LEAK DETECTION & REPAIR TRAINING PROGRAM

PREPARED FOR & PRESENTED TO
NEW YORK CITY HOUSING AUTHORITY

STUDENT WORKBOOK

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LEAK DETECTION & REPAIR TRAINING PROGRAM

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PREFACE

This training course manual has been created to provide staff of the New York City Housing Authority (NYCHA) with that organization's standard procedures, guidance and directives as provided by NYCHA Office of Mold Assessment & Remediation (OMAR). The procedures and practices detailed in these pages incorporate current procedures at the time of printing. The reader should be advised that as procedures evolve so do the methods for detecting and controlling leaks. We emphasize the need for the reader to obtain the most up to date information available.

Standardized procedures, technical expertise and common sense are major components of a successful project. The reader is encouraged to improve further on the techniques provided in this manual as experience is gained through field practice.

ACKNOWLEDGEMENTS & REFERENCES

It would be impossible to acknowledge all the individuals who have contributed to the development of this course curriculum in some fashion or manner. Environmental Education Associates, Inc. is extremely grateful to those who have generously shared their knowledge, expertise and experiences throughout the development process. Special thanks to Alisa Raab, Joanna Sporay and Victoria Gumennaya who made important contributions to this curriculum.

DISCLAIMER

This manual was developed using NYCHA documents. This manual has no official weight or legal merit outside NYCHA. Procedures and practices contained in this manual have not been reviewed or approved by regulatory agencies.

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June 9, 2025

INTRODUCTION TO MOLD AND MOISTURE CONTROL

The New York City Housing Authority (NYCHA) has launched a comprehensive leaks and mold program aimed at empowering maintenance workers with the skills and knowledge necessary to effectively address these critical issues. This initiative is part of NYCHA's ongoing commitment to improving living conditions for residents and ensuring the health and safety of its communities. By providing specialized training and resources, the program seeks to equip maintenance workers with the tools they need to identify, repair, and prevent leaks and mold growth in NYCHA properties.

Maintenance workers participating in the program will receive hands-on training in leak detection, temporary repairs, and mold remediation techniques. The curriculum is designed to cover a wide range of scenarios, from a variety of leak sources both within and outside impacted apartments, ensuring that workers are prepared to handle any situation they may encounter. In addition to practical skills, the program emphasizes the importance of adhering to safety protocols and industry standards, fostering a culture of excellence and accountability among NYCHA's maintenance staff.

The leaks and mold program also includes ongoing support and resources for maintenance workers, such as access to updated training materials, expert consultations, and other resources. By continuously enhancing the capabilities of its workforce, NYCHA aims to create a proactive approach to maintenance that not only addresses current issues but also prevents future problems. This initiative reflects NYCHA's dedication to providing safe, healthy, and well-maintained homes for all its residents, while also investing in the professional development of its employees.

TOP TEN THINGS NYCHA STAFF SHOULD KNOW ABOUT LEAKS & EXCESSIVE MOISTURE:

1. When responding to a leak or excessive moisture complaint, the first step is to identify the root cause(s). The root cause(s) must be 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.

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

3. Some of the most common root causes of floods and leaks are damage to plumbing pipes and fixtures, ill-fitting connectors, blockages, cracks in sinks and tubs, improperly connected equipment in the apartment (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 and use.

4. Use a moisture meter to inspect the surfaces in the apartment (e.g., ceiling, floors, walls) and trace the leak or excessive moisture condition up to its source. 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.

5. Investigate beyond the initial impacted apartment exhibiting leak(s) or water damage when needed. Root cause(s) are frequently located in apartment(s) above or adjacent to the impacted apartment. If the leak(s) affects multiple apartments, make sure to locate the root cause(s) impacting the multiple apartments and create follow-up work orders as needed.

6. Address floods and emergency leaks within 24 hours (or less, if indicated by its work order priority code) and remove all standing water within 48 hours of a report of the condition to NYCHA.

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

8. Prevent condensation from forming on cold-water pipe surfaces. Condensation on inadequately insulated supply pipes, waste/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 components. 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.

9. Ask questions and communicate your findings to residents of the impacted apartments. 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 and remediating the root cause(s) of leaks. In return, NYCHA staff must clearly communicate inspection findings, scope of repairs needed, and next steps in completing the work to the residents of all impacted apartments.

10. If applicable, inform residents with disabilities or 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 in their apartment of leaks, excessive moisture, severe flooding, or water damage. The resident may also be transferred temporarily to another apartment during abatement of the moisture conditions. See Section VIII.P*, Reasonable Accommodations/Relocations* for information on resident relocations due to a leak and/or mold condition.

Review Questions

Review Questions

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”?

   _____
   _____
   _____

5. Name this instrument & explain its purpose for leak detection? 

   _____
   _____
   _____

6. Name this instrument & explain its purpose for leak detection. 

   _____
   _____
   _____

7. Name this instrument & explain its purpose for leak detection. 

   _____
   _____
   _____

8. 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

9. 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

10. 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

11. Maintenance worker reviews list of work orders daily and prioritizes work in accordance to:
   a. Severity
   b. Priority
   c. All of the above

12. To shut off riser, to stop an active flood, the property maintenance supervisor or assistant property maintenance supervisor must get permission from the:
   a. Neighborhood Administrator
   b. Compliance Department
   c. Tenant

13. If maintenance worker abated active flooding when responding to the leak work order, how does maintenance worker document this in the handheld?
   Maintenance worker selects in the 'Perform Inspection' tab:
   a. Needs Abatement
   b. Corrective action Taken
   c. Documents in the "Work Log" only

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

   _____
   _____
   _____

15. 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

16. 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

17. Grouting DML stand for:
    a. Grouting damaged, moldy and loose
    b. Grouting density, moisture, and loose
    c. Grouting damaged missing and loose

18. 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

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

    _____
    _____
    _____

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

    _____
    _____
    _____

21. What skilled trades could be checked off RTS Slip?

    _____
    _____
    _____

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

    _____
    _____
    _____

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

_____
_____
_____

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

_____
_____
_____

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

_____
_____
_____

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

_____
_____
_____

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

_____
_____
_____

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

_____
_____
_____

29. 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?

_____
_____
_____

30. What repair code could be used when tracing the leak between multiple apartments

_____
_____
_____

31. 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?

_____
_____
_____

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

_____
_____
_____

33. 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?

_____
_____
_____

34. 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?

_____
_____
_____

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

_____
_____
_____

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

_____
_____
_____

37. What is a vertical line inspection plan?

_____
_____
_____

38. Within how many hours should units be scheduled for vertical line inspection? What form is given to inform residents of this inspection?

_____
_____
_____

39. What is the NYCHA Form 042.727 used for?

_____
_____
_____

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

_____
_____
_____

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

_____
_____
_____

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

_____
_____
_____

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

_____
_____
_____

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

_____
_____
_____

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

_____
_____
_____

46. What does EMSD stand for?

_____
_____
_____

47. For non-severe emergency leaks, what does EMSD maintenance do when the resident requests the staff to return during normal business hours?

_____
_____
_____

48. What does EMSD maintenance staff need to do if they addressed a root cause but a follow up for cosmetic repairs is needed for the unit?

_____
_____
_____

49. What does EMSD maintenance staff need do to if they were able to address full scope of repair and no follow up work needed?

_____
_____
_____

50. When a wet wall measures 599+ and the wet condition does not extend into the apartment above, where do you inspect the condition?

_____
_____
_____

51. 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?

_____
_____
_____

52. Once you identify the root cause, how big should the wall be enlarged to provide access to the plumbing pipes?

_____
_____
_____

53. What are some precautions when enlarging a wall break?

_____
_____
_____

54. How does the maintenance worker or other staff document in the IWM App that a wall break was performed?

_____
_____
_____

55. How do you dry flood and standing water impacted area? What tools do you use and for how long do you dry it for?

_____
_____
_____

56. What should residents do with damp furnishings and other personal property to remove moisture?

_____
_____
_____

57. What is a structural integrity issue?

_____
_____
_____

58. What structural integrity issues are there at NYCHA?

_____
_____
_____

59. What can you do to help prevent deterioration and extend the life of NYCHA buildings?
    a. With regards to leak visual inspections?
    b. Prompt leak and water accumulation repairs?
    c. Proactive maintenance?

60. What SP should you refer to if you observe suspected asbestos containing material?

_____
_____
_____

61. What is known as “Interim Controls”?

_____
_____
_____

62. What are the steps to apply “Interim Controls” in sheetrock constructions?

_____
_____
_____

63. How do you conduct a thorough quality assurance inspection for leak?

_____
_____
_____

64. What is an effective means of communicating to residents their role in leak identification and repair process?

_____
_____
_____

65. What are the timeframes to complete leaks repairs?

_____
_____
_____

66. What can poor performance reporting lead to?

_____
_____
_____

NYCHA Standard Procedure Manual SP 050:25:2
Leak and Moisture Control in NYCHA Residential Buildings

SP 050:25:2, LEAK AND MOISTURE CONTROL IN NYCHA RESIDENTIAL BUILDINGS

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SUBJECT	PROCEDURE OWNER	APPROVED DATE	APPROVED BY	INDEX NO.
LEAK AND MOISTURE CONTROL IN NYCHA RESIDENTIAL BUILDINGS	HEALTHY HOMES	Date: 5/19/25	Eva Trimble Chief Operating Officer	050:25:2

I. PURPOSE

This Standard Procedure establishes responsive measures to floods, standing water, leaks, excessive moisture, and their root causes in New York City Housing Authority (NYCHA) public housing locations. This Standard Procedure 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.

II. POLICY

To establish a cooperative partnership between NYCHA staff and residents to timely respond to floods, leaks, and excessive moisture conditions and their root causes. NYCHA will promptly address floods, leaks, and excessive moisture complaints and correct their root causes.

III. APPLICABILITY

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

IV. INTRODUCTION TO LEAKS AND MOISTURE CONTROL

Identifying the root cause(s) of floods, leaks, and excessive moisture early and accurately is the key to preventing extensive water damage to building components and materials and to prevent the recurrence of these issues. The root cause(s) can be often located behind walls in wall cavities and sometimes far away from the areas in which water damage is observed.

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.

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).

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

1. When responding to a leak or excessive moisture complaint, the first step is to identify the root cause(s). The root cause(s) must be 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.

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.

3. Some of the most common root causes of floods and leaks are damage to plumbing pipes and fixtures, ill-fitting connectors, blockages, cracks in sinks and tubs, improperly connected equipment in the apartment (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 and use.

4. Use a moisture meter to inspect the surfaces in the apartment (e.g., ceiling, floors, walls) and trace the leak or excessive moisture condition up to its source. 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.

5. Investigate beyond the initial impacted apartment exhibiting leak(s) or water damage when needed. Root cause(s) are frequently located in apartment(s) above or adjacent to the impacted apartment. If the leak(s) affects multiple apartments, make sure to locate the root cause(s) impacting the multiple apartments and create follow-up work orders as needed.

6. Address floods and emergency leaks within 24 hours (or less, if indicated by its work order priority code) and remove all standing water within 48 hours of a report of the condition to NYCHA.

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

8. Prevent condensation from forming on cold-water pipe surfaces. Condensation on inadequately insulated supply pipes, waste/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 components. 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.

9. Ask questions and communicate your findings to residents of the impacted apartments. 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 and remediating the root cause(s) of leaks. In return, NYCHA staff must clearly communicate inspection findings, scope of repairs needed, and next steps in completing the work to the residents of all impacted apartments.

10. If applicable, inform residents with disabilities or 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 in their apartment of leaks, excessive moisture, severe flooding, or water damage. The resident may also be transferred temporarily to another apartment during abatement of the moisture conditions. See Section VIII.P*, Reasonable Accommodations/Relocations* for information on resident relocations due to a leak and/or mold condition.

V. DEFINITIONS

A. *Baez* Consent Decree

The Baez et. al. v. NYCHA Modified Amended Stipulation and Order of Settlement (United States District Court, Southern District of New York, No. 13-cv-08916), which established many of NYCHA's current procedures and protocols for the remediation of mold and excessive moisture, set forth time parameters for NYCHA to complete remediation and repair work, and created a reporting and oversight framework.

B. Building Components

The basic components of a building structure (e.g., foundation, walls, ceiling, floor, beams, columns, roof). These elements serve the purpose of supporting, enclosing and protecting the building structure.

C. Borescope

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

D. Chase Wall

A structural wall, also known as a “wet 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), however, there may be exceptions. Chase walls at NYCHA may serve:

1. One set of fixtures (bathroom or kitchen). In this case, the rear of the wall would be a room without fixtures such as a living room or bedroom; or

2. Two sets of fixtures (back-to-back bathrooms, back-to-back kitchens, or back-to-back bathroom-kitchen configurations). It is possible that the rear of the chase wall is in a different apartment than the front of the chase wall.

E. Child Work Order

A work request created by a worker, authorizing supervisor, and/or automatically created in Maximo, whenever additional work is needed for a parent work order. Multiple child work orders can be created from a single parent work order.

F. Complex Repairs

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

G. 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.

H. Cosmetic Repairs

Repairs that should be made only after the root cause(s) repair has been addressed. Common cosmetic repair examples include follow-up plastering and painting work that improves the cosmetic appeal of the apartment (or building component) but does not affect the structural integrity of the building.

I. Craft

The type of worker (e.g., maintenance worker, plumber, painter) assigned to make repairs or perform inspections at NYCHA.

J. Customer Contact Center (CCC)

The CCC serves NYCHA residents over the phone at 718-707-7771. It is available 24/7 to residents of NYCHA developments to report emergencies, schedule maintenance repairs, and more.

K. 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. All emergency leaks are high priority work orders that are assigned a priority code of 7 or higher in Maximo.

L. Flooding

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

M. HEPA Vacuum

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

N. HUD Agreement

The January 31, 2019, 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, which committed the parties to several key actions. These include the establishment of a federal monitor, NYCHA's reorganization under a new Organizational Plan, the introduction of new performance metrics across six pillar areas: Lead-Based Paint, Mold/Leaks, Heat, Elevators, Pests/Waste, and Inspections to track remediation of physical conditions at NYCHA properties, and the creation of three new oversight departments—Compliance, Environmental Health & Safety, and Quality Assurance.

O. 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.

1. Additional Impacted Apartments

Any additional apartment(s) either in the line or adjacent to the impacted apartment, including apartments above the adjacent apartment, that is also impacted by the same flooding or leak condition that has a root cause in a different apartment (i.e., the root cause apartment).

P. Independent Data Analyst (IDA)

A court-appointed advisory firm, selected by the Special Master pursuant to the *Baez* Consent Decree, qualified in forensic data analysis. The IDA is given access to leak and excessive moisture work order data from Maximo, designs the Period Report that measures NYCHA's compliance with the *Baez* Consent Decree, and reviews and confirms the accuracy of the Period Reports. The IDA partners with NYCHA to validate mold and leak reporting tools and performs related analyses.

Q. Independent Mold Analyst (IMA)

A court-appointed individual or advisory firm selected by the Special Master pursuant to the *Baez* Consent Decree, who is licensed as a mold assessor by the New York State Department of Labor and is certified as an industrial hygienist by the American Industrial Hygiene Association. The IMA provides assistance with mold assessment and remediation to the Office of Mold Assessment and Remediation upon request, makes recommendations for improved compliance with this Standard Procedure, and performs quality assurance inspections of randomly selected apartments.

R. Informer Work Management (iWM) App

A work order application available to NYCHA staff on the handheld device.

S. 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.

T. Leak From Above

Floods, leaks, or water penetration into a resident's apartment from another apartment(s) above or adjacent to it, or the roof. The source of leaks from above might not be readily visible at first and might require a thorough inspection of the conditions behind the wall cavity and/or inspection of adjacent apartment(s) or above apartment(s) to locate the root cause(s). All leaks from above are considered emergency leaks and, if not promptly addressed, are likely to result in damage to building components. When feasible, a team of two maintenance workers, or a maintenance worker and another trained staff, should be dispatched to address leaks from above and conduct a multi-apartment inspection.

U. Leak Inspection

A process by which a NYCHA maintenance worker or other trained staff:

1. Responds to a flood, leak, and/or excessive moisture complaint.

2. Investigates the root cause(s) of the condition.

3. Documents findings in the work order.

4. Makes a temporary or permanent repair(s) and/or creates follow-up repair work orders to remediate the root cause(s) and to perform cosmetic repair work, when needed.

The leak inspection is considered a parent Leak Work Order (initial complaint).

V. Leak Inspection of Additional Apartment(s) (or Multi-Apartment Leak Inspection)

An inspection of multiple apartments, including apartment(s) up the line, apartment(s) adjacent to the impacted apartment, and/or apartments above adjacent apartments to locate the root cause(s) of a flooding, leak, or excessive moisture complaint.

W. Leak Service Level Agreement

1. Floods and emergency leaks are to be abated within 24 hours of the condition being reported to NYCHA, and standing water is to be removed within 48 hours.

2. Simple repairs are to be completed within seven calendar days. Complex repairs are to be completed within 15 calendar days.

NOTE:	If NYCHA is unable to comply with these timeframes, NYCHA shall use its best efforts to complete the repairs as quickly as possible.

X. Mildew

A term that is used to refer to some kinds of mold. On the iWM App, the term ‘mildew’ is used to describe both mildew and mold.

Y. Moisture Meter

An instrument used to measure the subsurface moisture of a given structure (e.g., walls, ceilings, floors) and components (e.g., kitchen and bathroom cabinets).

Z. Mold

A fungus that grows on, and sometimes in, damp surfaces (e.g., paint on walls and ceilings, paper covering on the front and back sides of sheetrock, and wood) and objects (e.g., furnishings and textiles). Live spores act like seeds, forming new mold growth (e.g., colonies) when they find the right conditions. Mold is most likely to grow where there is water or excessive moisture such as in bathrooms. Mold at NYCHA is measured by the square footage of mold identified in each room. The responsive measures to mold and its root causes are addressed in Standard Procedure 040:14:1, *Mold/Mildew Control in NYCHA Residential Buildings*.

AA. Mold and Leak Performance Scorecard (Scorecard)

An assessment tool that evaluates NYCHA's performance related to mold and leak remediation based on selected key performance metrics and provides Operations with actionable data. It was developed in collaboration with the IDA. For more information about the Scorecard factors see Appendix H in Standard Procedure 040:14:1, *Mold/Mildew Control in NYCHA Residential Buildings*.

BB. Mold Resistant Sheetrock

Paperless sheetrock with a fiberglass face that is designed to discourage the growth of mold.

CC. Mold Resistant Paint

Paint that contains a chemical fungicide that discourages the growth of mold on surfaces.

DD. Non-Emergency Leak

Leak conditions that do not cause sustained or recurrent moisture to flow into a resident's apartment or the walls of the apartment. Examples include, but are not limited to, leaky faucets, continuously running toilets, and clogged sink or shower drains. All non-emergency leaks are assigned a priority code of 4 or below in Maximo.

EE. Normal Business Hours

For the purposes of this Standard Procedure, normal business hours are 8:30 a.m.- 4:30 p.m., Monday through Friday, excluding holidays. Outside normal business hours, the Emergency Management & Services Department (EMSD) responds to emergency leak and flood complaints.

FF. Ombudsperson

An independent individual appointed by the Special Master pursuant to the *Baez* Consent Decree who has the authority to investigate mold and excessive moisture complaints and to order appropriate relief. Residents may contact the Ombudsperson with any concern about mold, leak, or excessive moisture repairs through the Ombudsperson Call Center which is operated by the IDA.

GG. Parent Leak Work Order

An original leak corrective maintenance request initiated by a resident, created by NYCHA staff, or automatically created in Maximo.

HH. Quality Assurance (QA) Assessment

An assessment performed by NYCHA's Office of Quality Assurance to verify that leak repairs were completed satisfactorily.

II. Recurrence

A second occurrence of a confirmed leak with the same root cause at the same location (i.e., the same room in the same apartment, or the same apartment as defined by the complaint). Recurrence can result when the root cause of the leak is not properly identified and remediated.

JJ. Right of Entry

NYCHA's right, upon reasonable 48-hour advance notification to the resident, to enter any leased premises for the purposes of performing routine inspections, maintenance, making improvements, or repairs. NYCHA may enter the leased premises at any time without advance notification when there is a reasonable cause to believe that an emergency exists. NYCHA's Right of Entry is contained in the public housing lease.

KK. Root Cause

The primary reason(s) for the occurrence of flooding, leak, and/or excessive moisture. The root cause(s) of such conditions may include 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. Identifying and correcting the root cause(s) in response to a leak or excessive moisture complaint is essential to avoiding or minimizing the damage to building components and to ensuring that the condition does not recur.

LL. Root Cause Apartment

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

MM. Simple Repairs

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

NN. Special Master

A court-appointed individual tasked with overseeing NYCHA's compliance with the *Baez* Consent Decree and subsequent Agreements and Orders, and with making recommendations to the Court concerning steps that should be taken to bring NYCHA into compliance.

OO. Standing Water

Non-flowing clear water or wastewater of any depth lying on the ground surface.

PP. Trained Staff

Maintenance workers or other staff trained to perform leak inspection and repair work to address flooding, leak, and/or excessive moisture complaints. Trained staff are responsible for locating the root cause(s) of the leak, inspecting for damage in any additional in-line or adjacent apartment(s), including apartments above the adjacent apartment, performing corrective maintenance repairs (when feasible), and creating follow-up child repair work orders to address the conditions.

QQ. Vendor

A third-party under contract with NYCHA. If a vendor performs any work described in this Standard Procedure, they must follow all applicable laws, regulations, and guidance, and NYCHA's policies, procedures, and guidelines regarding leaks and mold, including this Standard Procedure and their contract.

RR. Vertical Line Leak Inspection

A follow-up inspection of multiple apartments in the line and adjacent to the impacted 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. Apartments to be inspected as part of the vertical line inspection 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 and/or water damage that may have been identified during the initial leak inspection. If applicable, the adjacent apartment and apartments above it in the line may also be inspected.

SS. Wet Measurement

A moisture meter measurement of a surface structure that is equal to or greater than 599 (on a scale of 0 to 999).

VI. REVIEW CYCLE

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

VII. RESPONSIBILITIES

A. Office of Mold Assessment and Remediation (OMAR)

OMAR:

1. Sets a NYCHA-wide strategy to improve mold and leak compliance measures.

2. Monitors key NYCHA, borough, neighborhood, and consolidation-level leak and excessive moisture indicators including, but not limited to, response rates to work orders for emergency leaks, time to abate flooding and remove standing water, time to complete simple and complex repairs, the identified root causes, and recurrence rates.

3. Reviews the proportion of scheduled and missed appointments for Leak Work Orders and provides follow up recommendations to neighborhood administrators or skilled trades deputy directors, as applicable.

4. Provides technical expertise to property management staff, the Compliance Department, the Environmental Health and Safety Department, and the Office of Quality Assurance.

5. Reviews the efficiency of operational response and underlying IT solutions, identifies gaps, and engages subject matter experts to recommend and implement process improvements.

6. Manages large complex jobs related to leaks and mold including updating building lines (i.e., Building Line Initiatives).

7. Responds to complaints received by the Ombudsperson Call Center via NYCHA's Mold Response Unit (MRU.

8. Administers the Scorecard, including providing access, training, and oversight.

9. Administers the Enhanced Oversight Program (EOP) at select NYCHA consolidations to create joint strategies to improve leak and mold compliance, address specific work order backlog issues or staffing, and assist with training or any procurement delays. This includes:

    a. Providing assistance with leak and mold inspections by dispatching qualified teams.

    b. Providing assistance with field training, as needed.

    c. Providing assistance with work order backlog verification to determine if the work is still needed.

d. Providing assistance with addressing the backlog of high priority work orders, including vent cleaning, mold removal, and mold resistant paint work orders.

e. Utilizing OMAR vendors to address work order backlogs.

10. Serves as NYCHA's liaison to the Special Master, *Baez* Consent Decree plaintiffs, and court-appointed entities.

a. Tracks and reports NYCHA's obligations under the *Baez* Consent Decree and related supplemental agreements, and deliverables based on the HUD agreement.

b. Submits *Leak, Mold, and Excess Moisture Remediation Compliance Quarterly Report* to *Baez* Plaintiffs outlining NYCHA's compliance with the *Modified Amended Stipulation and Order of Settlemen*t and other reports.

11. Ensures employees follow all training outlined below in Section X, *Training Requirements.*

B. Mold Response Unit (MRU) of the Office of Mold Assessment and Remediation

1. The MRU monitors and manages Ombudsperson Call Center cases, referrals, escalated cases, and court cases:

a. Tracks complaints from residents until resolution and confirmation of resident satisfaction.

b. Hosts check-ins with residents to inform them about the repair processes.

c. Bridges the gap in communication to ensure that repairs are completed as scheduled.

d. Ensures all necessary work orders to address leak or excessive moisture complaints are created and properly sequenced.

e. Escalates severe conditions for prioritization of scheduling or resident relocation.

f. Ensures root causes of leaks and excessive moisture are identified and properly remediated.

C. Operations Departments

1. Vice-Presidents for Property Management

   a. Monitor key borough, neighborhood, and consolidation level leak and excessive moisture-related indicators including but not limited to those listed in Section XI, *Performance Metrics*.

   b. Provide recommendations to property management staff, when possible, regarding the Performance Metrics.

   c. Monitor the Scorecard performance on the borough, neighborhood, and consolidation level.

2. Operations Administrators

   a. Monitor key borough, neighborhood, and consolidation level leak and excessive moisture-related indicators including but not limited to those listed in Section XI, *Performance Metrics*.

   b. Provide recommendations to property management staff, when needed, regarding the Performance Metrics.

   c. Monitor the Scorecard performance on the borough, neighborhood, and consolidation levels.

3. Skilled Trades Deputy Directors

NOTE:	For guidance on creating, scheduling, and the overall management of skilled trades work orders see COO20240013, *Work Order Reform Interim Guidance* located in the Forms and Reference Library.

   a. Monitor skilled trades administrators, borough planners, and skilled trades employees and provide direction and guidance for responding to leak and excessive moisture work orders and ensuring that conditions are addressed in compliance with the protocols and timeframe requirements in this Standard Procedure.

   b. Provide recommendations, when needed, on a leak investigation and/or repair performed by NYCHA staff or an authorized vendor.

   c. Work closely with skilled trades administrators and supervisors to ensure that skilled trade workers:

      (1) Visit appointments as scheduled.

(2) Perform work in accordance with the protocols and guidance in this Standard Procedure.

d. Monitor the Scorecard for skilled trades work order trends on the borough, neighborhood, and consolidation levels.

4. Skilled Trades Administrators

a. Provide direction and guidance on leaks to neighborhood administrators, borough planners, and neighborhood planners.

b. 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 after a leak or excessive moisture condition is detected or reported to NYCHA. If NYCHA is unable to comply with this timeframe, use best efforts to prioritize the scheduling and completion of these work orders as quickly as possible.

c. Monitor the Scorecard for skilled trades work order trends on the borough, neighborhood, and consolidation levels.

5. Borough Planner

a. Schedule leak repairs assigned to borough skilled trades staff (e.g., glaziers and roofers) to be completed in no later than fifteen (15) calendar days after the condition is detected and reported to NYCHA. If NYCHA is unable to comply with this timeframe, use best efforts to prioritize the scheduling and completion of these work orders.

b. Schedule glazier and roofer work orders:

(1) Review all open work orders for the impacted and root cause apartment, when applicable, to determine the proper sequencing of borough skilled trades staff.

(2) Coordinate appointments with skilled trades supervisors and neighborhood planners to schedule all work orders sequentially (e.g., root cause repairs before cosmetic repairs) in a close date range to ensure timely completion of repair(s).

c. When notified by the skilled trades supervisor that scheduled appointments for glaziers and roofers cannot be kept and need to be rescheduled:

(1) Coordinate rescheduling of appointments for Leak Work Orders with the neighborhood planner and skilled trades supervisors, as applicable, and when needed with residents.

(2) Ensure that rescheduled appointments do not impact the sequencing of other work orders open for the apartment.

(3) Monitor the Scorecard for skilled trades work order trends on the borough, neighborhood, and consolidation levels.

6. Neighborhood Administrators

   a. Monitor property management operations and provide direction and guidance to neighborhood planners, property managers, property maintenance supervisors, and assistant property maintenance supervisors for responding to leak and excessive moisture work orders.

   b. Set priorities and plans for addressing leak and excessive moisture work orders on the neighborhood level:

      (1) Review the weekly schedule of skilled trade appointments for under booking or overbooking to plan for leak repairs.

      (2) Review high priority work orders, including work orders for emergency leaks, on the standing check-ins with neighborhood planner and property management supervisors and provide guidance in prioritizing repair needs.

      (3) Ensure that leak repairs get scheduled (and rescheduled), and that conditions are addressed in compliance with protocols and timeframe requirements outlined in this Standard Procedure. If NYCHA is unable to comply with the timeframe requirements, use best efforts to prioritize the scheduling of leak repairs as quickly as possible.

      (4) Review the Leak Work Order backlog and determine what work could be performed by vendors.

   c. Monitor the Scorecard for the performance of the neighborhood and consolidations and address performance issues with property maintenance supervisors, neighborhood planners, and neighborhood skilled trades staff.

7. Neighborhood Planners

   a. Schedule leak repairs assigned to the neighborhood skilled trades staff (e.g., electrician, exterminator, bricklayer, plumber, carpenter, plasterer, and painter) to be completed in no later than fifteen (15) calendar days after the condition is detected and reported to NYCHA, and inform property management of any non-skilled trades work (e.g., maintenance, lead paint or asbestos abatement, vendors) that needs to be coordinated to complete the full scope of skilled trade repairs. If

NYCHA is unable to comply with this timeframe, use best efforts to prioritize the scheduling of leak repairs as quickly as possible.

b. Answer resident calls to schedule leak skilled trades repairs:

(1) Review all open child work orders for impacted apartment(s), additional impacted apartment(s), and root cause apartment(s), when applicable, to determine the proper sequencing of skilled trades repairs. Coordinate with the borough planner the scheduling of borough skilled trades staff (e.g., roofer and glazier) to address leak repairs.

(a) In coordination with the borough planner, as applicable, schedule all work orders sequentially (e.g., root cause repairs before cosmetic repairs) in a close date range to ensure timely completion of repair(s).

(b) If a root cause(s) originates outside the impacted apartment, schedule the root cause repair(s) first prior to scheduling any cosmetic repair work in the impacted apartment(s).

(c) If any non-skilled trade repair work is required for skilled trades workers to complete the full repair (e.g., asbestos abatement, lead-paint abatement, vendors), inform property management to coordinate scheduling.

(2) Check all open work orders for duplication and, if possible, consolidate them.

(3) Coordinate appointments with residents and skilled trades supervisors.

c. Schedule backlog Leak Work Orders when the resident has not called to schedule:

(1) Applicable work orders:

(a) Work orders pending scheduling, including but not limited to the work orders in status '*Approved'* (APPR), '*Waiting to Schedule'* (WTSCH) and '*Failed To Schedule'* (FAILSCH).

(b) Work orders with a scheduled date (SCHED) in the past.

(2) Make two attempts to call the resident to obtain a scheduled date. Document in the work order notes all attempts made to contact the resident. If the resident cannot be reached, proceed with scheduling the work order.

(a) NYCHA issues NYCHA Form 042.861, *Notice of Appointment for Skilled Trades Repair* to residents when skilled trades appointment(s) are scheduled and NYCHA Form 042.863, *Notice of Rescheduled Appointment for Skilled Trades Repair* when rescheduled.

(b) NYCHA Form 042.861 is primarily issued (i.e., mailed and/or emailed to residents) and uploaded into Maximo automatically.

d. Email property maintenance supervisors the next day's schedule for skilled trades repairs by the close of business of the previous day.

(1) When notified by the skilled trades supervisor that the scheduled appointment cannot be kept and/or needs to be rescheduled:

(a) Notifies residents as soon as made aware that a skilled trade appointment cannot be kept. Before contacting the resident, review all other repairs scheduled for the apartment to ensure that the missed appointment does not impact other scheduled work.

(b) Reschedules leak repairs with residents, property maintenance supervisors, and skilled trades supervisors, when needed.

e. Review the development work order list to identify materials needs for skilled trades to address leak repairs and check that needed materials are in stock prior to scheduling work.

f. Escalate any issues to the neighborhood administrator, when needed.

g. Monitor the Scorecard for neighborhood and consolidation performance trends.

8. Property Managers

a. Monitor the consolidation level leak and excessive moisture-related indicators including but not limited to those listed in Section XI, *Performance Metrics*.

b. Monitor the customer service delivery aspects of this Standard Procedure to ensure NYCHA's commitments to residents are addressed. For information on customer service delivery, see Appendix I – *Communications with Residents Related to Leak Work Orders.*

c. Review all work orders including Leak Work Orders at least three times a week. If Leak Work Orders are not in compliance with the Leak Service Level Agreement timeframes, address issues with the property maintenance supervisor and assistant property maintenance supervisor.

d. Work closely with the property maintenance supervisors and assistant property maintenance supervisors to ensure that property maintenance staff:

(1) Visits the apartments for all Leak Work Orders as scheduled.

(2) Performs work according to the protocols and timeframes described in this Standard Procedure.

(3) Addresses emergency leaks within 24 hours (or earlier, if defined by the priority code) and removes standing water resulting from such conditions within 48 hours.

(4) Completes simple repairs for leak and excessive moisture complaints within 7 calendar days or earlier, when possible.

(5) Contacts residents when a Leak Work Order appointment must be rescheduled.

e. Monitor completion of complex repairs and follow up with the skilled trades administrator if work is not completed within 15 calendar days.

f. Work with the neighborhood planner to coordinate court-ordered repairs.

g. Ensure that designated staff in property management offices respond to requests for reasonable accommodations (including temporary relocations or permanent transfers to another apartment, where appropriate) and review and act on requests in accordance with Standard Procedure 040:12:1 *Reasonable Accommodation in Housing for Applicants, Public Housing Residents, and Section 8 Voucher Holders.*

h. Monitor the Scorecard and address performance issues on the consolidation level.

9. Property Maintenance Supervisors and/or Assistant Property Maintenance Supervisors

a. Review work orders in Maximo (including Leak Work Orders) multiple times a day.

b. Assign maintenance workers to address Leak Work Orders in accordance with the work order priority and/or the scheduled date.

(1) When possible, assign a second maintenance worker or other trained staff to assist the maintenance worker in conducting leak from above inspections.

c. Provide assistance to property maintenance staff, when needed, in conducting multi-apartment and vertical line leak inspections to identify the root cause(s) of leaks including checking the Leak Work Order history in Maximo, coordinating scheduling with residents, and assisting with the leak investigation.

d. Escalate any conditions requiring immediate attention or response by follow up craft(s) (e.g., floods, severe leaks, or other conditions impacting the structural

integrity of the apartment or building) to neighborhood, skilled trades, and borough operations administrators.

> **NOTE:** If shutting off the supply riser is needed to stop an active flood (i.e., there is gushing water), the property maintenance supervisor or assistant property maintenance supervisor must contact the neighborhood administrator (by phone and email) to request prior authorization, or an above title if the neighborhood administrator is not immediately available.

e. Ensure that property maintenance staff:

   (1) Visits apartments for all leak and excessive moisture work order appointments as assigned.

   (2) Performs work in accordance with the protocols and best practices described in this Standard Procedure.

   (3) Clearly communicates leak inspection findings, work performed, and next steps in the repair process to residents, as applicable.

> **NOTE:** The property maintenance supervisor or assistant property maintenance supervisor conducts regular quality assurance inspections of closed maintenance work orders, including closed Leak Work Orders. For more information see Standard Procedure 040:22:2, *Apartment Turnover, Monthly Building and Other Maintenance Inspections.*

f. Ensure that residents are notified if property maintenance staff might be late or will miss a scheduled leak appointment.

   (1) The property maintenance supervisor, assistant property maintenance supervisor, or a designee (e.g., a housing assistant) phones the resident.

g. Check the *Development Log Book* to ensure that skilled trades staff and vendors scheduled to complete leak repairs signed their names and indicated their work assignments.

   (1) Report to 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.

   (2) Notify the skilled trades supervisor and the neighborhood planner of any skilled trade repairs that require rescheduling or additional work.

   Monitor Maximo for any missed or past due Leak Work Order appointments:

(1) Reschedule maintenance Leak Work Orders in accordance with work order priority and the Leak Service Level Agreement timeframes.

(2) Coordinate the rescheduled date with NYCHA residents.

i. Monitor that Leak Work Order completion timeframes are in accordance with the Leak Service Level Agreement goals.

j. Manage and schedule vendor work to complete leak repairs.

k. Ensure that the development has a sufficient supply of materials in stock to complete leak repairs and that staff are using the necessary tools for Leak Work Orders (see Appendix G). Coordinate with skilled trades staff and supervisors if there are material needs.

l. Monitor the Scorecard and provide direction and guidance to property maintenance staff on the consolidation and/or development level.

10. Maintenance Workers and Other Trained Staff

a. Visit apartments for Leak Work Orders as assigned by property maintenance supervisory staff.

b. Respond to Leak Work Orders following the instructions in Section VIII.B, *Responding to Parent Leak Work Order (Impacted Apartments)* including bringing the required tools and supplies based on the type of work order (see Appendix G).

c. Follow iWM App prompts to document leak inspection findings and work performed in Section VIII.D, *Documenting Work in the iWM App and Discussing Findings/Next Steps with Resident(s).*

(1) Address any flooding and/or standing water conditions if feasible or create child work orders to address.

NOTE:	Escalate to the property maintenance supervisor or assistant property maintenance supervisor any conditions requiring immediate attention or response by follow up craft(s), e.g., floods, severe leaks, or other conditions impacting the structural integrity of the apartment or building). If standing water is observed, phone or radio the property maintenance supervisor or assistant property maintenance supervisor who coordinates with the supervisor of caretakers to assign staff to remove standing water while NYCHA has access to the apartment, when possible. If the standing water contains sewage, appropriate staff and/or a vendor is assigned to remove the standing water.

(2) Identify if the root cause(s) of the leak originates within the impacted apartment or an above or adjacent apartment. See Section VIII.F*, Performing Leak Inspections of Additional Apartments to Identify the Root Cause(s)*.

(3) If needed, conduct a wall break(s) to locate the root cause(s) and/or make a temporary repair in accordance with Section VIII.J*, Wall Break Instructions.*

(4) Complete permanent or temporary repairs to address the root cause(s) when feasible (i.e., within maintenance scope of work).

(5) Document the root cause(s) and create follow-up child repair work orders for the impacted apartment, the root cause apartment, and additional impacted apartments.

d. If the root cause of a leak from above cannot be identified during the initial leak inspection and/or a multi-apartment inspection, work with the property maintenance supervisor or assistant property maintenance supervisor to plan and conduct a vertical line inspection.

e. Inform the residents of all impacted apartments, additional impacted apartments, and root cause(s) apartments about inspection findings, repairs made, if applicable, and next steps to complete leak repairs.

(1) If skilled trade work is required, create a child work order(s) and complete and issue NYCHA Form 042.*800 Repairs to Schedule Slip (RTS slip)* to the resident of each apartment where work is required.

(2) If property maintenance staff, other craft, or vendor work is needed, inform the resident to contact the property management office to schedule the work.

NOTE:	If during a multi-apartment leak inspection, the maintenance worker or other trained staff identifies additional apartment(s) impacted by the same leak, it is **best practice** to create a child work order(s) for those apartment(s) while staff has access. However, if the worker is not able to create the work order(s) based on the site conditions, expediency, and other factors, they should instruct the resident(s) to call the CCC or use the MyNYCHA App to create a new repair request. If the maintenance worker or other trained staff **makes a wall break** in the additional impacted apartment(s) in an attempt to identify the root cause(s) of the leak, they **must** create a child work order(s) for that apartment.

f. If an adult resident is not home, 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.

g. Call or radio the property maintenance supervisor or assistant property maintenance supervisor to escalate any emergency repairs that require immediate attention.

11. Skilled Trades Supervisors

a. Oversee the daily work activities of all skilled trades staff to ensure that repairs are completed in accordance with NYCHA repair standards and protocols:

(1) Ensure skilled trade staff are at their assigned locations.

(a) Notify by email the neighborhood planner, neighborhood administrator, skilled trades deputy director and/or administrator by 9.30 a.m. if skilled trades work needs to be rescheduled (e.g., staffing or material shortages). The neighborhood planner calls the resident to reschedule.

(b) If a skilled trade worker during the course of the day is not able to keep an appointment for a scheduled repair due to other circumstances (e.g., other emergency repair request):

i. Notify the neighborhood planner immediately to inform them of the cancellation.

ii. When possible, make a courtesy call to the resident to let them know that the neighborhood planner will be in touch to reschedule the appointment and provide the resident the contact number of the neighborhood planner.

(c) If a skilled trades worker identifies additional work in the apartment while performing a scheduled leak repair, give clear direction to the worker on how to proceed and coordinate a follow up visit with the neighborhood planner, if needed.

(d) Notify the property maintenance supervisor or assistant property maintenance supervisor when skilled trades work is completed and follow up work is needed by maintenance staff, another craft, or a vendor.

b. 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.

(1) When possible, notify the neighborhood planner at least 24 hours prior to the scheduled appointment that a scheduled appointment cannot be kept.

12. Skilled Trades Workers and Other Non-Maintenance Crafts

a. Ensure that all repairs to correct the root cause(s) of leaks and cosmetic repairs are completed to NYCHA standards and documented in the Maximo work order as specified in Standard Procedure 040:09:7, *Managing Maintenance Work Orders,* including the uploading of required photographs. See Standard Procedure 040:18:1, *Repair Standards & NSPIRE REAC Inspections* for more information on NYCHA repair standards including the National Standards for the Physical Inspection of Real Estate (NSPIRE) and industry standards.

b. Adhere to leak specific instructions in this Standard Procedure, as applicable, including but not limited to the instructions for wall breaks and insulating/reinsulating pipes.

c. Any skilled trades worker or other non-maintenance craft (e.g., heating plant technician) who observes an active leak while performing work in an apartment must:

(1) Call/radio the property maintenance supervisor or assistant property maintenance supervisor who will check if a work order was created and if needed create the work order.

(2) Evaluate if the active leak could impact any work assigned to the staff:

(a) If a worker determines that the leak will not impact current work (e.g., staff is replacing a sink that will not be impacted by water damage), proceed with caution.

(b) If a worker determines that the leak might impact current work (e.g., staff is replacing a tub enclosure and discovers a leak behind the wall), stop the work and notify their supervisor and property maintenance supervisory staff.

NOTE: Vendors performing other work in an apartment should be instructed to notify property maintenance supervisory staff if they observe leaks or mold. The property maintenance supervisor or assistant property maintenance supervisor are responsible for inspecting and approving vendor work, and, if applicable, creating parent Leak Work Orders and Mold Inspection Work Orders for any confirmed vendor reports of leaks or mold.

d. Any skilled trades worker or other non-maintenance craft who observes mold while performing work in an apartment must notify property maintenance supervisory staff to create a parent Mold Inspection Work Order in Maximo.

13. Supervisors of Housing Caretakers

a. Review Maximo daily to monitor for any Standing Water Removal Work Orders:

(1) Assign caretakers to address standing water removal work orders resulting from flooding or leaks.

(2) Monitor that the work is completed in accordance with Leak Service Level Agreement timeframes and repair protocols outlined in Section VIII.H, *Abating Flood Conditions and Standing Water Clean Up Instructions.*

(3) Verify the work is completed and close the Standing Water Removal Work Order in Maximo.

> **NOTE:** Alternatively, the supervisor of caretakers may call or radio the property maintenance supervisor or assistant property maintenance to close the work order.

D. Emergency Management and Services Department (EMSD)

1. EMSD Supervisors

a. Oversee staff responding to emergency leaks at developments outside of NYCHA's normal business hours.

> **NOTE:** Outside normal business hours, Maximo routes select emergency work orders (priority 7,8, or 9) to EMSD as first responder.

b. Assign EMSD maintenance teams to respond to leak complaints in accordance with the work order priority code and the severity of the condition, as well as the timeframes and protocols outlined in this Standard Procedure.

c. Ensure that EMSD work orders (if not addressed) are reassigned back to the development at the start of the regular business hours.

2. EMSD Maintenance Team

a. Visits apartments for emergency Leak Work Orders, as assigned by the EMSD dispatcher or supervisor.

b. Responds to emergency Leak Work Orders in accordance with protocols and best practices outlined in this Standard Procedure.

c. Follows the iWM App prompts to document leak inspection findings and work performed as specified in Section VIII.E, *Responding to Emergency Leak Conditions Outside Normal Business Hours and Documenting Work in the iWM App* and Section VIII.H, *Abating Flood Conditions and Standing Water Clean Up Instructions*.

E. Office of Quality Assurance

The Office of Quality Assurance performs random QA assessments of closed Leak Work Orders to ensure that all repairs to address leak or excessive moisture complaints were satisfactory and in accordance with NYCHA repair standards. See Section VIII.N, *Quality Assurance Assessments for Leaks.*

F. Compliance Department

The Compliance Department:

1. Ensures that all NYCHA employees comply with laws and regulations and that NYCHA is ethical in fulfilling its overall mission to provide safe, affordable housing to its residents.

2. Performs an assessment of leak and mold complaints submitted by internal and external stakeholders through the department's Complaint Forum on the NYCHA website.

3. Investigates complaints of deceptive practices received and potential instances of deceptive practices identified through compliance monitoring.

4. Refers cases to EH&S, Property Management Operations, the Office of Quality Assurance, and Ombudsperson Call Center (OCC).

G. Environmental Health and Safety Department (EH&S)

EH&S:

1. Performs oversight inspections for mold work orders at NYCHA-owned and operated properties. Mold remediation oversight inspections include verifying that there is no ongoing moisture issue.

2. Responds to and investigates resident or employee complaints received through the Complaint Forum or other communications regarding hazards that may pose a threat to resident and employee health and safety including floods, severe leaks, and other indoor air quality issues.

3. Issues corrective actions to NYCHA departments to address deficiencies identified during investigations and oversight inspections. Corrective actions may include recommendations to relocate tenants or employees until hazards are abated, conduct a leak investigation and identify the root cause, use mold resistant materials, or provide additional mold/leak training to non-compliant staff.

4. Provides recommendations to Property Management Operations and other departments based on key observations and findings from investigations and routine oversight inspections.

5. Administers NYCHA's Respiratory Protection Program in accordance with NYCHA Standard Procedure 001:17:2, *NYCHA Respiratory Protection Safety Program.*

6. Oversees NYCHA's Hazard Communication Program including maintenance of the Safety Data Sheet database.

7. Provides initial safety trainings and refreshers to ensure NYCHA's compliance.

H. Ombudsperson Call Center (OCC)

The Ombudsperson Call Center:

1. Holds NYCHA accountable for completing necessary leak, excessive moisture, and mold repairs in a timely manner.

2. Interacts closely with NYCHA residents.

   a. Works closely with the Mold Response Unit (MRU) to respond to complaints from residents.

   b. Conducts initial intake of complaints from residents and shares the relevant information with the MRU, which ensures that there is a NYCHA response to resident complaints.

   c. Tracks scheduled repair dates and unscheduled repair work based on resident complaints.

   d. Tracks all Ombudsperson Call Center tickets and may issue orders to NYCHA if resident complaints are not promptly resolved using NYCHA's best efforts.

NOTE:	The Ombudsperson has the authority to issue an order requiring NYCHA to take specific action, such as requiring NYCHA to complete a repair within a specified number of days, requiring NYCHA to approve and assign the highest priority to a transfer of a tenant's household to another apartment, ordering an independent contractor to complete

repairs promptly at NYCHA's expense, or requesting that the IMA inspect an apartment and prepare a remediation plan at NYCHA's expense.

3. Refers cases to OMAR, the Compliance Department, and the IMA to ensure that the root causes of leak, excessive moisture, and mold complaints are identified and remediated.

4. Participates in NYCHA's specialized programs that focus on consolidations that are most impacted by leak, excessive moisture, or mold issues. This includes the Enhanced Oversight Program (EOP), administered by OMAR, to create joint strategies to improve leak and mold compliance, address specific backlog issues, and assist with case management.

5. Prepares periodic reports that are made available to the public and posted to the OCC website (https://ombnyc.com/).

6. Develops response timelines and escalation processes to ensure NYCHA responds to complaints from residents in a timely manner.

7. Facilitates regular status calls with NYCHA departments to discuss complaints from residents.

VIII. PROCEDURE

A. Creating and Scheduling Leak Service Requests

1. Creating Parent Leak Work Order

a. Resident Submits a Service Request to NYCHA's Customer Contact Center (CCC) or via the MyNYCHA App or Website

(1) When a resident calls the CCC or submits a service request via the MyNYCHA App or website to report a leak or excessive moisture complaint, a parent Leak Work Order is created in Maximo. The work order is assigned a specific Failure Class (FC), Problem Code (PC), and priority code based on the severity and source of the leak as reported by the resident:

(a) A Hazardous Leak (Priority 9) Work Order is created in Maximo if a resident reports a hazardous leak that is impacting electrical systems in the apartment (e.g., water leaking into a circuit breaker or electrical outlet).

The resident is required to be available immediately (within 1 hour) to allow NYCHA staff to access the apartment to abate the condition, as outlined in Standard Procedure 040:09:7, *Managing Maintenance Work Orders*. The resident is advised by the CCC or MyNYCHA that if no one answers the

door, NYCHA staff may use the Right of Entry to enter the apartment to abate the condition.

NOTE:	Residents should contact the CCC directly to report emergency leak conditions. CCC agents can immediately escalate repair requests to property maintenance supervisory staff during normal business hours and to EMSD staff outside of normal business hours. For life-threatening emergencies residents should call 911. In this Standard Procedure, both Hazardous and Emergency Leak Work Orders are considered “emergency leaks”.

(b) An Emergency Leak (Priority 7) Work Order is created in Maximo if a resident reports a leak from above or other emergency condition (e.g., pipe leak, overflowing toilet, running faucets, stoppages) that is causing or has a potential to cause sustained or recurrent moisture to flow into a resident’s apartment or the walls of the apartment, or other disruptions to the plumbing systems.

The resident is required to be available the same day up to 24 hours after reporting the condition to allow NYCHA staff to access the apartment and abate the condition, as outlined in the Standard Procedure 040:09:7, *Managing Maintenance Work Orders*. The resident is advised by the CCC or MyNYCHA that if no one answers the door, NYCHA staff may use the Right of Entry to enter the apartment to abate the condition.

NOTE:	See Standard Procedure 040:17:3*, Accessing Public Housing Apartments When Tenant Not Home to Address Deficiencies Related to Leaks, Mold, and Lead-Based Pain*t for instructions for using the Right of Entry to access an apartment when an adult resident is not home depending on the severity of the leak condition.

(c) A Non-Emergency Leak (Priority 4 or 3) Work Order is created in Maximo, if a resident reports excessive moisture, water damage, or other non-emergency leak conditions (e.g., dripping faucet, leak under the sink) that result in the unwanted escape of water but do not cause sustained or recurrent moisture to flow into a resident’s apartment or the walls of the apartment.

i. If a resident calls the CCC to submit a non-emergency leak service request, the CCC agent coordinates with the resident to select the appointment date. The CCC agent offers the resident the first

available appointment date in Siebel or, if requested by the resident, tries to accommodate alternative dates within normal business hours.

> **NOTE:** The CCC makes best efforts, in coordination with the resident, to schedule the appointment no later than seven (7) calendar days after the condition is reported to NYCHA.

ii. If a resident uses the MyNYCHA App or website for a non-emergency leak service request, the resident is prompted to select an appointment date in the MyNYCHA App or website.

> **NOTE:** If the resident does not select an appointment date, the Non-Emergency Leak Work Order is created with the status 'WAITING ON SCHEDULING' and is assigned as specified in Section VIII.A.2 below.
>
> The resident can call the CCC or login to the MyNYCHA App or website to update the appointment date.

> **NOTE:** See Standard Procedure 040:09:7, *Managing Maintenance Work Orders* for definitions of Siebel and Maximo; information on planning, completing, and closing out work orders in the Siebel and Maximo applications; and for the definitions of and relationships between parent and child work orders.

(2) Ombudsperson Call Center

Residents calling the CCC or using the MyNYCHA App or website to request or schedule a Leak Work Order are informed that if NYCHA does not properly or promptly complete leak or water damage repairs they can contact the independent court-appointed Ombudsperson Call Center at 1-888-341-7152 or at www.ombnyc.com.

b. NYCHA Staff Creates a Parent Leak Work Order

(1) When a NYCHA employee observes a leak or excessive moisture condition while performing other work in an apartment, they must:

(a) Create a parent Leak Work Order in the iWM App on the handheld device (See Appendix C - *Creating a Parent Leak Inspection Work Order on the iWM App on the Handheld*); or

(b) Telephone or radio the property maintenance supervisor or assistant property maintenance supervisor to create the work order in Maximo (See

Appendix D – *Instructions for Creating Parent Leak Work Order in Maximo (Craft - 'MAINT, Job Plan - 'INSLEAK').*

NYCHA staff must select the Failure Class (FC) and Problem Code (PC) that most accurately describes the condition and add notes, if needed.

(2) If the condition was identified by a maintenance worker, other property maintenance staff, a skilled trades supervisor, or any other NYCHA staff, and they determine that a skilled trade or vendor is needed for the parent Leak Work Order, they must notify by phone, radio, or email the property maintenance supervisor or assistant property maintenance supervisor who may assign the parent Leak Work Order to a specific craft (e.g., plumber) – a maintenance worker visit is not required. See Appendix E – *Instructions for Creating Parent Leak Work Order in Maximo (Craft – any other than 'MAINT').*

2. Supervisory Review of Parent Leak Work Orders

a. During Normal Business Hours

(1) Reviewing Work Orders

The property maintenance supervisor and/or assistant property maintenance supervisor must review all work orders in Maximo multiple times a day and assign Leak Work Orders to maintenance workers. The work orders are assigned in accordance with:

(a) Severity

(b) Priority

(c) Scheduled Date

NOTE: The CCC notifies development staff by telephone when there is a high priority work order during normal business hours, including work orders for emergency leaks. After 4:30 p.m., the call agent sends an email to EMSD at EMSDAlert@nycha.nyc.gov. See Standard Procedure 040:09:6, *Customer Contact Center* for more information.

(2) Emergency Leaks

If there is a work order for an emergency leak, the property maintenance supervisor or assistant property maintenance supervisor:

(a) Assigns a maintenance worker as required by the work order priority code – when possible, either immediately or no later than 24 hours after the condition was reported to NYCHA.

(3) Non-Emergency Leaks

If there is a work order for a non-emergency leak, the property maintenance supervisor or assistant property maintenance supervisor:

(a) Assigns a maintenance worker in accordance with the requested appointment date (i.e., time and date), if selected by the resident; or

(b) Assigns a maintenance worker in accordance with the work order priority if no appointment date was selected, but no later than 7 calendar days after the condition was reported to NYCHA.

i. The property maintenance supervisor or assistant property maintenance supervisor assigns a scheduled date to the work order based on the maintenance worker's availability.

ii. Once assigned, the maintenance worker visits the apartment to address the deficiency on the scheduled date.

b. Outside of Normal Business Hours (Weekends, Nights, Holidays).

EMSD supervisors and dispatchers must continuously review high priority work orders (Priority 7-9) in Maximo during their shifts and assign work orders for emergency leaks to EMSD maintenance teams. The work orders are assigned in accordance with:

(1) Severity

(2) Priority

3. Property Manager Review of Work Orders

Property managers must review all work orders including Leak Work Orders at least three times a week. If Leak Work Orders are not in compliance with the Leak Service Level Agreement, the property manager addresses the issue with the property maintenance supervisor and assistant property maintenance supervisor.

a. If work orders for emergency leaks are not addressed within 24 hours (or earlier, if required by the priority code), the property manager must notify the property maintenance supervisor and assistant property maintenance supervisor by email, phone, text, or in person to request that they immediately address the issue.

b. If work orders for non-emergency leaks are not scheduled, open past their scheduled date, or scheduled outside the Leak Service Level Agreement of this Standard Procedure, the property manager must notify the property maintenance supervisor and assistant property maintenance supervisor by email to contact the resident to move up the appointment in the schedule or issue NYCHA Form 042.727, *48 Hour Notice of Health and Safety Repairs* to the apartment.

> **NOTE:** All attempts to contact residents must be recorded in Maximo in the *Communication Log.*

4. Neighborhood Administrator Review of Work Orders

   Neighborhood administrators regularly review high priority work orders, including work orders for emergency leaks. If the work orders are not in compliance with the Leak Service Level Agreement, the neighborhood administrator addresses the issue with the property manager, property maintenance supervisor, and assistant property maintenance supervisor.

B. Responding to Parent Leak Work Orders (Impacted Apartments)

Once assigned a list of work orders, the maintenance worker responds to leak complaints in accordance with work order priority and/or appointment timeframes.

> **NOTE:** All parent Leak Work Orders must be performed using a handheld device. The maintenance worker must start the time of the work order when at the apartment door and document all findings/actions in the work order (e.g., respond to inspection questions, make temporary or permanent repairs, upload photographs, create child repair work orders) prior to leaving the apartment.
>
> If the maintenance worker is not able to use a handheld device during the leak inspection, the maintenance worker must use the Maximo Parent Leak Work Order form to document inspection findings and submit the completed form to the property maintenance supervisor or assistant property maintenance supervisor who must enter the results in Maximo.

1. Preparing for the Initial Visit

   a. The maintenance worker reviews the list of work orders assigned for the day and prioritizes work in accordance with work order severity, priority, and, for non-emergency work orders, a scheduled timeframe (e.g., between 9 a.m. - 12 p.m.).

NOTE: Property maintenance supervisors or assistant property maintenance supervisors must discuss with maintenance workers if any specific work orders need to be prioritized and, when needed, assist with coordinating access to apartments.

b. Prior to the initial visit to the impacted apartment in response to a leak complaint, the maintenance worker:

(1) Checks the tool kit to ensure all necessary tools to complete the leak inspection and repairs are in working order. At a minimum the maintenance worker must have the tools listed in Appendix G - *Leak Inspection Tools & Supplies* for the initial visit for:

(a) All Leak Work Orders

(b) Leak from Above Work Orders

(c) In Unit Stoppage Work Orders

c. For Leak From Above Work Orders:

The maintenance worker asks the property maintenance supervisor or assistant property maintenance supervisor if another maintenance worker or other trained staff is available to assist with conducting the leak from above inspection (e.g., to operate fixtures in the apartment above, if needed).

(1) The property maintenance supervisor or assistant property maintenance supervisor assigns other trained staff when possible.

(2) If other trained staff are not available, the maintenance worker proceeds to respond on their own.

2. Accessing the Impacted Apartment and Starting the Work Order

a. The maintenance worker (and other trained staff, if applicable) goes to the impacted apartment on the day of the assigned appointment and follows the steps in Standard Procedure 040:09:7, *Managing Maintenance Work Orders* to access the apartment and start the work order.

b. If a resident or other adult is not home to allow access to the apartment to address floods or other emergency leak conditions, the maintenance worker may 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 Pain*t. Per the procedure,

development supervisory staff prior authorization is needed before maintenance workers or other trained staff can access an apartment.

NOTE:	If shutting off the supply riser is needed to stop an active flood (i.e., there is gushing water), the property maintenance supervisor or assistant property maintenance supervisor must request prior authorization (by phone and email) from the neighborhood administrator, or an above title if the neighborhood administrator is not immediately available.

c. If the resident is home but refuses to provide access to the apartment or room:

(1) If the emergency leak condition is severe:

(a) The maintenance worker radios or phones the property maintenance supervisor or assistant property maintenance supervisor who contacts the property management office.

(b) The property manager, assistant property manager, or housing assistant contacts the tenant to request that they allow access and remind them of the Right of Entry provisions of the NYCHA Resident Lease (NYCHA Form 040.507).

(c) If the tenant still does not allow access, the property manager:

i. Calls the tenant's emergency contact to ask their assistance in convincing the tenant to allow immediate access.

ii. If unsuccessful, calls the neighborhood administrator for further guidance and instruction, which may include:

aa Requesting the involvement of the Family Partnerships Department to intervene with the tenant; and/or

ba Coordinating with the Resident Relocation Services Department if the resident is concerned about repairs being done while the resident is in the apartment; and/or

ca Requesting assistance, if necessary, from the New York City Police Department (NYPD) to facilitate access to the apartment.

(d) 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.

(2) If the emergency leak condition is not severe or if it is a non-emergency leak the maintenance worker follows the instructions in Standard Procedure 040:09:7, *Managing Maintenance Work Orders.*

d. If the maintenance worker has gained access to the apartment and identified a situation in the apartment that could be hazardous to their safety and health (e.g., an unsecured animal or suspected illegal activity), the maintenance worker must stop work and immediately leave the apartment and alert the property maintenance supervisor or assistant property maintenance supervisor.

NOTE:	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.

3. Discussing History of Leak Complaints with the Resident

Upon entering the apartment, the maintenance worker:

a. Immediately addresses any flooding or other emergency condition.

b. Makes a best effort to:

(3) Interview the resident about the history of prior leak complaints and repairs, if applicable, that might be relevant to the current work order.

(4) Communicate with the resident regarding the timeframe of the scheduled appointment and the type of work being performed.

NOTE:	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*. If staff cannot identify the resident's spoken language, or if there is no bilingual staff readily available to assist, staff may call the Language Assistance Hotline at 212-306-4444.

c. Asks specific questions about the current condition, if applicable:

(1) Frequency and duration of the condition.

(2) Whether the leak impacts other rooms or adjacent areas (e.g., through a shared wall).

(3) Whether the condition is associated with any activity (e.g., rainfall, bathroom use, neighbor taking shower, neighbor running washing machine, humidity in apartment).

(4) Nature of the leak (e.g., color of water, odor of the water, temperature of the water, and other distinctive characteristics).

d. Adds any relevant information to the Work Log that describes the condition and/or could assist in leak tracing or identifying additional repairs.

C. Identifying Whether Root Cause of Leak Originates Within Impacted Apartment or an Above or Adjacent Apartment

To ensure that the root cause(s) of leak or excessive moisture is properly identified and addressed, the maintenance worker or other trained staff must take the following steps:

1. If the root cause of the leak is suspected to originate <u>within</u> the impacted apartment, the maintenance worker or other trained staff must check the following, as necessary, to locate the root cause:

   a. Drain lines/lead bends above showers and toilets.

   b. Exterior wall condition, if the apartment has one or more.

   c. Sink (i.e., backsplash, faucets, waste lines).

   d. Shower body (i.e., escutcheon plates, stems, or cartridges) and whether the shower body, tub/diverter spout and shower head are operating properly.

   e. 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.

   f. Window frame and area around window lintels.

   g. Whether the washing machine, if any, is properly installed.

   h. Whether the air conditioner(s), if any, is properly installed.

   i. Whether the freezer, if any, is properly installed.

   j. Whether the dishwasher, if any, is properly installed.

2. If the source of the leak is suspected to originate <u>outside</u> the impacted apartment, the maintenance worker or other trained staff must inspect the above and/or adjacent apartments to locate the root cause.

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

(1) When feasible, a team of two maintenance workers or other trained staff should be assigned to address Leak From Above Work Orders and conduct a multi-apartment inspection. See Section VIII.F, *Performing Leak Inspections of Additional Apartments to Identify the Root Cause(s).*

> **NOTE:** If it is not feasible to assign a second maintenance worker or other trained staff to assist with the Leak From Above Work Order (see Section VIII.B), the maintenance worker must attempt to trace the leak and identify the root cause(s) on their own by navigating between the impacted apartment and above and/or adjacent apartments. If after making best efforts they are unable to locate the root cause(s), the maintenance worker calls or radios the property maintenance supervisor or assistant property maintenance supervisor for guidance and/or support.

(2) One maintenance worker or trained staff remains in the impacted apartment, and the other maintenance worker or trained staff proceeds to the apartment directly above or adjacent.

(3) The maintenance worker or other trained staff in the apartment above or adjacent proceeds as follows:

(a) With the tub stopper in, fills the tub past the overflow and lets the water drain through the overflow as the maintenance worker or other trained staff in the impacted apartment checks the apartment for leaks.

(b) Pulls the tub drain plug and lets the water drain as the maintenance worker or other trained staff in the impacted apartment checks the apartment for leaks.

> **NOTE:** 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 (from stack to tub trap) must be replaced if a leak is identified in the branch piping.

(c) Fills the sink with the stopper in and pulls the drain plug once filled as the maintenance worker or other trained staff in the impacted apartment checks the apartment for leaks.

(d) Checks for gaps or damaged caulking around the bathtub and tub enclosure.

(e) Flushes the toilet as the maintenance worker or other trained staff in the impacted apartment checks the apartment for leaks.

i. The maintenance worker or other trained staff may consider conducting a bowl lift to inspect the wax gasket and flange for damage.

(f) Checks whether the washing machine, if any, is properly installed.

(g) Checks whether the air conditioner(s), if any, is properly installed.

(h) Checks whether the freezer, if any, is properly installed.

(i) Checks whether the dishwasher, if any, is properly installed.

b. If the source of the leak is identified in an apartment located on the top floor, or if the maintenance worker or other trained staff otherwise suspects that the root cause(s) may be the roof of the building, the inspection of the roof must be performed. The maintenance worker or other trained staff must:

(1) Inspect the roof deck for torn or damaged areas of the roof membrane, and/or ponding.

(2) Inspect the perimeter of the roof (e.g., parapets and bulkheads) for damaged or missing flashing.

(3) Inspect penetrations (e.g., drains, roof fans, vents) for damaged or missing flashing or roof curbing materials.

(4) Investigate buildings with water tanks to check for defects with constant water leakage including checking up feed and supply lines for proper waterproofing.

NOTE:	A Maximo flag on the work order indicates if the roof is under warranty. NYCHA staff should not make the repair if the roof is under warranty and should follow the steps in Standard Procedure 025:52:1, *Administration of Guarantees and Warranties.*

D. Documenting Work in the iWM App and Discussing Findings/Next Steps with Resident(s)

1. Conducting a Leak Inspection

The maintenance worker or other trained staff inspects the apartment for leaks, excessive moisture, and water damage and answers iWM App inspection prompts to document findings on the parent Leak Work Order.

NOTE:	See Section XIV for the Leak Inspection Workflow.

a. **Step One:** Evaluation of Conditions

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

(1) Is there a flooding condition?

(a) No

The maintenance worker or other trained staff selects this option if no flooding condition was observed and proceeds to the next question.

(b) CAT (Corrective Action Taken)

i. The maintenance worker or other trained staff selects this option if a flooding condition is observed, and the maintenance worker or other trained staff is able to take a corrective action to abate the flooding during the visit. See Section VIII.H*, Abating Flood Conditions and Standing Water Clean Up Instructions* for details.

ii. Maximo automatically creates a closed child Flooding Abatement Work Order with a failure class 'FLOODING' and a problem code 'ABATED' to document that the flooding was abated during the visit.

(c) Needs Abatement

i. The maintenance worker or other trained staff selects this option if a flooding condition is observed, and the maintenance worker or other trained staff is not able to abate the flooding and/or stop the flow of water during the visit.

ii. Maximo automatically creates a child Flooding Abatement Work Order with a failure class 'FLOODING' and a problem code 'NEEDSABATEMENT.'

NOTE:	The maintenance worker or other trained staff must make best efforts to abate a flooding condition, if observed, while they have access to the apartment during the initial visit. However, if they are not able to abate the condition, the maintenance worker or other trained staff must select Needs Abatement to create a child Flooding Abatement Work Order and must notify property maintenance supervisory staff by phone or radio to escalate the high priority flooding abatement request.

NOTE: Floods and emergency leaks are to be abated **within 24 hours** after the condition is reported to NYCHA.

(2) Is there standing water?

(a) No

The maintenance worker or other trained staff selects this option if no standing water is observed and proceeds to the next question.

(b) CAT (Corrective Action Taken)

The maintenance worker or other trained staff selects this option if standing water is observed, and the maintenance worker or other trained staff can take corrective action to remove the standing water during the visit, including assigning a caretaker to assist. See Section VIII.H*, Abating Flood Conditions and Standing Water Clean Up Instructions* for details.

(c) Standing Water Within One Room

i. The maintenance worker or other trained staff selects this option if standing water was observed within one room, and the maintenance worker or other trained staff is not able to remove the water during the initial visit.

ii. Maximo automatically creates a child Standing Water Removal Work Order with a failure class 'LEAKFOLLOWUP' and a problem code 'NEEDSWATERREMOVAL' (job plan 'STDWATER1ROOM').

(d) Standing Water Extends Into Other Rooms

i. The maintenance worker or other trained staff selects this option if standing water was observed extending into multiple rooms, and the maintenance worker or other trained staff is not able to remove the standing water during the initial visit.

ii. Maximo automatically creates a child Standing Water Removal Work Order with a failure class 'LEAKFOLLOWUP' and a problem code 'NEEDSWATERREMOVAL' (job plan 'STDWATEROTRROOMS').

(e) Standing Water Apartment Wide or Greater than One Inch Deep

i. The maintenance worker or other trained staff selects this option if standing water was observed extending apartment wide and/or is

more than 1” deep, and the maintenance worker or other trained staff is not able to remove the standing water during the initial visit.

ii. Maximo automatically creates a child Standing Water Removal Work Order with a failure class ‘LEAKFOLLOWUP’ and a problem code ‘NEEDSWATERREMOVAL’ (job plan ‘STDWATERAPTWIDE’).

NOTE: The maintenance worker or other trained staff must make best efforts to remove standing water, if observed, while they have access to the apartment during the initial visit. However, if they are not able to abate the condition, the maintenance worker or other trained staff must select the appropriate option (c), (d), or (e) above to create a child Standing Water Removal Work Order and must notify property maintenance supervisory staff by phone or radio to escalate the high priority standing water removal request.

The supervisor of housing caretakers must dispatch a caretaker(s) within 24 hours to remove standing water. The supervisor of caretakers must verify that the work was completed before the work order is closed in Maximo. If the standing water contains sewage, appropriate staff and/or a vendor is assigned to remove the standing water.

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

(3) Is there an active leak(s)?

(a) No

The maintenance worker or other trained staff selects this option if no active leak was observed at the time of inspection and proceeds to *Step Two: Probable Cause.*

(b) Yes

The maintenance worker or other trained staff selects this option to document if the leak is ongoing at the time of inspection and proceeds to *Step Two: Probable Cause*.

b. **Step Two:** Probable Cause

The maintenance worker or other trained staff carefully inspects 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) and then documents the root cause(s) in the iWM App.

(1) Is Moisture Measurement Greater than or Equal to 599?

(a) No

The maintenance worker or other trained staff selects this option if there is no moisture meter measurement on any surface in the apartment that equals or exceeds 599 and documents the highest moisture meter measurement in the work order.

(b) Yes

The maintenance worker or other trained staff selects this option if the moisture meter measurement is equal to or exceeds 599 and documents the highest moisture meter measurement against each impacted surface (e.g., Wall 1, Wall 2, Wall 3, Wall 4, Ceiling, Floor) in the work order.

NOTE:	This question is mandatory for Leak From Above, Pipe Leak, and Wall Leak Work Orders. For other Leak Work Orders it is optional. See Section VIII.I, *Instructions for Using a Moisture Meter* and Appendix B - *Additional Instructions for Using a Moisture Meter (Protimeter)*.

(2) Is a wall break required?

(a) No

The maintenance worker or other trained staff selects this option if the root cause(s) of the leak, excessive moisture, or water damage could be identified without making a wall break and proceeds to question (5) – Probable Cause(s).

(b) Yes

The maintenance worker or other trained staff selects this option if a wall break needs to be created to identify the root cause(s) of a leak, excessive moisture, or water damage, and/or to provide access to further repairs.

The maintenance worker or other training staff must:

i. Follow the steps outlined in Section VIII.J, *Wall Break Instructions* when performing a wall break.

ii. Attach a photograph of the completed wall break to the parent Leak Work Order.

iii. Answer inspection questions (3) and (4) on the parent Leak Work Order (also below) to evaluate conditions within the wall cavity.

NOTE: 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, the maintenance worker or other trained staff must inspect the conditions within the wall cavity and create a wall break, if necessary (i.e., if the root cause is attributed to an active leak within the wall cavity or to condensation on the uninsulated cold water supply pipes that are causing moisture to penetrate into the walls and/or apartment).

NOTE: If not able to complete a wall break during the initial visit (e.g., the resident needs to remove personal property), the maintenance worker or other trained staff must complete *Step One: Evaluation of Conditions,* document in the Work Log that a follow up visit is needed to conduct a wall break and, when feasible, coordinate with the resident the follow up visit time.

The parent Leak Work Order remains open (Inspection State = 'PARTIAL') until the maintenance worker or other trained staff returns to complete the wall break to locate the root cause(s).

(3) Is there (suspected) asbestos on pipe insulation that could be disturbed?

(a) No

The maintenance worker or other trained staff selects this option if no suspected asbestos-containing materials (ACM) is observed on pipe insulation that could be disturbed during the wall break or root cause repair and proceeds to the next question.

(b) Yes

The maintenance worker or other trained staff:

i. Selects this option if suspected ACM is observed on pipe insulation that could be disturbed during the wall break or root cause repair.

ii. Must create a child work order with a failure class ‘ASBESTOS’ and problem code ‘ASBPIPEABATE’ (owner group ‘TSDEFO’) to request abatement of asbestos on pipe insulation before completing the parent Leak Work Order. See Section VIII.D.3, *Creating Child Leak Repair Work Orders in the iWM App* for details.

NOTE: The maintenance worker or other trained staff must notify the property maintenance supervisor or assistant property maintenance supervisor by phone or radio that asbestos abatement is needed.

The property maintenance supervisor or assistant property maintenance supervisor as soon as feasible phones or emails the Asbestos Department to notify them about the asbestos abatement request and to coordinate scheduling. **Because of the emergency nature of pipe leaks, which are responded to as promptly as possible, asbestos abatement may be performed without a prior asbestos survey.** See Standard Procedure 050:25:1, *Asbestos Safe Housing Procedure* for more information.

NOTE: **All work involving the disturbance of any suspected ACM, which has not been inspected and cleared to proceed by NYCHA’s Healthy Homes Asbestos Department, must stop immediately**.

No NYCHA employee or vendor shall disturb any ACM as part of their duties unless they have the appropriate training.

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 following all applicable federal, state, and city laws and regulations.

(4) Is there mold on the back side of sheetrock? (applies to sheetrock developments only)

(a) No

The maintenance worker or other trained staff selects this option if no mold was observed on the backside of sheetrock after inspecting the conditions within the wall cavity through the wall opening and proceeds to select the probable cause(s).

(b) Yes

The maintenance worker or other trained staff:

i. Selects this option if mold growth is observed on the backside of sheetrock after inspecting the conditions within the wall cavity through the wall opening.

ii. Must create a child work order with a failure class 'WALL' and a problem code 'SHEETROCKDML' to replace the sheetrock before completing the parent Leak Work Order. See Section VIII.D.3, *Creating Child Leak Repair Work Orders in the iWM App* for details.

iii. Must indicate in work order description that mold is observed on the backside of sheetrock.

NOTE: The water damaged or moldy sheetrock must be replaced with fiberglass-faced gypsum board in sheetrock constructions. See Appendix A – *HA Numbers for Leak Related Tools and Supplies* for the list of NYCHA-approved mold-resistant materials.

NYCHA staff responding to the sheetrock replacement work order must visually inspect the backside of the sheetrock to determine the location of the mold growth and the sections of sheetrock requiring removal.

For instructions for remediating mold, see Appendix A – Remediation Methods of Standard Procedure 040:14:1, Mold/Mildew Control in NYCHA Residential Buildings.

If mold is found on the back side of a sheetrock wall of an adjacent room or an adjacent apartment, the maintenance worker or other trained staff creates a mold inspection work order.

The property maintenance supervisor or assistant property maintenance supervisory must respond to a mold work order in accordance with inspection protocols and timelines in Standard Procedure 040:14:1,

Mold/Mildew Control in NYCHA Residential Buildings. If the maintenance worker on the job has successfully completed the Mold Busters training, a parent Mold Inspection Work Order can be assigned to the same maintenance worker, while they still have access to the apartment.

(5) Probable Root Cause(s)

(a) The maintenance worker or other trained staff must select at least one and up to four probable root cause(s) on the iWM App on the handheld device from the following options:

i. 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).

The maintenance worker or other trained staff selects one of the following drop-down options in the iWM App and provides specific instructions to the resident to prevent the condition from recurring:

aa Improperly Installed Dishwasher (or Tubing)

Instructs the resident to contact a repair service for the dishwasher and to not use the dishwasher until it is properly repaired and/or connected.

NOTE: If the dishwater unit is leaking, the maintenance worker or other trained staff shuts off the water valves.

ba Improperly Installed Washing Machine (or Tubing)

Instructs 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.

NOTE: If the washing machine is leaking, the maintenance worker or other trained staff shuts off the water valves.

ca Improperly Installed Air Conditioner

Instructs 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.

da Improperly Installed Freezer

Instructs the resident to contact a repair service for the freezer and to not use the freezer until it is properly repaired.

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

If the appliance is observed to be leaking, the maintenance worker or other trained staff must:

- Disconnect the appliance and instruct the resident to get the appliance repaired, installed correctly, or remove the appliance.
- Inform the property maintenance supervisor or assistant property maintenance supervisor who notifies the property management office.

If an air conditioner is improperly installed and presents a clear and present danger, the maintenance worker or other trained staff must immediately remove the air conditioner and install a window guard in its place.

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.

ii. 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)

iii. 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/toilet caulk.

iv. 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)

v. 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.

vi. Leak From Above/Adjacent – Investigate

Leak From Above/Adjacent - Investigate should be selected when the cause of the leak, water damage, or excessive moisture is attributed to a leak from the apartment above or adjacent to the impacted apartment. The maintenance worker or other trained staff is responsible for tracing the leak to the root cause apartment and identifying the probable cause.

NOTE:	The maintenance worker or other trained staff must enter the 'Root Cause Location' and provide a brief description of the root cause in the 'Notes' of the parent Leak Work Order. See Section VIII.F, *Performing Leak Inspections of Additional Apartments to Identify the Root Cause(s)* for details.

vii. 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 is an existing open work order to abate that the maintenance worker or other trained staff has confirmed.

NOTE: The maintenance worker or other trained staff must enter the 'Root Cause Location' and provide a brief description of the root cause in the 'Notes' of the parent Leak Work Order.

See Section VIII.F, *Performing Leak Inspections of Additional Apartments to Identify the Root Cause(s)* for details.

viii. 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.

ix. 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.

NOTE: The maintenance worker or other trained staff must enter a detailed explanation of the conditions observed and the suspected root cause in the 'Notes' in the iWM App.

x. 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. See Section VIII.M, *Addressing Pipe Condensation and Pipe Insulation Deficiencies* for more information.

NOTE: Condensation is most likely to be the contributing root cause when staff observes missing or damaged pipe insulation and there is water damage and/or mold on the lower 3 feet of the chase wall. This root cause requires a wall break to diagnose.

xi. Pipe Condensation - Previously Addressed

Pipe Condensation - Previously Addressed should be selected when the cause of an incidental wet condition on the lower 3 feet of the

chase wall is attributed to condensation on the cold-water risers and/or branch lines, and:

aa There is no water damage and mold growth present; and

ba Interim controls were already put in place to prevent mold growth (e.g., fiberglass-faced gypsum board was installed, and mold resistant paint was previously applied).

This root cause will require a wall break to diagnose. See Section VIII.M, *Addressing Pipe Condensation and Pipe Insulation Deficiencies* for more information.

xii. 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).

NOTE:	Suspected plumbing leaks behind the wall require an inspection of the wall cavity and a wall break may be required. The exact location of the leak must be identified before selecting this root cause.

xiii. 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.

xiv. 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).

The maintenance worker or other trained staff selects one of the following drop-down options in the iWM App and provides specific instructions to the resident to prevent the condition from recurring:

aa Improper Disposal of Waste Materials Down the Drains

Instructs 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).

ba Overflowing Fixtures

Instructs the resident not to overfill and/or overflow sinks and tubs.

ca Other

Provides other instructions to the resident, as needed, and documents the root cause(s) in the Work Log on the iWM App.

NOTE:	The maintenance worker or other trained staff must enter a detailed explanation of conditions observed and the suspected root cause in the 'Notes' in the iWM App.

xv. 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).

xvi. 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).

xvii. 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, and faulty ballcocks).

NOTE:	When not able to complete the full scope of repair(s) during the visit (e.g., root cause repair or cosmetic repair is needed), the maintenance worker or other trained staff must create a child work order(s) to address the

repairs. See Section VIII.D.3, *Creating Child Leak Repair Work Orders in the iWM App* for details.

c. **Step Three (if applicable)**: General Evaluation

During this step, the maintenance worker or other trained staff visually inspects the impacted area for environmental issues (i.e., mold or pest infestation) and records the findings in the iWM App on the handheld device.

NOTE: This step is required if mold or pest conditions are observed. If no mold or pest conditions are observed, completing this step is optional.

(1) Is there mold growth?

(a) No

The maintenance worker or other trained staff selects this option if no mold growth is observed.

(b) Yes

The maintenance worker or other trained staff selects this option if mold growth is observed and records 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 a failure class 'MILDEWCONDITION' and problem code 'NEEDSCLEANING' (craft 'SUPT').

NOTE: The maintenance worker or other trained staff must notify the property maintenance supervisor or assistant property maintenance supervisor by phone or radio that mold was observed while they still have access to the apartment.

The property maintenance supervisor or assistant property maintenance supervisor must respond to a mold work order in accordance with inspection protocols and timelines in Standard Procedure 040:14:1, *Mold/Mildew Control in NYCHA Residential Buildings*. If the maintenance worker on the job has successfully completed the Mold Busters training, a parent Mold Inspection Work Order can be assigned to the same maintenance worker, while they still have access to the apartment.

(2) Cockroaches?

(a) No

The maintenance worker or other trained staff selects this option if there are no visible indicators of a cockroach infestation.

(b) Yes

i. The maintenance worker or other trained staff selects this option if there are signs of cockroach infestation.

ii. Maximo automatically creates a parent Extermination Work Order with a failure class ‘EXTERMINATION’ and problem code ‘ROACHES’.

(3) Rodent Droppings?

(a) No

The maintenance worker or other trained staff selects this option if there are no visible indicators of a rodent infestation.

(b) Yes

i. The maintenance worker or other trained staff selects this option if there are signs of rodent infestation.

ii. Maximo automatically creates a parent Extermination Work Order with a failure class ‘EXTERMINATION’ and problem code ‘MICE’.

2. Performing Routine Leak Repairs

Once the root cause(s) is identified, the maintenance worker or other trained staff performs any routine repair(s) necessary to address the root cause(s) of the leak, excessive moisture, or water damage and documents completed repair(s) in the parent Leak Work Order. See Section VIII.K, *Correcting the Root Cause(s) of a Leak and Making Cosmetic Repairs.*

If the leak repair falls outside of the scope of routine or basic maintenance, the maintenance worker or other trained staff creates child work orders for the repairs by following the steps directly below in Section VIII.D.3, *Creating Child Leak Repair Work Orders in the iWM App*.

3. Creating Child Leak Repair Work Orders in the iWM App

If the leak repair falls outside of the basic maintenance scope, the maintenance worker or other trained staff creates a child work order for each skilled trade, other craft, and/or vendor needed to address the leak repair (including repairs to address the root cause and any cosmetic repairs).

a. Inspection Summary Tab

The maintenance worker or other trained staff uses the Inspection Summary tab on the parent Leak Work Order to review leak inspection findings for guidance in creating child repair work orders.

(1) The Inspection Summary tab lists the findings from *Step Two: Probable Cause* (e.g., probable root cause(s)), and whether staff observed suspected ACM on the pipe insulation and/or mold on the back side of sheetrock that requires replacement).

(2) The Inspection Summary tab does not list findings from *Step One: Evaluation of Conditions* and *Step Three: General Evaluation*. Maximo automatically creates work order(s) to address deficiencies identified in these steps, or documents if staff took corrective action to address the deficiency on the spot.

Child Work Orders Created Automatically During Evaluation of Conditions	**Child Work Orders Created by the Maintenance Worker or Other Trained Staff**	**No Child Work Order Created**
Flood remediation, if needed.	Work orders for other crafts to address the root cause(s), cosmetic repairs, and other leak related repairs.	Temporary or permanent repairs made by the maintenance worker or other trained staff.
Standing water remediation, if needed.	Suspected ACM abatement.	Wall breaks made by the maintenance worker or other trained staff.
Pest Infestation in area, if needed.	Mold on back side of sheetrock observed from wall cavity.	
Mold in room, if needed.	Permanent repairs related to wall breaks (e.g., painting, plastering).	

b. Creating Child Work Order(s)

(1) The maintenance worker or other trained staff enters the following information to create a child work order.

(a) Description

A concise summary of the type of repair needed and/or the specific area requiring repair (e.g., crack on cold water domestic supply pipe).

(b) Location

The specific room or area that requires work.

i. Maximo defaults the location to the specified room in the impacted apartment in the parent Leak Work Order, e.g., a leak in the bathroom.

ii. If the repair is required for another room or a room in a different apartment (e.g., the root cause of the leak originates in the apartment above or adjacent to the impacted apartment), the maintenance worker or other trained staff **must change the location in the iWM App to the specific apartment <u>and</u> room** when creating a child work order.

NOTE:	**Important:** All child work orders must specify the exact location where the work is required. Child work orders created without adjusting the location (when needed) will lead to delays in completing repairs. For step-by-step instructions see Appendix K – *Creating Child Work Orders for Separate Apartments When Responding to a Leak Work Order*.

(c) Work Type

Corrective Maintenance (CM)

(d) Sub-Work Type

The sub-work type is ‘Leak’

(e) Failure Class and Problem Code

The failure class identifies the work order category (e.g., Sink). The problem code identifies the specific issue within the category (e.g., Faucet Leaking).

(f) Craft

(g) If the suspected root cause(s) of the leak is still to be determined indicate “Root Cause TBD” in the Notes.

NOTE: The parent Leak Work Order remains open and cannot close until a suspected root cause is identified.

(2) The maintenance worker or other trained staff repeats the steps in Section (1) directly above for each child work order.

c. Reviewing Child Work Orders

The maintenance worker or other trained staff must review all created child work orders to make sure all necessary repairs are created to address the leak complaint.

NOTE: The maintenance worker or other trained staff is responsible for creating all repair child work orders for the impacted apartment, additional impacted apartment(s) if a wall break was made, and the root cause apartment to address the leak complaint, including repairs to address the root cause(s) and any cosmetic repair work.

If the maintenance worker or other trained staff suspects there is structural integrity issue they report the issue to their supervisor following the process in Section VIII.L, *Structural Integrity Issues*.

4. Taking Photographs to Document the Repairs

The maintenance worker or other trained staff during the initial visit must take the following photograph(s) in the apartment(s) using the iWM App on the handheld device:

a. Upload at least one photograph of each observed condition prior to the repair under the Document Type 'Photos – Pre Repair', if applicable.

b. Upload at least one photograph of the repaired condition once the repair is made under the Document Type 'Photos – Post Repair', if applicable.

NOTE: Workers must upload at least one photograph for each child work order for leak repairs for skilled trades, other crafts, and/or a vendor, if applicable.

For leaks from above, wall leaks, and other complex repairs, at least one close-up photograph of the condition (e.g., area of damage) and at least one photograph of the larger area (e.g., entire wall or ceiling) is required to document the area of damage and the scope of the required repair(s).

Workers must take high quality photographs, if possible, and avoid uploading blurry or unclear pictures.

5. Issuing Repairs to Schedule Slip ("RTS Slip") for Skilled Trades Work

   a. If during the leak inspection, the maintenance worker or other trained staff determines that skilled trades repair(s) are needed to complete the leak repair, the maintenance worker or other trained staff completes a NYCHA Form 042.800, *Repairs to Schedule Slip*.

NOTE: Skilled trades are limited to bricklayer, carpenter, electrician, exterminator, glazier, painter, plasterer, plumber, and roofer.

The RTS slip must be issued whenever a child work order(s) for a skilled trade is created, while the maintenance worker or other trained staff has access to the apartment.

All child work order(s) must first be created in the iWM App before an RTS slip is issued.

If there are pre-existing work orders for skilled trades that are part of the leak repair scope, the work orders must be 'related' to the parent Leak Work Order using the iWM App and the trades must be checked off on the RTS slip.

   (1) If the root cause of the leak is within the impacted apartment, the maintenance worker or other trained staff must issue the RTS slip to the resident of the impacted apartment. The maintenance worker or other trained staff must:

      (a) Add the parent Leak Work Order number at the top of the RTS slip.

      (b) Check all required skilled trades needed to complete the job in the impacted apartment.

   (2) If the root cause of the leak is outside the impacted apartment, the maintenance worker or other trained staff must issue a separate RTS slip to the residents of the impacted apartment, the root cause apartment, and if applicable, any other additional impacted apartments.

      (a) For the impacted apartment RTS slip:

         i. Add the parent Leak Work Order number at the top of the RTS slip.

         ii. Check all required skilled trades needed to complete the job in the impacted apartment.

(b) For the root cause apartment RTS slip:

i. Add the child root cause repair work order (e.g., plumbing work order) for that apartment at the top of the RTS slip.

ii. Check any additional skilled trades needed to complete the job in the root cause apartment, if needed.

(c) For each additional impacted apartment RTS slip:

i. Add the child repair work order to repair the wall break (e.g., plastering work order) or another child work order for that apartment at the top of the RTS slip.

ii. Check any additional skilled trades needed to complete the job in that apartment, if needed.

NOTE:	If during a multi-apartment leak inspection, the maintenance worker or other trained staff identifies additional apartment(s) impacted by the same leak, it is **best practice** to create a child work order(s) for those apartment(s) while staff has access. However, if the worker is not able to create the work order(s) based on the site conditions, expediency, and other factors, they should instruct the resident(s) to call the CCC or use the MyNYCHA App to create a new repair request. If the maintenance worker or other trained staff **makes a wall break** in the additional impacted apartment(s) in an attempt to identify the root cause(s) of the leak, they **must** create a child work order(s) for that apartment.

b. The maintenance worker or other trained staff must upload photograph(s) of the RTS(s) in the “RTS Slip” folder on the parent Leak Work Order in the iWM App.

c. The maintenance worker or other trained staff advises the resident(s) to contact the neighborhood planner to schedule skilled trade repair(s) using the designated phone numbers on the RTS slip.

d. The maintenance worker or other trained staff informs the resident(s) that:

(1) NYCHA will email and/or mail the resident NYCHA Form 042.861, *Notice of Appointment for Skilled Trades Repair* for each skilled trade appointment when work orders are scheduled. Form 042.861 will include the following information:

(a) Work order number

(b) Date and time for a skilled trade repair

(c) Description of work and craft

(d) Contact information for the neighborhood planner if a resident needs to reschedule or cancel the appointment.

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

> **NOTE:** If an appointment is rescheduled, NYCHA issues NYCHA Form 042.863, *Notice of Rescheduled Appointment for Skilled Trades* to the resident by email or by placing it under the apartment door.

6. Other General Instructions to Residents Related to Child Work Orders

   a. If there are child work orders for other crafts (not skilled trades) to complete the repairs, the maintenance worker or other trained staff advises the resident(s):

      (1) That NYCHA will schedule and inform the resident by phone, email, or mail once the work order is scheduled.

      (2) If the resident has questions about scheduling, they can contact their property management office.

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

   b. The maintenance worker or other trained staff informs the resident(s) of inspected apartment(s) that requires repair(s) (i.e., child work orders) related to the leak that they can check the status of work order tickets at any time by contacting NYCHA's CCC or using the MyNYCHA App or MyNYCHA website.

7. Reviewing Inspection Findings with Resident(s) – Different Scenarios

   The maintenance worker or other trained staff discusses the leak inspection findings with the resident(s) of any inspected apartment that requires repair(s) related to the leak:

   (1) **If the root cause(s) is identified <u>within</u> the impacted apartment,** the maintenance worker or other trained staff:

(a) Informs the resident that the root cause(s) has been identified and explains the circumstances leading to the complaint.

(b) If able to make any repair (i.e., permanent or temporary repair) during the visit, describes the work done.

i. If not able to make a repair during the visit, describes the reasons why they were not able to perform any work.

ii. Informs the resident of any additional work needed to complete the repair, including work order type and craft(s).

aa Issues an RTS slip (see Section VIII.D.5 above) if skilled trade work is needed.

ba For other repairs (e.g., steam, radiator, or standpipe leak), informs the resident that property management will schedule with the needed department.

NOTE:	If the maintenance worker or other trained staff was not able to do any work during the visit and a follow up visit by another craft(s) is required to do the repair, the resident must be informed accordingly.

(2) **If the root cause(s) is located <u>outside</u> the impacted apartment** (e.g., the apartment above or adjacent), the maintenance worker or other trained staff:

(a) Informs the resident of the impacted apartment that an inspection of additional apartment(s) needs to be conducted to identify the root cause(s).

(b) Follows the steps outlined in the Section VIII.F, *Performing Leak Inspection of Additional Apartments to Identify the Root Cause(s)* to access the additional apartments.

(c) Informs resident(s) of additional impacted apartment(s) of their findings and next steps:

i. If a wall break was created:

aa Describes the work done and invites the resident to inspect the repair(s).

ii. The repair work order(s) that were created for their apartment. Issues an RTS slip (see Section VIII.D.5 above) if skilled trade work is needed.

NOTE:	If during a multi-apartment leak inspection, the maintenance worker or other trained staff identifies additional apartment(s) impacted by the same leak, it is **best practice** to create a child work order(s) for those apartment(s) while staff has access. However, if the worker is not able to create the work order(s) based on the site conditions, expediency, and other factors, they should instruct the resident(s) to call the CCC or use the MyNYCHA App to create a new repair request. If the maintenance worker or other trained staff **makes a wall break** in the additional impacted apartment(s) in an attempt to identify the root cause(s) of the leak, they **must** create a child work order(s) for that apartment.

(3) **If able to locate and access the root cause apartment on the same day**:

(a) Informs the resident of the root cause apartment:

i. The root cause(s) of the leak impacting multiple apartments was identified in their apartment.

ii. If able to make any repair (i.e., permanent or temporary repair) during the visit, describes the work done and invites the resident to inspect the repair(s).

iii. The repair work order(s) that were created to correct the root cause(s) and make other repairs (e.g., cosmetic repairs), including work type and craft(s).

aa Issues an RTS slip (see Section VIII.D.5 above) if skilled trade work is needed.

ba For other repairs (e.g., steam, radiator, or standpipe leak), informs resident that property management will schedule with the needed department.

iv. Shares with the resident of the root cause apartment general recommendations to prevent the issue from recurring as described in the Section VIII.D.1.b.(5)*, Probable Root Cause(s),* if applicable.

(b) Returns to the resident in the impacted apartment to inform them of:

i. The identified root cause(s) of the leak.

ii. The repair work order(s) that were created to correct the root cause(s); and

iii. The repair work order(s) that were created for their apartment, including work order type and craft(s).

aa Issues an RTS slip (see Section VIII.D.5 above) if skilled trade work is needed.

(4) **If not able to locate the root cause and/or not able to access the suspected root cause apartment**, the maintenance worker or other trained staff:

(a) Returns to the impacted apartment to inform the resident:

i. That further inspection is needed to locate the root cause(s) and create repair work order(s) to address the deficiencies.

ii. If any additional repair work is needed in their apartment once the root cause has been identified and corrected.

aa Issues an RTS slip (see Section VIII.D.5 above) if skilled trade work is needed.

NOTE:
- The parent Leak Work Order remains open (Inspection State = 'PARTIAL') until the maintenance worker or other trained staff identifies the root cause(s) and documents the findings in the parent Leak Work Order in the iWM App.
- The resident can contact the neighborhood planner to receive an update on the status of the root cause repair(s), if located outside the impacted apartment, once the root cause apartment is identified and repair work orders are created. While the identification of the root cause is pending, residents can contact the property management office for more information.

b. Closing the Leak Parent Work Order

NOTE: In order to close the parent Leak Work Order, photographs must be uploaded to the parent Leak Work Order under the Document Type(s) 'Photos – Pre Repair' and 'Photos – Post Repair', if applicable, as outlined in Section VIII.D.4 above.

Once the suspected root cause(s) is identified, before closing the parent Leak Work Order, the maintenance worker or other trained staff:

(1) Invites the resident of the impacted apartment to inspect the repair(s) in their apartment, if any were made, and ask any questions.

(2) Requests that the resident of the impacted apartment sign the completed parent Leak Work Order in the iWM App on the handheld device.

(a) If the resident refuses to sign, the maintenance worker or other trained staff indicates the refusal in the iWM App.

(b) Captures resident satisfaction (Yes or No).

(c) Captures resident information if resident refuses work, when possible (e.g., resident's name and comments).

(3) Signs the completed parent Leak Work Order in the iWM App.

c. When No Leak or Excessive Moisture is Identified

The maintenance worker or other trained staff:

(1) Discusses the initial inspection findings with the resident.

(2) Invites the resident to inspect the area for any signs of leak and excessive moisture and ask any questions.

(3) Requests that the resident sign the unfounded parent Leak Work Order in the iWM App on the handheld device.

(a) If a resident refuses to sign, the maintenance worker or other trained staff indicates the refusal in the iWM App.

(b) Captures the resident satisfaction (Yes or No).

(4) Signs the completed parent Leak Work Order in the iWM App.

E. Responding to Emergency Leak Conditions Outside Normal Business Hours and Documenting Work in the iWM App

1. EMSD maintenance staff responds to emergency Leak Work Orders outside of normal business hours.

   a. For safety reasons, EMSD always sends a team of two staff (e.g., two maintenance workers, or one maintenance worker and one helper).

   b. The EMSD maintenance team checks the tool kit prior to responding to ensure all necessary tools to complete the leak inspection and repairs are in working order. At a minimum the EMSD maintenance team must have the tools listed in Appendix G - *Leak Inspection Tools & Supplies.*

NOTE:	In addition to the tools in Appendix G, the EMSD maintenance team also brings wet vacuums when responding to Leak Work Orders.

   c. The EMSD maintenance team accesses apartments following the instructions in Standard Procedure 040:09:7, *Managing Maintenance Work Orders*.

2. Upon entering the apartment, the EMSD maintenance team:

   a. Immediately addresses any flooding or other emergency condition.

   b. Makes best efforts to interview the resident about the circumstances of the leak complaint that might be relevant to the current work order.

3. If the EMSD maintenance team **completes the full scope of the repair(s) during the initial visit and no follow up work is needed**, the EMSD maintenance team completes and closes the parent Leak Work Order following the steps in Section VIII.D, *Documenting Work in the iWM App and Discussing Findings/Next Steps with Resident(s).*

4. If the EMSD maintenance team **is not able to complete** the full scope of the leak inspection and/or repair(s) during the initial visit and follow up work is needed, the EMSD maintenance team must follow the steps below depending on the severity of the follow up repairs.

   a. Additional Craft Work is Needed Outside Normal Business Hours for High Priority Repairs

      If the emergency leak requires immediate attention from a different craft to abate the emergency outside normal business hours, the EMSD maintenance team must complete *Step One: Evaluation of Conditions* in the iWM App and create a follow up repair work order for the necessary craft:

(1) If follow up work is needed to abate a flooding condition and/or remove standing water, the child work orders are created automatically based on the answers to the iWM App inspection prompts.

> **NOTE:** EMSD maintenance workers are authorized to shut down the supply riser if needed to stop a flooding or severe leak condition.
>
> If the suspected root cause is a leak from an above or adjacent apartment, the EMSD maintenance team follows the instructions in Section VIII.F, *Performing Leak Inspections of Additional Apartments to Identify the Root Cause(s).*

(2) If follow up work is needed to address other emergency repairs related to the leak (e.g., glaziers to replace broken glass windows), the EMSD maintenance team must create child work orders for the appropriate craft(s).

(3) The EMSD maintenance teams calls or radios the EMSD dispatcher with the disposition of the work order (i.e., the condition found, the work performed, and the child work orders created).

b. Timely Follow Up from the Property Maintenance Staff is Needed During Normal Business Hours for a High Priority Repair

(1) If the EMSD maintenance team makes a temporary repair to address the emergency leak and an immediate follow up visit by property maintenance staff is required (e.g., to perform a wall break to identify the source of the plumbing leak, to trace the leak to the root cause apartment up the line, or to create work orders to address root cause repair):

(a) The ESMD maintenance team must complete *Step One: Evaluation of Conditions in the iWM App* and add detailed notes in the Work Log for property maintenance staff to follow up.

(b) The EMSD dispatcher manually changes the work order Owner Group to property management and unassigns the EMSD maintenance team.

(c) EMSD emails property management to alert them to high priority follow up items (e.g., the supply riser was shut and a permanent repair is needed as soon as possible).

> **NOTE:** Parent Leak Work Orders remain open (Inspection State = 'PARTIAL') until all inspection steps are completed.
>
> 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.

(2) Property management follows the steps in Section VIII.D, as applicable, to complete and close the parent Leak Work Order.

c. Follow Up Inspection from the Property Maintenance Staff is Needed During Normal Business Hours

(1) If the EMSD maintenance team makes a permanent repair to correct the emergency leak but more repairs (e.g., cosmetic repairs) are required after the emergency condition is addressed, the EMSD maintenance team must:

(a) Complete *Step One: Evaluation of Conditions* and *Step Two: Probable Cause* in the iWM App (see Section VIII.D); and

(b) Create a child work order with a failure class 'APARTMENT' and problem code 'CHECK' (sub-work type 'EMSDPFU').

(c) Close the parent Leak Work Order.

(2) Property management responds to the Apartment Check Work Order and creates more repair work orders (e.g., cosmetic repairs) following the steps in Section VIII.D.3-7, as applicable.

5. 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 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 Pain*t.

6. If a resident or other adult is home but refuses to provide access to their apartment to address floods or other emergency leak conditions:

a. If the emergency leak condition is severe and requires immediate access:

(1) The EMSD maintenance team explains the urgency to the resident and if they still cannot get access the EMSD maintenance team may:

(a) Request NYPD assistance to access the apartment; and/or

(b) Shut down the supply riser.

b. If the emergency leak condition is not severe and the resident requests that NYCHA staff return during normal business hours:

(1) The EMSD maintenance team:

(a) Phones or radios the EMSD dispatcher that the resident requested daytime service.

(b) If it is a Leak From Above Work Order:

i. Informs the resident of the impacted apartment that they cannot access the suspected root cause apartment, and that property management will complete the inspection during normal business hours.

(c) Indicates in the Notes of the parent Leak Work Order the apartment that would not provide access outside normal business hours.

(2) The EMSD Dispatcher manually changes the work order Owner Group to property management and unassigns the EMSD maintenance team.

(3) Property management addresses the Leak Work Order following the process in this Standard Procedure.

F. Performing Leak Inspections of Additional Apartments to Identify the Root Cause(s)

NOTE:	If it is not feasible to assign a second maintenance worker or other trained staff to assist with the Leak From Above Work Order (see Section VIII.B), the maintenance worker must attempt to trace the leak and identify the root cause(s) on their own by navigating between the impacted apartment and above and/or adjacent apartments. If after making best efforts they are unable to locate the root cause(s), the maintenance worker calls or radios the property maintenance supervisor or assistant property maintenance supervisor for guidance and/or support.

1. Identifying Additional Apartments to Perform Leak Inspection

a. To locate the root cause(s) based on their inspection findings in the impacted apartment, the maintenance worker or other trained staff must at a minimum attempt to access:

(1) An apartment immediately above the impacted apartment and continue up the line, if needed; and/or

(2) An adjacent apartment or an apartment immediately above the adjacent apartment.

b. The maintenance worker or other trained staff must attempt to access as many apartments as needed to identify the root cause for the Leak From Above Work Order. Identifying apartments with similar wet conditions (e.g., water damage or wet readings) and apartments with no wet conditions narrows down the number of apartments that need to be accessed.

NOTE:	The maintenance worker or other trained staff can enter a repair code 'LEAK TRACING' on the parent Leak Work Order in the iWM App when performing a leak inspection of additional apartment(s) or a vertical line inspection to identify root cause(s).

c. If needed, the maintenance worker or other trained staff asks the property maintenance supervisor or assistant property maintenance supervisor to check the work order history in Maximo to identify additional apartments with a repeated history of leak complaints and/or any pending repair(s) up the line that could possibly indicate the root cause.

NOTE:	The property maintenance supervisor or assistant property maintenance supervisor must use their professional judgment when identifying additional apartments to inspect. The following is an example of an instance where it is appropriate to inspect an adjacent apartment to try to identify the probable root cause: *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 or other trained staff 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.*

2. Accessing Additional Apartments to Perform Leak Inspections

To gain access to the apartment(s) above or adjacent to the impacted apartment, the maintenance worker or other trained staff knocks on the apartment door(s) and/or contacts the property management office to request assistance with contacting the resident(s) to get access to the suspected root cause apartment(s). All NYCHA employees must announce their presence to residents when attempting to access apartments in accordance with Standard Procedure 040:09:7*, Managing Maintenance Work Orders*.

NOTE: The property management office indicates if the apartment is vacant when the NYCHA worker calls the office if unable to reach the resident by phone, per Standard Procedure 040:09:7*, Managing Maintenance Work Orders.*

If NYCHA staff needs to access an apartment sealed or locked by the NYPD to perform a leak or excessive moisture related inspection or repair, they follow the instructions in Section XXII, *Move-Outs* of Management Manual Chapter I, *Occupancy.*

Staff should consult the Law Department if there are questions regarding accessing a vacant or abandoned apartment which are not addressed in the Management Manual, a Standard Procedure, or other guidance.

a. If <u>able</u> to gain access to the apartment with the suspected root cause, the maintenance worker or other trained staff checks the apartment for any signs of leaks or water damage by performing a visual assessment, utilizing the moisture meter tool, and/or operating the fixtures in the apartment as described in Section VIII.C*, Identifying Whether Root Cause of Leak Originates Within Impacted Apartment or an Above or Adjacent Apartment.*

(1) If the root cause(s) is identified within the inspected apartment (e.g., above or adjacent to the impacted apartment), the maintenance worker or other trained staff follows the steps outlined in Section VIII.D*, Documenting Work in the iWM App and Discussing Findings/Next Steps with Resident(s).*

(2) If the root cause(s) is not identified, the maintenance worker or other trained staff continues the inspection of the apartments up the line until the root cause apartment is identified.

(a) The maintenance worker or other trained staff must document in the Notes of the parent Leak Work Order:

i. The apartments that were accessed and whether the accessed apartments exhibited or did not exhibit water damage.

ii. The apartments they attempted to access but were unable to access.

NOTE: When tracing leaks from above, a wet reading that extends to the uppermost section of a wall(s) indicates that the leak is likely coming from an above apartment and that the leak investigation should be continued up the line.

NOTE: If during a multi-apartment leak inspection, the maintenance worker or other trained staff identifies additional apartment(s) impacted by the

same leak, it is **best practice** to create a child work order(s) for those apartment(s) while staff has access. However, if the worker is not able to create the work order(s) based on the site conditions, expediency, and other factors, they should instruct the resident(s) to call the CCC or use the MyNYCHA App to create a new repair request.

If the maintenance worker or other trained staff **makes a wall break** in the additional impacted apartment(s) in an attempt to identify the root cause(s) of the leak, they **must** create a child work order(s) for that apartment.

b. If <u>not able</u> to gain access to the apartment with the suspected root cause:

(1) If a resident or other adult is not home to allow access to the apartment to address floods or other emergency leak conditions, the maintenance worker or other trained staff may 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 Pain*t.

Per Standard Procedure 040:17:3, if the leak is not severe, the maintenance worker or other trained staff:

(a) Issues NYCHA Form 042.727, *48 Hour Notice of Health and Safety Repairs* to the apartment.

(b) Returns in 48 hours to reattempt to access to the suspected root cause apartment(s) in order to identify the root cause(s).

NOTE: If there is a flooding or severe leak emergency, NYCHA may use its Right of Entry to immediately access the apartment following the instructions in Standard Procedure 040:17:3.

(2) If the resident is home but refuses to provide access to the apartment or room, the maintenance worker or other trained staff follows the instructions in Section VIII.B.2.c.

c. If <u>still not able</u> to identify the apartment with the suspected root cause, the maintenance worker or other trained staff must consult with the property maintenance supervisor or assistant property maintenance supervisor regarding conducting a vertical line inspection as outlined in the Section VIII.G*, Performing Vertical Line Inspections.*

3. Documenting Leak Inspection of Additional Apartments in iWM App

   a. If able to access the suspected root cause apartment and identify the root cause, the maintenance worker or other trained staff documents their findings on the parent Leak Work Order by selecting one of the following options for Root Causes:

      (1) Leak From Above/Adjacent – Investigate

      The maintenance worker or other trained staff selects this option when the root cause of the leak, water damage, or excessive moisture is attributed to an active leak from an apartment above or adjacent to the impacted apartment.

      The maintenance worker or other trained staff enters on the parent Leak Work Order:

      (a) Location of the root cause.

      (b) Notes describing the root cause and/or repairs needed.

NOTE:	The maintenance worker or other trained staff can use the 'Location Lookup' function in the iWM to select the location. **Important:** All child work orders must specify the exact location (i.e., apartment and room) where the work is required. Child work orders created without the correct location will lead to delays in completing repairs. For step-by-step instructions see Appendix K – *Creating Child Work Orders for Separate Apartments When Responding to a Leak Work Order*.

      (2) Leak From Above/Adjacent - Previously Identified

      The maintenance worker or other trained staff selects this option when the root cause of the leak, water damage, or excessive moisture has been previously identified and abated, or when there is an open work order to abate the root cause.

      The maintenance worker or other trained staff enters on the parent Leak Work Order:

      (a) Location of the root cause.

      (b) Notes describing either:

         i. The completed repair(s); or

ii. The presently open work order for repairs, including repair type, craft, and estimated timeframes to complete the repair, if available.

NOTE:	If needed, the maintenance worker or other trained staff consults with the property maintenance supervisor or assistant property maintenance supervisor to obtain the work order details (e.g., work order numbers for pending repairs, work descriptions).

b. The maintenance worker or other trained staff follows the steps in Sections VIII.D.2-7 to complete the parent Leak Work Order.

c. If <u>not able</u> to access the suspected root cause apartment and/or identify the root cause, the maintenance worker or other trained staff documents their findings on the parent Leak Work Order.

The maintenance worker or other trained staff:

(1) Enters that they are not able to locate and/or access the root cause apartment in the Work Log in the iWM App.

(2) Completes **Step One: Evaluation of Conditions** and saves findings in the iWM App.

NOTE:	The parent Leak Work Order remains open (Inspection State = 'PARTIAL') until the maintenance worker or other trained staff identifies the root cause(s) and documents the findings on the parent Leak Work Order in the iWM App.

G. Performing Vertical Line Inspections

If not able to identify the root cause(s) during the multi-apartment leak inspection, the maintenance worker must consult with the property maintenance supervisor or assistant property maintenance supervisor as soon as possible to develop a vertical line inspection plan.

NOTE:	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, to identify the root cause(s) of flood, leak, water damage, or excessive moisture conditions that could not be identified during the initial leak inspection.

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

a. Reviews the findings from the inspection of the impacted apartment and the inspection of additional apartment(s) in Maximo.

b. Develops a vertical line inspection plan:

(1) Apartments to be inspected as part of the vertical line inspection must include the 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 and/or water damage. This includes any apartments in the line that were inspected during the initial leak inspection.

(2) If all apartments accessed during the initial leak inspection exhibited signs of wet condition and/or water damage, all apartments in the line must be scheduled for the vertical line inspection. This includes the impacted apartment up to the top floor apartment in the building.

NOTE:	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).

c. The property maintenance supervisor or assistant property maintenance supervisor must make best efforts to schedule additional apartments for the vertical line inspection within 48 hours following the initial leak inspection.

NOTE:	**If there is a flooding or severe leak emergency, NYCHA may use its Right of Entry to conduct an immediate vertical line inspection following the instructions in Standard Procedure 040:17:3, *Accessing Public Housing Apartments When Tenant Not Home to Address Deficiencies Related to Leaks, Mold, and Lead-Based Pain*t.**

(1) Property management staff must:

(a) Contact by phone residents of all apartments identified for the vertical line inspection. During the phone call they must:

i. Advise the resident that NYCHA needs to access their apartment on a specific day to investigate a leak condition.

ii. Ask the resident if they have a current leak or any water damage.

aa Property management staff provides the response for each apartment to the property maintenance supervisor or assistant property maintenance supervisor.

(b) Issue NYCHA Form 042.727*, 48 Hour Notice of Health and Safety Repairs* to all identified apartments in the vertical line inspection to inform the

resident(s) in writing that NYCHA will attempt to access the identified apartment(s) on the specified date and will utilize its *Right of Entry* to gain access, if needed.

(2) If a resident or other adult is not home to allow access to the apartment during the vertical line inspection, the maintenance worker or other trained staff may 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 Pain*t.

2. Conducting the Vertical Line Inspection

a. The maintenance worker and/or other trained staff with the assistance of the property maintenance supervisor or assistant property maintenance supervisor must:

(1) Review the findings from the initial leak inspection.

(2) Review Maximo for the history of leak complaints in the line and/or any open repairs.

(3) Inspect all apartments in the line identified for the vertical line inspection.

NOTE:	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.

(4) If the resident is not home after having been issued NYCHA Form 042.727, *48 Hour Notice of Health and Safety Repairs,* use the Right of Entry to access the apartment 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 Pain*t.

(5) Document the root cause(s), once identified, in the parent Leak Work Order.

(a) The maintenance worker or other trained staff follows the steps outlined in the Section VIII.D, *Documenting Work in the iWM App and Discussing Findings/Next Steps with Resident(s)* to complete the leak inspection and create repair work order(s) for the impacted apartment, the root cause apartment, and additional impacted apartments.

NOTE:	If during a multi-apartment or vertical line leak inspection, the maintenance worker or other trained staff identifies additional apartment(s) impacted by the same leak, it is **best practice** to create

a child work order(s) for those apartment(s) while staff has access. However, if the worker is not able to create the work order(s) based on the site conditions, expediency, and other factors, they should instruct the resident(s) to call the CCC or use the MyNYCHA App to create a new repair request.

If the maintenance worker or other trained staff **makes a wall break** in the additional impacted apartment(s) in an attempt to identify the root cause(s) of the leak, they **must** create a child work order(s) for that apartment.

(6) Inform the residents of inspected apartments about the vertical line inspection findings (see instructions in Section VIII.D).

(a) For child work orders for skilled trades, issue NYCHA Form 042.800*, Repairs to Schedule Slip* to each apartment as outlined in the Section VIII.D.5*, Issuing Repairs to Schedule Slip (RTS slip) for Skilled Trades Work.*

(b) For child work order for other repairs (e.g., steam, radiator, or standpipe leak), inform residents that property management will schedule the repair with the needed department.

3. If the maintenance worker or other trained staff with the assistance of the property maintenance supervisor or assistant property maintenance supervisor is still not able to locate the root cause(s) of the leak or excessive moisture complaint following the vertical line inspection, the property maintenance supervisor or assistant property maintenance supervisor must contact OMAR for assistance with complex leak tracing via email at:

MOLD.BUSTERS@NYCHA.NYC.GOV

H. Abating Flood Conditions and Standing Water Clean Up Instructions

1. NYCHA's property maintenance staff or EMSD must make best efforts to abate a flooding and/or standing water condition(s) during the initial visit. However, if they are not able to abate the condition(s), they must create child work order(s) following the steps in Section VIII.D.1.a, *Step One: Evaluation of Conditions*, and must notify, as applicable, property maintenance or ESMD supervisory staff to escalate the work order.

2. When needed to stop an active flood by shutting off the supply riser:

   a. Property maintenance staff must call or radio the property maintenance supervisor or assistant property maintenance supervisor who will then call and email the

neighborhood administrator (or an above title if the neighborhood administrator is not immediately available) to request authorization to shut off the supply riser.

b. EMSD maintenance workers are authorized to shut off a supply riser if needed to stop a flood or severe leak condition.

3. NYCHA staff must wear appropriate PPE when abating flood conditions and removing standing water.

   a. For standing water removal, with no sewage, wear waterproof boots and gloves, and a hard hat if overhead debris is present.

   b. If sewage is present, in addition to the PPE listed in Section a., wear face shields/safety goggles, and protective clothing (e.g., Tyvek). Employees may also use an N95 respirator (N95). Strict hygiene practices must be followed including washing hands thoroughly, after cleanup.

   c. PPE must be thoroughly cleaned after each use, or disposed of, where applicable. If PPE becomes damaged it must be replaced.

NOTE:	Employees using respirators must follow the requirements in NYCHA Standard Procedure 001:17:2, *Respiratory Protection Safety Program*. While N95s are not required in all instances, employees have the right to request and receive an N95 as recommended. Supervisors must ensure that supplies are available to be provided to employees upon request or where warranted based on job-specific conditions. Employees who are not required to use an N95 are not enrolled in NYCHA's Respiratory Protection Program. Employees electing to use an N95 must complete NYCHA Form 040.870, *OSHA Appendix D - Voluntary Respirator Use Form*. Supervisors may access this form on the SafeNYCHA webpage or the Forms and Reference Library. If there is sewage in standing water, staff must notify the property maintenance supervisor or assistant property maintenance supervisor who assigns the work order to appropriate staff and/or vendors.

4. When removing standing water, property maintenance or EMSD staff must:

   a. Instruct the resident to move any personal property from the affected area.

   b. Use a wet vacuum to remove most of the water.

      Use a squeegee and/or a dry mop to remove the remaining water.

d. Clean water damaged areas (walls, floors, closets, shelves and other hard surfaces) with a NYCHA-approved low-toxicity cleaner/disinfectant (e.g., Foster 40-80 or Shockwave).

> **NOTE:** When using any chemicals during cleanup, follow the safety precautions including recommended PPE noted on the Safety Data Sheet and product label.

e. Dry impacted area for at least 48 hours to remove any remaining moisture and prevent mold growth:

(1) Use a portable blower to dry floors, walls, and other hard to reach places.

(2) Use a dehumidifier to remove moisture from the air to dry indoor spaces and help prevent mold growth,

or

(3) Use a fan, and open windows and doors to dry impacted areas, when a dehumidifier is not available.

f. Advise residents to clean and dry within 48 hours any damp furnishing and other personal property to remove any remaining moisture.

g. Advise residents that if any personal property was damaged by flooding, leak, and/or excessive moisture, 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.*

h. Closing Standing Water Removal Work Orders

(1) Normal Business Hours

Once the worker completes the removal of the standing water and the area is dry they call or radio the supervisor of caretakers who:

(a) Verifies in person that all the water has been removed and the area is dry.

(b) Closes the work order.

NOTE: Alternatively, the supervisor of caretakers may call or radio the property maintenance supervisor or assistant property maintenance to close the work order.

(2) Outside Normal Business Hours

The EMSD maintenance team closes the work order after removing the standing water and drying the area.

NOTE: If after making best efforts additional drying is needed, EMSD assigns the work order to property management following the steps in Section VIII.E, *Responding to Emergency Leak Conditions Outside Normal Business Hours and Documenting Work in the iWM App.*

I. Instructions for Using a Moisture Meter

1. The maintenance worker or other trained staff uses the moisture meter to measure the walls, floor, ceilings, and components in a room for subsurface moisture and records the measurement(s) in the work order.

   a. The maintenance worker and other trained staff uses the moisture meter in all instances when:

      (1) There is a possible water leak from above or within a wall cavity; and

      (2) A wall break needs to be conducted to trace the leak up to its source and identify the root cause(s).

NOTE: Wet conditions might be present on walls in good condition and be concealed by recent cosmetic repair work. By using a moisture meter, the maintenance worker or other trained staff can identify hidden wet conditions and more accurately identify the location of the root cause.

Wet readings that are localized and are present on lower portions 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 (but potentially not directly above) the impacted apartment. 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.

When tracing leaks from above, it is also possible for a leak in the root cause apartment 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.

b. The maintenance worker or other trained staff:

(1) Inspects the chase wall, or any other area(s) displaying leak, water damage, and/or visible moisture.

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

(2) Takes multiple measurements of each surface or component:

(a) If the surface displays visible water damage or mold growth, the moisture meter reading should be taken in six-inch (6”) intervals in each direction, horizontal and vertical, and continue to the point at least two feet (2’) beyond a moisture meter reading of 599 or greater.

(b) If the surface displays no visible water damage or mold growth, the moisture meter reading should be taken in one-foot intervals in each direction.

NOTE: The moisture meter must be held firmly with the back sensor flat against the wall while taking measurements. See Appendix B - *Additional Instructions for Using a Moisture Meter.*

(3) Records the highest moisture meter measurement in the parent Leak Work Order as outlined in Section VIII.D.

c. If the maintenance worker or other trained staff observes visible moisture (e.g., water leaking from the ceiling), they can manually enter 999 since an active leak or wet surface always measures wet with the moisture meter.

2. Using a moisture meter is mandatory for Leak From Above, Pipe Leak, and Wall Leak Work Orders. For other Leak Work Orders it is optional.

J. Wall Break Instructions

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, the maintenance worker or other trained staff must inspect conditions inside the wall cavity for the possible root cause(s) of the leak.

1. Assessing Conditions in Wall Cavity Without Making a Wall Break

The maintenance worker or other trained staff attempts to perform an assessment without making a wall break, when feasible, and inspects the wall cavity with the help of the borescope:

a. Leak is in the Shower Wall Area

(1) Remove the escutcheon plate to inspect the conditions within the wall cavity.

b. Leak is Behind/Around the Sink/Toilet Area

(1) Remove the medicine cabinet to determine if there is an existing opening in the underlying wall through which conditions within the wall cavity can be inspected.

NOTE:	If a 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.

2. Making an Initial Wall Break

If unable to identify the root cause through the escutcheon plate or an existing opening behind the medicine cabinet, the maintenance worker or other trained staff makes an initial small wall break of approximately 1 square inch to inspect the conditions in the wall cavity with the help of the borescope.

The maintenance worker or other trained staff:

a. Uses the moisture meter to identify the location for the initial wall break.

(1) The initial wall break should be made as close as possible to the location of the suspected root cause; or

(2) The initial wall break could also be made behind the medicine cabinet or other central area in the wall if the maintenance worker or other trained staff is not able to identify the location of the suspected root cause.

NOTE: If an affected surface displays water damage, mold growth and/or wet measurements in multiple locations, NYCHA staff might need to make additional initial wall breaks to verify the root cause(s).

If an initial wall break is not enlarged (see Section VIII.J.3 below) because, for example, it is determined based on the inspection of the wall cavity that the root cause of the leak is in a different apartment, the maintenance worker or other trained staff uses caulk to fill the hole and follows the steps in Section 5 below to create child work order(s) for follow up repairs.

(3) Inspects all pipes and conditions behind the walls to identify the exact location and source of the leak.

3. Enlarging the Initial Wall Break

a. Once the root cause is identified, the maintenance worker or other trained staff enlarges the initial wall break to provide full visibility to the root cause and access to perform the repair (temporary or permanent) as outlined in Section VIII.J.4 below.

(1) 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.

(a) The maintenance worker or other trained staff must make a temporary repair as outlined in the Section VIII.K.3.a, *Temporary Plumbing Repairs*; or

(b) If not able to make a temporary repair (e.g., brittle pipes), the maintenance worker or other trained staff must:

i. Create a child work order for the repair following the instructions in Section VIII.D.

ii. Call or radio the property maintenance supervisor or assistance property maintenance supervisor to escalate the repair request.

NOTE: 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.*

b. An initial wall break must also be enlarged if the maintenance worker or other trained staff is 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.

4. Specific Instructions for Enlarging the Initial Wall Break

a. When making an enlarged wall break in plaster and sheetrock constructions:

(1) NYCHA staff must follow the steps in Sections b. or c. below, as applicable, to reduce the generation or migration of airborne dust and reduce the potential for disturbance of suspected asbestos containing material (ACM) while providing a sufficient opening to access plumbing pipes.

(2) In addition to utilizing prescribed dust control measures, the following PPE is recommended when performing larger wall breaks: safety glasses, protective clothing and the use of an N95 respirator (N95).

NOTE:	While N95s are not required in all instances, employees have the right to request and receive an N95 as recommended. Supervisors must ensure that supplies are available to be provided to employees upon request or where warranted based on job-specific conditions. Employees who are not required to use an N95 are not enrolled in NYCHA's Respiratory Protection Program. Employees electing to use an N95 must complete NYCHA Form 040.870, *OSHA Appendix D - Voluntary Respirator Use Form*. Supervisors may access this form on the SafeNYCHA webpage or the Forms and Reference Library.

b. Plaster Developments

The maintenance worker or other trained staff:

(1) Instructs the resident to move any personal property in the affected area or room before initiating work.

(2) Covers 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.

(3) Closes and covers the ventilation system (e.g., bathroom vents) in the work area as outlined in Standard Procedure 050:20:1, *Lead Safe Housing Procedure*.

(4) Marks the area of the wall break using a straight edge and marker.

(5) Uses a spray water bottle to wet the surfaces that will be disturbed to limit the creation and dispersal of dust. Periodically rewets the area while working. Before applying the water, be sure there are no electrical circuits inside the wall. If electrical circuits are inside the wall, they must be turned off and disconnected before removal.

(6) Creates an enlarged wall break by using a hammer while operating a HEPA-vacuum with one hand at the point of dust generation.

See Appendix *A – HA Numbers for Leak Related Tools and Supplies* for the list of NYCHA approved materials.

NOTE:	NYCHA staff carefully makes a cut using a sharp-edged scraper and hammer. **Use extreme caution when enlarging a wall break to avoid cutting gas risers, if applicable, and electrical wiring concealed behind the wall.**

(7) Removes plaster from underlying metal mesh using a sharp-edged scraper.

(8) Uses snips to open underlying metal mesh to avoid contact with any suspected asbestos-containing pipe insulation within the wall cavity.

(a) Remaining metal mesh around the wall break should be bent inward, using caution not to contact any suspected asbestos-containing pipe insulation, to reduce the risk of cut hazards.

(b) If suspected ACM is observed on pipe insulation and may be disturbed during performance of the repair work, the maintenance worker or other trained staff creates an asbestos abatement work order following the inspection prompts as outlined in Section VIII.D*, Documenting Work in the iWM App and Discussing Findings/Next Steps with Resident(s).*

NOTE:	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.

(9) Following creation of the wall break, continues to operate the HEPA-vacuum for 5-10 minutes to purge remaining particles from the air with the room door kept closed.

(10) Uses a damp cloth or wet wipes to clean surfaces upon completion of HEPA-vacuuming of dust debris.

(11) Once the root cause(s) is identified and a temporary repair is made, if feasible, covers the wall break with a NYCHA approved solid pest-proof material (e.g., Masonite or equivalent), removes poly sheeting, and thoroughly HEPA-vacuums the horizontal surfaces throughout the room.

(a) In areas where Masonite or equivalent (e.g., Plas-tec Polywall) cannot be practically used to provide a temporary wall covering (e.g., the area of the wall beneath the sink where the supply lines/shutoff valves penetrate through the wall), the NYCHA employee can temporarily cover the wall break with rodent exclusion mesh secured by foam as outlined in the NYCHA Standard Procedure 040:49:6*, Pest Prevention and Control In NYCHA Residential Buildings.*

(12) Instructs the resident to not disturb the temporarily closed wall cavity pending completion of the follow up repair work (i.e., asbestos abatement, plumbing repair, and/or pipe insulation).

c. Sheetrock Developments

The maintenance worker or other trained staff:

(1) Instructs the resident to move any personal property in the affected area or room before initiating work.

(2) Covers all horizontal surfaces in the work area (e.g., countertops, cabinets) with poly-sheeting, and ensures all drawers are sealed and door(s) are closed.

(3) Closes and covers all ventilation systems (e.g., bathroom vents) in the work area as outlined in Standard Procedure 050:20:1, *Lead Safe Housing Procedure*.

(4) Marks the area of the wall break using a straight edge and marker.

(5) Creates a wall break using a small mechanical sheetrock saw or alternative (e.g., a utility knife or standard sheetrock saw) while operating a HEPA vacuum at the point of dust generation.

NOTE:	When possible, NYCHA employees should avoid creating the wall break directly on areas that display visible mold growth.

(6) Following creation of the wall break, continues to operate the HEPA vacuum for 5-10 minutes to purge remaining particles from the air with the room door kept closed.

(7) Uses a damp cloth or wet wipes to clean surfaces upon completion of HEPA-vacuuming of dust debris.

(8) Inspects the backside of the sheetrock for mold growth conditions. If any mold growth is observed on the backside of sheetrock, creates a sheetrock replacement work order as outlined in Section VIII.D, *Documenting Work in the iWM App and Discussing Findings/Next Steps with Resident(s).*

(9) Once the root cause(s) is identified and a temporary repair is made, if feasible, covers the wall break with a NYCHA approved solid pest-proof material (e.g., Masonite, Plas-tec Polywall, or equivalent), removes poly sheeting, and thoroughly HEPA-vacuums the horizontal surfaces throughout the room, as described above.

(10) Instructs the resident not to disturb the temporarily closed wall cavity pending completion of the follow up repair work (e.g., asbestos abatement and plumbing repair).

5. The maintenance worker or other trained staff documents in the iWM App that a wall break was performed in accordance with the Section VIII.D*, Documenting Work in the iWM App and Discussing Findings/Next Steps with Resident(s)*.

   a. The maintenance worker or other trained staff:

      (1) Selects a repair code “WALLBROKEN” or “WALLBREAKCOMPLETED” to document the wall break that was made.

      (2) Selects a repair code to document if a temporary repair was made, if applicable.

      (3) Creates child work order(s) for follow up repairs as needed.

   b. The maintenance worker or other trained staff takes a photograph of the completed wall break and uploads the photograph under the Document Type ‘Photos – Post Repair’ on the parent Leak Work Order.

K. Correcting the Root Cause(s) of Leaks and Making Cosmetic Repairs

1. NYCHA employees must ensure that all repairs to correct the root cause(s) and cosmetic repairs are:

   a. Completed to NYCHA standards. See Standard Procedure 040:18:1, *Repair Standards and NSPIRE REAC Inspections*.

   b. Documented in the Maximo work order as specified in Standard Procedure 040:09:7, *Managing Maintenance Work Orders* including the uploading of required photographs.

   c. Once repairs are made, the work orders are closed as specified in Standard Procedure 040:09:7, *Managing Maintenance Work Orders*.

   d. Employees are to use the PPE indicated within this Standard Procedure to perform their specific task and refer any questions about PPE to their supervisor or contact the Environmental Health & Safety Department at ehs@nycha.nyc.gov.

      (1) 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.

2. Work Orders Assigned to Vendors

   Supervisors who assign work orders to vendors must follow the steps in Standard Procedure 040:09:07, *Managing Maintenance Work Orders* to:

   a. Inspect that the work is completed to NYCHA repair standards before closing the work order.

   b. Ensure that the work is correctly documented in the Maximo work order, including the uploading of photographs.

3. Instructions for Making Plumbing Repairs

   a. Temporary Plumbing Repairs

      Temporary plumbing repairs must be designated as temporary and child work order(s) must be created for permanent plumbing repairs. An example of a temporary repair is:

      (1) A maintenance worker was able to patch a crack of a pipe joint during the initial leak inspection and created a child work order for a plumber.

(2) The plumber must replace the pipe joint when responding to the child work order (i.e., epoxy must not be left as a permanent plumbing solution).

NOTE:	Unless another more suitable substitute exists, common temporary pipe repairs must be made with an epoxy putty stick, which provides a longer-lasting temporary repair. Compared to duct tape or wax, epoxy putty sticks are more convenient to use and can be applied to wet and dirty surfaces.

b. Replacing Cast Iron and Galvanized Pipes

Plumbers must use caution when replacing stack/vent waste pipes and horizontal branch waste pipes:

(1) Aging cast iron pipes are brittle, and care must be taken to minimize stress while making repairs and replacements.

(2) Replacement pipe must only be connected to pipe in satisfactory condition.

(a) It is 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.

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

(3) It is also 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.

4. Instructions for Creating Leak, Mold Inspection, and Asbestos Inspection Work Orders When Performing Leak-Related Skilled Trades Repairs

NYCHA skilled trades workers must follow Standard Procedure 040:09:7*, Managing Maintenance Work Orders* when responding to leak-related repairs, including starting and stopping time on work orders, recording labor type, accessing and working in apartments, and closing work orders.

a. If a NYCHA skilled trades worker observes an active leak that might impact the quality of repair work, the worker must:

(1) Indicate the presence of the leak in the Work Log on the iWM App.

(2) Notify the skilled trades supervisor and property maintenance supervisor or assistant property maintenance supervisor and discuss next steps to proceed.

NOTE: Wet wall cavities must be dried before installing a new dry wall or plastering.

(3) Request that the property maintenance supervisor or assistant property maintenance supervisor create a parent Leak Work Order in Maximo.

(a) The property maintenance supervisor or assistant property maintenance supervisor must assign a maintenance worker to address the leak following the process in this Standard Procedure.

(4) Leave the work order open until the root cause of the leak is addressed.

(a) The property maintenance supervisor or assistant property maintenance supervisor must coordinate next steps in the repair process with the skilled trades supervisor and neighborhood planner to ensure that the root cause(s) of the leak condition is addressed.

(5) Notify the resident that a parent Leak Work Order was created and inform them about the next steps in the repair process.

NOTE: 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.

b. If a NYCHA skilled trades worker observes the presence of mold at any stage of repair work, the worker must:

(1) Indicate the presence of mold in the Work Log on the iWM App.

(2) Notify the skilled trades supervisor and property maintenance supervisor or assistant property maintenance supervisor and discuss next steps to proceed.

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(3) Request that the property maintenance supervisor or assistant property maintenance supervisor create the parent Mold Inspection Work Order in Maximo or create the work orders themselves using the iWM App on the handheld device.

(a) The property maintenance supervisor or assistant property maintenance supervisor must complete a mold inspection or assign a maintenance worker to complete a mold inspection in accordance with Standard Procedure 040:14:1*, Mold/Mildew Control in NYCHA Residential Buildings.*

(4) Leave the work order open until the root cause of the mold is addressed.

(a) The property maintenance supervisor or assistant property maintenance supervisor must coordinate next steps in the repair process with the skilled trades supervisor and neighborhood planner to ensure that the root cause(s) of the mold condition is promptly addressed.

(5) Notify the resident that a parent Mold Inspection Work Order was created and inform the resident about next steps in the repair process.

NOTE:	If mold remediation and repair is expected to have an impact on the quality of the skilled trade repair NYCHA staff must immediately stop the work until the root cause(s) of the mold is addressed.

c. If a NYCHA skilled trades worker observes any suspected asbestos containing materials (ACM) that might be disturbed during any stage of repair work, the employee must:

(1) Immediately stop work and refer to the Standard Procedure 050:25:1, *Asbestos Safe Housing Procedure*.

(2) Indicate the presence of suspect ACM in the Work Log on the iWM App.

(3) Notify the skilled trade supervisor and the property maintenance supervisor or assistant property maintenance supervisor that they are unable to complete the scheduled work due to suspected ACM.

(4) Request that the property maintenance supervisor or assistant property maintenance supervisor create an Asbestos Testing or Abatement Work Order.

(a) The property maintenance supervisor or assistant property maintenance supervisor must as soon as feasible phone or email the Asbestos Department to notify them about the asbestos testing or abatement request and to coordinate scheduling in accordance with Standard Procedure 050:25:1, *Asbestos Safe Housing Procedure.*

(5) Notify the resident that suspected ACM was observed that might be disturbed during the repair work and inform the resident about next steps in the repair process.

L. Structural Integrity Issues

1. Normal Business Hours – Initial Response to Leak Work Order

   a. If the maintenance worker or other trained staff suspects that there is an issue with the building's structural integrity (e.g., there is exposed rebar, a bulging wall, a sagging floor or ceiling) due to a flood or leak condition, they immediately call or radio the property maintenance supervisor or assistant property maintenance supervisor.

   b. If their schedule allows, the property maintenance supervisor or assistant property maintenance supervisor evaluates the condition. If they cannot come in person, or if they need a skilled trades supervisor's expertise to further evaluate the condition, they escalate the issue to the borough skilled trades supervisor by phone and email.

   c. Once the property maintenance supervisor, assistant property maintenance supervisor, and/or skilled trades supervisor evaluates the condition, and confirms there is a structural integrity issue, they determine:

      (1) If skilled trades staff can make the repair or if it needs to be escalated to A&CM.

      (2) If immediate stabilization of an emergency condition is required. The supervisor follows the process in Standard Procedure 060:88:2, *Emergency Repair and Procurement Process for Operations* to immediately stabilize the condition using existing resources, including existing contracts or a new procurement, or by escalating the issue to A&CM if a licensed architect is required to complete an initial assessment and/or the immediate stabilization cannot be completed or procured by Operations.

NOTE:	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.

2. Normal Business Hours - Other Work Performed in Response to Leak Work Order

   a. Skilled trade workers and maintenance workers must report suspected structural integrity issues to their supervisors, who evaluate the condition and follow the process, as applicable, in Section VIII.L.1 above.

   b. Vendors report suspected structural integrity issues to the property maintenance supervisor or assistant property maintenance supervisor who follow the process, as applicable, in Section VIII.L.1 above.

3. Outside Normal Business Hours

    a. 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*.

    b. If the structural integrity issue is not an emergency, the EMSD supervisor emails the property maintenance supervisor or assistant property maintenance supervisor for follow up during normal business hours.

4. Workers must continue to follow the process in this Standard Procedure to address the leak condition unless directed by a supervisor.

M. Addressing Pipe Condensation and Pipe Insulation Deficiencies

1. Identifying Pipe Condensation and Pipe Insulation Deficiencies

    If the maintenance worker or other trained staff observes water damage and the moisture meter shows wet readings **on the lower three feet of the chase wall**, the maintenance worker or other trained staff must:

    a. Inspect behind the wall/make an initial wall break as outlined in the Section VIII.J*, Wall Break Instructions*.

    b. Inspect the conditions within the plumbing chase wall cavity for an active leak. If there is an active leak, the maintenance worker or other trained staff follows the steps in this Standard Procedure to address the leak.

    c. Inspect the domestic hot and cold-water supply pipes for condensation. If there is condensation, the maintenance worker or other trained staff inspect for the root cause(s):

        (1) First inspect the tank room or boiler room if directly under the line for condensation appearing from steam leaks.

        (2) Then inspect apartments in the line (e.g., above and/or adjacent apartments) for continuously running shower body valves, toilets, bathroom faucets, and kitchen faucets. Conduct a multi-apartment inspection and, if needed, a vertical line inspection to find the root cause(s). See Sections VIII.F and VIII.G for instructions on performing these inspections.

        (3) Follow the steps in this Standard Procedure to repair the root cause(s).

    d. Evaluate the domestic hot and cold-water supply pipes for missing or damaged insulation.

NOTE:	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.

e. If condensation is identified on the domestic hot or cold-water supply pipes, the maintenance worker or other trained staff selects **one** of the following methods to address the condensation:

(1) Applying Interim Controls to Replace or Refinish Impacted Surfaces Using Mold-Resistant Materials

The maintenance worker or other trained staff selects this approach (See Section VIII.M.2 below for details) when:

(a) Condensation on the hot or cold-water supply pipes appears to be the only root cause of the water damage and/or wet condition; **or**

(b) An additional root cause(s) is identified (e.g., plumbing leak) and the size of the wall break needed to repair the root cause(s) is not large enough to insulate the domestic hot and cold-water supply pipes.

(2) Insulating or Reinsulating Domestic Hot and Cold-Water Supply Pipes

The maintenance worker or other trained staff selects this approach (See Section VIII.M.3 below for details) when:

(a) Condensation is severe; or

(b) An additional root cause(s) is identified (e.g., plumbing leak) and the size of the wall break needed to repair the root cause(s) is large enough to insulate the domestic hot and cold-water supply pipes.

2. Applying Interim Controls to Replace or Refinish Impacted Surfaces Using Mold-Resistant Materials to Address Pipe Condensation

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.

NOTE:	Ideally, to fully resolve condensation issues, hot and cold-water supply and branch pipes with missing or damaged insulation must be fully insulated or re-insulated. **However:**

- This requires removing substantial portions of the chase wall, and in many cases, could also require the abatement of asbestos-containing pipe insulation, and 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 following **Interim Control** procedure to prevent mold growth associated with most pipe insulation deficiencies and pipe condensation issues.

a. The maintenance worker or other trained staff follows these steps to implement Interim Controls, if not previously applied:

(1) Selects root cause Pipe Condensation in the iWM App.

(2) Follows the steps in Section VIII.D*, Documenting Work in the iWM App and Discussing Findings/Next Steps with the Resident(s)* to complete the parent Leak Work Order and create child work order(s):

(a) In plaster constructions:

i. Inspects the plaster surface for any signs of extensive damage and creates a child Plaster Repair Work Order, if needed.

ii. Creates a child Mold-Resistant Paint Work Order by selecting the failure class 'WALLS' and problem code 'MRPAINT' to reduce the potential for mold growth on the room-side painted surfaces.

(b) In sheetrock constructions:

i. Creates a child Sheetrock Replacement Work Order to replace the existing sheetrock with fiberglass-faced gypsum board by selecting the failure class 'WALLS' and problem code 'SHEETROCKDML'; **and**

ii. Creates a child Mold-Resistant Paint Work Order by selecting the failure class 'WALLS' and problem code 'MRPAINT' to reduce the potential for mold growth on the room-side painted surfaces.

NOTE: When performing repairs to address condensation-related deficiencies, NYCHA skilled trade staff 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. See Appendix A – *HA Numbers for Leak Related Tools and Supplies* for the list of approved supplies.

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.*

b. The maintenance worker or other trained staff follows these steps if the Interim Controls were previously implemented, and no further action is needed:

(1) Selects the root cause Pipe Condensation – Previously Addressed in the iWM App; and

(2) Adds details about the control(s) previously put in place in the Work Log in the iWM App.

(3) Follows the steps in Section VIII.D*, Documenting Work in the iWM App and Discussing Findings/Next Steps with the Resident(s)* to complete the parent Leak Work Order and create child work order(s) (e.g., cosmetic repairs), if needed.

NOTE: If the maintenance worker or other trained staff observes water damage, they must inspect the conditions behind the wall cavity to locate the root cause. If the root cause is still limited to condensation issues, the maintenance worker or other trained staff must inspect and correct the root cause of the condensation (see Section VII.M.1.c above) and either reapply the Interim Controls or insulate or reinsulate the cold-water pipes.

If the maintenance worker cannot visually determine that Interim Controls were previously implemented, they can contact the property maintenance supervisor or assistant property maintenance supervisor and request that the work order history for the apartment/room be reviewed to make the determination.

3. Insulating or Reinsulating Domestic Hot and Cold-Water Supply Pipes

a. General Instructions

(1) 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:

(a) Maintenance workers

(b) Heating plant technicians

(c) Plumbers

(d) Plasterers

(e) Roofers

(2) Domestic hot and cold-water supply pipes must be insulated or re-insulated when NYCHA staff are performing the following repairs that require a substantial wall opening:

(a) When performing Building Line Initiatives (BLI) or other comprehensive plumbing replacement and renovation projects that result in domestic branch pipes being replaced and where the newly installed pipes can be configured in a way that would allow sufficient access to insulate both the domestic supply and branch pipes.

(b) When performing plumbing repairs that require large portions of the chase wall to be open providing sufficient access to insulate domestic water supply pipes (at the discretion of NYCHA plumbers).

(c) When sufficient access to cold water and hot water domestic supply pipes was provided following the abatement of asbestos pipe insulation within wall cavities.

(d) When responding to significant and persistent condensation issues and related water damage conditions, which might be influenced by some other factors (e.g., steam pipe related issues).

(e) When observing significant mold growth (one square foot or more) on existing pipe insulation that requires removal and replacement.

NOTE: If a NYCHA employee suspects that asbestos containing material (ACM) might be present on existing pipe insulation that might be disturbed during work, the employee must immediately stop work and follow the instructions in Standard Procedure 050:25:1, *Asbestos Safe Housing Procedure*. Once the insulation has been tested and/or abated, the NYCHA employee must resume work.

(3) Other than the Building Line Initiative scenario in Section (2) directly above, the insulation work must be limited to the domestic hot and cold-water supply pipes in accordance with the following procedures:

(a) Insulate domestic hot and cold-water supply pipes above and below the T-fitting.

(b) Insulate a small section of the adjacent branch line (i.e., at least four to six inches, or to the next elbow or T-fitting).

(c) Install the fiberglass insulation pillow and accompanying PVC cover over the T-fitting. The PVC cover fits over the fiberglass pillow and the pipe insulation above, below, and adjacent to the T-fitting.

(d) Coat the top edge of the domestic supply pipe insulation and exposed edge of the branch line pipe insulation with a waterproofing mastic material to protect 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).

(e) Take a photo of the newly installed or replaced insulation using the iWM App on the handheld device.

NOTE:	When performing insulation/re-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. See Appendix A – *HA Numbers for Leak Related Tools and Supplies* for the list of approved supplies. For guidance on measuring plumbing pipes and selecting properly sized insulation, see Appendix F.

b. Specific Instructions for the Initial Leak Inspection

(1) If an enlarged wall break is made during the initial visit, the maintenance worker or other trained staff must inspect the domestic hot and cold-water supply pipes that are exposed and accessible after the wall break has been made.

NOTE:	Condensation most commonly occurs on cold water domestic supply pipes where the insulation has failed or on hot/cold water domestic supply pipes that have been subject to recurrent leaks from above. The maintenance worker or other trained staff must carefully inspect the existing pipe insulation within wall cavities whenever enlarged wall breaks are made.

(2) The maintenance worker or other trained staff follows these steps when pipe insulation is needed:

(a) Selects root cause 'Pipe Condensation' in the iWM App.

(b) Follows the steps in Section VIII.D*, Documenting Work in the iWM App and Discussing Findings/Next Steps with the Resident(s)* to complete the parent Leak Work Order and create a child work order(s):

i. If the maintenance worker or other trained staff was able to insulate or reinsulate the pipes during the initial visit, they:

aa Enter a repair code "PIPESINSULATED" on the parent Leak Work Order in the iWM App.

ii. Upload a photograph of the repair under the Document Type 'Photos – Post Repair' on the parent Leak Work Order.

iii. If the maintenance worker or other trained staff is not able to insulate/reinsulate the pipes and/or a repair by skilled trades or another craft is needed to address the root cause(s) prior to the insulation being installed, the maintenance worker or other trained staff:

aa Creates a child Pipe Insulation Work Order by selecting the failure class 'PIPE INSULATION' and the problem code 'INSULATIONDML'.

iv. Assigns a craft to complete the insulation.

N. Quality Assurance Assessments for Leaks

1. Following the process in Standard Procedure 059:17:1, *Public Housing Quality Assurance Program,* NYCHA's Office of Quality Assurance conducts random quality assurance (QA) assessments of closed public housing work orders, including closed Leak Work Orders.

2. In addition, the Office of Quality Assurance conducts QA assessments of Leak Work Orders at one development per week based on an established schedule.

a. The week prior to the scheduled assessment, OMAR emails the Office of Quality Assurance information about up to 30 closed Leak Work Orders (i.e., the parent and any child work orders are closed) for the scheduled development.

3. The Office of Quality Assurance performs the QA assessments following the steps in Standard Procedure 059:17:1, *Public Housing Quality Assurance Program*.

   The QA inspector:

   a. Conducts an assessment of completed repairs using a QA work order on the handheld device to ensure that the root cause(s) of the leak or excessive moisture was addressed, and repair work was completed in accordance with NYCHA standards.

      NOTE: The QA inspector takes moisture meter measurements, as needed, to determine if the root cause(s) of the leak is addressed. See Section VIII.I. *Instructions for Using a Moisture Meter* for details.

   b. Indicates in the QA work order whether the work performed was Satisfactory or Unsatisfactory.

      (1) If the work is Unsatisfactory, Maximo creates a new parent Leak Work Order for property maintenance staff.

   c. Informs the resident of the assessment findings and next steps to address the deficiencies identified during the leak QA assessment, if any.

O. Communicating the Resident's Role in Leak Identification and Repair

1. Residents are an essential partner in:

   a. Immediately identifying and reporting leaks and excessive moisture conditions; and

   b. Providing access to their apartments to trace a leak even though there may be no leak, excess moisture, or water damage in their apartment.

2. NYCHA communicates its leak repair and leak tracing process and the protocols to address floods, leaks, and excessive moisture on its Mold Busters webpage on NYC.gov and through the distribution of informational or educational materials to resident associations or directly to residents. OMAR:

   a. Publishes the following to the Mold Busters webpage at NYC.gov:

      (1) This Standard Procedure

      (2) Informational materials/frequently asked questions

      See Appendix H for a sample flyer with the type of general information to be provided to residents.

b. Collaborates with the Resident Participation & Civic Engagement Services Department (RPCES) on outreach efforts to resident associations and for targeted development-wide outreach efforts.

3. As described in this Standard Procedure, NYCHA employees involved in the leak inspection and repair process keep residents informed about the work performed or that needs to be performed. A listing of those communications by staff title (or communication method) is included in Appendix I - *Communications with Residents Related to Leak Work Orders*.

P. Reasonable Accommodations/Relocations

1. Reasonable Accommodations

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*, to learn more about the responsibilities of NYCHA staff to review reasonable accommodation requests, and the applicable terms, forms, and policies for reasonable accommodations.

2. Relocations Due to Floods, Leaks, and Mold

Residents can be relocated for emergency or health and safety reasons following the instructions in Standard Procedure 040:24:1, *Resident Relocation*:

a. Property management or, outside normal business hours, EMSD determines if a relocation is needed due to an emergency requiring immediate vacancy because of a substantial danger to the occupants or the public (e.g., fire, flood, ceiling collapse, water or steam pipe burst).

b. Property management or another requesting department (e.g., the Asbestos Department, OMAR, the Lead Hazard Control Department) in coordination with property management requests a relocation if there is a situation that requires that a specific apartment(s) be vacated because continued occupancy may constitute an environmental hazard to the occupants or because local or federal law requires that the apartment be vacated for health and safety related work to occur. See Appendix J - *Relocation Criteria for Environmental Hazards for Mold and Leak Conditions*.

Q. Timeframes to Respond to Leaks and Excessive Moisture Issues

1. Leak Service Level Agreement Goals

   a. 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.

   b. Simple repairs must be completed within seven calendar days after the leak or excessive moisture condition is reported to NYCHA.

   c. Complex repairs must be completed within 15 calendar days after the leak or excessive moisture condition is reported to NYCHA.

NOTE:	If NYCHA is unable to comply with these timeframes, NYCHA uses best efforts to prioritize the scheduling and completion of these work orders as quickly as possible.

2. These standards may be reviewed and updated based on performance.

R. Performance Reporting

1. The Office of Mold Assessment and Remediation assigns:

   a. Staff to review performance dashboards and identify consolidations with:

      (1) Number of open parent Leak Work Orders that are higher than the NYCHA and/or borough average.

      (2) Time to respond to emergency Leak Work Orders that are higher than the NYCHA and/or borough average, including:

         (a) Time to abate flooding condition.

         (b) Time to remove standing water.

      (3) Time to complete leak or excessive moisture related repairs are higher than the NYCHA and/or borough average.

      (4) Rates for recurrent leak or excessive moisture work orders that are higher than the NYCHA and/or borough average.

   b. Supervisory property maintenance staff trained in the leak response and inspection process and this Standard Procedure to:

(1) Visit developments to inspect randomly selected apartments with high rates of unfounded, closed with no work done, or recurring Leak Work Orders.

(2) Report findings on the underlying issue(s) such as building system, leak inspection, and/or remediation issues.

(3) Provide assistance with identifying underlying root cause(s).

(4) Provide follow up recommendations to the property maintenance supervisor, assistant property maintenance supervisor, or neighborhood administrator.

(a) For leak inspection issues (e.g., initial inspection or leak repair work), the property maintenance supervisor or assistant property maintenance supervisor addresses the issues by requesting additional training, reviewing key accountabilities, or providing progressive discipline to property maintenance staff. See Section XII, *Non-Compliance.*

(b) For comprehensive building systems issues (e.g., roofs, roof tanks, buildings lines), the property manager, property maintenance supervisor, assistant property maintenance supervisor, or neighborhood administrator recommends additional repairs or escalation to A&CM for capital repairs.

c. Staff trained in performing and/or overseeing comprehensive leak repairs:

(1) Review all open leak work orders for an apartment or line.

(2) Provide follow up recommendations to the skilled trades deputy director, neighborhood administrator, or the director of the Technical Resources Department.

(a) For leak repair issues (e.g., creation of remediation plan to address the root cause(s), scheduling and/or performing work in a logical sequence), the skilled trades deputy director addresses the issues with the borough planner, skilled trades administrators, and skilled trades supervisors.

(3) Recommend that the neighborhood administrator address issues with the neighborhood planner.

(4) Recommend that the director of the Technical Resources Department address issues with Technical Resources Department skilled trades administrators and supervisors.

2. For comprehensive building systems issues, OMAR may recommend additional repairs and perform repairs in selected instances.

IX. OUTPUTS, REPORTS, AND RECORDKEEPING

A. Outputs

1. Leaks and excessive moisture conditions are addressed, and the root cause(s) are identified and corrected within the established timeframes.

2. Leaks and excessive moisture recurrence are reduced.

3. Leak inspection and leak repairs are monitored to ensure compliance with this Standard Procedure.

B. Reports

1. Operations review performance dashboard reports to monitor leak response and repairs including but not limited to the performance metrics listed in Section XI below.

2. NYCHA's overall compliance with the leak and mold key performance indicators are available via the Mold and Leak Scorecard (Scorecard). It is required that the following titles review the Scorecard at least once per week and set specific goals based on performance:

    a. Borough vice presidents

    b. Operations administrators

    c. Skilled trades deputy directors

    d. Skilled trades administrators

    e. Borough planners

    f. Neighborhood administrators

    g. Neighborhood planners

    h. Property managers

    i. Property maintenance supervisors

    j. Assistant property maintenance supervisors

NOTE:	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.

3. *Baez* Quarterly Leak Mold and Excess Moisture Remediation Compliance Reports.

   a. 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.

   b. 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.

4. New York City Housing Authority Quarterly Monitorship Reports.

   The HUD Monitor issues this public report available at Reports — NYCHA Monitorship

C. Recordkeeping

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

X. TRAINING REQUIREMENTS

A. OMAR in coordination with the Learning and Development Department provides or contracts to provide the following training, as applicable.

NOTE:	Following publication of this Standard Procedure, the Leak Inspection Training will be provided to all existing employees consolidation by consolidation as well as to the new employees as they join NYCHA. The Leak Inspection Refresher Training will be provided to NYCHA employees every three years following the initial training, or as needed.

1. Leak Inspection Training

The goal of the training is to provide attendees with knowledge and practical understanding of the procedures and practices to conduct leak inspections, correctly identify root cause(s), and create efficient repair plans.

a. Attendees include but are not limited to: maintenance workers, property maintenance supervisors, assistant property maintenance supervisors, property managers, neighborhood administrators, neighborhood planners, and borough planners.

b. Curriculum includes:

(1) Roles and responsibilities.

(2) Leak Work Order priorities and response timeframes.

(3) The overall process and the fundamentals associated with leak detection, recordkeeping, and resident communication when the root cause of the leak is located within the impacted apartment.

(4) The overall process and fundamentals associated with leak tracing, record keeping, and resident communication when the root cause of the leak originates outside of the impacted apartment.

(a) Performing inspections of additional apartment(s) to identify root causes.

(b) Performing a vertical line inspection.

(5) Working with leak detection equipment such as the moisture meter and borescope.

(6) Documenting findings and creating follow up repair work order(s) in the iWM App with training phones that can access the app.

(7) Identifying structural integrity issues pertaining to leak and excessive moisture.

(8) Hands-on activities for leak repair, including wall breaks, simple repairs, and installing pipe insulation.

2. Leak Inspection Refresher Training

The goal of this training is to review and update attendees of the Leak Inspection Training on important elements of the initial training. The course will include practical exercises using the IWM App to complete dummy work orders and hands-on demonstrations of proper use of detection instruments.

B. Additional Training Provided to Maintenance Workers by NYCHA's Learning and Development Department:

1. Basic Maintenance Training for maintenance workers includes:

   a. Basic Plumbing Course

   b. Controlling Stoppages

   c. Leak From Above - How to Properly Trace and Correctly Sequence a Child Work Order

2. Apartment Inspections: Maintenance Workers

3. Mold – Building Science: Maintenance Workers

4. RRP: Renovation, Repair, and Painting

XI. PERFORMANCE METRICS

A. Percentage of flood and emergency leak conditions abated within 24 hours after the initial leak complaint was reported to NYCHA.

B. Percentage of standing water conditions removed within 48 hours after the initial leak complaint was reported to NYCHA.

C. Number of calendar days to complete simple repairs.

D. Number of calendar days to complete complex repairs.

E. Percentage of work orders (status of 'SCHED') with a scheduled date in the future.

F. Percentage of missed appointments.

G. Percentage of leak recurrence.

H. Percentage of passed and failed Leak Work Order QA assessments.

I. Ratio of parent and child work orders closed without any work done and/or without properly sequencing repairs.

XII. NON-COMPLIANCE

A. NYCHA staff, including supervisory staff, involved with working with leaks and excessive moisture complaints in NYCHA developments are required to comply with this Standard Procedure.

B. NYCHA departments are required to take corrective action to bring NYCHA into compliance.

C. If unsatisfactory work or non-compliance is identified supervisory staff must take one or more of the following actions:

   1. Identify areas for follow up training for the employee(s) and ensure training is scheduled and provided.

   2. Reinforce with the employee(s) the job expectations, accountabilities, and the progressive discipline process.

D. Failure to comply with the requirements of this Standard Procedure may result in disciplinary actions as per the NYCHA Human Resources Manual.

E. For work performed by vendors, supervisors must certify the completion of work performed to NYCHA's repair standards. 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. Copies of all correspondence with the vendor must be filed in the contract folder.

XIII. FORMS

A. NYCHA Form 040.126, Personal Property Damage Claim

B. NYCHA Form 040.507, NYCHA Resident Lease Agreement

C. NYCHA Form 040.870, OSHA Appendix D - Voluntary Respirator Use Form

D. NYCHA Form 042.727, 48 Hour Notice of Health and Safety Repairs

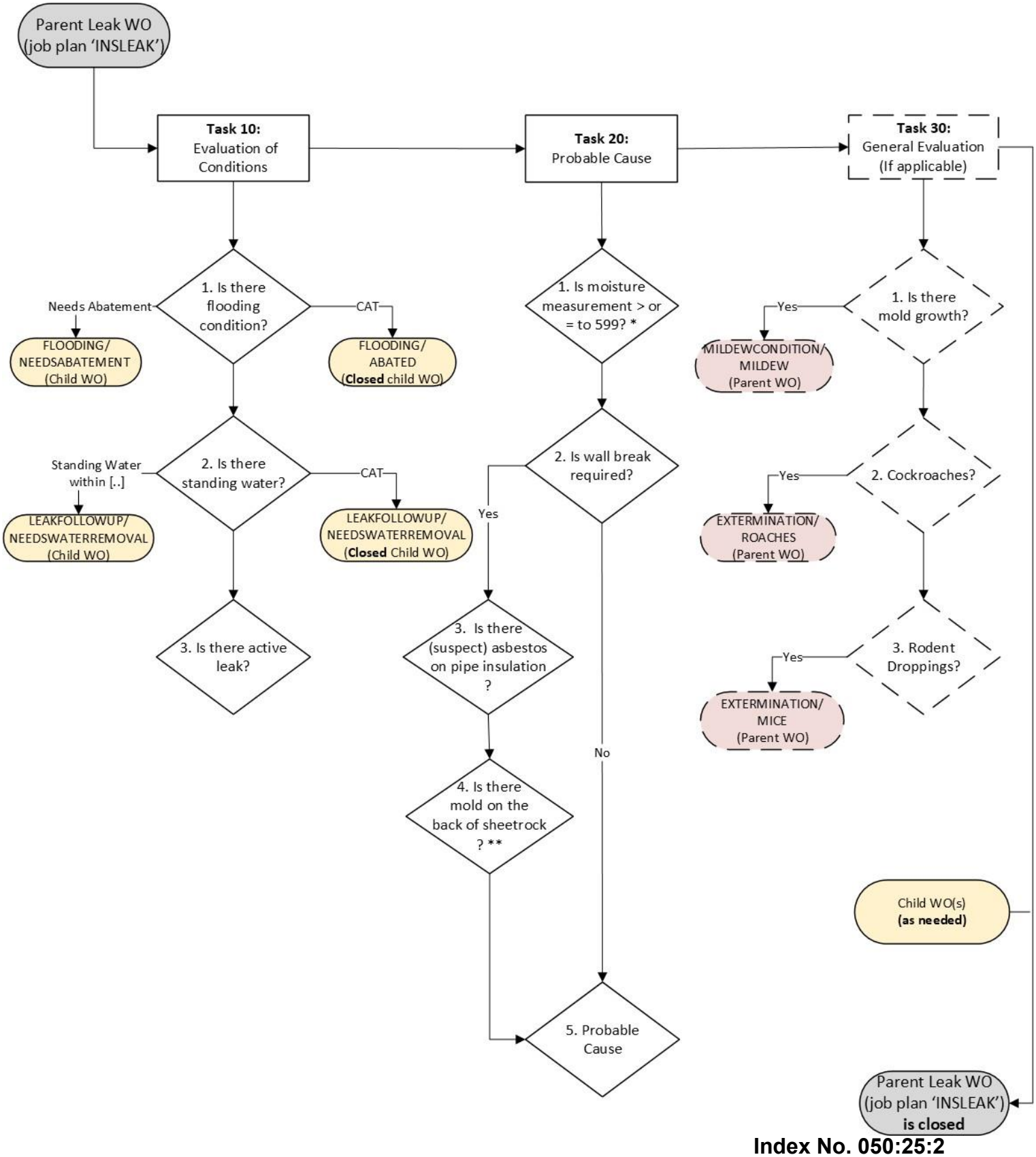
E. NYCHA Form 042.800, Repairs to Schedule Slip

F. NYCHA Form 042.861, Notice of Appointment for Skilled Trade Repair

G. NYCHA Form 042.863, Notice of Rescheduled Appointment for Skilled Trades

XIV. WORKFLOW

A. Leak Inspection Workflow



XV. REVIEW/REVISION HISTORY PAGE

Review/ Revision	Review/Revision Date	Sections Amended
1.		
2.		
3.		
4.		
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XVI. APPENDICES

Appendix A – HA Numbers for Leak Related Tools and Supplies

1. Tools

HA #	Material Item	Material Item Specification (if applicable)	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.
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).

HA #	Material Item	Material Item Specification (if applicable)	Application
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.
2003001010	Toilet Auger	General Wire® Toilet Auger with Flexicore Cable®, 3’, Non-Telescoping	Sewer cleaning tool.
2003001015	Toilet Auger	General 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	Used for scraping excess mortar, putty, caulk or even paint and wallpaper from floors and walls
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.

HA #	Material Item	Material Item Specification (if applicable)	Application
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.
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*[1]	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.

[1] Wet/dry vacuums indicated with * are most commonly used at developments.

HA #	Material Item	Material Item Specification (if applicable)	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.
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.

HA #	Material Item	Material Item Specification (if applicable)	Application
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 industrial 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, Industrial 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.
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.

2. Supplies

HA #	Material Item	Material Item Specification (if applicable)	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 maintenance tasks (e.g., secure a containment 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.
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.

HA #	Material Item	Material Item Specification (if applicable)	Application
1610929059	Headlamp		Used to increase visibility and provide sufficient lighting while performing various maintenance tasks.
1610967499	Flashlight		Used to increase visibility and provide sufficient lighting while performing various maintenance tasks.
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.
080657583	Shock Wave		Lower toxicity cleaner and disinfectant.
0806962366	Foster 40-80	One step disinfectant liquid, 5 gallon.	Lower toxicity cleaner and disinfectant.
0908200100E	Rags	Rag, Maintenance warehouse 14”x 17”, Terry cloth cleaning towel	Used as part of the cleaning supplies.
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.

HA #	Material Item	Material Item Specification (if applicable)	Application
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.
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.
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.

HA #	Material Item	Material Item Specification (if applicable)	Application
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.
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.
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.

HA #	Material Item	Material Item Specification (if applicable)	Application
1207993963	Insulation, Fiberglass Copper Pipe Insulation	2-5/8" pipe size with 1" pipe thickness. Owen Corning/Manville Part #0110026	Used for pipe insulation.
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.
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.

HA #	Material Item	Material Item Specification (if applicable)	Application
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.
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.
1207993950	Aluminum Seal Clips	100 seals per bag designed for ½” strapping	Used to secure aluminum fitting covers over pipe insulation.

HA #	Material Item	Material Item Specification (if applicable)	Application
1404922227	Foster 40-50 Paint	5 Gallon Container	Mold-resistant paint.
140492228	Fiberlock IAG 6000	5 Gallon Container	Mold-resistant paint.
1404981941	Sherwin Williams – Emerald Interior Satin Extra	5 Gallon Container	Mold-resistant paint.

Appendix B – Additional Instructions for Using a Moisture Meter (Protimeter)

1. Moisture meters monitor moisture levels in building components and may be helpful for measuring the moisture content in a variety of building components after water damage. Moisture meters can be used on materials such as carpet, wallboard, wood, brick, and concrete.

2. There are two settings for Moisture Meter Survey:

3. Search Mode (REL):

   (1) When used in a Search Mode, the moisture meter serves as a moisture detector. Search Mode readings provide the moisture condition up to 19 mm/ 3/4" beneath the surface materials.

   (2) The Search Mode is ideal for assessing solid walls and floors to pinpoint areas of concern (e.g., wet wall) that might justify a more extensive investigation.

   (3) To use a moisture meter in the Search Mode:

      (a) Make sure that the back of the meter is in the full contact with the surface that needs to be tested.

      (b) Test different areas of the surface by placing the meter onto different areas of the surface to measure. **Do not slide the meter across the surface**.

NOTE:	Sliding the meter can cause a premature wear to the back of the meter.

         i. If the surface displays visible water damage or mold growth, the moisture meter reading should be taken in six-inch (6”) intervals in each direction, horizontal and vertical, and continue to the point at least two feet (2’) beyond a moisture meter reading of 599 or above.

ii. If the surface displays no visible water damage or mold growth, the moisture meter reading should be taken in one-foot intervals in each direction.

4. Measure or Pin Mode (WME).

(1) When used in a Measure/PIN Mode, the moisture meter uses the electrical conductance principles to measure the moisture level of the material between two electrodes.

(2) The Measure/Pin Mode is used to obtain a more accurate and precise measurement of the moisture content at a specific point in a material, however, to achieve a more accurate root cause assessment the Search Mode should be used.

(3) To use the moisture meter in the Measure/PIN Mode:

(a) Remove the needle cap from the moisture meter.

(b) Push the pins firmly onto the surface of the material.

(c) Measurements taken in wood are actual percent moisture content values, whereas readings taken in material other than wood are percent of Wood Moisture Equivalent (%WME).

5. The moisture meter must be held flush against the wall and not held at an angle while taking measurements.

a. Wet Reading

(1) 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).

b. Caution-False Reading

(1) The meter is calibrated to detect moisture in building materials composed of organic matter (e.g., wallboard, wood, brick, concrete). The meter may report a “999” or other false reading if the instrument detects metal, wire, or tile. If the inspector suspects 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 intervals in each direction.

6. Additional use tips:

a. Press  button to turn ON/ OFF the moisture meter

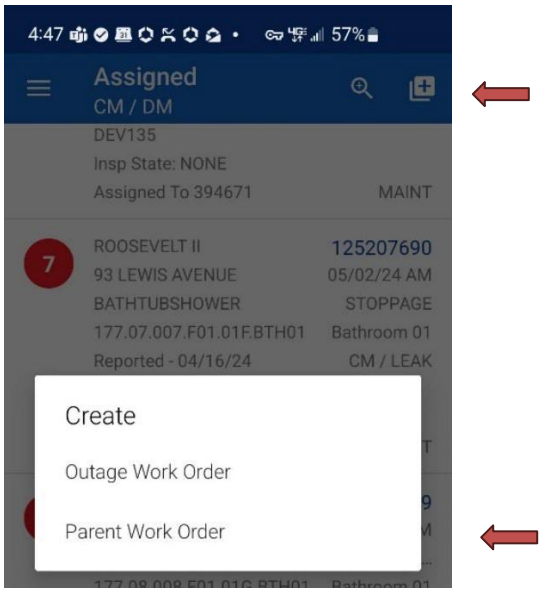
b. Press  button to change from the Seach Mode (REL) to the Measure/PIN Mode (WME), or vice versa.

c. Change the battery when the Low Battery indicator is on. A 550mAh battery is expected to last continuously for more than 20 hours

NOTE:	If a maintenance worker or other trained staff needs technical assistance with a moisture meter (e.g., the moisture meter appears to be broken) they should reach out to the property maintenance supervisor or assistant property maintenance supervisor for assistance.

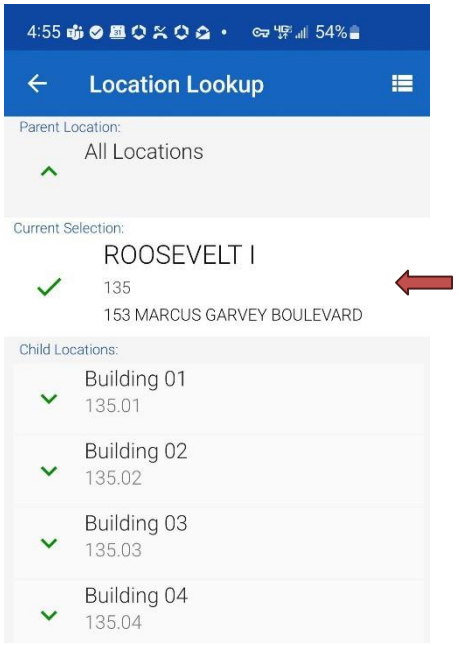
Appendix C – Creating a Parent Leak Inspection Work Order on the iWM App on the Handheld (Craft - 'MAINT, Job Plan - 'INSLEAK')

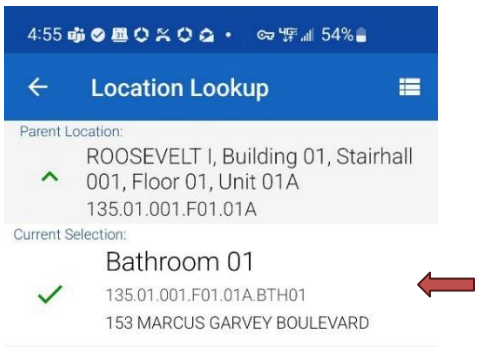
Step 1: Click on 'Create' sign and select 'Parent Work Order'



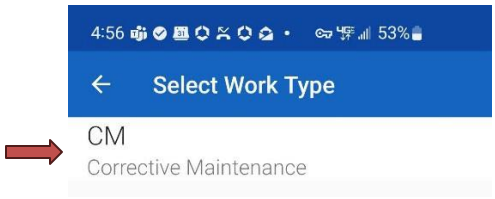
Step 2: Follow the prompts to create a parent work order

- Enter 'Description' (e.g., pipe under sink needs to be replaced)
- Enter 'Location' (use iWM App 'Location Lookup' function to select or change location)

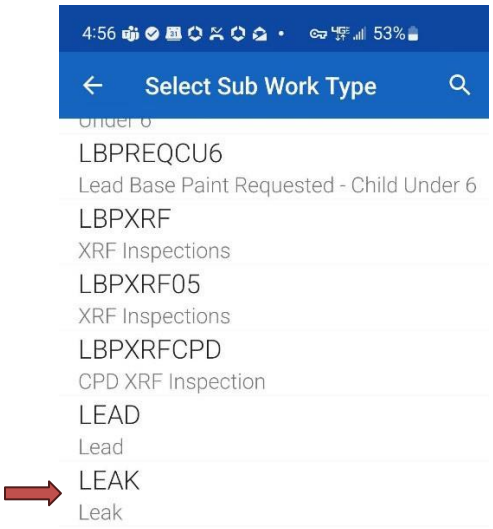




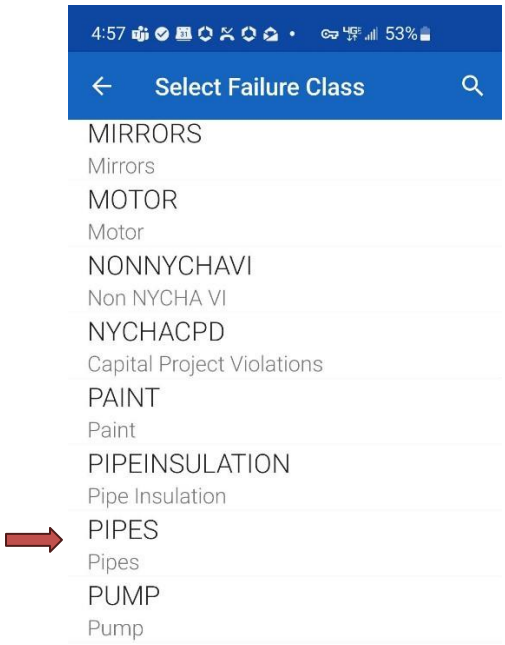
- Select work type ‘Corrective Maintenance’

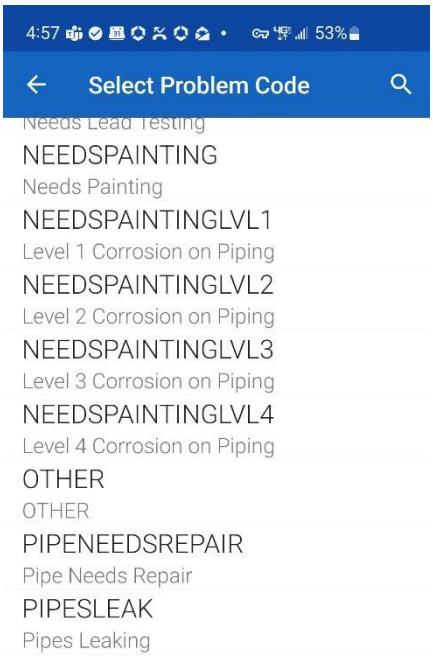


- Select Sub Work Type ‘Leak’

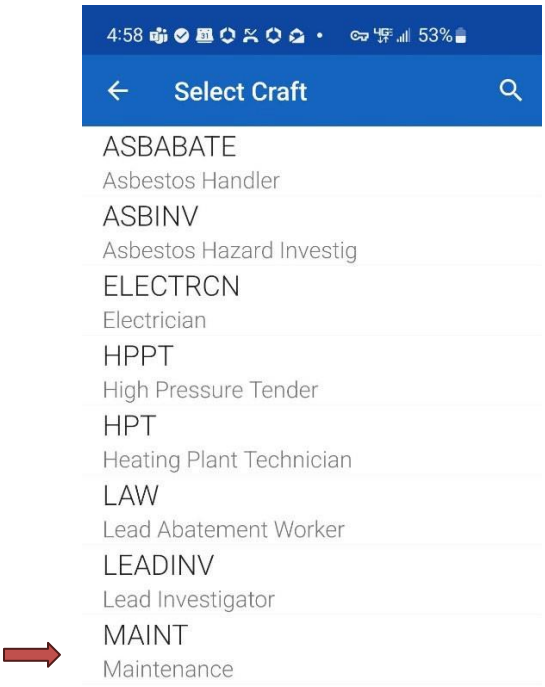


- Select ‘Failure Class’ and ‘Problem Code’





- Select craft ‘MAINT’



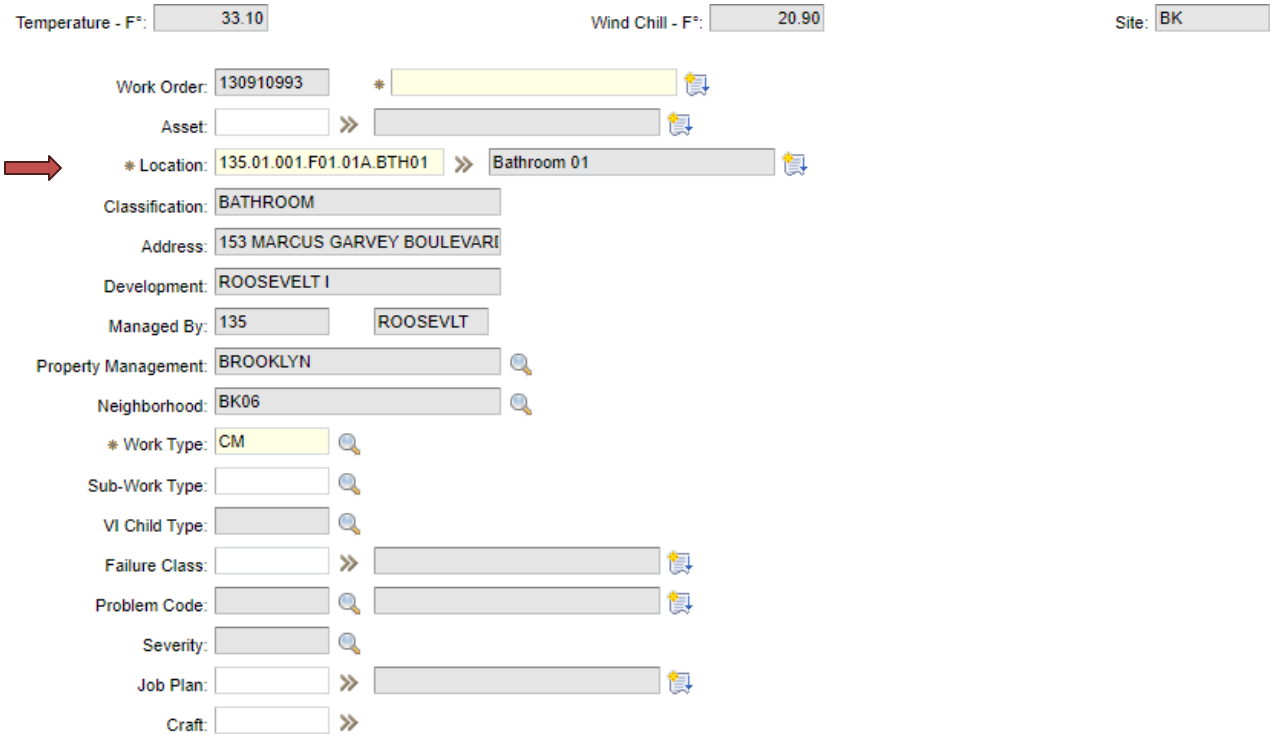
Step 3: Click ‘Done’

Step 4: A parent Leak Work Order will be created (Craft - ‘MAINT, Job Plan - ‘INSLEAK’).

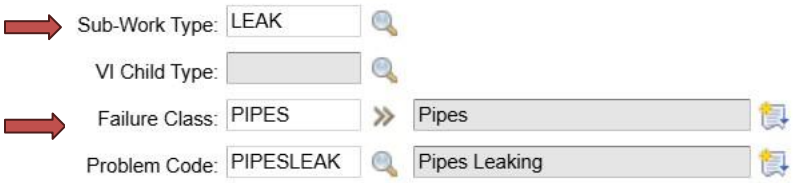
Appendix D – Instructions for Creating Parent Leak Work Order in Maximo (Craft - 'MAINT, Job Plan - 'INSLEAK')

Step 1: Click 'New Work Order'.

Step 2: Select the location.



Step 3: Select Sub-Work Type, 'Failure Class' and 'Problem Code'.



Step 4: Select craft 'MAINT'. The Job Plan will be auto assigned to the 'INSLEAK' (Leak Inspection)

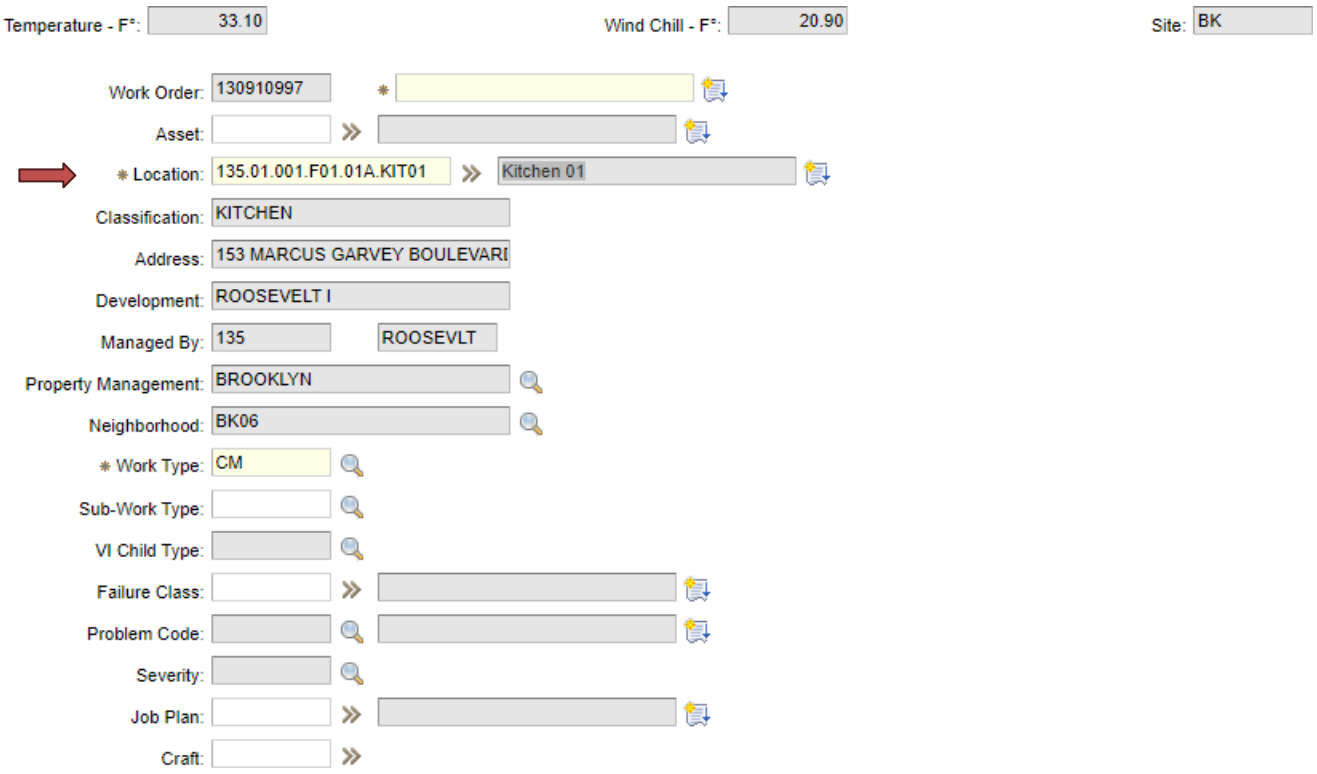
Step 5: Submit the work order.

Appendix E – Instructions for Creating Parent Leak Work Order in Maximo (Craft – any other than 'MAINT')

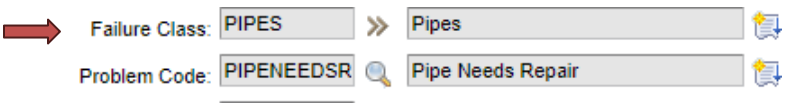
NOTE:	The instructions in this section only apply to conditions that have been previously identified by a maintenance worker, property maintenance supervisor or assistance property maintenance supervisor, skilled trade supervisor, or any other NYCHA staff, and it is determined that a skilled trade or vendor parent work order is needed (no maintenance visit is required). In all other instances the parent leak work order should be assigned to the craft 'MAINT'.

Step 1: Click 'New Work Order'

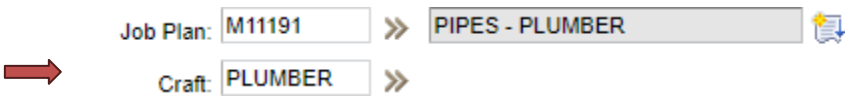
Step 2: Select the location



Step 3: Select 'Failure Class' and 'Problem Code'



Step 4: Select craft <u>any other</u> 'MAINT' (e.g., Plumber)



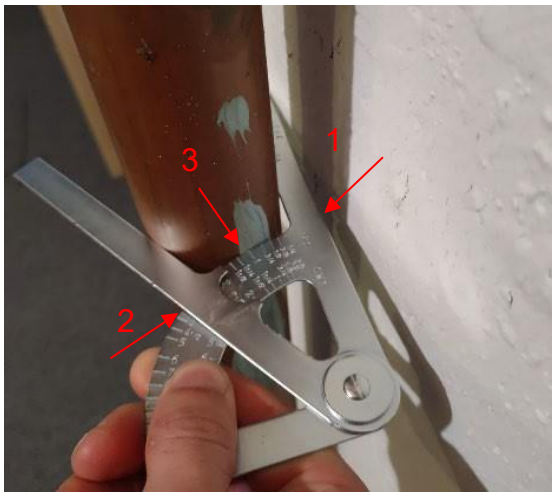
Step 5: The Job Plan will be auto assigned based on the craft selected (not limited to 'INSLEAK').

Step 6: Submit the Work Order

Appendix F – Guidance on Measuring Plumbing Pipes and Selecting Properly Sized Insulation

When performing insulation work, a variety of insulation sizes will need to be used. To select the proper size pipe insulation, the diameter of the pipes being insulated must first be measured using a pipe caliper. When measuring pipes, NYCHA staff should make sure that the pipe touches both wings as well as the head of the caliper (see photo).

Once the pipe is touching all three of these areas, the measurement can be read by looking at the head of the caliper to see which numbers (pipe sizes) are underlined by the two points on the lower wing of the caliper.



Example 1: showing that the upper wing (1), lower wing (2), and head (3) of the pipe caliper are in contact with the pipe.

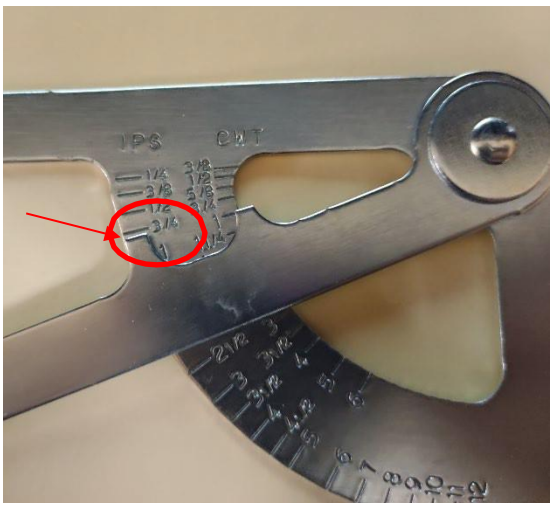
Reading the Pipe Caliper

There are two size scales that can be read with a pipe caliper: IPS for iron, brass, and PVC pipes; and CWT for copper pipes and tubing.

1. Step 1: Take pipe caliper measurement and look at the IPS scale, located on the left side of the caliper head:

    a. If a number indicating a pipe size is underlined on the IPS scale (zoom in and see photo at right, the left point is directly underneath the ¾ pipe size on the IPS scale), this is the diameter of the insulation that should be used (see example 2).

    b. If a number indicating a pipe size are underlined on both the IPS and CWT scales, use the IPS size indicated. In the photo in example 2 only an IPS pipe size is indicated.



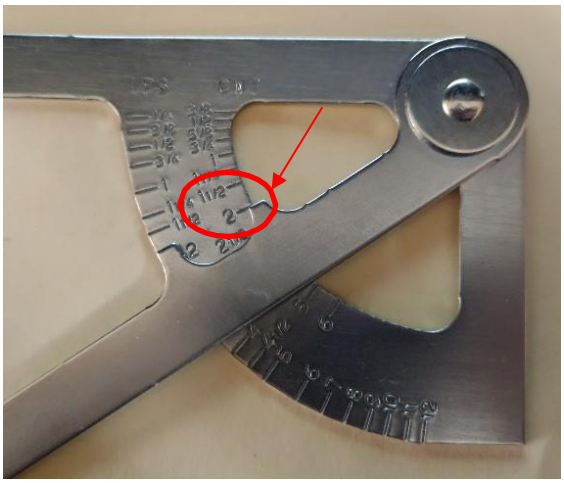
Example 2: Pipe caliper shows a measurement of 3/4 on the IPS scale. A 3/4 diameter insulation should be used.

2. Step 2: If a number indicating a pipe size is underlined only on the CWT scale (see example 3), located on the right side of the caliper head, pipe insulation made

specifically for copper pipe sizes will need to be used.

a. This pipe insulation will have “CT” marked on the jacket, which indicates that the insulation is made specifically for the copper pipes.

    (1) For copper pipes measured in the CWT scale, the corresponding insulation will be slightly larger (1/8 inch) than the copper pipe size measured. Table 1 below shows examples of copper pipe sizes and the corresponding insulation to be used.



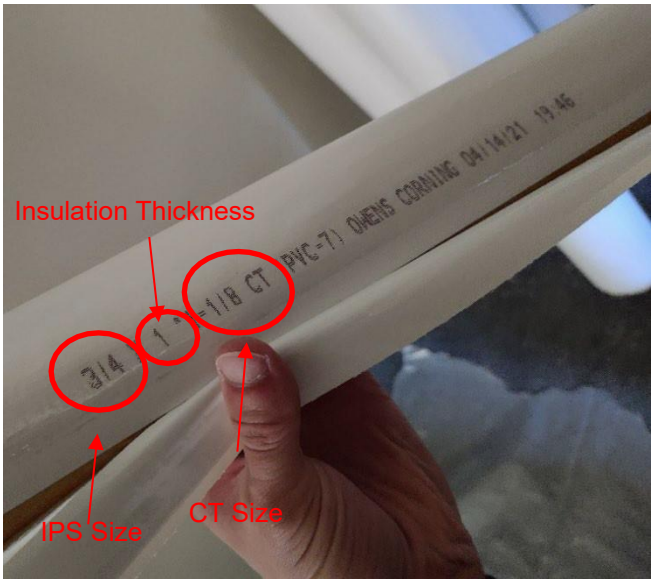
Example 3: Pipe caliper shows a measurement of 2 on the CWT scale and no pipe size underlined on the IPS scale. An insulation made specifically for the copper pipes must be used.

Reading Pipe Insulation Sizes

Some pipe insulation is sized for the IPS scale, some is sized for copper pipe sizes (CWT scale), and some is sized for both. A combination of different insulation sizes might need to be used provided that the hot and cold-water pipes in the wall cavities are a combination of brass and copper. NYCHA staff should check the sizing indicated on the insulation jacket. For example, the jacket of the Owens Corning ASJ Max Insulation will indicate the diameter of the insulation (first number) and thickness of the insulation (second number).

It is recommended that NYCHA staff install 1-inch-thick insulation, when feasible.

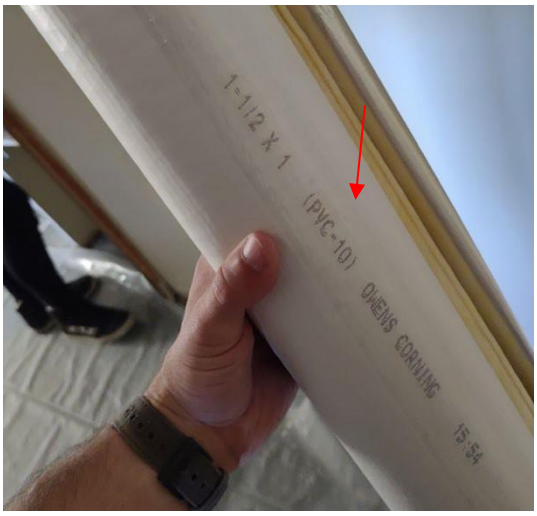
As mentioned above, insulation made for the copper pipe sizes will be marked with “CT” on the insulation jacket. Insulation made for iron, brass and PVC pipes will not have any letters shown on the insulation jacket. If the insulation is sized for both IPS and copper pipe sizes (see example 4), the IPS size will be shown first, the insulation thickness will be shown second, and the CT pipe size will be shown third.



Example 4: Insulation sized for both the IPS scale and CWT scale - IPS size is 3/4, the insulation thickness is 1, and the CT size is 1-1/8.

Selecting Properly Sized PVC Covers for Elbows and T’s

PVC covers and accompanying fiberglass pillows used to insulate pipe elbows and T’s also come in various sizes. For all pipe insulation, including both IPS scale and CWT scale, the size of the corresponding PVC cover is also indicated on the insulation jacket, with the designation “PVC” (see example 5).



Example 5: Insulation jacket showing the PVC cover size 10.

Staff Guide: How to Select Properly Sized Pipe Insulation?

Type of the Pipe: Iron, Brass and PVC

Iron, Brass and PVC Pipe Size (IPS)	Pipe Insulation Diameter (Size)	PVC Covers Size for Elbow & T's
1/2"	1/2	Size 7
3/4"	3/4	Size 7
1"	1	Size 9
1-1/4"	1-1/4	Size 9
1-1/2"	1-1/2	Size 10
2"	2	Size 11
2-1/2"	2-1/2	Size 12
3"	3	Size 13

Type of the Pipe: Copper

Copper Pipe Size (CWT)	Pipe Insulation Diameter (Size)	PVC Covers Size for Elbow & T's
1/2"	5/8 CT	Size 7
3/4"	1/2	Size 7
1"	3/4	Size 7
1-1/4"	1	Size 9
1-1/2"	1-1/4	Size 9
2"	2-1/8 CT	Size 10
2-1/2"	2-5/8 CT	Size 11
3"	3-1/8 CT	Size 12

Step 1: Use Pipe Caliper to Determine the Size of Pipe Insulation

- Use IPS size guide if the number on the caliper (pipe size) is underlined on the IPS scale, or both IPS and CWT scales.
- Use CWT size guide if the number on the caliper (pipe size) is underlined on the CWT scale and no corresponding IPS size is available.

Step 2: Select the Properly Sized Insulation Material

Pipe Insulation

- Insulation for iron, brass and PVC pipes (IPS): The diameter is listed as the first number on insulation jacket and doesn't have any letters to it (e.g., 3/4).
- Insulation for copper pipes (CWT): The diameter is listed next to the "CT" letters on insulation jacket (e.g., CT 1-1/4").

PVC Covers Size for Elbow & T's:

- The size of the PVC cover is indicated on the insulation jacket for both IPS scale and CWT scale (e.g., "PVC 7").

Appendix G - Leak Inspection Tools & Supplies

1. Tools to be carried on all Leak Work Orders

    (a) Moisture Meter

    (b) Step Ladder (4 ft)

    (c) Set of Pipe Wrenches (10” and 14”)

    (d) Tongue & Groove Pliers (various sizes)

    (e) Regular Hammer

    (f) 3lb Lump Hammer (Sledge)

    (g) Utility Knife

    (h) Aviator Snips

    (i) Epoxy

    (j) Sufficient lighting source (e.g., headlamp, flashlight, torch)

    (k) Safety Glasses

    (l) Respiratory Protection (N95 respirator)

    (m)Rags

    (n) Duct Tape

    (o) Nitrile Gloves

NOTE:	NYCHA staff should follow the steps outlined in *SafeNYCHA Ladder Safety*, and most importantly complete the Ladder Safety Checklist, when a ladder is used.

2. Additional Tools for Leak from Above Work Orders

    a. Tools for initial visit:

        (1) Drill and drill bits

        (2) Borescope

        (3) Allway Handy Saw

        (4) Masonite or equivalent product (e.g., Plas-tec)

    b. Additional tools needed if an enlarged wall break is required:

        (5) Sheetrock saw (for sheetrock locations only)

        (6) HEPA vacuum cleaner

        (7) 6 mil poly-sheeting roll

3. Additional Tools for In Unit Stoppage Work Orders

        (1) Hand drum

        (2) Toilet auger with swivel head

Appendix H – Sample Flyer for Residents

Resident cooperation is essential for NYCHA to effectively and immediately address leaks and excessive moisture conditions and to maintain a healthy and safe living environment. Please help us to protect your homes from leaks and excessive moisture conditions that can lead to mold.

- Immediately report floods, standing water, and leaks in apartments and common areas to NYCHA through the Customer Contact Center (CCC) at 718-707-7771 or by using the MyNYCHA App or website.

- If it is an emergency, call the CCC at 718-707-7771 to speak to a customer service representative and for a prompt response 24 hours a day.

- Provide access to the apartment for maintenance workers, skilled trades workers, vendors, and other NYCHA staff to perform leak tracing and repairs. <u>In emergency situations, residents must be available to provide access to the apartment for up to 24 hours after the service request is created.</u>

- Notify NYCHA when a non-emergency appointment needs to be rescheduled or cancelled <u>at least 24 hours in advance</u> of the scheduled appointment.

    - For maintenance tickets, call the CCC or use MyNYCHA to reschedule.
    - For skilled trades tickets, call the neighborhood planner to reschedule. The number is on the *Repairs to Schedule Slip.*
    - Call the property management office to reschedule other leak related appointments.

- Prepare the apartment for the leak inspection or repairs before the appointment. Remove personal belongings from the area of the leak or standing water.

- Update your contact information including email, cell phone, and work phone whenever you submit a new repair request to the CCC or MyNYCHA.

Important:

- Water travels. The cause of leaks is often in a different apartment and NYCHA may need to inspect several apartments to identify the cause of the leak.

- Clean and dry any damp furnishings and other personal property within 48 hours. If personal property was damaged contact your property management office to make a claim.

- Residents can check the status of any open repair request in MyNYCHA or by calling the CCC.

- If NYCHA does not properly or promptly complete leak or water damage repairs, residents can:

    a. Contact the NYCHA Compliance Department at **on.nyc.gov/Submit-Concern** or call the CCC at 718-707-7771 (and select menu option 7 when prompted), or

    b. Contact the independent, court-appointed Ombudsperson Call Center (OCC) at 1-888-341-7152 or at **www.ombnyc.com.**

Appendix I – Communications with Residents Related to Leak Work Orders

Note: 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*. If staff cannot identify a resident's spoken language, or if there is no bilingual staff readily available to assist, staff may call the Language Assistance Hotline at 212-306-4444.

	Communication with Residents Related to Leak Work Orders	Section in SP
Customer Contact Center (CCC) or MyNYCHA	For emergency leaks (priority 7 or above), informs residents to be available to provide access to NYCHA for up to 24 hours following creation of the Service Request.	VIII.A
	For non-emergency leaks, provides the opportunity for the resident to schedule the repair when convenient in the next 7 days.	VIII.A
	Informs residents that NYCHA staff may use its Right of Entry to enter the apartment to abate the condition per the NYCHA Lease Agreement.	VIII.A
	Informs residents they can contact the independent court-appointed Ombudsperson Call Center at 1-888-341-7152 or at www.ombnyc.com if they are dissatisfied with NYCHA's response to the leak complaint.	VIII.A
Maintenance Worker and/or Other Trained Staff (During Normal Business Hours)	Follows the steps in SP 040:09:7, *Managing Maintenance Work Orders* to knock on the door when arriving at a resident's apartment. If no response, attempts to call the resident at the phone number on file and then reaches out to the property management office for assistance.	VIII.B
	If a resident is not home for a non-emergency leak repair, issues the 48 Hour Notice of Health and Safety Repairs (Form 042.727). Right of Entry may be used for emergency situations.	VIII.B
	If any resident furnishings or personal property is wet, advises the resident to clean and dry the property within 48 hours. If a resident's personal property was damaged, advises them that they can contact the property management office to make a claim.	VIII.H
	Before beginning the inspection, makes 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. • Communicate with the resident regarding the timeframe of the scheduled appointment and the type of work being performed.	VIII.B
	Upon completion of the inspection, reviews inspection findings with resident(s) of the impacted apartment, additional impacted apartment (if a child work order was created), and root cause apartment, as applicable:	VIII.D VIII.J

	• Keeps the resident informed throughout the repair process as necessary (e.g., notifying when the worker needs to leave the apartment to obtain additional materials, or if the work is expected to generate significant noise or dust). • Invites the resident to inspect the repair(s) made or informs them why they were not able to make repairs. • Informs the resident not to disturb a temporary closed wall cavity, if the repair(s) were made behind the wall. • Informs the resident how to prevent the issue from reoccurring. • Asks the resident of the impacted apartment if they are satisfied with the inspection findings, repairs made (when applicable), and records the results in the iWM App. If no leak or excessive moisture is identified (i.e., condition is unfounded), discusses the inspection findings with the resident, asks if the resident is satisfied with the explanation, and records the results in the iWM App.	
	If a multi-apartment leak inspection is required, describes the process to the resident(s) of apartments inspected. If they cannot find the root cause after the multi-apartment inspection, they advise the resident of the impacted apartment that NYCHA will contact them on next steps (e.g., vertical line inspection).	VIII.D VIII.F VIII.G
	If skilled trades are needed to complete the repairs, issues the *Repairs to Schedule Slip* (RTS slip) (Form 042.800) to residents to schedule repairs. Informs the resident: • To call the neighborhood planner to schedule skilled trades repairs using the number on the RTS slip. • NYCHA will mail and/or email Notices of Appointment for Skilled Trades Repair (Form 088.168) in advance of the appointment, and • NYCHA will provide a robocall reminder 48 hours in advance of the appointment.	VIII.D
	If other crafts or vendors are needed to complete the repairs, informs the resident that property management will schedule the appointment and advises them to call the property management office with any questions about scheduling.	VIII.D
	If during a multi-apartment or vertical line leak inspection, the maintenance worker or other trained staff identifies additional apartment(s) impacted by the same leak, it is **best practice** to create a child work order(s) for those apartment(s) while staff has access. However, if the worker is not able to create the work order(s) based on the site conditions, expediency, and other factors, they should instruct the resident(s) to call the CCC or use the MyNYCHA App to create a new repair request.	VIII.D VIII.F VIII.G

	If the maintenance worker or other trained staff **makes a wall break** in the additional impacted apartment(s) in an attempt to identify the root cause(s) of the leak, they **must** create a child work order(s) for that apartment.	
	Reminds residents that they can check the status of any open repair request in MyNYCHA or by calling the CCC.	VIII.D
Property Management Office Staff	When requested, informs residents with disabilities or 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 in their apartment of leaks, excessive moisture, severe flooding and/or water damage. Follows the process in SP 040:12:1, *Reasonable Accommodations in Housing for Applicants, Public Housing Residents, and Section 8 Voucher Holders* to review reasonable accommodation requests.	VII.C VIII.P
	Reviews resident property damage claim requests.	VIII.H
	Contacts the resident (and if needed the resident's emergency contact) upon notification by NYCHA staff to coordinate access to the apartment when: • NYCHA staff needs to access the apartment for an emergency inspection and/or repairs and the tenant is not home or otherwise does not allow access. • NYCHA needs to access the apartment to perform a vertical line inspection: o Coordinates the appointments on a specific date and asks about any existing leak or water damage. o Issues the 48 Hour Notice of Health and Safety Repairs (Form 042.727) to all apartments identified for the vertical line inspection.	VIII.B VIII.G
Property Maintenance Supervisor of Assistant Property Maintenance Supervisor	When needed, coordinates with the property management office and/or residents to: • Reschedule non-emergency maintenance appointments for leaks if not scheduled and/or scheduled outside of the Leak Service Level Agreement. • Reschedule emergency or non-emergency leak appointments when property maintenance staff is expected to be late. • Schedule and gain access to apartments to perform multi-apartment leak inspections or vertical line leak inspections.	VIII.A VIII.F VIII.G

EMSD Maintenance Team (Outside Normal Business Hours)	When responding to a Leak Work Order, makes best efforts to interview the resident about the circumstances of the leak complaint that might be relevant to the current work order.	VIII.E
	If a resident refuses to provide access for an emergency leak inspection, explains the urgency to the resident. If the resident still does not provide access, EMSD may contact NYPD and/or shut down the supply riser.	VIII.E
	If the leak is not severe and the resident requests that NYCHA staff return during normal business hours, EMSD assigns the work order to property management.	VIII.E
Neighborhood Planner	Calls residents to schedule skilled trades repair appointments.	VII.C
	If an appointment needs to be rescheduled, calls the resident to reschedule at least 24 hours before the scheduled appointment, when possible.	VII.C
Skilled Trades Supervisor	For last minute cancellations, makes a courtesy call to the resident when possible.	VII.C
Skilled Trades Workers and Other Non-Maintenance Crafts	Follows the steps in SP 040:09:7, *Managing Maintenance Work Orders* to: • Knock on the door when arriving at a resident's apartment for a scheduled appointment. If no response, attempts to call the resident at the phone number on file and then reaches out to the property management office for assistance. • Keep the resident informed throughout the repair process as necessary (e.g., notifying when the worker needs to leave the apartment to obtain additional materials, or if the work is expected to generate significant noise or dust). • Invite the resident to inspect the repair(s) made and asks that they sign the work order.	VIII.K
Quality Assurance Inspector	Informs the resident of QA assessment findings and, if deficiencies were identified, the next steps to repair the condition.	VIII.N

Appendix J - Relocation Criteria for Environmental Hazards for Mold and Leak Conditions

1. Relocation for leak conditions will be required if more than 10 square feet or 25 linear feet of ACM abatement is needed to perform the leak repairs, or, if the repairs require any lead paint or asbestos abatement work that meets the criteria identified in Standard Procedure 050:21:1, *Lead Safe Housing Procedure* or Standard Procedure 050:25:1, *Asbestos Safe Housing Procedure*.

2. The following are examples of mold or leak conditions where property management should consider requesting a relocation:

    a. Extensive mold growth that impacts the majority of the apartment (greater than 50% of walls and ceilings).

    b. Significant mold growth (greater than 100 square feet) in a “high-use” area (sole bathroom, sole kitchen, foyer) in apartments occupied by individuals with severe medical conditions exacerbated by continued exposure.

    c. Significant mold growth (greater than 100 square feet) in any area where the root cause cannot be identified within 4 calendar days, or the remediation cannot be completed within 15 calendar days.

    d. Greater than 10 square feet of mold 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 days, or the repairs cannot be completed within 15 calendar days.

    e. Leaks that compromise structural integrity that may lead to harm or fatalities (e.g. ceiling collapse).

    f. Severe leaks from waste/sanitary lines that require significant cleanup, remediation, and repairs.

    g. Severe flooding conditions that require gut renovations.

    h. 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).

Appendix K - Creating Child Work Orders for Separate Apartments When Responding to a Leak Work Order

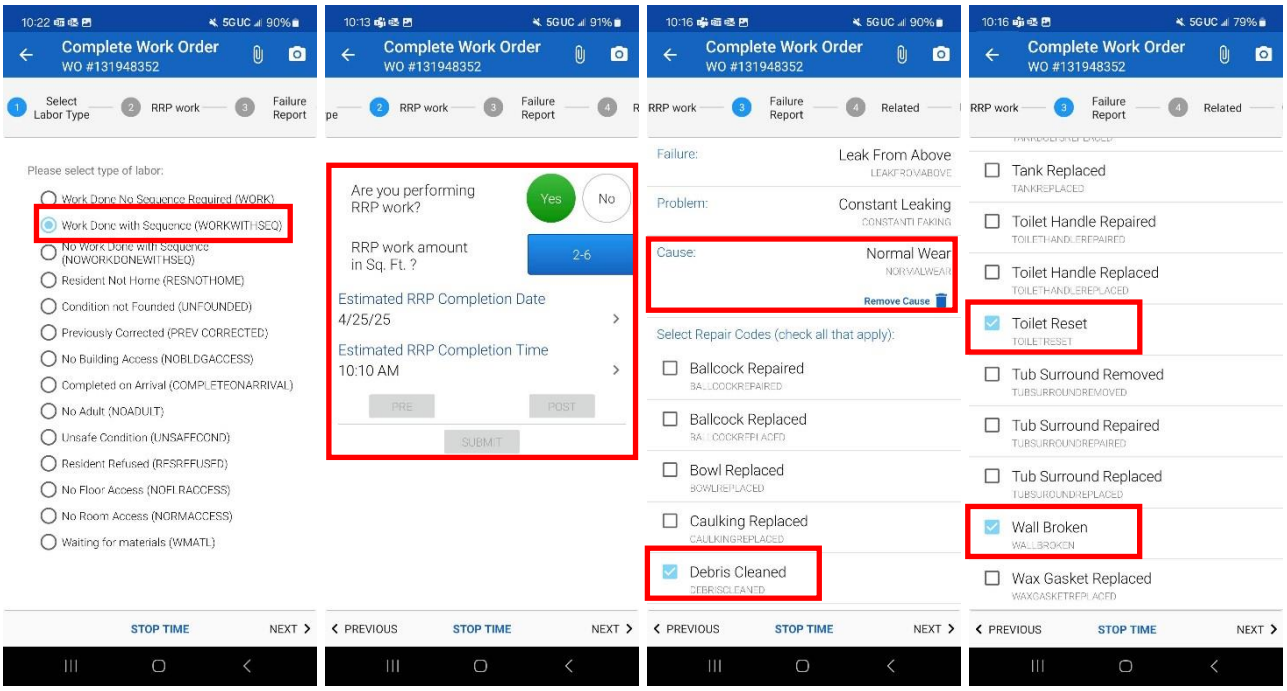
When a maintenance worker or other trained staff is assigned a Leak Work Order (e.g., Leak From Above) and determines that the root cause of the leak is located in an apartment/unit above or adjacent to it, they should follow the steps below to create follow up child repair(s):

- **Step 1:** Complete a **leak inspection** to identify the **root cause(s)** of the leak affecting the resident. The unit experiencing the leak is referred to as the “Impacted Apartment”, while the unit where the leak originates is referred to as the “Root Cause Apartment.”

- **Step 2:** Once the root cause is identified, perform any routine repair(s) necessary to address the root cause(s) of the leak.

- **Step 3:** Document inspection findings in the iWM App.

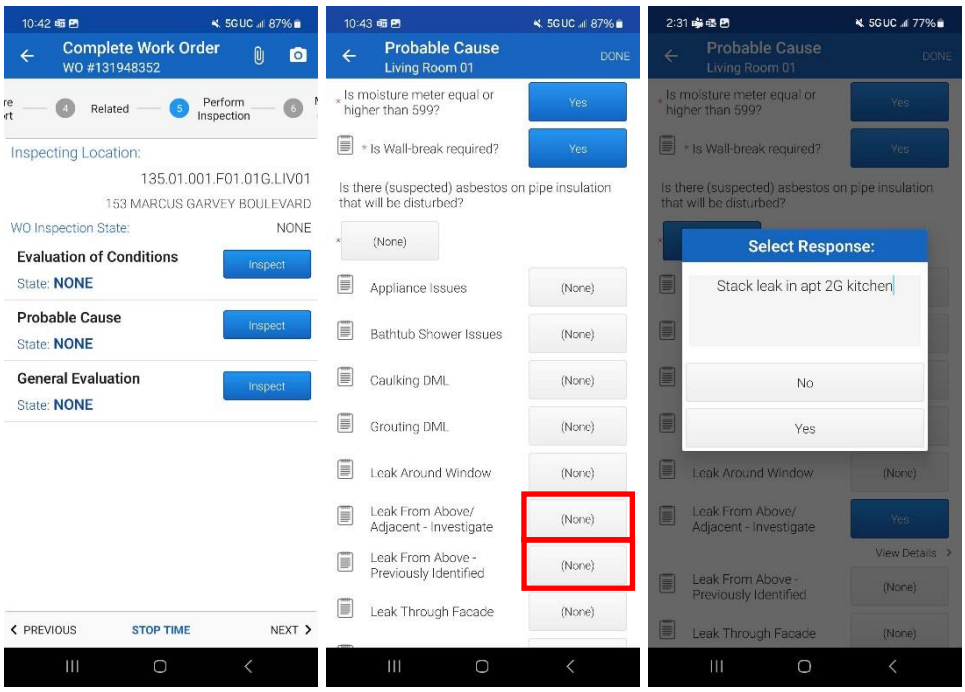
    - Select ‘Labor Type’ (e.g., WORKDONEWITHSEQ or NOWORKDONEWITHSEQ), answer questions pertaining to ‘RRP Work’ (if needed), and complete a ‘Failure Report’.



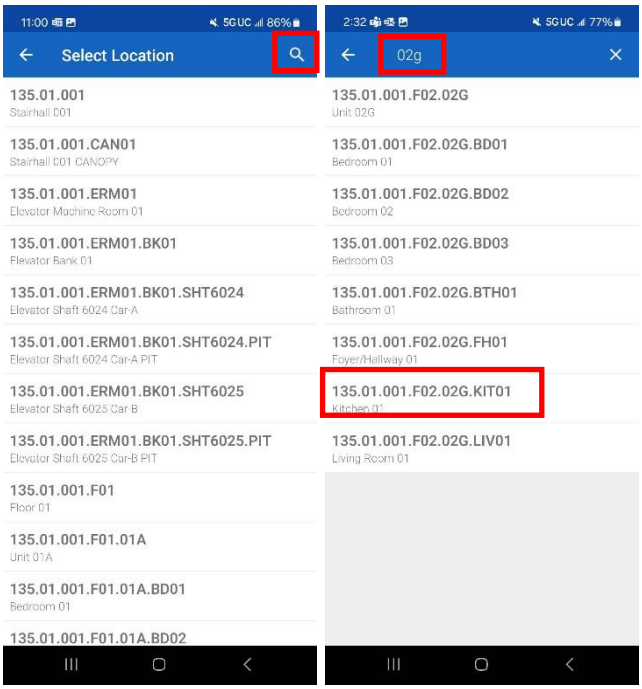
NOTE:	If needed, multiple ‘Repair Codes’ should be selected to document repairs that were made, including wall break (e.g., ‘WALL BROKEN’).

    - Complete ‘Leak Inspection’ and document the root cause(s). If the root cause of the leak originates in the apartment above or adjacent to the impacted apartment, select one of the following options and document the location of the root cause:

- Leak From Above/ Adjacent – Investigate
- Leak From Above/ Adjacent – Previously Identified

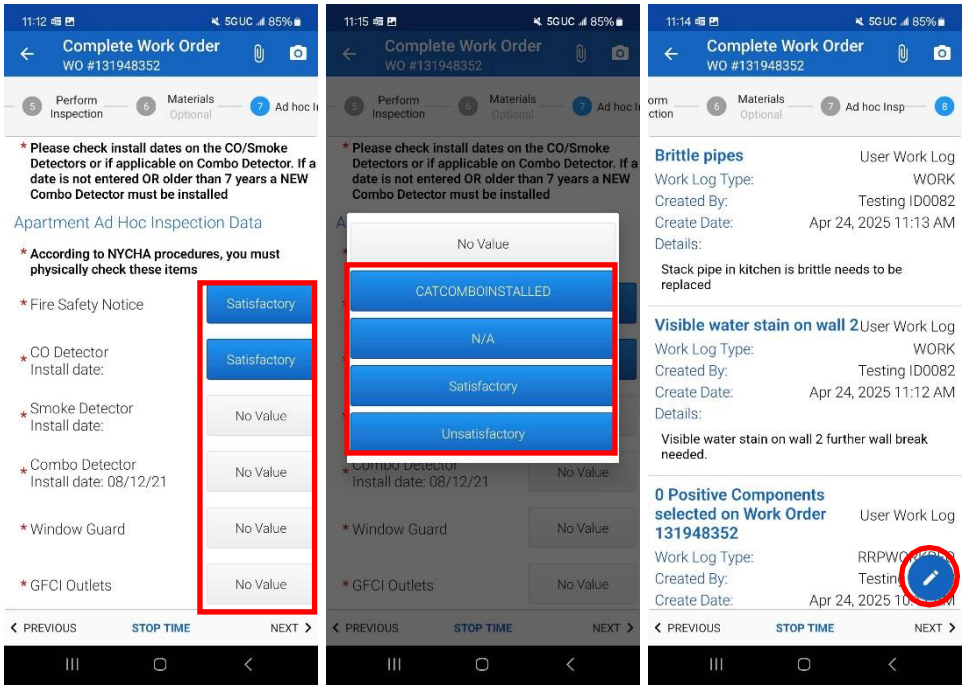


Select the ‘Location’ (e.g., Root Cause Apartment).



NOTE:	The maintenance worker or other trained staff must gain access to the apartment above or adjacent to the impacted apartment and verify the root cause, **before** documenting the root cause in the iWM App. If unable to get access, the maintenance worker or other trained staff must enter the note in the 'Work Log' and return to complete the inspection once they have access. The parent Leak Work Order remains open (Inspection State = 'PARTIAL') until the maintenance worker or other trained staff identifies the root cause(s) and documents the findings on the parent Leak Work Order in the iWM App.

- Complete the 'Ad Hoc' Inspection, enter notes in the 'Work Log' and sign the work order.



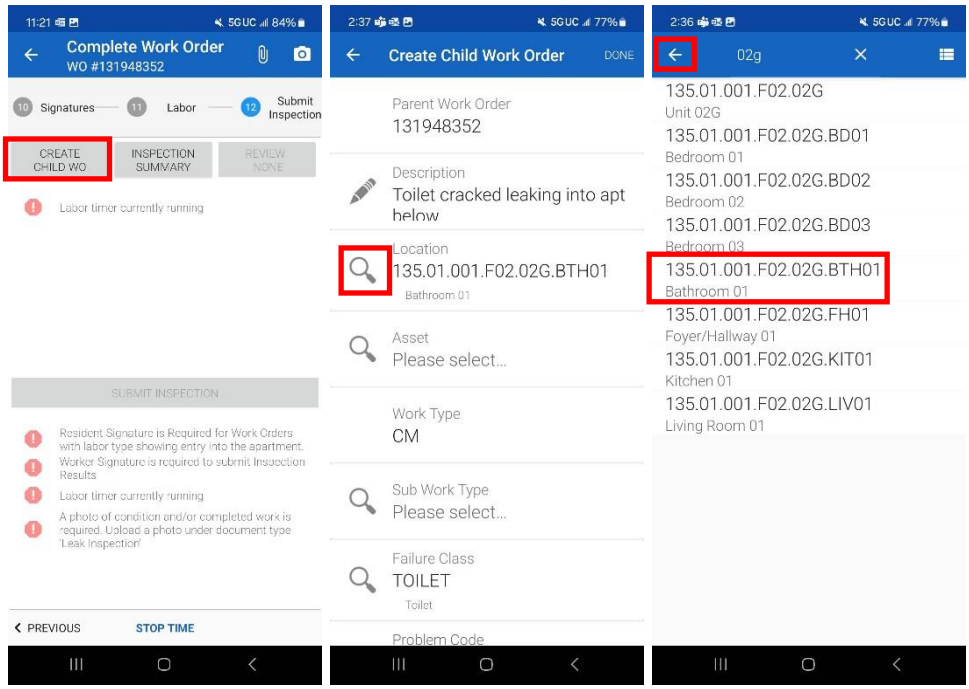
NOTE:	Input any notes to the 'Work Order' that could be helpful for staff performing follow-up repairs in the 'Work Log' prior to creating child work orders. Do not put in the 'Notes' that the source of the leak is in the unit other than the unit specified in the location field of the child work order(s).

Step 4: If the repair(s) fall outside the scope of routine and basic maintenance, create child work order(s) to address the repairs for the Impacted Apartment and the Root Cause Apartment, as needed. If skilled trade(s), vendor(s), or other craft(s) are needed to complete the full repair, **create child work orders for the necessary work under the same parent:**

- Adjust 'Location' to the appropriate unit.
- Select 'Failure Class', 'Problem Code', and 'Craft'.
- Input the notes to assist staff performing follow-up repair.

NOTE:	It is important that work orders are generated for the correct unit and/or room where a Plumber, Carpenter, Bricklayer, Roofer, Painter, Vendor, or other craft is needed. This process also applies when creating child work orders for additional apartments that were inspected and found to be affected by the same root cause originating in another unit (e.g., wall break, paint, or plaster repairs).

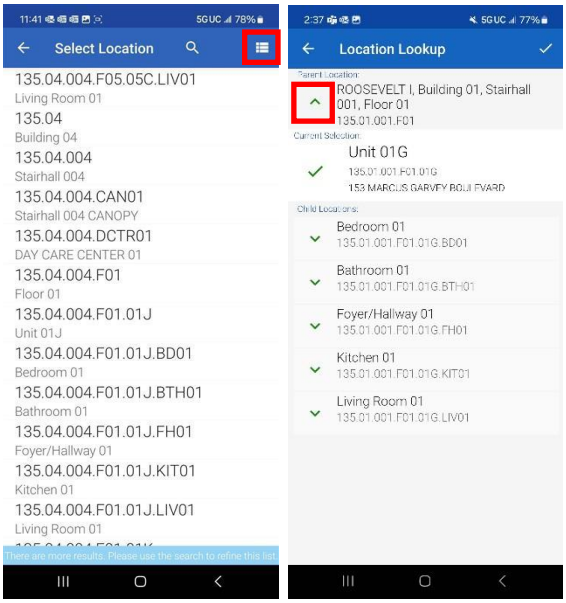
Option 1: Adjust the 'Location' to create child Work Order(s).



NOTE:	When the root cause is coming from a different unit, click the **magnifying glass** when creating the child work order to change the location string and select a different unit. If the child work order is for another unit you can type in the unit number to narrow down your search.

Option 2: For more location options while selecting a location, tap on  .

Tapping on  will allow you to change the location string and create a child work order for a different unit.



NOTE:	Please note, if a maintenance worker or other trained staff attempts to create a child work order where there is already an **existing work order for that issue**, Maximo **will relate** the existing work order to the parent and will not allow the creation of a duplicate. If repairs are needed that are **unrelated to the leak or damage caused by the leak**, those work orders should be created under a **separate parent work order.**

- **Step 5**: Complete the Repairs to Schedule (RTS) Slip for **both** the Impacted Apartment and the Root Cause Apartment.

  - For the Impacted Apartment, the RTS slip should be filled out with the **parent leak work order** at the top and all work orders for the trades needed for that specific apartment checked off.
  - For the root cause apartment, the RTS slip should be filled out with the **child work order at the top <u>for that unit (e.g., Plumber)</u>** and all other work orders for trades needed for that unit checked off.

Example Scenario:
Barbara in unit 1G called CCC to report a leak in her living room. A maintenance ticket was created, and Devon, a maintenance worker, was assigned to the work order. When Devon arrives at 1G, he notices that the leak is coming from above and investigates the bathroom in the unit directly above in 2G. In 2G, he notices that the wall next to the shower is damaged and he makes a wall break to investigate. Once opened, he uses the borescope and sees that there's a crack on the waste line, which is leaking into 1G. He enlarges the wall break to get access to the root cause, makes a temporary repair and creates the following tickets to sequence to skilled trade workers:

Parent or Child	**Unit**	**Craft**
Parent	**1G (Impacted Apartment)**	**Maintenance**
Child	1G	Carpenter
Child	1G	Plaster
Child	1G	Paint
Child	**2G (Root Cause Apartment)**	**Plumber**
Child	2G	Plaster
Child	2G	Paint

The maintenance worker fills out an RTS slip for both 1G and 2G. The slip for 1G contains the original parent leak work order number, with Carpenter, Plaster, and Painter checked off. The RTS slip for 2G contains the plumbing work order number for 2G, with Plumber, Plaster, and Painter checked off.

RTS slip for apt **#1G**

NEW YORK CITY HOUSING AUTHORITY
Repairs to Schedule Slip

Date: Work Order #: 13194835

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 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

RTS slip for apt **#2G**

NEW YORK CITY HOUSING AUTHORITY
Repairs to Schedule Slip

Date: Work Order #: 13201176

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 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:

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

iWM Leak Inspector Overview

Welcome to the Handheld Informer Work Management (iWM)

Training Course for Leak Inspection

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1

iWM Mobile Application Training - Agenda

- 1. Welcome, Introductions, Overview
- 2. Sort, Search, and Select WOs from Menu List
- 3. End-to-End Leak Inspection WO (various scenarios)
- 4. Closing Leak Inspection WO (no access)
- 5. Checking Leak WOs in Maximo
- 6. Quality Assurance
- 7. Leak Inspection WOs Exercises

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Leak Inspection WO –Workflow

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

Arrive & 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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Leak Inspection WO –Workflow Process

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 asbestos on pipe insulation?
  - ▪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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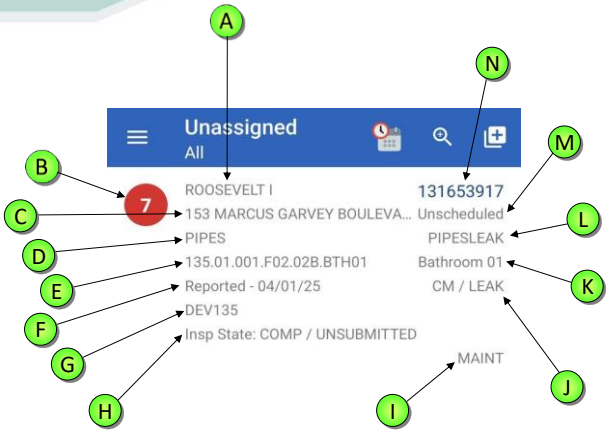
View Work Order Details

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

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



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NYCHA Locations Explained

Examples of NYCHA Locations:

- Developments
- Buildings
- Stair Halls
- Floors
- Apartments
- Rooms (bedroom, bathroom, etc.)
- Heating Plumbing Line
- Grounds
- Elevators
- Community Centers

005.01.001.F02.02C.KIT01

Development #/ Building / Stair Hall / Floor / Apartment / Room

005. 01. 001. F02. 02C. KIT01

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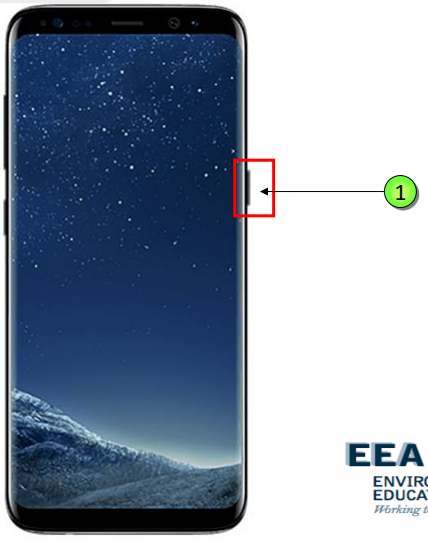
Log into the Device

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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Display Settings

	Term	Definition
1	**iWM Maximo Prod**	**Informer Work Management** is used to search, document work and close Work Orders.
2	**Camera**	User friendly, just point and shoot. Pictures taken are saved in the Gallery application.
3	**Gallery**	A place holder for all pictures taken. Can sort pictures by albums. Can easily search, upload and delete pictures.
4	**Maps**	Google maps reliable mapping service providing location information.

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iWM Mobile Application Training - Agenda

1. Welcome, Introductions, Overview
2. ➢ Sort, Search and Select WOs from Menu List
3. End-to-End Leak Inspection WO (various scenarios)
4. Closing Leak Inspection WO (no access)
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6. Quality Assurance
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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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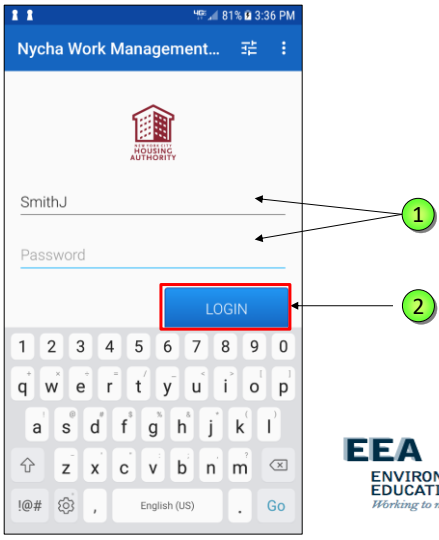
Log into iWM Application

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

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

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



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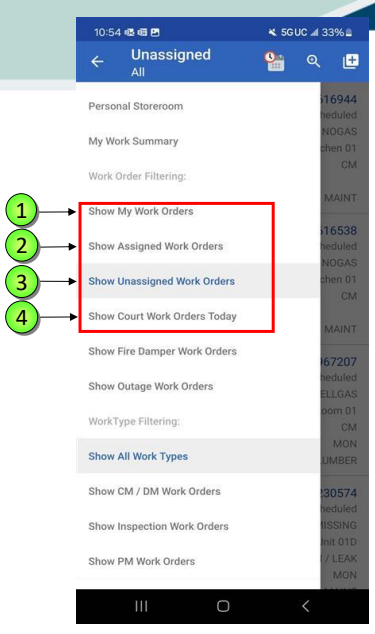
View Work Orders Menu

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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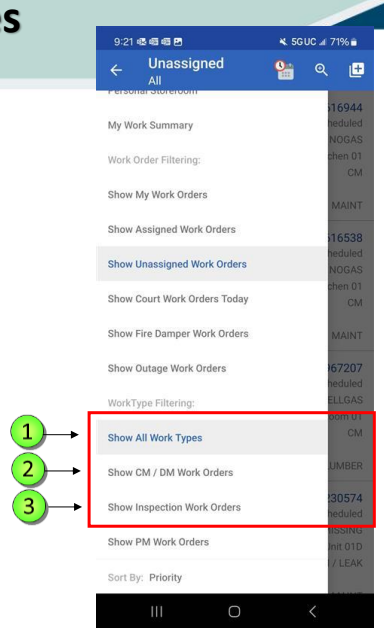
View Work Orders – By Types

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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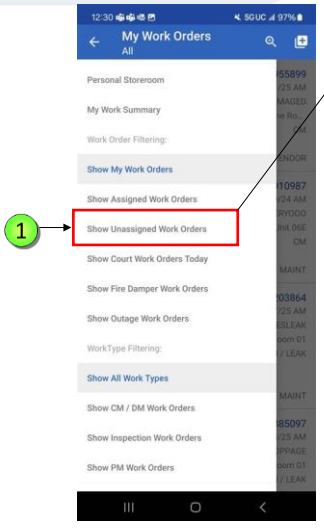
Viewing Work Orders

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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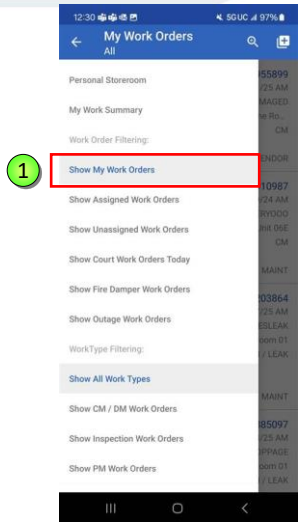
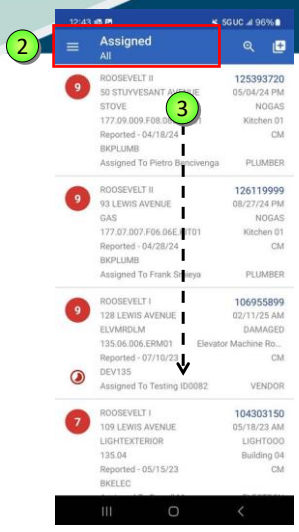
Viewing Work Orders

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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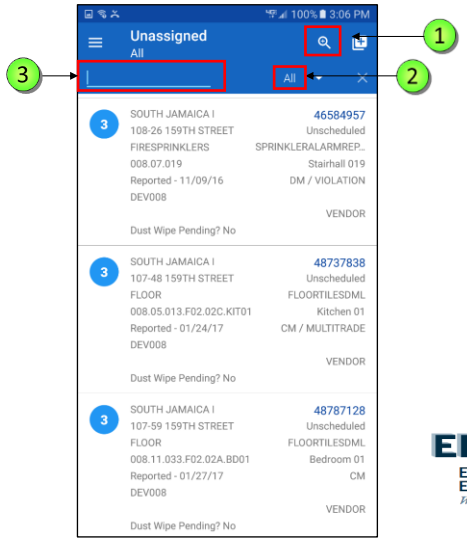
How to Search for Work Orders

1. 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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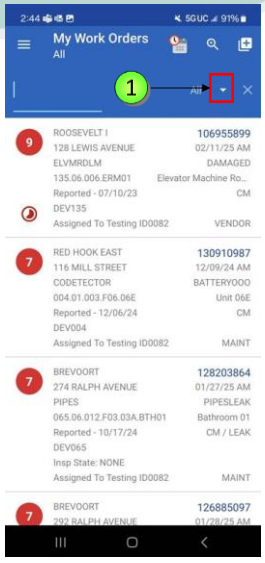
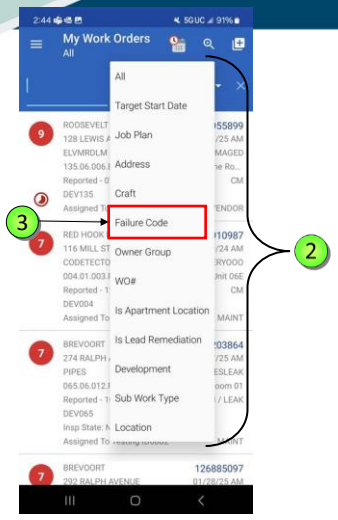
How to Search for Work Orders

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.** Select the search option you wish to explore and enter the details for your search.

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





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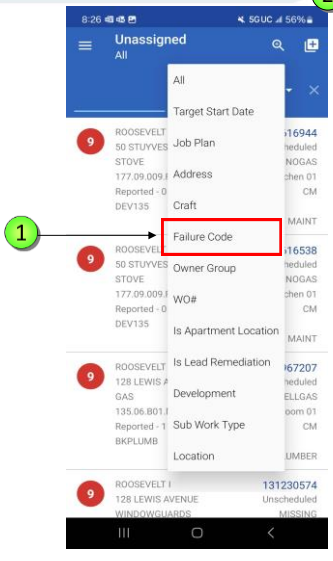
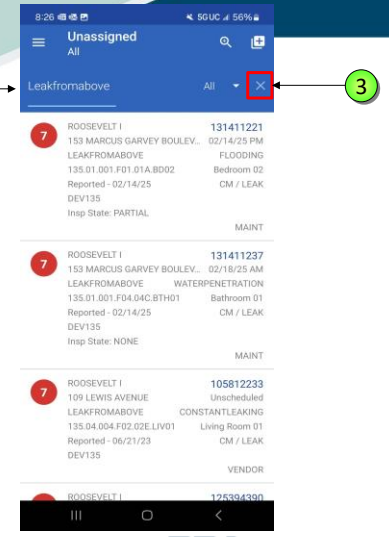
How to Search for Work Orders

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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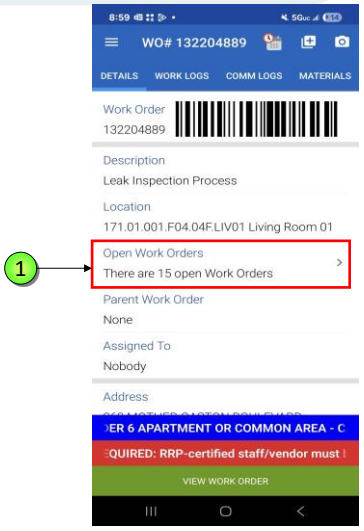
How to View all Open or Related Work Orders

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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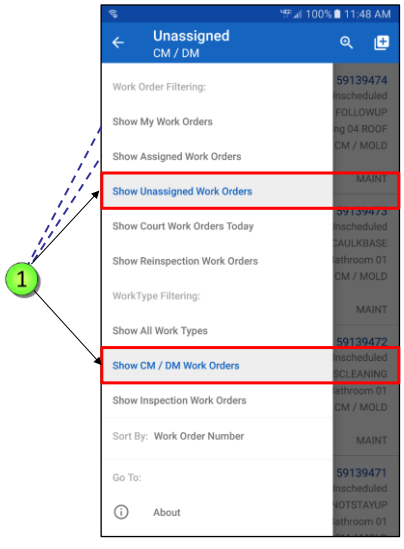
Leak Work Orders Process

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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iWM Mobile Application Training - Agenda

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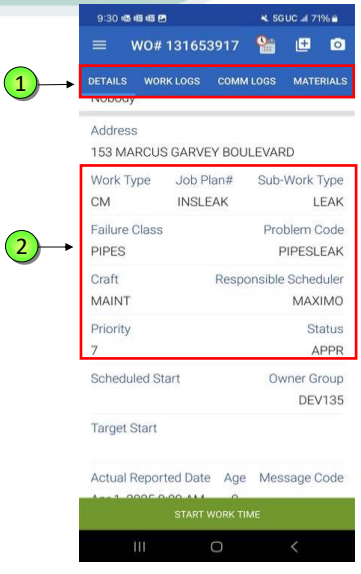
View Work Order Details – Emergency Leak

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

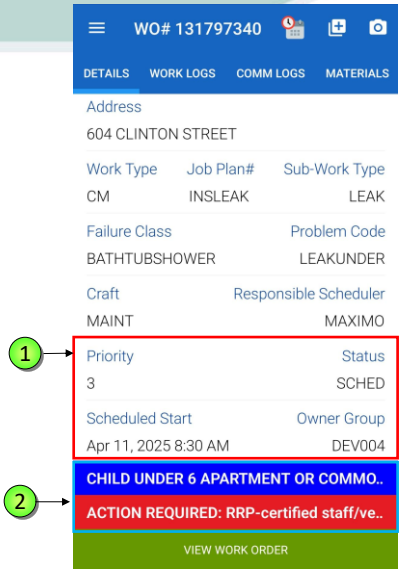
1. This is a **Non-Emergency Leak WOs** with a scheduled start date.

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

   - **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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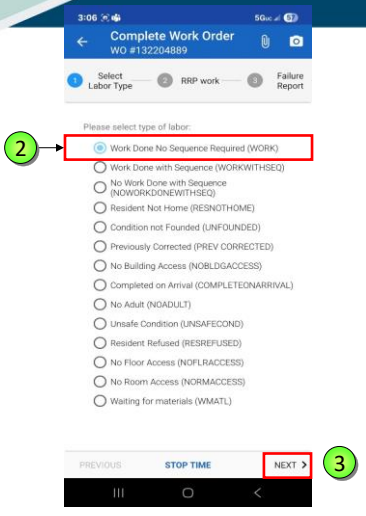
View and Select Labor – Start the Timer

After reviewing the **Work Order Details**, the user is now ready to begin the work. **'Start Time'** is displayed at the bottom of the screen.

1. Tap on **'Start Work Time'**
2. Select '**Labor Type'**
3. Tap **'Next'**

Note: *The maintenance worker must start the time of the work order when at the apartment door.*



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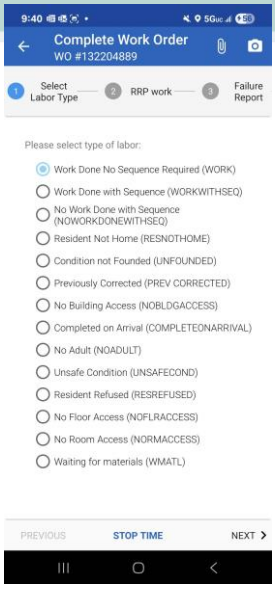
Labor Types



Work Done No Sequence Required: The worker performed work (no further work is needed).

Work Done with Sequence: The worker performed work and created a child work order(s) for further work.

No Work Done with Sequence: The worker did not perform work but created a child work(s) order for further work.

Resident Not Home: When resident is not present to provide access to apartment.

Condition Not Founded: The condition described in the work order is not present.

Previously Corrected: The work specified in the work order was previously corrected by another worker.

No Building access: The worker is unable to access the building with the job location

Completed on Arrival: The work was already completed when the worker arrived at the job location.

No Adult: The only resident at home is a minor (i.e., a person less than 18 years old).

Unsafe Condition: The worker encountered an unsafe condition.

Resident Refused: The resident is home but does not allow the worker to access the job location.

No Floor Access: The worker is unable to access the floor with the job location.

No Room Access: The worker is unable to access the room with the job location.

Waiting for Materials: The job requires additional materials that have not yet arrived at the job location.

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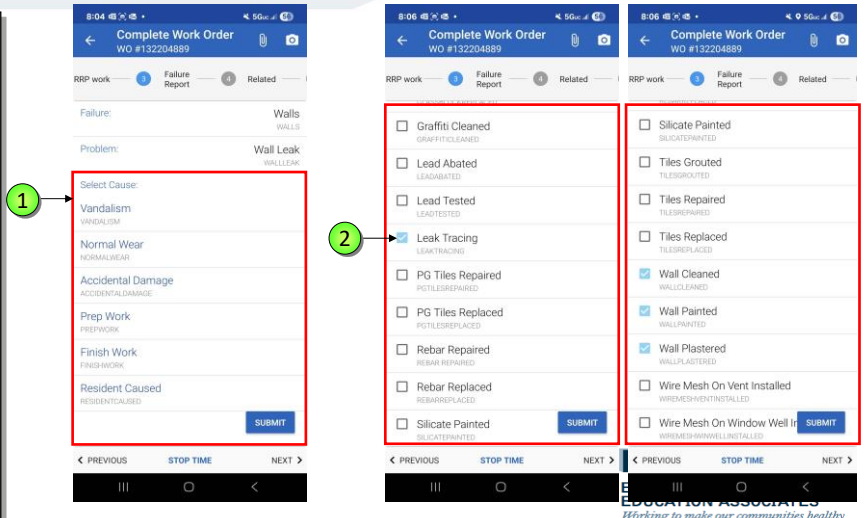
Failure Report

In the **Failure Report** tab, select:

1. **Cause**
2. **Repair Code**

Note: *You can select multiple 'Repair Codes', when needed.*



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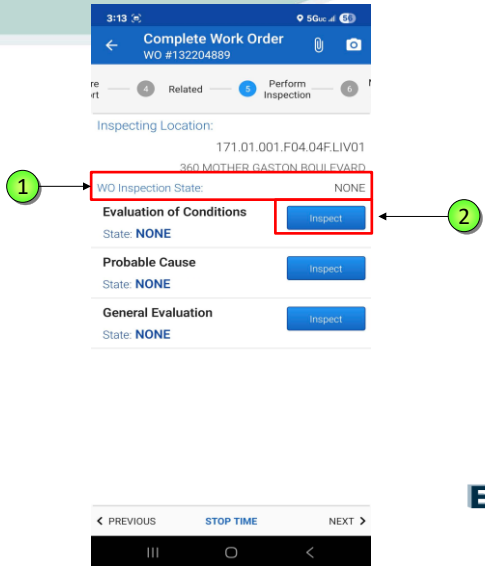
Perform Inspection

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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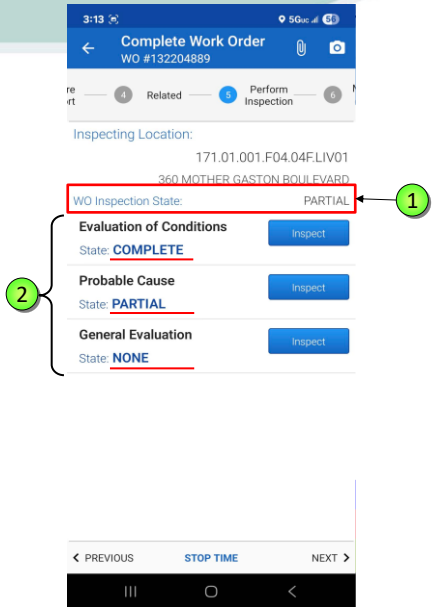
Inspection State vs Work Order Status

1. On **Perform Inspection** screen you can see the '**WO Inspection State'.** This is the current **State** of the **Inspection**.
2. The WO Inspection State is the summary of the '**Task Inspection State':**
   - **COMPLETE:** All required results have been entered.
   - **PARTIAL:** Some results have been entered, but not **all** required results.
   - **NONE:** No results have been entered.



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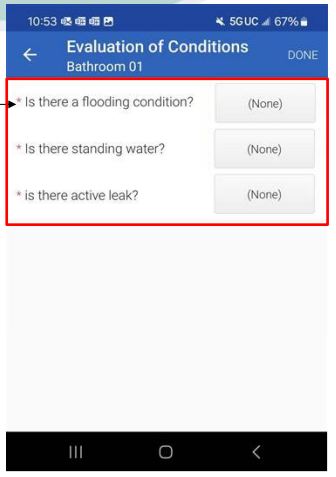
Task 10: Evaluation of Conditions

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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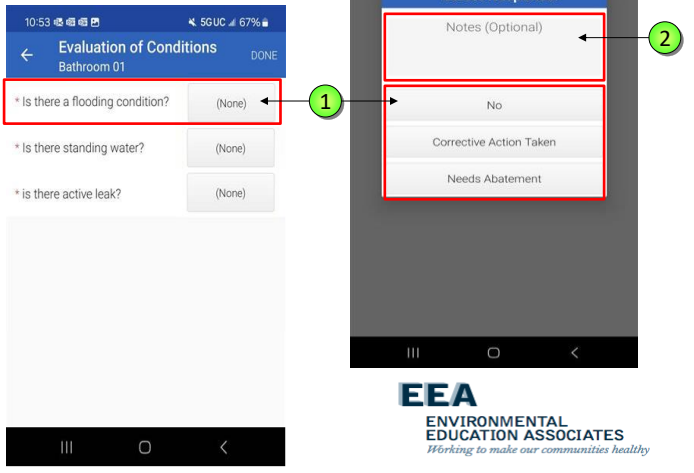
Task 10: Evaluation of Conditions – Flooding Condition

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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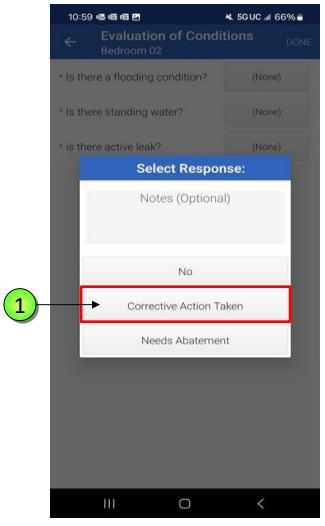
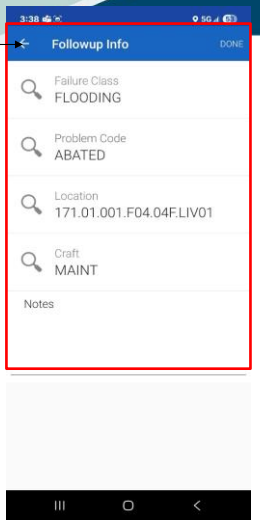
Task 10: Evaluation of Conditions – Flooding Condition

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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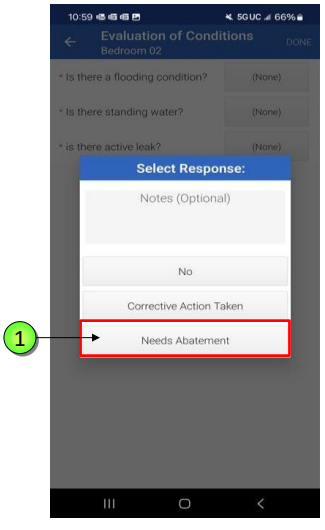
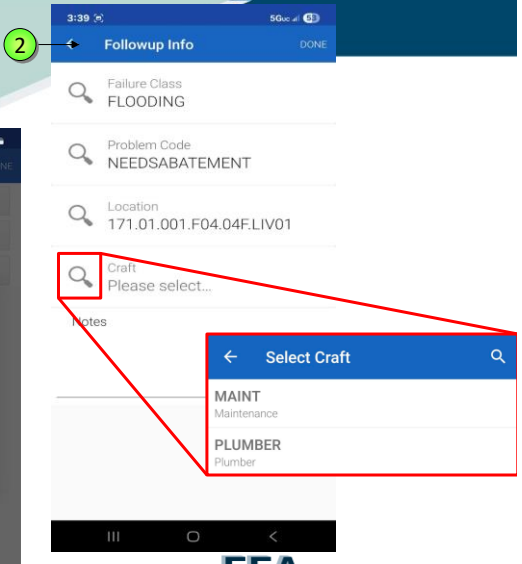
Task 10: Evaluation of Conditions – Flooding Condition

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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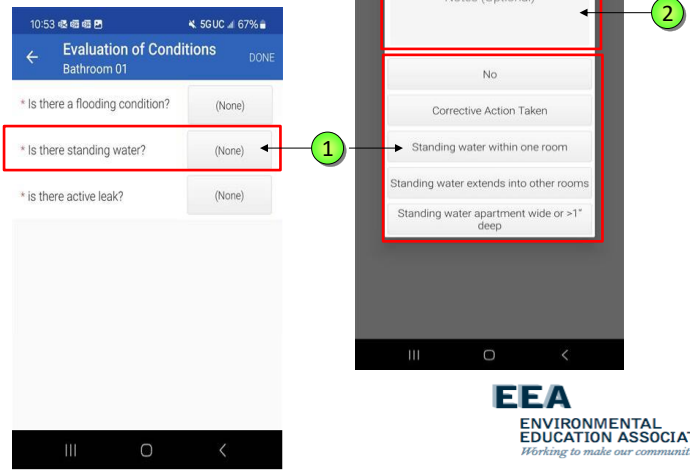
Task 10: Evaluation of Conditions – Standing Water

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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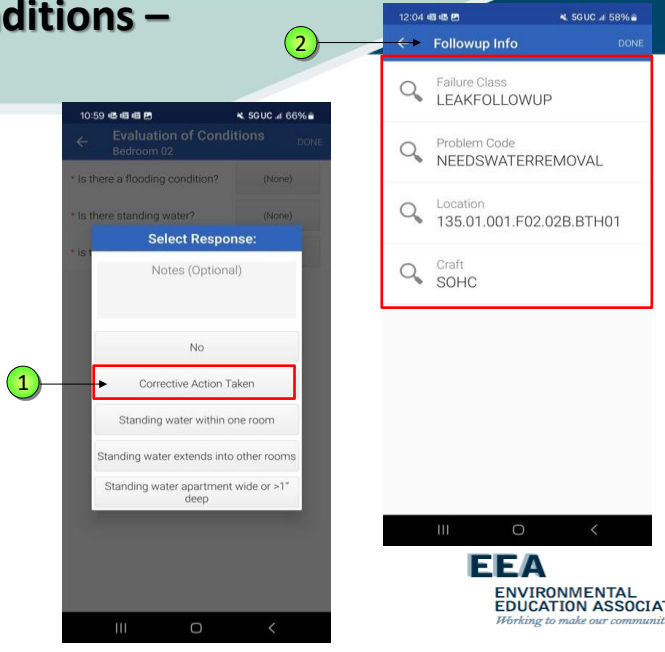
Task 10: Evaluation of Conditions – Standing Water

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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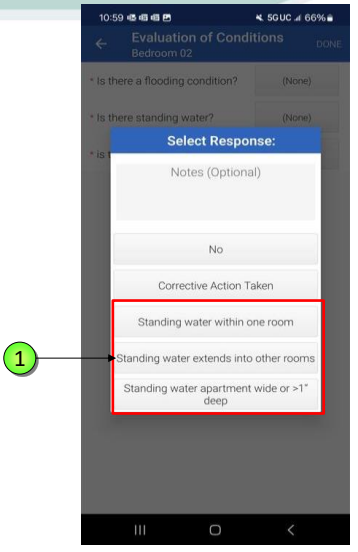
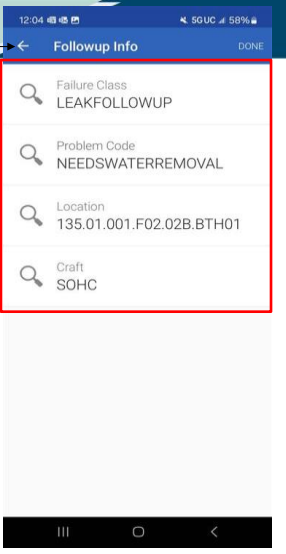
Task 10: Evaluation of Conditions – Standing Water

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).**

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





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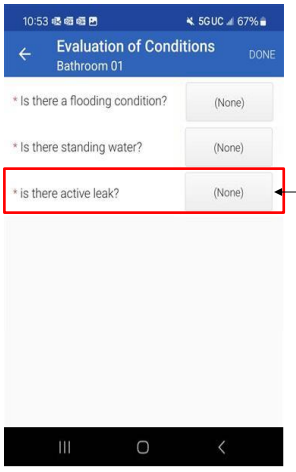
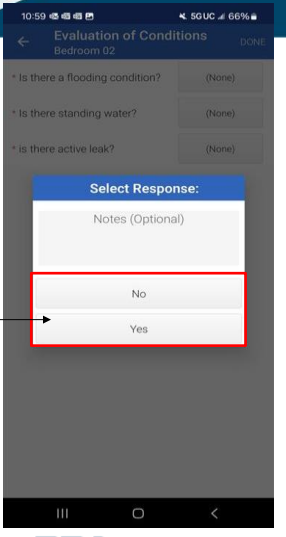
Task 10: Evaluation of Conditions – Active Leak

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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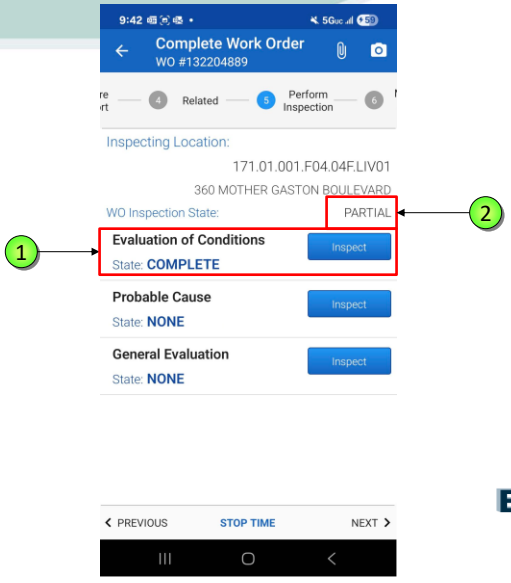
Perform Inspection

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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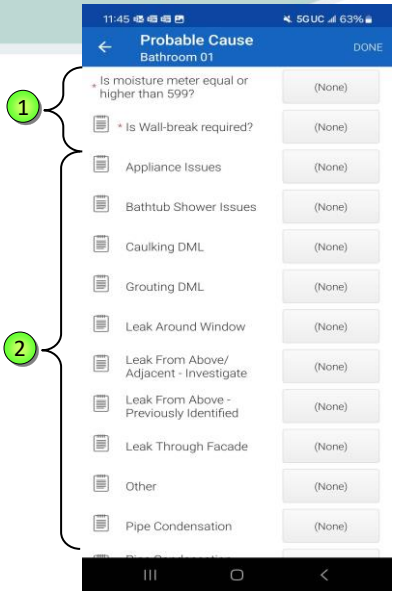
Task 20: Probable Cause

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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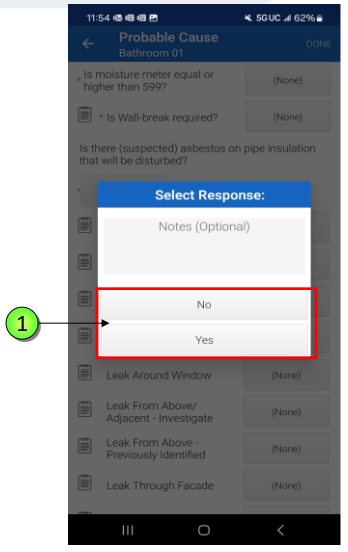
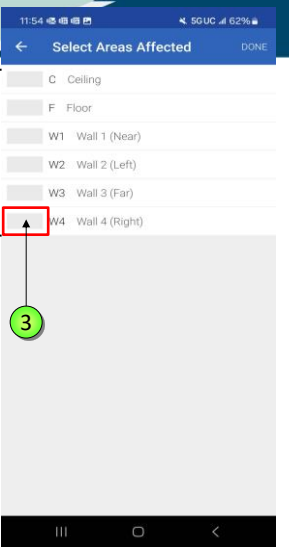
Task 20: Probable Cause – Moisture Meter

1. Response options for **'Is Moisture Meter Equal or Higher than 599'** are:
   - No
   - Yes
2. If '**No**', document the highest moisture meter measurement observed (below 599).
   If '**Yes**', document the highest moisture meter measurement observed 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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Task 20: Probable Cause – Moisture Meter

1. **Moisture meter readings** must be taken and documented for parent Leak Work Orders created with the following FC/PCs. For these FC/PCs the moisture meter question will be marked with an asterisk (*) to show that it is **mandatory to be answered**.
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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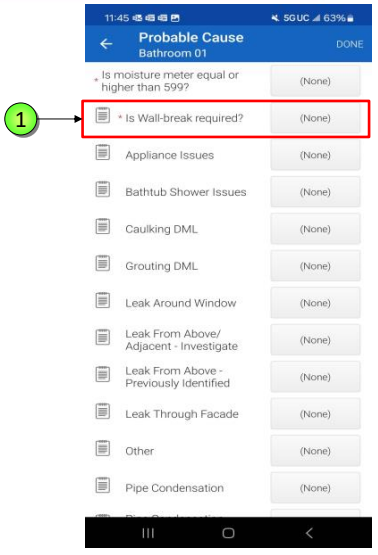
Task 20: Probable Cause – Wall Break

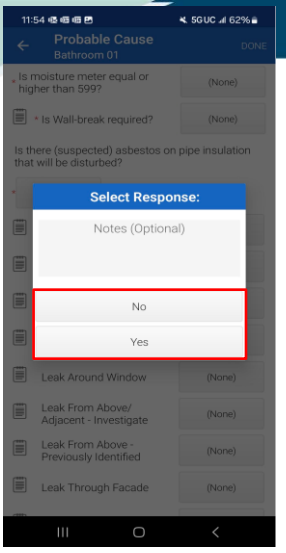
1. Response options for **'Is wall break required?'** are:

   - 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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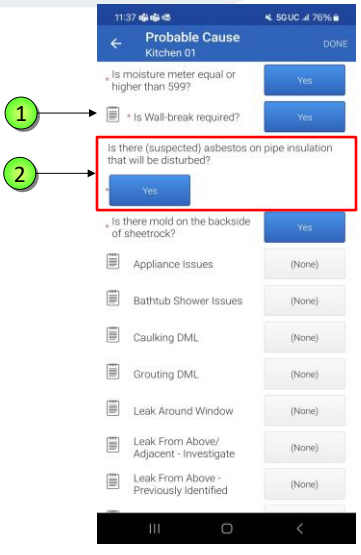
Task 20: Probable Cause – Asbestos Abatement

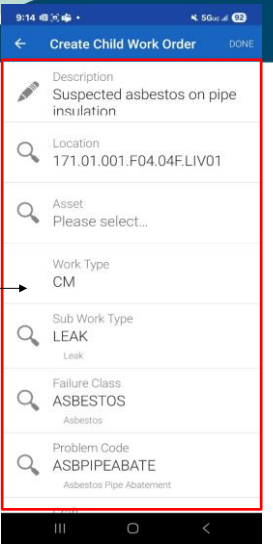
1. If you identify that **wall break is required**, iWM App will prompt **<u>two additional questions.</u>**

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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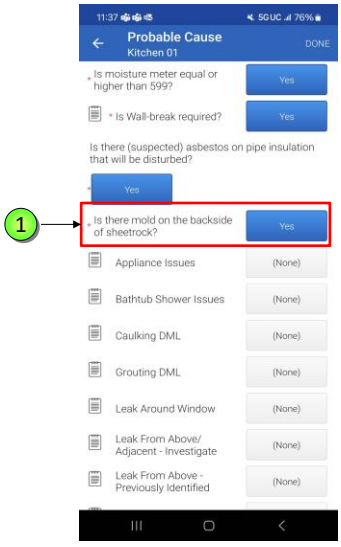
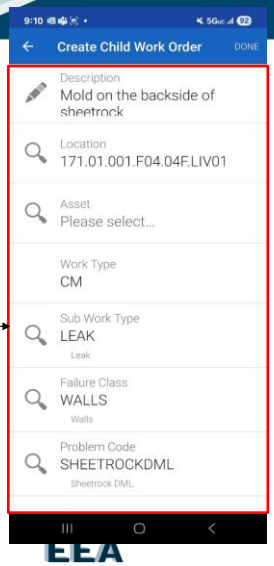
Task 20: Probable Cause – Sheetrock*

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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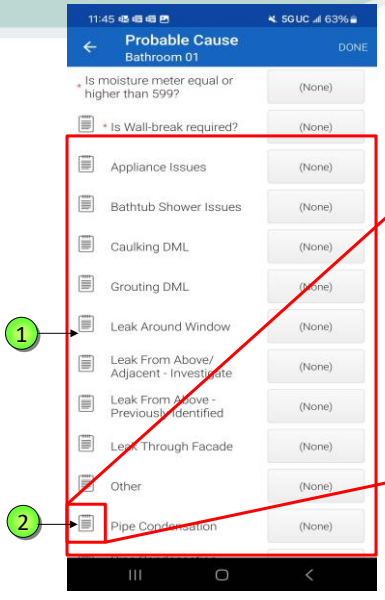
Task 20: Probable Cause

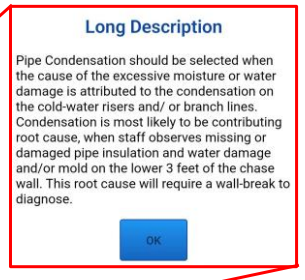
1. Select a **Probable Cause (Root Cause)**.
   - **At least one** Probable Cause should be selected.
   - **Up to four** Probable Causes can be selected.

   Note: *Select between **17** Root Causes.*

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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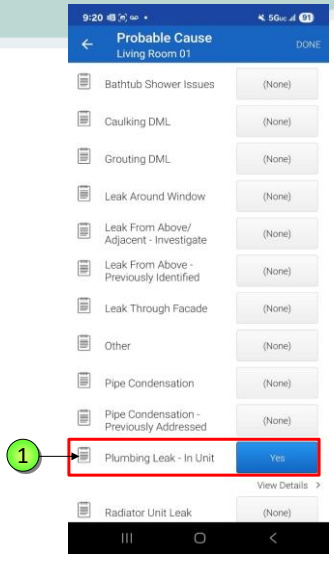
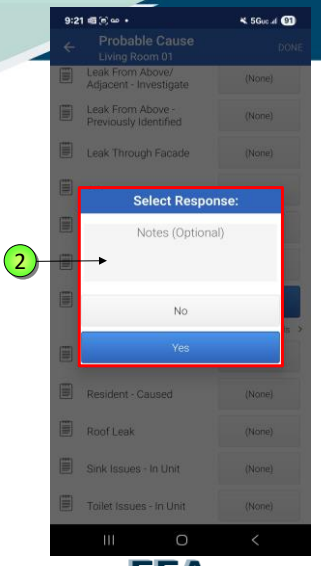
Task 20: Probable Cause – Plumbing (Example)

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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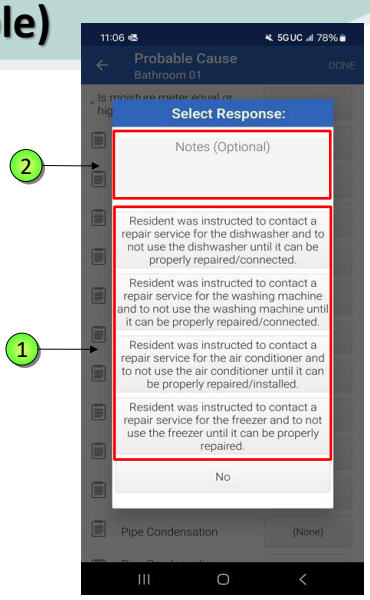
Task 20: Probable Cause – Appliance Issues (Example)

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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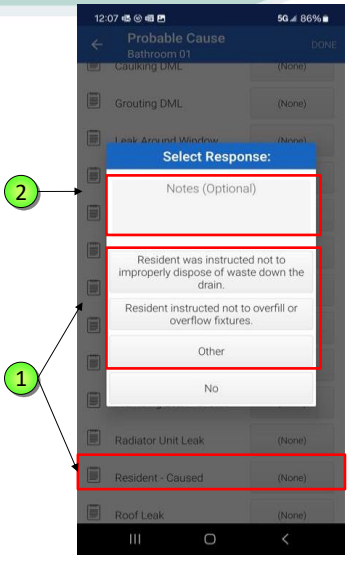
Task 20: Probable Cause – Resident Caused (Example)

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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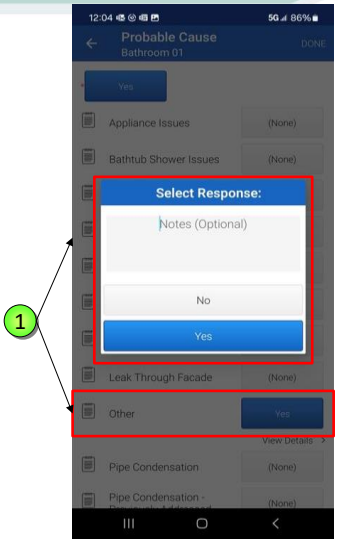
Task 20: Probable Cause – Other (Example)

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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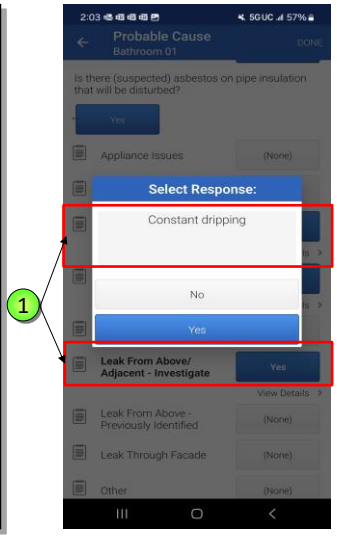
Task 20: Probable Cause
Leak From Above (Example)

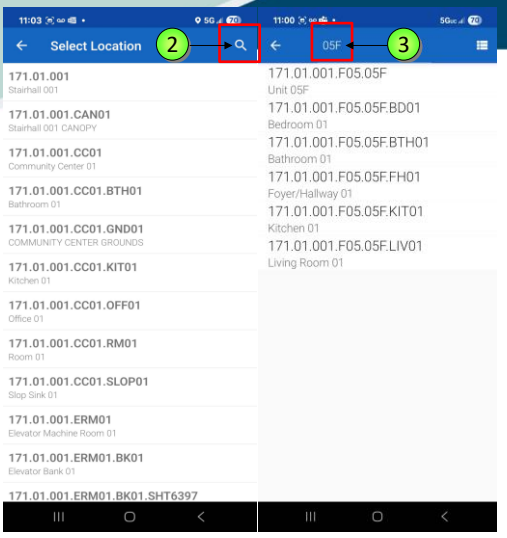
1. If root cause is **'Leak From Above/ Adjacent',** document the '**Location**' of the root cause and add 'Notes' as needed.

   Note: *If you are not able to locate the root cause, complete Task 10 – Evaluation of Conditions and return at a later date to complete.* ***Do not input the location until verified.***

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)





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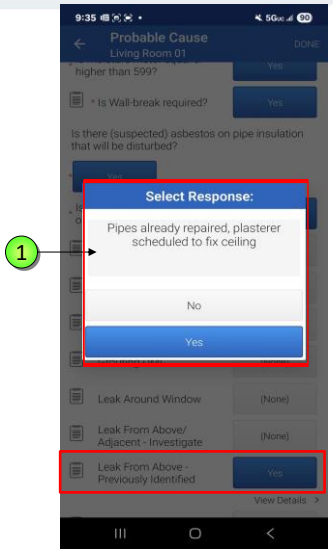
Task 20: Probable Cause
Leak From Above – Previously Identified

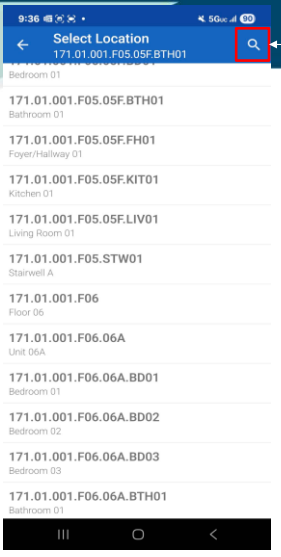
1. If root cause is **'Leak From Above - Previously Identified',** document the **'Location'** of the root cause and add '**Notes**', describing:

   - Completed repair(s), or
   - Pending repairs

   Note: *Consult PMS or APMS if not sure if the repair was already created and/or scheduled.*

2. Tap on the **magnifying glass** to search for '**Location'.**





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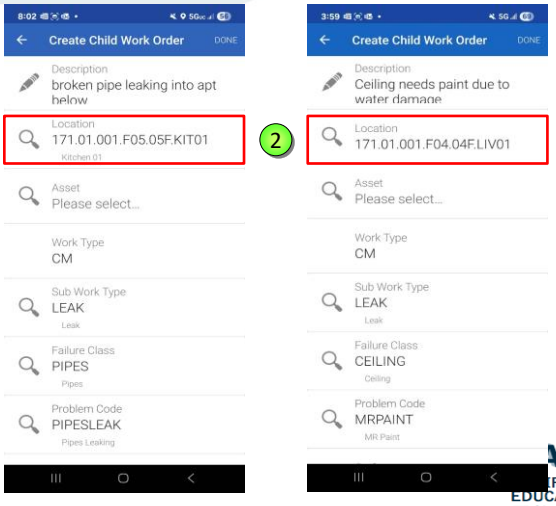
Task 20: Probable Cause
Leak From Above – Impacted Apartment

1. It is crucial that follow up child work orders (including cosmetic repairs) are created for the root cause apartment and additionally impacted apartment, as needed.

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

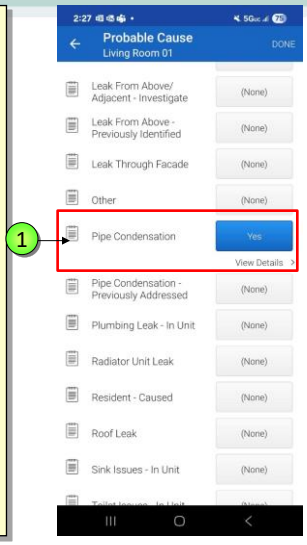


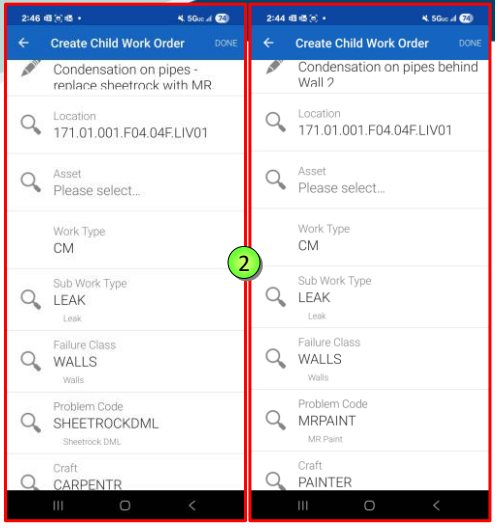
Task 20: Probable Cause – Pipe Condensation

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 failure class '**WALLS**' and problem code '**MRPAINT**'.

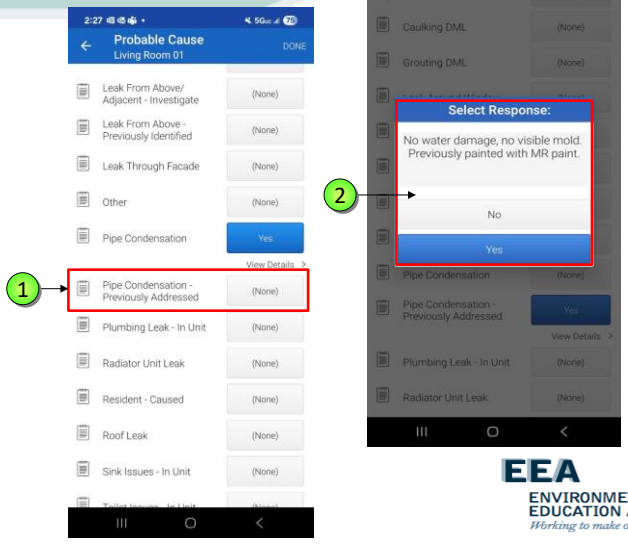
   In Sheetrock Constructions:
   - Create a child WO to replace sheetrock with fiberglass-faced gypsum board by selecting failure class '**WALLS**' and problem code '**SHEETROCKDML**'.
   - Create a child Mold-Resistant Paint WO by selecting failure class '**WALLS**' and problem code '**MRPAINT**'.





Task 20: Probable Cause – 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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Task 20: 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 2:

Leak from above PFU

✔

Note 1:

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

Note 2:

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

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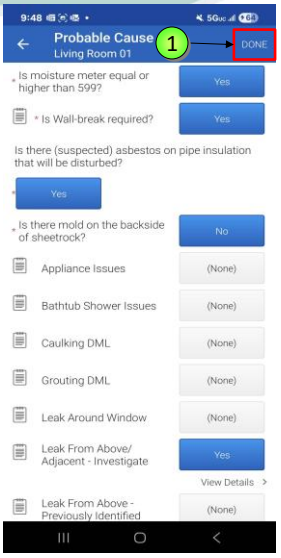
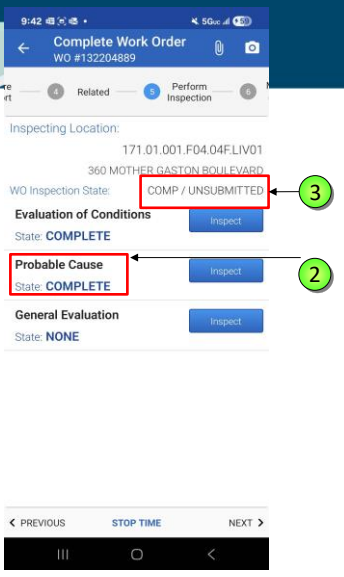
Complete Task 20: Probable Cause

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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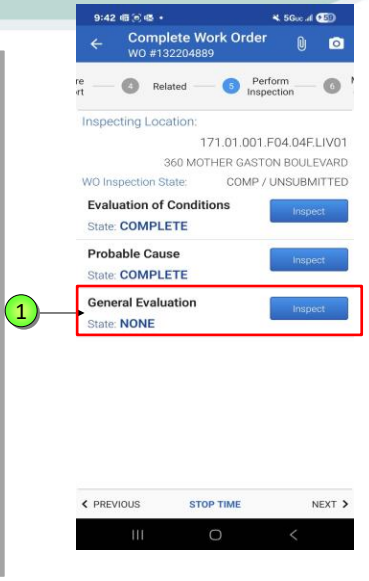
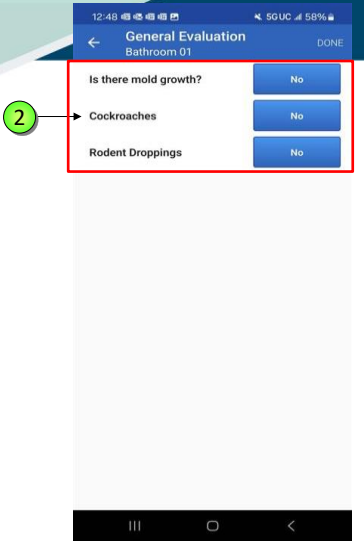
Task 30: General Evaluation (Optional)

1. Completing **'Task 30: General Evaluation'** is **optional** for Leak Work Orders.

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

2. Task 30 has three questions:
   - **1 - Is there Mold Growth?**
   - **2 - Cockroaches**
   - **3 - Rodent Droppings**





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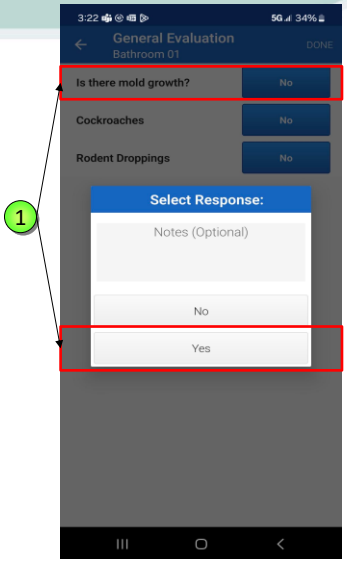
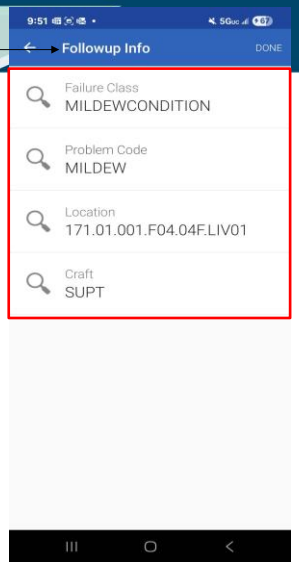
Task 30: General Evaluation

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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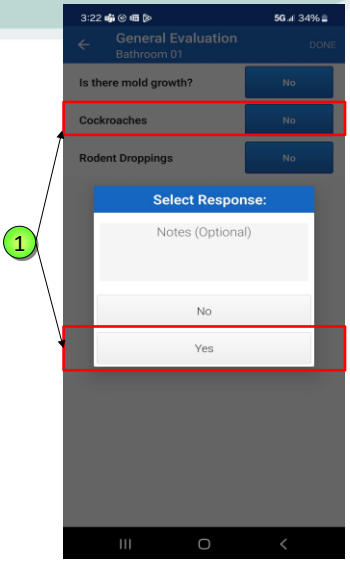
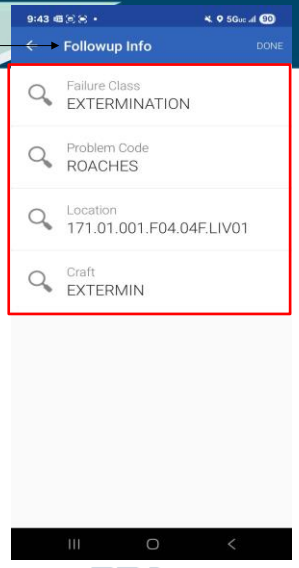
Task 30: General Evaluation

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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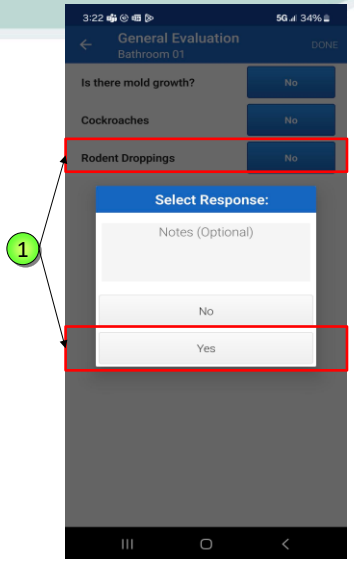
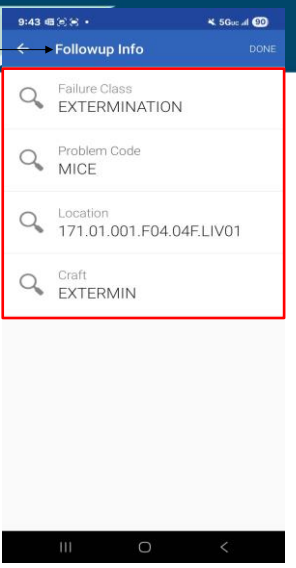
Task 30: General Evaluation

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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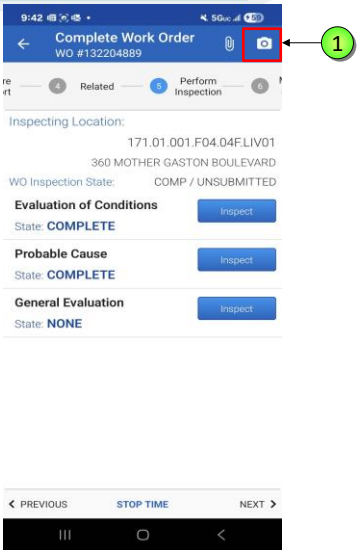
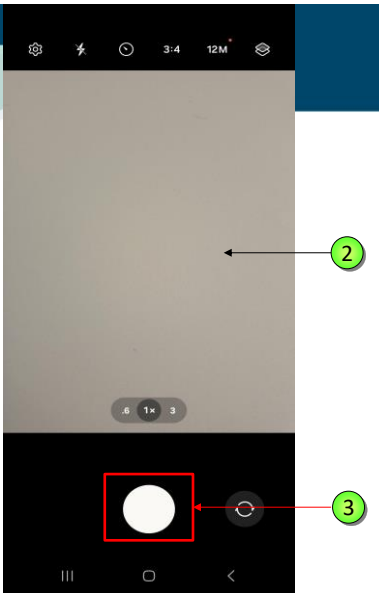
Taking Photos for Work Orders

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 Photos for Work Orders

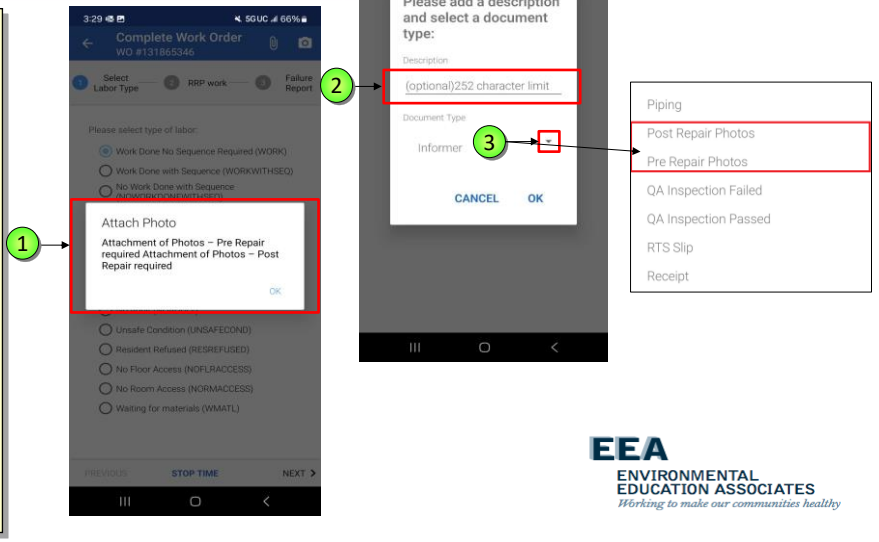
1. Support your findings with **photographs** to document the condition and completed or identified repairs.

   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 Photos for Work Orders

1. Best practices for taking photographs:

   - At least one photograph of the condition **prior to the repair**, if applicable.
   - At least one photograph of **repaired condition**, if applicable.
   - At least one photograph for each follow up repair, if applicable (e.g., each skilled trades)

2. For complex leak repairs (e.g., significant water damage), take **at least one close-up** photograph and **at least one photographs of the larger area** to capture scope or repairs.

   Note: *avoid taking unclear or blurry pictures.*

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

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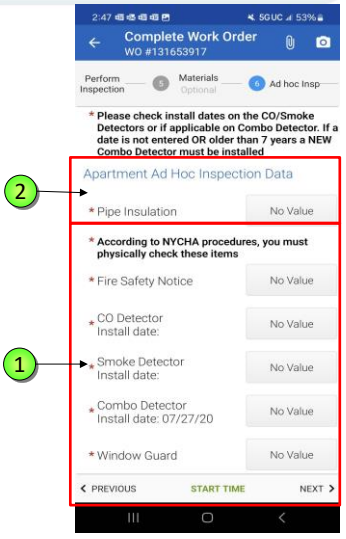
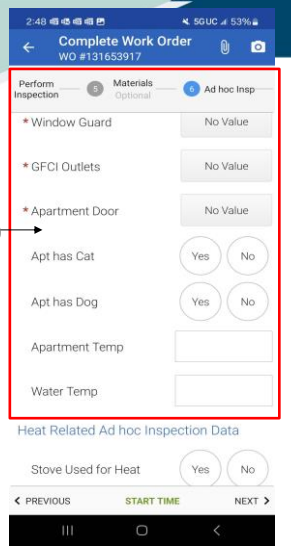
Ad Hoc Inspections

1. Completing **Ad Hoc Inspection** is required for all corrective maintenance work orders (including Leak WOs).

   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'.***

2. Some FC/PCs require the **'Pipe Insulation'** to be inspected as well.





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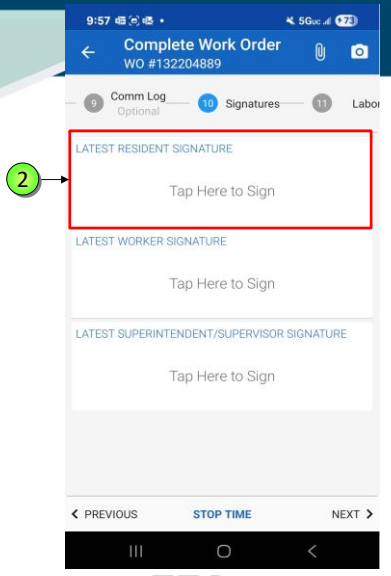
Capture Signatures

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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Capture Signatures - Resident Signature

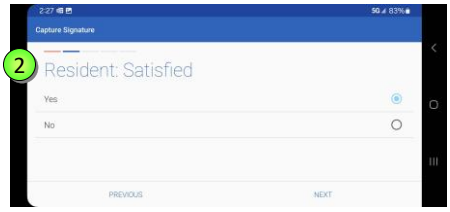
1. Upon completion of inspection and/or repairs, ask Resident to **sign WO on the iWM App.** Tap 'NEXT'.

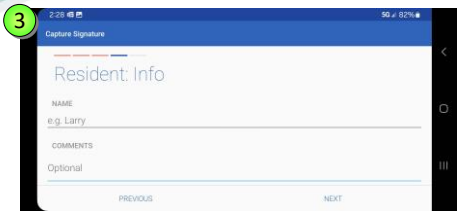
   Note: *If the* ***Resident Refused Work*** *to be completed, check the box.*

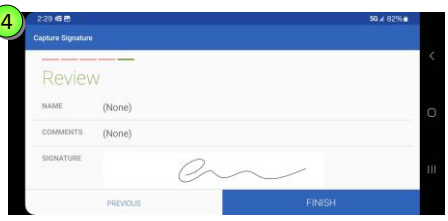
2. Ask **if the resident was satisfied or not** with completed inspection and/or repairs. Tap 'NEXT'.

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

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







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Capture Signatures - Worker Signature

After tapping on **LATEST WORKER SIGNATURE:**

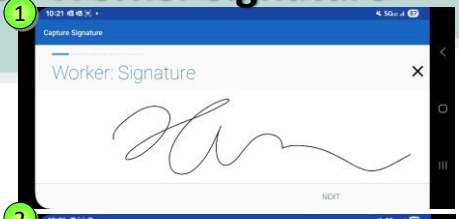
1. Sign and tap 'NEXT'.

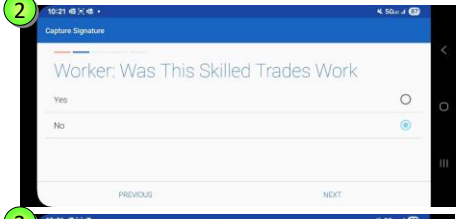
2. Answer 'Yes' or 'No' if the work was skilled trades work.

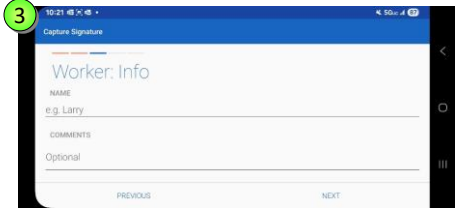
3. Enter your information.

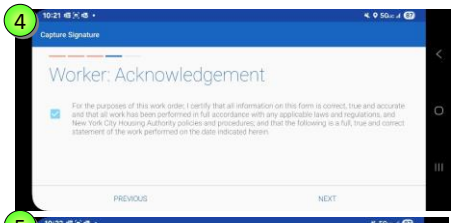
4. Answer the 'Acknowledgement Statement'.

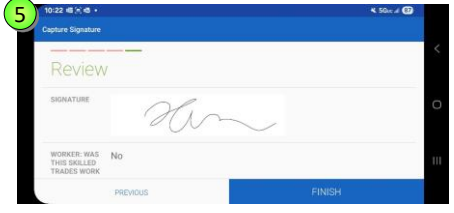
5. Review the information and tap **'FINISH'**.











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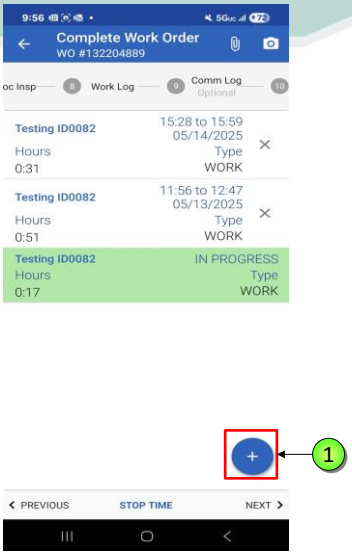
Capturing Labor Information

1. To add additional Labor or Partners tap on the 'Plus' icon (+).
2.
   - **Add Labor** add a helper that has a different work time duration.
   - **Add Partner** if you and your helper have identical work time duration.



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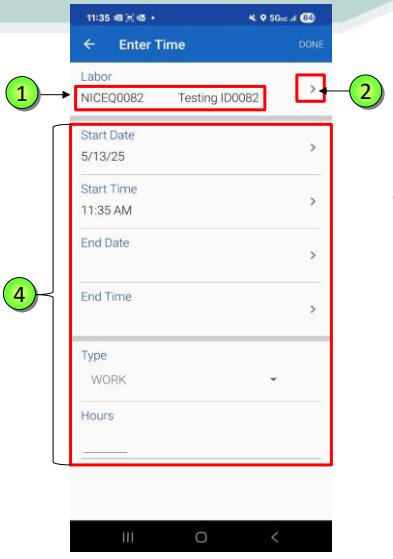
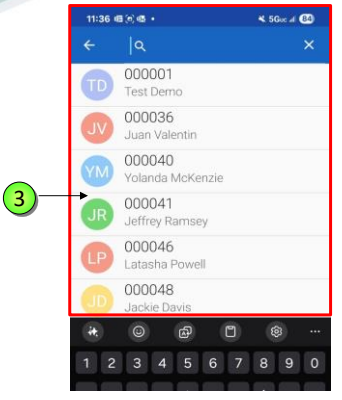
Capturing Labor Information – Add Labor

1. At the top of the screen **Employee Number** and **Name** are displayed.
2. Tap on › to select the name from the additional labor screen.
3. Select the name of the **Additional Laborer** to add as a contributor to this Work Order. ***Note:*** *You can search by First and last name or Badge ID.*
4. Fill out the rest of the information: Start/End date, Start/End Time, and work type.





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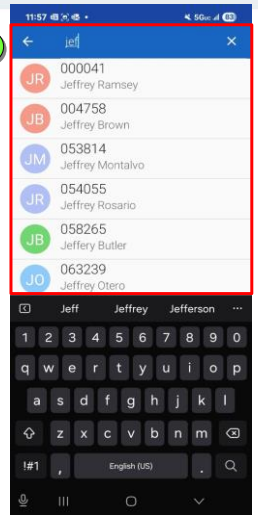
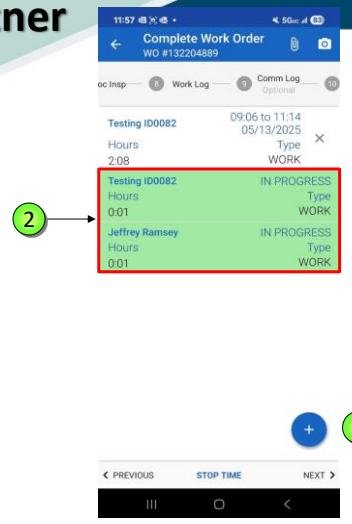
Capturing Labor Information – Add Partner

1. After tapping on to 'Add Partner', search by their First Name, Last Name, or Badge ID.
2. After selecting partner, labor records for initial maintenance worker and their partner <u>are identical</u> and are highlighted in green.
3. To add additional Partners, repeat the same process.

<u>Note:</u> *Labor time must be running while adding Partner.*





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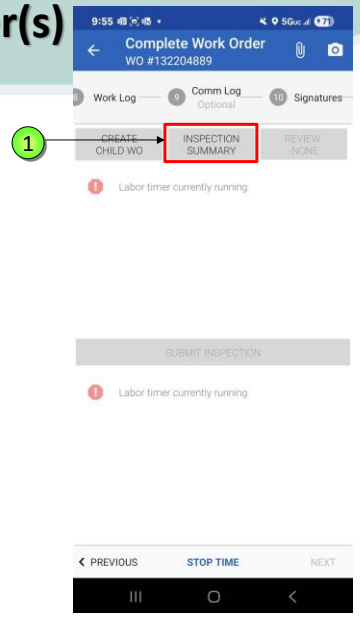
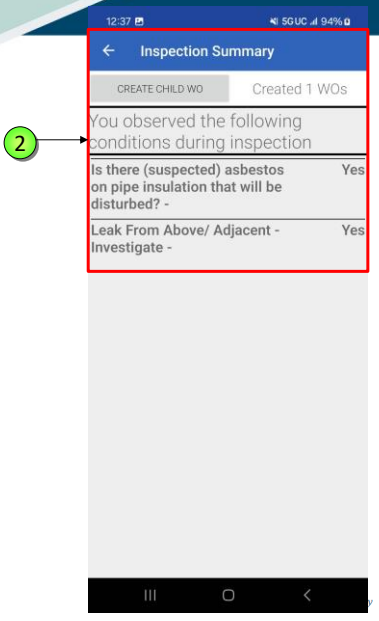
Creating Child Work Order(s)

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.

<u>Note:</u> *Work Orders from **Task 10** and **Task 30 are created automatically** during inspection and **don't require a follow up action**.*





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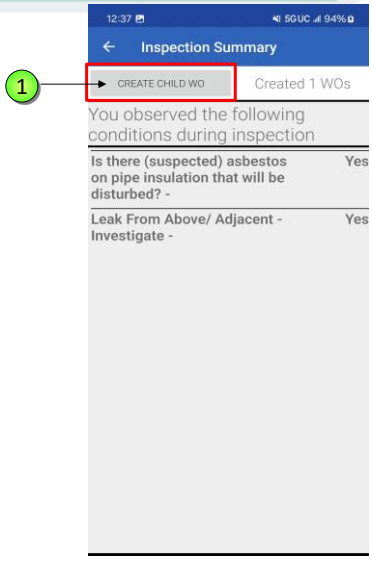
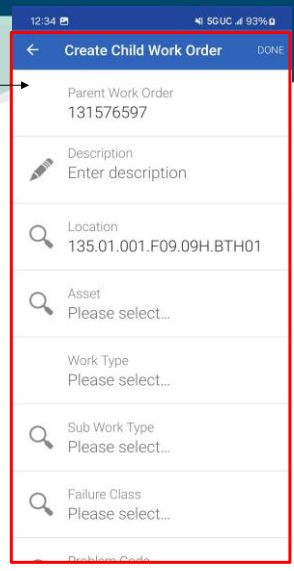
Creating Child Work Order(s)

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

   Note: *In this example, staff identified root cause as* ***'Leak From Above/ Adjacent – Investigate'*** *and suspected asbestos on* ***the pipe insulation****.*

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





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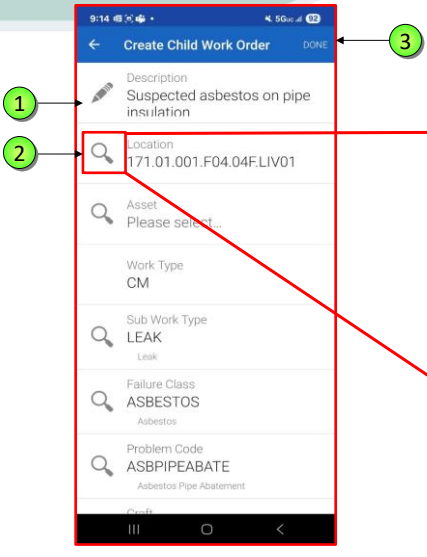
Creating Child Work Order(s)

Example 1: you need to create a child WO to address ***suspected asbestos.***

1. 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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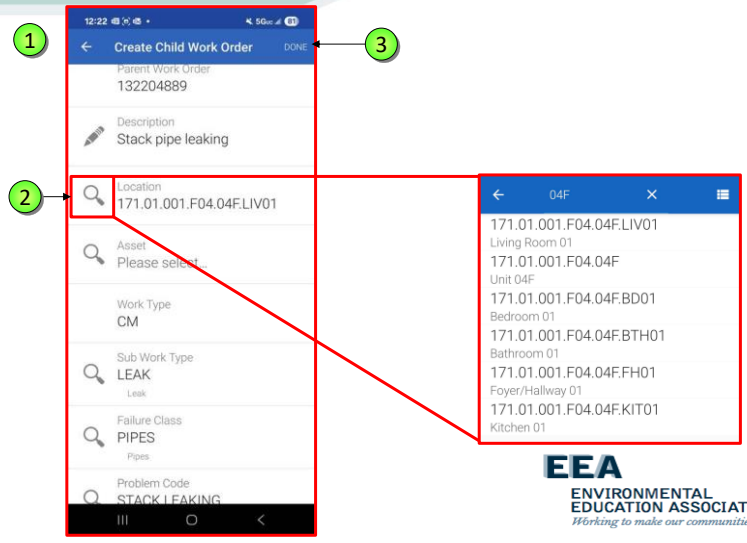
Creating Child Work Order(s)

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

1. Fill out all the required steps (see previous slide)
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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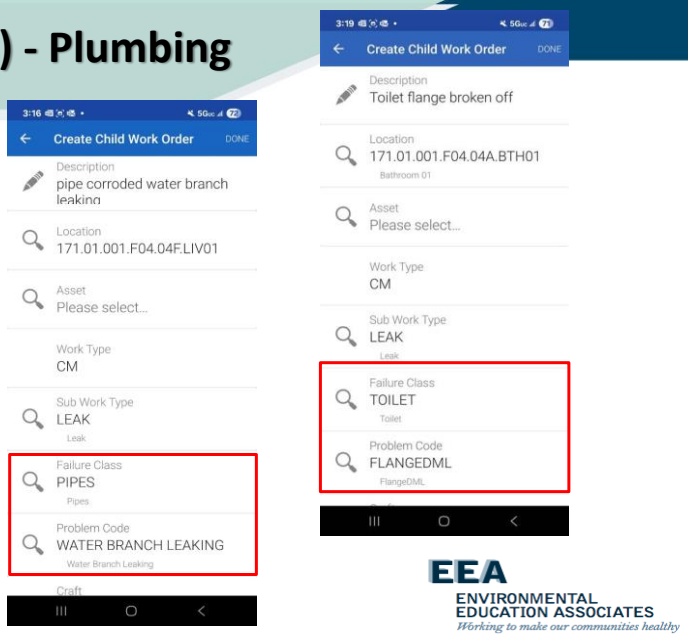
Creating Child Work Order(s) - Plumbing

1. When creating child work orders, **carefully select FC/PC** that most accurately identify the repair need.
2. 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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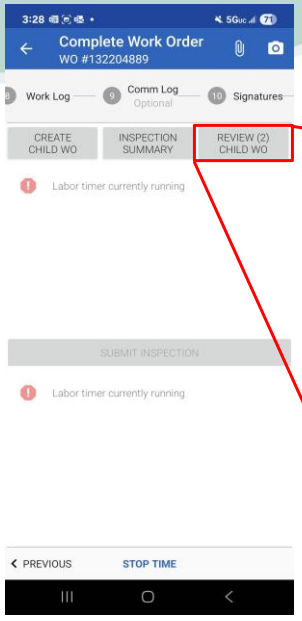
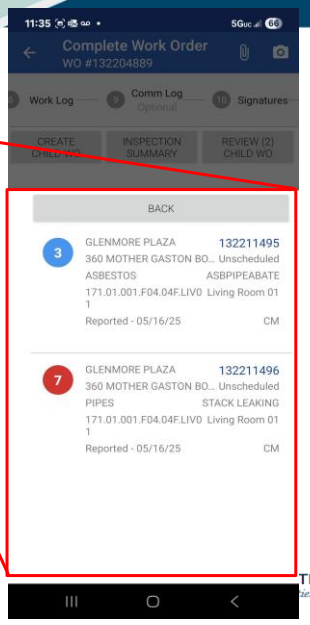
Viewing the Child Work Orders

1. Once the maintenance worker finishes creating the child work orders, you could view them by tapping on **'REVIEW (X) CHILD WO' view .**





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Repair to Schedule Slip ('RTS slip')

1. If **skilled trade work** is needed to complete the repair(s), fill out and issue to the resident RTS slip.

   Note: *Skilled trades is limited to* ***painter, plasterer, carpenter, plumber, electrician, exterminator, bricklayer, roofer****, and* ***glazier****. All other work, which is not scheduled by Neighborhood Planner, does not require an RTS slip to be presented to the resident.*

2. Once RTS is filled out, take a photograph of the RTS slip and upload to the **'RTS slip' folder** on the work order.

3. Inform resident to call Neighborhood Planner to schedule repairs.

1

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 - lanning Team:**
Mon-Fri between the hours of 8:30am – 4:30pm

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

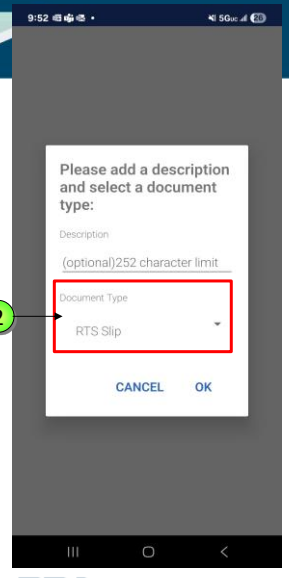
New repairs can be requested through the contact lines below:

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. 12/25/23) V3

2



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Repair to Schedule Slip ('RTS slip')

If more than one unit is affected and skilled trade work is required (e.g., leak from above), the maintenance worker must fill out RTS slips for all impacted apartments.

1. • **For Impacted Apartment,** the RTS slip should be filled out with the **parent Leak WO at the top (e.g., Maintenance)** 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)** 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 - 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:

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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 - 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

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

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Closing Leak Work Order

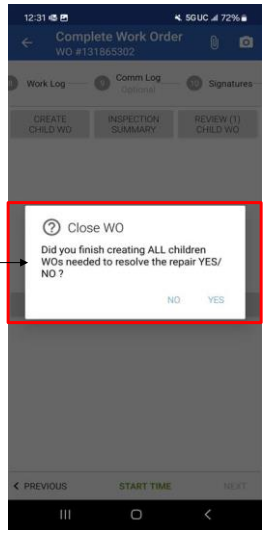
1. Response options for **'Did you finish creating ALL children WOs to resolve the repairs?'**, are:

   - Yes
   - No

2. Select 'No' if you need to create any additional repairs (child WOs).

Note: ***Do not close the Leak WO until:***

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



1

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iWM Mobile Application Training - Agenda

1. Welcome, Introductions, Overview
2. Sort, Search and Select WOs from Menu List
3. End-to-End Leak Inspection WO (various scenarios)
4. Closing Leak Inspection WO (no access)
5. Checking Leak WOs in Maximo
6. Quality Assurance
7. Leak Inspection WOs Exercises

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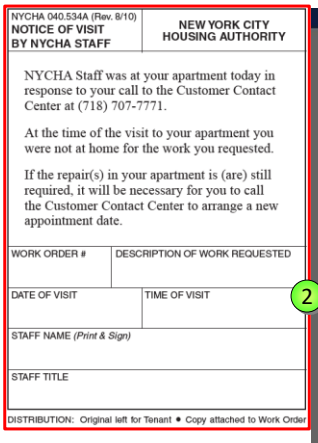
Tenant Not Home

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

2. To close Leak WO with 'no access' staff must:
   - 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'.**

3. ***Note:*** *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 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.

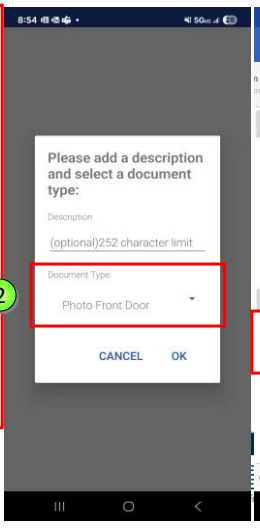
At the time of the visit to your apartment you were not at home for the work you requested.

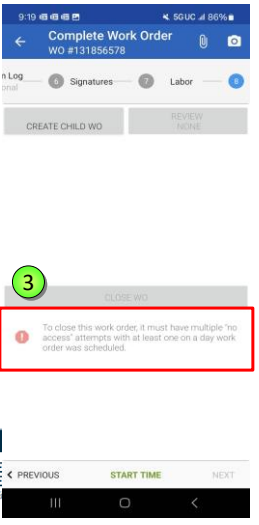
If the repair(s) in your apartment is (are) still required, it will be necessary for you to call the Customer Contact Center to arrange a new appointment date.

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

2





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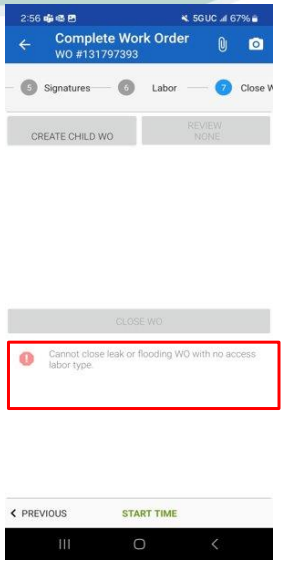
Tenant Not Home

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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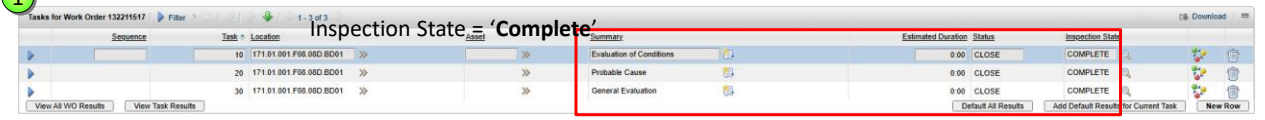
Maximo View of Leak Work Orders

Example 1: Simple Leak WO

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

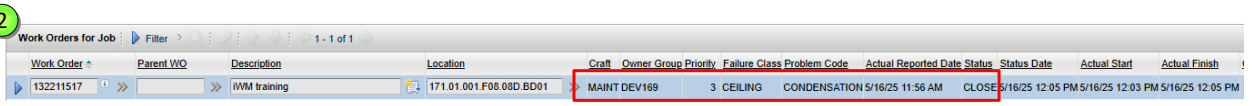
Inspection State = '**Complete**'

1



Work Order Status = '**Closed**'

2



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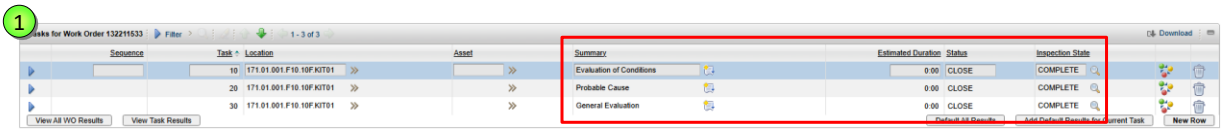
Maximo View of Leak Work Orders

Example 2: Complex Leak WO

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

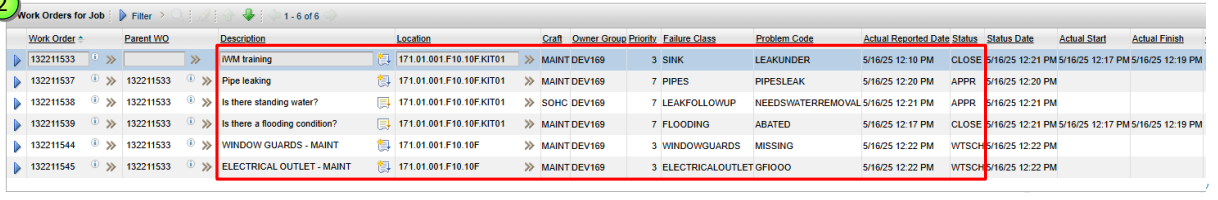
Inspection State = '**Complete**'

1



Work Order Status = '**Closed**' + Open Repairs.

2



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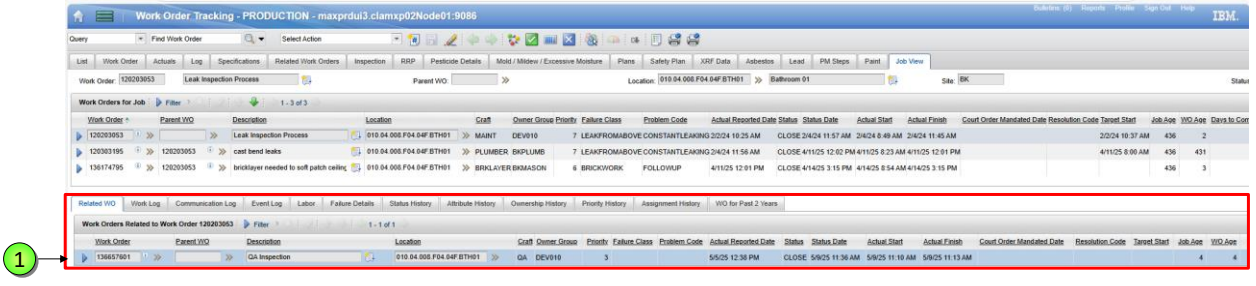
Quality Assurance

NYCHA's Office of Quality Assurance conducts **randomized quality assurance inspection(s)** for closed Leak WOs.



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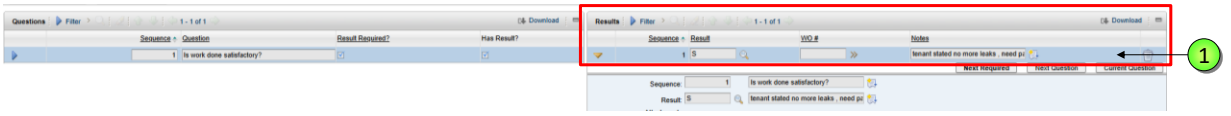
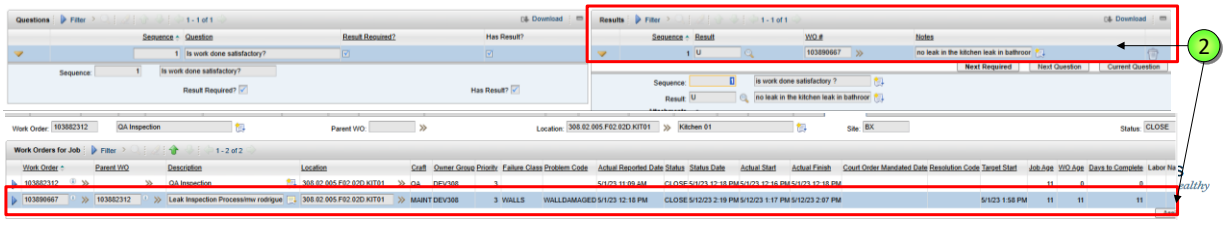
Quality Assurance

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



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iWM App Practical Exercises

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NYCHA Leak Training

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Leak From Above (Scenario)

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.

Note: *Before visiting, gather the tools listed in Appendix G of the Leak SP.*
Additionally, for "Leak from Above" cases, it is recommended to have a second trained staff member. Ask PMS/APMS for support. If not available, proceed alone.

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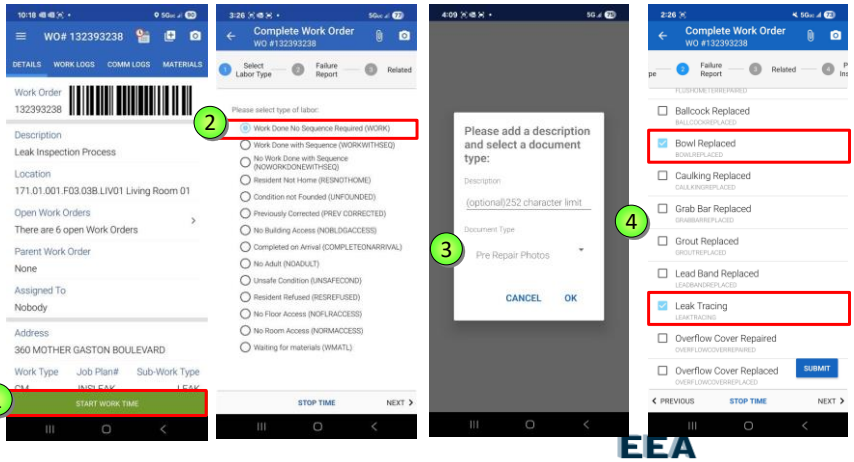
Leak From Above (Scenario)

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/adjacent to locate the root cause(Leak Tracing).
5- Speak with the resident to gather information about the history of the leak.



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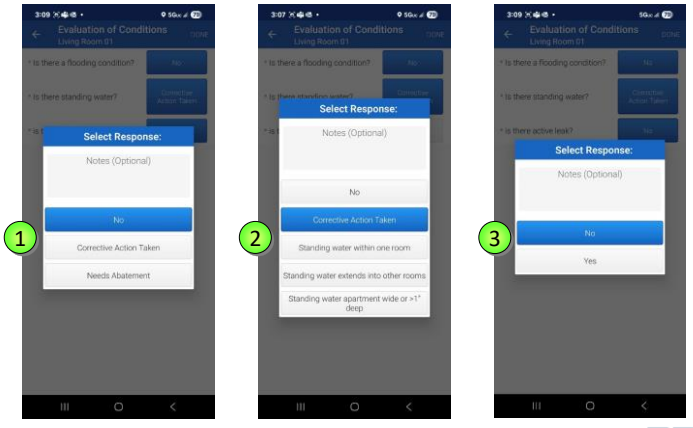
Leak From Above (Scenario)

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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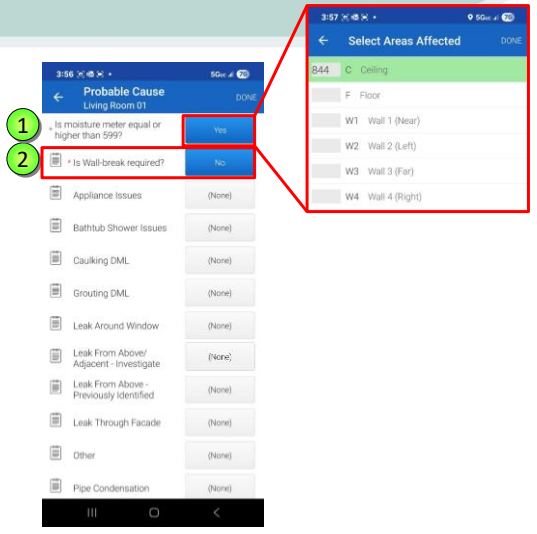
Leak From Above (Scenario)

1. 7- Enter moisture meter measurements.
2. 8-Indicate if wall break is required.



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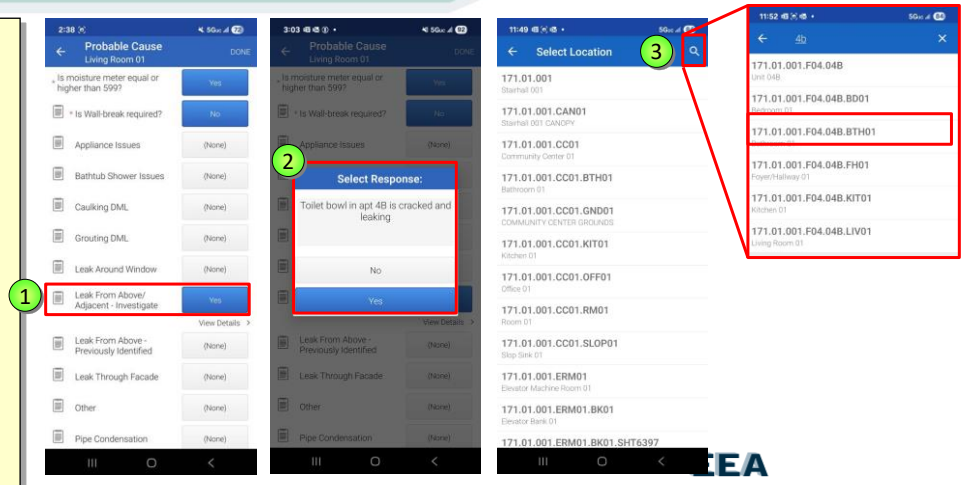
Leak From Above (Scenario)

8- Inspect above/adjacent 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** 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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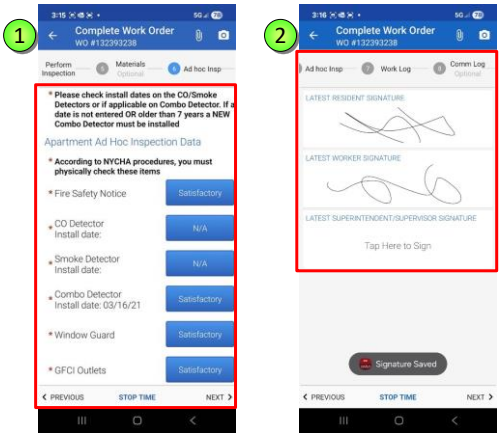
Leak From Above (Scenario)

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



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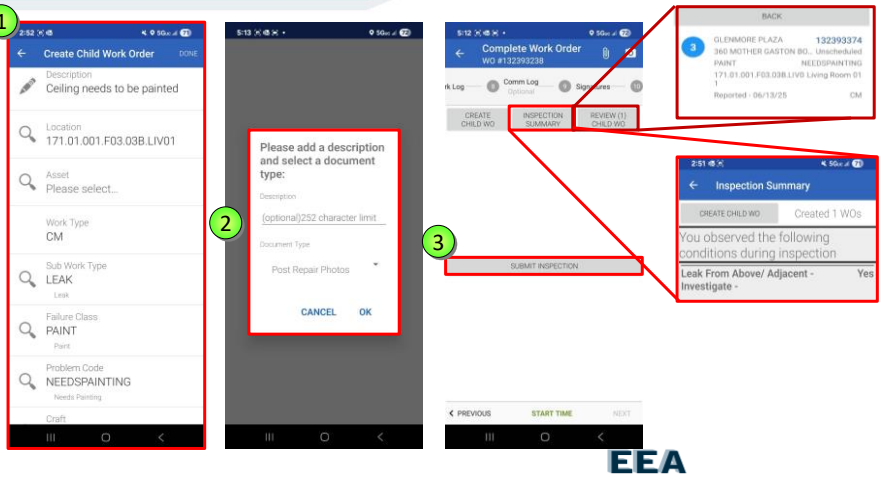
Leak From Above (Scenario)

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



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Probable Root Causes & Root Cause Scavenger Hunt

NYCHA Leaks Detection & Repair Root/Probable Causes

1. **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).

    a. Improperly Installed Dishwasher (or Tubing); Instructs the resident to contact a repair service for the dishwasher and to not use the dishwasher until it is properly repaired and/or connected.
    b. Improperly Installed Washing Machine (or Tubing); Instructs 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
    c. Improperly Installed Air Conditioner; Instructs 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
    d. Improperly Installed Freezer; Instructs the resident to contact a repair service for the freezer and to not use the freezer until it is properly repaired

2. **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).

3. **Caulking Damaged, Missing, Loose (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/toilet caulk.

4. **Grouting Damaged, Missing, Loose (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)

5. **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.

6. **Leak From Above/Adjacent – Investigate -** should be selected when the cause of the leak, water damage, or excessive moisture is attributed to a leak from the apartment above or adjacent to the impacted apartment. The maintenance worker or other trained staff is responsible for tracing the leak to the root cause apartment and identifying the probable cause.

7. **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 is an existing open work order to abate that the maintenance worker or other trained staff has confirmed.

8. **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.

9. **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.

10. **Pipe Condensation - Previously Addressed -** should be selected when the cause of an incidental wet condition on the lower 3 feet of the chase wall is attributed to condensation on the cold-water risers and/or branch lines, and:

a. There is no water damage and mold growth present; and
b. Interim controls were already put in place to prevent mold growth (e.g., fiberglass-faced gypsum board was installed, and mold resistant paint was previously applied).

11. **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).

12. **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.

13. **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). The maintenance worker or other trained staff selects one of the following drop-down options in the iWM App and provides specific instructions to the resident to prevent the condition from recurring:

    a. Improper Disposal of Waste Materials Down the Drains; Instructs the resident not to dispose of waste objects (other than toilet paper in toilets) down the drains (e.g., kitchen grease, paper towels, disposable diapers, cotton balls).
    b. Overflowing Fixtures; Instructs the resident not to overfill and/or overflow sinks and tubs
    c. Other; Provides other instructions to the resident, as needed, and documents the root cause(s) in the Work Log on the iWM App.

14. **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).

15. **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).

16. **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, and faulty ballcocks).

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

What's the Root Cause? - NYCHA Leaks Detection Scavenger Hunt

Use the moisture meter readings placed around the pest management space to determine where wet readings are present and then choose the appropriate probable root causes of leaks for each wet reading. Select one root cause per moisture meter reading from the list below.

Moisture Reading	Room/Location	Probable Root Cause
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Probable Root Causes (each root cause can only be used once)

Appliance Issues	Bathtub Shower Issues	Caulking DML
Grouting DML	Leak Around Window	Leak Through Façade
Leak Above/Adjacent – Investigate		Pipe Condensation
Plumbing Leak – In Unit	Radiator Unit Leak	Resident Caused
Roof Leak	Sink Issues	Toilet Issues - In Unit

Note: Moisture meter reading that are not wet have no root cause

iWM Work Order Scenarios

Scenario #1

Worker Oder Type:

- **Failure Class:** SINK
- **Problem Code:** STOPPAGE
- **Location:** KITCHEN

Background

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.

Observations

Upon inspecting the kitchen sink, you notice the following:

1. There is no flooding around the sink or in the surrounding area.
2. No standing water is present in or around the sink, suggesting the issue is not an active leak or overflow.
3. No active leaks are visible under the sink or around the pipes.

Findings

1. The issue appears to be a simple stoppage with no visible signs of plumbing or cosmetic damage.
2. You clear drain blockage and close the work order. No follow-up work is needed.

Scenario #2

Work Order Type:

- **Failure Class:** PIPES
- **Problem Code:** PIPESLEAK
- **Location:** BATHROOM

Background

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 in the impacted unit.

Observations

Upon inspection, you observe the following:

1. There is significant flooding in the area, with water pooling on the floor. Leak seems to be ongoing.
2. Water damage is visible on the wall where the plumbing issue is suspected to have originated. The water damage doesn't extend to the top area of the wall. Moisture meter reads _____ on the wall.
   Insert reading

Findings

1. You make a wall break and determine that the issue is attributed to a crack on the pipe.
2. You make a temporary repair on the middle section of the pipe to stop leak and prevent further flooding.
3. You suspect asbestos on the lower area of the pipe that *might be disturbed* during follow up plumbing repair (temp repair was made above this area without any risk of disturbing asbestos).
4. You also notice rodent droppings in the area.
5. Complete the RTS Slip and issue it to the tenant.

Scenario #3

Work Order Type:

- **Failure Class:** LEAKFROMABOVE
- **Problem Code:** CONSTANTDRIPPING
- **Location:** BATHROOM

Background

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.

Observations

Upon entry, you observe a small puddle in the bathroom, and water dripping from the ceiling. You don't see a flooding condition.

Findings

1. You radio a SOHC to dispatch a Caretaker who helps remove the standing water.
2. Moisture meter around the lead bend reads 822.
3. After investigating the leak, you confirm that the source is a toilet in the apartment directly above. You perform a bowl lift in the bathroom of the apartment above and replace the wax ring.
4. The bathroom ceiling and wall area around lead bend in the impacted apartment need to be repainted.
5. In addition, you noticed mold on the bathroom caulk measuring around 3 sq ft in the impacted apartment (unrelated to Leak).
6. Complete the RTS Slip and issue it to the tenant.

Scenario #4

Work Order Type:

- **Failure Class:** WALLS
- **Problem Code:** WALL LEAK
- **Location:** KITCHEN

Background

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.

Observations

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.

Findings

1. You inspect the apartment above and do not see signs of water damage, and a resident in 2 apartments above is not home. You enter this information in the work log.
2. You trace the leak to 3rd apartment above the impacted units, where lower section of the wall measures 989 on the moisture meter but top section of the wall reads 156.
3. You make a wall break in the apartment with suspected root cause (three apartments above the impacted unit) and determine that the source of the leak originates from the cold-water riser in that unit.
4. You don’t see any suspected ACM on the pipe insulation and make a temporary repair by using epoxy.
5. You determine that the follow up work is needed to replace the pipe in root cause apartment and replaster damaged wall. Both the impacted unit and the root cause unit will need to be repainted.
6. Complete the RTS Slips for both units and issue it to the tenants.

Scenario #5

Work Order Type:

- **Failure Class:** WALLS
- **Problem Code:** WATERDAMAGE
- **Location:** BATHROOM

Background

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.

Observations

Upon entry, you observe visible signs of the water damage in the lower section of the wall and moisture meter reads 650. The top area of the wall and adjacent walls measure dry on the moisture meter. You make a small wall break in the lower section of the wall to investigate. You insert borescope and carefully check the conditions within the wall cavity for active leaks - after a few minutes of careful examination you do not find any active leaks. However, you notice missing insulation in a few areas of the pipe that actively condensate. You determine that ongoing condensation might be attributing to the water damage that the tenant has been complaining about.

Findings

1. There is no active leak, flooding or standing water.
2. Wall break is needed to inspect conditions behind the wall cavity.
3. No suspect asbestos or asbestos containing materials (ACM).
4. The issue is attributed to active condensation that worsened during hot summer months and you determine that ***'Interim Controls'*** approach to address condensation will be sufficient to eliminate the issue. You create a sheetrock replacement and mold-resistant paint work order.
5. You do not notice any environmental issues.
6. Complete the RTS Slip and issue it to the tenant.

Repair to Schedule Slips

NEW YORK CITY HOUSING AUTHORITY
Repairs to Schedule Slip

Date: **Work Ticket #:**

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

____ **Bricklayer**	____ **Exterminator**	____ **Roofer**
____ **Electrician**	____ **Carpenter**	____ **Plumber**
____ **Painter**	____ **Glazier**	____ **Plasterer**

To schedule theserepairs, please call the
QSI 4 **Neighborhood Planning Unit:**
(646) 994-1282

Available Mon-Fri, 8:30am – 4:30pm

You can also check the status of your work tickets at any time by calling the Customer Contact Center (CCC) at (718) 707-7771 or using the MyNYCHA app or website: 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. 5/21/25) V4

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NYCHA042.800 (Rev. 5/21/25) V4

48 Notice for Health & Safety Repairs

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。

OUR VISION FOR NEXT GENERATION NYCHA
Safe, Clean, And Connected Communities

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 / 報修項目說明:

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 еше 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

根據您所簽署的租約規定，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所需的維修工作。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。

Leak Inspection Checklist

Before the Inspection

□ 1. Check iWM App throughout the day to review 'assigned' work orders.

□ 2. Respond based on work order:

- Priority (e.g., Priority 9 or 7 in Maximo).
- Severity (e.g., Leak From Above *Flooding* vs. Leak From Above *Water Penetration*).
- Scheduled time for non-emergency repairs (e.g., 9am-12pm or 1pm-4pm).

□ 3. **Running late or will not meet the scheduled appointment?** Notify APMS or PMS.

□ 4. Bring tools necessary to complete work. Check tools to make sure they work.

All Leak (CM) Work Orders		
Moisture Meter	Hammer (Regular)	Safety Glasses
Step Ladder (3' or 4')*	3 lb. Lump Hammer (Sledge)	Nitrile Gloves
Set of Pipe Wrenches	Utility Knife	Rags
Tongue and Groove Pliers	Epoxy	Duct Tape
Aviator Snips	Headlamp or Flashlight	Respiratory Protection (N95)*
Leak From Above (LFA) Work Orders		
Tools for an Initial Wall Break		
Drills/ Drill Bits	Allway Handy Saw	Masonite, Plas-tec, etc.
Borescope	Sheetrock Saw*	Caulk
Tools to Enlarge a Wall Break		
HEPA vacuum cleaner	6mil Poly-Sheeting Roll	Spray bottle
Stoppages		
Hand Drum	Toilet Auger w. Swivel Head	

□ 5. For **Leak From Above Work Orders**, request help from another worker to inspect multiple units. Request APMS or PMS for assistance, if needed.

□ 6. Bring required documents:

- NYCHA From 042.800, *Repairs to Schedule slip (RTS slip)*.
- NYCHA Form 042.727, *48-Hour Notice for Health and Safety Repairs*.
- If handheld device is not available, use the *Maximo Parent Leak Work Order form* and submit results to PMS or APMS to create follow-up repairs.

□ 7. **Start time in the iWM App** when at the resident's door.

- If a resident is not home or refuses entry:
  - Attempt contact via iWM App.
  - Notify Property Management for assistance to contact resident, if needed.
  - If conditions are **severe**, use *Right of Entry* to access the unit after obtaining prior authorization from APMS or PMS.
  - If conditions are **not severe**, post *48-Hour Notice* and take a photo via iWM App. |

During the Inspection

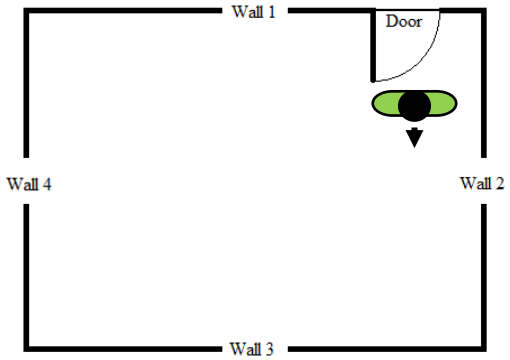
☐ 8. **State your name and title to introduce yourself:**
- Show NYCHA ID and explain the purpose of the visit *(e.g., Leak repairs)*.
- Ask the resident about the history of the problem *(e.g., When did it start? Are any prior repairs made? Are there any other rooms affected?)*

☐ 9. **Immediately address** any flooding or emergency conditions.

☐ 10. **Inspect the room and nearby areas for water damage**:
- Use **moisture meter to take multiple measurements** of each impacted surface.
  - Prioritize plumbing chase walls, areas above toilets and showers/ bathtubs.
  - Inspect kitchen cabinets and bathroom vanities for water damage.
- Use **a step ladder** to measure moisture on ceilings and upper walls.

Visible water damage or mold?	❖ Take moisture readings every 6" (horizontal & vertical). ❖ 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).

- Document **the highest moisture reading against each impacted surface** in the iWM App.
  - *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*



Tip! If you observe visible moisture (e.g., water leaking from the ceiling), you can manually enter moisture meter reading of **999** in the iWM App.

☐ 11. **Identify Source of the Leak (Root Cause):**
- If wet readings are limited to **the lower wall section**, the source is likely within the **same or adjacent apartment**.
- If wet readings reach the **upper wall or ceiling**, the source may be from the **apartment above, adjacent unit, or roof — <u>further leak tracing is needed!</u>**
- Common Leak Indicators:
  - **Lead bend area:** Leak is likely from a **toilet issue** in the apartment above (e.g., wax gasket or flange).

Tip! Identify the exact source of the leak before creating Plumbing Repair.

- **P-trap area:** Leak is likely from a **bathtub waste or overflow pipe leak** above.

□ 12. **Need a wall break to find a Root Cause?**

- **Assess the area first, without breaking the wall (if possible):**
  - Remove **escutcheon plate** (if leak is in shower area).
  - Remove **the medicine cabinet** (if leak is behind a sink or around a toilet).
- **Make an initial wall break:**
  - Start with a **1 sq in.** opening and insert **borescope** to locate the leak.
  - Enlarge to **1–2 sq ft to locate leak and/or perform temp repairs.**
- **Control dust and debris:**
  - Run **HEPA vacuum during wall break** and for **5–10 minutes after.**
- **Repair or escalate:**
  - Make **temporary repair** (e.g., epoxy), if possible
  - If not repairable, **notify to APMS or PMS** to escalate repairs to Skilled Trades.
- **Seal the wall break:**
  - Cover with **pest-proof material** (e.g., Masonite or Plas-tec Polywall).
- **Document wall break in iWM App:**
  - Use repair codes **'Wall Broken'** or **'Wall Break Completed'**, or add details in **'Work Log'**

□ 13. **Take clear photographs of observed conditions and repairs made.**

- 'Pre-Repair' photo(s)
- 'Post Repair' photo(s)

Tip! Take photographs of **each type of repair needed,** including multiple rooms or units! **Include close-up shots and wider shots** to show full scope of repairs.

□ 14. **Document Root Cause in the iWM App (select up to four[1] Root Causes).**

- **Escalate** to APMS/ PMS if you cannot the Root Cause**. Do not close Leak Work Order** until the root cause is identified!

Category	Root Cause
Plumbing	▪ Bathtub Shower Issues ▪ Plumbing Leak – In Unit ▪ Radiator Unit Leak ▪ Sink Issues – In Unit ▪ Toilet Issues – In Unit
Leak From Above	▪ Leak From Above/Adjacent – *Investigate* ▪ Leak From Above/Adjacent – *Previously Identified*
Structural	▪ Leak Around Window ▪ Leak Through Façade ▪ Roof Leak ▪ Caulking DML ▪ Grouting DML
Condensation	▪ Pipe Condensation ▪ Pipe Condensation – *Previously Addressed*
Other	▪ Appliance Issues ▪ Resident-Caused ▪ Other

[1] If there are multiple Root Causes, select the most significant four in the iWM App.

□ 15. **Create child work orders to address full scope of repair(s), including:**
- **'Impacted Apartment':** apartment that called initial request for repairs.
- **'Root Cause Apartment'**: apartment with originating root cause.
  - Adjust the **'Location'** in the iWM App, when repair is needed in different unit.
- Identified **'Additional Apartments' impacted** by the same issue?
  - If possible, create **child work orders** while you have access to unit(s).
  - If not possible, instruct the resident(s) to **call CCC** or **use MyNYCHA App** to submit a new repair request.

Tip! For plumbing repairs, **select a specific 'Problem Code'** for a pipe that is leaking (e.g., '**Riser Leaking',** or **'Stack Leaking'**).

□ 16. **Identified unrelated mold or leak in other unit(s) while tracing the leak?**
- If possible, **create a parent mold or leak** work order(s) while you have access.
- If not possible, instruct the resident(s) **to call CCC or use MyNYCHA App** to submit a new repair request.

After the Inspection

□ 18. **Inform residents(s) of the next steps:**
- If skilled trade repairs are needed, **issue Repair to Schedule (RTS) Slip** and instruct the resident to contact the Neighborhood Planner to schedule repairs.
  - **Tip! Multiple units impacted by leak?** Issue **RTS Slip for each unit**.
- If other crafts are needed, inform the resident(s) that **the Property Management Office will schedule repairs** and instruct the resident(s) to contact the Office with any questions.

□ 19. Identified conditions that require **immediate follow-up repair(s)** by skilled trades, vendor or other crafts after the root cause(s) are located? **Escalate to APMS or PMS!**

□ 20. Identified **severe and hazardous conditions that could impact resident health and safety** (e.g., floods, severely damaged ceilings or walls, excessive hoarding)? Notify **NYCHA Maintenance Cares** at Maintenance.Cares@nycha.nyc.gov with photos and a brief description!

Useful Reminders

□ 20. If the iWM app is not working, call IT at 212-306-7000.

□ 21. If you have further questions or a complex leak case where it is difficult to identify the root cause, please contact the Office of Mold Assessment and Remediation at **Mold.Busters@nycha.nyc.gov.**

Table 1: Documenting Leak Inspection Findings in the iWM App.

Task	Question	Response	Work Order Outcome
Task 10: Evaluation of Conditions	Q1: Is there flooding condition?	No	-
		CAT	FLOODING/ABATED **(Closed child WO)**
		Needs Abatement	FLOODING/ NEEDSABATEMENT **(Open child WO)**
	Q2: Is there standing water?	No	-
		CAT	LEAKFOLLOWUP/ NEEDSWATERREMOVAL **(Closed child WO)**
		Standing Water Within [...]	LEAKFOLLOWUP/ NEEDSWATERREMOVAL **(Open child WO)**
	Q3: Is there active leak?	No	-
		Yes	-
Task 20: Probable Cause	Q1: Is moisture meter equal or higher than 599?[2]	No	Enter Moisture Measurement
		Yes	Select surface(s) Enter Moisture Measurement
	Q2: Is Wall-break required?	No	-
		Yes	1: Is there (suspected) asbestos on pipe insulation that will be disturbed? **(If yes, create child WO).** 2: Is there mold on the backside of sheetrock[3]? **(If yes, create child WO).**
	Q3: Select Probable Cause		Select up to 4 Root Causes **(Create child WO(s), as needed.**
Task 30: General Evaluation (If applicable)	Q1: Is there mold growth?	No	-
		Yes	MILDEWCONDITION/MILDOW **(Open parent WO)**
	Q2: Cockroaches?	No	-
		Yes	EXTERMINATION/ROACHES **(Open parent WO)**
	Q3: Rodent Droppings?	No	-
		Yes	EXTERMINATION/MICE **(Open parent WO)**

[2] Mandatory for certain FC/PCs
[3] Sheetrock locations only