NYCHA LEAK TRAINING

1

Welcome NYCHA Staff

- EEA is an accredited asbestos, lead & mold training provider.
- This training is presented by EEA under contract to NYCHA & is consistent with Standard Procedure 050:25:2, ***Leak & Moisture Control In NYCHA Residential Buildings***.
- It's critical to providing safe public housing in NYC & is consistent with *Baez* Consent Decree and HUD Agreement.

*NYCHA succeeds when **YOU** succeed!*

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Welcome NYCHA Staff

- Registration & Sign-in/out
- Presentation & Training Workbook
  - *Review Questions*
  - *Standard Procedure 050:25:2*
  - *iWM App slides*
  - *Root Cause Scavenger Hunt*
  - *iWM Work Order Scenarios*
  - *Leak Inspection Checklist*
- Training Agenda
- Training Goals
  - *Understand importance of detecting & repairing leaks*
  - *Be able to use the instruments, tools, practices & procedures*
  - *Be ready to get this done!*

Link to Training Resources

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Course Agenda – Day 1

- Overview & Policy
- Roles & Responsibilities
- *Leak Detection: Equipment & Procedures*

Leak Inspections: Source of the Leak <u>Within</u> Impacted Apartment

- Inspection Requirements & Steps
- Creating Repair Work Orders
- Resident Communication

iWM Work Order Simulations #1 - #2

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Course Agenda – Day 2

Leak Inspections: Source of the Leak <u>Outside</u> Impacted Apartment:

- Inspection Requirements & Steps
  - Multi Apartment Inspection
  - Vertical Line Inspection
- Creating Repair Work Orders
- Resident Communication
- *iWM Work Order Simulations #3 - #4*

Leak Repair Procedures

- Leak Repairs
- *Wall Breaks & Temporary Leak Repairs*
- Standing Water Removal
- Structural Integrity Issues
- *Pipe Condensation: Insulation & Interim Controls*
- *Wall Break Repairs*
- QA Process for Leaks
- Case Studies/Course Review
- Outputs, Reports & Recordkeeping
- *Knowledge Assessment*

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Why Are We Here Today?

- Exposure to excessive moisture and mold have been associated with **increased risks for respiratory symptoms**, asthma, hypersensitivity pneumonitis, rhinosinusitis, bronchitis, and respiratory infections.
- Floods, leaks, and excessive moisture conditions, if not addressed in a timely manner, **can cause permanent damage to building components** and, in some instances, may lead to mold growth.

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Why Are We Here Today?

To strengthen the partnership between NYCHA staff and residents by improving how we respond to floods, leaks, and moisture issues—starting with their root causes.

- Learn how **to identify and document** the source of leaks
- Ensure leaks are **properly traced to their origin**
- Review how to **create accurate work orders** for all affected units
- **Discuss how to keep residents informed** and guide them through next steps

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Why Are We Here Today?

NYCHA is required to establish procedures for mold and excessive moisture under two Federal lawsuits.

- The *Baez* et. al. v. NYCHA Modified Amended Stipulation and Order of Settlement (***Baez* Consent Decree**).
- Settlement agreement between HUD, the U.S. Attorney's Office for the Southern District of New York (SDNY), NYCHA, and the City of New York (**HUD Agreement**).

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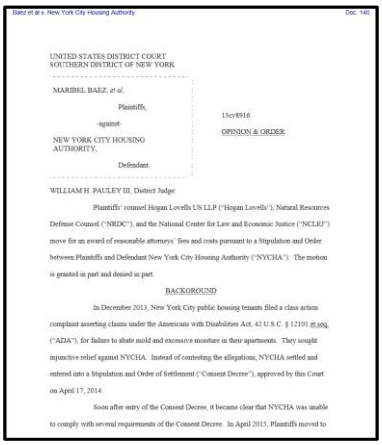
Baez Lawsuit

Maribel Baez vs. NYCHA ("*Baez*") is a class action lawsuit filed in December 2013, alleging a violation of the Americans with Disabilities Act for the conditions of mold and excessive moisture for residents suffering from asthma. The case never went to trial – it was filed with a settlement agreement (a Consent Decree). In July 2018, the parties filed a Revised Consent Decree.

The Court appointed a Special Master and independent experts including:

- The Ombudsperson and Ombudsperson Call Center (OCC)
- The Independent Data Analyst (IDA)
- The Independent Mold Analyst (IMA)



Baez et al v. New York City Housing Authority Doc. 140

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

MARIBEL BAEZ, *et al*,
Plaintiffs,
-against-
NEW YORK CITY HOUSING AUTHORITY,
Defendant.

13cv8916
OPINION & ORDER

WILLIAM H. PAULEY III, District Judge:

Plaintiffs' counsel Hogan Lovells US LLP ("Hogan Lovells"), Natural Resources Defense Counsel ("NRDC"), and the National Center for Law and Economic Justice ("NCLEJ") move for an award of reasonable attorneys' fees and costs pursuant to a Stipulation and Order between Plaintiffs and Defendant New York City Housing Authority ("NYCHA"). The motion is granted in part and denied in part.

BACKGROUND

In December 2013, New York City public housing tenants filed a class action complaint asserting claims under the Americans with Disabilities Act, 42 U.S.C. § 12101 et seq. ("ADA"), for failure to abate mold and excessive moisture in their apartments. They sought injunctive relief against NYCHA. Instead of contesting the allegations, NYCHA settled and entered into a Stipulation and Order of Settlement ("Consent Decree"), approved by this Court on April 17, 2014.

Soon after entry of the Consent Decree, it became clear that NYCHA was unable to comply with several requirements of the Consent Decree. In April 2015, Plaintiffs moved to

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HUD Agreement Action Plan

In January 2019, the U.S. Department of Housing and Urban Development, NYCHA, and the City of New York, entered the Agreement which established the role of HUD Monitor and outlined the following requirements for NYCHA:

Within 2 years:

- For 95% of the verified mold complaints, clean visible mold and provide a written plan to address root causes within 5 days of notification and remediate root causes within 7 days for simple repairs and 15 days for complex repairs.
- For leaks from above or floods, abate the condition within 24 hours and remove any standing water within 48 hours.

Within 5 years:

- For 85% of the verified mold complaints, no second complaint in the same unit/common area within 12 months.

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Why Are We Here Today?

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Water Infiltration

- Major cause of **building damage** & **mold growth**.
- Leading cause of **damage claims**, costing more than $13 billion dollars annually in the US.
- Determined as a significant source of **excessive moisture** in NYCHA properties.
- Water infiltration can lead to **electrical shorts and fire hazards** if it reaches wiring and electrical systems.
- Water can **compromise insulation**, reducing its effectiveness and leading to higher energy costs.
- Water stains, peeling paint, and warped materials can affect the **appearance and value of a property.**

Natural and weather-related damage are not included in this training.

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Terms to Know

Leak Inspection – A process by which a NYCHA maintenance worker:

- Responds to emergency and non-emergency leak work orders.
- Investigates their root cause(s).
- Makes repairs (including temporary or permanent).
- Documents findings in the work order.
- Creates follow-up work orders to address full scope of repairs, if needed.
- Communicates findings and next steps to the residents, if needed.

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Terms to Know

Leak - An unintended escape of liquid (commonly water) from the building supply or waste piping, building fixtures, or penetration of water through any gaps or damages in the building envelope.

Leak From Above - Floods, leaks, or water penetration into a resident's apartment from another apartment(s), above or adjacent to it, including apartments above the adjacent apartment.

Condensation - Moisture that forms on a cold surface when it encounters warmer humid air. Condensation may commonly occur on inadequately insulated cold-water pipes, toilet tanks, toilet bowls and lead bends.

The source of leaks from above **might not be visible at first and might require a thorough inspection** of the conditions behind the wall cavity and/or inspection of adjacent apartment(s) or apartment(s) up in the line.

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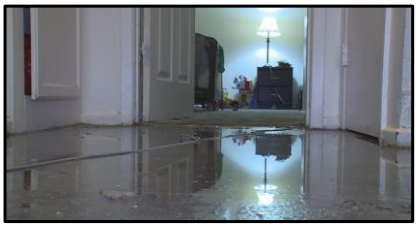
Terms to Know

9 7 **Emergency Leak** - Floods, leaks from above and other conditions (e.g., **burst pipes, overflowing toilets, running faucets, etc.)** that cause sustained or recurrent moisture to flow into a resident's apartment or the walls of the apartment.

- **Priority Code of 7 or 9 in Maximo.**

4 3 **Non-Emergency Leak** - Leaks that do not cause sustained or recurrent moisture to flow into a resident's apartment or the walls of the apartment (**e.g., leaky faucets, continuously running toilets, and clogged sink or shower drains).**

- **Priority code of 4 or 3 in Maximo.**



Flooding - A visible, continuous, and uncontrolled flow of water or wastewater into an apartment that may result in standing water.

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Terms to Know

Root cause - the fundamental reason for the occurrence of flooding, leak or excessive moisture, e.g.:

- Leaks and overflows from plumbing fixtures (sinks, toilets, tubs).
- Leaks from domestic water riser and branch pipes.
- Leaks in drainage, waste riser and branch pipes.
- Deterioration of building envelope (façade, roofs, window lintels).
- Improperly insulated or uninsulated cold-water pipes.

Identifying root cause(s) of water infiltration **is the key to preventing extensive water damage** to the building components and materials.

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Terms to Know

Impacted Apartment - The apartment which initially reported a leak complaint. The root cause of the leak may be inside or outside of the impacted apartment.

Root Cause Apartment - Apartment where the source (root cause) of the leak is located.

Additional Impacted Apartments - Any additional apartment(s) either in the line or adjacent to the impacted apartment that is impacted by the same leak and has a root cause in a different apartment (i.e., the root cause apartment).

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Terms to Know

Multi-Apartment Leak Inspection - An inspection of multiple apartments to identify the root cause(s). This includes apartment(s) up the line to the impacted apartment, adjacent apartment(s) and/or apartments above adjacent apartments.

Vertical Line Leak Inspection - A follow-up inspection of multiple apartments in the line, if the root cause(s) wasn't identified during initial multi-apartment inspection. This must include the impacted apartment and **all the apartments above it up to the first apartment in the line which does not exhibit** any sign of wet conditions or water damage

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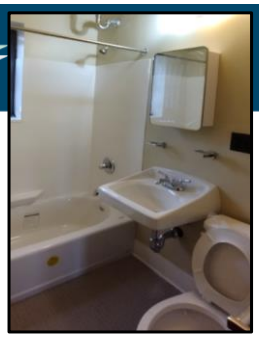
Important Terms



Chase Wall (Wet Wall) - A structural wall designed to house plumbing pipes for fixtures including sinks, showers, and toilets. Each kitchen and bathroom is served by a chase wall. Typically, this wall is located immediately behind the fixtures (e.g., sink/tub/toilet).

Chase walls at NYCHA may serve:

- One set of fixtures (bathroom or kitchen). In this case, the rear of the wall would be a room without fixtures.
- Two sets of fixtures (back-to-back bathrooms, back-to-back kitchens, or back-to-back bathroom-kitchens). It is possible that the rear of the chase wall is in a different apartment than the front of the chase wall.

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Terms to Know

Simple Repairs - Repairs that can be fully completed by property management staff (e.g., maintenance workers and caretakers).

Complex Repairs - Repairs that need skilled trades or other specialized staff to address and may require multiple visits (e.g., plumbers, carpenters or vendors).

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Terms to Know

Leak Service Level Agreement (SLA) –

- Floods and emergency leaks are to be abated **within 24 hours after condition is reported to NYCHA**
- Standing water is to be removed **within 48 hours**.
- Simple repairs are to be completed within **7 calendar days.**
- Complex repairs are to be completed **within 15 calendar days**.

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Top Ten

Top Ten Things NYCHA Staff Should Know About Leaks & Excessive Moisture

1. **When responding to leak or excessive moisture complaints, first step is to identify their root cause(s). Ensure that the root cause(s) are identified and addressed before making any cosmetic repair.**

   A cosmetic repair made without the elimination of the root cause(s) will be temporary, while a repair made after the root cause(s) has been identified and addressed will have a long-lasting effect.

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Top Ten

2. **Leak and excessive moisture conditions may have multiple root causes. Inspect for all possible sources and ask for assistance if you are unsure about the origins and/or appropriate remediation methods.**

   *There are **seventeen root causes** to choose from in the IWM App.*

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Top Ten

3. **Some of the most common root causes(s) of leaks are:**
   - *Damage to the plumbing pipes and fixtures*
   - *Ill-fitting connectors*
   - *Blockages*
   - *Cracks in sinks and tubs*
   - *Improperly connected in-unit equipment (e.g., washing machines and dishwashers)*
   - *Damage to flashing and roofing materials*
   - *Aging facades, damage to window frames and lintels, and other conditions caused by building deterioration.*

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4. **Use moisture meter to inspect the in-unit surfaces (e.g., ceiling, floors, walls) and trace the leaks up to its source. Inspect kitchen sink cabinets and bathroom vanities.**

   - *Areas of water damage that are localized and are present on **lower portions** of the wall are typically caused by a leak **within the local chase wall.***
   - *If wet/or water damaged areas extend to the **top of the wall and/or ceiling**, it is likely that the root cause(s) of the water damage is located **above the current apartment.***

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Top Ten

5

5. **Investigate beyond the initial unit, when needed. Root cause(s) are frequently located in apartment(s) above or adjacent to the initial unit exhibiting leak or water damage.**

   *If leaks affect multiple apartments, make sure to locate the root cause(s) impacting multiple units and **create follow-up work orders for each impacted apartment**, as needed.*

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Top Ten

6. **Address emergency leaks within 24 hours (or less, if indicated by its hazardous status) and remove all standing water within 48 hours of a report of the condition to NYCHA.**

   If a resident reports water leak impacting electrical systems (e.g., switch or circuit box), the work order will be assigned a hazardous status (Priority 9) and should be responded to in one hour.

7. **Clean and dry damp (or wet) building materials or areas within hours to prevent mold growth. Advise residents to clean and dry any damp furnishings and other personal property within 48 hours.**

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Top Ten

8. **Prevent condensation from forming on cold water pipe surfaces. Condensation on inadequately insulated supply pipes, waste or drainpipes inadvertently receiving a continuous flow of cold water, windows and exterior walls can cause significant moisture accumulation and lead to saturated and water damaged building.**

   *Ensure that **leaky faucets and faulty toilet tank parts** (e.g., flappers, float valves, and speedy connectors) **are repaired** so that cold water does not continuously flow into waste lines.*

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Top Ten

9. Ask questions and communicate your findings to the residents.

- *Residents have the most up-to-date information on the history of occurrence (e.g., frequency of the leak, odor, location, and other valuable information) that could assist in properly identifying the root cause(s).*
- *NYCHA staff should clearly communicate with residents of all impacted apartments inspection findings, scope of repairs needed, and next steps in completing the work.*

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Top Ten

10

10. Inform the residents with disabilities and medical conditions that:

- *They may seek a reasonable accommodation to transfer to another apartment, if the disability or medical condition is caused or worsened by the presence of leaks.*
- *The resident may also be transferred temporarily to another apartment during abatement of the moisture conditions.*

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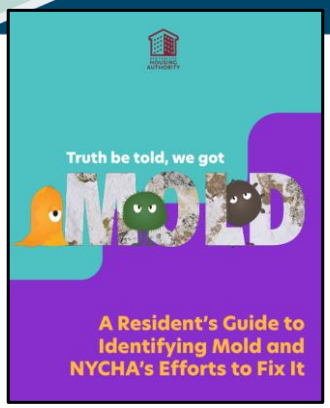
NYCHA SP 050:25:2

- **Standard Procedure 050:25:2, *Leaks & Moisture Control in NYCHA Residential Buildings* establishes** responsive measures to floods, leaks, excessive moisture, and their root causes in New York City Housing Authority (NYCHA) public housing locations.
- Standard Procedure 050:25:2 is adjunct to **Standard Procedure 040:14:1, *Mold/Mildew Control in NYCHA Residential Buildings*** to not only address, reduce, and prevent occurrences of leaks, excessive moisture, and associated water damage, but to also reduce occurrences of mold growth.
- These Standard Procedures apply 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).



These are in your course manuals, keep them nearby!

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Summary

- Exposure to excessive moisture and mold have been associated with **increased risks for respiratory symptoms**, asthma, hypersensitivity pneumonitis, rhinosinusitis, bronchitis, and respiratory infections.
- NYCHA staff and its **residents must work together** to detect the source(s) of floods, leaks, and excessive moisture as soon as conditions are observed and take timely actions to remediate the root cause(s).

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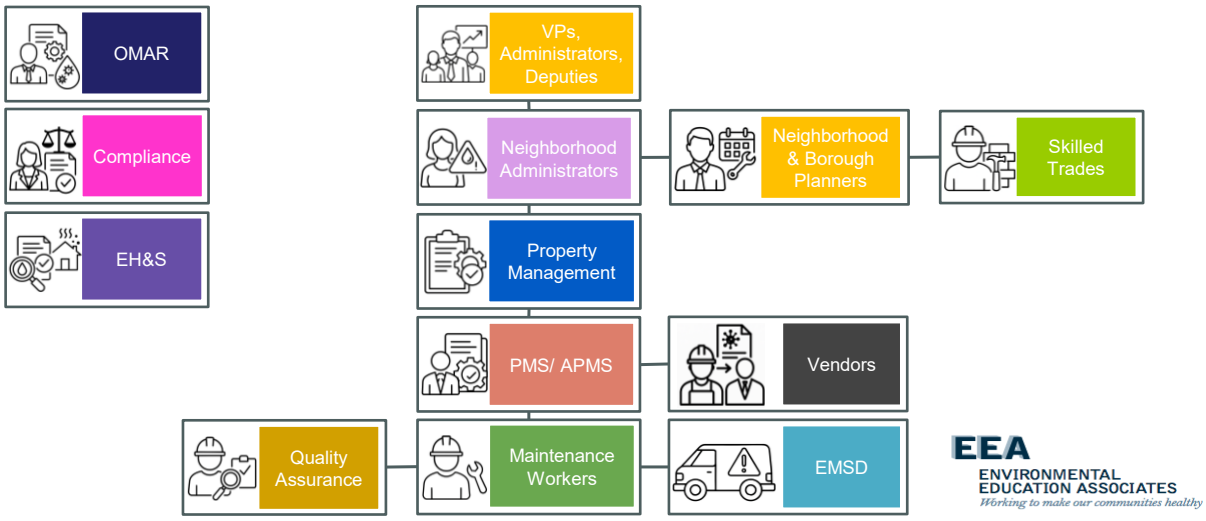
NYCHA LEAK TRAINING

33

Roles Supporting Leak Repairs



34

Maintenance Workers or Other Trained Staff

- **Address emergency and non-emergency** Leak Work Orders as assigned by APMS or PMS.
- **Perform work** in accordance with Leak Standard Procedure, including:
  - Bringing the required tools and supplies.
  - Documenting work in the iWM App.
  - Creating follow up repairs.
- Might use **Right of Entry** to address any emergency conditions in accordance with NYCHA SP.

If an adult resident is not home, see *NYCHA Standard Procedure 040:17:3, Accessing Public Housing Apartments When Tenant Not Home to Address Deficiencies Related to Leaks, Mold, and Lead-Based Paint.*

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Maintenance Workers or Other Trained Staff

- Use iWM App to document findings and create follow up repairs.
  - Address **any flooding and/or standing water conditions** or create child work orders to address.
  - **Identify root cause(s)** of leaks.
  - **Conduct wall break(s)** find the root cause(s), if needed
  - **Make repairs** to address the root cause(s), if possible.
  - **Create all work orders** to address the repair needs.
- If not able to find the root cause tracing the leak between multiple units, work with APMS or PMS **to develop a Vertical Line Inspection** plan.

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Maintenance Workers or Other Trained Staff

- **Immediately notify APMS or PMS when:**
  - There is a **standing water** in the unit as a result of a flood or leak.
    - PMS/APMS coordinate with Caretaker Supervisors to assign staff for water removal while maintenance has unit access.
  - There is a **suspected structural integrity issue**.
  - **Immediate follow-up repairs by another trade** are required *(e.g., you are not able to stop an active leak due to the severe corroded pipes and require an immediate follow up response by plumbers).*

If the standing water **contains sewage**, appropriate staff and/or a vendor is assigned to remove the standing water.

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Maintenance Workers or Other Trained Staff

- Keep the residents informed on inspection findings, repairs made, and next steps in repair process:
  - **If skilled trade work is required**, issue *NYCHA Form 042.800 Repairs to Schedule (RTS)* slip to each impacted apartment and inform resident(s) to contact Neighborhood Planner to schedule repairs.
  - **If other craft work is required** (e.g., property maintenance staff, vendor, heating, etc.,), inform the resident that property management office will schedule repairs.

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Supervisors of Housing Caretakers (SOHC)

- **Review Maximo <u>daily</u>** to monitor for any Standing Water Removal Work Orders:
  - **Assign caretakers** to address standing water removal work orders.
  - **Monitor that the work is completed** in accordance with Leak SLA and repair protocols.
  - **Verify once the work** is completed and **close the Standing Water Removal Work Order** in Maximo.

If needed, **SOHC could request PMS or APMS** to close a Standing Water Removal WO in Maximo.

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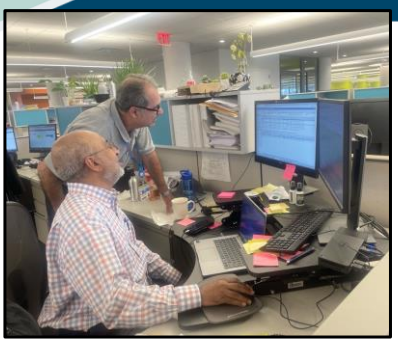
Property Maintenance Supervisors & Assistant Property Maintenance Supervisors

- Review work orders in Maximo **<u>multiple</u> times a day**
- **Assign maintenance workers** to address the work orders based on:
  - Severity of condition
  - Work orders priority
  - Scheduled date
- Assist with **Multi-apartment and Vertical Line Inspections,** including:
  - Reviewing Maximo for history of complaints
  - Coordinating scheduling with residents
  - Assisting with conducting inspections



See NYCHA Standard Procedure 040:12:1 *Reasonable Accommodation in Housing for Applicants, Public Housing Residents, and Section 8 Voucher Holders* for reference.

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Property Maintenance Supervisors & Assistant Property Maintenance Supervisors

- Monitor Maximo for **any missed Leak WOs**:
  - Reschedule maintenance work orders.
  - Coordinate the rescheduled date with residents, when needed.
- Ensure that residents are notified if maintenance workers **might be late or miss a scheduled appointment.**

Property maintenance staff (PMS, APMS, HA, etc.) **must contact resident** is maintenance workers might be late or miss scheduled appointment.

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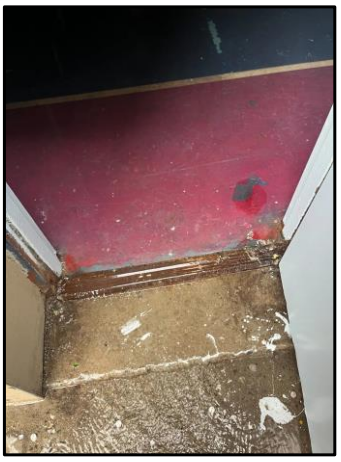
Property Maintenance Supervisors & Assistant Property Maintenance Supervisors

- **Escalate any conditions that require immediate attention or response by follow up crafts** to neighborhood administrator, skilled trades administrator or operations administrator *(e.g., structural integrity risks, floods or severe leaks).*
- Notify neighborhood administrator and above titles **if shutting of the supply riser is needed** to stop an active floods.
- Manage and schedule **vendor work** to complete leak repairs.



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Property Maintenance Supervisors & Assistant Property Maintenance Supervisors

- Conduct **regular quality assurance (QA) inspections** of closed maintenance work orders.
  - Randomly select up to 3 closed WOs per worker each week for QA inspections.
  - Pay close attention **to closed Leak From Above WOs** to ensure their root causes are identified and follow up repairs are created.

See NYCHA Standard Procedure 040:22:2, *Apartment Turnover, Monthly Building and Other Maintenance Inspections* for reference.

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Property Maintenance Supervisors & Assistant Property Maintenance Supervisors

- Check the *Development Log Book* to ensure that skilled trades and vendors are at the assigned locations.
  - Notify the skilled trades supervisor if **a skilled trades worker** that is scheduled for the day **does not check in by 9.00 a.m. at the development**.
  - Notify the skilled trades supervisor and the neighborhood planner of **any skilled trade repairs that require rescheduling or additional work.**

- Ensure that the development **is equipped with appropriate tools and materials** to complete repairs.
  - Coordinate with skilled trades and supervisors if there are material needs.

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44

Emergency Management and Services Department (EMSD)

- **EMSD Maintenance Team:**
  - Visit apartments for **emergency Leak Work Orders** outside Normal Business hours.
  - Respond to emergency work orders **in accordance with the Leak SP.**
  - **Follow the iWM App** prompts to document leak inspection findings, work performed and create follow up work orders, if needed.

Outside normal business hours, Maximo routes select emergency work orders with Priority Codes 7 or 9 to EMSD as first responder.

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Emergency Management and Services Department (EMSD)

- **EMSD Supervisors:**
  - Oversee staff response to emergency leaks **outside of Normal Business Hours**.
  - **Assign EMSD maintenance teams** to respond to leak complaints in accordance with the work order priority code, severity, and protocols outlined in the Leak SP.
  - Ensure that EMSD work orders **are closed** or **are reassigned back to the development** at the start of the regular business hours.

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Property Managers

- Monitor the **customer service delivery aspects** of Leak Standard Procedure to ensure NYCHA's commitments to residents are addressed.
- **Review work orders at least <u>three</u> times a week**.
  - If Leak Work Orders are not in compliance with the SLA timeframes, discuss with PMS/ APMS.
- **Ensure that staff in property management office:**
  - Assists property maintenance staff **with contacting residents** to get access, upon request.
  - **Timely responds** to the reasonable accommodation requests.

If NYCHA is unable to comply with this timeframe, **use best efforts** to prioritize the scheduling of these work orders.

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Neighborhood Planners

- Schedule skilled trade repairs to be completed in **no later than 15 calendar days** after the condition is detected and reported to NYCHA.
  - Email PMS and APSM the next day's schedule for skilled trades repairs **by the close of business** of the previous day.
  - Inform PMS or APMS of any non-skilled trades work (e.g., heating, lead, asbestos, vendors) that needs to be coordinated to complete repairs.
- Identify materials needs for skilled trades and **ensure that materials are in stock** prior to scheduling work.

Neighborhood skilled trades include **Bricklayer, Electrician**, **Exterminator**, **Plumber**, **Carpenter**, **Plasterer**, and **Painter**.

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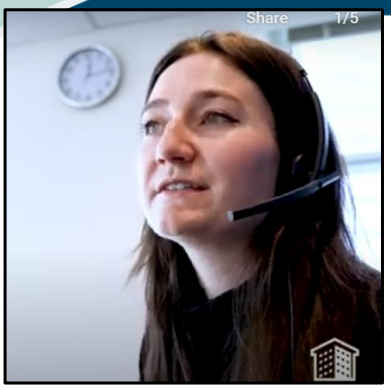
Neighborhood Planners

- **Answer resident calls to schedule leak repairs:**
  - Review all open work orders to determine appropriate sequencing of repairs.
    - If root cause originates outside of the impacted apartment, **schedule repairs in the root cause apartment** (e.g., plumbing) prior to scheduling cosmetic repairs in the impacted apartment.
  - Coordinate with **the borough planner** the scheduling of borough skilled trades staff.
  - Coordinate with the **property management** staff scheduling of non-skilled trade repairs.



If NYCHA is unable to comply with this timeframe, **use best efforts** to prioritize the scheduling of these work orders.

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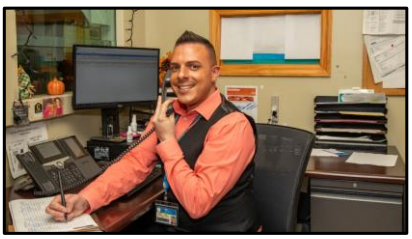
Neighborhood Planners

- **Schedule backlog Leak WOs when the resident has not called.**
- Make **two attempts** to call the resident to obtain a scheduled date. If the resident cannot be reached, proceed with scheduling:
  - If appointment is **21+ days away**, NYCHA will mail/email *NYCHA Form 042.861, Notice of Skilled Trade Appointment.*
  - If appointment is **<u>less</u> than 21 days away or rescheduled**, Planning Unit must generate forms in Maximo and email to development to place under resident's door.



If the phone number for resident is out of service or incorrect, **contact property management to request best contact number** for resident.

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Neighborhood Planners

- When notified by the skilled trade supervisor that **the scheduled appointment can't be kept:**
  - **Notify the resident** as soon as made aware.
  - **Coordinate rescheduling of a skilled trade appointment** with resident(s), skilled trade supervisors, and APMS/PMS.
  - Review all other repairs scheduled for the apartment(s) **to ensure that the missed appointment won't impact other work.**
- Escalate any issues to the Neighborhood Administrator.

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Borough Planners

Borough skilled trades include **Glazier** and **Roofer.**

- Schedule skilled trade repairs to be completed in **no later than 15 calendar days** after the condition is reported to NYCHA.
- Coordinate appointments with neighborhood planner and skilled trades supervisors.
- When notified that scheduled appointments for **glaziers** and **roofers** cannot be kept:
  - **Coordinate rescheduling** of appointments with the neighborhood planner and skilled trades supervisors, and residents, if needed.
  - **Ensure that rescheduled appointments** do not impact other scheduled appointments.

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Skilled Trade Workers

- Ensure that all repairs to **correct the root cause(s) of leaks and cosmetic repairs** are completed to NYCHA standards and documented in the iWM App.
- Adhere to leak **specific instructions outlined in the Leak SP**, including instructions for:
  - Making wall breaks.
  - Insulating or re-insulating pipes.
  - Applying mold-resistant materials.

See Standard Procedure 040:09:7, *Managing Maintenance Work Orders* for instructions on addressing WOs.
See Standard Procedure 040:18:1, *Repair Standards & NSPIRE REAC Inspections* for more information on NYCHA repair standards.

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Skilled Trades Supervisors

- **Oversee** the daily work of all skilled trades staff and ensure repairs are completed in accordance with NYCHA procedures.
- Conduct a weekly review of **skilled trade leak repair appointments scheduled for the next two weeks** and notify the neighborhood planner as soon as possible if a skilled trade worker cannot keep a scheduled appointment.
  - When possible, notify the neighborhood planner **at least 24 hours** prior to the scheduled appointment.

If NYCHA is unable to comply with this timeframe, **use best efforts** to prioritize the scheduling of these work orders.

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Neighborhood Administrators

- **Set priorities and plans for addressing work on the neighborhood level.**
  - **Review weekly schedule** of skilled trade appointments for under booking or overbooking.
  - **Review high priority WOs** with neighborhood planner and property management supervisors and **provide guidance** in prioritizing repairs.
  - Ensure that leak repairs **get scheduled and rescheduled,** and that work is completed in compliance with Leak SP.
- **Review work order backlog** and determine what work could be performed by vendors.

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Other Staff Responsibilities

VPs for Property Management & Operations Administrators

- Monitor leak performance metrics at the borough, neighborhood, and consolidation levels.
- Provide guidance to property management staff as needed.

Skilled Trades Deputy Directors

- Provide recommendations on a leak instigations and repair performed by NYCHA staff or vendors.
- Work closely with skilled trades administrators and supervisors to ensure that skilled trade workers meet scheduled appointments and perform work in accordance with Leak SP.

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Other Staff Responsibilities

Skilled Trades Administrators

- Provide guidance on leak repairs to neighborhood administrators, borough planners and neighborhood planners.
- Monitor scheduling of skilled trades staff to ensure that complex repairs that do not require capital improvements are scheduled and **completed within 15 calendar days,** when possible.
- Monitor Scorecard performance across all levels.

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Office of Mold Assessment and Remediation (OMAR)

- Sets a NYCHA wide strategy to **improve leak & mold compliance**.
- **Monitors key performance metrics** for leaks, including, response time to leaks, proper root cause identification, scheduling, missed appointments, and recurrence.
- **Provides technical expertise** to NYCHA staff:
  - Manages **large complex jobs** related to leaks and mold (i.e., Building Line Initiatives).
  - Takes **on escalated cases** for assessment.
- Serves as a **NYCHA's liaison** to the Special Master, *Baez* plaintiffs, IMA and IDA.

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Office of Mold Assessment and Remediation (OMAR)

- Administers **the Enhanced Oversight Program (EOP)** to improve leak and mold compliance, address work order backlog, and assist with training or any procurement issues.
- Assists NYCHA Operations upon request with:
  - Performing leak & mold inspections.
  - Providing field training.
  - Assisting with on-site work order verification.
  - Assisting with addressing high priority work orders (e.g., vent cleaning, mold removal, and mold resistant paint).
  - Addressing work order backlog by utilizing vendors.

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Mold Response Unit (MRU)
Office of Mold Assessment and Remediation

- **Monitors and case manages OCC cases, referrals, escalated cases, and court cases:**
  - Tracks resident complaints until resolution and confirmation of resident satisfaction.
  - Hosts check-ins with residents.
  - Ensures all necessary work orders to address leak complaints are created, properly sequenced and completed as scheduled.
  - Escalates severe conditions for prioritization of scheduling or resident relocation.

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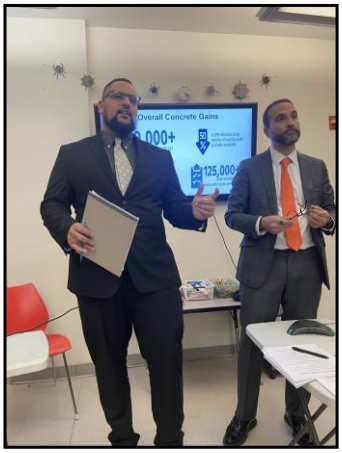
Ombudsperson Call Center (OCC)

OCC is independent, court-appointed entity that holds NYCHA accountable for completing leak and mold repairs in a timely manner.

- **Conducts initial intake** of complaints from residents and shares the information with the MRU.
- **Tracks scheduled repair dates** and **unscheduled** repair work based on resident complaints.
- **Refers cases** to OMAR, the Compliance Department, and the IMA to ensure root causes are addressed.
- M**ay issue orders to NYCHA** if resident complaints are not promptly resolved using NYCHA's best efforts.



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Ombudsperson Call Center (OCC)

The Ombudsperson has **the authority to issue NYCHA to take a specific action**, including – **completing repairs with specified days**, require a **transfer**, require an **independent contractor** to complete repairs at NYCHA expense, and others.

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Office of Quality Assurance

- Performs **random QA inspections** of closed Leak Work Orders to ensure that all repairs to address leak or excessive moisture complaints:
  - Were completed satisfactory.
  - Were completed in accordance with NYCHA repair standards.

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Compliance Department

- Ensures that all NYCHA employees **follow laws** and uphold ethical standards.
- Reviews leak and mold complaints **through the department's Complaint Forum on the NYCHA website**.
- Investigates or flags potential **deceptive practices**.
- **Refers cases** to EH&S, Property Management Operations, the Office of Quality Assurance, and Ombudsperson Call Center (OCC).

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Environmental Health & Safety Department (EH&S)

- **Conducts oversight inspections** for Mold WOs, ensuring there are no ongoing moisture issues.
- **Investigates resident or employee complaints** received regarding health and safety hazards (e.g., floods, severe leaks, and air quality).
- **Issues corrective actions to NYCHA departments** to address deficiencies identified during investigations, e.g:
  - Recommendations to relocate tenants or employees until hazards are abated.
  - Conduct investigations to identify the root cause(s).
  - Use mold-resistant materials.
  - Provide additional training to non-compliant staff.

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Environmental Health & Safety Department

- Provides **recommendations to Property Management Operations** and other departments based on findings from investigations and routine oversight inspections.
- Administers **NYCHA's Respiratory Protection Program**
- Oversees **NYCHA's Hazard Communication Program** including maintenance of the Safety Data Sheet database.
- Provides **initial safety trainings** and **refreshers** to ensure NYCHA's compliance.

See *NYCHA Standard Procedure 001:17:2, NYCHA Respiratory Protection Safety Program.*

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Take a Break!

- We appreciate your participation.
- Our job is to provide training that will give you the capability to conduct leak evaluation & control.
- Please let the instructor or any EEA staff if there's anything we can do to improve your learning experience.

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NYCHA LEAK TRAINING

68

Informer Work Management

Samsung Handheld provides access to the Informer Work Management (iWM) App

- iWM App is used to Search, Document Work, Create and Close Work Orders.
- Camera in iWM is used to document the condition and completed or identified repairs
  - Document if the resident is not home.

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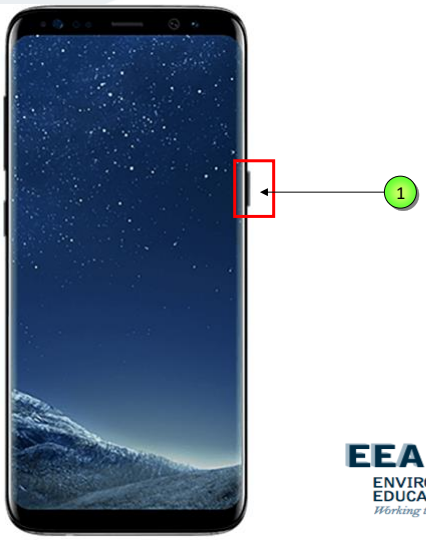
Log into the Device

1. Press Power/Lock Button
   Swipe across screen
   Enter the default password for the **Device**:

   nycha90
   (Old devices)

   nycha123
   (New devices)



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Tools: all Leak Work Orders

- Moisture Meter
- Step Ladder (4 ft)
- Set of Pipe Wrenches (10’ & 14”)
- Tongue & Groove Pliers (various sizes)
- Hammer & 3 lb. Lump Hammer (Sledge)
- Utility Knife
- Aviator Snips
- Epoxy
- Headlamp, flashlight, etc.
- Nitrile Gloves
- Safety Glasses
- Rags
- Duct Tape
- Respiratory Protection (N95 respirator), as needed.

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Moisture Meter

Protimeter SurveyMaster

The Protimeter SurveyMaster Dual-Function Moisture Meter with Digital LCD Display includes both **Search** and **Measure (Pin)** measurement capabilities for recording moisture levels in buildings.

The two-in-one measurement capability allows for faster and less destructive moisture measurements.

Search Mode
(Non-Invasive)

Measure Mode
(Pin Mode)

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Moisture Meter

- By pressing the device against the material's surface, moisture meters can be used to measure the amount of moisture present in a range of building materials after they have been damaged by water **(Search Mode).**
    - *Moisture meters can be used on materials such as **Sheetrock, Plaster, Wood, Brick, and Concrete.***
- They also can be used to monitor the progress of drying damaged materials by inserting a specialized pin probe into the material to be tested **(Measure Mode).**

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When to use Moisture Meter?

Use a Moisture Meter when**:**

- **Investigating** a possibility of leak from above or leak within call cavity.
- **Tracing a leak from above** to identify the root cause.
- **Making a wall break** to identify a possible location of the root cause.

- **Document the highest moisture meter measurement(s)** on the parent Leak Work Order.

A NYCHA building component **is considered "wet"** when the moisture meter reading **is equal to or greater than 599** (on a scale of 0 to 999).

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When to use Moisture Meter?

Take moisture meter measurements when resident(s) reported any of the following conditions:

FAILURE CLASS (FC)	PROBLEM CODE (PC)
LEAKFROMABOVE	CONSTANTDRIPPING
LEAKFROMABOVE	CONSTANTLEAKING
LEAKFROMABOVE	FLOODING
LEAKFROMABOVE	LEADBENDLEAKING
LEAKFROMABOVE	WATERPENETRATION
EXCESSIVEMOISTURE	EXCESSIVEMOISTURE
PIPES	PIPENEEDSREPAIR
PIPES	PIPESLEAK
WALLS	WALLLEAK
WALLS	WATERDAMAGE

If you see **visible moisture** (e.g., water leaking from the ceiling), **you can manually enter 999 on the work order** since the active leak or wet surface will measure wet.

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How to use Moisture Meter?

Use moisture meter to inspects the chase walls or any other areas displaying leak, water damage, or visible moisture.

- **Chek <u>all surfaces</u> in the room you are inspecting:**
  - **Visible water damage or mold?** Take moisture readings every 6” (horizontal & vertical) and continue until readings are below 599 for at least 2’ beyond the affected area.
  - **No visible water damage or mold?** Take moisture readings every 1’ (horizontal & vertical).

The moisture meter **must be held firmly** with the back sensor flat against the wall. **Do not slide it!**

Special attention must be paid **to plumbing chase walls** and **ceiling surfaces above toilets and showers**.

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How to use Moisture Meter?

- By using a moisture meter, **identify hidden wet conditions** and **pinpoint to the location of the root cause.**
  - Wet readings that are localized and are present on **lower portion** of the wall are typically caused by a leak within the local chase wall.
  - Wet readings that extend to the **top of the wall and/or ceiling** often indicate that the root cause(s) of the leak is located above the impacted apartment.
- It is also possible for a leak to be **concealed behind a tub enclosure or beneath a toilet** and there will be no damaged building materials or visible signs of a leak.

For leaks from above originating within plumbing chase walls, the **root cause apartment** will likely be the first apartment where wet conditions **do not extend to the uppermost section of the chase wall.**

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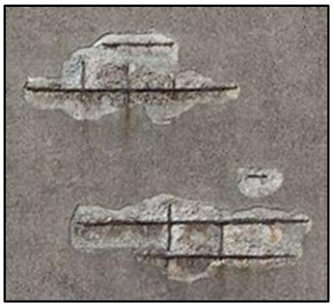
Moisture Meter

Caution - False Readings!

- The moisture meter is calibrated to detect moisture in building materials composed of organic matter. The meter **may report a "999"** or **other false reading if the instrument detects metal, wire, or tile.**
- If you **suspect a false reading,** (e.g., if the moisture meter makes contact with rebar in a reinforced concrete cement structure) **additional readings should be taken in six-inch (6") intervals in each direction.**



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Knowledge Check

1. **What is the moisture meter used for?**
2. **Explain when you should be using a moisture meter?**
3. **Explain and demonstrate how it is used including how to take multiple measurements in each direction?**
4. **What moisture measurement reading is considered "wet?**

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Tools:
Leaks from Above Work Orders

Tools to Make Initial Wall Break:

- Drill and drill bits
- Borescope
- Allway handy saw
- Masonite or equivalent (e.g., Plas-tex Polywall)

Tools (Additional) to Enlarge a Wall Break:

- Scraper
- Straight Edge (Level) + Marker
- Sheetrock saw (for sheetrock locations only)
- HEPA vacuum cleaner
- 6 mil poly-sheeting roll

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Borescope

A borescope is a hand-held tool that allows users to see leaks and potential mold problems inside walls, ceiling plenums, crawl spaces, and other tight areas.

- Consists of a video camera on the end of a flexible "snake."
- No major drilling or cutting of drywall is required.
- Can be **used to observe conditions in other hard to reach places**, such as inside an exhaust vent.

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Borescope Operations

1. Turn Power on
2. Lamp to brighten image
3. Zoom in & out
4. Flip Image
5. Take Picture
6. Save Picture

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Tools: In Unit Stoppage

- Hand drum
- Toilet auger with swivel head

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Knowledge Check

Name this instrument & explain its purpose for leak detection

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Knowledge Check

- Moisture meters measure/monitor moisture levels in building materials such as **Sheetrock, Plaster, Wood, Brick, and Concrete.**
- Use a Moisture Meter when:
  - **Investigating** a possibility from leak from above or leak within call cavity.
  - **Tracing a leak** from above to identify the root cause.
  - **Making a wall break** to identify the location of the root cause.

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Knowledge Check

Name this instrument & explain its purpose for leak detection.

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Knowledge Check

A borescope is a hand-held tool that allows users to see potential leaks and mold problems inside walls, ceiling plenums, crawl spaces, and other tight areas.

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- No major drilling or cutting of drywall is required.
- Can be used to observe conditions in other hard to reach places, such as inside an exhaust vent.

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Knowledge Check

Name this instrument and explain its purpose for leak detection.

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Knowledge Check

Samsung Handheld provides access to the Informer Work Management (iWM) App.

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  - Document if the resident is not home.

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NYCHA's Smart Device Policy

The smart device provided to you by NYCHA is the property of NYCHA and is solely for use 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.

This information can be found in section 17 of the NYCHA Human Resources Manual.

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Good Work, so far!

- We appreciate your participation!
- Our job is to provide training that will give you the capability to conduct leak evaluation & control.
- Please let the instructor or any EEA staff if there's anything we can do to improve your learning experience.

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NYCHA LEAK TRAINING

92

93

Leak Inspection – Workflow

Review Work Orders
- ❖Prioritize emergencies.
- ❖Address non-emergencies in accordance with the scheduled date.

Access Apartment
- ❖Use *Right of Entry*, if needed.
- ❖Confirm complaint.

Talk to Resident
- ❖Ask about leak history.
- ❖Inform about work needed.

Inspect for Root Cause
- ❖Use moisture meter.
- ❖Check pipes, fixtures, walls, ceilings etc.
- ❖If needed, inspect above/adjacent apartments.

Document in iWM App
- ❖Respond to inspection prompts.
- ❖Document moisture readings.
- ❖Upload photos.
- ❖Create follow up repairs, if needed.

Communicate Next Steps
- ❖Tell resident what was found.
- ❖Explain what will happen next.
- ❖Leave RTS slip, if needed.

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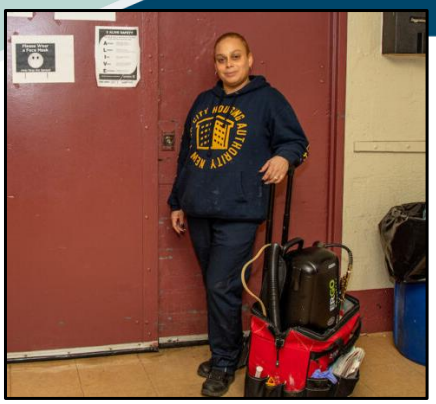
Reviewing Work Orders

- Review the list of work orders assigned for the day and prioritize work in accordance with:
  - **Work order severity**
  - **Priority**
  - **Scheduled date** (e.g., between 9 a.m. -12 p.m.) for non-emergency repairs.

- **Check the tool kit** to ensure all necessary tools to complete the leak inspection and repairs are in working order.



See Standard Procedure 040:09:7, *Managing Maintenance Work Orders* for instructions on accessing apartments and starting time on work order.

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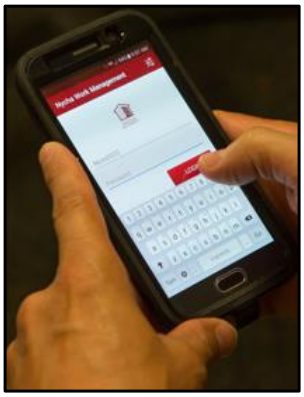
Reviewing Work Orders

- All Work Orders must be performed **using a handheld device**:
  - Start the time of the work order when **at the apartment door.**
  - Document all findings in the **work order prior to leaving the apartment** (e.g., respond to inspection questions, make repairs, upload photographs, create child repair work orders).

- If not able to use a handheld device, use the **Maximo Parent Leak Work Order Form** to document findings.
  - Submit the completed Form to the PMS or APMS who must enter the results in Maximo.



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Reviewing Work Orders

When feasible, PMS or APMS should assign **two maintenance workers** to respond to the **Leak From Above (LFA) work orders.**

- If another maintenance worker or other trained staff **is not available**, APMS or PMS could assign one worker to respond.

If needed during leak tracing, **maintenance worker should request APMS or PMS to dispatch additional maintenance staff** to assist with multi-apartment inspection (e.g., operating fixtures in units above)**.**

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Accessing the Apartment

Scenario 1: Emergency Leak is Severe, but Tenant is Not Home

- If a resident or other adult is not home to allow access to the apartment, the maintenance worker **may use NYCHA's Right of Entry to address floods or other emergency conditions** following 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.*

See Right of Entry provisions of *NYCHA Resident Lease* (NYCHA Form 040.507).

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Accessing the Apartment

Scenario 2: Emergency Leak is Severe, but Tenant Refuses Access

- If the resident is home but **refuses to provide access**, immediately notify APMS or PMS who will contact the property management office.
  - Property management must contact tenant to try to convince them to allow access.
- If the tenant **still does not allow access**, the property management office could:
  - Call the tenant's emergency contact for assistance.
  - If unsuccessful, call the neighborhood administrator for further guidance.

Do not leave severe leaks and floods unaddressed!

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Accessing the Apartment

How to obtain access in case of emergency conditions?

- Request **NYCHA's Family Partnerships** to intervene with tenant to obtain access.
- Request the assistance from the **NYPD** to obtain access.
- Coordinate with **NYCHA's Relocation Services** regarding any relocation needs (e.g., if the resident is concerned about repairs being done while residing in the apartment).

For refusing to provide access in an emergency, property management **may begin the termination of tenancy process** for breach of rules and regulations described in *Management Manual Chapter IV*.

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Accessing the Apartment

Scenario 3: Emergency Leak is not Severe, or Work Order is Not for Emergency Leak

- Issue *NYCHA form 042.727, 48 Hour Notice of Health and Safety Repairs* to the apartment and **return in 48 hours** to reattempt to gain access.


Sorry, we missed you.
Lo siento, no los encontramos en su residencia.
Вас не было дома.
我們曾經到訪，但您不在家。

DATE / FECHA / ДАТА / 日期

Work Order #
Orden de trabajo# / / № заказа на ремонт / 維修工作單編號

Description of work
Descripcion del trabajo / Описание необходимых работ / 維修項目說明:

NOTICE GIVEN BY
NOTIFICACION DADA POR /
УВЕДОМЛЕНИЕ ПОДПИСАЛ / 特此通知:

We will return on
Regresamos el / Мы придем еще раз / 我們將會再次上門，日期

Based on the terms of your lease, we are providing you with advanced notice that NYCHA will be exercising our right to enter your apartment on the date listed above to perform repairs. That means we may need to gain access if you or another adult is not home.

If we do not hear from you, we will attempt to gain access to your apartment on the date listed.

Spanish

Russian

Chinese

48 NOTICE FOR HEALTH & SAFETY REPAIRS

See NYCHA Standard Procedure 040:09:7, *Managing Maintenance Work Orders* for reference.

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Speaking with Resident

Upon entering the apartment, immediately address any flooding or other emergency condition.

- **Make a best effort to interview the resident** about the history of prior leak complaints and repairs that might be relevant to the current work order (if applicable).
- Inform residents of **what kind of work will be done and how long it's expected to take** (if applicable).

Can not identify resident's language? Call the **Language Hotline** for assistance **212-306-4444**.

For guidance on how to request and provide language assistance services to limited English proficient persons, see Standard Procedure 007:09:1, *Language Assistance Services*.

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Speaking with Resident

Here are some examples of questions you can ask a resident:

- *Did this happen before? How long did it/ does it last? When did it occur for the first time?*
- *Does the leak impact other rooms or adjacent areas (e.g., through a shared wall)?*
- *Is the leak associated with any activity (e.g., rainfall, bathroom use, neighbor taking shower, neighbor running washing machine, humidity in apartment)?*
- *Any distinctive characteristics (e.g., color of water or odor of the water).*

Add any relevant information to the 'Work Log' that could assist with leak tracing or inform follow up work.

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Speaking with Resident

If you identify a situation in the apartment that could be **hazardous to your safety and health** (e.g., an unsecured animal or suspected illegal activity):

- Stop work
- Immediately leave the apartment
- Immediately alert APMS or PMS

See Standard Procedure 001:15:3, *Make it Safe*, which establishes the process to resolve tasks stopped due to health and/or safety conditions that put employees at risk.

104

Knowledge Check

If a resident or adult is not home to allow access to apartment that reported flooding condition, the maintenance worker:

a. Waits for resident to request a visit
b. Disregards the leak issue
c. Uses NYCHA's Right of Entry

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Knowledge Check

If a resident or adult is not home to allow access to apartment that reported flooding condition, the maintenance worker:

a. Waits for resident to request a visit
b. Disregards the leak issue
c. Uses NYCHA's Right of Entry

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Knowledge Check

If resident refuses to provide access to apartment with emergency leak, the property maintenance supervisor or assistant maintenance supervisor contacts:

a. Property manager
b. Assistant property manager
c. All of the above

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Knowledge Check

If resident refuses to provide access to apartment with emergency leak, the property maintenance supervisor or assistant maintenance supervisor contacts:

a. Property manager
b. Assistant property manager
c. All of the above.

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Identify the Source of Root Causes

Determine whether Root Cause of leak originates **Within Impacted Apartment** or in an **Above or Adjacent Apartment.**

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Root Causes

The primary reason(s) for the occurrence of flooding, leak, and/or excessive moisture:

- Leaks and overflows from plumbing fixtures (e.g., sinks, toilets, tubs).
- Leaks from domestic water supply and branch pipes.
- Leaks in drainage and waste riser and branch pipes.
- Deterioration of the building envelope (e.g., façade, roofs, window lintels).
- Improperly insulated or uninsulated cold-water supply pipes, among others.

Timely identifying and correcting the root cause(s) **is essential to avoiding damage to building components** and to ensuring that **the condition does not recur.**

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Root Causes

When responding to a parent Leak Work Order, select **up to four (4)** Root Causes. At least **one (1) Root Cause** should be selected to close a Work Order.

1. Appliance Issues
2. Bathtub Shower Issues
3. Caulking Damaged, Missing, Loose (Caulking DML)
4. Grouting Damaged, Missing, Loose (Grouting DML)
5. Leak Around Window
6. Leak From Above/Adjacent - Investigate
7. Leak From Above/Adjacent - Previously Identified
8. Leak Through Façade
9. Pipe Condensation
10. Pipe Condensation - Previously Addressed
11. Plumbing Leak - In Unit
12. Radiator Unit Leak
13. Resident Caused
14. Roof Leak
15. Sink Issues - In Unit
16. Toilet Issues - In Unit
17. Other

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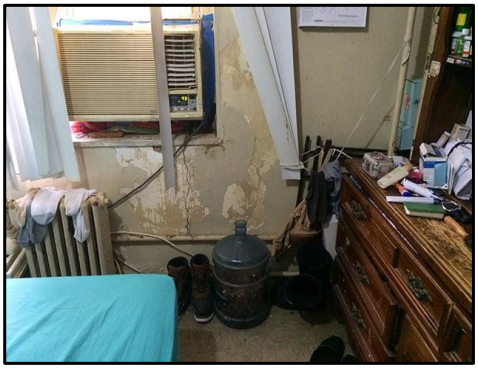
Root Cause #1

Appliance Issues:

Appliance Issues should be selected when the cause of leak, water damage, or excessive moisture is attributed to **improper installation or failure of appliances** (e.g., washing machine, air conditioner, dishwasher).



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Continued…

112

Root Cause #1

Appliance Issues:

- **Improperly Installed Dishwasher (or Tubing) -** Instruct the resident to contact a repair service for the dishwasher and to not use the dishwasher until it is properly repaired and/or connected.

- **Improperly Installed Washing Machine (or Tubing) -** Instruct the resident to contact a repair service for the washing machine and to not use the washing machine until it is properly repaired and/or connected.

Continued…

If dishwasher or washing machine is leaking, **shut off the water valves.**

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Root Cause #1

Appliance Issues:

- **Improperly Installed Air Conditioner -** Instruct the resident to contact a repair service for the air conditioner and to not use the air conditioner until it is properly repaired and/or connected.

- **Improperly Installed Freezer** - Instruct the resident to contact a repair service for the freezer and to not use the freezer until it is properly repaired.

If an air conditioner is improperly installed and presents a clear and present danger, immediately remove the air conditioner and install a window guard in its place.

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Root Cause #1

If maintenance worker observes leaking appliances:

- **Disconnect the appliance** and **instruct the resident** to get the appliance repaired, installed correctly, or remove the appliance.
- **Inform the APMS or APMS** who should notify the property management office.
- **Property management must** take prompt follow up action to confirm the appliance is authorized and to ensure the appliance is properly installed or repaired.
- If the resident fails to repair, properly install, or remove the appliance from the apartment, **NYCHA may commence a termination of tenancy action for breach of rules and regulations.**

See the *Management Manual Chapter I, Occupancy, Section X, Appliances,* for NYCHA policies related to resident installed appliances.

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Root Cause #2

Bathtub Shower Issues:

Bathtub Shower Issues should be selected when the cause of the leak, water damage, or excessive moisture is attributed to **any damage to the bathtub or shower** (e.g., damaged or cracked bathtub, damaged or cracked tub enclosure, faucet leaks).

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Root Cause #3

Caulking Damaged, Missing, Loose (Caulking DML):

Caulking DML should be selected when the cause of the leak, water damage, or excessive moisture is attributed to **water penetration through a missing or damaged area of bathtub/shower caulking.**

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Root Cause #4

Grouting Damaged, Missing, Loose (Grouting DML):

Grouting DML should be selected when the cause of the leak, water damage, or excessive moisture is attributed to water penetration **through missing or damaged areas of bathtub or shower grout** (e.g., missing or damaged tiles, missing or chipping grout, missing mortar).

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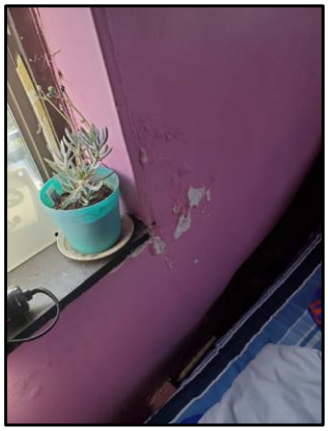
Root Cause #5

Leak Around Window:

Leak Around Window should be selected when the cause of the leak, water damage, or excessive moisture is attributed to **missing, damaged, or inadequate sealant** around a window, or a **poorly installed window**, which allows water to penetrate the building.



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Root Cause #6

Leak From Above/Adjacent – *Investigate:*

Should be selected when the cause of the leak, water damage, or excessive moisture is attributed to **an active leak from the apartment above or adjacent to the impacted apartment**.

Use moisture meter when tracing leaks from above!

Make sure to identify **the source of the leak** before you select this root cause.

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Root Cause #7

Leak From Above/Adjacent – *Previously Identified:*

Leak From Above/Adjacent - Previously Identified should be selected when the cause of the leak, water damage, or excessive moisture **has been already identified and abated**, or there i**s an existing open work order to abate** that you confirmed.

Make sure to verify **that there is an existing (or recently completed) work order** before you select this root cause.

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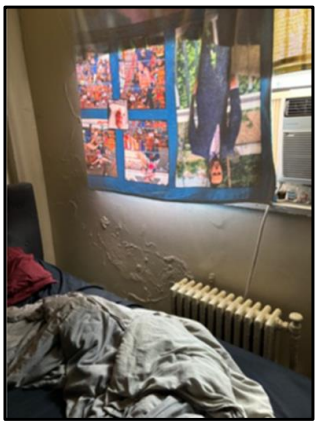
Root Cause #8

Leak Through Façade:

Leak Through Façade should be selected when the cause of the leak, water damage, or excessive moisture is attributed to **damaged, cracked, or missing mortar** on the exterior wall.



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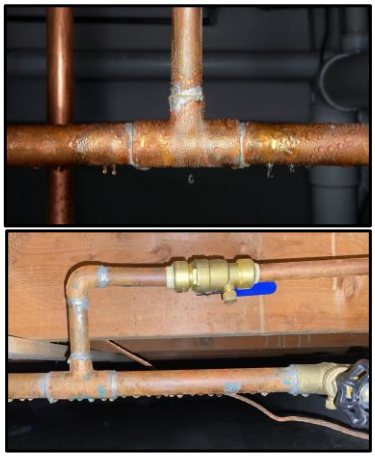
Root Cause #9

Pipe Condensation:

Pipe Condensation should be selected when the cause of the **excessive moisture or water damage** is attributed to condensation on the cold-water risers and/or branch lines.

Make a small wall break to diagnose!



Condensation is most likely to be the contributing root cause when you **observe missing or damaged pipe insulation** and **water damage and/or mold on the lower 3 feet** of the chase wall.

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Root Cause #10

Pipe Condensation – *Previously Addressed:*

Pipe Condensation - Previously Addressed should be selected when the cause of the excessive moisture is attributed to **condensation on the cold-water risers or branch lines, but mold resistant materials have been already applied** (e.g., fiberglass-faced gypsum board and mold-resistant paint).

Make a small wall break to diagnose!

Applying mold-resistant materials to prevent mold growth is known as 'Interim Controls'. If 'Interim Controls' were applied there should be **no visible mold or water damage.**

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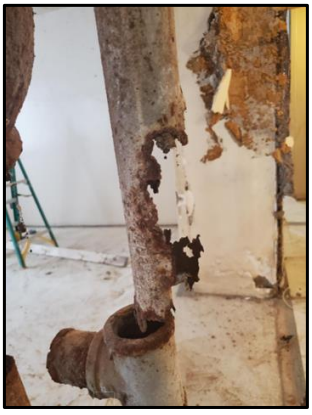
Root Cause #11

Plumbing Leak – In Unit:

Plumbing Leak - In Unit should be selected when the cause of the leak, water damage, or excessive moisture is attributed to a **plumbing leak within the apartment** (e.g., clogged lines, corrosion, broken seals, damaged joints, loose connectors).

Wet readings will not extend to the upper section of the chase wall, when the leak originates within impacted apartment.



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Root Cause #12

Radiator Unit Leak:

Radiator Unit Leak should be selected when the cause of the leak, water damage, or excessive moisture is attributed to **excessive steam or a leak from a radiator unit.**

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Root Cause #13

Resident Caused:

Resident Caused should be selected when the cause of the leak, water damage, or excessive moisture is attributed **to specific resident actions or inactions** (e.g., allowing fixtures to overflow, improper disposal of waste, leaving the windows open during rain or a storm).

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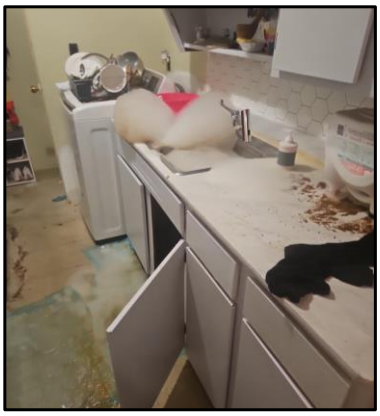
Continued…

127

Root Cause #13

Resident Caused:

- **Improper Disposal of Waste Materials Down the Drains:** Instruct the resident not to dispose waste objects other than toilet paper in toilets down the drains (e.g., kitchen grease, paper towels, disposable diapers, cotton balls).
- **Overflowing Fixtures:** Instruct the resident not to overfill or overflow sinks and tubs.
- **Other:** Provide other instructions to the resident, as needed, based on conditions, and enter details in the 'Work Log'.



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Root Cause #14

Roof Leak:

Roof Leak should be selected when the cause of the leak, water damage, or excessive moisture is attributed to **damage to the roof** (e.g., punctured seals, cracked flashing, loose or broken shingles, worn down roofing materials, etc.).

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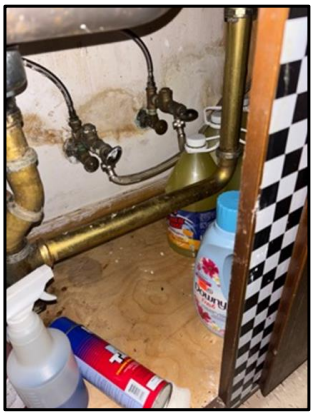
Root Cause #15

Sink Issues – In Unit:

Sink Issues - In Unit should be selected when the cause of the leak, water damage, or excessive moisture is attributed to the **improper installation of the sink or a sink leak** (e.g., leaking faucets, damage to the shut off valve, stoppages, loose or damaged connections or joints, etc.).



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Root Cause #16

Toilet Issues – In Unit

Toilet Issues - In Unit should be selected when the cause of the leak, water damage, or excessive moisture is attributed to **improper installation of the toilet or a toilet leak** (e.g., leaking bowl, running water, loose wax ring, loose flange bolts, deteriorated flappers, faulty ballcocks, etc.).

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Root Cause #17

Other:

Other should be selected when the cause of the leak, water damage, or excessive **moisture is not available for selection in the dropdown menu**.

Describe suspected root cause or conditions observed in the 'Work Log' in the iWM App.

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Identifying Root Causes- Impacted Unit

Root cause originates within the currect apartment? Check the following:

- ✓ Drain lines and lead bends above showers and toilets.
- ✓ Exterior wall condition.
- ✓ Sink (i.e., backsplash, faucets, waste lines).
- ✓ Shower body (i.e., escutcheon plates, stems, or cartridges) and whether the shower body, tub/diverter spout and shower head are operating properly.
- ✓ Toilet (i.e., internal toilet parts, or flapper) and whether the bowl is loose/affixed to the floor, whether the toilet is constantly running and/or displays visible condensation.
- ✓ Window frame and area around window lintels.
- ✓ Whether the washing machine, if any, is properly installed.
- ✓ Whether the air conditioner(s), if any, is properly installed.
- ✓ Whether the freezer, if any, is properly installed.
- ✓ Whether the dishwasher, if any, is properly installed.

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Do it Yourself!

Leak Detection – Hands-On

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Take a Lunch Break!

- We appreciate your participation!
- Our job is to provide training that will give you the capability to conduct leak evaluation & control.
- Please let the instructor or any EEA staff if there's anything we can do to improve your learning experience.

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NYCHA LEAK TRAINING

136

Leak Inspection – iWM App

Begin Inspection
- ❖INSLEAK Job plan

Task 10: Evaluation of Conditions
- ❖Is there flooding condition?
- ❖Is there standing water?
- ❖Is there active leak?

Task 20: Probable Cause
- ❖Is moisture measurement >/= to 599?
- ❖Is wall break required?
  - Is there suspect ACM?
  - Is there mold on back of sheetrock?

Task 30: General Evaluation
- ❖Is there mold growth?
- ❖Cockroaches?
- ❖Rodent droppings?

Child work orders as needed
- ❖Create follow up repairs if needed.

Submit report
- ❖Close work order

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Inspection Steps

Step One: Evaluation of Conditions

Inspect the apartment for leaks, excessive moisture, and water damage.

Step Two: Probable (Root) Cause

Inspect surfaces in the apartment (e.g., cabinets, ceilings, floors, or walls) for any signs of the leak, excessive moisture, or water damage to locate the root cause of the leak (e.g., uses leak inspection tools to trace the leak to its source).

Step Three: General Evaluation (If Applicable)

Visually inspect the impacted area for environmental issues (i.e., mold or pest infestation).

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Inspection Steps

Step One: Evaluation of Conditions

- Inspect the apartment for leaks, excessive moisture, and water damage.
- Take steps to abate active flooding or remove standing water, if applicable.

Follow the iWM App prompts to log your findings!

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Step One: Evaluation of Conditions

Q1: Is there a flooding condition?

Floods and Emergency Leaks are to be abated **within 24 hours** after the condition is reported to NYCHA.

- **No**

- **Corrective Action Taken (CAT)**
  Select this option if you observed flooding and **you were able** to take a corrective action to abate the condition during the visit.

  Maximo automatically creates a closed child work order with failure class '**FLOODING**' and problem code '**ABATED**' to document that the flooding was abated during the visit.

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Continued…

140

Step One: Evaluation of Conditions

Q1: Is there a flooding condition?

- **Needs Abatement**
  Select this option if you observed flooding and **you were not able** to abate the condition or stop the flow of water during the visit.

Maximo automatically creates a child work order with failure class '**FLOODING**' and problem code '**NEEDSABATEMENT**' for a follow up response.

Notify the **PMS or APMS immediately** if a follow up response needed to abate active flooding.

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Active Flood Emergency

If shutting off the riser is needed to stop an active flood (i.e., there is gushing water):

- **During Normal Business Hours**: PMS or APMS must contact the Neighborhood Administrator, or above titles, to request prior authorization.
- **Outside Normal Business Hours**: EMSD maintenance workers are authorized to shut off a supply riser if needed to stop a flood or severe leak condition.

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Step One: Evaluation of Conditions

Q2. Is there Standing Water?

- **No**

- **Corrective Action Taken (CAT)**

  Select this option if you observed standing water and **you were able to** take a corrective action to remove it during the visit.

  Maximo automatically creates a closed child work order with failure class '**LEAKFOLLOWUP**' and problem code '**NEEDSWATERREMOVAL**' to document standing water was removed.

Continued…

Standing water is to be removed **within 48 hours** after the condition is reported to NYCHA.

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Step One: Evaluation of Conditions

Q2. Is there Standing Water?

- **Standing Water within One Room**

  Select this option if you observed standing water in one room, and **you were not able** to remove it during the initial visit.

  Maximo automatically creates a child work order with failure class '**LEAKFOLLOWUP**', problem code '**NEEDSWATERREMOVAL**', and job plan '**STDWATER1ROOM**' for a follow up response.

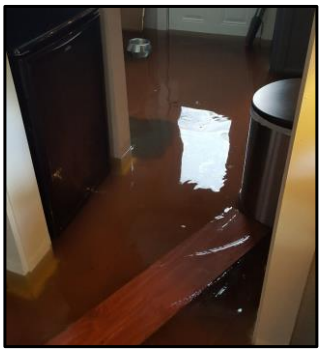
- **Standing Water Extends into Other Rooms**

  Select this option if you observed standing water in multiple rooms, and **you were not able** to remove it during the initial visit.

  Maximo automatically creates a child work order with failure class '**LEAKFOLLOWUP**', problem code '**NEEDSWATERREMOVAL**', and job plan '**STDWATEROTRROOMS**' for a follow up response.

144

Step One: Evaluation of Conditions



Q2. Is there Standing Water?

- **Standing Water Apartment Wide or Greater than One Inch Deep**

  Select this option if you observed standing water apartment wide or 1" deep (or more), and **you were not able** to remove it during the initial visit.

Maximo automatically creates a child work order with failure class '**LEAKFOLLOWUP**', problem code '**NEEDSWATERREMOVAL**', and job plan '**STDWATERAPTWIDE**' for a follow up response.

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Standing Water Removal

- Request **Caretaker** to assist while you have access to unit.
- Create child WO '**Leak Follow Up/Needs Water Removal**'
- Immediately **notify APMS/ PMS**
- APMS/ PMS will notify **SOHC**
- SOHC will dispatch **Caretaker**
- **SOHC** will verify work is completed and **close WO** in Maximo.

Not able to remove standing water right away?

Notify the **PMS or APMS immediately** if a follow up response needed to remove standing water.

146

Step One: Evaluation of Conditions

Q3. Is there an active leak(s)?

- **No**
- **Yes**
  Select this option if the leak is ongoing at the time of the visit. This will help to escalate a repair request, if needed!

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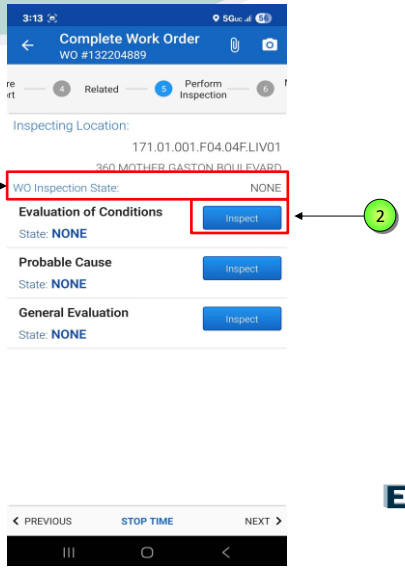
Perform Inspection

The first task in a series of tasks is **Task 10: Evaluation of Conditions**

1. The **WO Inspection State** is **NONE.**
2. Tap **'Inspect'**



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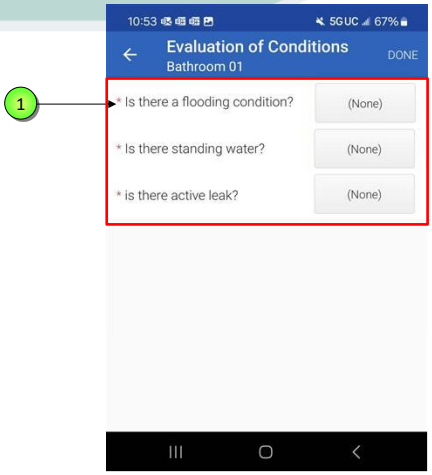
Evaluation of Conditions

1. During this step, the maintenance worker evaluates the overall severity of the leak and takes steps to abate a flooding condition or remove standing water, if observed.

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



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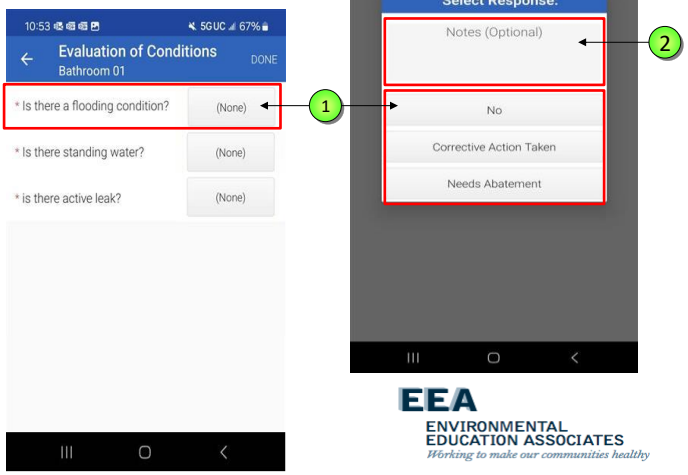
Evaluation of Conditions – Flooding

1. Response options for '**Is there a Flooding Condition?'** are:
   - No
   - Corrective Action Taken (CAT)
   - Needs Abatement
2. In the **Notes** field, the user can input free-text information.



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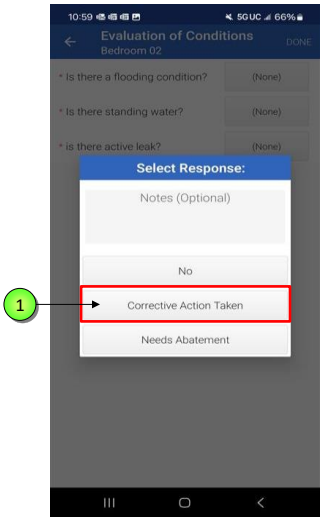
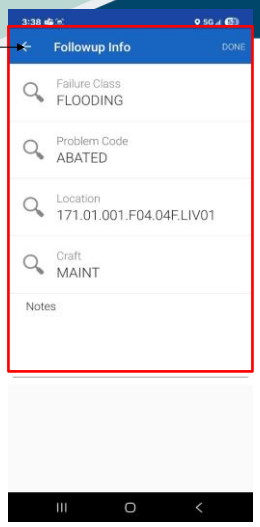
Evaluation of Conditions – Flooding

1. If maintenance worker **is able to abate flooding** during the visit, select '**Corrective Action Taken' (CAT).**
2. iWM App will prompt '**Followup Info**' screen showing:
   - Failure Class
   - Problem Code
   - Location
   - Craft (defaulted to **MAINT)**

Note: *Selecting this option will create a* ***closed*** *child work order to document that flooding was abated.*





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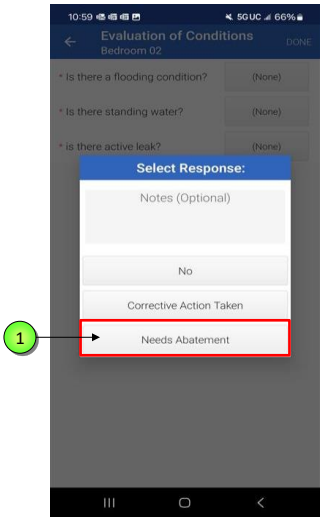
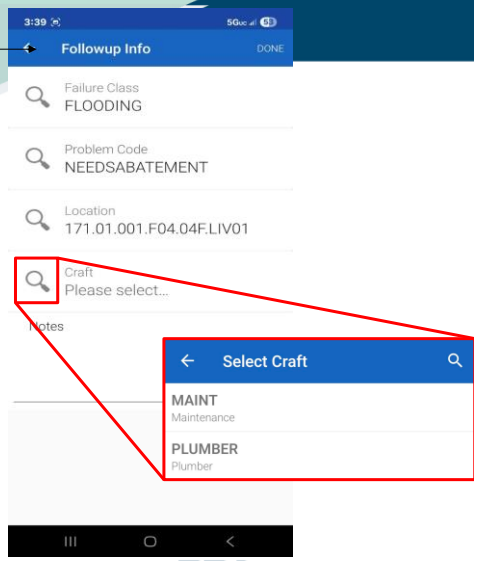
Evaluation of Conditions – Flooding

1. If maintenance worker **is not able to abate flooding** during the visit, select **'Needs Abatement'** to create a work order for the follow up response.
2. iWM App will prompt '**Followup Info**' screen showing:
   - Failure Class
   - Problem Code
   - Location
   - Craft (select **MAINT** or **PLUMBER)**

Note: *Selecting this option will create an* ***open*** *child work order to abate active flood.*





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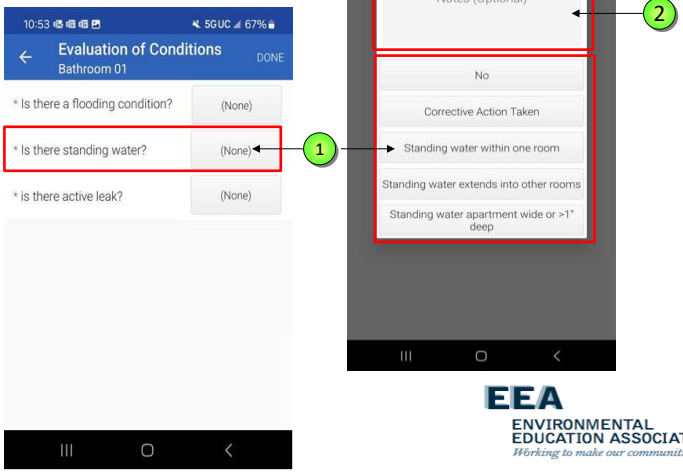
Evaluation of Conditions – Standing Water

1. Response options for **'Is there Standing Water?'** are:
   - No
   - Corrective Action Taken (CAT)
   - Standing water within one room
   - Standing water extends into other rooms
   - Standing water apartment wide or >1" deep
2. In the **Notes** field, the user can input free-text information.



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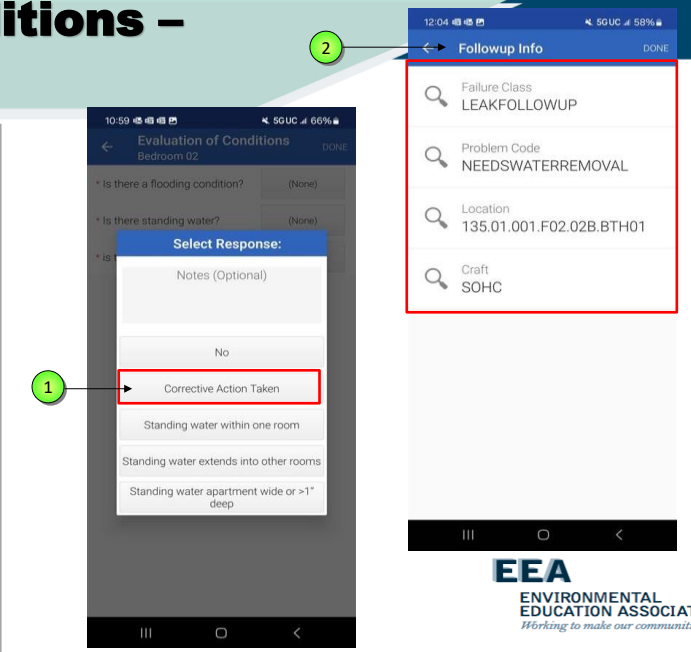
Evaluation of Conditions – Standing Water

1. If maintenance worker **is able to remove standing water** during the visit, select **'Corrective Action Taken' (CAT).**
2. iWM App will prompt **'Followup Info'** screen showing:
   - Failure Class
   - Problem Code
   - Location
   - Craft (defaulted to **SOHC).**

Note: *Selecting this option will create a* ***closed*** *child work order to document that standing water was removed.*



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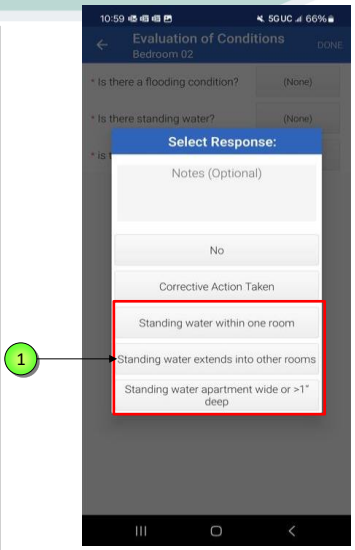
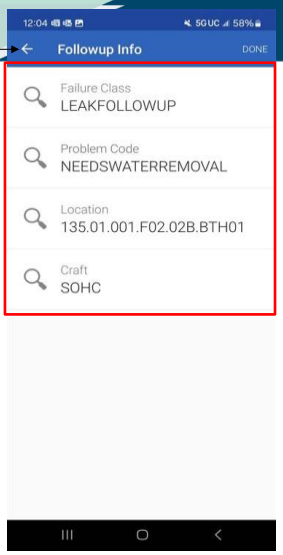
Evaluation of Conditions – Standing Water

1. If maintenance worker **is <u>not able</u> to remove standing water** during the visit, select the appropriate option to create a work order for the follow up response.

2. iWM App will prompt **'Followup Info'** screen showing:
   - Failure Class
   - Problem Code
   - Location
   - Craft (defaulted to **SOHC).**

*Note: Selecting this option will create an **<u>open</u>** child work order to remove standing water*





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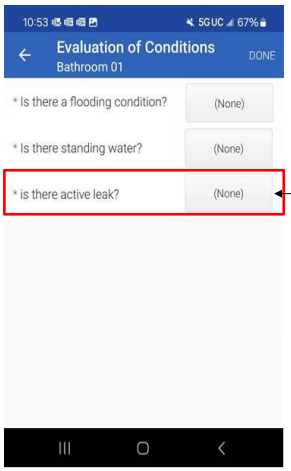
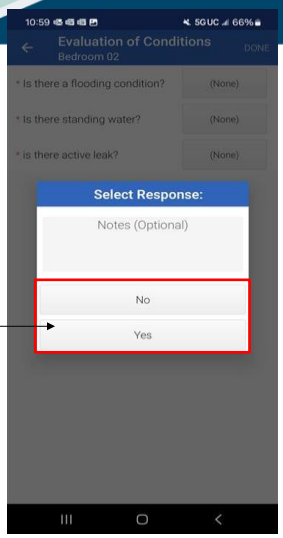
Evaluation of Conditions – Active Leak

1. Response options for '**Is there Active Leak?'** are:
   - No
   - Yes

***<u>Note:</u>** Select '**Yes**' if there is an active leak at the time of inspection.*





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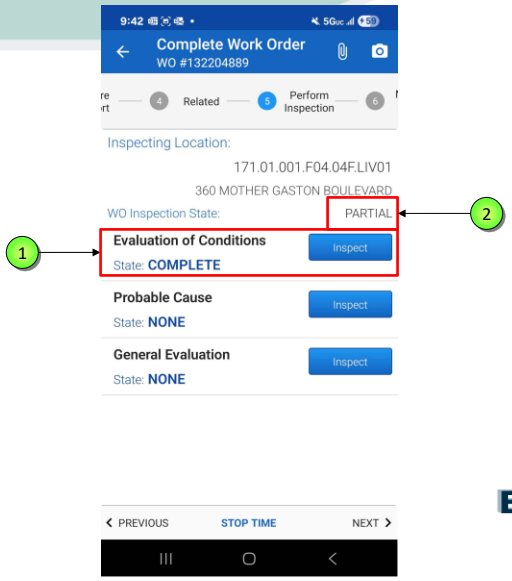
Evaluation of Conditions

1. **Task 10: Evaluation of Conditions** is now completed.
2. **The 'WO Inspection State'** is **'PARTIAL'** because the **Task 20: Probable Cause** task needs to be completed as well.



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Knowledge Check

When responding to a work order, the maintenance worker uses the handheld device and starts the time of the work order:

a. When at the apartment door
b. Before getting to the apartment
c. After leaving the apartment

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Knowledge Check

When responding to a work order, the maintenance worker uses the handheld device and starts the time of the work order:

a. When at the apartment door
b. Before getting to the apartment
c. After leaving the apartment

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Knowledge Check

Maintenance worker reviews list of work orders daily and prioritizes work in accordance with:

a. Severity
b. Priority
c. All of the above

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Knowledge Check

Maintenance worker reviews list of work orders daily and prioritizes work in accordance with:

a. Severity
b. Priority
c. All of the above

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Knowledge Check

To shut off a riser, to stop an active flood, the property maintenance supervisor or assistant property maintenance supervisor must get permission from the:

a. Borough Vice-President
b. Compliance Department
c. Tenant

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Knowledge Check

To shut off a riser, to stop an active flood, the property maintenance supervisor or assistant property maintenance supervisor must get permission from the:

a. Borough Vice-President
b. Compliance Department
c. Tenant

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Knowledge Check

If maintenance worker abated active flooding when responding to the leak work order, how does maintenance worker document this in the handheld?

Maintenance worker select in the 'Perform Inspection' tab:

a. Needs Abatement
b. Corrective Action Taken
c. Documents in the 'Work Log' only

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Knowledge Check

If maintenance worker abated active flooding when responding to the leak work order, how does maintenance worker document this in the handheld?

Maintenance worker select in the 'Perform Inspection' tab:

a. Needs Abatement
b. Corrective Action Taken
c. Documents in the 'Work Log' only

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165

Knowledge Check

What are the procedures if the resident is not home to allow access to the unit during an emergency leak?

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Knowledge Check

What are the procedures if the resident is not home to allow access to the unit during an emergency leak?

The maintenance worker may use NYCHA's Right of Entry to access the apartment following the steps in SP 040:17:3, *Accessing Public Housing Apartments When Tenant Not Home to Address Deficiencies Related to Leaks, Mold, and Lead-Based Paint.*

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Inspection Steps

Step Two: Probable (Root) Cause

- Use moisture meter to inspect apartment for leaks, water damage or hidden moisture, when applicable.
- Document any wall breaks made, when applicable.
- Identify and document the root cause(s).

Follow the iWM App prompts to log your findings!

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Step Two: Root Cause

Q1. Is the moisture meter equal or higher than 599?

- **No**
  Document the highest moisture meter measurement.

- **Yes**
  Document the highest moisture meter measurement **against each impacted surface** (e.g., Wall 1, Wall 2, Wall 3, Wall 4, Ceiling, Floor) in the iWM App.

If you see **visible moisture** (e.g., water leaking from the ceiling), **you can manually enter 999 on the work order** since the active leak or wet surface will measure wet.

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Step Two: Root Cause

Inspect surfaces in the room (e.g., cabinets, ceilings, floors, or walls) for any signs of the leak, excessive moisture, or water damage **by using a moisture meter:**

- Check each wall and ceiling in the room you are inspecting.
- Inspect kitchen sink cabinets and bathroom vanities.
- Inspect around P-traps and lead bends.

A moisture meter quickly and accurately detects hidden leaks without damaging surfaces or helps to pinpoint to where a root cause of the leak might be coming from.

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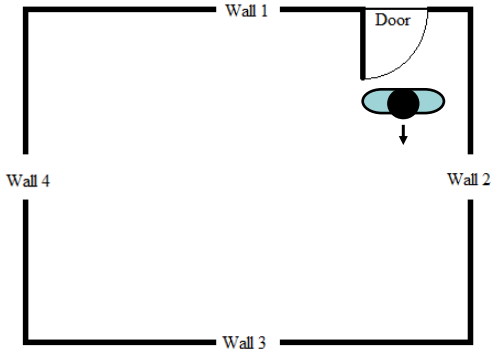
Step Two: Root Cause

Wall Numbers

- **Wall 1:** The wall with the door.
- **Wall 2:** The wall to your left upon entering.
- **Wall 3:** The wall you are facing upon entering.
- **Wall 4:** The wall to your right upon entering.



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Step Two: Root Cause

Q2. Is Wall Break Required?

- **No**
- **Yes**
  Select this options if you need to make a wall break to identify the location of the root cause and/or provide access to further repairs.

Make sure to document completed wall break by selecting repair code '**WALLBROKEN**' or '**WALLBREAKCOMPLETED**', or entering details in the 'Work Log' in the iWM App.

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Step Two: Root Cause

When a chase wall measures equal to or greater than 599 on a moisture meter, **wet readings do not extend to the upper section of the wall**, and the root cause(s) of the leak or wet condition is not readily visible:

- Make a small wall break in the room
- Inspect the conditions within the wall cavity to identify the root cause

The root cause could be attributed to an active leak within the wall cavity or to uninsulated cold water supply pipes that are causing moisture to penetrate into the walls or apartment.

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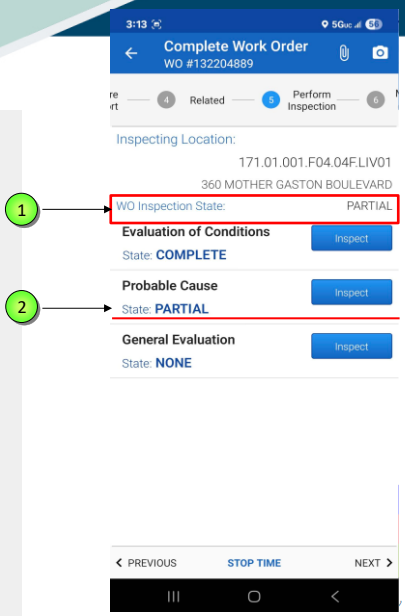
Step Two: Root Cause

- **If not able to complete a wall break** during the initial visit (e.g., the resident needs to remove personal property), **do not close parent Leak Work Order**.
  - Complete *Step One: Evaluation of Conditions.*
  - Document in the 'Work Log' that a *follow up visit is needed* to conduct a wall break.
  - Coordinate with the resident *the follow up visit time*, when possible.
- The parent Leak Work Order **remains open** until staff returns to complete the wall break and identify the root cause ('Inspection State' = 'Partial').



174

Step Two: Root Cause

Q3. Is there (suspected) asbestos on pipe insulation that will be disturbed?

- **No**
- **Yes**
  Select this option if you observe suspected ACM on pipe insulation that could be disturbed during the wall break or repairs.

Create a child work order with failure class '**ASBESTOS**' and problem code '**ASBPIPEABATE**' (owner group '**TSDEFO**') to request abatement of asbestos.

See Standard Procedure 050:25:1, *Asbestos Safe Housing Procedure.*

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Step Two: Root Cause

- If you observe suspected ACM that could be disturbed over the course of wall break or follow up repairs, **immediately stop the work.**
- Notify the APMS or PMS that asbestos abatement is needed.
- APMS or PMS will notify NYCHA Asbestos Department about the asbestos abatement request and to coordinate scheduling.
- Because of the emergency nature of pipe leaks, **asbestos abatement may be performed without a prior asbestos survey,** as outlined in Standard Procedure 050:25:1, *Asbestos Safe Housing Procedure.*

Continued…

Insulation with a fabric wrapping or corrugated appearance is typical of asbestos containing material.

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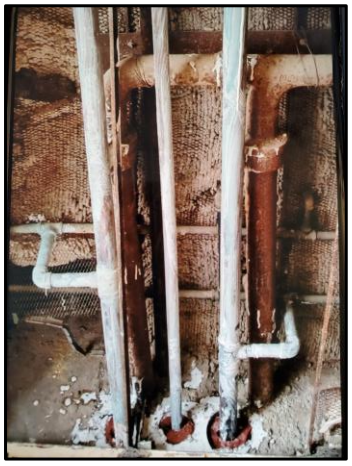
Step Two: Root Cause

- No NYCHA employee or vendor shall disturb any ACM as part of their duties unless they have had the appropriate training to perform the task.
- Failing to test ACM/suspect ACM prior to disturbing it violates NYCHA's policy for the handling of ACM. Failure to follow the established protocol for the assessment and removal of asbestos can pose a health risk to both NYCHA residents and staff.
- NYCHA staff must follow the criteria and instructions in Standard Procedure 050:25:1, *Asbestos Safe Housing Procedure* to identify, investigate, test, and abate ACM and presumed ACM in NYCHA buildings, apartments, and common areas.



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Step Two: Root Cause

Q4. Is there mold on the backside of sheetrock? (sheetrock locations only*)

- **No**
- **Yes**
  Select this option if you observe mold on the backside of sheetrock during inspection (e.g., you made initial wall break and were inspecting conditions behind the wall cavity).

Create a child work order with failure class '**WALL**' and problem code '**SHEETROCKDML**' to replace the sheetrock.

Note in the 'Work Log' that the **mold is on the back side of the sheetrock** to assist follow up trades with repairs.

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Step Two: Root Cause

- The water damaged or moldy sheetrock must be **replaced with fiberglass-faced gypsum board** in sheetrock constructions.
- If mold is found **on the back side of a sheetrock wall of an adjacent room or an adjacent apartment**, create a Mold Inspection Work Order following inspection prompts and complete Mold Inspection, as outlined in the Mold SP.

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Step Two: Root Cause

Q5: Select one of the Root Causes

1. Appliance Issues
2. Bathtub Shower Issues
3. Caulking Damaged, Missing, Loose (Caulking DML)
4. Grouting Damaged, Missing, Loose (Grouting DML)
5. Leak Around Window
6. Leak From Above/Adjacent - Investigate
7. Leak From Above/Adjacent - Previously Identified
8. Leak Through Façade
9. Pipe Condensation
10. Pipe Condensation - Previously Addressed
11. Plumbing Leak - In Unit
12. Radiator Unit Leak
13. Resident Caused
14. Roof Leak
15. Sink Issues - In Unit
16. Toilet Issues - In Unit
17. Other

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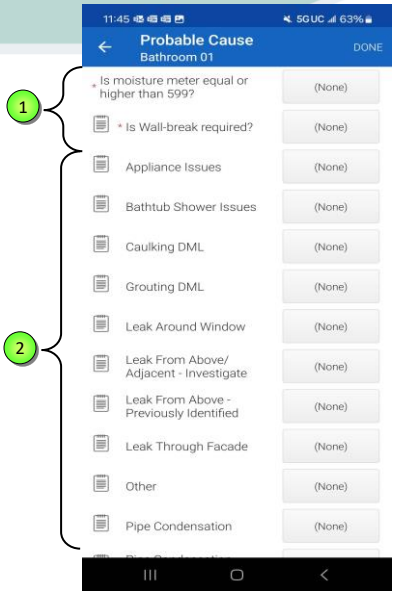
Step Two: Root Cause

During this step, the maintenance worker inspects surfaces for water damage and documents root cause(s) in Maximo.

1. All questions that have an asterisk (*) are **mandatory**.
2. At least **one Probable Cause** should be selected.



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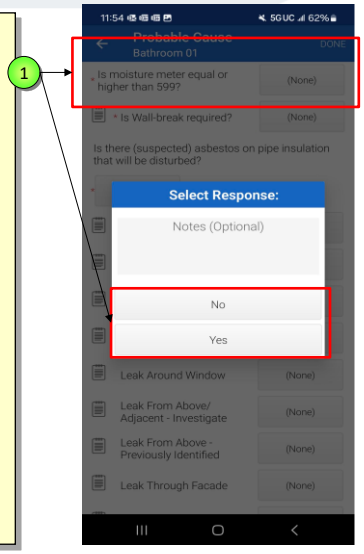
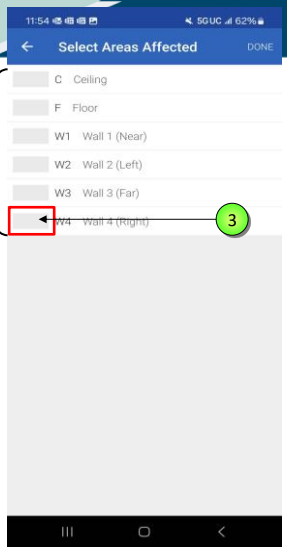
Root Cause – Moisture Meter

1. Response options for **'Is Moisture Meter Equal or Higher than 599'** are:
   - No
   - Yes
2. If '**No**', document the highest moisture meter measurement (below 599).
   If '**Yes**', document the highest moisture meter measurement per each surface (equal or above 599).
3. To input value, **select the location** you found moisture in and then tap on the grey box next to it.





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Root Cause – Moisture Meter

1. **Moisture meter readings** must be taken and documented for parent Leak Work Orders created with the following FC/PCs.

2. ***Note**: Taking moisture meter readings will be **optional for other FC/PCs.***

Failure Class (FC)	Problem Code (PC)
LEAKFROMABOVE	CONSTANTDRIPPING
LEAKFROMABOVE	CONSTANTLEAKING
LEAKFROMABOVE	FLOODING
LEAKFROMABOVE	WATERPENETRATION
EXCESSIVEMOISTURE	EXCESSIVEMOISTURE
PIPES	PIPENEEDSREPAIR
PIPES	PIPESLEAK
WALLS	WALLLEAK
WALLS	WATERDAMAGE

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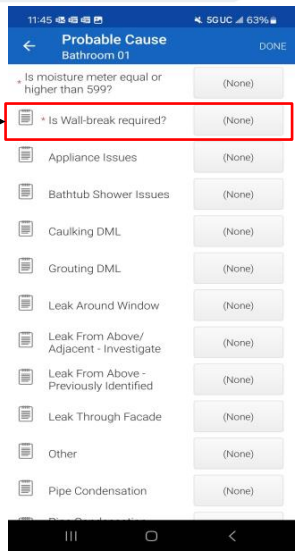
Root Cause – Wall Break

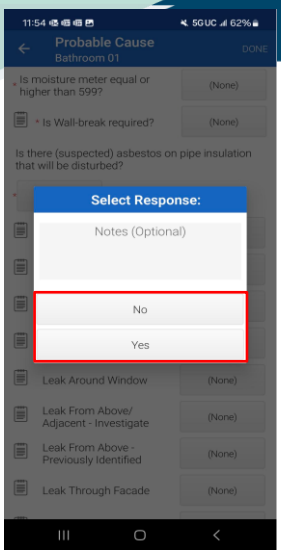
1. Response options for **'Is wall break required?'** are:

   - No
   - Yes

***Note:** Select **'Yes'** if wall break needs to be made to identify root cause and/or complete repairs.*

If **not able to do the wall break** during the visit (e.g., tenant needs to move personal property) **complete Task 10** and enter in Work Log that need to return to conduct a wall break.





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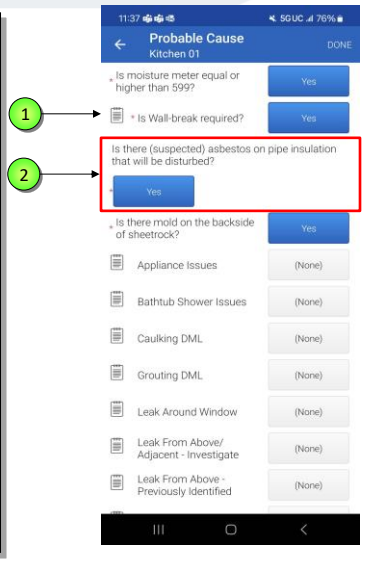
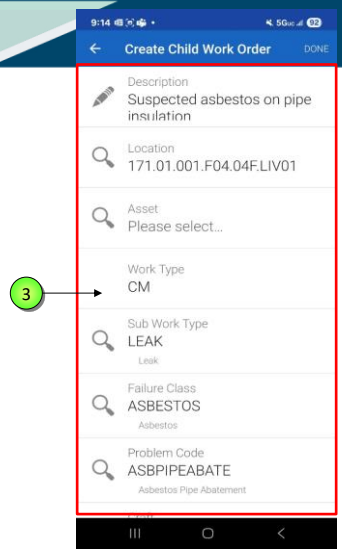
Root Cause – Asbestos*

1. If you identify that **wall break is required**, iWM App will prompt **two additional questions.**

2. Response options for **'Is there Suspected Asbestos on Pipe Insulation that will be disturbed?'** are:
   - No
   - Yes

3. If you identify suspected asbestos containing material (ACM) that might be disturbed during repairs, **you must create a child work order** with failure code **'ASBESTOS'** and problem code **'ASBPIPEABATE'.**





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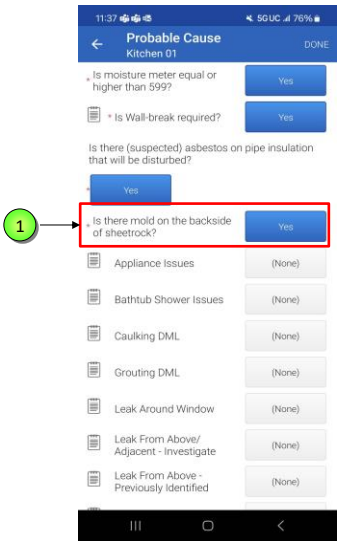
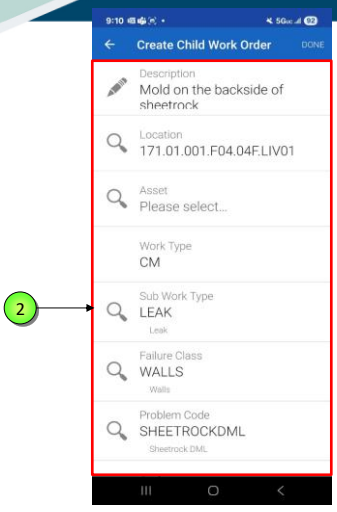
Root Cause – Sheetrock*

1. Response options for **'Is there Mold on the Back Side of Sheetrock?'** are:
   - No
   - Yes

   Note: *For locations that use sheetrock, you must check behind the sheetrock for mold.*

2. If you identify mold on the back side of sheetrock, **you must create a child work** order with a failure class '**WALL'** and a problem code '**SHEETROCKDML'.** Please indicate in the Work Order Description that **'mold on the backside of sheetrock'.**





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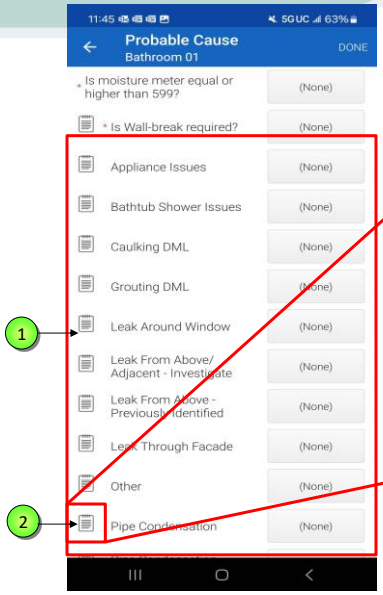
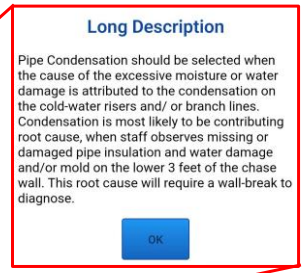
Root Cause

1. Select a **Probable Cause (Root Cause)**.
   - **At least one** Probable Cause should be selected.
   - **Up to four** Probable Causes can be selected.
2. Tap on **Long Description** to learn more information about each Probable Cause.

   Some probable causes will require '**Notes**' and/or '**Location**' to be entered to complete.





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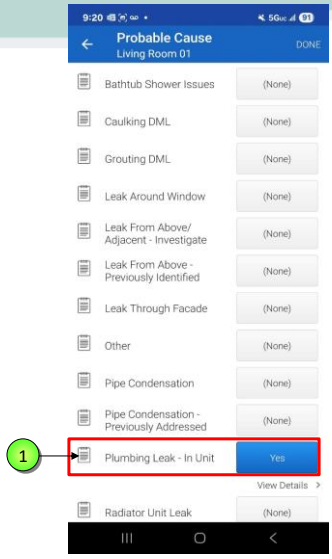
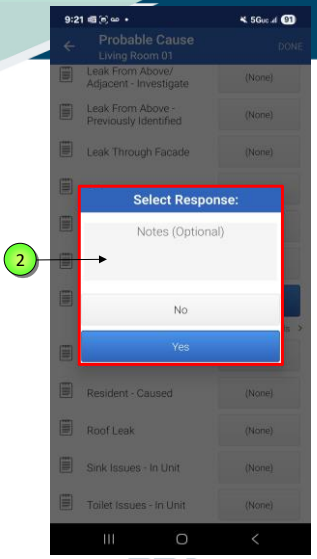
Root Cause – Plumbing (Example #1)

1. Select the root cause(s) that contributed to the leak or water damage complaint (e.g., '**Plumbing Leak – In Unit**').
2. Add 'Notes' as needed.





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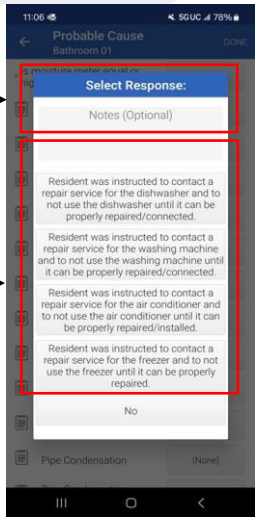
Root Cause – Appliance Issues (Example #2)

1. If root cause is **'Appliance Issues'**, select one of the following options and provide instructions to the resident(s):

   - Improperly Installed Dishwasher (or Tubing)
   - Improperly Installed Washing Machine (or Tubing)
   - Improperly Installed Air Conditioner
   - Improperly Installed Freezer

2. Add 'Notes' as needed.



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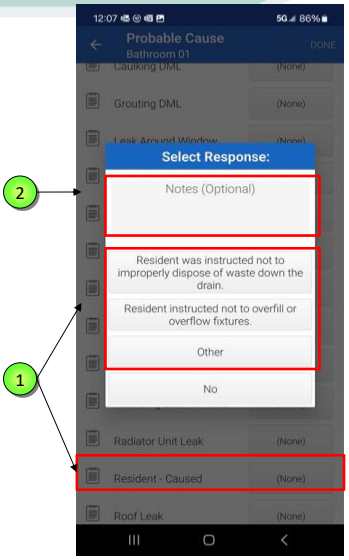
Root Cause – Resident Caused (Example #3)

1. If root cause is **'Resident Caused'**, select one of the following options and provide instructions to the resident(s):

   - Improper Disposal of Waste Materials Down the Drains
   - Overflowing Fixtures
   - Other

2. Add 'Notes' as needed.



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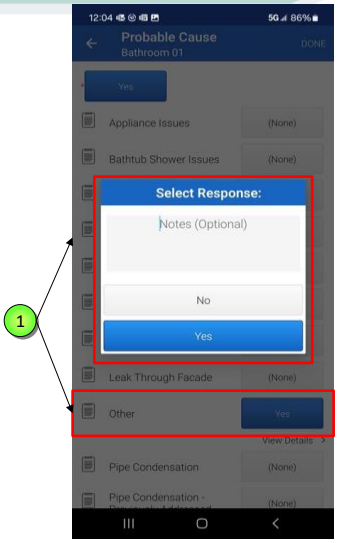
190

Root Cause – Other (Example #4)

1. If root cause is **'Other',** you must enter the identified root cause in the 'Notes' and attach a **photograph** to support their determination.



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Probable Cause - Note Examples

Make sure your 'Note' is helpful to other staff responding to follow up repair requests (child WOs) or reviewing findings in Maximo.

Note 1:

Leak was fixed before.

Note 1:

Shower body repair was done in Apt 2A bathroom in April. Walls and ceiling in 1A bathroom measure dry.

Note 2:

Leak from above PFU.

Note 2:

Unable to access to 2A. Accessed 2B and 3A (no leak). Need to follow up with 2A.

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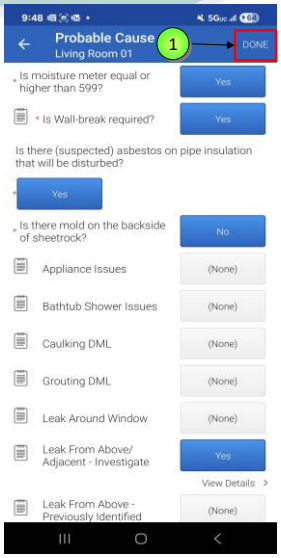
Complete Task: Probable Cause

1. Once you have selected all applicable Probable Causes, tap on **'Done'**.
2. **Task 20: Probable Cause** is now completed.
3. **The WO Inspection State** is **'COMPLETED'**



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Knowledge Check

Bathtub shower Issues should be selected when the cause of the leak, water damage, or excessive moisture is attributed to which of the following:

a. Damaged or cracked tub enclosure
b. Missing grouting
c. Clogged pipes

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Knowledge Check

Bathtub shower Issues should be selected when the cause of the leak, water damage, or excessive moisture is attributed to which of the following:

a. Damaged or cracked tub enclosure
b. Missing grouting
c. Clogged pipes

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Knowledge Check

Caulking DML should be selected when the cause of the leak, water damage, or excessive moisture is attributed to water penetration through:

a. Missing or damaged area of bathtub/shower caulk
b. Walls or foundations
c. Cracks or openings

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Knowledge Check

Caulking DML should be selected when the cause of the leak, water damage, or excessive moisture is attributed to water penetration through:

a. Missing or damaged area of bathtub/shower caulk
b. Walls or foundations
c. Cracks or openings

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Knowledge Check

Grouting DML stand for:

a. Grouting damaged, moldy, and loose
b. Grouting density, moisture, and loose
c. Grouting damaged missing, and loose

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198

Knowledge Check

Grouting DML stand for:

a. Grouting damaged, moldy, and loose
b. Grouting density, moisture, and loose
c. Grouting damaged, missing, and loose

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199

Knowledge Check

What probable cause could be selected when the cause of leak, water damage or excessive moisture is due to improper installation or failure of appliances?

a. Pipe Condensation
b. Resident-Caused
c. Appliance Issues

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Knowledge Check

What probable cause could be selected when the cause of leak, water damage or excessive moisture is due to improper installation or failure of appliances?

a. Pipe Condensation
b. Resident-Caused
c. Appliance Issues

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Inspection Steps

Step Three: General Evaluation (If Applicable):

- Visually inspect the impacted area for environmental issues (e.g., mold or pest infestation.

Follow the iWM App prompts to log your findings!

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Step Three: General Evaluation

This step is required, **if mold or pest conditions are observed.**

If no mold or pests (e.g., roaches or mice) are observed, completing this step is optional.

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Step Three: General Evaluation

Q1. Is there mold growth?

- **No**
- **Yes**

  Select this option if you observe mold during the visit. Record the total estimated square footage of mold on room walls (1-4), floor, ceiling, or any components such as kitchen cabinetry.

Maximo automatically creates a parent Mold Inspection work order with failure class '**MILDEWCONDITION**' and problem code '**NEEDSCLEANING**' for a follow up inspection.

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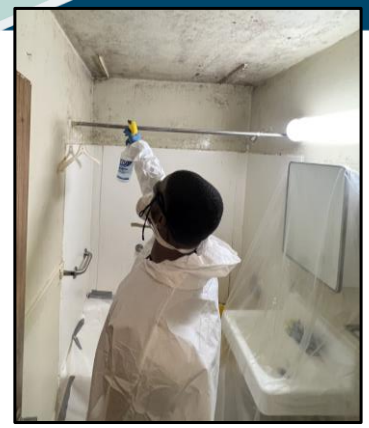
Step Three: General Evaluation

Do you see any Mold?

- **Follow iWM App inspection prompts** to create a Mold Inspection Work Order.
- **Notify APMS or PMS** while you still have access to the unit.
- If you completed *Mold Busters t*raining, APMS or PMS **might assign you to complete Mold Inspection** while you still have access to the apartment.

NYCHA staff must complete **mandatory Mold Busters training** in order to perform mold inspections and/or repairs.



See Standard Procedure 040:14:1, *Mold/Mildew Control in NYCHA Residential Buildings.*

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Step Three: General Evaluation

Q2. Are there cockroaches?

- **No**
- **Yes**
  Select this option if you observe any signs of roach infestation.

Maximo automatically creates a parent Extermination work order with failure class '**EXTERMINATION**' and problem code '**ROACHES**'.

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Step Three: General Evaluation

Q3. Are there rodent droppings?

- **No**
- **Yes**
  Select this option if you observe signs of rodent infestation.

Maximo automatically creates a parent Extermination work order with failure class '**EXTERMINATION**' and problem code '**MICE**'.

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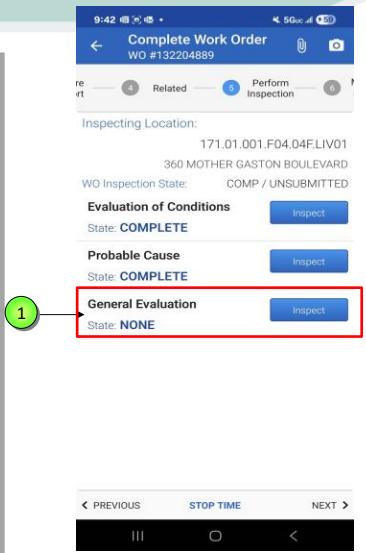
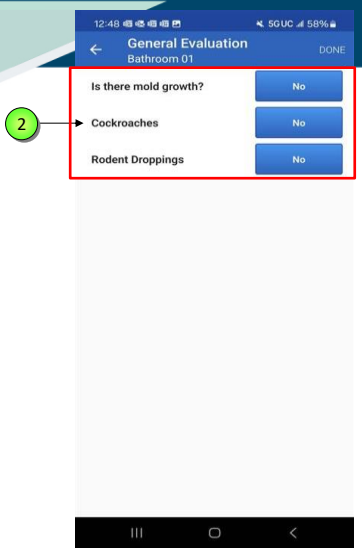
General Evaluation

1. Completing '**Task 30: General Evaluation'** is **optional** for Leak Work Orders.
2. Task 30 has three questions:
   - **1 - Is there Mold Growth?**
   - **2 - Cockroaches**
   - **3 - Rodent Droppings**

Note: *Complete Task 30 if the conditions are observed, otherwise all responses will be defaulted to 'No'.*





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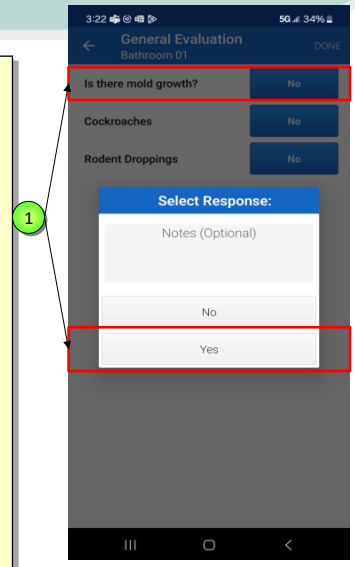
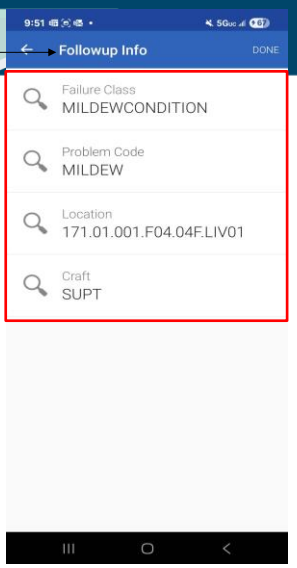
General Evaluation

1. Response options for **'Is there Mold Growth?'** are:
   - No
   - Yes
2. If the response is **'Yes'**, iWM App will prompt '**Followup Info**' screen:
   - Failure Class
   - Problem Code
   - Location
   - Craft
3. ***Note:*** *Selecting this option will create an* ***open*** *parent Mold Inspection Work Order.*





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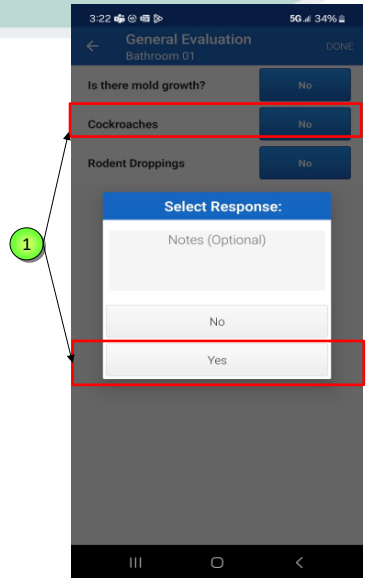
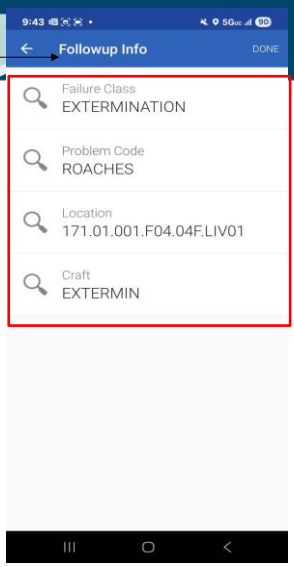
General Evaluation

1. Response options for '**Cockroaches?**' are:
   - No
   - Yes
2. If the response is **'Yes'**, iWM App will prompt '**Followup Info**' screen:
   - Failure Class
   - Problem Code
   - Location
   - Craft
3. ***Note:*** *Selecting this option will create an* ***open*** *parent Extermination Work Order.*





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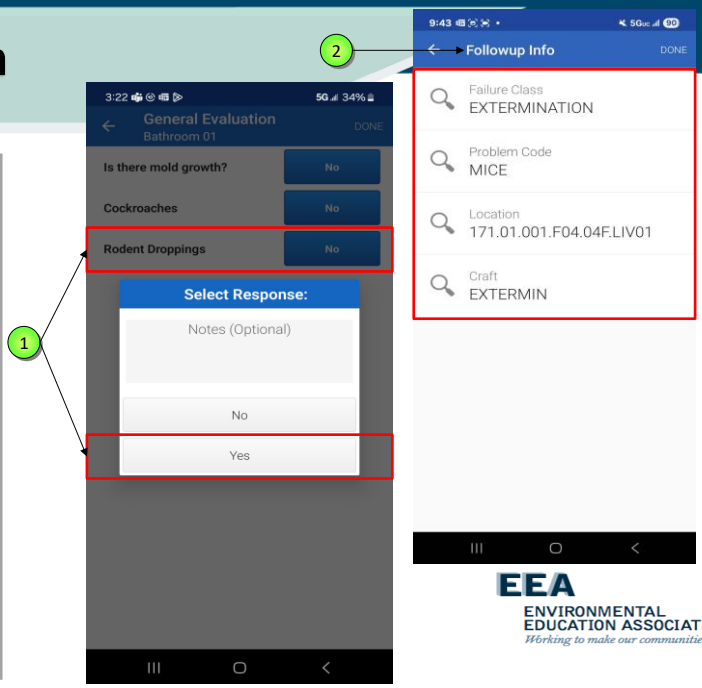
General Evaluation

1. Response options for **'Rodent Droppings?'** are:
   - No
   - Yes
2. If the response is **'Yes'**, iWM App will prompt '**Followup Info**' screen:
   - Failure Class
   - Problem Code
   - Location
   - Craft
3. ***Note:*** *Selecting this option will create an* ***open*** *parent Extermination Work Order.*



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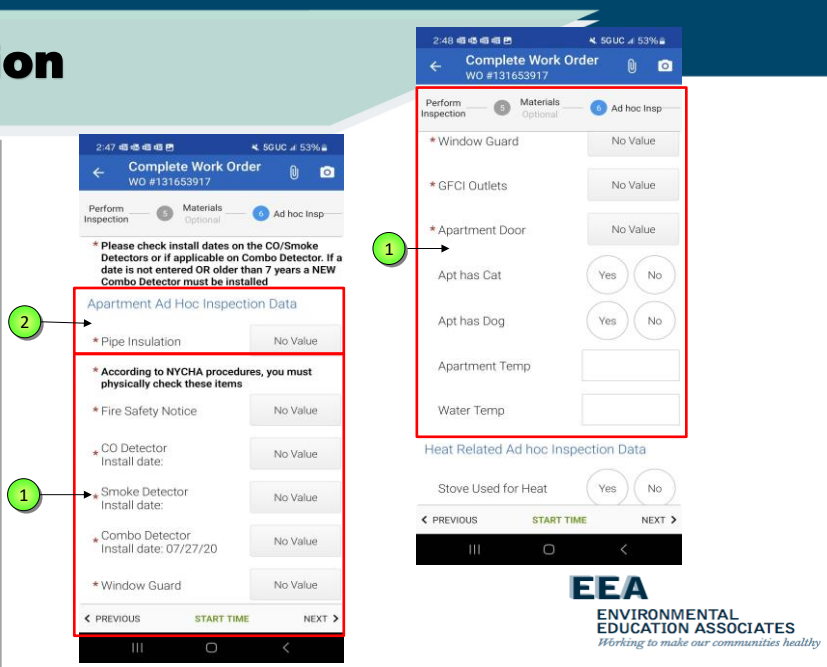
Ad Hoc Inspection

1. Completing **Ad Hoc Inspection** is required for all corrective maintenance work orders .
2. Some FC/PCs require the '**Pipe Insulation'** to be inspected as well.

Note: *All items on the list must be answered up to* ***'Heat related Ad Hoc Inspection Data'*** *excluding* ***'Apt has Cat'*** *and* ***'Apt has Dog'.***



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Knowledge Check

How does moisture serve as a catalyst for mold, rodents and roaches?

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213

Knowledge Check

How does moisture serve as a catalyst for mold, rodents and roaches?

It provides essential condition for their growth and survival

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214

Knowledge Check

Why is it important to report these environmental issues as soon as they are discovered?

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Knowledge Check

Why is it important to report these environmental issues as soon as they are discovered?

It is important for the health, safety, and property maintenance. If not addressed, these infestations can cause serious health problems, structural damage, and legal issues.

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NYCHA LEAK TRAINING

217

Creating Child Work Orders

Repair falls **outside** of the maintenance scope?

Create Child WOs for:
- Skilled Trades
- Vendor
- Other crafts (e.g., asbestos or heating)

Create child WOs for **all impacted units***:
- Impacted apartment
- Root cause apartment
- Additional impacted apartment

Parent Leak WO should remain open **until the root cause is identified** & **entered** on the Work Order.
(!) Do not enter a root cause until it is verified.

218

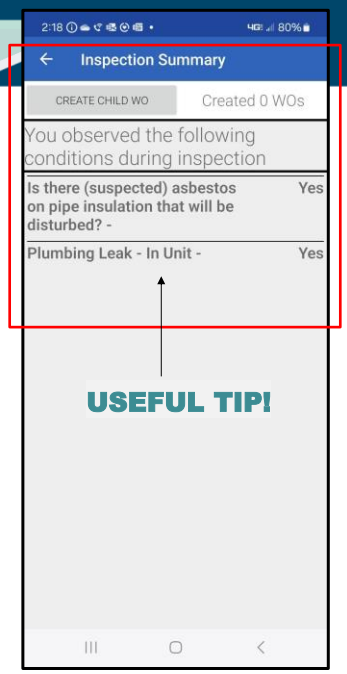
Creating Child Work Orders

You can use the '**Inspection Summary'** tab for guidance in creating child repairs.

- The 'Inspection Summary' **will list** findings from *'Step Two: Root Cause'* in the iWM App.
  - **Create Child WOs** to address these conditions, when needed.

- The 'Inspection Summary tab' **will NOT list** findings from *'Step One: Evaluation of Conditions'* and *'Step Three: General Evaluation'.*
  - Maximo **will automatically create work order(s)** to address these conditions based on the inspection results (e.g., standing water removal or mold).

Continued…



219

Creating Child Work Orders

Child WO(s) are created automatically in IWM App (based on inspection)	**Child WO(s) need to be manually created by Maintenance (based on inspection)**	**No Child WOs need to be created**
Flooding Abatement WO	Root Cause and/or Cosmetic Repair WO(s) to address leaks	Repairs made during initial visit (e.g., permanent or temporary).
Standing Water Removal WO	Repairs WO(s) to related to wall breaks *(e.g. Plastering)*	Wall breaks made by Maintenance during initial visit.
Extermination WO *(e.g., Mice or Roaches)*	Asbestos Abatement WO	
Mold Inspection WO	Sheetrock Replacement WO *(e.g., mold on the back of sheetrock)*	
Step 1: Evaluation of Conditions **Step 3**: General Evaluation	**Step 2:** Root Cause	Use '**Repair Code**' to document work done!

220

Creating Child Work Orders

To create a Child WO(s) enter in the iWM App:

- **Description:** Type of repair or the specific area requiring repair (e.g., crack on cold water riser).
- **Location:** Specific room or area that requires work.
  - Location is defaulted to the same location as the parent Leak WO (e.g., a leak in the bathroom).
  - If the repair is needed for another room or a room in a different apartment, **you must change the location in the iWM App** when creating a child work order (e.g., repair needed in the bathroom above).

Continued…

All child work orders must specify the **exact location** where the work is required. Child work orders created without **adjusting the location** will delay repairs.

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Creating Child Work Orders

To create a Child WO(s) enter in the iWM App:

- **Work Type:** "Corrective Maintenance" (CM)
- **Sub-Work Type:** "Leak"
- **Failure Class and Problem Code:**
  - The Failure Class identifies the work order category (e.g., Pipes).
  - The Problem Code identifies the specific issue within the category (e.g., Riser Leaking).
- **Craft:** Select based on FC/PC.

Not able to identify the root cause during the visit but need to create repairs for impacted apartment? Enter **"Root Cause TBD"** in the 'Work Log'.

Parent Leak WO will remain open until the root cause is identified and documented in the iWM App *('Inspection State' = 'Partial').*

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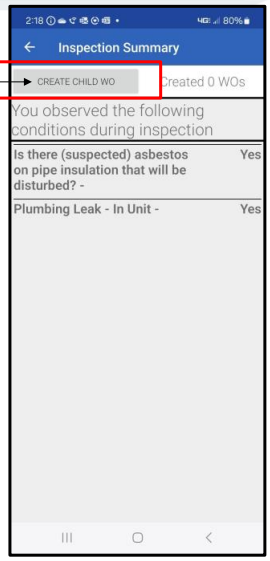
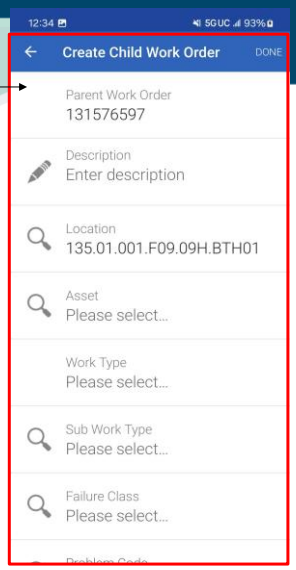
Creating Child Work Orders

1. To create a child work order, tap on **'Create Child WO'.**

   Note: *In this example, staff identified root cause as* ***'Plumbing Leak – In Unit'*** *and* ***suspected asbestos on the pipe insulation.***

2. iWM App will prompt a new window to **'create Child Work Order'.**





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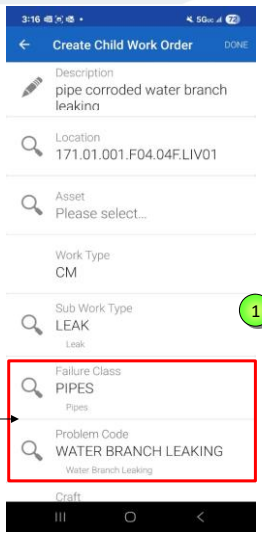
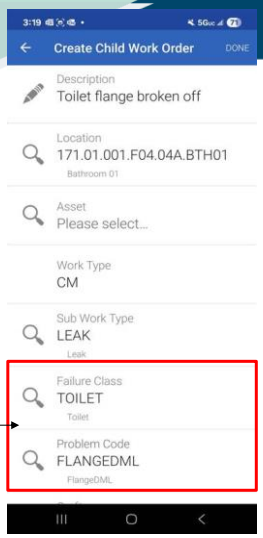
Creating Child Work Orders

1. When creating child work orders, **carefully select FC/PC** that most accurately identify the repair need.

   NYCHA has recently introduced **new FC/PCs for Plumbing Repairs:**

Failure Code	Problem Code
PIPES	WATER BRANCH LEAKING
PIPES	RISER LEAKING
PIPES	WASTE BRANCH LEAKING
PIPES	STACK LEAKING
PIPES	TRAP LEAKING
TOILET	FLANGEDML
TOILET	TANKNEEDSBARRIER





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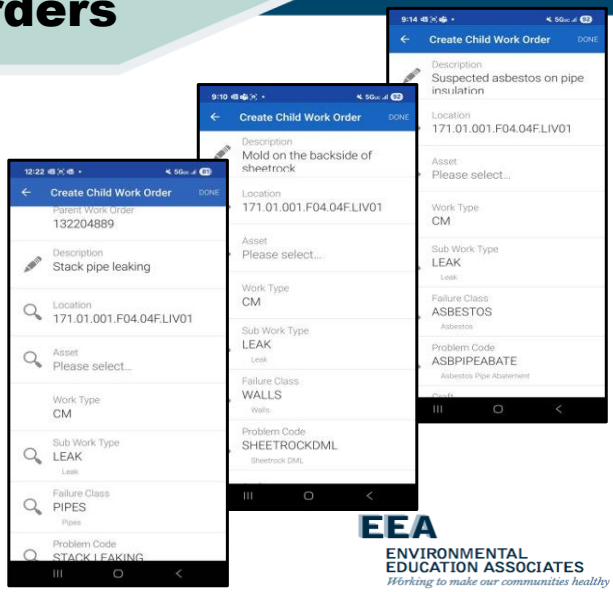
Creating Child Work Orders

Need to create multiple child repair WOs?

Repeat steps above for each child WO!



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Creating Child Work Orders

If skilled trades repair(s) are needed to complete the leak repairs, **issue to resident *NYCHA Form 042.800, Repairs to Schedule Slip (RTS slip)*** to the resident and **instruct resident to contact Neighborhood Planner** to schedule repairs.

- Issue RTS Slip to resident when **child WOs are created** for skilled trades, while you still have access to the apartment.
- Create **child WO(s) in iWM App** before RTS is issued.

Continued…

Skilled trades are limited to **Bricklayer, Carpenter, Electrician, Exterminator, Glazier, Painter, Plasterer, Plumber**, and **Roofer**.

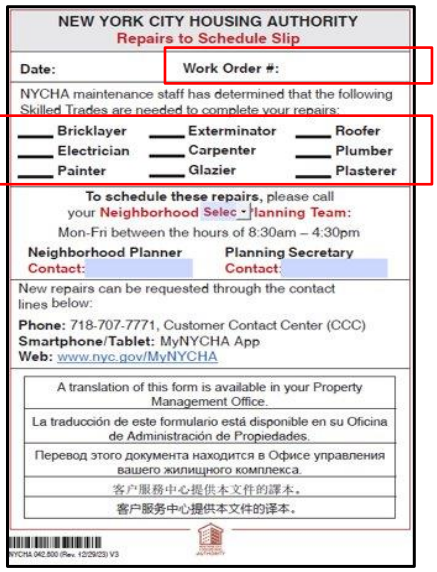
226

Issuing RTS Slip for Skilled Trades Work

Add the following information on the RTS Slip:

- **Parent Leak WO Number** at the top of the RTS Slip.
- **Check all skilled trades required** to complete the job:
  - If there are pre-existing work orders that are part of the leak repair scope, **use the iWM App to relate the work order(s)** to the parent Leak WO and **check the skilled trade(s) on the RTS Slip.**
  - If a pre-existing work order **falls outside of the leak repair**, **DO NOT** relate it to the parent Leak WO.

Continued…



NEW YORK CITY HOUSING AUTHORITY
Repairs to Schedule Slip

Date: Work Order #:

NYCHA maintenance staff has determined that the following Skilled Trades are needed to complete your repairs:

___ Bricklayer ___ Exterminator ___ Roofer
___ Electrician ___ Carpenter ___ Plumber
___ Painter ___ Glazier ___ Plasterer

To schedule these repairs, please call your Neighborhood Selec Planning Team:
Mon-Fri between the hours of 8:30am – 4:30pm

Neighborhood Planner Contact: Planning Secretary Contact:

New repairs can be requested through the contact lines below:

Phone: 718-707-7771, Customer Contact Center (CCC)
Smartphone/Tablet: MyNYCHA App
Web: www.nyc.gov/MyNYCHA

A translation of this form is available in your Property Management Office.
La traducción de este formulario está disponible en su Oficina de Administración de Propiedades.
Перевод этого документа находится в Офисе управления вашего жилищного комплекса.
客户服務中心提供本文件的譯本。
客户服务中心提供本文件的译本。

NYCHA 042.800 (Rev. 12/25(E)) V3

227

Issuing RTS Slip for Skilled Trades Work

Take photograph of the completed RTS Slip before leaving apartment:

- Upload the photograph of the RTS Slip under document type **'RTS Slip'** in the iWM App.
- Advise the resident to **contact the neighborhood planner** to schedule skilled trade repair(s) using the designated phone numbers on the RTS Slip.

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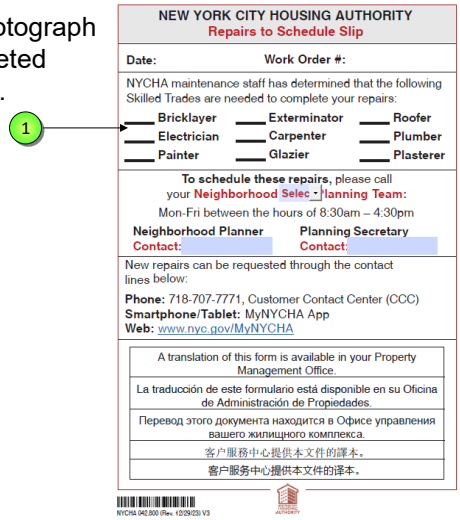
228

Issuing RTS Slip for Skilled Trades Work

Take photograph of completed RTS Slip.



NEW YORK CITY HOUSING AUTHORITY
Repairs to Schedule Slip

Date: Work Order #:

NYCHA maintenance staff has determined that the following Skilled Trades are needed to complete your repairs:

___ Bricklayer ___ Exterminator ___ Roofer
___ Electrician ___ Carpenter ___ Plumber
___ Painter ___ Glazier ___ Plasterer

To schedule these repairs, please call your **Neighborhood** Select **Planning Team:**
Mon-Fri between the hours of 8:30am – 4:30pm

Neighborhood Planner Contact: **Planning Secretary Contact:**

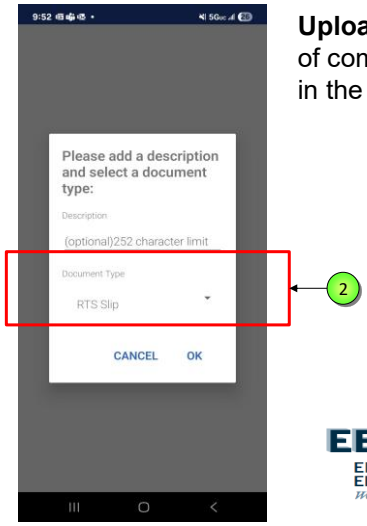
New repairs can be requested through the contact lines below:

Phone: 718-707-7771, Customer Contact Center (CCC)
Smartphone/Tablet: MyNYCHA App
Web: www.nyc.gov/MyNYCHA

A translation of this form is available in your Property Management Office.
La traducción de este formulario está disponible en su Oficina de Administración de Propiedades.
Перевод этого документа находится в Офисе управления вашего жилищного комплекса.
客户服務中心提供本文件的譯本。
客户服务中心提供本文件的译本。

NYCHA 042.800 (Rev. 12/29/23) V3

1



2

Upload photograph of completed RTS Slip in the iWM App.

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Issuing RTS Slip for Skilled Trades Work

Advise residents that NYCHA **will mail and/or email** the resident NYCHA Form 042.861. *Notice of Appointment for Skilled Trade Repairs* for each skilled trade appointment when work orders are scheduled. It will include:

- Work order number.
- Date and time for a skilled trade repair.
- Description of work and craft.
- Contact information for neighborhood planner if a resident needs to reschedule or cancel work.

NOTICE OF APPOINTMENT FOR SKILLED TRADES REPAIR

Date: 02/11/2025
Development: RED HOOK
Address: 116 MILL STR

Dear Resident,

An appointment for a **Painter** has been scheduled for your apartment.

Appointment Date: **February 11th, 2025**
Appointment Time: **8:00 a.m. to 3:30 p.m.**

During the appointment, the **Painter** will address the ticket(s) listed below.

Work Ticket Number	Location	Description
131410032	Living Room	Paint

Please prepare for your appointment by:

- Clearing a path from your apartment door to the repair area
- Moving items and furniture away from the repair area and surrounding area
- Ensuring that conditions are fit for the repair

On the appointment date, please make sure that you or an adult 18 years of age or older is home from 8:00 a.m. to 3:30 p.m. If the **Painter** does not arrive by 10 a.m., please contact your Neighborhood Planning Unit (their contact information is below).

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The resident will receive **a robocall reminder 48 hours in advance** of scheduled skilled trade repairs.

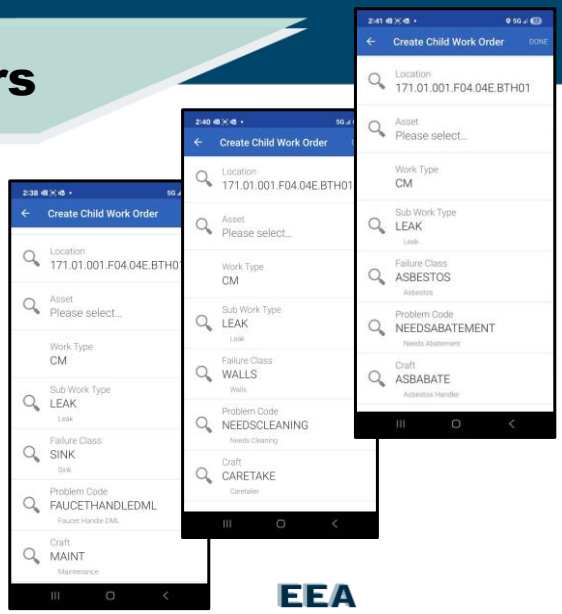
230

Creating Child Work Orders

If **non-skilled trades repair(s)** are needed to complete leak repair(s), use iWM App to create the work orders and advise resident that:

- NYCHA **will schedule work order(s**) and inform the resident once repairs are scheduled.
- Resident **can contact Property Management Office**, if they have any questions about scheduling.

Other non-skilled trades repairs include asbestos testing and abatement, heating, lead testing and abatement, vendor, follow up maintenance and caretaker assignments and others.



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Taking Photographs to Document the Repairs

Use the iWM to take photograph(s) of the **conditions**, **repair(s) made**, and/or **any follow-up repair(s), as needed**:

- Upload at least one photograph of each condition **prior to making repair(s)** under the document type **'Photos – Pre Repair'**.
- Upload at least one photograph of the condition **after making repair(s)** under the document type **'Photos – Post Repair'**

USEFUL TIP!

When possible, take high quality photographs, and **avoid uploading blurry** or **unclear pictures.**

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Taking Photographs to Document the Repairs

Photos: '**Pre-Repair'**

Photos: **'Post-Repair'**

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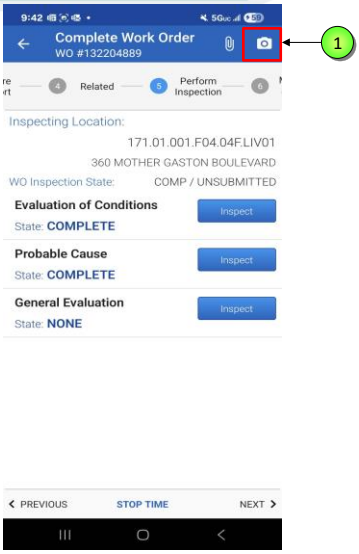
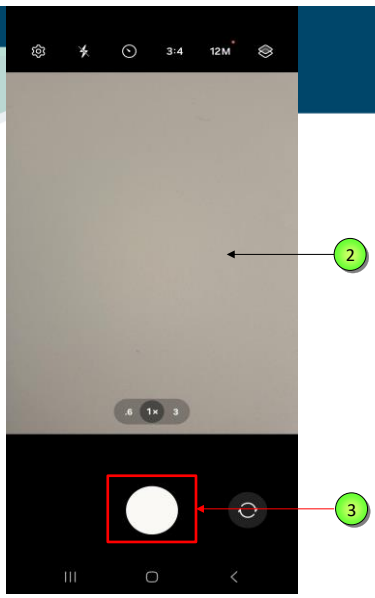
Taking Photographs to Document the Repairs

NYCHA has made it very easy to add photos to Work Orders. Photos can be **taken anytime during the inspection or repair process** and automatically attached to the Work Order.

1. Tap on the **Camera icon** in the upper right corner to open the camera.
2. Tap the image on the preview screen to **focus** the camera.
3. Then, tap the **Circle** icon at the bottom of the screen to take the photo.





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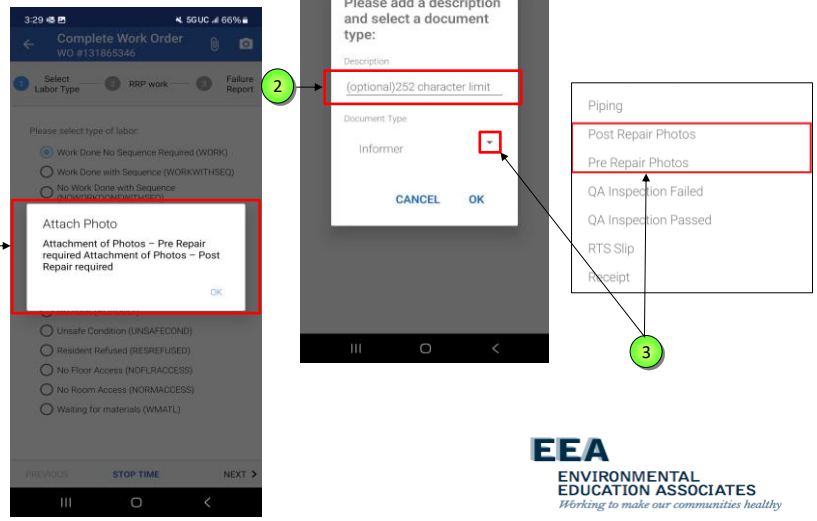
Taking Photographs to Document the Repairs

1. Use the following folders in the iWM App, as applicable:
   - **'Photo – Pre-Repair'**
   - **'Photo – Post-Repair'**
2. You can type a **Description** for the photo taken, if needed.
3. Document Type will be defaulted to '**Informer**'. Use a drop down to change to **'Photo – Pre-Repair**' and/or **'Photo – Post-Repair'** and tap 'OK'.



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Taking Photographs to Document the Repairs

- If follow up repairs are needed, upload at least one photograph **for each type of the follow up repair** (e.g., skilled trades, vendors, other crafts).
- For leaks from above, wall leaks, and other complex repairs, it is recommended to capture:
  - At least **one close-up** photograph of the condition (e.g., area of damage), and
  - At least one photograph of the **larger area for scale** (e.g., entire wall or ceiling).

Photos: '**Pre-Repair**'

Photos: **'Post-Repair'**

236

Reviewing Child Work Orders

Before closing parent Leak Work Order, review all created child work orders to make sure **all necessary repairs are created to address the leak complaint.**

Do not close the Leak WO until:

- The **source of the leak has been identified** and fully repaired, or
- All necessary **repair WOs were created** to address leak.

Maintenance workers are responsible for creating repairs all repairs to address the condition.

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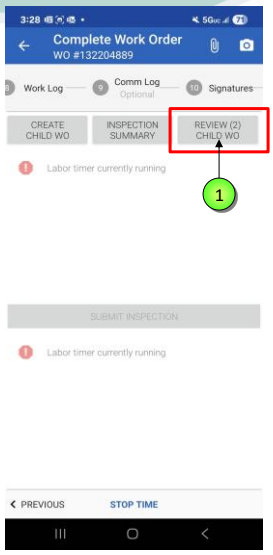
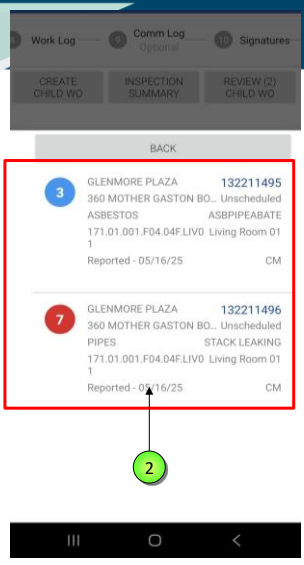
Reviewing Child Work Orders

1. Once you finish creating the child work orders, you could view them by tapping on **'REVIEW (X) CHILD WO' view .**
2. iWM App **will display** all created work orders.





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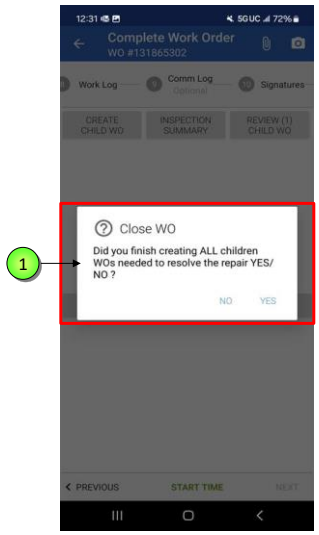
Reviewing Child Work Orders

1. Before closing parent Leak WO, iWM App will prompt **'Did you finish creating ALL children WOs to resolve the repairs?'**:

   - Yes
   - No

   Select **'Yes'** if you created all necessary child WOs.

   Select **'No'** if you need to create any additional child WOs.



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Knowledge Check

What skilled trades could be checked off RTS Slip?

a. Plumber
b. Heating Plant Technician
c. Lead Abatement Worker

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Knowledge Check

What skilled trades could be checked off RTS Slip?

a. Plumber
b. Heating Plant Technician
c. Lead Abatement Worker

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Knowledge Check

Name some other crafts for child work orders (not skilled trades)?

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Knowledge Check

Name some other crafts for child work orders (not skilled trades)?

Other crafts include but are not limited to asbestos testing and abatement, caretaker, heating, lead testing and abatement, maintenance, and vendor.

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Knowledge Check

What are some different advantages of taking photographs upfront and from a distance?

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Knowledge Check

What are some different advantages of taking photographs upfront and from a distance?

An upfront photo provides visual evidence of the condition at the time of the inspection and throughout the work, capturing details that are less easy to describe in words.

A photo from a distance documents the overall context of the area and provides a broader understanding of the situation.

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Take a Break!

- We appreciate your participation.
- Our job is to provide training that will give you the capability to conduct leak evaluation & control.
- Please let the instructor or any EEA staff if there's anything we can do to improve your learning experience.

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NYCHA LEAK TRAINING

247

Resident Communication

Residents are an essential partner in:

- Immediately identifying and reporting leaks.
- Providing access to their apartments even though there may be no leak, excess moisture, or water damage in their apartment (e.g., to trace the leak or perform repairs).

NYCHA staff should keep residents informed in all stages of leak investigation & repair process.

- This includes informing the resident **what type** of work is needed, **who is responsible** to complete this work, **how the work will be scheduled** and how the **resident can follow up.**

See *Leak Standard Procedure (Appendix I), Communications with Residents Related to Leak Work Orders* for details.

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Resident Communication

Keep residents informed during inspection & repairs!

Before you begin work, unless it is an emergency:

- Ask resident about any **history** of leaks & repairs.
- Check if there are **any open (pending) repairs**.
- Inform resident what work needs to be done and how long it might take.

During the inspection or repair, let the resident know:

- If you need to **temporarily step out** from apartment.
- If you anticipate appointment to take **longer than expected**.
- If work is expected to generate a **significant level of noise or dust**.

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Resident Communication

Observed severe condition that require an immediate response?

- Immediately escalate the repair request with photos and brief description to **NYCHA Maintenance Cares** at **Maintenance.Cares@nycha.nyc.gov**.

- Examples of hazardous conditions include **hazardous or severe conditions**, including floods, severely damaged ceilings or walls, excessive hoarding.

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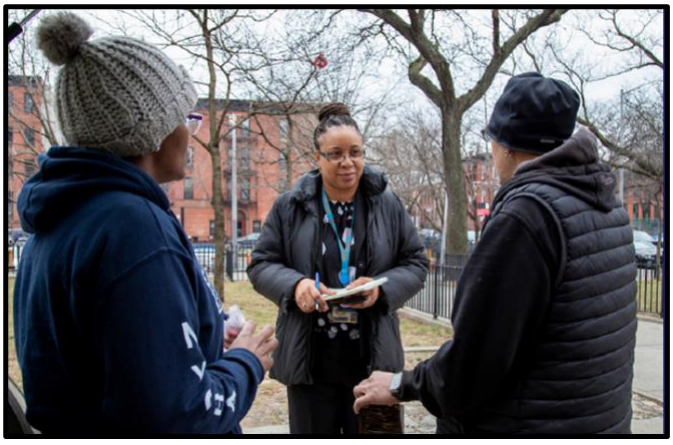
Resident Communication



Leak is **Founded**?

Leak is **Unfounded**?

Keep resident informed!

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Reviewing Inspection Findings

Scenario 1: Leak is Founded

- Explain to the resident what caused the issue
- Describe any **repair(s) made** during the visit, if any:
  - Invite the resident(s) to check completed repair(s).
  - Answer any questions about repair(s).
  - If **not able to make any repair(s)**, explain why.
- Explain what resident could do to **prevent issue from reoccurring.**

Continued…

If you were not able to do any work and other craft is needed to complete the repair, **the resident must be informed accordingly.**

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Reviewing Inspection Findings

Scenario 1: Leak is Founded

- Inform resident of **any additional work** to complete the repairs, if needed.
  - If **skilled trade work** is needed, issue RTS Slip and inform resident to contact Neighborhood Planner to schedule repairs.
  - If **other craft work** is needed inform the resident that Property Management Office will schedule the repairs.
- Inform resident that they could **check status of open repairs** by contacting CCC or using MyNYCHA.

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Continued…

253

Reviewing Inspection Findings

Scenario 1: Leak is Founded

- Let resident **inspect completed** repairs.
- **Ask resident to sign** completed WO in the iWM App:
  - If the resident refuses to sign, **indicate the refusal**
  - **Capture resident satisfaction** ('Yes' or 'No').
  - **If resident refuses work**, capture resident information when possible (e.g., resident name and comment).
- **Sign** the completed Leak WO in the iWM App.

Do not close a Leak Work Order **until the root cause is identified**, and all necessary repairs are created.

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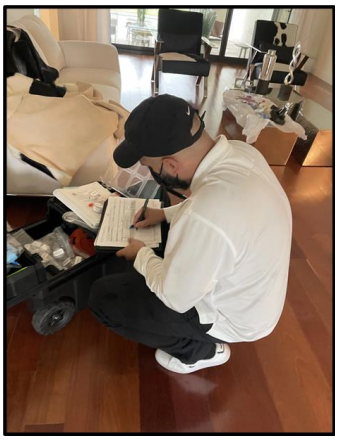
Reviewing Inspection Findings

Scenario 2: Leak is Unfounded

- Discuss the findings with the resident.
- Invite the resident to inspect the area for any signs of leak or water damage and ask additional questions.
- Capture unfounded condition in the iWM App:
  - Request that the **resident sign the unfounded work** in the iWM App.
  - If a resident **refuses to sign**, indicate the refusal in the iWM App.
  - Capture the **Resident Satisfaction** ('Yes' or 'No').
- **Sign** the completed Leak WO in the iWM App.



No Leak also means no water damage, no water damage, no wet condition, no flooding, no standing water, no flooding etc.

255

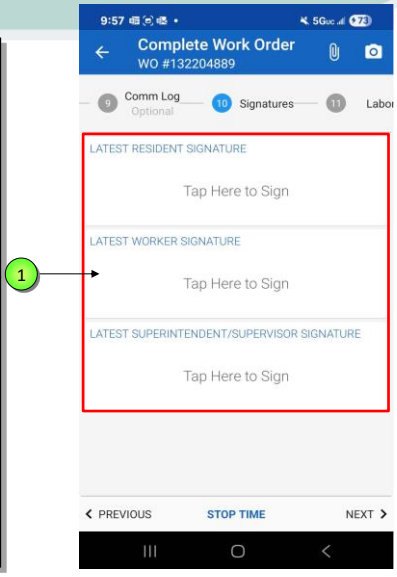
Reviewing Inspection Findings

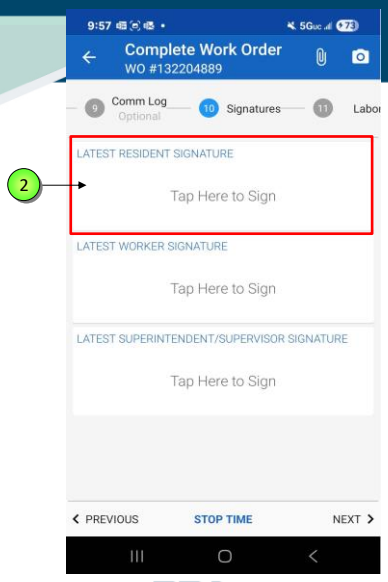
1. The **Signatures** screen will display three selections '**Resident'**, '**Worker'** and **'Superintendent'**.

   Note: ***'Worker'*** *and* ***'Resident'*** *signatures are* ***required.***

2. To start capturing a signature, tap on the desired signature type.

   For example, to capture the resident's signature, tap on **'Latest Resident Signature'**.





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Reviewing Inspection Findings

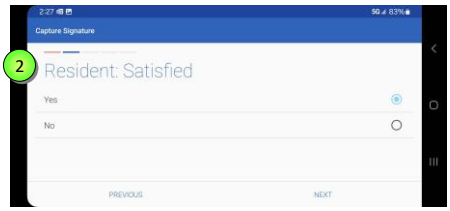
1. Upon completion of inspection and/or repairs, ask Resident to **sign WO on the iWM App.** Tap 'NEXT'.

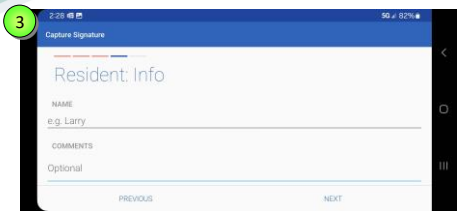
   Note: *If the **Resident Refused Work** to be completed, check the box.*

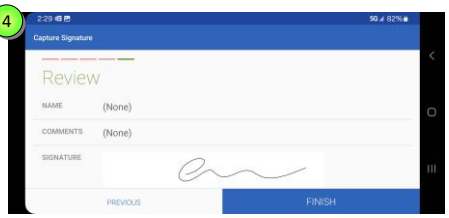
2. Ask **if the resident was satisfied or not** with completed inspection and/or repairs. Tap 'NEXT'.

3. Capture **Resident Name** and **Comments**, when possible. Tap 'NEXT'.

4. Review the information and tap **'FINISH'**.







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Reviewing Inspection Findings

After tapping on **LATEST WORKER SIGNATURE:**

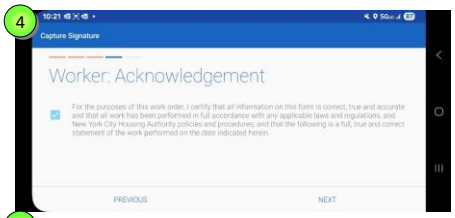
1. Sign and tap 'NEXT'.

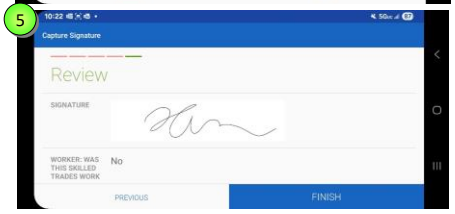
2. Answer 'Yes' or 'No' if the work was skilled trades work.

3. Enter your information.

4. Answer the 'Acknowledgement Statement'.

5. Review the information and tap **'FINISH'**.





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Resident Communication

Tenant is Not Satisfied with NYCHA Response or Repairs?

- Residents can contact the **NYCHA Compliance Department** at on.nyc.gov/Submit-Concern or call the CCC at 718-707-7771 (select menu option 7 when prompted),
- Residents can contact the **independent, court-appointed Ombudsperson Call Center** at 1-888-341-7152 or at www.ombnyc.com.

If needed, instruct resident to **contact Property Maintenance Office** for details.

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Resident Communication

Reasonable Accommodation

Residents with a disability such as breathing problems may request a short-term or permanent relocation due to a leak or mold condition.

See Standard Procedure 040:12:1, *Reasonable Accommodations in Housing for Applicants, Public Housing Residents, and Section 8 Voucher Holders*, for responsibilities of NYCHA staff to review reasonable accommodation requests, and the applicable terms, forms, and policies for reasonable accommodations.

How to submit Reasonable Accommodation request?

- Resident can submit *NYCHA Form 040.050, NYCHA Transfer Request* and *NYCHA Form 040.426, Reasonable Accommodation – Medical Verification* available at each **Property Management Office**, or
- Resident can submit a request via NYCHA's Self-Service Portal.

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Ombudsperson Call Center

When can a resident contact OCC?

- Tenant submitted a leak or mold repair request, but NYCHA staff **didn't show up** for the scheduled appointment.
- Tenant is waiting for a leak or mold repair that is **taking longer than 15 calendar days** to complete and is causing a problem to tenant.
- NYCHA staff began leak or mold repair but **didn't complete work** or **didn't provide resident** with the follow up appointment date or instructions.
- NYCHA completed leak or mold repair, but tenant **is not satisfied** with repair.
- NYCHA determined that the leak is unfounded, but tenant doesn't agree with inspection results.

For details: Ombudsperson Call Center

The OCC receives complaints from residents, who **already submitted** a leak or mold complaint to NYCHA but still have concerns about their repairs.

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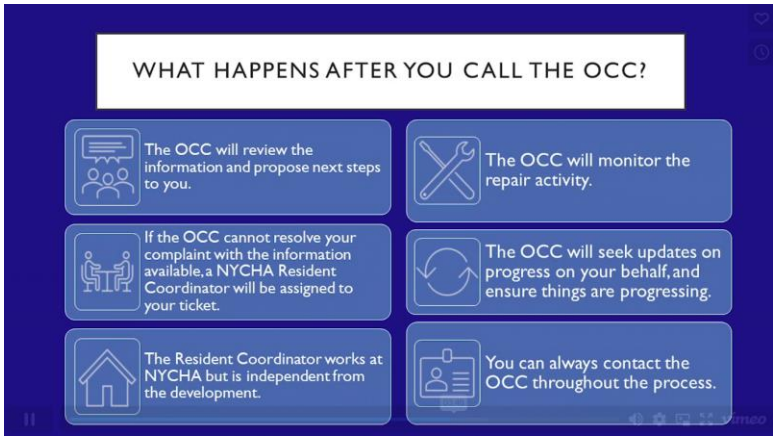
Ombudsperson Call Center



Ombudsperson Video

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Relocations Due to Floods, Leaks, and Mold

Residents can be relocated for emergency or health and safety reasons, if needed, to abate the condition.

- **Immediate Relocation:** Determined by Property Management or EMSD (after hours) when an emergency poses immediate danger (e.g., fire, flood, ceiling collapse, water or steam pipe burst).
- **Planned Relocation**: Initiated by Property Management or another department (e.g., Asbestos, Lead Hazard Control, OMAR) when an apartment must be vacated due to ongoing health/safety risks or legal requirements.

See Standard Procedure 040:24:1, *Resident Relocation* for guidance on resident relocation.

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Relocations Due to Floods, Leaks, and Mold

The following are examples of mold conditions where property management ***should consider*** **requesting a relocation**:

- Extensive mold growth that **impacts the majority of the apartment** (≥ 50% of walls and ceilings).
- **Significant mold growth (100+ sq ft) in a "high-use" area** (sole bathroom or sole kitchen) in apartments occupied by individuals with **severe medical conditions** exacerbated by continued exposure.
- **Significant mold growth (100+ sq ft) in any area** or **greater than 10 sq feet in a "high-use" area in apartments occupied by individuals with severe medical conditions exacerbated by continued exposure** where the root cause **cannot be identified** within 4 calendar days, or the **remediation cannot** be completed within 15 calendar days.

Continued…

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Relocations Due to Floods, Leaks, and Mold

The following are examples of mold conditions where property management ***should consider*** **requesting a relocation**:

- Leaks that **compromise structural integrity** that may lead to harm or fatalities (e.g. ceiling collapse).
- **Severe leaks from waste/sanitary lines** that require significant cleanup, remediation, and repairs.
- **Severe flooding conditions** that require gut renovations.
- Leaks that render a **"high-use" area unable to be occupied** (e.g., cascading water leak from water line that renders bathroom or kitchen unusable).

265

Knowledge Check

What are some reasons why it is important to relocate residents with disabilities?

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Knowledge Check

What are some reasons why it is important to relocate residents with disabilities?

For their safety, well-being, and compliance with legal obligations.

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NYCHA LEAK TRAINING

268

Closing Leak Work Order

If the resident is not home, refuses access to the apartment or specific room, or if no adult is present document the visit by selecting appropriate '**Labor Type**'.

- Issue *'NYCHA Form 040.534A, Notice of Visit by NYCHA Staff'* against the door.
- Upload the photograph of the Notice under the document type **'Photo Front Door'.**

NYCHA staff must make **two attempts with at least one attempt a scheduled appointment** to be able to close a Leak WO with 'no access'.

NYCHA staff can not close Leaks From Above or Flooding Work Orders without access.

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Closing Leak Work Order

NYCHA 040.534A (Rev. 8/10)
NOTICE OF VISIT BY NYCHA STAFF

NEW YORK CITY HOUSING AUTHORITY

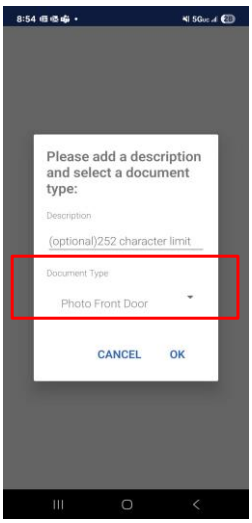
NYCHA Staff was at your apartment today in response to your call to the Customer Contact Center at (718) 707-7771.

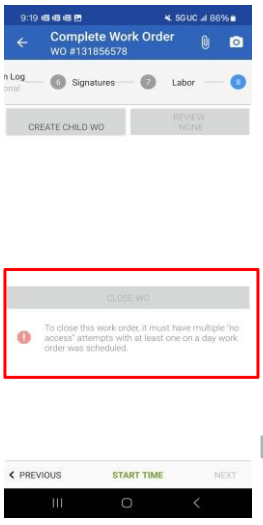
At the time of the visit to your apartment you were not at home for the work you requested.

If the repair(s) in your apartment is (are) still required, it will be necessary for you to call the Customer Contact Center to arrange a new appointment date.

WORK ORDER #	DESCRIPTION OF WORK REQUESTED
DATE OF VISIT	TIME OF VISIT
STAFF NAME *(Print & Sign)*	
STAFF TITLE	

DISTRIBUTION: Original left for Tenant • Copy attached to Work Order





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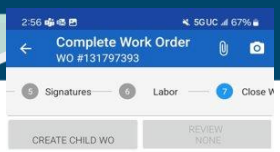
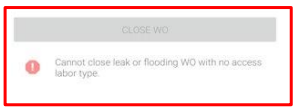
Closing Leak Work Order

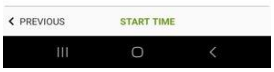


Exception!

Based on the current business rules, NYCHA **can not close Flooding** and **Leak From Above WOs** until condition is verified.

Failure Code	Problem Code
Pipes	Pipes Leak
Leak From Above	Constant Dripping
Leak From Above	Constant Leaking
Leak From Above	Lead Bend Leaking
Leak From Above	Water Penetration
Leak From Above	Flooding
Drains	Flooding
Rooftop	Flooding
Terrace	Flooding
Sink	Stoppage with Flooding
Toilet	Overflowing





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271

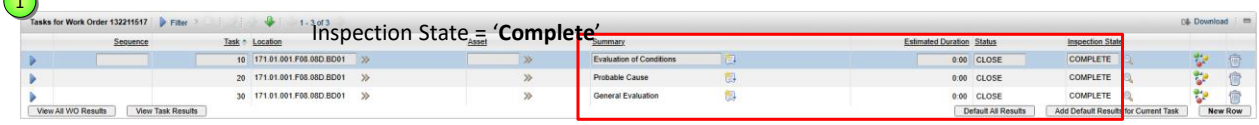
Maximo View of Leak Work Orders

Example 1: Simple Leak WO

Supervisors **can view status** of Leak Inspection WOs in Maximo to make sure work order is properly addressed.

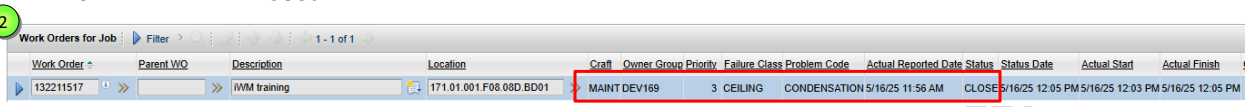
Inspection State = '**Complete**'

1



Work Order Status = '**Closed**'

2



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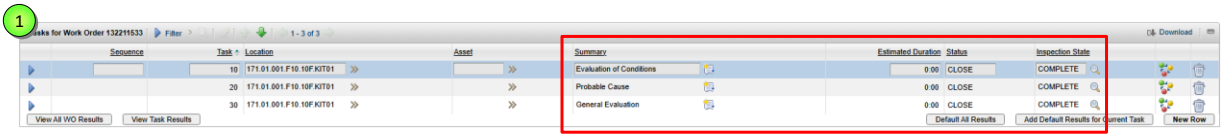
Maximo View of Leak Work Orders

Example 2: Complex Leak WO

Supervisors **can view status** of Leak Inspection WOs in Maximo to make sure work order is properly addressed.

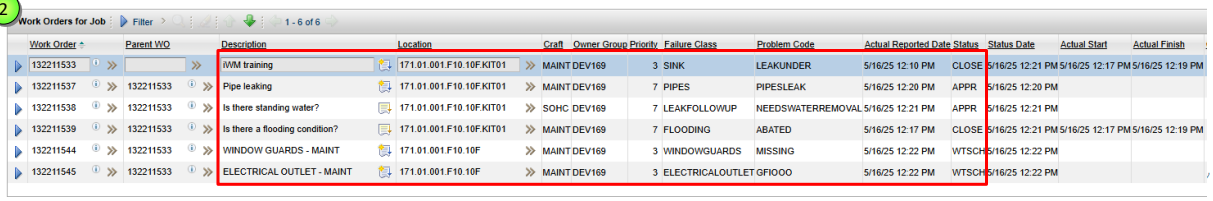
Inspection State = '**Complete**'

1



Work Order Status = '**Closed**' and **Child WOs created.**

2



273

Knowledge Check

What do maintenance workers or other staff issue to residents of impacted apartment if follow up skilled trade repairs are needed?

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Knowledge Check

What do maintenance workers or other staff issue to residents of impacted apartment if follow up skilled trade repairs are needed?

If it is determined that skilled trades repair(s) are needed to complete the leak repair, the maintenance worker issues a Repairs to Schedule Slip with the parent Leak Work Order number written at the top of the RTS

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Knowledge Check

What do maintenance workers or other staff do if the resident refuses to sign the parent leak order?

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Knowledge Check

What do maintenance workers or other staff do if the resident refuses to sign the parent leak order?

The maintenance staff will indicate the refusal in the iWM App and indicate whether or not resident was satisfied.

- Captures resident information and comments and if resident refuses work.
- Staff will then sign the completed parent Leak Work Order.
- This will be followed by the upload of photographs to the parent Leak Work Order (under document type 'Photos – Pre Repairs).
- Staff will then can inform the resident that they can contact the Ombudsperson Call Center if they are dissatisfied with NYCHA's response to the leak complaint.

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Knowledge Check

What do maintenance workers or other staff do and tell the resident if they are unable to locate the root cause?

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Knowledge Check

What do maintenance workers or other staff do and tell the resident if they are unable to locate the root cause?

- Explain why were not able to locate the root cause (e.g., need to make a wall break or need access to another apartment).
- Inform of the next steps (obtain access or seek additional guidance).
- Explain if any interim steps were taken to prevent the issue from reoccurring.

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iWM Simulations

Leak Inspection Scenarios #1 - #2: Source of the Leak Within Impacted Apartment

1. Log into the iWM Training

nycha90
(Old devices)

nycha123
(New devices)

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Launch the iWM Application

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

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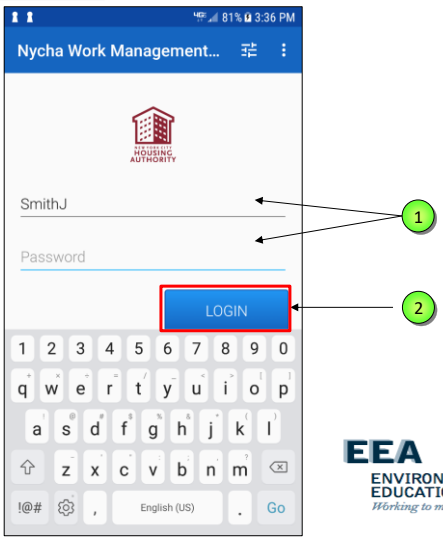
Log into iWM Application

1. Enter **Username** and **Password**
2. Tap **Login**

Use the same Username and Password as Maximo and your computer.

For training only: *use log in and password provided by the EEA.*



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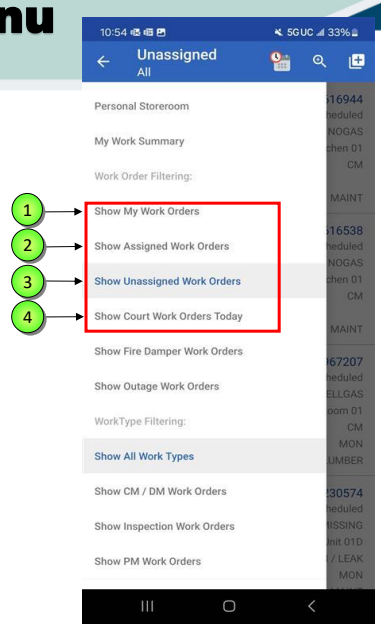
View Work Orders Menu

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.



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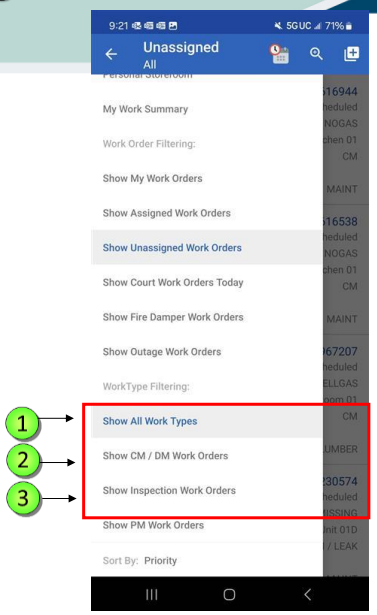
View Work Orders – By Types

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

1. **Show All Work Types** displays all open WOs for the Development.
2. **Show CM / DM Work Orders** displays all open Corrective Maintenance and Deferred Maintenance WOs.
3. **Show Inspection Work Orders** displays all open Inspection WOs.



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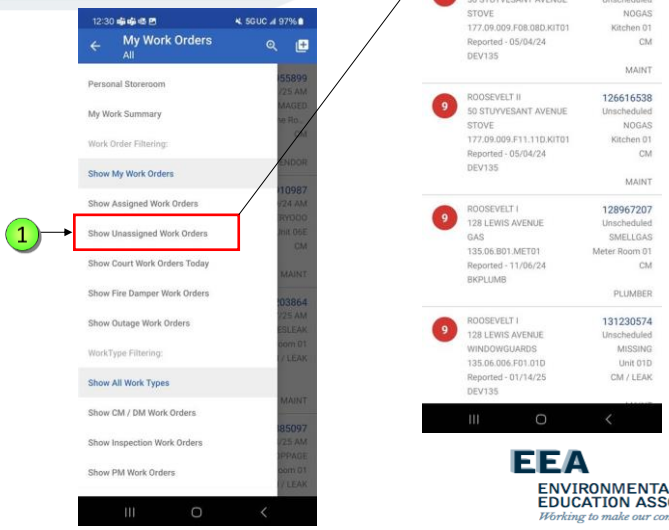
Viewing Work Orders

1. To view the unassigned work orders, tap this Icon ☰ to go to the **Menu.** Then Tap on **Show Unassigned Work Orders**.

Note: *The work orders you see are tied to the user's assigned area or location.*



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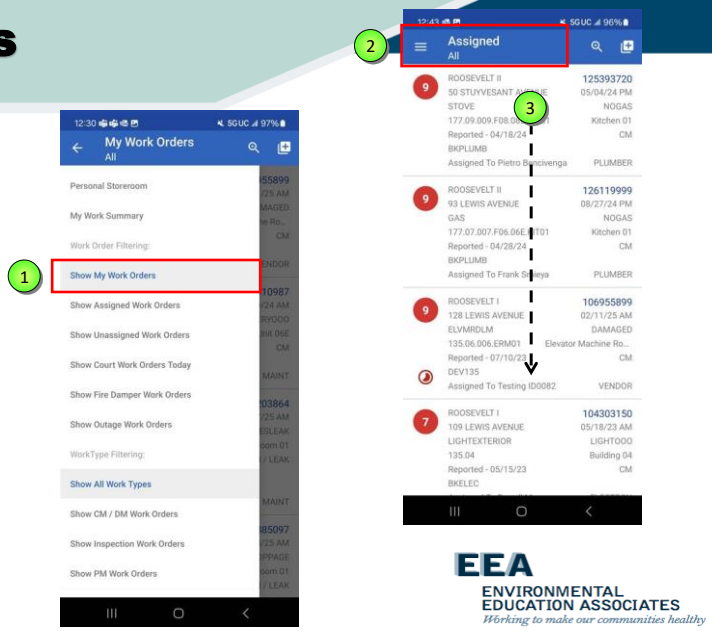
Viewing Work Orders

1. To see the list of assigned Work orders tap this Icon ☰ again to open the **Menu**.
2. Tap **Show Assigned Work Orders** option to open the list.
3. To manually **Refresh** the app, you can slide your finger **down** on the screen.



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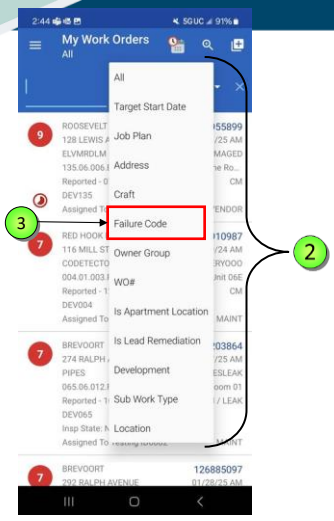
How to Search for Work Orders

1. To search under a specific 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, etc.**

Note: *Work Orders are shown in order of highest to lowest priority.*



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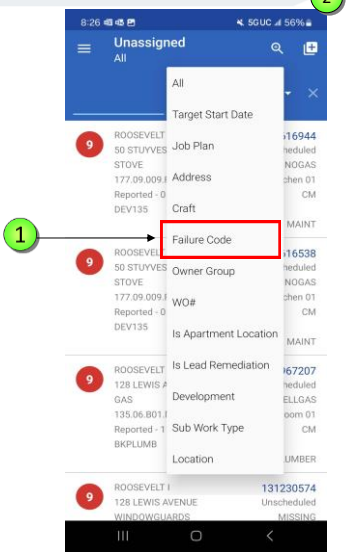
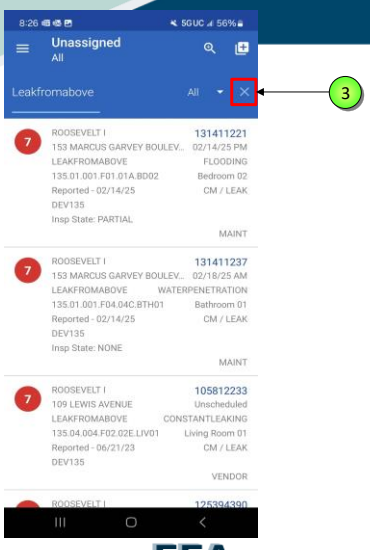
How to Search for Work Orders

1. For example, to search by **Failure Code**, type the desired code in the search bar (e.g., Leak From Above).
2. iWM App will display all the WOs with this criteria.

   You can tap anywhere on the screen to close the search list.
3. Tap on **X** to cancel your search.





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How to Search for Work Orders

1. You can search for Work Orders by tapping on the **small** magnifying glass icon.
2. The default search criteria is set to **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** and the system displays all the Work Orders that start with or contain these numbers.

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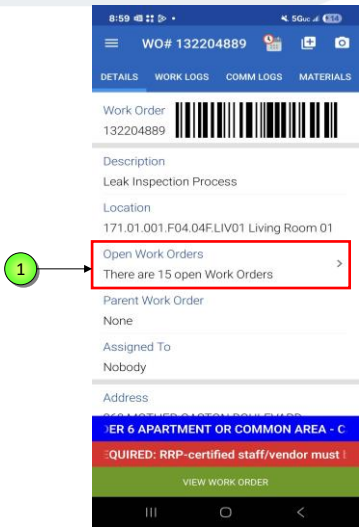
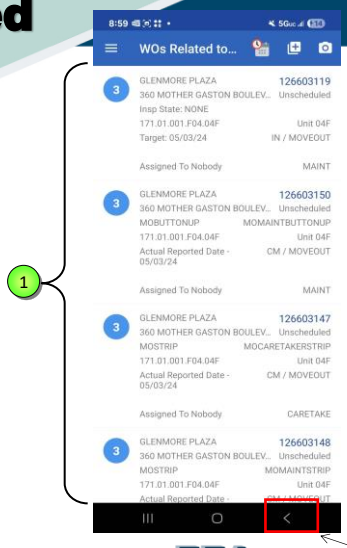
How to View all Open or Related Work Orders

1. Tap on **Open Work Orders** to see all open work orders in the apartment.
2. To return to the original **Work Order Details** screen after viewing the **Related Work Orders**, tap the device's **back arrow.**





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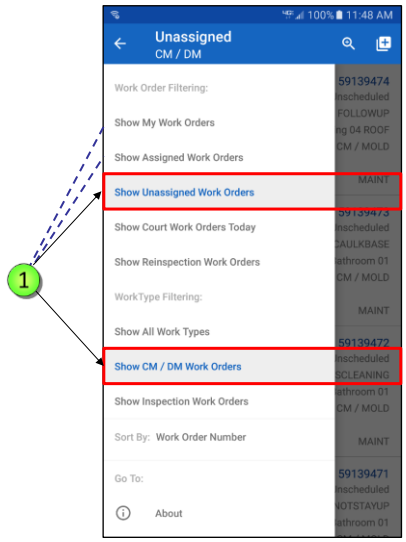
Leak Work Orders Process

1. The **Parent Leak 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**.



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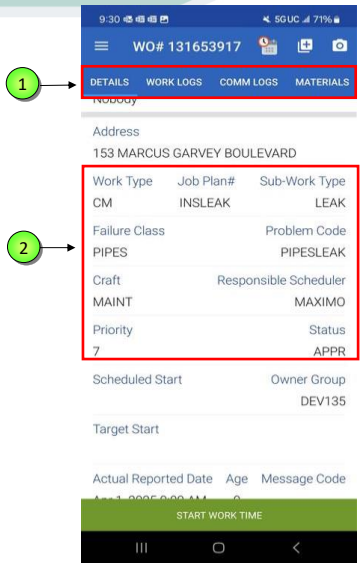
View Work Order Details – Emergency Leak

This is an **Emergency Leak WOs** with a no start date.

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

2. The fields below are unique for the **Leak** Work Order:

   - **Work Type** = **CM**
   - **Job Plan#** = **INSLEAK**
   - **Sub-work Type** = **LEAK**
   - **Failure Class** = **PIPES**
   - **Problem Code** = **PIPESLEAK**
   - **Priority** = **7**



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View Work Order Details – Non-Emergency Leak

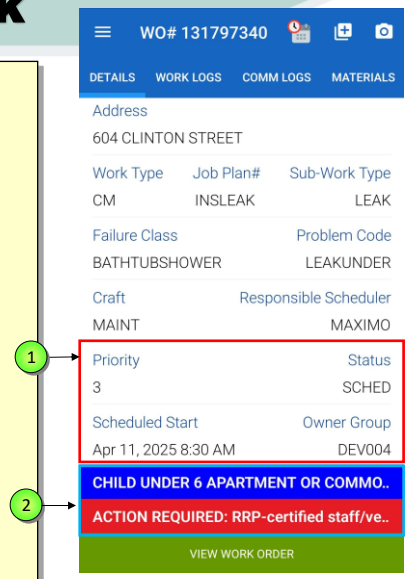
1. This is a **Non-Emergency Leak WOs** with a scheduled start date.

   Maintenance workers should make their best effort to respond on the scheduled date.

   - **Work Type = CM**
   - **Job Plan# = INSLEAK**
   - **Sub-work Type = LEAK**
   - **Failure Class = BATHTUBSHOWER**
   - **Problem Code = LEAKUNDER**
   - **Priority = 3**

   Note: *See* ***Scheduled Start Date****.*

2. Additional important information about the resident's apartment.



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Training Phone iWM Practice

Scenario #1: Sink Stoppage

You enter a resident's apartment in response to a complaint that the kitchen sink is backing up. The resident mentions that water isn't draining properly and that they've noticed the sink is slow to empty after being used. The resident is concerned that the issue may be a plumbing issue, though there is no visible damage or active leakage around the sink. You're tasked with assessing the situation to determine the cause and resolve the issue if possible.

Failure Class: SINK
Problem Code: STOPPAGE
Location: KITCHEN

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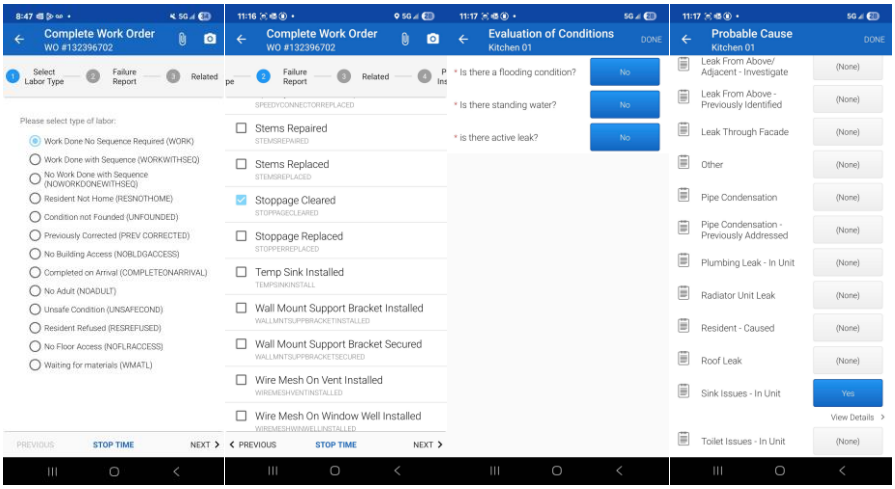
What to check in iWM App



Sink Stoppage

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Training Phone iWM Practice

Scenario #2: Pipes Leak

You respond to a service request for a plumbing issue in a resident's unit. The resident has reported significant flooding in the bathroom and water accumulating on the floor. Upon entering the unit, you notice signs of an ongoing flooding condition that requires immediate abatement. You request APMS to get approval to shut down the riser to stop active flooding. You also radio a SOHC who dispatches a caretaker to remove standing water while you have access to the unit. The plumbing problem seems to be originating from pipes behind the bathroom sink.

Failure Class: PIPES
Problem Code: PIPESLEAK
Location: BATHROOM

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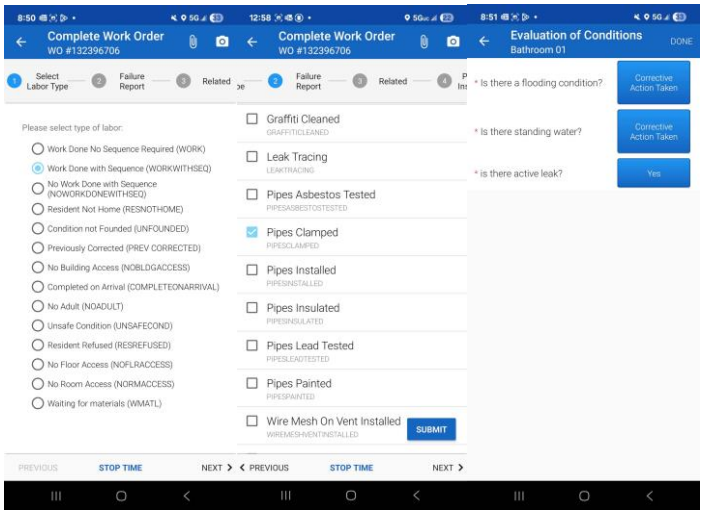
What to check in iWM App



Pipes Leak

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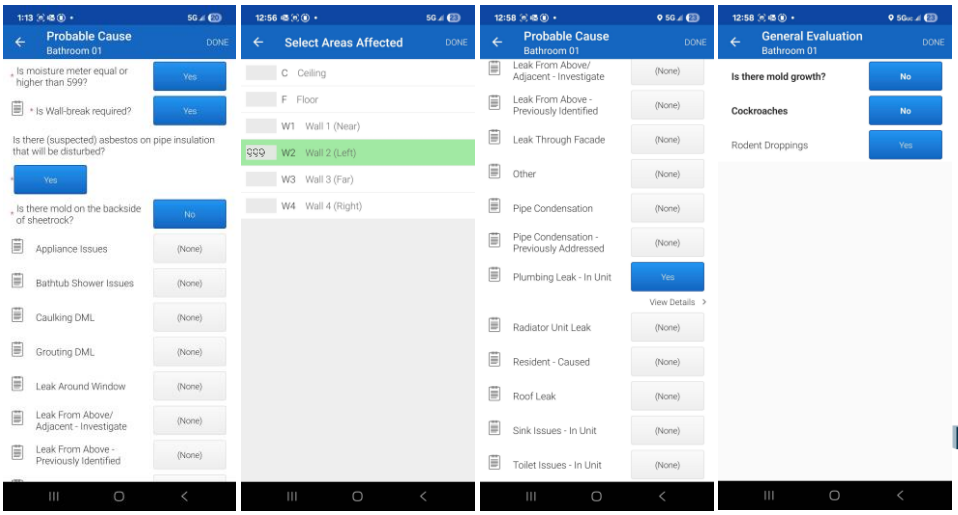
What to check in iWM App



Pipes Leak

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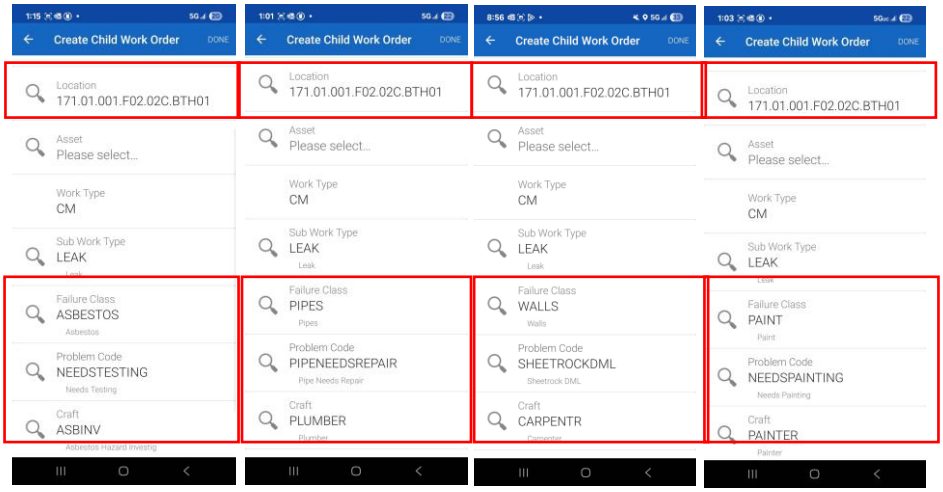
What to check in iWM App



Pipes Leak

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Have a Great Night!

- We appreciate your participation.
- Leave your training handheld & workbook here
- Please let the instructor or any EEA staff if there's anything we can do to improve your learning experience.
- See you tomorrow.
- Get home safe!

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NYCHA LEAK TRAINING

1

Day 1 Review

- Overview & Policy
- Roles & Responsibilities
- *Leak Detection: Equipment & Procedures*
- Root/ Probable Causes

Leak Inspections: Source of the Leak <u>Within</u> Impacted Apartment

- Inspection Requirements & Steps
- Creating Repair Work Orders
- Resident Communication
- *iWM Work Order Simulations #1 & 2*

Link to Training Resources

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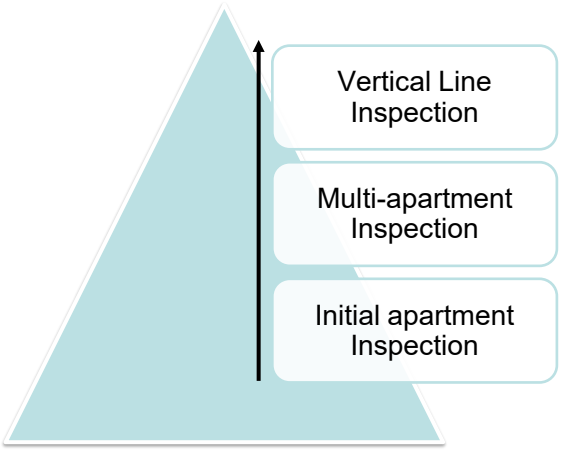
2

NYCHA LEAK TRAINING

3

Identifying Root Causes – Outside the Impacted Apt



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Identifying Root Causes – Outside the Impacted Apt

- When feasible, APMS or PMS should assign **a team of 2 maintenance workers** address Leak From Above WOs.
  - If not feasible, assign one maintenance worker.
  - Maintenance worker **must attempt to inspect multiple units** and **trace the source of the leak** on their own.

- **If not able to identify the root cause** or operate fixtures in multiple units on their own, maintenance worker must **contact APMS or PMS for guidance** or **request another staff assistance.**

Continued…

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Identifying Root Causes – Outside the Impacted Apt

- To locate the root cause(s) of the leak from above, the maintenance **must at a minimum attempt to access**:
  - **An apartment immediately above** the impacted apartment and **continue up the line**, if needed, and/or
  - **An apartment adjacent to the impacted apartment** or an apartment immediately above the adjacent apartment, if needed.

- Attempt **to access as many apartments** as needed to identify the root cause of the leak from above.

For leaks from above originating from **within plumbing chase** walls, the root cause apartment is likely to be **the first apartment where wet conditions <u>do not extend to the uppermost section of the chase wall.</u>**

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Accessing Additional Apartment(s)

- To gain access to the additional apartments to perform leak inspection:
  - **Knock** on the apartment door(s) and state purpose of the visit, or
  - **Contact the property management office to for assistance** with contacting the resident(s).
    - Property management office **will inform NYCHA staff** if apartment is vacant.

Make sure **to announce the presence** to residents when attempting to access NYCHA apartments!

See Standard Procedure 040:09:7, *Managing Maintenance Work Orders* for reference.

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Accessing Additional Apartment(s)

- **If not able to gain access to the apartment with the suspected root cause due to <u>Tenant Not Home:</u>**
  - If the leak is **severe** (e.g., floods or water leak through electrical outlets), consider using ***Right of Entry*** to access apartment.
  - If the leak is **not severe** (e.g., signs of past water damage but no active leak):
    - Issue **NYCHA Form 042.727, *48 Hour Notice of Health and Safety Repairs***.
    - **Return in 48 hours** to reattempt the access.

See *Standard Procedure 040:17:3, Accessing Public Housing Apartments When Tenant Not Home to Address Deficiencies Related to Leaks, Mold, and Lead-Based Paint* for instructions.

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Accessing Additional Apartment(s)

- **If not able to gain access to the apartment with the suspected root cause due to <u>Tenant Refused:</u>**
  - Notify APMS or PMS for assistance, or
  - Request NYPD to assist with getting access.

See Right of Entry provisions of *NYCHA Resident Lease* (NYCHA Form 040.507).

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Accessing Additional Apartment(s)

- **Apartment sealed and locked by the NYPD?**
  - Follow the *Section XXII, Move Outs* of the *Management Manual Chapter, Occupancy*.
  - **Not sure?** Contact property management office for guidance.
- **Apartment is vacant or abandoned?**
  - **Not sure?** Contact NYCHA Law Department for guidance.

See *Section XXII, Move-Outs of Management Manual Chapter I, Occupancy* for reference.

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Inspecting Additional Apartments

One maintenance worker **remains in the impacted apartment**, and the other worker **proceeds to the apartment** directly above or adjacent.

The worker in the apartment above should:

- ❑ **Visually inspect** wall, ceiling, and floor surfaces above for visible water damage.
- ❑ **Take moisture measurements** from building surfaces, focusing on areas adjacent to fixtures and appliances (including floors) and on plumbing chase walls.
- ❑ **Operate fixtures** in the suspected root cause apartment.

Wet readings on the ceiling **around the p-traps** or l**ead bends** in the impacted apartment commonly indicate leaks from around the toilet wax gasket or bathtub waste/overflow pipes in the apartment above.

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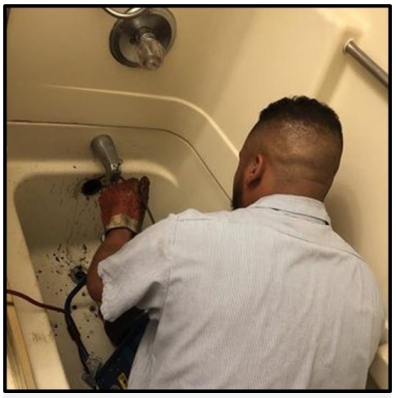
Inspecting Additional Apartment(s)

Scenario #1: Maintenance gained access above

Maintenance worker in the **suspected root case apartment checks the following (as applicable)** while maintenance worker **in the impacted apartment** checks for leaks:

- ❑ **Bathtub:**
  - With the tub stopper in, **fill the tub past the overflow** and let the water drain through the overflow, and
  - **Pull the tub drain plug and lets the water drain.**
- ❑ **Sink**: Fill the sink with the stopper in & pull the drain plug.
- ❑ **Toilet**: Flush the toilet.



One of the most common places for a waste line leak is from the **horizontal branch piping** that connects the tub drain to the stack. The entire line (i.e., from stack to tub trap) must be replaced if a leak is identified in the branch piping.

12

Inspecting Additional Apartments

Maintenance worker in the **suspected root case apartment** checks the following, as applicable:

- ❑ **Caulking**: Check for gaps or damaged caulking around the bathtub and tub enclosure.
- ❑ **Washing Machine**: Check whether the washing machine, if any, is properly installed.
- ❑ **Air Conditioner:** Check whether the air conditioner(s), if any, is properly installed.
- ❑ **Freezer**: Check whether the freezer, if any, is properly installed.
- ❑ **Dishwasher**: Check whether the dishwasher, if any, is properly installed.

Continued…

The maintenance worker may consider conducting **a toilet pull** to inspect the wax gasket and flange for damage.

13

Inspecting Additional Apartments

For leaks from above originating within plumbing chase walls of an above apartment:

- Wet readings that are present only **on the lower sections of the wall** suggest the leak is likely within that or an adjacent apartment.
  - *A wall-break is needed to inspect pipes inside the chase wall.*
- Wet readings that extend to **the upper sections of a chase wall** suggest that the Root Cause Unit is further up the line and additional leak tracing is necessary.

After making **a wall-break in the Root Cause Unit,** operate the fixtures in that unit (and the above unit as necessary) and make observations inside the wall cavity to determine the specific leak source.

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Inspecting Roof

If an apartment located **on the top floor** reported leak from above, **inspect the roof of the building:**

- ❑ **Roof Deck**: Inspect the roof deck for torn or damaged areas of the roof membrane, and/or ponding.
- ❑ **Roof Perimeter:** Inspect the perimeter of the roof (e.g., parapets and bulkheads) for damaged & missing flashing.
- ❑ **Roof Flashing & Curbing:** Inspect penetrations (e.g., drains, roof fans, vents) for damaged or missing flashing or roof curbing materials.
- ❑ **Water Tanks:** Investigate buildings with water tanks to check for defects with constant water leakage including checking up feed and supply lines for proper waterproofing.

A **Maximo flag** indicates if the roof is under warranty. **Do not make any repairs if the roof is under warranty**. See Standard Procedure 025:52:1, *Administration of Guarantees and Warranties.*

15

Inspecting Additional Apartments

Scenario #2: Maintenance is not able to get access

If not able to gain access or identify the root cause in the apartment above or adjacent, **continue up the line.**

- **If no wet readings** are present in the next accessible unit, **this narrows down** the leak source to below apartments.
- If unable to access an above apartment, it may be possible to **identify the leak source from an adjacent apt. if there is a shared chase wall.**

Apartments with **similar wet conditions** and apartments with **no wet conditions** narrows down the number of apartments that need to be accessed.

If needed, **ask PMS or APMS to check history in Maximo** to identify apartments with repeated complaint history and/or any pending repairs.

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Inspecting Additional Apartments

Scenario #3: Still not able to identify the source?

If still not able to identify the apartment with the suspected root cause **after inspecting multiple units**:

- Consult with APMS or PMS for guidance.
- Prepare to conduct **Vertical Line Inspection.**

APMS or PMS should:

- Use their professional judgement to identify which apartment to inspect.
- Check work order history in Maximo to identify apartments in line with a repeated history of leak complaints.

Apartments with **similar wet conditions** and apartments with **no wet conditions** narrows down the number of apartments that need to be accessed.

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A Case Study

- A resident complained of water damage on the living room wall.
- The property maintenance supervisor knows that this wall is a chase wall serving the kitchen in the adjacent apartment.
- The property maintenance supervisor advises the maintenance worker to **attempt to access the adjacent apartment (with the kitchen) and two apartments above,** for a total of four apartments, to locate the probable root cause(s) of the leak.

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Knowledge Check

What units must staff attempt to access when trying to locate a root cause during a leak inspection?

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Knowledge Check

What units must staff attempt to access when trying to locate a root cause during a leak inspection?

- An apartment immediately above the impacted apartment and continue up the line, if needed, and/or
- An apartment adjacent to the impacted apartment or an apartment immediately above the adjacent apartment.

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Knowledge Check

Who does the maintenance worker or staff ask for history in Maximo to identify additional units with repeated history of leak complaints and any pending repairs up the line that could indicate root cause?

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Knowledge Check

Who does the maintenance worker or staff ask for history in Maximo to identify additional units with repeated history of leak complaints and any pending repairs up the line that could indicate root cause?

Property maintenance supervisor or assistant property maintenance supervisor.

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Knowledge Check

What repair code *could* be used when tracing the leak between multiple apartments?

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Knowledge Check

What repair code *could* be used when tracing the leak between multiple apartments?

"LEAK TRACING"

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Knowledge Check

When performing leak inspections of additional units to identify the root cause, name some indications that the maintenance worker or other staff can look for?

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Knowledge Check

When performing leak inspections of additional units to identify the root cause, name some indications that the maintenance worker or other staff can look for?

- Visible leaks
- Water damage
- Moisture readings above 599

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Knowledge Check

What does a wet reading that extends to the uppermost section of a wall indicate?

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Knowledge Check

What does a wet reading that extends to the uppermost section of a wall indicate?

That the leak is likely coming from an above apartment and that the leak investigation should be continued up the line.

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Documenting Inspection of Additional Apartments in iWM App

Once the root cause of the leak from above **is identified**, document the root cause(s) in the iWM App.

- If there is an **active leak** and **you need to create a follow up repair**, select:
  - Root Cause **'Leak From Above/Adjacent – *Investigate'***
  - Enter on the parent Leak WO:
    - **Location** of the root cause (e.g., exact room)
    - **Notes** (e.g., describing root cause and/or repairs needed)

Document in the iWM App the **exact location** of the root cause.

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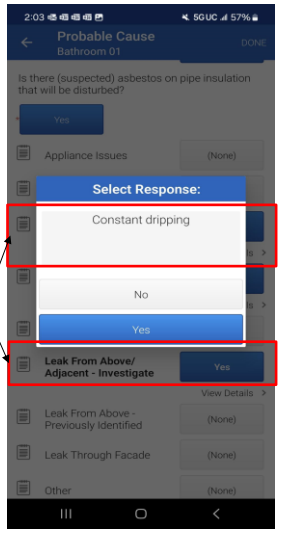
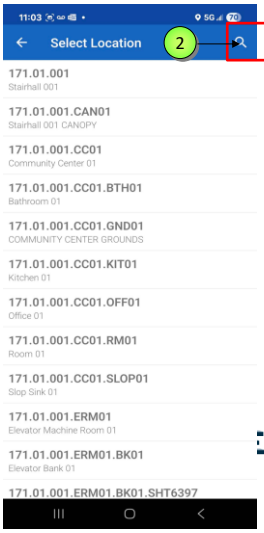
Leak From Above - Investigate (Example #1)

1. If root cause is **'Leak From Above/ Adjacent',** document the '**Location**' of the root cause and add **'Notes'** as needed.
2. Tap on the **magnifying glass** to search for '**Location**'.
3. iWM App will prompt all possible options for that location (e.g., type 05F)





30

Documenting Inspection of Additional Apartments in iWM App

- If there is a **prior leak which has been previously identified and repaired**, or there is an existing open work order to address leak, select:
  - Root Cause **'Leak From Above/Adjacent - *Previously Identified'***
  - Enter on the parent Leak WO:
    - **Location** of the root cause (e.g., exact room)
    - **Notes** (e.g., describe completed or pending repairs – including repair type, craft, sched date).
- If needed, **consult APMS or PMS to obtain the work order details**.

Document in the iWM App the **exact location** of the root cause.

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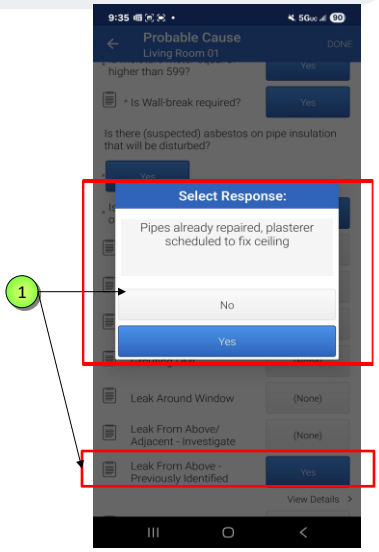
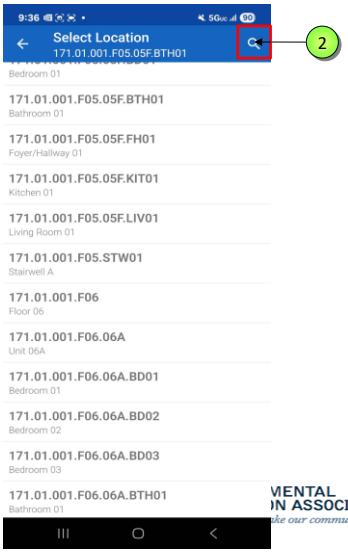
Leak From Above – Previously Identified (Example #2)

1. If root cause is **'Leak From Above - Previously Identified',** document the **'Location'** of the root cause and add '**Notes**', describing:
   - Completed repair(s), or
   - Pending repairs
2. Tap on the **magnifying glass** to search for **'Location'.**





32

Documenting Inspection of Additional Apartments in iWM App

- If **not able to access** the suspected root cause apartment or **not able to identify the root cause:**
  - Complete *Step One: Evaluation of Conditions.*
  - Enter in the 'Work Log' your findings.
    - The apartments you we able to access (e.g., apt #2B BTH wall – wet, apt #3B BTH wall – dry).
    - The apartments you attempted but were unable to access (e.g., apt #3A – no access).
- **Save inspection findings** and return to complete parent Leak WO next day.

Do not select a root cause, until verified! The parent Leak WO will remain open until you identify and enter the exact source of the leak *('Inspection State' = 'PARTIAL')*

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NYCHA LEAK TRAINING

34

Vertical Line Inspection

Accessed multiple units to trace the leak but still not able to identify the root cause?

- Consult PMS or APMS to develop a **Vertical Line Inspection plan**.

(!) A water leak **can sometimes "skip" multiple floors**, meaning it can appear on a lower level even if the root cause of the leak is significantly higher up, as water can travel along structural elements (e.g., floor joists or wall studs) before dripping down to a visible location.

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Vertical Line Inspection

To prepare for the Vertical Line Inspection, APMS or PMS must:

- Review the **findings from the initial Leak Inspection.**
- Check **work order history** (e.g., Maximo or Tableau)
- Develops a **Vertical Line Inspection** plan

(!) Depending on the individual layout of the apartments, the vertical line inspection may consist of only **one apartment per floor** (i.e., if the chase wall is entirely contained within the apartment) or **multiple apartments** (i.e., if the chase wall is shared with adjacent apartments).

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Vertical Line Inspection

What apartments should be included in Vertical Line Inspection?

Impacted apartment and all the apartments above it **up to the first apartment in the line that does not exhibit** any sign of wet condition or water damage (including previously accessed units).

All inspected apartments exhibited water damage? All apartments **in line must be scheduled for the vertical line inspection**, including the impacted apartment up to the top floor apartment in the building.

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Vertical Line Inspection

When to schedule a Vertical Line Inspection?

- The PMS or APMS must make best effort to schedule **Vertical Line Inspection within 48 hours** of the initial leak inspection.
- Property management staff must contact identified units to:
  - Advise the resident that NYCHA needs to **access their apartment on a specific day** to investigate leak and ask **if resident has any water damage or leak.**
  - **Provide the response** for each unit to the PMS or APMS.
  - Issue **NYCHA Form 042.727, *48 Hour Notice of Health and Safety Repairs*** to all apartments identified for the Vertical Line Inspection.

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Vertical Line Inspection

Not able to access apartment identified for the Vertical Line Inspection on the Scheduled Date?

- If a resident or other adult is not home to allow access to the apartment during the Vertical Line Inspection:
  - **Use NYCHA's Right of Entry** following 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,* or
  - **Consult PMS** or **APMS** for further guidance.


Sorry, we missed you.
Lo siento, no los encontramos en su residencia.
Вас не было дома.
我们很抱歉错过。但您不在家。

DATE / FECHA / ДАТА / 日期

Work Order #

Description of work

NOTICE GIVEN BY
NOTIFICACION DADA POR /
УВЕДОМЛЕНИЕ ПОДПИСАЛ / 特此通知:

We will return on

Based on the terms of your lease, we are providing you with advanced notice that NYCHA will be exercising our right to enter your apartment on the date listed above to perform repairs. That means we may need to gain access if you or another adult is not home.

If we do not hear from you, we will attempt to gain access to your apartment on the date listed.

Spanish

Russian

Chinese

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Vertical Line Inspection

Maintenance workers with assistance of PMS or APMS, when needed, should:

- **Check and/or operate fixture**s in the above apartments (see *'Inspecting Additional Apartments'*).
- Document **the root cause(s)** in the iWM App.
- Create **follow up repairs** for the additional impacted apartments, when feasible.
- **Inform the residents** of inspected apartments about the Vertical Line Inspection findings.

If an additional impacted apartment **requires a wall break to trace the leak**, the maintenance worker must **create child work order(s)** related to the wall break.

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Vertical Line Inspection

Still not able to identify root cause after Vertical Line Inspection?

- Property management staff (e.g., PMS, APMS, PM) or Neighborhood Administrator must **contact Office of Mold Assessment and Remediation (OMAR)** for assistance with tracing of complex leak cases via:

  MOLD.BUSTERS@NYCHA.NYC.GOV

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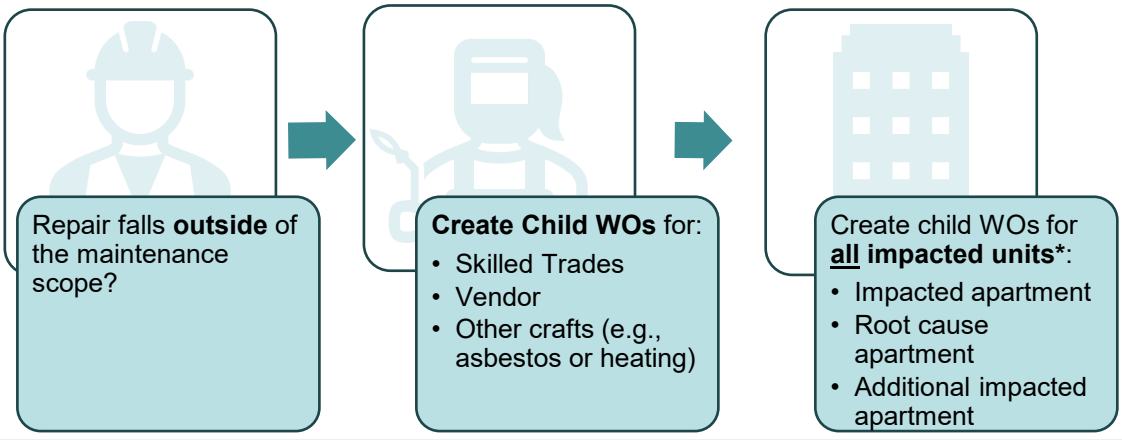
NYCHA LEAK TRAINING

42

Creating Child Work Orders



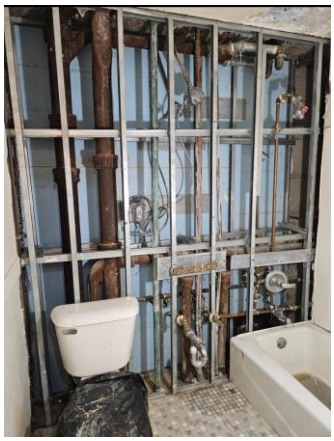
Parent Leak WO should remain open **until the root cause is identified** & **entered** in the iWM App.
(!) Do not enter a root cause until it is verified.

43

Creating Child Work Orders

Important (!)

- It is crucial that follow up **child work orders are created for the root cause apartment and impacted apartment (including cosmetic repairs).**
- Use iWM App to **adjust the location** when creating child work orders, as needed.
- Child work orders created **without the correct location** will lead to delays in completing repairs.



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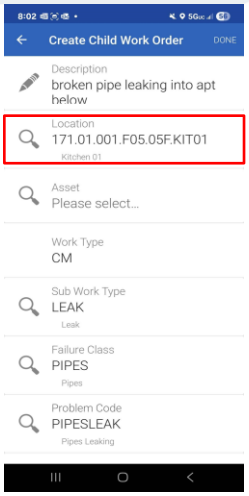
Creating Child Work Orders

*For example, if you identify that the leak in apartment #4F originates from apartment #5F, you must **create work orders for both impacted units.***

1 Use iWM App to **adjust the location**, when needed.

- Tap on the **'magnifying glass'** to adjust the location, when needed (e.g., apt. #5F)



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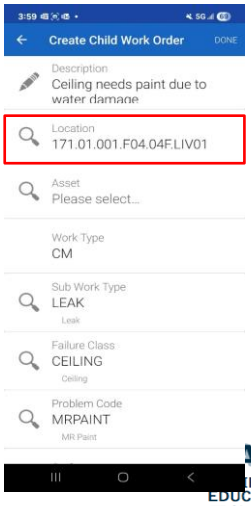

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Creating Child Work Orders

- If you identified **additional apartment(s) in the line impacted by the <u>same leak</u>**:
  - It is the best practice to **create child work orders** for additionally impacted apartment(s), while staff has access, *or*
  - If not able to create a child work orders (e.g., due to the conditions, expediency or other factors), instruct the resident(s) of additionally impacted apartment(s) **to call CCC or use MyNYCHA** to submit a repair request.

Made wall break while tracing the leak? Make sure to provide temporary repairs and **create work orders** to repair the wall!

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Creating Child Work Orders (Skilled Trades)

If skilled trade repairs are needed for the inspected apartments, **issue a separate RTS** to the residents of the impacted apartment, the root cause apartment, and any other additional impacted apartments, if feasible.

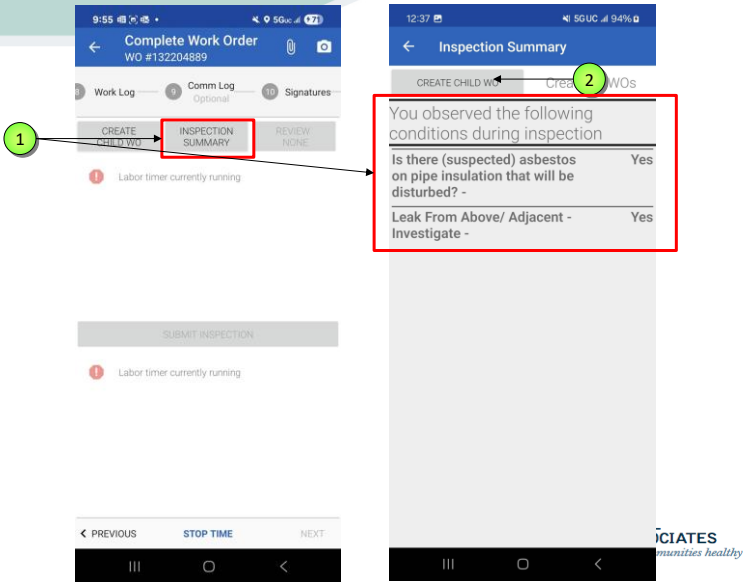
Impacted Apartment RTS Slip (e.g., apt 1A)	**Root Cause Apartment RTS Slip (e.g., apt 4A)**	**Additional Impacted Apartment RTS Slip ** (e.g., apt 2A)**
Parent Leak WO# at the top of the RTS slip (e.g. Leak From Above WO#)	Child Root Cause Repair WO# at the top of the RTS slip (e.g., Plumbing WO#)	Child Cosmetic Repair WO# at the top of the RTS slip (e.g., Plastering or Paint WO#)
All skilled trades necessary to complete leak repair at this apartment checked off.	All skilled trades necessary to complete leak repair at this apartment checked off.	All skilled trades necessary to complete leak repair at this apartment checked off.

47

Creating Child Work Orders

1. Before submitting the inspection, you can check **'Inspection Summary'** view in the iWM App to see what actions need to be taken (e.g., creating appropriate child work orders, if needed).

2. **'Inspection Summary'** view will document findings from **'Task 20: Probable Cause'** to guide you what repairs needs to be created.



48

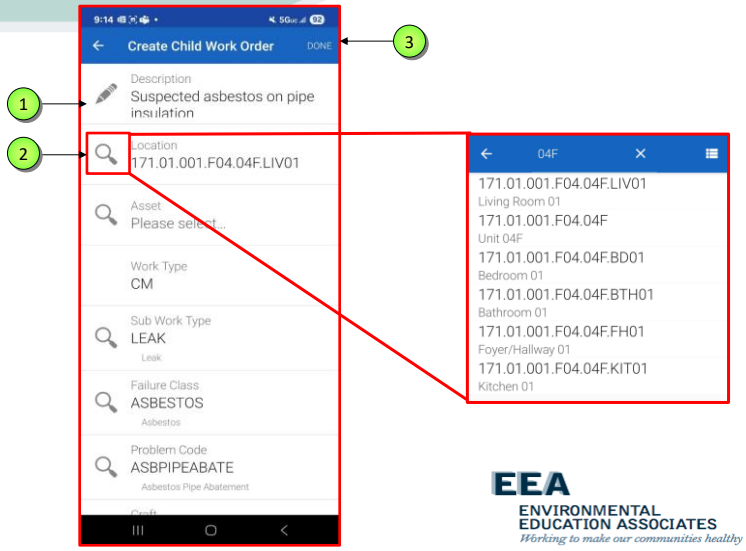
Creating Child Work Orders

1. *Example 1: you need to create a child WO to address **suspected asbestos** in apt. #4F.*

   Fill out all the required steps:
   - Description
   - Location*
   - Work Type
   - Sub-Work Type
   - Failure Class
   - Problem Code
   - Craft

2. ***Note:** Adjust the '**Location**' as needed. iWM App defaults the location to the initial parent WO.*

3. Tap **'Done'.**



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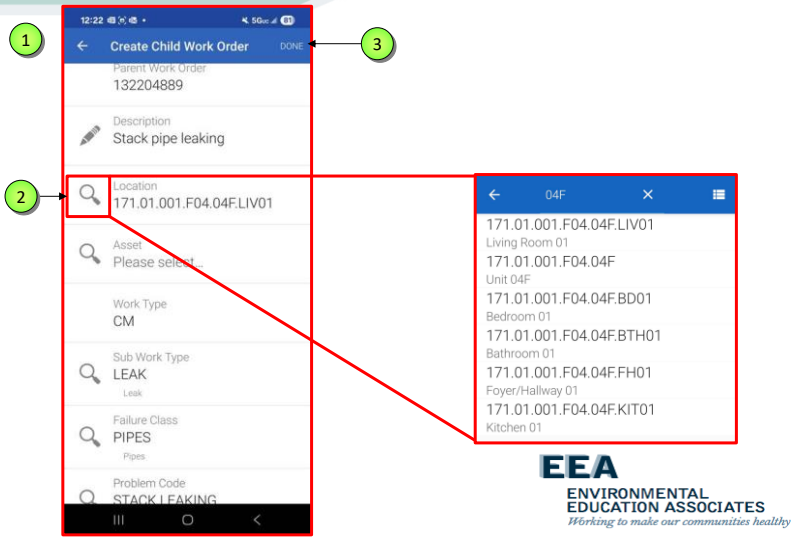
Creating Child Work Orders

1. *Example 2: You need to create a child WO to address the root cause **('PIPES/ STACK LEAKING')** after asbestos is abated.*

2. If the root cause originates in the other apartment, **adjust the 'Location' as needed.**

   ***Note:** iWM App defaults the location to the initial parent WO.*

3. Tap **'Done'.**



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Leak From Above (Scenario #1)

You are assigned to a work order for a resident who is complaining of water dripping from her living room ceiling. Upon entering her apartment, you notice a small puddle where the leak happened which you radio a caretaker to help with. There are no signs of mold or pests in the apartment. Moisture meter reads 844 on the ceiling. There is no flooding or active leak. Upon inspection of the apartment above, you conclude that the leak is due to a cracked toilet bowl.

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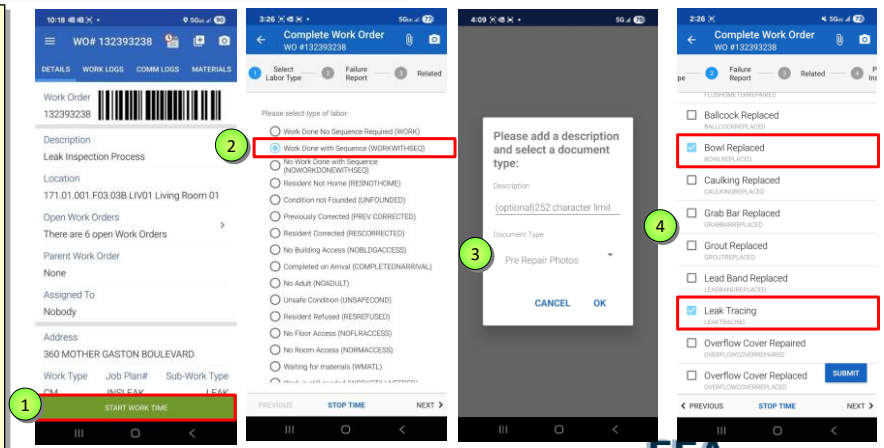
Leak From Above (Scenario #1)

1. 1- Open iWM and begin work time once arrived at the apartment.
2. 2- Tap on **Work Done No Sequence Required** (WORK).
3. 3- **Take a picture** of the condition (pre-repair).
4. 4- You or your teammate must **inspect apartments directly above** to locate the root cause.

   5- **Speak with the resident** to gather information about the history of the leak.



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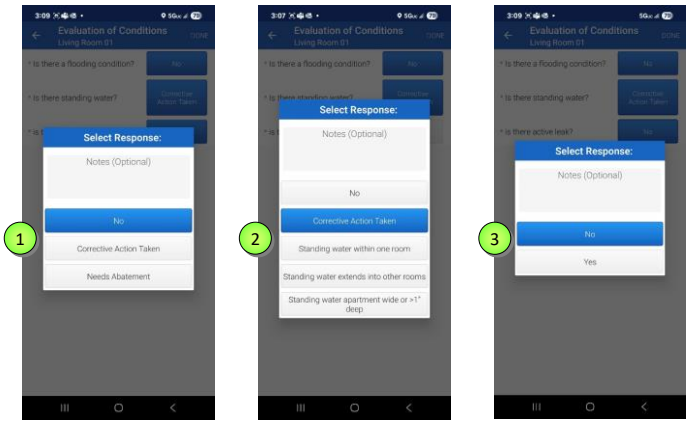
Leak From Above (Scenario #1)

6- Complete **Task 10: Evaluation of Conditions.**

1. • Is there a flooding condition?
2. • Is there standing water?
3. • Is there an active leak?



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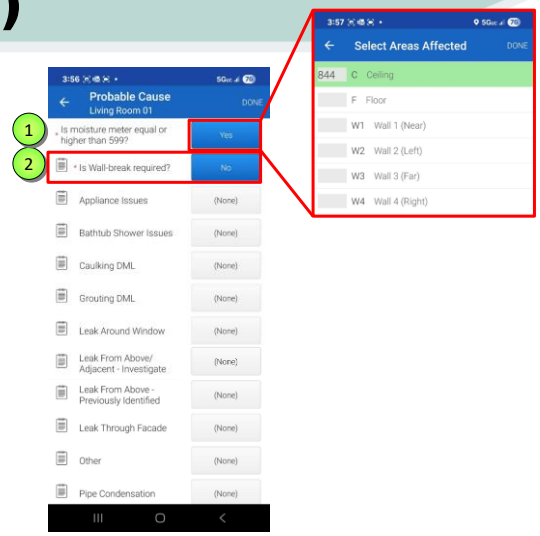
Leak From Above (Scenario #1)

1. 7- Enter **moisture meter measurements.**
2. 8-Indicate **if wall break is required ('No').**



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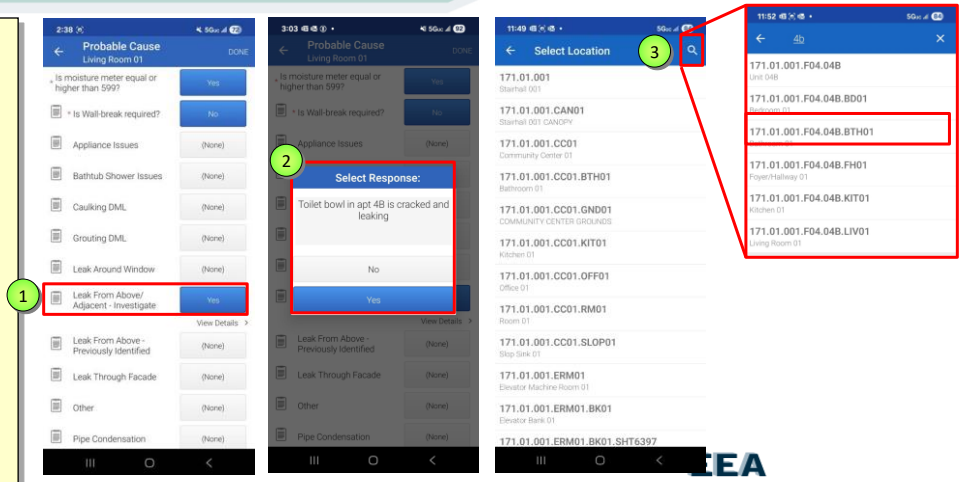
Leak From Above (Scenario #1)

8- **Inspect the above apartments.**

9- Once the location of the root cause is confirmed:

1. • Select the **Probable Cause(s).**
2. • Type in the necessary **notes**.
3. • Input the **exact location where the root cause is coming from** in the iWM app, using the magnifying glass to search. In this case the bathroom of the unit above the affected unit, 4B.



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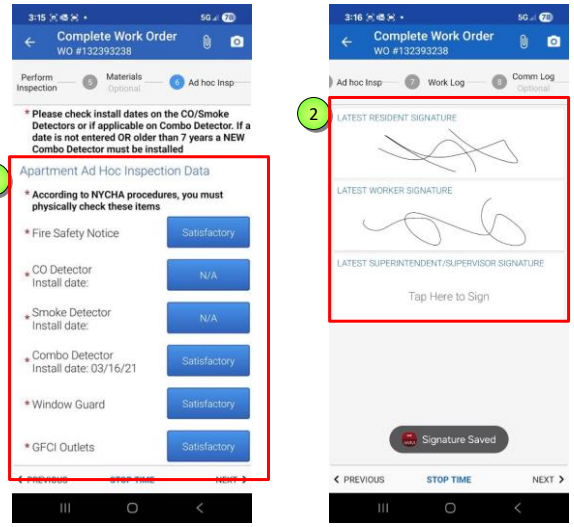
Leak From Above (Scenario #1)

1. 10- Complete Ad Hoc questions.
2. 11- Get signatures.



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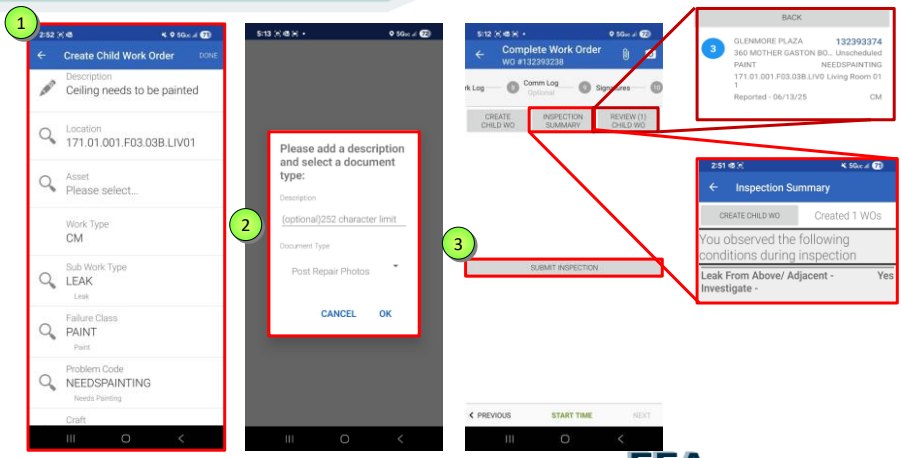
Leak From Above (Scenario)

1. 12- Create Child Work Orders needed.
2. 13- Submit Post-repair photos.
3. 14- Review Inspection Summary, create and verify Child Work Orders, and Submit the work order.



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Knowledge Check

When performing additional unit leak investigation, maintenance worker or staff identifies visible water damage due to the same root cause as the impacted unit, what should they inform resident?

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58

Knowledge Check

When performing additional unit leak investigation, maintenance worker or staff identifies visible water damage due to the same root cause as the impacted unit, what should they inform resident?

- Best practice would be to **create child work orders** for additional impacted unites while staff has access.
- If not ale to create child repairs on the spot, **instruct resident to call CCC or use MyNYCHA App** to submit a repair request.

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NYCHA LEAK TRAINING

60

Reviewing Inspection Findings with Impacted Resident(s)

Need to trace leak up the line?

- Keep all impacted **tenants informed**!
- Attempt to **access additional units** to trace the leak
- **If you identify additional units in line impacted by the same leak, keep impacted residents informed:**
  - It is best practice to **create a child work order(s)** for additionally impacted apartment(s) while you have access.
  - If not able to create child repairs on the spot, **instruct the resident(s) to call the CCC or use the MyNYCHA App** to create a new repair request.

If you made a wall break but the root cause is not there, **create necessary repairs** for the additionally impacted unit.

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Reviewing Inspection Findings with Impacted Resident(s)

Scenario #1: You were able to get access to the Root Cause Unit same day

- **Inform the resident of <u>the root cause apartment</u>:**
  - The issue in their apartments impacts other units.
  - **Made Repairs (temporary or permanent)?** Describe work done and let the resident to inspect the repair(s).
  - **Can't Make Repairs?** Create child work orders(s) to address the repairs and discuss next steps with the resident.
    - If skilled trade work is needed, issue ***RTS Slip.***
    - If other repairs are needed, inform the resident that ***property management will schedule*** these repairs.

Share with the resident general recommendations to prevent the issue from recurring, if applicable.

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Reviewing Inspection Findings with Impacted Resident(s)

Scenario #1: You were able to get access to the Root Cause Unit same day.

- **Return to the resident in the <u>impacted apartment:</u>**
  - Inform them that root cause was identified in the apartment above or adjacent.
  - **Made Repairs (temporary or permanent)?** Describe work done!
  - **Resident needs a follow up repairs?** Create child work orders(s) and discuss next steps with the resident.
    - If skilled trade work is needed, issue RTS Slip.
    - If other repairs are needed, inform the resident that property management will schedule the repairs.

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Repair to Schedule Slip ('RTS slip')

1. **For Impacted Apartment**, the RTS slip should be filled out with the **parent Leak WO at the top (e.g., Maintenance WO#)** and all work orders for the trades needed for that unit checked off.

2. For the **Root Cause Apartment**, the RTS slip should be filled out with the **child WO at the top for that unit (e.g., Plumber WO#)** and all other work order for trades needed for that unit checked off.

1 **Impacted Apartment**

NEW YORK CITY HOUSING AUTHORITY
Repairs to Schedule Slip

Date: Work Order #: Parent WO #

NYCHA maintenance staff has determined that the following Skilled Trades are needed to complete your repairs:

___ Bricklayer	___ Exterminator	___ Roofer
___ Electrician	___ Carpenter	___ Plumber
___ Painter	___ Glazier	___ Plasterer

To schedule these repairs, please call your Neighborhood Selec - lanning Team:
Mon-Fri between the hours of 8:30am – 4:30pm

Neighborhood Planner Contact: Planning Secretary Contact:

New repairs can be requested through the contact lines below:

Phone: 718-707-7771, Customer Contact Center (CCC)
Smartphone/Tablet: MyNYCHA App
Web: www.nyc.gov/MyNYCHA

A translation of this form is available in your Property Management Office.
La traducción de este formulario está disponible en su Oficina de Administración de Propiedades.
Перевод этого документа находится в Офисе управления вашего жилищного комплекса.
客户服务中心提供本文件的譯本。
客户服务中心提供本文件的译本。

NYCHA 042.800 (Rev. 12/29/23) V3

2 **Root Cause Apartment**

NEW YORK CITY HOUSING AUTHORITY
Repairs to Schedule Slip

Date: Work Order #: Child WO #

NYCHA maintenance staff has determined that the following Skilled Trades are needed to complete your repairs:

___ Bricklayer	___ Exterminator	___ Roofer
___ Electrician	___ Carpenter	___ Plumber
___ Painter	___ Glazier	___ Plasterer

To schedule these repairs, please call your Neighborhood Selec - lanning Team:
Mon-Fri between the hours of 8:30am – 4:30pm

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NYCHA 042.800 (Rev. 12/29/23) V3

64

Reviewing Inspection Findings with Impacted Resident(s)

Scenario #2: You were not able to get access to the Root Cause Unit same day

- **Return to the resident in the impacted apartment:**
  - Inform resident that you were not able to get access and will follow up within 48 hours.
  - **Resident needs Repairs?** Create child work orders(s) to address repairs and discuss next steps with the resident.
  - **Resident needs update on the Status Repairs?**
    - Resident can contact local property management office on the update on the root cause tracing, or
    - Resident could contact neighborhood planner to get update on the status of root cause repairs.

The parent Leak Work Order remains open until the root cause is identified and documented in the iWM App (Inspection State = 'PARTIAL').

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Knowledge Check

When performing leak inspections in additional apartments to identify the root cause to no avail, who does the maintenance worker call or radio for guidance?

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Knowledge Check

When performing leak inspections in additional apartments to identify the root cause to no avail, who does the maintenance worker call or radio for guidance?

The property maintenance supervisor or assistant property maintenance supervisor for guidance and/or support

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Knowledge Check

If a resident is not home to allow access to unit and the leak is not severe, what does the staff do?

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Knowledge Check

If a resident is not home to allow access to unit and the leak is not severe, what does the staff do?

- Issues NYCHA form: *48 Hour Notice of Health and Safety Repairs* to the apartment.
- Then returns in 48 hours to reattempt to access to the suspected root cause apartment(s) in order to identify the root cause(s)


Sorry, we missed you.
Lo siento, no los encontramos en su residencia.
Вас не было дома.
我們曾經到訪，但您不在家。

DATE / FECHA / ДАТА / 日期

Work Order #
Orden de trabajo# / № заказа на ремонт / 維修工作單編號

Description of work
Descripción del trabajo / Описание необходимых работ / 維修項目說明

NOTICE GIVEN BY
NOTIFICACION DADA POR /
УВЕДОМЛЕНИЕ ПОДПИСАЛ / 特此通知

(NYCHA Employee Name Printed / NYCHA Nombre de empleado en imprenta / (Имя и фамилия сотрудника NYCHA печатными буквами) / 房屋局職員姓名(正楷書寫))

We will return on
Regresamos el / Мы придем еще раз / 我們將會再次上門，日期

Based on the terms of your lease, we are providing you with advanced notice that NYCHA will be exercising our right to enter your apartment on the date listed above to perform repairs. That means we may need to gain access if you or another adult is not home.

If we do not hear from you, we will attempt to gain access to your apartment on the date listed.

Spanish

Basado en los terminos de su contrato, nosotros le estamos notificando por adelantado, que NYCHA ejercera sus derechos de entrar a su apartamento en la fecha indicada arriba para hacer reparaciones. Esto significa que nosotros necesitamos acceso si usted u otro adulto no esta en casa.

Si nosotros no escuchamos de usted, nosotros trataremos de entrar a su apartamento en la fecha indicada.

Russian

В соответствии с условиями вашего Договора об аренде жилья, мы предоставляем вам предварительное уведомление о том, что NYCHA осуществит свое право на посещение вашей квартиры в указанную выше дату для выполнения ремонтных работ. Это означает, что нам может понадобиться доступ в вашу квартиру даже при вашем (или другого взрослого члена семьи) отсутствии в ней.

Если от вас не поступит никаких известий, NYCHA будет пытаться получить доступ в вашу квартиру в указанную выше дату.

Chinese

根據您房客要約的規定，如果我們已預先提供了通知，紐約市房屋局有權於上述日期進入您的住房單位進行前面的維修工作。也就是說，如果您或其他成年人未留守家中，我們或強行進入您的住房單位。

如您沒有回覆，我們將於上述日期嘗試進入您的住房單位。

NYCHA 040.727 (Rev 7/19/17) V3

48 NOTICE FOR HEALTH & SAFETY REPAIRS

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Knowledge Check

What is the inspection state/status of the parent leak work order when the staff has still not identified the root cause?

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Knowledge Check

What is the inspection state/status of the parent leak work order when the staff has still not identified the root cause?

- The parent Leak Work Order remains open (Inspection State = 'Partial') until the root cause is documented in the iWM App.

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Knowledge Check

What is a Vertical Line Inspection plan?

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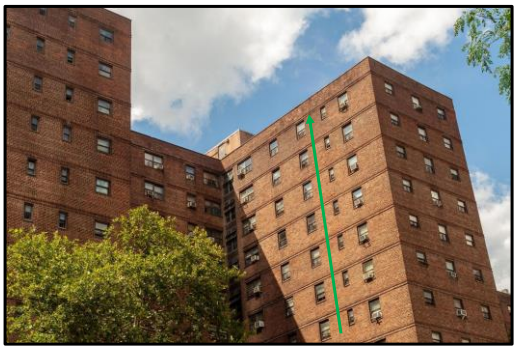
Knowledge Check

What is a Vertical Line Inspection plan?

A vertical line inspection is **a follow-up inspection of multiple apartments in the line and adjacent to the impacted apartment**, including apartments above the adjacent apartment, with a purpose of identifying the root cause(s) of flood, leak, water damage, or excessive moisture conditions that could not be identified during the initial leak inspection.



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Knowledge Check

Within how many hours should units be scheduled for Vertical Line Inspection? What form is given to inform residents of this inspection?

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Knowledge Check

Within how many hours should units be scheduled for Vertical Line Inspection? What form is given to inform residents of this inspection?

- **Within 48 hours** following the initial leak inspection, when feasible.
- Issue **NYCHA For, 48 Hour Notice of Health and Safety Repairs** to the apartment.

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Knowledge Check

What is the NYCHA Form 042.727 used for?

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Knowledge Check

What is the NYCHA Form 042.727 used for?

The NYCHA form 042.727, *48 Hour Notice of Health and Safety Repairs* is used to notify NYCHA residents that NYCHA staff attempted access their apartment to perform work, and that NYCHA staff will reattempt access in 48 hours.

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Knowledge Check

Why should NYCHA issue NYCHA Form 042.727 to conduct a vertical line inspection?

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Knowledge Check

Why should NYCHA issue NYCHA Form 042.727 to conduct a vertical line inspection?

It is provided to all identified apartments in the vertical line inspection t**o inform the residents in writing that NYCHA will attempt to access the identified apartments on the specified date** and will utilize its Right of Entry to gain access, if needed.

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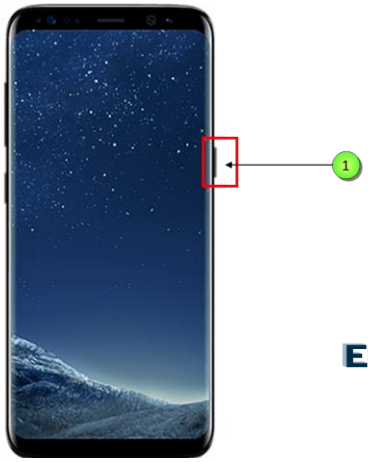
iWM Simulation

Leak Inspection Scenario **Source of the Leak Outside Impacted Apartment**

1. Press Power/Lock Button
   Swipe across screen
   Enter the default password for the **Device**:

   nycha90
   (Old devices)

   nycha123
   (New devices)



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Training Phone iWM Practice

Failure Class: LEAKFROMABOVE
Problem Code: CONSTANT DRIPPING
Location: BATHROOM

Scenario #3: Leak From Above - Constant Dripping

You enter the apartment of a resident who is complaining of a water leak above the toilet leading to occasional water pooling on the bathroom floor. The tenant also notices water damage around the lead bend. The resident mentions that the leak gets more severe when the neighbor above flushes their toilet.

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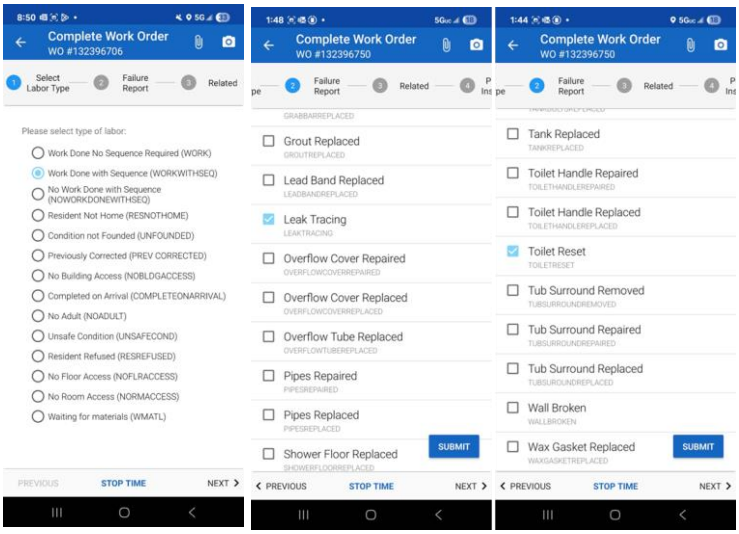
What to check in the iWM App

Leak From Above/ Constant Dripping



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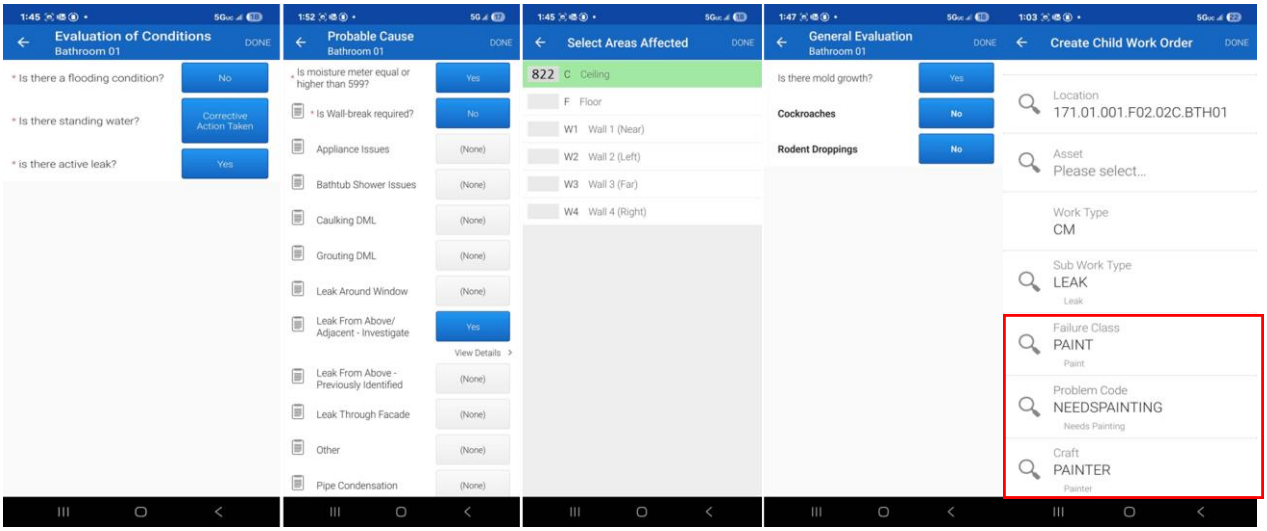
What to check in the iWM App

Leak From Above/ Constant Dripping



83

Training Phone iWM Practice

Failure Class: WALLS
Problem Code: WALLLEAK
Location: KITCHEN

Scenario #4: Walls - Wall Leak

You enter a resident's apartment who called about water stains on their kitchen wall. The resident says that the water stain started appearing after a severe storm that happened the night before. Upon entry, you see water stains on the wall coming from the ceiling, stopping halfway on the wall. The moisture meter measures 800 on the ceiling, 784 on the top of the wall, and 120 on the bottom half of the wall. You don't see flooding or standing water. You begin tracing the leak in the apartments above.

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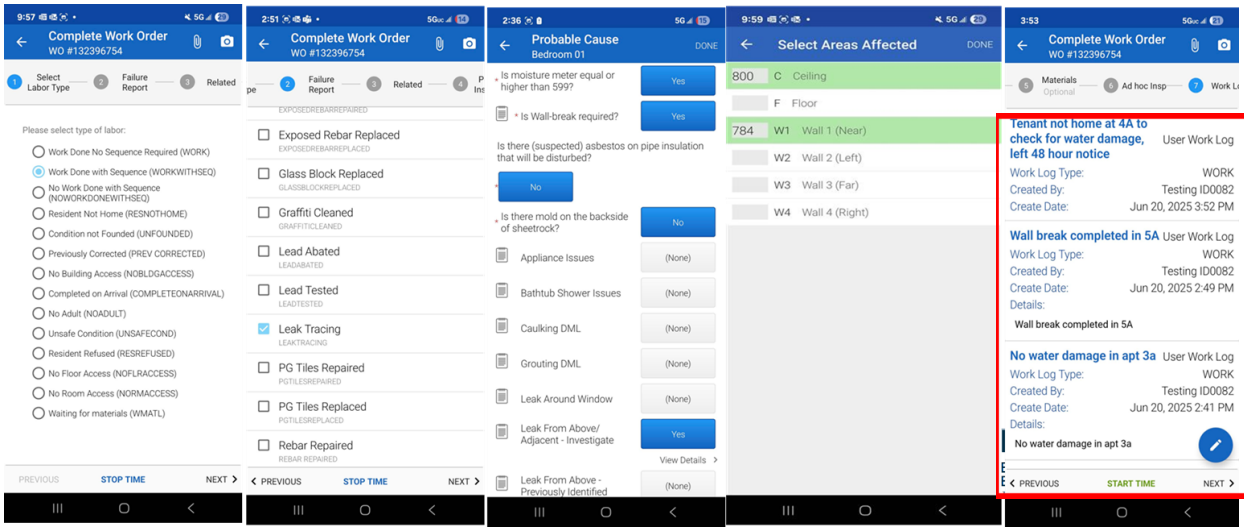
What to check in the iWM App

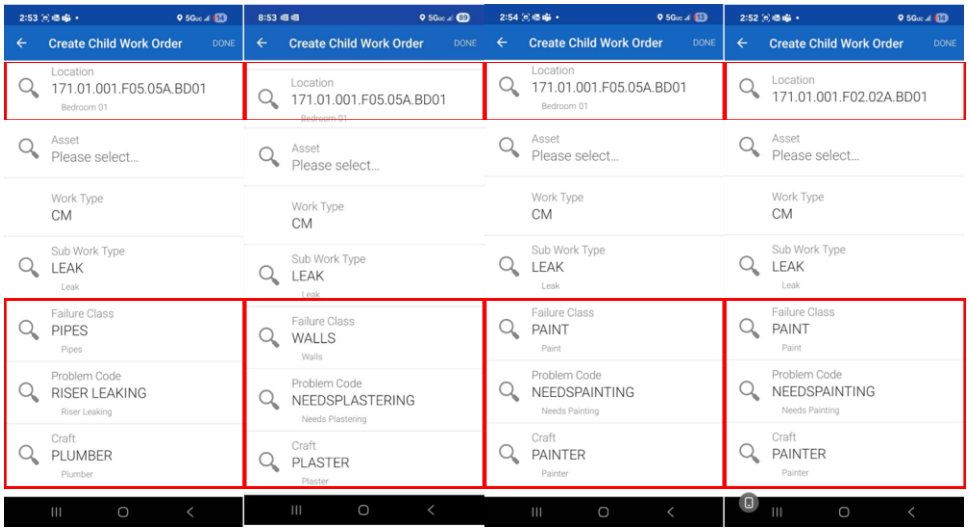
Walls/ Wall Leak



85

What to check in the iWM App

Walls/ Wall Leak



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Breaktime!

- We appreciate your participation!
- Our job is to provide training that will give you the capability to conduct leak evaluation & control.
- Please let the instructor or any EEA staff if there's anything we can do to improve your learning experience.
- **Stretch!**

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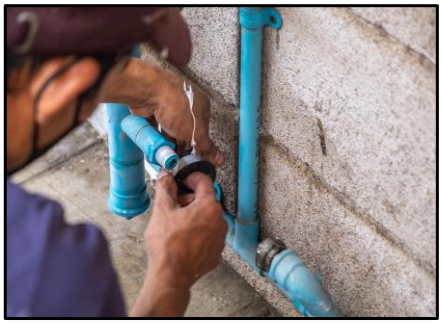
NYCHA LEAK TRAINING

88

Leak Repairs

NYCHA employees must ensure that **both root cause(s) repairs and cosmetic repairs** are:

- Completed to NYCHA standards in accordance with Standard Procedure 040:18:1, *Repair Standards and NSPIRE REAC Inspections.*
- Documented and closed in Maximo in accordance with Standard Procedure 040:09:7, *Managing Maintenance Work Orders,* including uploading required photographs and confirming that repairs have been completed.



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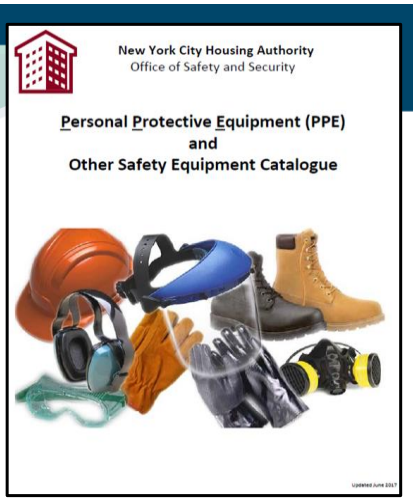
Leak Repairs

- NYCHA employees **must wear appropriate Personal Protective Equipment (PPE)** when performing specific tasks outlined in Leak Standard Procedure:
  - Standing Water Removal
  - Wall Breaks
  - Pipe Insulation

- For more information about HA numbers and item descriptions, refer to the Personal Protective Equipment (PPE) and Other Safety Equipment Catalogue located on the *SafeNYCHA* webpage on *NYCHA Connect.*



Have questions about PPE?

- Discuss with your Supervisor, or
- Contact NYCHA EH&S at ehs@nycha.nyc.gov

90

Leak Repairs

Temporary Plumbing Repairs

- When possible, maintenance must make a **temporary plumbing repair** to address leak:
  - Patch a crack of a pipe joint and create a child work order for plumber.
    - **Use epoxy putty stick to make a temp repair.**
    - **Duct tape <u>should not</u> be considered a temp repair.**
- The plumber must replace the pipe joint during repairs **(i.e., epoxy must not be left as a permanent plumbing solution).**

Temporary plumbing repairs must be designated as temporary and **child work order(s) must** be created for permanent plumbing repairs.

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Leak Repairs

Temporary Plumbing Repairs

Not able to do any temporary repair and there is active leak? Take these steps:

- ❑ Shut down water valve.
- ❑ Shut down the riser.
- ❑ Immediately notify PMS or APMS to escalate emergency repair request.

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Knowledge Check

Can you name three examples of cosmetic issues related to plumbing leaks?

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Knowledge Check

Can you name three examples of cosmetic issues related to plumbing leaks?

- Paint peeling
- Wallpaper damage
- Delamination of materials like drywall or floorboards.

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Leak Repairs

Permanent Plumbing Repairs

- NYCHA plumbers are responsible for making permanent plumbing repairs (e.g., replacing cast iron or galvanized pipes).
- Plumbers **must use caution** when replacing pipes (in particular, stack vent pipes and horizontal branch waste pipes).
  - Aging cast iron pipes are brittle, and care must be taken to minimize stress while making repairs and replacements.
  - **Replacement pipe must only be connected to pipe in satisfactory condition.**

Continued…

It's possible that work on brittle pipes **may cause breaches**. These breaches must be immediately reported, treated as emergency leaks, and addressed in accordance with this Standard Procedure.

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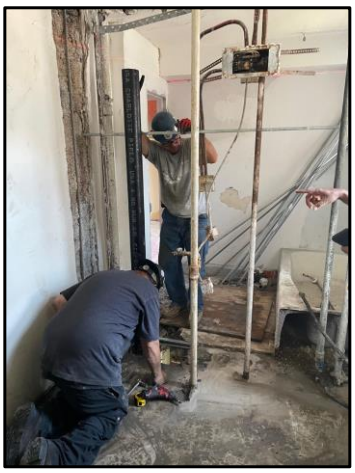
Leak Repairs

Permanent Plumbing Repairs

- **It's possible** that corroded or otherwise damaged stack or vent waste pipes extend floor to ceiling within an apartment and **the nearest satisfactory pipe may be located in another apartment.**

- If galvanized or cast-iron horizontal branch waste pipes are damaged or leaking, **the entire line from stack to tub trap must be replaced** if a leak is identified in the branch piping.



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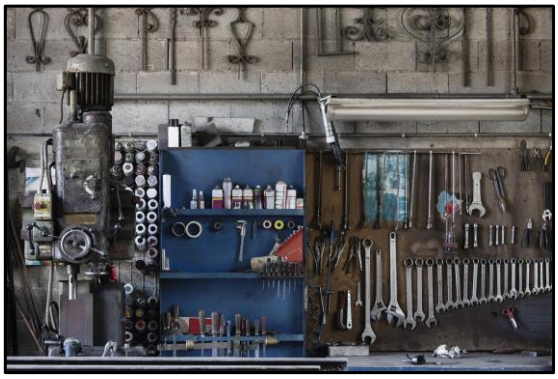
Leak Repairs (Skilled Trades)

Skilled trade and other crafts might come across the following issues when performing repairs in NYCHA apartments.

- Active Leak
- Visible Mold
- Suspected Asbestos-Containing Material (ACM).



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Scenario #1: Active Leak

If a skilled trade worker observes leak, the worker must:

- Indicate leak in the 'Work Log' *(e.g., leak within chase wall).*
- Notify Supervisor and PMS/APMS, and discuss next steps:
  - PMS/ APMS must **create a parent Leak WO** or check for an existing Leak WO in Maximo.
  - PMS/ APMS must **promptly assign** maintenance worker to address Leak WO.
- Leave skilled trades WO open until the root cause of the leak is addressed:
  - PMS or APMS **must coordinate next steps** with the skilled trades supervisor and neighborhood planner.
- Inform the resident about the next steps in repair process.

Wet wall cavities **must be dried** before installing a new drywall or plastering.

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Scenario #1: Active Leak

If the leak impacts or is suspected to impact the quality of the repair, **NYCHA staff must immediately stop the work** until the root cause(s) of the leak is addressed!

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Scenario #2: Visible Mold

If a skilled trade worker observes mold, the worker:

- Indicate mold in the 'Work Log' (*e.g., mold on Wall 1*).
- Notify Supervisor and PMS/APMS, and discuss next steps:
  - PMS/APMS must **create a parent Mold WO** or check for an existing Mold WO in Maximo, **or**
  - Skilled trades worker must **create a parent Mold WO** in the iWM App.
- Leave **skilled trade WO open** until the root cause of mold is addressed:
  - PMS or APMS **must coordinate next steps** with the skilled trades supervisor and neighborhood planner.
- Inform the resident about the next steps in repair process.

See *NYCHA Standard Procedure 040:14:1, Mold/Mildew Control in NYCHA Residential Buildings.*

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Scenario #2: Visible Mold

If mold remediation and repair is expected to impact the quality of the repair, **NYCHA staff must immediately stop the work** until the root cause(s) of the mold is addressed.

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Scenario #3: Suspected ACM

If a skilled trades worker observes **any suspected ACM that might be disturbed** during repair work, the worker must:

- **Immediately stop work,** and indicate suspect ACM in the 'Work Log' *(e.g., asbestos on insulation).*
- Notify the skilled trade supervisor and PMS or APMS that they are unable to complete work due to suspected ACM:
  - PMS/ APMS must **create testing** or **abatement WO**.
  - PMS/APMS must coordinate with NYCHA Asbestos Department **scheduling of asbestos testing** or **abatement request.**
- Leave **skilled trade WO open** until the ACM is addressed.
- Notify the resident that suspected ACM was observed and inform the resident about next steps in the repair process.

See NYCHA Standard Procedure 050:25:1, *Asbestos Safe Housing.*

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Knowledge Check

Why should you be extra cautious when replacing cast iron and galvanized pipes?

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Knowledge Check

Why should you be extra cautious when replacing cast iron and galvanized pipes?

Because these pipes have inherent vulnerabilities. They can develop rust, mineral buildup, and corrosion, which can result in health concern. They can also contain lead which can cause serious health hazards.

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Knowledge Check

Why must you only connect replacement pipe to a pipe in satisfactory condition?

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Knowledge Check

Why must you only connect replacement pipe to a pipe in satisfactory condition?

Because connecting a replacement pipe to one in unsatisfactory condition can lead to the plumbing damage and cause severe condition.

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Knowledge Check

What could happen if you connect new pipe to a brittle aged pipe?

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Knowledge Check

What could happen if you connect new pipe to a brittle aged pipe?

- If the original pipe is weak or damaged, the new pipe can become unsupported resulting in it also becoming damaged or falling.
- There could be new leakage points or exacerbate existing ones.
- A leak in one section of a pipe system can lead to pressure imbalances and problems throughout the pipe system.
- Connecting a damaged pipe to a new one may shorten the lifespan of the new one. The weak connection or pressure issues can put stress on the new pipe, making it more likely to fail prematurely.

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Knowledge Check

What steps should NYCHA staff take (e.g., plasterers) of they observe an active leak that might impact the quality of repair work?

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Knowledge Check

What steps should NYCHA staff take (e.g., plasterers) of they observe an active leak that might impact the quality of repair work?

Staff must immediately stop the work until the root cause(s) of the leak is addressed.

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NYCHA LEAK TRAINING

111

Leak Repairs Outside Normal Business Hours

- **NYCHA Emergency Management & Services Department (EMSD)** responds to emergency work orders outside of normal business hours.
  - EMSD always sends a team of **two staff.**
  - EMSD staff checks **the tool kit** prior to responding to ensure all necessary tools are in working order (including Wet Vacuums).
- Upon entering the apartment, the EMSD:
  - **Immediately addresses** any flooding or other emergency.
  - **Makes best efforts to interview** the resident about the circumstances of the leak complaint.

Normal business hours are **8:30 a.m.-4:30 p.m., Monday through Friday,** excluding holidays.

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Leak Repairs Outside Normal Business Hours

Tenant Not Home or Refuses Access?

- If a resident or other adult **is not home** to allow access to the apartment to address floods or other emergency leak conditions, the **EMSD maintenance team may use *NYCHA's Right of Entry*** to access the apartment.

See Standard Procedure 040:17:3, *Accessing Public Housing Apartments When Tenant Not Home to Address Deficiencies Related to Leaks, Mold, and Lead-Based Paint*.

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Leak Repairs Outside Normal Business Hours

Tenant Refuses Access?

- If a resident **refuses to provide access** to address emergency leaks outside normal business hours:
  - Explain urgency to the resident
  - Shut down the riser *or* contact NYPD for assistance.

- **If emergency leak is not severe**, notify the EMSD dispatcher that resident is requesting a day-time service:
  - Note in the 'Work Log' that day-time service is requested.
  - The EMSD Dispatcher manually **changes the 'Owner Group'** to property management.

If this is a non-severe **leak from above** complaint, EMSD team informs the resident of the impacted apartment that they can't get access to the root cause apartment, and that the property maintenance staff will respond during regular business hours.

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Leak Repairs Outside Normal Business Hours

Scenario #1: EMSD completes **full scope of repair.**

- **No follow up** response needed.

Scenario #2 and #3: EMSD **is not able to complete** full scope of repair.

- Follow up response needed **outside normal business hours**.
- Follow up response needed **during regular business hours.**

Scenario #4: ESMD addresses the root cause.

- Follow up response needed **for cosmetic repair.**

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Scenario #1: EMSD completes full scope of repair

If EMSD is able to address full scope of repair during the initial visit, the **EMSD team is responsible for closing Leak WO in iWM App:**

- Complete 'Leak Inspection' in the iWM App.
- Select Root Cause(s).
- Upload photographs.
- Close Leak Work Order.
- Inform residents of the repairs made.

Examples:
- EMSD cleared toilet stoppage
- EMSD repaired running faucet
- EMSD conducted a bowl lift in the apartment above.

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Scenario #2: Follow up response needed outside normal business hours.

If the emergency condition requires an **immediate attention from another craft after hours**, the EMSD team must:

- Complete *Step One: Evaluation of Conditions*.
- Create **a follow up child work order(s):**
  - If follow up is needed to **abate flood** or **remove standing water**, the work orders will be created **automatically** based on the iWM App prompts.
  - If follow up work is needed for **other emergency leak repairs**, the EMSD must create a child WO manually.
- Contact EMSD dispatcher **with the disposition of the WO.**
  - Development staff will be responsible **to follow up during regular business hours and close Leak WO.**

Examples of emergency repairs:
- Flooding Abatement
- Standing Water Removal
- Broken window glass replacement.

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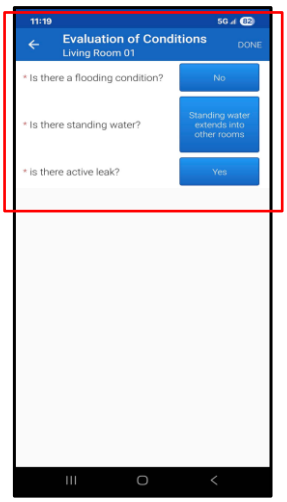
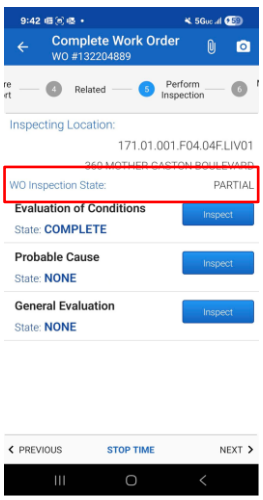
Scenario #2: Follow up response needed outside normal business hours.

EMSD completes *Step One: Evaluation of Conditions* in the iWM App.

Parent Leak WO will remain open with *'Work Order Inspection State = Partial'*.

Development must address the WO during normal business hours and create follow up repairs, as needed.





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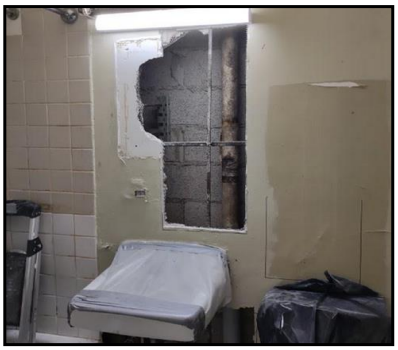
Scenario #3: Follow up response needed during normal business hours.

If the condition requires a follow up response from property maintenance staff **during normal business hours** (e.g. EMSD made temporary repair), the EMSD team must:

- Complete Step *One: Evaluation of Conditions.*
  - Add notes in the 'Work Log' describing repairs.
  - Add necessary photographs documenting work.
- The EMSD dispatcher **manually changes the Owner Group** to property management and un-assigns the EMSD maintenance team.
  - **Development staff will be responsible to follow up during business hours and close Leak WO.**

Continued…



Examples of follow-up repairs by property maintenance:
- Perform a wall break to locate the source of the plumbing leak.
- Trace the leak to the root cause.
- Create work orders to address root cause.

119

Scenario #3: Follow up response needed during normal business hours.

- The EMSD emails property management to **alert them to high priority follow-up items**, e.g.:
  - *EMSD shut the supply riser.*
  - *Maintenance needs to follow up next morning to complete the work order and create a plumbing repair.*
- At the end of the EMSD shift and before normal business hours, **Maximo automatically changes the 'Owner Group'** from EMSD to property management for all unassigned work orders or work orders with no labor record.

Parent Leak Work **Orders remain open** until Leak Inspection is completed ('Inspection State = PARTIAL').

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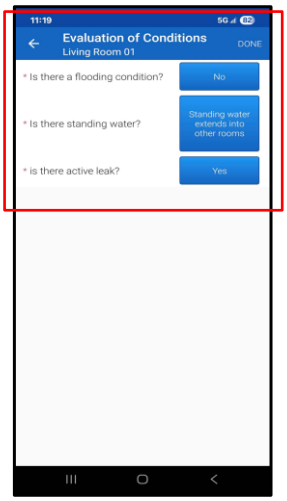
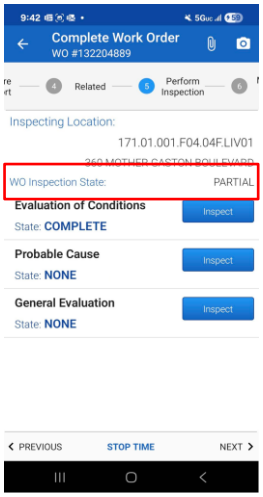
Scenario #3: Follow up response needed outside normal business hours.

EMSD completes *Step One: Evaluation of Conditions* in the iWM App.

Parent Leak WO will remain open with *'Work Order Inspection State = Partial'*.

Development must address the WO during normal business hours and create follow up repairs, as needed.





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Scenario #4: ESMD address the root cause (cosmetic repair needed)

If the EMSD is able to address the root case but **resident needs a follow up cosmetic repair,** the EMSD must:

- **Complete Leak Inspection in the iWM App.**
  - Select Root Cause(s).
  - Upload photos and enter notes in the 'Work Log'.
  - Inform residents of the repairs made.
- Create a child work order with a **failure class 'APARTMENT**' and **problem code 'CHECK'** (sub-work type 'EMSDPFU').
- **Close parent Leak Work Order** in the iWM App.
  - Property maintenance staff must create work orders to address any follow up cosmetic needs.

Examples of follow-up cosmetic repairs by property maintenance:

❖ Leak around sink was fixed but tenant needs cabinet replacement & fresh paint.

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Knowledge Check

What does EMSD stand for?

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123

Knowledge Check

What does EMSD stand for?

Emergency Management and Services Department

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Knowledge Check

For non-severe emergency leaks, what does EMSD maintenance do when the resident requests the staff to return during normal business hours?

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Knowledge Check

For non-severe emergency leaks, what does EMSD maintenance do when the resident requests the staff to return during normal business hours?

- **Notify the EMSD dispatcher** that the resident requested daytime service.
- **Add in the notes** that resident would not provide access outside normal business hours.
- If it is a leak from above work order (e.g., signs of the past water penetration but not active at the moment), **the team informs the resident of the impacted apartment that they cannot access the suspected root cause apartment,** and that the property management will complete the inspection during normal business hours.

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Knowledge Check

What does EMSD maintenance staff need to do if they addressed a root cause but a follow up cosmetic repairs are needed for the unit?

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Knowledge Check

What does EMSD maintenance staff need to do if follow up cosmetic work is necessary? What team follows up?

- Complete 'Leak Inspection' in the iWM App.
- Create a child work order with a failure class 'APARTMENT' and problem code 'CHECK' (sub-work-type "EMSDPFU.
- Close parent Leak Work Order.
- The property maintenance staff must respond to the APARTMENT CHECK work order, and create all necessary cosmetic repairs.

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Knowledge Check

What does EMSD maintenance staff need to do if they were able to address full scope of repair and no follow up work needed?

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Knowledge Check

What does EMSD maintenance staff need to do if they were able to address full scope of repair and no follow up work needed?

- Complete ‘Leak Inspection’ in the iWM App.
- Select Root Cause(s).
- Upload photographs, as needed.
- Close Leak Work Order.
- Inform residents of the repairs made.

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NYCHA LEAK TRAINING

131

Wall Breaks

When a wet wall measures equal to or greater than 599 on a moisture meter and the wet condition does not extend into the apartment above, **inspect conditions inside the wall cavity for the possible root cause(s) of the leak.**

- If the wet reading is present of the **lower portion of the wall**, the leak most likely originates within a local chase wall.
- If the wet reading extends to be **uppermost section of the wall**, the leak most likely originates in the apartment above and the leak inspection should be conducted up the line.

For leaks from above originating within plumbing chase walls, **the root cause apartment is likely to be first apartment** where wet conditions do not extend to the upper most section of the chase wall.

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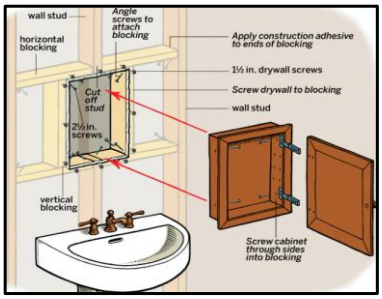
Wall Breaks

Step #1: Assessing Conditions in Wall Cavity Without Making a Wall Break

When possible, attempt to perform an assessment without making a wall break and use borescope to inspect wall cavity:

- **Leak is in the Shower Wall Area**
  - Remove the escutcheon plate to inspect the conditions within the wall cavity.
- **Leak is Behind/Around the Sink/Toilet Area**
  - Remove the medicine cabinet to determine if there is an existing opening through which conditions within the wall cavity can be inspected.



If medicine cabinet is recessed (i.e., installed between the studs in a sheetrock wall), there will be an opening to access the wall cavity when removed.

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Wall Breaks

Step #2: Making an Initial Wall Break (~ 1 Square Inch)

If unable to identify the root cause through the escutcheon plate or an existing opening behind the medicine cabinet, make an **initial wall break to inspect the conditions with borescope.**

- Use the moisture meter to identify where to make a wall break.
  - Make initial wall break **as close as possible to the location** of the suspected root cause; *or*
  - Make initial wall break **behind the medicine cabinet** or **other central area in the wall**, if not able to identify the location of the suspected root cause.
- Inspect the pipes and conditions behind the wall cavity.

Made a small opening but leak is not there? **Use caulk to fill up the hole!**

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Wall Breaks

Step #3: Enlarging the Initial Wall Break (1-2 square feet)

- Once the root cause is identified, enlarge the initial wall break to provide full visibility to the root cause and access for repairs:
  - An initial wall break must be enlarged to **at least 1 square foot** to provide access to the plumbing pipes.
  - In some instances, the wall break might need to **be enlarged to up to 2 square feet, or more.**
- Make a temporary repair, when possible, to stop active leak and create child work order(s) for permanent repairs.
- If not able to make temporary repair (e.g., brittle pipes), create child work orders and notify PMS or APMS to escalate a repair request.

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Be Careful!

Creating **a 1 square foot wall-break** provides great access to look into the wall cavity but always be sure to use caution and be aware of exposed metal mesh or other sharp objects in the wall cavity that can pose cut, scrape, or puncture hazards.

For difficult to access areas that cannot be safely assessed, **consider using the borescope or creating another small wall break** to provide access.

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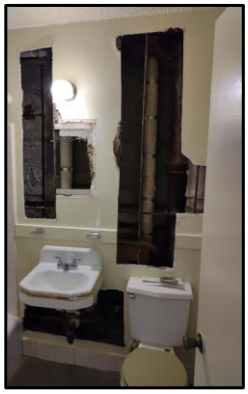
Wall Breaks

Enlarging the Initial Wall Break

An initial wall break must be also enlarged, if you are not able to identify the root cause using the borescope and requires a larger wall break to get good visual access to the plumbing pipes.

Lead-safe work practices and Renovation, Repair, and Painting (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. For more information see Standard Procedure 050:20:1, *Lead Safe Housing Procedure*.



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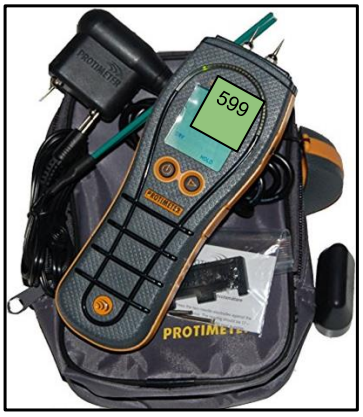
Knowledge Check

When a wet wall measures 599+ and the wet condition does not extend into the apartment above, where do you inspect the condition?



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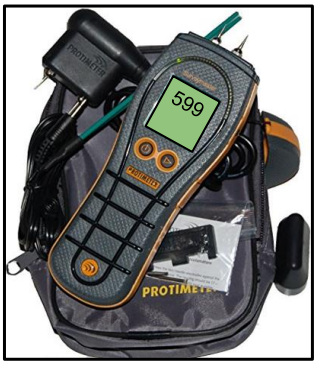
Knowledge Check

When a wet wall measures 599+ and the wet condition does not extend into the apartment above, where do you inspect the condition?

The maintenance worker must inspect conditions inside the wall cavity (current apartment) for the possible root cause of the leak.



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Wall Breaks (PPE)

When making an enlarged wall breaks at NYCHA developments:

- NYCHA staff must reduce the generation or migration of airborne dust and reduce the potential for disturbance of suspected asbestos containing material (ACM).
- NYCHA staff **is recommended** to wear the following PPE:
  - Safety glasses
  - Protective clothing
  - N95 respirator

Employees using respirators must follow the requirements in NYCHA Standard Procedure 001:17:2, *Respiratory Protection Safety Program.*

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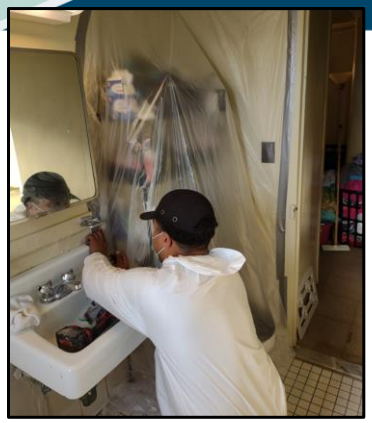
Wall Breaks (Plaster Developments)

When conducting wall breaks in plaster constructions:

- Instruct the resident **to move any personal property** in the affected area or room before initiating work.
- Cover all horizontal surfaces in the work area **with poly-sheeting** (e.g., countertops, cabinets, etc.), and ensures all drawers are sealed and door(s) are closed.
- Close and **cover the ventilation system** in the work area (e.g., bathroom vents).
- **Mark the area** of the wall break using a straightedge and marker.



See Standard Procedure 050:20:1, *Lead Safe Housing Procedure.*

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Wall Breaks (Plaster Developments)

- **Use a spray water bottle** to wet the surfaces to limit the creation and dispersal of dust:
  - Before applying the water, be sure there are no electrical circuits inside the wall and periodically rewet the area.
  - If electrical circuits are inside the wall, they must be turned off and disconnected before removal.
- **Use a hammer while operating a HEPA-vacuum** with one hand at the point of dust generation to create a wall break.
  - **Make a cut** using a sharp-edged scraper and hammer.
  - Continue **to operate the HEPA-vacuum for 5-10 minutes** to purge remaining particles from the air with the room door kept closed.

Use extreme caution when enlarging a wall break to avoid cutting gas risers, if applicable, and electrical wiring concealed behind the walls.

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Wall Breaks (Plaster Developments)

- **Remove plaster** from underlying metal mesh using a sharp-edged scraper
- **Use snips** to open underlying metal mesh to avoid contact with any suspected ACM pipe insulation:
  - **Bend inward remaining metal mesh around the wall break**, using caution not to contact any suspected asbestos-containing pipe insulation, to reduce the risk of cut hazards.
  - **If suspected ACM is observed** on pipe insulation and may be disturbed during the repairs, **stop the work** and **create an asbestos abatement work order.**

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Wall Breaks (Plaster Developments)

- **Use a damp cloth or wet wipes** to clean surfaces upon completion of HEPA-vacuuming of dust debris.
- Once the root cause(s) is identified and a temprepair is made:
  - Cover the wall break with a **NYCHA approved pest-proof material** (e.g., *Masonite* or *Plas-tec Polywall*),
  - **Remove poly sheeting**
  - Thoroughly **HEPA-vacuum the area**.
- **Instruct the resident to <u>not disturb the temporarily closed wall cavity</u>** while awaiting repairs.

*In areas where Masonite or equivalent cannot be used, temporarily cover the wall break with **rodent exclusion mesh secured** by foam.*

See NYCHA Standard Procedure 040:49:6, *Pest Prevention and Control In NYCHA Residential Buildings.*

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Wall Breaks (Plaster Developments)



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Wall Breaks (Plaster Developments)

If a NYCHA employee observes any suspected ACM that might be disturbed during the wall break, the employee must immediately stop all work in accordance with Standard Procedure 050:25:1, *Asbestos Safe Housing Procedure.*

No NYCHA employee or vendor shall disturb any ACM as part of their duties unless they have been directed to and have had the appropriate required training. Failure to test suspected ACM prior to disturbing the material violates NYCHA's policy for the handling of ACM. Failure to follow the established protocol for the assessment and removal of asbestos can pose a health risk to both NYCHA residents and staff.


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Wall Breaks (Sheetrock Developments)

When conducting wall breaks in sheetrock constructions:

- Instruct the resident to move **any personal property** in the affected area or room before initiating work.
- Cover all horizontal surfaces in the work area (e.g., countertops, cabinets, etc.) **with poly-sheeting**, and ensures all drawers are sealed and door(s) are closed.
- Close and **cover the ventilation system** (e.g., bathroom vents) in the work area as outlined in Standard Procedure 050:20:1, *Lead Safe Housing Procedure.*
- Mark the area of the wall break using a **straightedge and marker**.

When possible, **avoid creating wall break directly on areas that display visible mold growth.**

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Wall Breaks (Sheetrock Developments)

- **(!) Create a wall break** using a sheetrock saw or alternative **while operating a HEPA vacuum** at the point of dust generation.
- Continue **to operate the HEPA vacuum for 5-10 minutes** to purge remaining particles from the air with the room door kept closed after making wall break.
- Use **a damp cloth or wet wipes** to clean surfaces upon completion of HEPA-vacuuming of dust debris.
- **(!)** Inspect the **backside of the sheetrock** for mold growth conditions.

If any **mold is observed on the backside of sheetrock**, create a sheetrock replacement work order.

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Wall Breaks (Sheetrock Developments)

- Once the root cause(s) is identified and a temporary repair is made (when feasible):
  - **Cover the wall break** with a NYCHA approved solid pest-proof material (e.g., Masonite, Plas-tec Polywall, or equivalent),
  - **Remove poly sheeting.**
  - **Thoroughly HEPA-vacuum** the area.
- Instruct the resident to **not disturb the temporarily closed wall cavity** while awaiting repairs (i.e., asbestos abatement, plumbing repair, and/or pipe insulation).

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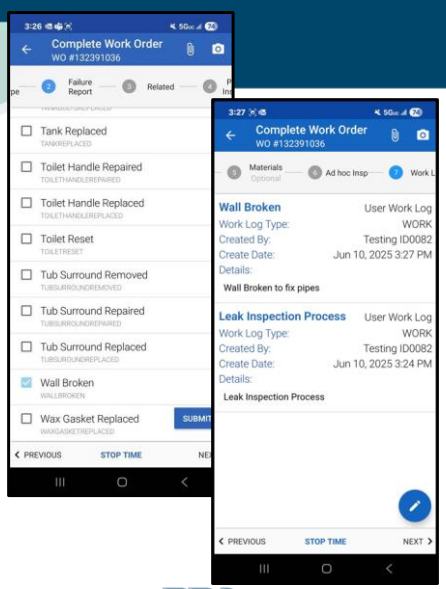
Wall Breaks

- Document in the iWM App that a wall break was made, for example:
  - Select a repair code **to document completed wall break** (e.g., '**WALLBROKEN**' or '**WALLBREAKCOMPLETED**').
  - Select a repair code **to document any temp repair** (e.g., '**PIPE REPAIRED**').
  - Create **child work order(s)** for follow up repairs (e.g., **PIPE RISER LEAKING**').
  - **Take a photograph** of the completed wall break and upload in the iWM App ('Photos – Post Repair').



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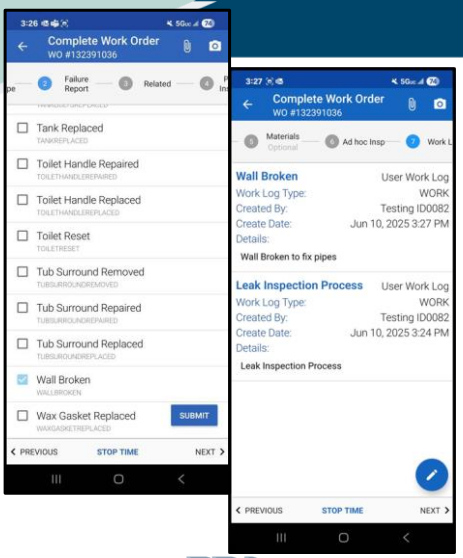
Wall Breaks

If a follow up visit is needed in the Root Cause apartment (e.g. resident need to move personal items), you can create a child work order for the Root Cause unit with Failure class "**WALLS**" and Problem Code "**WALLBREAK REQUIRED**".



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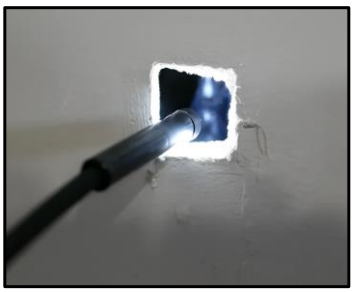
Knowledge Check

If unable to identify root cause through escutcheon plate or medicine cabinet, how big of an opening do you make on the wall to inspect with a borescope? What tool will you use to determine the location for the wall break?



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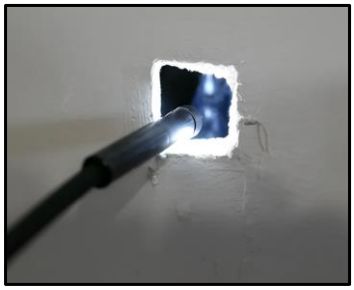
Knowledge Check

If unable to identify root cause through escutcheon plate or medicine cabinet, how big of an opening do you make on the wall to inspect with a borescope? What tool will you use to determine the location for the wall break?

- Make an initial wall break of approximately **1 square inch** to inspect the conditions in the wall cavity with the help of the borescope.
- Use **the moisture meter** to determine the location for the initial wall break.



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153

Knowledge Check

Once you identify the root cause, how big should the wall be enlarged to provide access to the plumbing pipes?

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Knowledge Check

Once you identify the root cause, how big should the wall be enlarged to provide access to the plumbing pipes?

- It must be enlarged to at least **1 square foot** to provide access to the plumbing pipes.
- In some instances, the wall break might need to be enlarged to at least **2 square feet.**

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Knowledge Check

What are some precautions when enlarging a wall break?

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Knowledge Check

What are some precautions when enlarging a wall break?

Use extreme caution when enlarging a wall break to avoid cutting gas risers and electrical wiring.

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Knowledge Check

How does the maintenance worker or other staff can document in the IWM App that a wall break was performed?

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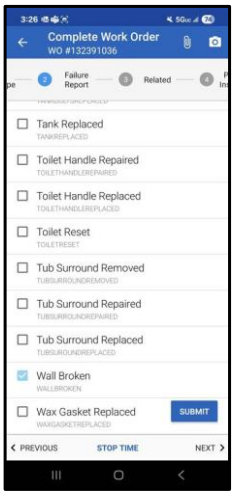
Knowledge Check

How does the maintenance worker or other staff can document in the IWM App that a wall break was performed?

- Select repair code “WALLBROKEN” or “WALLCOMPLETED”, or type details in the Work Log.



159

Take a Break!

- We appreciate your participation.
- Our job is to provide training that will give you the capability to conduct leak evaluation & control.
- Please let the instructor or any EEA staff if there’s anything we can do to improve your learning experience.

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NYCHA LEAK TRAINING

161

Flood Conditions & Standing Water

Property maintenance or EMSD staff must make best efforts to abate flooding or standing water during the initial visit.

- **If needed, consider shutting off the supply riser:**
  - Property maintenance must contact APMS or PMS, who calls the Neighborhood Administrator and above to request authorization to shut off the riser.
  - EMSD maintenance workers are authorized to shut off a supply riser, when needed.
- **If not able to abate flooding, create child work order(s) for abatement following the iWM App:**
  - Immediately escalate the request to APMS and PMS.

Follow *Step One: Evaluation of Conditions* in the iWM App to document work or create follow up repairs.

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Flood Conditions & Standing Water (PPE)

NYCHA staff must wear appropriate PPE when abating floods and removing standing water.

- If **no sewage** in standing water, wear **waterproof boots, gloves** and **hard hat**, if overhead debris are present.
- If **there is sewage** in standing water, **wear waterproof boots**, **gloves**, **safety goggles** or **face shield**, **protective clothing** (e.g., Tyvek), **N95 respirator** and **hard hat**, if overhead debris are present.
  - Wash your hands thoroughly after cleanup and follow strict hygiene practices.
  - PPE must be thoroughly cleaned after each use or disposed of, where applicable.
  - PPE must be replaced, if damaged.

Immediately **notify APMS or PMS if you observe sewage** in standing water.

PMS or APMS can assign standing water removal work order to vendor or other staff, as needed.

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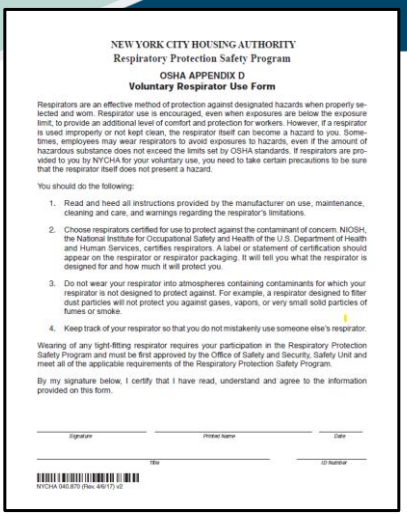
Flood Conditions & Standing Water (PPE)

- While **N95 respirators are not required** in all instances, employees **have a right to request it.**
- **Supervisors must ensure that the supplies are available** and could be provided to NYCHA employees upon request, based on the job specific conditions.
- Employees, who are not required to use a N95 respirator, are not enrolled in NYCHA's Respirator Protection Program.
  - Employees electing to use a N95 respirator must complete NYCHA Form 040.870, *OSHA Appendix D, Voluntary Respirator Use Form*.
  - Supervisors may access this from on the SafeNYCHA webpage.



NEW YORK CITY HOUSING AUTHORITY
Respiratory Protection Safety Program
OSHA APPENDIX D
Voluntary Respirator Use Form

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to you. Sometimes, employees may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If respirators are provided to you by NYCHA for your voluntary use, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirator's limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

Wearing of any tight-fitting respirator requires your participation in the Respiratory Protection Safety Program and must be first approved by the Office of Safety and Security, Safety Unit and meet all of the applicable requirements of the Respiratory Protection Safety Program.

By my signature below, I certify that I have read, understand and agree to the information provided on this form.

Signature | Printed Name | Date

Title | ID Number

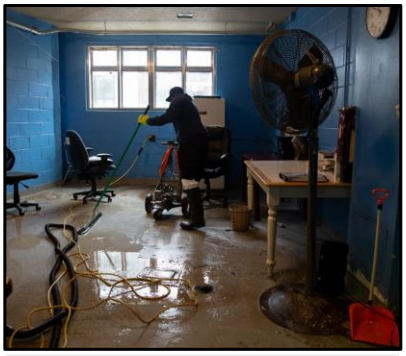
NYCHA 040.870 (Rev. 4/6/17) v2

Employees using respirators must follow the requirements in NYCHA Standard Procedure 001:17:2, *Respiratory Protection Safety Program.*

164

Steps to Remove Standing Water

- Tell the resident to **move any personal property** from the affected area.
- Use **a wet vacuum** to remove most of the water.
- Use **a squeegee** and/or a dry mop to remove the remaining water.
- Clean water damaged areas with a **NYCHA approved low-toxicity cleaner/disinfectant** (walls, floors, closets, shelves and other hard surfaces)**:**
  - ❖ Foster 40-80
  - ❖ Shockwave



When using any chemicals during clean up, NYCHA staff should wear appropriate PPE and follow safety precautions.

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Continued…

165

Steps to Remove Standing Water

- **Dry impacted area for at least 48 hours** to remove any remaining moisture and prevent mold growth:
  - **Use a portable blower** to dry floors, walls, and other hard to reach places.
  - **Use a dehumidifier to** remove moisture from the air to dry indoor spaces and help prevent mold growth, *or*
  - **Use a fan, and open windows and doors to dry impacted areas**, when a dehumidifier is not available.

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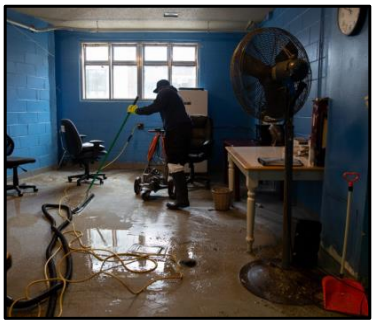
Continued…

166

Steps to Remove Standing Water

- Advise residents **to clean and dry within 48 hours** any damp furnishing and other personal property to remove any remaining moisture.
- Advise residents that **if any personal property was damaged by leak**, residents can contact their Property Management Office to make a claim.
    - The resident will be required to submit a written statement addressing the circumstances of the claim and proof of damage.
    - The property manager investigates each claim, and prepares NYCHA Form 040.126*, Personal Property Damage Claim.*



See Standard Procedure 150:61;1, *Settlement and Disposition of Claims in Favor of and Against the Authority*.

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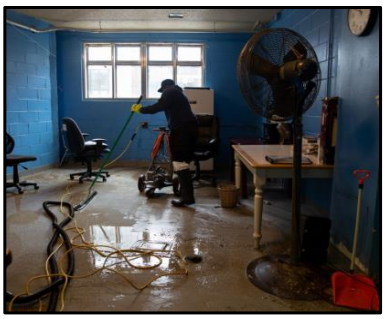
Flood Conditions & Standing Water

NYCHA property maintenance and EMSD staff must ensure that the **standing water removal work orders are closed in Maximo**, once this work is completed.

- **Normal Business Hours**: Worker must notify the Supervisor of Housing Caretakers (SOHC) once the work is completed:
    - SOHC verifies in person that the work is completed and closes work order in Maximo, or
    - Calls PMS/APMS to request to close work order in Maximo.
- **Outside Normal Business Hours:** The EMSD maintenance team closes the work order after removing the standing water and drying the area.



See Standard Procedure 150:61;1, *Settlement and Disposition of Claims in Favor of and Against the Authority*.

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Knowledge Check

How do you dry flood and standing water impacted area? What tools do you use and for how long do you dry it for?

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Knowledge Check

How do you dry flood and standing water impacted area? What tools do you use and for how long do you dry it for?

- Use a wet vacuum to remove most of the water;
- Use a squeegee and/or dry mop to remove remaining water;
- Clean water damaged areas such as walls, floors, closets, shelves, and other hard surface with a NYCHA-approved low-toxicity cleaner/disinfectant.
- Dry impacted area for at least 48 hours to remove remaining moisture and prevent mold growth;
- Use a fan and open window when a dehumidifier is not available.

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Knowledge Check

What should residents do with damp furnishings and other personal property to remove moisture?

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Knowledge Check

What should residents do with damp furnishings and other personal property to remove moisture?

Advise residents to clean and dry furnishings and other personal property within 48 hours.

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NYCHA LEAK TRAINING

173

Structural Integrity Issues

Responding to the Leak Work Order and **observe a potential structural integrity issue?** It is important to take the steps to ensure **safety** and **proper documentation**!

- **Ensure Immediate Safety**
  - Stop work if there is an imminent danger (e.g., sagging ceilings, shifting walls, unusual sounds).
  - Evacuate the area, if necessary, and notify others nearby.
- **Document Your Observations**
  - Take photos and/or videos (e.g., cracks in walls, sagging, rusted beams, warped floors).
  - Document the exact location and when noticed.
  - Document any odors, noises, vibrations.

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Structural Integrity Issues

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Structural Integrity Issues

Exposed Rebar

Sagging Floor

Bulging Wall

Sagging Ceiling

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Structural Integrity Issues

Normal Business Hours (Maintenance Workers)

If you suspect that there is an **issue with the building's structural integrity due to a flood or leak condition** (e.g., exposed rebar, bulging wall, sagging floor or ceiling):

- **Immediately notify PMS or APMS by phone or radio.**
  - PMS/APMS must evaluate the condition, and/or
  - PMS/APMS must escalate request to skilled trade supervisor(s), skilled trade deputy director or administrator, as applicable, for further evaluation.

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Structural Integrity Issues

- If PMS/APMS/ skilled trade supervisor **confirm there is a structural integrity issue**, they determine if the immediate stabilization could be:
  - Completed by **NYCHA skilled trades staff or vendor** (by using existing contract or new procurement), or
  - Require **an independent assessment by a licensed architect** when stabilization cannot be completed or procured by Operations.
    - If licensed architect is needed, such requests needs to be escalated to NYCHA's Asset & Capital Management (A&CM).

See Standard Procedure 060:88:2, *Emergency Repair and Procurement Process for Operations* for reference.

See Standard Procedure 001:15:3, *Make it Safe*, which establishes the process to resolve tasks stopped due to health and/or safety conditions that put employees at risk.

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Structural Integrity Issues

Normal Business Hours (Skilled Trades or Vendors)

- If **skilled trade workers or other crafts** suspect structural integrity issues, they must immediately report the issue to their supervisors.
  - Supervisors must evaluate the condition and follow the process described previously, as applicable.

- If **vendors** suspect structural integrity issues, they must immediately report the issues to PMS or APMS.
  - PMS or APMS must evaluate the conditions and/or escalate the issues to skilled trades supervisors as described previously.

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Structural Integrity Issues

Outside Normal Business Hours (EMSD)

- If emergency stabilization is required outside normal business hours, EMSD follows the process in Standard Procedure 060:88:2*, Emergency Repair and Procurement Process for Operations.*
- If the structural integrity issue is not an emergency, the EMSD supervisor emails the PMS or APMS for follow up during normal business hours.

NYCHA staff must continue to follow the Leak Standard Procedure to address the leak condition unless directed by a supervisor.

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Knowledge Check

What is a structural integrity issue?

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Knowledge Check

What is a structural integrity issue?

An issue that occurs when a structure is unable to withstand loads and maintain its ability to perform its intended function.

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Knowledge Check

What structural integrity issues are there at NYCHA?

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Knowledge Check

What structural integrity issues are there at NYCHA?

Issues pertaining to roof, wall and floor (e.g., exposed rebar, sagging floors or ceilings, budging walls)

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Knowledge Check

What can you do to help prevent deterioration and extend the life of NYCHA buildings?

a. **With regards to leak visual inspections:**

a. **Prompt leak and water accumulation repairs:**

a. **Proactive maintenance:**

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Knowledge Check

What can you do to help prevent deterioration and extend the life of NYCHA buildings?

a. **With regards to leak visual inspections:**
Focus on early detection and prompt repairs and maintain partnership with residents.

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Knowledge Check

What can you do to help prevent deterioration and extend the life of NYCHA buildings?

b. Prompt leak and water accumulation repairs:

Prioritize and implement prompt repairs, identify the root causes of leaks, and improve its repair processes.

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Knowledge Check

What can you do to help prevent deterioration and extend the life of NYCHA buildings?

c. Proactive maintenance:

By regularly inspecting and repairing components before they fail.

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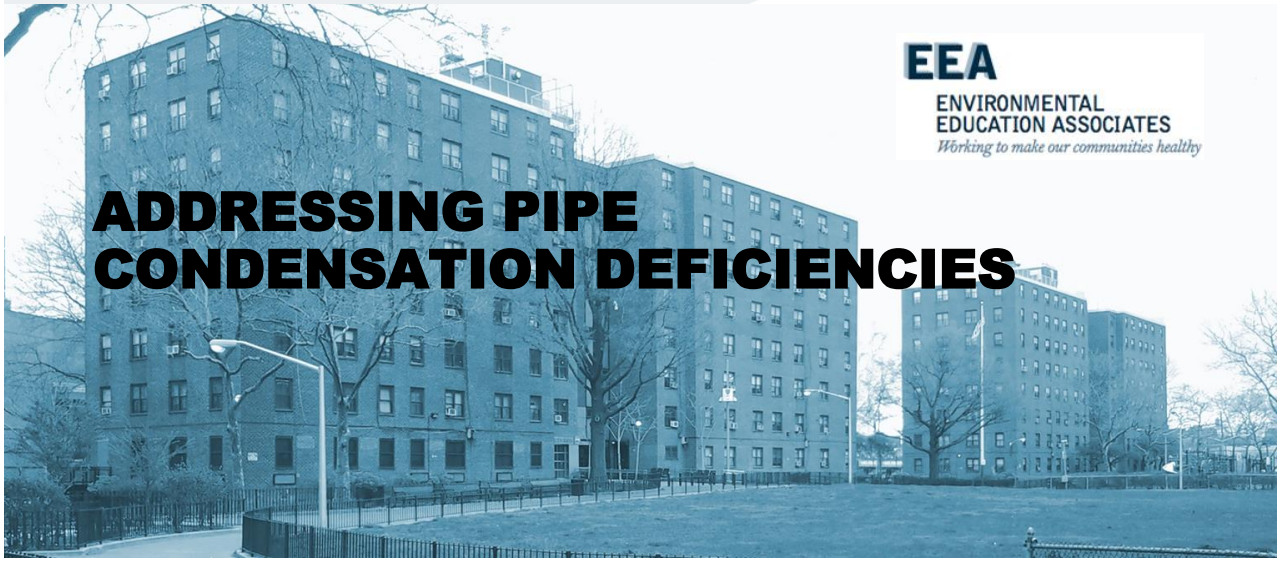
NYCHA LEAK TRAINING



189

Pipe Condensation & Insulation

If there is **water damage or wet reading on the lower three feet of the chase** wall:

- Make an initial wall break.
- Inspect the conditions within the plumbing chase wall cavity for an active leak.
  - **If there is an active leak,** follow the steps outlined in the Leak Standard Procedure to address the leak and/or create a follow up repair.
  - **If there is no active leak,** inspect the domestic water supply pipes (cold and hot) for condensation.

Follow the guidance for making wall breaks outlined in the Leak Standard Procedure

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Continued…

190

Pipe Condensation & Insulation

- If there is condensation, **take steps to identify the root cause(s):**
  - Inspect the tank room or boiler room (if directly under the line) **for condensation appearing from steam leaks**.
  - Inspect apartments in the line (e.g., above and/or adjacent) for **continuously running shower body valves, toilets, bathroom faucets, and kitchen faucets**. Conduct a multi-apartment or a vertical line inspection to find the root cause(s), if needed.
  - Make a repair to address condensation or create a follow up work order(s), as needed.

Example of condensation on the cold-water riser.

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191

Pipe Condensation & Insulation

- **Evaluate the domestic hot and cold-water supply pipes for missing or damaged insulation.**
  - Pipe insulation deficiencies can result in **condensation formation (sweating) on cold water plumbing pipes** during the summer months that manifest on the lower section of chase walls.
  - Condensation on uninsulated or not properly insulated domestic cold water supply pipes **can lead to mold growth or visible water damage on the chase walls**, if not properly addressed.

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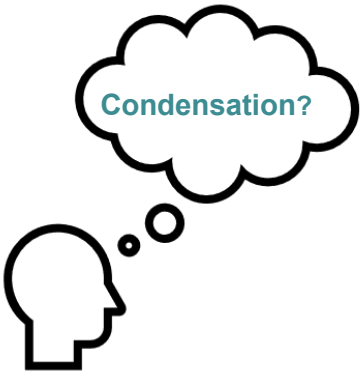
Continued…

192

Pipe Condensation & Insulation



Select appropriate method to address pipe condensation:

- **Method #1**: **Applying "Interim Controls**
- **Method #2: Insulating** Domestic Water Supply Pipes

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#1: Applying "Interim Controls"

Applying **"Interim Controls"** can substantially reduce the potential for mold growth on chase walls even in the presence of existing insulation deficiencies and continued pipe condensation.

- Ideally, to fully resolve condensation issues, hot and cold-water supply and branch pipes with missing or damaged insulation must be fully insulated . However:
  - This requires removing substantial portions of the chase wall, and in many cases, could also require asbestos abatement, and even the temporary relocation of residents.
  - Many domestic water branch pipes were not insulated as part of the original design in many NYCHA buildings and cannot be fully insulated due to obstructions within the wall cavity (e.g., framing, wall surfaces, and other pipes).
- **Therefore, NYCHA has developed the "Interim Control" procedure by applying NYCHA-approved mold-resistant materials (e.g., mold-resistant sheetrock and mold-resistant paint), when insulating domestic water supplies pipes is not practical or feasible.**

194

#1: Applying "Interim Controls"

- **Select "Interim Controls" to address condensation when:**
  - **Condensation** on cold and/or hot water supply pipes appears to be **the only root cause** of the water damage and/or wet condition on the chase wall, or
  - There might be an additional root cause attributing to the water damage and/or wet condition (e.g., plumbing leak and condensation), but the **wall break to address plumbing leak won't provide sufficient access** to insulate domestic water pipes.
- You should **inspect the conditions behind the wall cavity** by making an initial wall break **before** you can make this determination.

Example of condensation on the cold-water supply pipes.

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#1: Applying "Interim Controls"

- **If wet reading and/or water damage on the lower portions** on chase wall attributed to pipe condensation:
  - Select root case **'Pipe Condensation'** in the iWM App.
  - Create **child WO(s)** to address the deficiencies

Plaster Constructions	Sheetrock Constructions
❑ Create a child WO to replaster the surface, as needed. **(e.g., WALLS/NEEDSPLASTERING)**	❑ Create a child WO to replace water-damaged sheetrock*. **(e.g., WALLS/ SHEETROCKDML)**
❑ Create a child WO to apply mold-resistant paint*. **(e.g., WALLS/ MRPAINT)**	❑ Create a child WO to apply mold-resistant paint*. **(e.g., WALLS/ MRPAINT)**

Asterisk (*) indicates mandatory step;
'MRPaint' is an abbreviation for the 'Mold-Resistant Paint'

For instructions for removing sheetrock that displays visible water damage, mold growth, and/or that measures wet see Standard Procedure 040:14:1, *Mold/Mildew Control in NYCHA Residential Buildings*.

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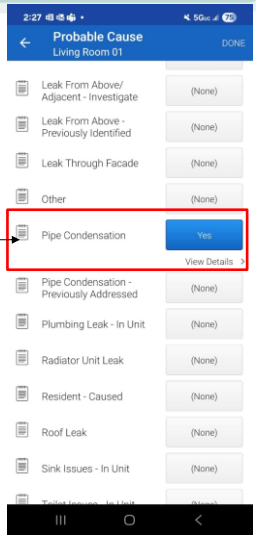
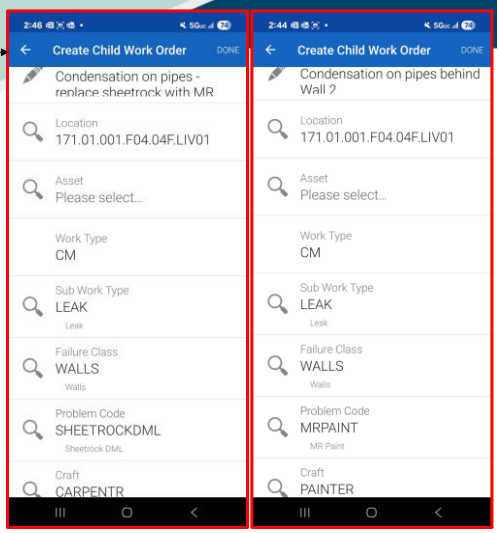
‘Pipe Condensation’

1. If root cause is **‘Pipe Condensation’** the maintenance worker **must create** child work orders for mold resistant materials.

2. **In Plaster Constructions:**
   - Create a child Mold-Resistant Paint WO by selecting FC/PC ‘**WALLS/MRPAINT**’.

In Sheetrock Constructions:
- Create a child WO to replace sheetrock with fiberglass-faced gypsum board by selecting FC/PC ‘**WALLS/‘SHEETROCKDML**’.
- Create a child Mold-Resistant Paint WO by selecting FC/PC ‘**WALLS/MRPAINT**’.





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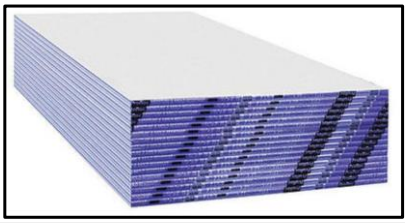
#1: Applying “Interim Controls”

When performing repairs to address condensation-related deficiencies, NYCHA skilled trade staff or **vendor must use NYCHA-approved mold resistant materials** to prevent any future mold growth and/or water damage. This includes replacing sheetrock chase walls and applying mold resistant paint to both sheetrock and plaster chase walls.



Mold Resistant Sheetrock is Paperless sheetrock with a fiberglass face that is designed to discourage the growth of mold.

Mold Resistant Paint is paint that contains a chemical fungicide that discourages the growth of mold on surfaces.

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198

#1: Applying "Interim Controls"

- If the "Interim Controls" **were previously applied** and **there is wet reading but <u>no water damage or mold growth</u>** on the lower portions on chase wall:
  - Select root cause **'Pipe Condensation – *Previously Addressed*'** in the iWM App.
  - Enter in the 'Work Log' the details about the control put in place.

- **If not sure or can not visually determine that "Interim Controls"** were previously put in place, contact PMS or APMS to check the work order history for apartment or room (e.g., in Maximo or Tableau).

See water damage? Create child work orders to **(re)apply mold-resistant materials**, as needed.

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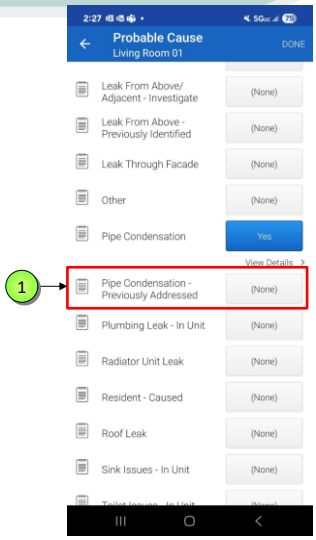
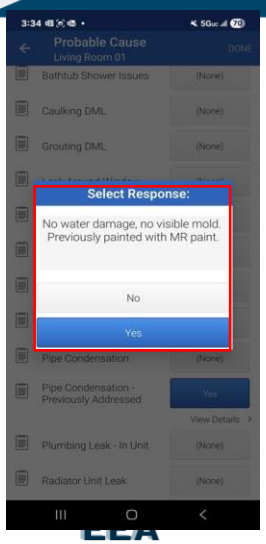
Pipe Condensation – *Previously Addressed*

1. If maintenance worker identifies that **wet reading** is attributed to the pipe condensation that was previously addressed (e.g., pipes were insulated and/or mold-resistant paint applied), select **'Pipe Condensation – Previously Addressed'.**

2. Add 'Notes' as needed.





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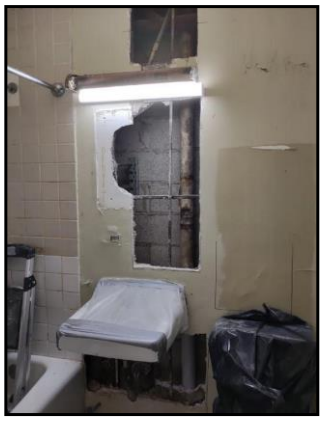
#2: Insulating Domestic Water Pipes

It is recommended to insulate domestic water pipes when:

- **Condensation** is severe (e.g., due to a steam leak).
- There is **significant mold growth on existing pipe insulation** (1 sq.ft. or more) that requires removal and replacement.
- The water damage or wet reading is attributed to another root cause and the **size of the wall break** needed to repair the leak **is sufficient to insulate** the hot and/or cold-water domestic supply pipes:
  - Large scale plumbing repairs (e.g., supply riser replacement).
  - Complex plumbing projects (e.g., Building Line Initiative).
  - Asbestos abatement provided sufficient access to insulate pipes.



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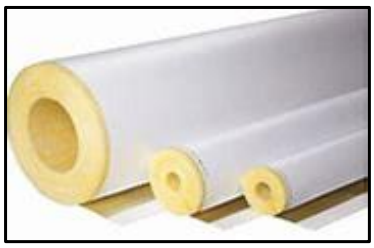
#2: Insulating Domestic Water Pipes

- **If you had to enlarge wall break** during inspection:
  - Inspect the domestic cold and/or hot-water supply pipes that are exposed & accessible after the wall break.
  - If condensation is observed:
    - **Address root cause(s) of condensation** or **create child work order(s) to address**, and
    - **Insulate or reinsulate domestic water pipes** or **create child work orders** to insulate the pipes.

Condensation most commonly occurs on cold water domestic supply pipes where the insulation has failed, or cold/ hot water domestic supply pipes that have been subject to recurrent leaks from above.



202

#2: Insulating Domestic Water Pipes

The following crafts are responsible for inspecting exposed pipes, valves, and fittings for the presence of insulation and installing new insulation when **a sufficient wall opening is provided** and **before the wall cavity is permanently closed**, when feasible:

- Maintenance Workers
- Heating Plant Technicians
- Plumbers
- Plasterers
- Roofers

When performing insulation work, staff must use **NYCHA-approved mold-resistant fiberglass insulation**, insulation tape, and PVC pipe T-covers to prevent any future mold growth on newly installed insulation.

203

#2: Insulating Domestic Water Pipes

Suspect Asbestos?!

- If a NYCHA employee suspects **asbestos containing material (ACM)** on existing pipe insulation that **might be disturbed during work**, the employee must:
  - **Immediately stop work**
  - Notify PMS/APMS or supervisor (e.g., if skilled trades).
    - Create asbestos testing or abatement work order, or request PMS/APMS to create.
    - PMS/APMS to notify NYCHA Asbestos Department.
- Once the insulation has been tested and/or abated, the NYCHA employee can complete work.

See Standard Procedure 050:25:1, *Asbestos Safe Housing Procedure* for reference.

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#2: Insulating Domestic Water Pipes

How to apply insulation?

- Insulate the straight pipe(s) above and below the T-fitting.
  - **Install fiberglass insulation,** remove the self-sealing strip and secure adhesive onto the other side of the insulation.
  - **Slide the insulation to the top** or **bottom of the pipe** and install additional pieces of insulation until the pipe is completely covered.
  - **Use a staple gun** to reinforce the insulation seam.
  - When needed, **thin out sections of the fiberglass to fit into tight spaces** and contour the ends of the insulation to fit flush with uneven sections of the concrete slab at the top and/or bottom of pipe.

Continued…

Use Owens Corning ASJ Max Fiberglass Insulation.

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#2: Insulating Domestic Water Pipes

How to apply insulation?

- **Insulate the straight pipe(s)** above/ below the T-fitting.
- Insulate **a small section of the adjacent branch line** (at least four to six inches, or to the next elbow or T-fitting).
- Install **fiberglass pillows over T's & Elbows** then cover with PVC jackets and secure using King Tacks.
  - The PVC cover fits over the fiberglass pillow and the insulation above, below, and adjacent to the T-fitting.
  - For T's, the perpendicular end of the PVC jacket will need to be cut to match the size of the pipe.
  - T's can also be insulated with the fiberglass insulation by cutting a hole through the ASJ jacket along the seam of the insulation.

Continued…

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#2: Insulating Domestic Water Pipes

See 'Appendix A - HA Numbers for Leak Tools & Supplies'

Fiberglass Pillow

King Tacks

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#2: Insulating Domestic Water Pipes

How to apply insulation?

- Coat the top edge of the domestic supply pipe insulation and exposed edge of the branch line pipe insulation, as well as all joints and seams, **with a waterproofing mastic material** (e.g., Childers CP-11).

Waterproof mastic material protects newly installed insulation from the damage caused by future excessive moisture issues (e.g., leaks from above or condensation on the adjacent sections of cold-water supply branch pipes).

Continued…

208

#2: Insulating Domestic Water Pipes

How to apply insulation?

- **Install aluminum banding:**
  - As an added layer of protection, aluminum banding is installed on the straight runs of insulation at approximately 2-feet intervals.
  - The banding is cut to size from a 200-feet roll and secured around the insulation by crimping a wing seal onto one end, threading the other end through the wing seal, and then bending the banding back on itself.



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#2: Insulating Domestic Water Pipes

- When pipe insulation is needed to address condensation:
  - Select root case **'Pipe Condensation'** in the iWM App.
  - Address the deficiencies:
    - **Insulate** (or reinsulate) domestic water pipes, or
    - **Create child WO(s)** to insulate (or reinsulate) domestic water pipes.

Condensation is most likely to be the contributing root cause **when you observe missing or damaged pipe insulation** and there is **water damage and/or mold on the lower 3 feet of the chase wall.**

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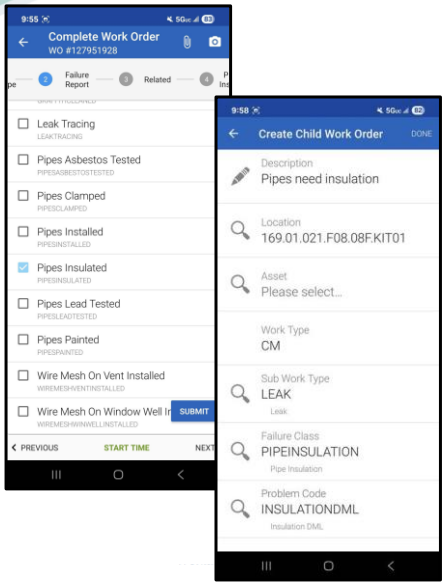
Continued…

210

Insulating Domestic Water Pipes

- If the maintenance worker **was able to insulate or reinsulate pipes** during the visit:
  - Enter **a Repair Code "PIPESINSULATED"** on the parent Leak WO.
  - **Upload a photograph** of the completed repair under Document Type 'Photos – Post Repair'.

- If the maintenance worker **was <u>not</u> able to insulate or reinsulate pipes** during the visit:
  - Create a child Pipe Insulation WO by selecting the failure class **"PIPE INSULATION"** and the problem code **"INSULATIONDML".**
  - Select a craft to complete the job (e.g., plumber).



211

Knowledge Check

What SP should you refer to if you observe suspected asbestos containing material?

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Knowledge Check

What SP should you refer to if you observe suspected asbestos containing material?

Standard Procedure 050:25:1, *Asbestos Safe Housing Procedure.*

You must stop work immediately and indicate ACM presence in the App.

Notify the APMS or PMS that the work cannot be completed due to ACM.

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Knowledge Check

What is known as "Interim Controls"?

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Knowledge Check

What is known as "Interim Controls"?

"Interim Controls" is practical and less invasive approach to addressing deficiencies on uninsulated cold-water pipes by applying NYCHA-approved mold-resistant materials (e.g., mold-resistant sheetrock and mold-resistant paint), when insulating domestic water supplies pipes is not practical or feasible.

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Knowledge Check

What are the steps to apply "Interim Controls" in sheetrock constructions?

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Knowledge Check

What are the steps to apply "Interim Controls" in sheetrock constructions

- ❑ Create a child WO to replace water-damaged sheetrock **(e.g., WALLS/ SHEETROCKDML)**
- ❑ Create a child WO to apply mold-resistant paint **(e.g., WALLS/ MRPAINT)**

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Training Phone iWM Practice

Failure Class: WALLS
Problem Code: WATER DAMAGE
Location: BATHROOM

Scenario #5: Walls - Water Damage

You enter a resident's apartment who is complaining of water stains on their bathroom wall. The resident states that the stain first started appearing about 2 weeks ago, and it has continued to grow. The resident also stated that last year they noticed similar water stains on that area, but it dried out as the weather cooled down and they didn't put a ticket.

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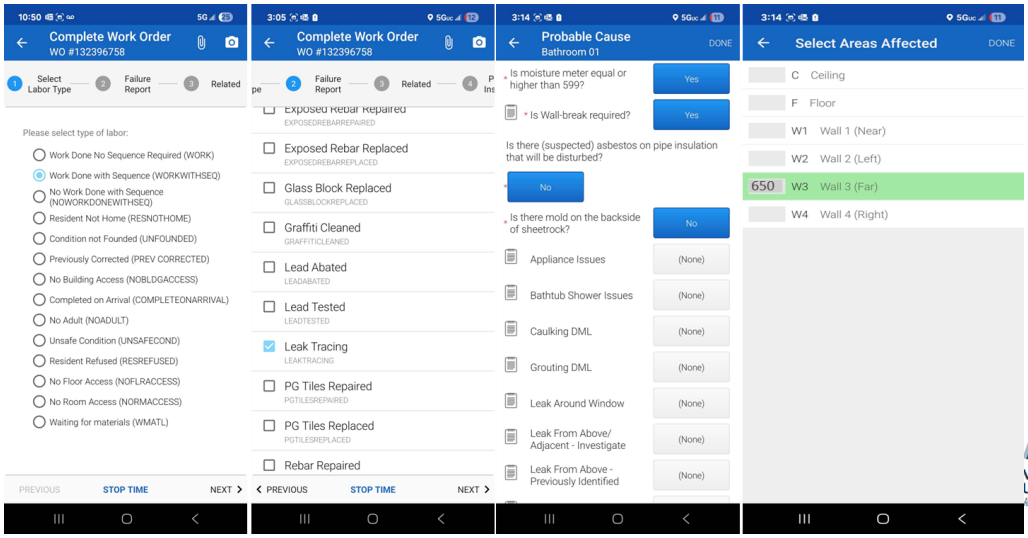
What to check in iWM App

WALLS/ WATER DAMAGE



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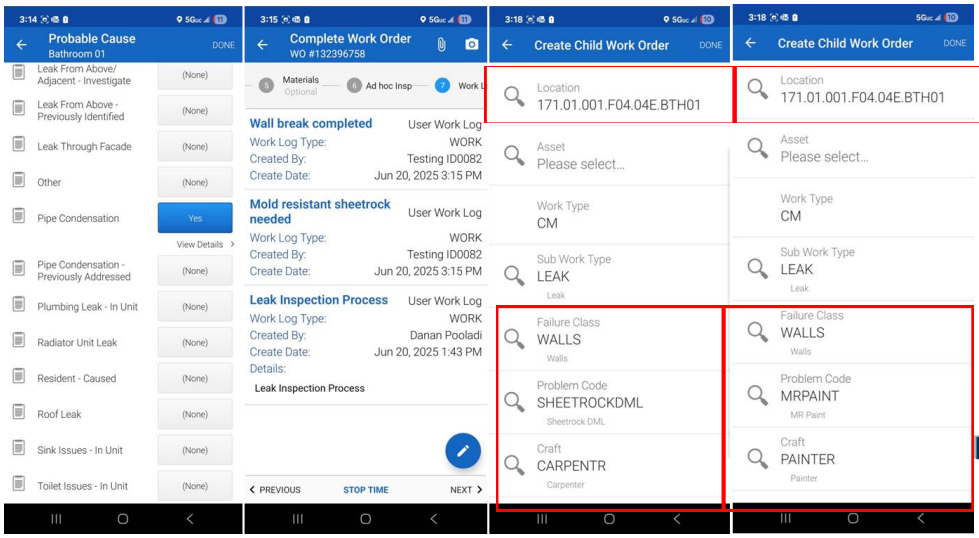
What to check in iWM App

WALLS/ WATER DAMAGE



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Breaktime!

- We appreciate your participation!
- Our job is to provide training that will give you the capability to conduct leak evaluation & control.
- Please let the instructor or any EEA staff if there's anything we can do to improve your learning experience.
- **Stretch!**

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NYCHA LEAK TRAINING

222

Microecologies Video

“Tracing Simple Leaks From Above”

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Microecologies Video

“Tracing Complex Leaks From Above”

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NYCHA LEAK TRAINING

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Quality Assurance for Leaks

- NYCHA's Office of Quality Assurance **conducts random quality assurance (QA) inspections** of closed work orders, including closed Leak Work Orders.
- The Office of Quality Assurance conducts QA assessment of Leak Work Orders **at one development per week** based on an established schedule.
  - **Target**: ~30 closed leak work per visit where inspection and child repairs were completed.
  - The Office of Quality Assurance creates an inspection work order (job plan '**INSQA**').

See Standard Procedure 059:17:1, *Public Housing Quality Assurance Program.*

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Quality Assurance for Leaks

NYCHA Quality Assurance Inspector:

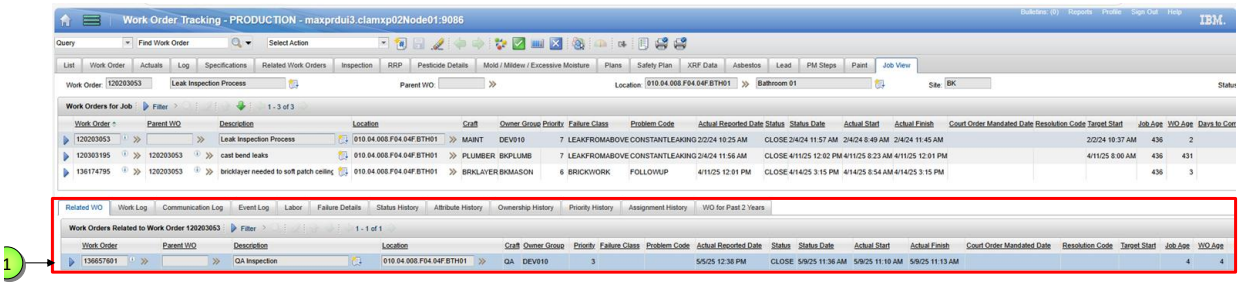
- **Conducts an assessment** of completed repairs to ensure that the root cause(s) of the leaks were addressed, and repairs were completed in accordance with NYCHA standards.
- Indicates in the QA Work Order in the iWM App whether the work performed was '**Satisfactory**' or '**Unsatisfactory**'.
  - If the work is 'Unsatisfactory', Maximo creates **a new parent Leak Work Order.**
  - Property maintenance staff **must respond** to the work order in accordance with the Leak Standard Procedure.
- Informs the resident of the inspection findings and next steps to address the deficiencies identified during the leak QA inspection, if any.

The QA inspector **takes moisture meter measurements**, as needed, to determine if the root cause(s) of the leak is addressed.

227

Quality Assurance for Leaks

NYCHA's Office of Quality Assurance conducts **randomized quality assurance inspection(s)** for closed Leak WOs.



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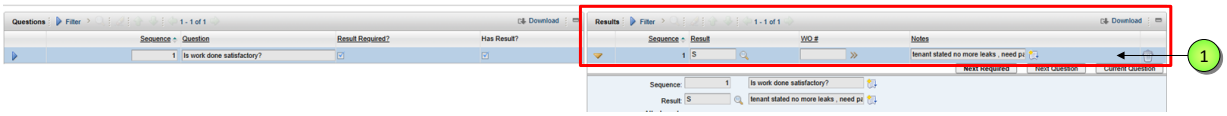
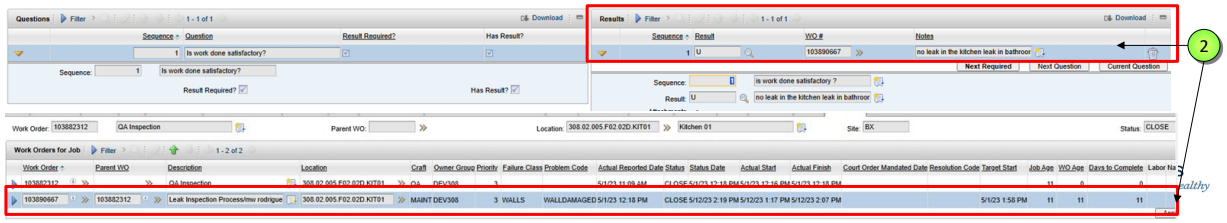
Quality Assurance for Leaks

NYCHA QA will evaluate if the repair(s) was completed '**Satisfactory**' or '**Unsatisfactory**'.

- If repair was completed '**Satisfactory**', QA Team will close the WO (no action needed).



- If repair was completed '**Unsatisfactory**', QA Team will create a follow up Leak Inspection WO (MAINT) to correct the deficiency



229

Knowledge Check

How do you conduct a thorough quality assurance inspection for leak?

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Knowledge Check

How do you conduct a thorough quality assurance inspection for leak?

By following NYCHA's guidelines and performing a quality visual inspection with specialized tools to identify all potential leak points.

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NYCHA LEAK TRAINING

232

Leak Timelines (SLAs)

- Flooding conditions must be **abated within 24 hours** of the initial complaint provided that NYCHA has access to the impacted areas.
- All standing water relating to the flood must be removed, and water-soaked areas, except for residents' personal property, must be dried **within 48 hours** of the initial complaint.
- Simple repairs must be completed within **seven calendar days** after the leak or excessive moisture condition is reported to NYCHA.
- Complex repairs must be completed **within 15 calendar days** after the leak or excessive moisture condition is reported to NYCHA.

If NYCHA is unable to comply with these timeframes, NYCHA uses best efforts to prioritize the scheduling and completion of these work orders.

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Performance Reporting

●	Percent of flood and emergency leak conditions **abated within 24 hours** after the initial leak complaint was reported to NYCHA.
●	Percent of standing water conditions **removed within 48 hours** after the initial leak complaint was reported to NYCHA.
●	Number of calendar days to **complete simple repairs**.
●	Number of calendar days to **complete complex repair.**
●	Percentage of **leak recurrence.**
●	Percent of **passed and failed Leak Work Order QA** inspections.
●	Ratio of parent and child work orders closed **without any work done** and/or **without properly sequencing repairs.**

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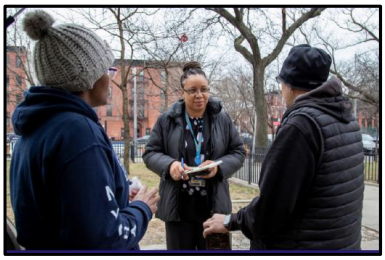
Non-Compliance



NYCHA is required to comply with this Standard Procedure:

- NYCHA staff, including supervisory staff, involved with working with leaks complaints in NYCHA developments are required to comply with *Leak & Excessive Moisture Control Procedure.*
- NYCHA departments are required **to take corrective actions** to bring NYCHA into compliance.
- If unsatisfactory work or non-compliance is identified supervisory staff must take the following actions:
  - Identify **areas for follow up training** for the employee(s) and ensure training is scheduled and provided, and/or
  - **Reinforce with the employee(s)** the job expectations, accountabilities, and the progressive discipline process.

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Non-Compliance

NYCHA is required to comply with this Standard Procedure:

- For work performed by vendors, supervisors must certify the completion of work performed to industry standards. Copies of all correspondence with the vendor must be filed in the contract folder.
  - If vendor work is not satisfactorily completed, supervisors must request that the vendor complete the work to NYCHA's satisfaction by a specified date.
  - If the vendor has not corrected the work by the specified date, the supervisor must follow the guidance in the contract.

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Knowledge Check

What is an effective means of communicating to residents their role in leak identification and repair process?

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Knowledge Check

What is an effective means of communicating to residents their role in leak identification and repair process?

Providing a clear message with proactive education including information on identifying potential leaks, the importance of reporting them and the process for initiating and managing repairs.

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Knowledge Check

What are the timeframes to complete leak repairs?

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Knowledge Check

What are the timeframes to complete leak repairs?

For simple repairs, within 7 days and for complex repairs, within 15 days.

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Knowledge Check

What can poor performance reporting lead to?

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Knowledge Check

What can poor performance reporting lead to?

Potential for repeat unsatisfactory work, improperly completed repairs, health risks, among others.

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NYCHA LEAK TRAINING

243

NYCHA Forms

NYCHA Form Number	Form Name
NYCHA Form 042.727	48 Hour Notice of Health and Safety Repairs
NYCHA Form 010.126	Personal Property Damage Claim
NYCHA Form 040.507	NYCHA Resident Lease Agreement
NYCHA Form 042.727	48 Hour Notice of Health and Safety Repairs
NYCHA Form 042.800	Repairs to Schedule Slip
NYCHA Form 042.861	Notice of Skilled Trade Appointment
NYCHA Form 042.862	Reminder Notice of Skilled Trade Appointment
NYCHA Form 042.863	Notice of Rescheduled Skilled Trade Appointment

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NYCHA LEAK TRAINING

245

Outputs

Leaks and excessive moisture conditions addressed	⇨	**Root cause identified & corrected within established timeframes**
Leaks and excessive moisture recurrence	⇨	**Reduced**
Leak inspection and leak repairs monitored	⇨	**Ensures compliance with this Standard Procedure**

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Reports

To access the Scorecard from the NYCHA Connect Homepage, select Data Warehouse from the Apps tab. From there, click on the dropdown menu for "Operations" and select "Mold and Leak Scorecard." Multi-Factor Authentication (MFA) setup is required to log in successfully to the scorecard.

If a new staff member with a title listed directly above and in Section VII, Responsibilities requires access to the Scorecard, access may be requested by contacting OMAR by email at **mold.busters@nycha.nyc.gov**.

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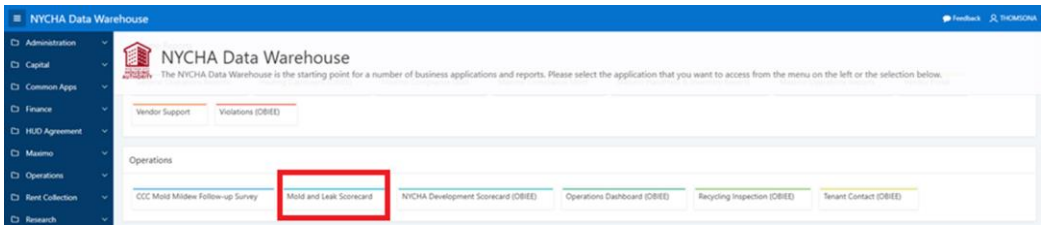
Scorecard

Mold & Leaks Scorecard



Link: Data Warehouse Home

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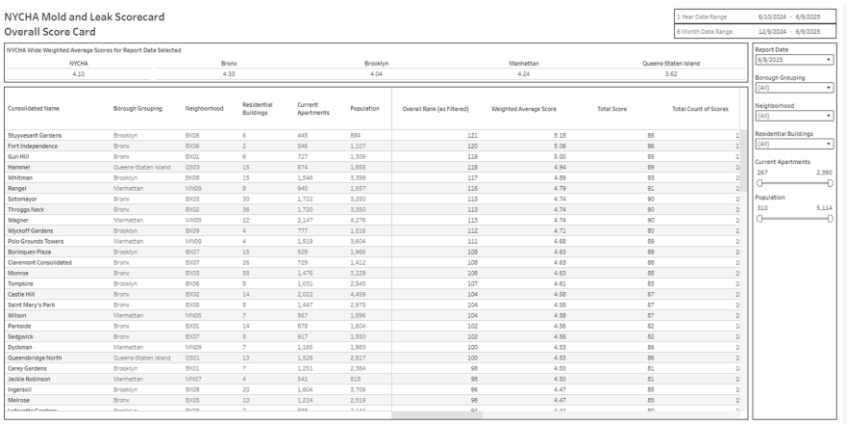
248

Scorecard

Mold & Leaks Scorecard


NYCHA Mold and Leak Scorecard
Overall Score Card

1 Year Date Range 6/10/2024 - 6/9/2025
6 Month Date Range 12/9/2024 - 6/9/2025

NYCHA Wide Weighted Average Scores for Report Date Selected

NYCHA	Bronx	Brooklyn	Manhattan	Queens-Staten Island
4.10	4.33	4.04	4.24	3.62

Report Date 6/9/2025
Borough Grouping (All)
Neighborhood (All)
Residential Buildings (All)
Current Apartments 267 2,390
Population 310 5,114

Consolidated Name	Borough Grouping	Neighborhood	Residential Buildings	Current Apartments	Population	Overall Rank (as filtered)	Weighted Average Score	Total Score	Total Count of Scores
Stuyvesant Gardens	Brooklyn	BK06	6	445	884	121	5.18	88	1
Fort Independence	Bronx	BX06	2	646	1,107	120	5.06	86	1
Gun Hill	Bronx	BX01	6	727	1,359	119	5.00	85	1
Hammel	Queens-Staten Island	QS03	15	874	1,858	118	4.94	89	1
Whitman	Brooklyn	BK08	15	1,546	3,399	117	4.89	93	1
Rangel	Manhattan	MN09	8	940	1,957	116	4.79	91	1
Sotomayor	Bronx	BX03	30	1,722	3,280	113	4.74	90	1
Throggs Neck	Bronx	BX02	36	1,720	3,350	113	4.74	90	1
Wagner	Manhattan	MN05	22	2,147	4,276	113	4.74	90	1
Wyckoff Gardens	Brooklyn	BK09	4	777	1,516	112	4.71	80	1
Polo Grounds Towers	Manhattan	MN09	4	1,519	3,604	111	4.68	89	1
Borinquen Plaza	Brooklyn	BK07	16	939	1,968	108	4.63	88	1
Claremont Consolidated	Bronx	BX07	26	729	1,412	108	4.63	88	1
Monroe	Bronx	BX03	58	1,476	3,229	108	4.63	88	1
Tompkins	Brooklyn	BK06	8	1,031	2,546	107	4.61	83	1
Castle Hill	Bronx	BX02	14	2,022	4,459	104	4.58	87	1
Saint Mary's Park	Bronx	BX05	8	1,447	2,875	104	4.58	87	1
Wilson	Manhattan	MN05	7	867	1,896	104	4.58	87	1
Parkside	Bronx	BX01	14	878	1,604	102	4.56	82	1
Sedgwick	Bronx	BX07	8	917	1,550	102	4.56	82	1
Dyckman	Manhattan	MN09	7	1,165	1,983	100	4.53	86	1
Queensbridge North	Queens-Staten Island	QS01	13	1,526	2,817	100	4.53	86	1
Carey Gardens	Brooklyn	BK01	7	1,251	2,394	98	4.50	81	1
Jackie Robinson	Manhattan	MN07	4	541	818	98	4.50	81	1
Ingersoll	Brooklyn	BK08	20	1,604	3,709	96	4.47	85	1
Melrose	Bronx	BX05	10	1,224	2,519	96	4.47	85	1

Link: Consolidated Name Scorecard: ScoreCard - Tableau Cloud

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Reports

Baez Quarterly Leak Mold and Excess Moisture Remediation Compliance Reports

OMAR submits this report to the Special Master and the *Baez* Plaintiffs as required under the Amended Stipulation and Order of Settlement under the *Baez* Consent Decree.

OMAR also shares this report with NYCHA stakeholders (e.g., Operations, Compliance, EH&S, Law, Strategy and Innovation) and external stakeholders (e.g., HUD Monitor) but it is not required by the order.

New York City Housing Authority Quarterly Monitorship Reports

The HUD Monitor issues this public report available at Reports — NYCHA Monitorship

Recordkeeping

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

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NYCHA LEAK TRAINING

251

TOOLS

HA #	Material Item	Material Item Specification	Application
2004994492	Hammer	Sledgehammer, 3lb	Used in a variety of maintenance tasks.
0615925841	Utility Knife	Stiff Tip	Used in a variety of maintenance tasks.
2006938949	Drill Bits	BIT, 3/4", Straight	Used in a variety of maintenance tasks (including making a small wall opening to insert borescope).
2003925185	Auger (Hand Drum)	5/16" x 25 ft, Hollow Core Cable with Bulb head, Hand Spin Type with Molded Plastic Drum	Sewer cleaning tool.
2003053010	Auger (Hand Drum)	1/4" x 25', Cleaner, Drain, Manual	Sewer cleaning tool.

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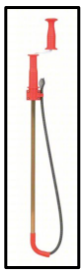
TOOLS

HA #	Material Item	Material Item Specification	Application
2003001010	Toilet Auger	General Wire® Toilet Auger with Flexicore Cable®, 3', Non-Telescoping	Sewer cleaning tool.
2003001015	Toilet Auger	Generak Wire 3' Flexicore, With Down Head	Sewer cleaning tool.
2012497150	Allway Handy Saw	Saw, Hole, Handy, Pistol Handle with Blade, Flush Cutting	Multipurpose keyhole saw.
2022966222	Snips		Used to cut sheet metal (i.e., when wall break is made, snips could be used to cut wire mesh).
2016150023	Scraper	Knife, Warner Tool® Progrip™ Stiff 3" Scraper, Carbon Steel Blade	For scraping excess mortar, putty, caulk, paint and wallpaper from floors and walls (When wall break is made using electric grinder, a scraper is used to pry out pieces of plaster).



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TOOLS

HA #	Material Item	Material Item Specification	Application
2003928503	Seesnake Micro Inspection Camera Borescope	Model CA-300 with 3 ft. Cable, Complete with Accessories, Rigid #37888	Assist in recording and saving still images and videos of problems in hard-to-reach areas.
2018620243	Sheetrock Saw	Saw, hand, Crosscut type with 26" Blade & hardwood handle, Stanely #15- 300	Assist in performing wall breaks (sheetrock constructions).
2006984254	DEWALT Screw Gun	DW255/660	Used for driving screws into a variety of surfaces.

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TOOLS

HA #	Material Item	Material Item Specification	Application
2022986560	Staple Gun	Gun, staple, non-jamming	Used to securely fasten lightweight materials like fabric, insulation, thin wood panels, or wire mesh to various surfaces.
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.
0304939762	Vacuum, Wet/Dry*	17-Gal Tank x 1.2" Vacuum Hose DIA, 114 CFM, Peak 1 5/8 HP, Two Stage Motor, with Brush, Crevice Tool, Floor Tool, Hose & Squeegee Attachment	Used to vacuum up large quantities of standing water.

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TOOLS - HA Numbers

HA #	Material Item	Material Item Specification	Application
1701920185	Moisture Meter	Rugged construction, large backlit display, pin moisture measurement, non-invasive measurement up to ¾" - 20mm below the surface	Assist in detecting excessive moisture.
0308940334	Step Ladder	4 ft. ladder	Used to inspect or access surfaces that are above ground level (e.g., ceilings).
2006939047 2006939048	Pipe Wrench	Wrench, Pipe, Straight,1-1/2" Capacity, 10" LG, Alum, Heavy Duty	Used to turn threaded pipe and pipe fittings for installation or removal.
2020130492	Tongue and Groove Pliers	Pliers, Irwin Vise-Grip 3-Piece Groovelock Pliers Set, 8", 10" and 12"	Provide purpose jaw grips on round, flat, square and hex shapes.
2019170124	Hammer	Hammer, 16 oz, Fiberglass handle crew hammer	Used in a variety of maintenance tasks.

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TOOLS

HA #	Material Item	Material Item Specification	Application
0304939984	Vacuum, Wet/Dry	16 Gal 11.5A 4 HP, 100 CFM, 2-stage	Used to vacuum up large quantities of standing water.
0304942687	Vacuum, Wet/Dry*	6 Gal, 2 HP, with HEPA Filter, 10' Hose, Extension Wands & Accessory Nozzles	Used to vacuum up large quantities of standing water.
0304945120	Vacuum, Wet/Dry*	20.6 Gal, 115V 15A 50/60HZ, Capacity, SS Tank, Twin Motor Pump out with Tilt Bar Vacuum with Accessories & Casters	Used to vacuum up large quantities of standing water.
0304947111	Vacuum, Wet/Dry*	8 Gal, 4 HP, Poly Tank, with 7' Hose, Utility Nozzle, Brush Insert, Out Board Caster Feet	Used to vacuum up large quantities of standing water.
0304953817	Vacuum, Wet/Dry	20 Gal, Heavy Duty, 11A 3 HP	Used to vacuum up large quantities of standing water.

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TOOLS

HA #	Material Item	Material Item Specification	Application
0304959081	Vacuum, Wet/Dry	1.5 Gal, 2HP, Poly Tank, with Crevice Tool, Utility Nozzle, Dusting Brush, Foam Sleeve & Dry Disc Filter, 18' Power Cord	Used to vacuum up large quantities of standing water.
0309929324	Blower (Portable Dryer)	115V, 1/5 HP, Horizontal/Vertical Airflow, 700 CFM High, 3 Speeds, 10' Power Cord	Used to dry floors, walls and other hard to reach places after flooding.
0309926838	Blower (Portable Dryer)	120V 1PH, Heavy Duty	Used to dry floors, walls and other hard to reach places after flooding.
1601951893	Dehumidifier	Portable Ind.commercial uses 142-250 pints daily capacity, built in drain pump, 10ft cord 115v ac, 10AMPS. Includes air filter & 40 ft drain hose.	Used to remove moisture from the air to dry indoor spaces and help prevent any mold growth.
1601951890	Dehumidifier	Portable, 85-165 Pints Daily Capacity, 115V 5.6A, Ind.Job Sites Uses, 20' Darin Hose, Built in Drain Pump, 10' Cord, Air Filter	Used to remove moisture from the air to dry indoor spaces and help prevent any mold growth.

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TOOLS

HA #	Material Item	Material Item Specification	Application
2022939347	Insulation Knife	Insulation boning knife with wide 7” carbon steel blade and hardwood handle	Used for pipe insulation and cutting thick material.
2022949877	Pipe Caliper		Used to measure pipe diameter to select the size of pipe insulation materials.
1401823764	Paint Brush	Wooster 5222 2-1/2” silver tip varnish brush	Used to apply weather-resistant mastic over pipe insulation.

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SUPPLIES

HA #	Material Item	Material Item Specification	Application
1308924586	Epoxy	Adhesive, Repair Pro Poxy/ Epoxy Putty Stick, 4 oz Tubes	Used to temporary fix leaks, holes, or cracks in a variety of pipes. Used for metal, masonry, wood or glass.
1909967353	Poly Sheeting Roll	6-mil, 20" x 100" Sheet	Used to set up containment area during work by creating the barrier to isolate hazardous materials and prevent their spread.
1909929406	Duct Tape Roll	Duct tape, silver 3’ core, 9 mil waterproof, 2”x60 yards	Used in a variety of maint. tasks (e.g., secure a contained area).
1210926515 1210926516	Masonite	¼”x4'x4' Sheet ¼”x2’x2’ Sheet	Used to provide temporary wall covering after wall break is made.
1214922226	Plas-tec Panels, Polywall and Silk Waterproof Wall Panels	1/16”x4’x8’ Sheet	Used to provide waterproof barrier behind toilet or temporary wall covering after wall break is made.

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SUPPLIES

HA #	Material Item	Material Item Specification	Application
1219924836	Heavy Duty Adhesive	Multipurpose Type for Various Construction Projects, Liquid Nails # LN603	Used as adhesive for plastic panel.
1220991245	White Tub & Tile Sealant Caulking Silicone	10.1 oz Cartridge Packed 24/box G.E. SCS1702	Used to seal base of toilets and shower walls.
1216984470	Silicone Caulking Sealant and Adhesive, Clear Color	Silicone, kitchen and bath caulking sealant and adhesive, clear color, mold free protection-waterproof	Used to seal base of toilets and shower walls.
1610929059	Headlamp		Used to increase visibility and provide sufficient lighting while performing various maint. tasks.
1610967499	Flashlight		Used to increase visibility and provide sufficient lighting while performing various maint. tasks.

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SUPPLIES

HA #	Material Item	Material Item Specification	Application
1906980863	Safety goggles	3M, 100 series	Used to protect eyes from a variety of hazards including chemicals, dust and flying objects.
1905930210	Box of N95 respirators	20/box	Used as a disposable respirator.
0802937621	Bucket	Under 6-gallon ProBucket, Window cleaning bucket, Plastic	Used as part of the cleaning supplies.
0807964138	Betco All Purpose Cleaner	Detergent, Betco all-purpose cleaner concentrate, 1 gallon case	Used as part of the cleaning supplies.
0908200100E	Rags	Rag, Maintenance warehouse 14”x 17”, Terry cloth cleaning towel	Used as part of the cleaning supplies.

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SUPPLIES

HA #	Material Item	Material Item Specification	Application
0907970631 0907975458 0907975459 0907968233	Nitrile Gloves	Various sizes	Used in a variety of maintenance tasks.
0907951691	Neoprene Gloves	Gloves, disposable power- free	Gloves for handling insulation products.
0907927937	HexArmor Gloves	HexArmor® 9014 Cut Resistant Gloves, Needle-resistant	Gloves for sharps and waste handling.
0907927936	Long Cuff PVC - Large Gloves	Needle stick resistant	Gloves for handling hot pipes.
0304920052	Micro Filter	Micro Filter, 10 Quantity replacement filtres.	Used with backpack vacuum.

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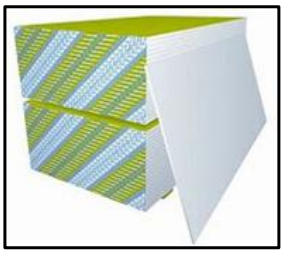
SUPPLIES

HA #	Material Item	Material Item Specification	Application
1210945694	Georgia-Pacific DensArmor Plus Mold & Moisture Resistant Interior Panel	Armor plus 5/8" x 4'x8', moisture and mold resistant interior panel	Mold-resistant sheetrock.
1225963003	USG Sheetrock Brand Glass Mat Mold Tough (regular)	Sheet rock, USG sheet rock brand glass- mat panel mold tough (regular), ½' x4'x 8', interior, moisture and mold resistant glass- mat	Mold-resistant sheetrock.
1225963002	Gold Bond eXP Interior Extreme Gypsum Panel		Mold-resistant sheetrock.
1404924256	FibaTape Mold-X 10	1-7/8 inch by 300 ft roll.	Mold-resistant tape used for seam taping when sheetrock is replaced with fiberglass-faced gypsum board.



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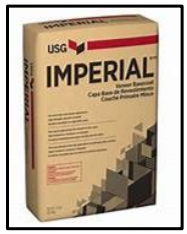
SUPPLIES

HA #	Material Item	Material Item Specification	Application
1212919100	USG Imperial Natural Veneer Plaster Basecoat	50-pound bag	Mold-resistant plaster basecoat used for sealing seams when sheetrock is replaced with fiberglass-faced gypsum board.
1212919101	USG Diamond Veneer Plaster Finish	50-pound bag	Mold-resistant plaster finish used for sealing seams when sheetrock is replaced with fiberglass-faced gypsum board.
1207923801	Owens Corning ASJ Max Fiberglass Pipe Insulation	0.5" diameter	Used for pipe insulation.
1207923804	Owens Corning ASJ Max Fiberglass Pipe Insulation	0.75" diameter (3/4)	Used for pipe insulation.



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SUPPLIES

HA #	Material Item	Material Item Specification	Application
1207923807	Owens Corning ASJ Max Fiberglass Pipe Insulation	1" diameter	Used for pipe insulation.
1207923810	Owens Corning ASJ Max Fiberglass Pipe Insulation	1.5" diameter	Used for pipe insulation.
1207923813	Owens Corning ASJ Max Fiberglass Pipe Insulation	2" diameter	Used for pipe insulation.
1207923816	Owens Corning ASJ Max Fiberglass Pipe Insulation	2.5" diameter	Used for pipe insulation.
1207993960	Insulation, Fiberglass Copper Pipe Insulation	5/8" pipe size with 1" pipe thickness. Owen Corning/Manville Part #0110006	Used for pipe insulation.

IRON PIPE SIZE	OUTSIDE DIAMETER	PIPE CIRCUMFERENCE	ORDER THIS SIZE
1/2"	7/8"	2-5/8"	1/2 x
3/4"	1-1/8"	3-1/4"	3/4 x
1"	1-3/8"	4-1/8"	1 x
1-1/4"	1-5/8"	5-1/4"	1-1/4 x
1-1/2"	1-7/8"	6"	1-1/2 x
2"	2-3/8"	7-1/2"	2 x
2-1/2"	2-7/8"	9"	2-1/2 x
3"	3-3/8"	11"	3 x
4"	4-3/8"	14-1/8"	4 x
5"	5-3/8"	17-1/2"	5 x
6"	6-5/8"	20-3/4"	6 x
7"	7-5/8"	24"	7 x
8"	8-5/8"	27-1/8"	8 x
9"	9-5/8"	30-1/4"	9 x
10"	10-3/4"	33-3/4"	10 x
11"	11-3/4"	36-7/8"	11 x
12"	12-3/4"	40"	12 x

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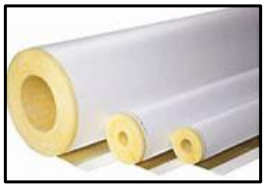
SUPPLIES

HA #	Material Item	Material Item Specification	Application
1207930275	Insulation, Fiberglass Copper Pipe Insulation	1-1/4" pipe size with 1" pipe thickness. Owen Corning/Manville Part #0110012	Used for pipe insulation.
1207993962	Insulation, Fiberglass Copper Pipe Insulation	2-1/8" pipe size with 1" pipe thickness. Owen Corning/Manville Part #0110021	Used for pipe insulation.
1207993963	Insulation, Fiberglass Copper Pipe Insulation	2-5/8" pipe size with 1" pipe thickness. Owen Corning/Manville Part #0110026	Used for pipe insulation.



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SUPPLIES

HA #	Material Item	Material Item Specification	Application
1207930272	Insulation PVC Elbow, PVC 90° Degree PVC Elbow Pipe Fitting Cover	1" thickness for 1/2" pipe (Size 7). Proto/JM SKU #300790	Used for pipe insulation.
1207930274	Insulation PVC Elbow, PVC 90° Degree PVC Elbow Pipe Fitting Cover	1" thickness for 1" pipe (Size 9). Proto/JM SKU #300990	Used for pipe insulation.
1207930275	Insulation PVC Elbow, PVC 90° Degree PVC Elbow Pipe Fitting Cover	1" thickness for 1-1/2" pipe (Size 10). Proto/JM SKU #301090	Used for pipe insulation.
1207930276	Insulation PVC Elbow, PVC 90° Degree PVC Elbow Pipe Fitting Cover	1" thickness for 2" pipe (Size 11). Proto/JM SKU #301190	Used for pipe insulation.
1207930277	Insulation PVC Elbow, PVC 90° Degree PVC Elbow Pipe Fitting Cover,	1" thickness for 2-1/2" pipe (Size 12); Proto/JM SKU #301290	Used for pipe insulation.

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SUPPLIES

HA #	Material Item	Material Item Specification	Application
1207930280	Insulation PVC Tee/Valve Cover, Tee PVC Fitting,	1" thickness for 1/2" pipe (Size 7); Proto/JM SKU #3007TV	Used for pipe insulation.
1207930281	Insulation PVC Tee/Valve Cover, Tee PVC Fitting,	1" thickness for 1" pipe (Size 9); Proto/JM SKU #3009TV	Used for pipe insulation.
1207930282	Insulation PVC Tee/Valve Cover, Tee PVC Fitting	1" thickness for 1-1/2" pipe (Size 10); Proto/JM SKU #3010TV	Used for pipe insulation.
1207930283	Insulation PVC Tee/Valve Cover, Tee PVC Fitting	1" thickness for 2" pipe (Size 11); Proto/JM SKU #3011TV	Used for pipe insulation.
1207930284	Insulation PVC Tee/Valve Cover, Tee PVC Fitting	1" thickness for 2-1/2" pipe (Size 12); Proto/JM SKU #3012TV	Used for pipe insulation.

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SUPPLIES

HA #	Material Item	Material Item Specification	Application
1216995800	Childers CP-11	Coating, weather barrier coating for thermal insulations for both indoors and outdoors, CP-11 VI-CRYL one (1) gallon pail	Used for pipe insulation as a waterproofing and adhesive barrier, and sealant.
1207993953	ASJ Insulation Tape	Insulation ASJ Max tape, fiberglass material, 3" wide x 150 feet length roll, Owen Corning Brand SKU Part #50MAXASJ3	Used for pipe insulation.
1207993951	King Tacks	PVC fitting tacks (50 tack per bag), color white, stainless steel annular serrated tack with round head	Used for pipe insulation as a closure system for PVC insulation fitting covers.
2006965078	Hilti Mineral Wool Board	Firestop, mineral wool, packed (4) sheets per case, 46"X24"x4' Hilti #236993	Used for pipe insulation.
1207993952	Aluminum Banding Roll	200 feet, 1/2" wide, 0.020" thick, coiled & stored in cardboard box, metal brand	Used to secure aluminum pipe jacket covers over pipe insulation.

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SUPPLIES

HA #	Material Item	Material Item Specification	Application
1207993950	Aluminum Seal Clips	100 seals per bag designed for ½" strapping	Used to secure aluminum fitting covers over pipe insulation.
1404922227	Foster 40-50 Paint	5 Gallon Container	Mold-resistant paint.
1404981941	Sherwin Williams – Emerald Interior Satin Extra	5 Gallon Container	Mold-resistant paint.

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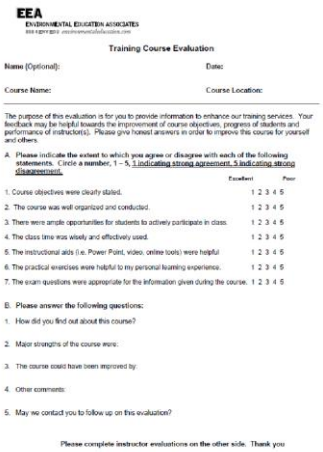
271

NYCHA LEAK TRAINING

272

That's all folks!



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Training Course Evaluation

Name (Optional): **Date:**

Course Name: **Course Location:**

The purpose of this evaluation is for you to provide information to enhance our training services. Your feedback may be helpful towards the improvement of course objectives, progress of students and performance of instructor(s). Please give honest answers in order to improve this course for yourself and others.

A. **Please indicate the extent to which you agree or disagree with each of the following statements.** Circle **a number**, 1 – 5, 1 indicating strong agreement, 5 indicating strong disagreement.

	Excellent				Poor
1. Course objectives were clearly stated.	1	2	3	4	5
2. The course was well organized and conducted.	1	2	3	4	5
3. There were ample opportunities for students to actively participate in class.	1	2	3	4	5
4. The class time was wisely and effectively used.	1	2	3	4	5
5. The instructional aids (i.e. Power Point, video, online tools) were helpful	1	2	3	4	5
6. The practical exercises were helpful to my personal learning experience.	1	2	3	4	5
7. The exam questions were appropriate for the information given during the course.	1	2	3	4	5

B. **Please answer the following questions:**

1. How did you find out about this course?
2. Major strengths of the course were:
3. The course could have been improved by:
4. Other comments:
5. May we contact you to follow up on this evaluation?

Please complete instructor evaluations on the other side. Thank you

- We appreciate your participation.
- We hope that this training will give you the capability to conduct leak evaluation & control.
- Please let the instructor or any EEA staff if there's anything else we can do to help you accomplish these goals.
- Please provide feedback on our evaluation so we can improve this training for future learners

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