

New York City Housing Authority
Action Plan – Heating

Appendix

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SP 060:63:1, HEATING AND DOMESTIC HOT WATER

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NEW YORK CITY HOUSING AUTHORITY

STANDARD PROCEDURE

SUBJECT	PROCEDURE OWNER	APPROVED DATE	APPROVED BY	INDEX NO
HEATING AND DOMESTIC HOT WATER	OPERATIONS	Issued Oct. 15, 1961 Rev. Apr. 15, 1963 Rev. Jan. 1, 1965 Rev. Jan. 15, 1966 Rev. Feb. 15, 1966 Rev. Apr. 1, 1966 Rev. Oct. 1, 1966 Rev. May 4, 2016 Rev. Oct. 4, 2018 DATE: _____	Rev. Sep. 15, 1977 Rev. Oct. 1, 1989 Rev. Jul. 20, 2005 Rev. Oct. 17, 2006 Rev. Dec. 27, 2007 Rev. Jun. 23, 2010 Rev. May 25, 2016 Carolyn Jasper Acting Executive Vice-President of Operations Vito Mustaciuolo General Manager	060:63:1

I. PURPOSE

This Standard Procedure establishes NYCHA's policy and guidelines regarding the successful operation and maintenance of all NYCHA heating operations. This Standard Procedure also provides information to assist personnel with heating and domestic hot water responsibilities.

NYCHA uses asset and management software products called Siebel and Maximo to process heating and domestic hot water service requests and work orders. Refer to Standard Procedure 040:09:7, *Managing Maintenance Work Orders*, for information about processing work orders in Maximo.

II. POLICY

NYCHA's policy is to maintain ambient temperatures in apartments and supply hot water to dwelling units in accordance with the New York City Administrative Code, Title 27, Chapter 21 Article 8, § 27-2029 and Section 79(1) of New York State Multiple Dwelling Law. For an outline of these regulations, refer to Appendix D.

A. Heating Practice Between October 1 and May 31

1. NYCHA complies with the Local Law that requires landlords to maintain a minimum temperature during the Heating Season, defined as between October 1 and May 31, as follows:
 - a. Between the hours of 6:00 a.m. and 10:00 p.m., a temperature of at least 68 degrees Fahrenheit whenever the outside temperature falls below 55 degrees; and
 - b. Between the hours of 10:00 p.m. and 6:00 a.m., a temperature of at least 62 degrees Fahrenheit.

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2. In addition, NYCHA strives to maintain an ambient temperature of 70 degrees Fahrenheit in Senior Citizen developments when the outside temperature falls below 55 degrees Fahrenheit between the hours of 6:00 a.m. and 10:00 p.m.
3. In buildings where indoor temperature sensors are used for temperature control, regardless of outside temperature:
 - a. Between the hours of 6:00 a.m. and 10:00 p.m., the set points are 72 degrees, and 74 degrees in designated senior buildings.
 - b. Between the hours of 10:00 p.m. and 6:00 a.m., the set points are 69 degrees, and 71 degrees in designated senior buildings.

B. Domestic Hot Water Practice

It is NYCHA's policy to maintain a constant hot water temperature of 120° Fahrenheit at the source on a 24-hour basis, except for day care centers, where hot water temperatures in children's wash basins must not exceed 115° Fahrenheit.

C. Manufacturer's Instructions

In NYCHA developments, equipment is produced by different manufacturers. As a result, the Heating Management Services Department's heating superintendent must consult manufacturers' handbooks and manuals to develop specific instructions for the care and operation of the individual heating plants.

Local operating procedures are submitted to the heating administrator for review and must be approved by the Heating Management Services Department's director, or deputy director, prior to implementation.

D. Air Pollution

1. NYC-DEP - Rules and Regulations

New York City Department of Environmental Protection (NYC-DEP) regulations for Boiler Operating Personnel, New York City Administrative Code, Title 11, Chapter 2, Sub-Chapter 2, Part 4, § 11-266 (Refer to Appendix D). specifies the fines and/or penalties to be levied against NYCHA for non-adherence to the above referenced code.

NOTE:	The heating frontline staff assigned to a boiler room at the time of the violation accepts, but does not sign, the summons/violation. All staff must review NYCHA Standard Procedure 158:03:1, Violations and Summonses, for NYCHA protocols on receiving and remedying violations/summonses.
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2. Admittance of NYC-DEP Personnel into Heating Plant

NYCHA personnel cannot interfere, resist, obstruct, or delay in any way, with the duties of personnel of the Department of Environmental Protection, as per New York City Administrative Code Title 24, Chapter 1, Subchapter 2, §24-108 (Refer to Appendix D). Development property management supervisors, or Heating Management Services or Emergency Services Departments staff, must permit entry into the heating plant after proper identification has been provided. Staff requests that the DEP inspector sign the Boiler Room Logbook, though DEP personnel are not required to do so. If the DEP inspector will not sign the logbook, on site staff makes a notation in the logbook and provides the name of the DEP inspector.

3. Equipment

Opacity meter readings must be maintained in the Boiler Room Logbook and Boiler Room Daily Log Sheet.

- a. Opacity readings are taken daily by heating plant technicians or maintenance workers/oil burner mechanics assigned to the location or the Heating Frontline Staff morning or evening watch shift.
- b. Opacity meters must be inspected and cleaned monthly when testing the Boiler Room Fire Safety Remote Control Switch. For more information, refer to Section XIV, Testing – Fire Safety System Remote Control Switch (ASCO).

Opacity violations may be issued if the opacity meter registers that the emitted smoke is 20% or greater density for two (2) continuous minutes within a one-hour period.

4. The heating frontline staff assigned to the heating plant must:

- a. Contact the assigned heating assistant superintendent if dense smoke is spotted emanating from the heating plant. If the heating assistant superintendent is not available, contact the heating superintendent.

Note	Smoke is dense if it cannot be seen through at the point of emission, or if the smoke has a greater density than a #2 Ringelmann (a smoke density measuring apparatus).
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- b. Record in the Boiler Room Logbook the smoke condition and the time of occurrence:
 - (1) If the smoking condition cannot be abated, heating plant personnel must shut all boilers causing a smoke condition and contact the heating superintendent. The heating superintendent contacts:

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- (a) The appropriate Heating Management Services Department mechanics and staff required to correct the problem, if the boiler is a fixed boiler, in a NYCHA-owned and NYCHA-operated heating plant, or a NYCHA-owned portable boiler.
 - (b) The contractor if the malfunctioning boiler is a contractor-owned portable boiler.
- (2) If the condition occurs during after hours, weekends, or holiday hours, personnel must report the problem to the Heating Management Services Department Heat Desk.
- c. The following rule is of greatest importance and must be adhered to:

The operator cannot cause or allow dense smoke to be emitted into the open air in excess of two (2) continuous minutes within a one-hour period.

III. REVIEW CYCLE

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

IV. RESPONSIBILITIES

This Standard Procedure applies to the following titles:

- A. Heating Management Services Department
 - 1. Director
 - 2. Deputy directors
 - 3. Heating administrators
 - 4. Heating superintendents
 - 5. Heating assistant superintendents
 - 6. Advanced heating plant technicians
 - 7. Heating plant technicians

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8. Maintenance workers
- B. Emergency Services Department
1. Deputy Director
 2. Shift superintendents
 3. Administrators
- C. Property Management Departments
1. Property maintenance supervisors
 2. Assistant property maintenance supervisors
 3. Property managers
 4. Assistant property managers
 5. Maintenance workers
- D. Maintenance, Repairs, and Skilled Trades Department
1. Plumbing supervisors
 2. Plumbers
 3. Electricians
- E. Customer Contact Center
1. Customer service agents
- F. Technical Services Department
1. Fuel Oil Remediation Unit coordinator
 2. Fire Safety Violations Unit administrator
- G. Accounts Payable and Utility Management Department
1. Director
 2. Deputy Director

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H. Capital Projects

1. Inspectors

I. Environmental Health and Safety Department

1. Heating oversight specialists

V. SAFETY RULES AND REGULATIONS

A. Make It Safe

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

B. Service Disruption Staffing

Employees working outside of NYCHA normal business hours (Monday-Friday, 8:00 a.m.-4:30 p.m.) who investigate a potential service disruption must do so with another employee.

C. Lighting

1. Proper lighting must be maintained in the boiler room and mechanical room at all times.
2. Light bulbs of appropriate wattage must be supplied by property management and be available in the boiler room at all times.
3. Property management staff is responsible for maintaining emergency lighting.

D. Ladders and Scaffolding

1. Repair or replace defective ladders or scaffolding.
2. Do NOT paint wooden ladders or scaffolding.
3. Reduce accident hazards where scaffolds are used, by:
 - a. Securing the scaffold to the front of the boiler.
 - b. Setting all outriggers in the furthest-most position.
 - c. Locking the outriggers in place and checking that all steps are secure.

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E. Flammable Materials

1. Properly dispose of waste oil.
2. Wipe up spilled oil immediately.
3. Properly dispose of oily rags in the drum designated for such waste.
 - a. Each development must have a receptacle designed specifically for oily rag waste.
 - b. When the drum is $\frac{1}{2}$ full, the heating assistant superintendent contacts the Fuel Oil Remediation Unit staff in the Technical Services Department which informs the contracted provider to remove the used drum and provide an empty one.
4. Use absorbent granular material to absorb oil (Do NOT use sand).
5. If absorbent granular material is unavailable, sand may only be used to build temporary barricades and dikes to prevent spilled oil from entering the city sewer system. For more information, see Appendix E, Fuel Oil Spills or Seepage.
6. Never store flammable materials in the boiler room.

F. Lockout/Tagout

1. When working on electrical equipment, precautions are taken to prevent machinery from being activated, when repairs are made, or maintenance is performed.
2. Lock and tag safety disconnect switches in the open position and remove fuses so that the circuit cannot be closed when equipment is serviced.
3. For further information on NYCHA policy regarding Lockout/Tagout protocol, refer to Standard Procedure 158:04:1, *Lockout/Tagout (LO/TO)*.

G. Confined Spaces

1. Prior to entering any confined space, staff must be familiar with Standard Procedure 060:94:1, *Confined Space Safety Procedure*. Staff must adhere to the provisions of the procedure.
2. Supervisors must consult the applicable NYCHA Forms 158.001A through 158.001I, *Confined Space Survey Forms*, and ensure compliance with required safety practices, as outlined on these forms.
3. Only trained staff works in permit-required confined spaces.

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4. Air monitoring devices are available at each Property Management Office and can be requested from the property maintenance supervisor. Property management maintains and repairs all air monitoring equipment used in confined spaces.
5. Signed NYCHA Form 060.263, *Confined Spaces Entry Permit*, must be procured from the development before employees enter a permit-required confined space. Refer to Standard Procedure 060:94:1, *Confined Space Safety Procedure*.
6. Confined spaces that do not require permits to enter still must be approached with extreme caution and only by trained NYCHA personnel.

H. Permit-Required Confined Space

Heating plants contain several areas considered confined space (e.g., Vaulted Oil Tanks, Water Tanks), as defined in NYCHA Standard Procedure 060:94:1, *Confined Space Safety Procedure*. Permit-required confined spaces require specialized training in hazard identification, air monitoring, and teamwork. A signed entry permit must be posted before a trained employee may enter the space.

I. Boiler Room Entrances and Exits

1. Must be secured against unauthorized entry.
2. Access to entrances and exits must be unobstructed by equipment or materials.
3. Must be clean and free of slipping or tripping hazards.

J. Emergency Communications

1. An emergency call list must be posted in the heating plant and in the property maintenance supervisor and/or assistant property maintenance supervisor's office. The list must include the following:
 - a. Fire Department (Local Firehouse)
 - b. Police Department (Local Precinct)
 - c. Utility Companies
 - d. NYCHA Emergency Services Department
 - e. Heating Management Services Department Heat Desk

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- f. All dangerous, hazardous and/or emergency conditions must be reported to a supervising employee at the Property Management Office immediately. If supervisory personnel are unavailable, employees must contact the Emergency Services Department and Heating Management Services Department Heat Desk.

K. Gas System Safety

All employees must read and review NYCHA Standard Procedure 060:01:1, *Gas Line Safety*.

1. Property management staff must investigate any reported gas leak or damaged gas piping:
 - a. Heating frontline staff, assistant property maintenance supervisors and property maintenance supervisors are required to inspect gas meter rooms, gas boiler rooms, outdoor gas vents, and vegetation above underground gas piping, with gas detecting equipment.
 - b. All substantiated reports are immediately reported to the development property maintenance supervisor or property manager.
 - c. The property maintenance supervisor or property manager must immediately notify the Skilled Trades administrator plumbing supervisor of any leak, and a Heating Management Services Department supervisor if heating equipment is affected.
2. All questions or concerns about gas equipment or piping are addressed to a plumbing supervisor in Operations.
3. If an emergency gas leak situation exists, property management personnel must immediately contact the following:
 - a. Heating Management Services Department and a plumbing supervisor in Operations.
 - b. Administrator for Maintenance, Repairs, and Skilled Trades Department
 - c. Emergency Services Department
4. Any repairs made to gas lines and/or equipment must be inspected by a licensed Technical Services Department plumbing supervisor. Gas service may not be restored without approval. For more information, refer to SP 060:01:1, *Gas Line Safety*.

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L. Fire Extinguishing Equipment

The property maintenance supervisor must maintain adequate and appropriate fire extinguishing equipment at all times. Ensure that one ABC-type fire extinguisher is in front of each boiler, and one in front of the fuel oil transfer station, with a pail of sand. In boiler rooms with kitchens, an ABC K-type extinguisher must be available in the kitchen area.

For more information, see NYCHA Standard Procedure 040:02:2, *Fire Extinguisher*.

M. Fire Emergency

In the event of a fire in the boiler plant, the following rules are adhered to:

1. Break glass on the Remote-Control Safety Switch at the entrance point of the boiler plant.
2. Leave the heating plant via the nearest exit.
3. Dial 911 and report the fire.

VI. REQUIRED PERMITS, REGISTRATIONS, CERTIFICATES OF FITNESS

A. Certificates of Fitness

Certificates of Fitness are issued by the New York City Fire Department for various hazardous occupations and are based on the type of system employees work with at individual developments. The following table lists all possible Certificates of Fitness that may be required.

The Certificate P-99 Low PSI Oil Burner is required for all heating frontline staff.

At locations leased or rented by NYCHA, it is the responsibility of the ownership or management group at that location to provide their own staff with the required Certificates of Fitness.

Certificate of Fitness	Certificate Name	Location Dependent	Staffing
G-35	Operate Air Compressors	Yes	All, as required
P-99	Low PSI Oil Burner	Yes	All, as required.

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B. Acquiring Certificates of Fitness

1. To obtain a required Certificate of Fitness, the applicant must pass an examination administered by the New York City Fire Department.
2. To be eligible for the exam, or to renew an existing Certificate of Fitness, a request must be submitted to the Technical Services Department Violations Unit coordinator, with the following information:
 - a. Name
 - b. Social Security Number
 - c. Address and zip code of the buildings to be covered
 - d. Number of years working for NYCHA
3. Employees must bring a letter of approval from the Technical Services Department Violations Unit coordinator to the exam, and any other documents as required by FDNY.
4. The Heating Management Services Department in coordination with the Human Resources Department tracks the issuance and renewal of Certificates of Fitness.

C. NYS-DEC Heating Plant Registrations and Permits

1. Air Facility Registration

An Air Facility Registration must be acquired through NYS-DEC for any heating plant with:

- a. A rate greater than 10 million BTU's per hour
- b. Emissions of less than 12½ tons of Nitrogen Oxide (NOx) per year

This permit is distributed by the Utility Control Division of the Accounts Payable and Utility Management Department (APUMD) as follows:

Original	APUMD, Utility Control Division
Copy	Heating Administrator
Copy	Property Maintenance Supervisor
Copy	Posted in the heating plant
Copy	NYS-DEC Inspection Folder

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Any modifications to the heating plant and/or its equipment must be reported to the Utility Control Division in APUMD and the Energy Programs Department of Capital Projects. The Utility Control Division in APUMD notifies NYS-DEC.

NOTE:	As of 2013, new Air Facility Registrations expire in 10 years. Older registrations acquired before 2013 do not expire, unless modifications are made to the equipment within the heating plant.
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Heating Management Services Department supervisory personnel contacts the Utility Control Division in APUMD, if they are unsure of the status of the equipment in the heating plants under their supervision.

2. Air State Facility Permit

An Air State Facility Permit must be acquired through NYS-DEC for any heating plant with a rate greater than 10 million BTU's per hour, and emissions of more than 12½ tons, but less than 24 tons, of Nitrogen Oxide (NOx) per year. Beginning in 2013, new permits expire in 10 years. Older permits have no expiration date, unless modifications are made to the equipment within the heating plant.

This permit is distributed by the Utility Control Division in APUMD, as follows:

Original	APUMD, Utility Control Division
Copy	Heating Administrator
Copy	Property Maintenance Supervisor
Copy	Posted in the heating plant
Copy	NYS-DEC Inspection Folder

Any modifications must be reported to the Utility Control Division in APUMD which must notify the New York State Department of Environmental Conservation (NYS-DEC) thirty (30) days prior to the start of work.

Heating plants with an Air State Facility Permit are required to submit semi-annual and annual nitrogen oxide (NOx) reports to NYS-DEC. The Utility Control Division in APUMD submits the reports to NYS-DEC. NYS-DEC assesses penalties if a heating plant is not in compliance.

Heating Management Services Department supervisory staff contacts the Utility Control Division in APUMD if they are unsure of the filing status of the equipment in the heating plants under their supervision.

NOTE:	Plants rated at fewer than 10 million BTU's per hour are exempt from registering with NYS-DEC.
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D. NYC-DEP Boiler Registration and Permits

1. Certificate of Registration

The New York City Department of Environmental Protection (NYC-DEP), Bureau of Environmental Compliance, requires a Certificate of Registration for all boiler plants with a cumulative rating of 350 MBTU TO 2.8 MMBTU.

- a. Certificate must be renewed every three (3) years.
- b. Utility Control Division in APUMD automatically initiates and oversees the renewal of the certificate.
- c. Utility Control Division in APUMD and the Energy Programs Department of Capital Projects must be notified immediately of any and all modifications and/or changes to boiler equipment.
- d. If the NYC-DEP requires a performance test, NYCHA personnel must be present at the boiler room site.

(1) If the plant fails the performance test, NYCHA has sixty (60) days to resolve the violation(s) listed on the Notice of Disapproval.

- e. The Certificate of Registration is distributed by the Heating Management Services Department Heat Desk as follows:

Original	APUMD, Utility Control Division
Copy	Heating Administrator
Copy	Property Maintenance Supervisor
Copy	Posted in the heating plant
Copy	NYS-DEC Inspection Folder

NOTE:	Property management must examine the certification for errors or changes. Any errors or changes must be brought to the attention of the Utility Control Division of APUMD.
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2. Certificate of Operation (C of O)

The New York City Department of Environmental Protection, Bureau of Environmental Compliance, requires a C of O for all boiler plants with a cumulative rating of 2.8 MMBTU or greater.

- a. Certificate must be renewed every three (3) years.

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- b. A professional engineer must prepare the paperwork for amendments to the C of O.
- c. The Heating Management Services Department heating administrator initiates and oversees the renewal of the C of O.
- d. Utility Control Division in APUMD and the Energy Programs Department of Capital Projects must be notified immediately of any and all modifications and/or changes to boiler equipment.
- e. The assigned professional engineer or contractor must notify the NYC-DEP of any and all modifications and/or changes to the heating plant, with a copy of this notification submitted to the heating administrator. If the NYC-DEP requires a performance test, NYCHA Heating Management Services Department staff must be present at the boiler room site.
- f. Inspector ensures proper operation of the following, including, but not limited to:
 - (1) Smoke alarms and visual alarms.
 - (2) Sequential dampers and low draft cut-offs.
 - (3) Existing motorized louvers interlocking with all burners. An alternative to motorized louvers is to install new fresh air intake fans that are electrically interlocked with the burners.
- g. If the plant fails the performance test, the Heating Management Services Department has sixty (60) days to resolve the violation(s) listed on the Notice of Disapproval and re-test the plant.
- h. The Heating Management Services Department attempts to avoid scheduling NYC-DEP inspections during heating plant overhauls.
- i. If the NYC-DEP requires a performance test, Heating Management Services Department personnel must be present at the boiler room site.

Certificate of Operation is distributed by the Heating Management Services Department:

Original	Heating Administrator
Copy	APUMD, Utility Control Division
Copy	Heating Superintendent
Copy	Posted in the heating plant
Copy	NYS-DEC Inspection Folder
Copy	Development Heating Folder

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The certification must be examined for errors or changes by Heating Management Services Department staff. Any errors or changes must be brought to the attention of NYC-DEP.

New heating plants and temporarily leased boilers require the contractor to procure the required certifications from NYC-DEP.

Emergency boilers require the same certifications and are rated by the same guidelines as listed above. Contractors providing emergency (portable mobile) boilers submit copies of their certifications to the Heating Management Services Department and/or Capital Projects. Property management personnel may request copies of these certifications for emergency boilers used at their location(s).

E. NYC-DEP Hot Water Heater Registrations

Hot water heating equipment and machinery require the same certifications from NYC-DEP, based on the same guidelines as those of heating plants.

These certifications must also be renewed every three years and require notification of the Utility Control Division in APUMD, if any hot water heaters in the plant are replaced or modified. Instantaneous hot water exchangers do not require any permits or registration.

F. Boiler Certificates

The table below summarizes information on boiler room and heating plant certifications and registrations, including:

1. Required boiler certificates
 - a. Issuing agencies are New York City entities, unless otherwise indicated.
 - b. NYCHA department(s) responsible for information on the certificate.
 - c. A brief explanation of the reason(s) why the permit or certificate is required, and the duties of property management staff in procuring the certificate, permits, etc.

Certificate Name	Issuing Agency	NYCHA Department	Term	Comments
<i>Certificate of Approval (C of A)/ Certificate of Boiler Inspection (C of BI)</i>	Department of Buildings (DOB)	Capital Projects	N/A	Required for the installation of tanks at a development location. These must be obtained from the contractor prior to final sign-off.

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Certificate Name	Issuing Agency	NYCHA Department	Term	Comments
<i>Certificate of Operation (C of O)/ Certificate of Registration (C of R)</i>	Department of Environmental Protection (DEP)	Capital Projects and Utility Control Division in APUMD	3 Years	Test the efficiency of the heating plant. If the development fails the inspection, the inspector informs the development/heating staff what specifically must be remedied. Repairs, improvements, etc., must be made or the DOB may fine NYCHA for failure to remediate faulty equipment. NYC Admin. Code § 24-109 & 24-122.
<i>Bulk Petroleum Storage Permit (BPSP)</i>	New York State Department of Environmental Conservation (NYS-DEC)	Technical Services Department, Heating/ Fuel Oil Remediation Unit	5 Years	Certifies that the tanks to be installed are registered with the New York State Department of Environmental Conservation (NYS-DEC) and adhere to the provisions of 6 NYCRR § 613.
<i>Air Facility Registration/ Air State Facility Permits</i>	New York State Department of Environmental Conservation (NYS-DEC)	Utility Control Division in APUMD	Pre-2013 facilities do not expire, unless alterations are made to the heating equipment. Post-2013 are 10 years.	The type of license required depends on the size of the boiler, Nitrous Oxide (NO) outputs, etc. Heating Administrators unaware of the status of the boilers under their supervision must contact the Utility Control Division in APUMD. All heating plants must have the required license or permit, as determined in 6 NYCRR § 201.

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Certificate Name	Issuing Agency	NYCHA Department	Term	Comments
<i>New York City Fire Department (FDNY) Storage Permit</i>	FDNY	Technical Services Department Violations Unit	Annual	If no changes to the oil tanks are made during the year, FDNY does an inspection for renewal. If there are changes, the contractor provides an affidavit indicating a tank has been removed, or left in the ground, and has been sealed with slurry cement. If the affidavit is not filed, FDNY does not issue a Storage Permit and instead issues a violation. See Title 27, Chapter 4, Sub-Chapter 8, § 27-4055.
<i>Low Pressure Boiler Annual Inspection Report</i>	Current Insurer of NYCHA Mechanical Equipment, or Designee	Risk Management Department	Inspection Report Filed Annually	The insurance carrier sends a letter to the Heating Management Services Department indicating the date and time of the inspection. The Heating Management Services Department informs the development of the date and time of the inspection. A member of the development staff must accompany the inspector during the inspection process. If the development fails the inspection, the inspector informs the development staff what specifically must be remedied and schedules a date for re-inspection. Repairs, improvements, etc., must be made by the re-inspection date or the DOB may fine NYCHA for failure to remediate faulty equipment.

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G. NYS-DEC Inspections

1. New York State Department of Environmental Conservation (NYS-DEC) intermittently conducts unannounced inspections at NYCHA developments to ensure that all developments have completed an annual overhaul of heating plant equipment, and have all required documentation available, upon request.
2. All required NYS-DEC documentation must be visible upon entering the heating plant. It is the responsibility of the Property Management Office to have the required NYS-DEC documents available, upon inspection.
3. The Heating Management Services Department and the individual Property Management Offices must maintain separate and distinct NYS-DEC Inspection Folders.
4. The Heating Management Services Department and Property Management Office NYS-DEC Inspection Folders must contain the following, if applicable:
 - a. A Certificate of Operation (New York City Department of Environmental Protection – NYC-DEP)
 - b. A Certificate of Fitness (New York City Fire Department – FDNY)
 - c. A Petroleum Bulk Storage Permit (New York State Department of Environmental Conservation – NYS-DEC)
 - d. Emergency Procedure for Reporting Fuel Oil Spills (for more information, see Appendix E, Fuel Oil Spills or Seepage).
 - e. Air Facility Registrations or Air State Facility Permits
 - f. Heating Plant Operations Records printed out from Maximo.
 - g. Semi-annual reports submitted to developments by the Accounts Payable and Utility Management Department (APUMD), regarding pollutants and oil consumption history
5. The Heating Management Services Department NYS-DEC Inspection Folder must also contain the following:
 - a. Annual Boiler Preventive Maintenance Work Order
 - b. NYCHA Form 060.240, *Boiler Hydrostatic Test Report*
 - c. Boiler Room Daily Inspection Work Orders

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d. NYCHA Form 060.242, *Oil/Gas Burner & Boiler Service Report*

VII. HEAT DESK

A. Heat Desk

1. The Heating Management Services Department Heat Desk (“Heat Desk”) operates 24 hours a day and 7 days a week, and is staffed by Heating Management Services Department employees.
2. The Heat Desk tracks, monitors, and reports all no heat and no hot water service disruptions until the service is restored.
 - a. A field staff employee is identified to serve as a point of contact with the Heat Desk for every no heat and no hot water service disruption.
3. The Heat Desk sends daily reports of high work order counts and Building Management Systems alarms to identify potential outages to Heating Management Services Department field staff.

B. After-Hours Heat Desk

The After-Hours Heat Desk is responsible for the following:

1. Logging electronically all contacts from Heating Management Services Department staff performing after-hours work in the Work Log section of the Maximo work order.
2. Recording manually all contacts with the heating frontline staff performing boiler room watch on After-Hours Contact Log sheets.
3. Logging electronically, or manually, the development name, building address, location of work (apartment number, basement, boiler room, roof, etc.), name and title of caller, time of call, status of work, and any relevant information or circumstances pertaining to the work being performed.
4. Engaging in direct contact with the Emergency Services Department to ensure they have the information necessary to provide after-hours notifications.

VIII. HEATING MANAGEMENT SERVICES DEPARTMENT PERSONNEL GENERAL DUTIES AND RESPONSIBILITIES

To provide consistent coverage, Heating Management Services Department employees are assigned to specific sites in one of three shifts: 5:00 a.m.-1:00 p.m., 8:00 a.m.-4:30 p.m., or 2:00 p.m.-10:00 p.m. In addition, Heating Management Services roving teams are scheduled daily after 4:00 p.m., overnights including weekends, and holidays. Heating Management Services also maintains 24-hour supervisory coverage. For more information, see Appendix J, Shift Duties.

A. Heating Administrator

The heating administrator oversees all heating operations.

1. Responsible for all heating plants in developments within his/her heating cluster.
2. Responsible for deployment of staff within his/her heating cluster.
3. Ensures that relevant staff are effectively using Building Management Systems to monitor and manage all Building Management Systems-enabled heating plants.

NOTE:	Building Management Systems remotely monitors most of NYCHA's larger heating plants. Building Management Systems are designed to achieve the following: <ul style="list-style-type: none">• Give quicker and more efficient responses to heating needs and emergency situations.• Ensure efficient operations and maintenance of equipment in Building Management Systems-enabled heating plants.• Achieve an effective and efficient deployment of personnel within heating clusters.
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4. Periodically logs-in to Building Management Systems to check settings, especially when a heating plant is not operating efficiently.
5. Ensures that all Heating Management Services Department staff are properly maintaining all heating equipment and delivering proper service to the residents.
6. Oversees the maintenance of fuel oil supplies and monitors the data entry of information on the Emergency Fuel System (EFS), including feedwater readings, oil deliveries and the status of oil-on-hand.
7. Approves orders for equipment or materials.
8. Attends Pre-Start Meetings or Pre-Design Meetings with staff from Capital Projects.

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9. Reviews the file for the New York State Department of Environmental Conservation (NYS-DEC) Inspection for all developments.

NOTE:	Information on the requirements and contents of the NYS-DEC Inspection Folder can be found in Section VI.G., NYS-DEC Inspections, above.
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10. Reviews files of all required certifications/registrations/permits for all developments in his or her heating clusters.
11. Reviews all reports related to heat and hot water.
12. Reports any damage to heating plant equipment, as a result of fire or other incident, to the Risk Management Department; and/or to the affected development's Property Management Department and its property maintenance supervisor.
13. Maintains all files for all boiler and machinery damage for all heating plants within his or her heating cluster.

B. Heating Superintendent

1. Supervises and maintains all heating equipment, within assigned heating clusters, according to established procedure or manufacturer guidelines. Any procedural deviation must be reported to the heating administrator immediately.
2. Supervises assistant heating superintendents' responsibilities.
3. Assists, advises and instructs heating frontline staff, as needed.
4. Schedules, prepares and conducts annual inspections on boilers, boiler rooms, tank rooms, hot water tanks, instantaneous hot water units, and all mechanical and Building Management Systems equipment. Provides detailed inspection reports to the heating administrator and the heating deputy director.
5. Performs semi-annual accumulation and evaporation tests with the Heating Management Services Department's heating assistant superintendent.
6. Performs boiler feedwater analysis at developments to ensure compliance.
7. Observes all hydrostatic tests on boilers.
8. Coordinates maintenance of NYCHA-owned equipment for heating personnel.
9. Coordinates the remediation of hazardous conditions with the Technical Services Department, Emergency Services Department, and Heating Management Services Department Heat Desk.

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10. Ensures that all burners pass the New York City Department of Environmental Protection Combustion Inspection.
11. Ensures boilers switch over to alternative fuels.
12. Inspects any equipment, prior to its disposal/transfer, that is used in heating and/or hot water plants.
13. Ensures all equipment or materials needed are ordered by the assistant heating superintendent.
14. Uses Building Management Systems to monitor and manage all Building Management Systems-enabled heating plants. At least once a day, logs-in to Building Management Systems and reviews all heating plants within their cluster to ensure that:
 - a. Automatic settings are maintained.
 - b. Building Management Systems is online.
 - c. If a heating panel is not able to be set in automatic mode, the location must be monitored via Building Management Systems daily and a staff member must be assigned to monitor equipment and report status changes.

NOTE:	Building Management Systems always must be set on automatic settings to attain optimum efficiency.
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15. Consults with Skilled Trades supervisors on issues involving boilers, tank rooms, hot water tanks, and instantaneous hot water heaters related to heating concerns.
16. Maintains a file for the NYS-DEC Inspection Folders, for all developments within their cluster. For details on the required contents of this folder, refer to Section VI.G., NYS-DEC Inspections, above.
17. Maintains a copy of:
 - a. Warranties for boilers in their designated area
 - b. Warranties for all equipment related to a Building Management Systems installation
 - c. Warranties for all instantaneous hot water units
 - d. Manufacturer's maintenance and operations manuals

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18. Maintains a copy of all heating related blueprints when available, including Building Management Systems as-built drawings in their designated area. If copies of blueprints are unavailable, contacts Capital Projects.
19. Inspects newly installed heating system components during the warranty period in accordance with Standard Procedure 025:52:1, *Administration of Guarantees and Warranties*, and reports deficiencies to the property manager and property maintenance supervisor.
20. Coordinates repairs, as required, under Guarantees and Warranties.
21. Reviews the following forms:
 - a. NYCHA Form 060.064, *Certificate of Final Acceptance*, as needed
 - b. NYCHA Form 060.248, *Request for Relining Hot Water Storage Tanks*
 - c. NYCHA Form 061.064, *Mechanical Inspection Record – Phase #1*
 - d. NYCHA Form 061.064A, *Mechanical Inspection Record – Phase #2*
 - e. NYCHA Form 061.064B, *Mechanical Inspection Record – Phase #3*
 - f. NYCHA Form 061.064C, *Mechanical Inspection Record – Phase #4*
 - g. NYCHA Form 060.240, *Boiler Hydrostatic Test Report*
 - h. NYCHA Form 060.175, *Boiler Feedwater Analysis*
 - i. NYCHA Form 040.689, *CHAS Readiness Checklist*
 - j. Others, as may be required
22. Reviews, completes, approves, and closes (as needed) the following work orders in Maximo:
 - a. Boiler Room Daily Inspection Work Order
 - b. Fuel Request/Delivery Work Order
 - c. Outage Work Order
 - d. Annual Hot Water Preventive Maintenance Work Order
 - e. Annual Boiler Preventive Maintenance Work Order

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23. In collaboration with the heating administrator, establishes and documents guidelines for the care and maintenance of all heating equipment, as per manufacturer's recommendations.
24. Takes immediate measures to contact employees that fail to call in according to the prescribed timelines below in Section IX., Employee Safety Check-In.

C. Heating Assistant Superintendent

1. Has overall responsibility for establishing and maintaining the safe and efficient operation of all heat generating systems and associated equipment in assigned clusters.
2. Uses Building Management Systems to monitor and manage all Building Management Systems-enabled heating plants. At least twice a week, logs-in to Building Management Systems and reviews all heating plants within their cluster to ensure:
 - a. That automatic settings are maintained
 - b. Building Management Systems online status
 - (1) If a heating panel is not able to be set in automatic mode, the location must be monitored via Building Management Systems daily and a staff member must be assigned to monitor equipment and report status changes

NOTE:	Building Management Systems always must be set on automatic settings to attain optimum efficiency.
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3. Supervises heating frontline staff within their respective cluster. Ensures that all heating staff under their supervision attends all required training.

NOTE:	Heating frontline staff in the Heating Management Services Department are comprised of the following titles: <ul style="list-style-type: none">• Heating plant technician (HPT)• Advanced heating plant technician (advanced HPT)• Heating maintenance worker The specific duties for each title are specified below in this section.
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4. Ensures coverage for any heating frontline staff absences.
5. Provides the After-Hours Heat Desk with a list of names and telephone numbers of staff available for back-up duty on weekends and holidays, or in cases of a Roving Team heating frontline staff absence. Creates and maintains an emergency contact list.

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6. Inspects each conventional heating plant in assigned clusters, a minimum of once per week. Inspects non-conventional heating plants, as assigned by the heating superintendent. Inspects tank rooms quarterly, or as directed by heating superintendent.
7. Verifies that fuel oil deliveries are in compliance with NYCHA procedure and are accurately measured.
8. Spot-checks fuel oil deliveries to ensure compliance.
9. Monitors oil supplies during the heating season, and plans deliveries accordingly.
10. Orders equipment and materials as needed.
11. Responsible for establishing coverage for the deployment of the heating frontline staff Roving Teams.
12. Ensures that information in Appendix E, Fuel Oil Spills or Seepage, is posted on all maintenance bulletin boards and in all boiler rooms.
13. Monitors and periodically performs boiler water analysis, as per the standards for Boiler Water Treatment in Section XIX.
14. Ensures resolution of all requests for service and repair of:
 - a. Boilers
 - b. Building Management Systems equipment
 - c. Instantaneous hot water heaters, where installed
15. Ensures that appropriate heating standards are maintained.
16. Ensures that staff performs the weekly test of all dual fuel boilers for four (4) continuous hours, on Tuesdays, if the development has dual fuel operating capabilities.
17. Informs the heating superintendent if boilers are inoperative or if Building Management Systems equipment is offline. Advises when repairs are complete, and service is restored.
18. Ensures that heating equipment is disposed of, or transferred, according to the protocols established in Standard Procedure 001:48:1, *Disposition of Authority Property*.
19. Maintains copies of all heat and hot water reports.
20. Prepares and files boiler tube, stay bolt and seam welding charts for all boilers.

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21. Reports any instances of damage to heating plant or Building Management Systems equipment, as a result of fire or other incident, to the heating superintendent, property maintenance supervisor/property manager and Emergency Services Department.
22. Performs monthly test of "Building Management Systems Alarm Notifications:"
 - a. Tests all three alarm points in the following order:
 - (1) Water Intrusion
 - (2) System Alarms (Steam or Hot Water Temperature)
 - (3) Electric (ASCO Relay)
 - b. Waits the allotted time for e-mail notification.
 - (1) If the system is not operating properly, contacts the After-Hours Heat Desk, Emergency Services Department, and the heating superintendent to initiate the repair process.
23. Completes the Boiler Room Daily Inspection work order.

D. Heating Maintenance Worker

The heating maintenance worker performs the following duties and related work at their assigned developments under the direct supervision of the heating assistant superintendent.

1. The heating maintenance worker is a heating frontline staff and is responsible for performing all the duties and meeting all requirements of the HPT listed in this section below.
2. The heating maintenance worker also is responsible for performing all the duties of the advanced HPT listed directly below for advanced heating plant technicians.
3. In addition, the heating maintenance worker also:
 - a. Performs complex troubleshooting on heating boilers and determines corrective action.
 - (1) Adjusts boilers where necessary at the direction of the heating superintendent.
 - (2) Troubleshoots and diagnoses the heat distribution system
 - (3) Rebuilds vacuum systems.

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b. Troubleshoots and diagnoses the boiler feedwater systems.

(1) Rebuilds rotation assemblies.

(2) Replaces pump motors.

(3) Isolates and replaces feedwater valves.

E. Advanced Heating Plant Technician (Advanced HPT)

The advanced HPT performs the following duties and related work at their assigned developments under the direct supervision of the heating assistant superintendent.

1. The advanced HPT is a heating frontline staff and is responsible for performing all the duties and meeting all requirements of the HPT listed directly below.
2. In addition, the advanced HPT:
 - a. Must use air respirators, when necessary, and pass a physical test-fit for the facemask following the requirements of Standard Procedure 001:17:2, *Respiratory Protection Safety Program*.
 - b. Swipes-in at the development designated by the heating assistant superintendent as the first location to be visited.
 - c. Reviews all outstanding work orders or problems reported at the location with the HPT on a handheld device.
 - d. Has overall responsibility for establishing and maintaining the safe and efficient operation of all heat generating systems and associated equipment in their assigned cluster.
 - e. Ensures that the Building Management Systems equipment is in place and functioning in all Building Management Systems-enabled heating plants. Informs the Heating Management Services supervisor if any components of the system have been tampered with or are missing.
 - f. Assists and trains HPTs on necessary techniques.
 - g. Periodically conducts basic tests to confirm results obtained by HPTs.
 - h. When necessary, performs the monthly Remote Safety Switch (ASCO) test, and signs the daily log.

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- i. Ensures that there are adequate supplies and makes recommendations to the heating assistant superintendent as to what is needed.

F. Heating Plant Technician (HPT)

The HPT is a heating frontline staff and performs the following duties and related work at their assigned developments under the direct supervision of the heating assistant superintendent.

1. Performs inspections or maintenance on boilers with fixed air compressors and must also possess an A-35 or G-35 Certificate of Fitness to operate air compressors.
2. Must use air respirators, when necessary, and pass a physical test-fit for the facemask following the requirements of Standard Procedure 001:17:2, *Respiratory Protection Safety Program*.
3. Must possess a P-99 Certificate of Fitness for low-pressure oil boilers.
4. At the beginning of their shift, immediately reports to the property maintenance supervisor's office.
5. Checks for work orders on the handheld device and any additional work requested by the Heating Management Services Department or Property Management.
 - a. Four (4) times a day during the heating season and refreshes their handheld device every 30 minutes.
 - b. A minimum of twice a day during the non-heating season at 8:00 a.m. and at the end of their shift.
6. Daily checks all centrally located Building Management Systems equipment to ensure that the equipment is in place and functioning. Informs the property maintenance supervisor and heating superintendent if any components of the system have been tampered with or are missing.
7. Visits apartments and addresses heat and hot water complaints.

For every complaint regarding heat or hot water that is received during the heating season, the following readings must be taken in the apartment and logged on the related order, with a picture of the thermometer showing the recorded temperature:

- a. Ambient temperature in every room
- b. Hot water temperature in bathroom and kitchen

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8. Maintains janitorial standards in all heating related areas.
9. Is responsible for maintaining and repairing all heat related equipment.
10. Inspects the heating plant and reviews and signs all logbooks, reports and/or forms.
11. Performs daily oil tank stick reading:
 - a. Must be completed at the same time each day.
 - b. Initiates order for oil, if required, via the handheld device.
 - c. Enters results in the daily log.
 - d. Receives and inspects fuel deliveries.
12. Records daily steam meter readings in the Boiler Room Logbook (for all heating plants that are supplied steam by a utility company).
13. Performs safety tests:
 - a. At the beginning of each shift.
 - b. When boilers are restored to service.
 - c. Records all results after each test in the Boiler Room Logbook.
14. Ensures that all boiler safety devices are operating properly at all times: At no time is any safety device to be circumvented from its normal operations.
15. If problems occur with any safety device, notifies the heating assistant superintendent, and the property maintenance supervisor immediately and records all problems in the Boiler Room Logbook, in red ink. If the heating assistant superintendent is not available, contact the heating superintendent.
16. Performs visual inspections on all safety devices daily and records results in the Boiler Room Logbook.
17. Inspects and lubricates all machinery and equipment, in accordance with established schedules; logs all preventive maintenance measures in the Boiler Room and Preventive Maintenance Logbooks and on the Boiler Room Daily Inspection Work Order via the handheld device.

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18. Performs the Daily Flue Gas Analysis on all boilers that are in operation and enters results in the Boiler Room Logbook, and via the handheld device in the Boiler Room Daily Inspection Work Order.
19. Maintains the boiler emissions within a carbon dioxide (CO₂) range of 8% to 9.5% for gas and 10% to 12.5% for #2 grade oil.
20. Performs feedwater analysis once a day on all operating boilers, records results and recommended dosages on NYCHA Form 060.175, *Boiler Feedwater Analysis*.
21. Inspects all tank rooms and Building Management Systems components, if present, a minimum of twice weekly, or as directed by the heating assistant superintendent.
22. Completes all associated NYCHA forms, including:
 - a. NYCHA Form 060.073, Twice-Weekly Tank Room Inspection Report – inspected twice weekly, submitted weekly to the property maintenance supervisor.
 - b. NYCHA Form 060.074, *Tank Room Log* – inspected twice weekly, submitted monthly. Performs any minor repairs or maintenance, as needed.
 - c. Each hot water storage tank is given a bottom blowdown on the first Monday of each month, or more often if necessary, to remove sediment and foreign matter. This is reported on the monthly NYCHA Form 060.074, *Tank Room Log*.
23. Performs the monthly Remote Safety Switch (ASCO) test. Enters the date and results of the test in the back of the Boiler Room Logbook.
24. Completes and submits to the Property Management Office completed NYCHA Form 060.175, *Boiler Feedwater Analysis*, and other required reports. The Property Management Office forwards these forms (via fax or e-mailed scanned copy) to the heating assistant superintendent. If the heating assistant superintendent is not available, forward the forms to the heating superintendent.
 - a. Originals are filed at the Property Management Office in the Development Heating Folder.
25. Maintains and updates the development's NYS-DEC Folders. For more information on the contents of this folder see Section VI.G., NYS-DEC Inspections, above.
 - a. Provides copies to the Property Management Office and forwards originals to the Heating Management Services Department for placement in the NYS-DEC Folder, as required.

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NOTE:	Copies of all NYS-DEC documents related to the Heating Management Services Department and developments must be maintained in the PHAS folder and kept in the property manager's office.
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26. Reports any unusual condition to the heating assistant superintendent and logs in the Boiler Room Logbook. **Unsafe conditions must not be left unattended.** If the heating assistant superintendent is not available, contact the heating superintendent.
27. Contacts the heating assistant superintendent if assistance for repairs or maintenance is required. If the heating assistant superintendent is not available, contact the heating superintendent.
28. Informs the heating assistant superintendent of any inoperative boilers in the plant immediately after the boiler is taken offline. If the heating assistant superintendent is not available, contact the heating superintendent.
29. Checks sump pumps in the boiler room daily and records the results in the Boiler Room Logbook.

NOTE:	<ul style="list-style-type: none">• After-Hours Heat Desk must be notified of any bypasses left open after 4:00 p.m.• Technical support is provided by the Professional Development and Training Unit personnel, upon request.
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IX. EMPLOYEE SAFETY CHECK-IN

NYCHA is committed to providing a safe workplace environment for its employees. This section establishes communication guidelines to ensure the safety of NYCHA field staff.

A. Heating Department - Day Shift

1. Sign in to the Skilled Trades log when you arrive.
2. Inform the development property maintenance supervisor or assistant property maintenance supervisor in person you are on site.
3. Inform your immediate supervisor you are on site, and at the end of your shift.
4. Call the Heat Desk to inform them you are on site, then every two hours, and at the end of your shift.
5. Check in in person with the property maintenance supervisor after lunch and at the end of your shift.

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6. Sign the Skilled Trades sign-in sheet at the end of your shift indicating you have left for the day.
7. Sign the Boiler Room Logbook to provide your location when you are not in the boiler room.
8. Inform your immediate supervisor when transferring between locations.

B. Heating Department - All Other Shifts

This section is regarding morning watch, evening watch, and roving teams.

1. Sign in to the Skilled Trades log when you arrive.
2. Call the After-Hours Heat Desk to inform them you are on site, then every two hours, and at the end of your shift. The phone number is **718-707-8629**.
3. Send an e-mail to your borough e-mail distribution list and your immediate supervisor with your name, location, and employee identification number in the subject line to inform them you are on site, and every two hours until the end of your shift.

The roll call employee e-mail addresses are:

- a. hmsdbx@nycha.nyc.gov (HMSD Bronx Employee (Roll Call))
 - b. hmsd.bk@nycha.nyc.gov (HMSD Brooklyn Employee (Roll Call))
 - c. hmsd.mn@nycha.nyc.gov (HMSD Manhattan Employee (Roll Call))
 - d. hmsdqsi@nycha.nyc.gov (HMSD Queens & Staten Island Employee (Roll Call))
4. Sign the Skilled Trades sign-in sheet at the end of your shift indicating you have left for the day.
 5. Sign the Boiler Room Logbook to provide your location when you are not in the boiler room.
 6. Inform your immediate supervisor when transferring between locations.
 7. Additional Safety Check-Ins for Specific Shifts

These safety check-ins are in addition to the actions listed directly above.

- a. Monday through Friday Morning Watch

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Morning watch Heating Services Department frontline staff must report to the heating assistant superintendent via phone call at 8:00 a.m., after their lunch break, and before they leave at the end of their shift. If the heating assistant superintendent is not available, contact the heating superintendent.

a. Monday through Friday Evening Watch

At 5:00 p.m., evening watch Heating Services Department frontline staff must contact the After-Hours Heat Desk.

b. Weekends and Holidays Supervisors

(1) Send an e-mail to the appropriate roll call employee e-mail address as listed above at 8:00 a.m. and 2:00 p.m.

(2) Call the After-Hours Heat Desk at the beginning of your shift, midday, and end of your shift.

C. Maintenance, Repairs, and Skilled Trades Department

Maintenance, Repairs, and Skilled Trades Department staff performing after-hours heating-related repairs must notify the After-Hours Heat Desk.

X. TYPES OF HEATING PLANT OPERATIONS

NYCHA heating plants utilize a variety of fuel types as follows:

A. Dual Fuel Plants (Natural Gas or Fuel Oil - Switchable)

The majority of NYCHA developments are designed with the capability to switch from natural gas to #2 fuel oil. These plants receive gas service on firm gas rates and are NOT required to curtail use during the gas utilities' peak curtailment periods.

B. Firm Fuel Plants (Dedicated Fuel Type)

Some NYCHA heating plants are built for one type of fuel only, either natural gas or grade #2 fuel oil (purchased from approved contracted vendors).

C. Con Edison Purchased Steam Plants

A small portion of Manhattan developments are designed to operate solely on Con Edison Purchased Steam to supply heat and hot water (no boilers on site).

XI. RESPONSE TO HEATING PLANT ALARMS

Building Management Systems has an alarm system established to notify NYCHA personnel of emergency situations at a heating plant.

A. Alarms for Building Management Systems-Enabled Heating Plants

As part of the implementation of Building Management Systems, the existing dial-up Sensaphone end devices were removed from NYCHA's wide area network. Building Management Systems automatically notifies designated personnel of certain emergency conditions at heating plants.

1. Types of Alarms:

There are three (3) emergency conditions for which the Building Management Systems provides an alarm notification:

a. System Alarms (Steam or Hot Water Temperature)

System alarms depend on the type of boilers that are installed at a heating plant. The two (2) system types are:

Steam System	Hydronic System
An alarm is triggered if there is substantial pressure loss at the heating plant, as measured by the Pressuretrol sensor.	An alarm is triggered if there is substantial hot water temperature loss at the heating plant, as measured by the Aquastat sensor.

b. Electric (ASCO Relay) Alarms

An alarm is triggered if there is an interruption or reduction of power in the heating plant, as indicated by the ASCO Relay.

c. Water Intrusion Alarms

An alarm is triggered if there is a substantial increase in the water level on the heating room floor, as measured by a flood float sensor.

2. Building Management Systems MAP (No Time Delay)

When an alarm is triggered, the heating plant icon on the Building Management Systems map changes color. The green icon changes to a flashing red icon, without a time delay.

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3. Building Management Systems E-mail Notifications (Time Delayed)

Each alarm type is configured to automatically send an e-mail after a predetermined period of time. The e-mails are sent to relevant Heating Management Services Department personnel and other departments as follows:

- a. Heating Administrator
- b. Heating Superintendent
- c. Heating Assistant Superintendent
- d. Emergency Services Department

4. The Building Management Systems alarm e-mail provides the following information:

- a. Time of the alarm
- b. Alarm Type
- c. Property Management Department/Cluster
- d. Heating Plant Location
- e. Web link to the Building Management Systems site (login required)
- f. Order ID

5. The notifications and delays are as follows:

Alarm Type	Building Management Systems Alarm (E-mail sent)	Delay
Steam Pressure System	Pressure Is Below 3 PSI.	15 Mins.
Hydronic System	Hot Water Is Below 120 Degrees.	15 Mins.
Electric (ASCO Relay)	ASCO has been tripped.	5 Mins.
Water Intrusion	Flooding Condition in Boiler Plant	1 Min.

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6. Response to Building Management Systems E-mails

After the heating superintendent, or designee, receives an alarm e-mail notification for heating plants within their cluster, they must acknowledge the e-mail notification by utilizing the e-mail Reply to All function. The reply e-mail updates the recipients and advises how the response to the alarm is being conducted. A heating administrator can also assign personnel to an emergency by utilizing the e-mail Reply to All function.

NOTE:	When the alarm condition returns to OK Status , a follow up e-mail is automatically sent to the original recipients list and indicates the duration that the alarm condition existed.
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B. Recording Alarm Responses by After-Hours Heat Desk

The After-Hours Heat Desk Roving Team of heating frontline staff who responds to an alarm must record all visits to development boiler rooms in the Boiler Room Logbook (in red ink) and on NYCHA Form 060.296, *Heating Plant Service Area Nightly Report*. The name and title of the supervisory staff member must be recorded as well as the purpose of the visit, as follows:

1. Routine visit
2. Emergency Services Department requested visit
3. Alarm response

For more information, please see Section VII., Heat Desk, above.

XII. LOGBOOKS AND REPORTS

A. Boiler Room – Logbooks

The following logbooks must be kept at all times in a convenient place in the boiler room:

1. Boiler Room Logbook
 - a. Is a hard cover book that usually is red in color.
 - b. Must have the development name and boiler room address written on the cover in marker.
 - c. Includes important entries (such as malfunctioned safety devices) in red ink. Entries cannot be omitted or removed.

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- d. Provides information related to:
 - (1) Daily routines related to plant operations MUST be entered
 - (2) Safety checks
 - (3) Feedwater tests
 - (4) Building Management Systems equipment checks
- e. Is not to be removed from the boiler room by any persons without the approval of the heating superintendent or assistant heating superintendent.
- f. Is considered the permanent official record of boiler room operations.
 - (1) No erasures or “white-out” are permitted.
 - (2) If an original entry is incorrect, it must be lined out and initialed by the person correcting the entry.
- g. Must not have vacant lines or spaces left between entries.
- h. Must be signed by:
 - (1) The heating frontline staff on duty.
 - (2) Any person entering or leaving the boiler room. Entries must include the time and purpose of the visit.
 - (3) Contractors and their employees, including supervisors, indicating company name, nature of repairs, and time of arrival and departure.
- i. Indicates the time of departure, reason for departure, and destination when a heating frontline staff leaves the boiler room for tank room inspections, supplies or repairs, etc. The heating frontline staff must note the time of return as the next entry in the logbook.

2. Boiler Room Preventive Maintenance Logbook

- a. Is a hard cover book (must be labeled or marked).
- b. Includes important entries (such as malfunctioned safety devices) in red ink. Entries cannot be omitted or removed.

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- c. The logbook includes:
 - (1) Detailed information regarding work
 - (2) Repairs
 - (3) Overhauls
 - (4) Any aspect of operations regarding the heating system
- d. All heating frontline staff, or any other employee involved with the maintenance and repair of heating equipment, must enter relevant information in this log, with no erasures or “white out.”

B. Boiler Room Reports

1. The Boiler Room Daily Inspection Work Order is automatically generated twice daily and is used to report operating information. Heating frontline staff completes, signs, and closes the Boiler Room Daily Inspection Work Order via the handheld device.
2. The heating superintendent, or designee, must monitor each boiler room’s fuel consumption, as this information may alert them to an existing problem:
 - a. If there are multiple plants, the first calculation should start at 9:00 a.m. and then calculate the other plants in a sequential mode. This sequence must be kept consistent on a daily basis to ensure accurate calculations.
 - b. Heating meters must be read on the scheduled date in order to reflect an accurate monthly budget.
3. Heating frontline staff must maintain a daily log of boiler meter readings, as well as monthly utility company readings.
4. The utility company meter reading date must be posted in the assistant superintendent’s office, as well as on the bulletin board in the heating plant.
 - a. If the utility company does not read the meter on the scheduled date, a trained development employee reads the meter and maintains a copy of the readings.
5. Heating frontline staff records stack temperature readings in the handheld device.
6. Heating frontline staff records oil tank stick readings in the handheld device.

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7. Heating Plant Operations Record (Daily)

Heating frontline staff enters the following information in the handheld device:

- a. Daily carbon dioxide (CO₂) readings
- b. Chemical readings and tests

8. Heating Plant Operations Record (Monthly)

Heating frontline staff enters the following information in both the Preventive Maintenance Logbook and the Boiler Room Logbook:

- a. Date and result of the monthly boiler room fire safety remote control (ASCO) test
- b. Dates and results of pop-safety tests

9. Heating Plant Operations Record (Semi-Annual Records)

The heating superintendent records the results and date of the most recent Evaporation and Accumulation Tests in both the Preventive Maintenance Logbook and the Boiler Room Logbook.

XIII. OPERATING AND MAINTAINING THE HEATING PLANT

This section provides an outline on how to operate and maintain a heating plant.

A. Developing Heating Plant Protocols

Each heating assistant superintendent:

1. Creates specific instructions on how to open and operate plants in their cluster.
2. Refers to manufacturer's instructions when creating specific procedures for individual heating plants.
3. Consults with the heating superintendent, heating administrator, and/or Professional Development and Training staff, if needed.
4. Submits the developed plan to the heating superintendent and/or heating administrator for review and approval, prior to being enacted.

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B. Operating the Plant

Each development heating plant is to have the appropriate heating staff available for duty, Monday through Friday. The following position descriptions should be used only as a guideline.

C. Heating Frontline Staff

1. At the beginning of her or his shift, immediately reports to the assistant property maintenance's supervisor's office, to be assigned any additional requested work.
2. Upon arrival at the development, addresses heat/hot water orders via the handheld device. Checks for work orders a minimum of four (4) times daily during the heating season.
3. Inspects the heating plant and reviews and signs all logbooks.
4. Reviews reports and/or forms via handheld device.
5. Performs all safety tests at the beginning of shift.
6. Performs daily oil tank stick reading at a consistent time each day and initiates orders for oil, when needed, by notifying Heating Management Services Department personnel designated by the heating administrator.
7. Completes NYCHA Form, 060.073, *Twice Weekly Tank Room Inspection Report*.
8. Contacts the heating superintendent, if assistance for repairs or maintenance is necessary.
9. Maintains janitorial standards.

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10. Performs feedwater analysis once a day, or as assigned, on all operating boilers and records results and dosage(s) administered on NYCHA Form 060.175, Boiler Feedwater Analysis. If blowdowns are required, refer to the table below:

BOILER BLOWDOWN GUIDE	
Action	Purpose
Low Water Cut-Offs	Verify Operation and Remove Sediment
Water Column	Verifies True Level
Gauge Glass	Verifies True Level
Feedwater Regulator	Ensures Valve/Motor Operation and Removes Sediment
High Water Alarm	Removes Sediment
Surface Blowdown*	Removes Foreign Matter in Suspension

*Surface blowdowns must be performed prior to placing a boiler online. For more information, see Section XIX.F., Feedwater Treatment and Corresponding Boiler Maintenance.

11. Checks the tri-cocks during each watch:

- a. The top tri-cock must emit steam.
- b. The middle tri-cock must emit a mixture of steam and water.
- c. The bottom tri-cock must emit water at all times.

D. Boiler Identification

The Heating Management Services Department ensures that all NYCHA-operated boilers are labeled properly with the NYC Department of Buildings (DOB) identification code or device number that appears on the Boiler Inspection Report sent to DOB. In addition, the Heating Management Services Department works with private management companies at privately-managed developments to ensure that violations are addressed in accordance with DOB requirements.

XIV. TANK ROOM INSPECTION PROCESS

A. Tank Room Maintenance Basics

1. Tank rooms must be properly maintained and cleaned at all times.
2. If condensate water is being dumped into the pit of the tank room, the problem must be addressed immediately.
3. If temporary sump pumps are installed, discharge lines must be exhausted directly into the sewage line, with no exceptions.

B. Frequency of Tank Room Inspections by Title

1. Heating frontline staff inspect all tank rooms a minimum of twice weekly. If problems exist with tank room machinery, inspections must be made at least once per day until the malfunctions are remedied.
2. Heating assistant superintendents must schedule staff accordingly to ensure that tank room inspections are performed, as required.
3. Heating assistant superintendents must inspect all tank rooms quarterly and as needed. Heating superintendent must spot check tank rooms as needed and formally inspect all tank rooms annually.

To inspect a tank room:

- a. While performing annual inspections of the tank room, the heating superintendent, or designee, uses the handheld device to electronically record the current status of the equipment, recording any item(s) that are deficient, and noting any additional specifics. If a handheld device is not available, a paper work order is completed and inspection results are manually entered into Maximo.
- b. Once the inspection is complete and signed off, the heating superintendent, or designee, enters the inspection results in Maximo and child work orders are created in Maximo to correct the noted deficiencies.

C. Conducting Inspections

When inspecting tank rooms, staff must inspect the following:

1. Motorized control valves
2. Pumps

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3. Mechanical equipment
4. Operation of alternating equipment
5. Check and record all equipment gauges:
 - a. House and return vacuum systems
 - b. Steam pressure
 - c. Hot water temperature

D. NYCHA Form 060.074, *Tank Room Log*:

1. NYCHA Form 060.074 is posted on a board installed at the pump equipment.
2. Twice-weekly tank room inspections are to be reported on this form.
3. Any defects in the tank room are noted on the form and reported to supervisory personnel.
4. The form is removed and reviewed by the heating assistant superintendent and heating superintendent at the end of each month. A new form must be immediately posted at the pump equipment.

E. NYCHA Form 060.073, *Twice-Weekly Tank Room Inspection Report*

1. Each visit to all tank rooms is noted on this form.
2. This form must be fastened to a clipboard and brought with the heating frontline staff during the inspection.
3. Heating frontline staff notes all inspection readings/findings on this form.
4. Heating frontline staff scans and sends completed form to the heating assistant superintendent once the inspection is complete. If the heating assistant superintendent is not available, send the form to the heating superintendent.
5. Heating assistant superintendent reviews the completed form, provides it to the heating superintendent, and ensures corrective measures are taken in areas where deficiencies are noted.

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XV. RESIDENT COMMUNICATIONS

NYCHA notifies residents about planned and unplanned heat and/or hot water service interruptions.

A. The Heating Management Services Department or Capital Projects Department, whichever is applicable, notifies the property manager and property maintenance supervisor at least 72 hours in advance of a scheduled heat and/or hot water interruption.

B. The property manager ensures NYCHA Form 060.059B, *Emergency Notice – Interruption of Services*, is posted in all buildings affected by a heat and/or hot water interruption.

C. Robocalls

1. The Heating Management Services Department creates an outage work order in Maximo.

2. Maximo automatically notifies Siebel of the outage.

3. Siebel creates the appropriate robocalls.

4. Planned Interruptions

a. A robocall is made to all affected residents 48 hours before a scheduled interruption.

b. Another robocall is made to all affected residents after service is restored.

5. Unplanned Interruptions

a. A robocall is made to all affected residents after an unplanned interruption.

b. Robocalls are made on the hour, from 9:00 a.m. to 9:00 p.m., e.g. if a service interruption occurs at 8:30 a.m., the calls will be made at 9:00 a.m.

(1) Robocalls begin at 8:00 a.m. if the interruption is an emergency.

c. Another robocall is made to all affected residents after service is restored.

Residents can provide feedback regarding the interruption with an interactive feature.

(1) They press '1' to indicate if their service still is not restored. This will connect them with the Customer Contact Center, and their call will be flagged as a follow-up to a heat and/or hot water outage.

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- (2) They press '2' to indicate if their service is restored. Siebel logs the responses that service is restored successfully.
- (3) If neither option is pressed, the system records the service as being restored successfully.
- (4) The Department of Information Technology creates a report that shows the number of successful and failed calls including retries for failed calls, and the number of each type of response.

XVI. HEAT COMPLAINTS

NYCHA must restore heat to units affected by a heating outage within 24 hours, and in no event more than 48 hours, based on the Agreement between NYCHA, the U.S. Department of Housing and Urban Development (HUD), and New York City entered into on January 31, 2019 ("the Agreement").

A. Heat Complaint Work Orders

The heating assistant superintendent, property maintenance supervisor, assistant property maintenance supervisor and/or property manager must monitor Maximo at 8:00 a.m., 10:00 a.m., 12:00 p.m., and 3:00 p.m. during regular business hours to determine if there are any outstanding heating work orders. After business hours, the After-Hours Heat Desk must continuously monitor Maximo for heat complaints.

B. Procedures for Heat Complaints

1. Upon receiving a heat complaint, the Customer Contact Center customer service agent creates a service request in Siebel and informs the resident that staff will investigate and correct the condition. Siebel automatically transfers the service request information into Maximo which creates a Priority 7 emergency work order.
2. The CCC customer service agent receiving the complaint must verify the phone number of the resident.
3. Maximo automatically routes the work order to either:
 - a. The heating frontline staff located in the development office during business hours;
or
 - b. The After-Hours Heat Desk if after business hours.

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4. The property maintenance supervisor or ESD Supervisor uses Building Management Systems to ensure that the boiler plant is operating properly.
 - a. For non- Building Management Systems sites, a Roving Team must be dispatched by the After-Hours Heat Desk.
5. The heating frontline staff investigating the complaint must complete all steps in the following order:
 - a. Notes the outside temperature on the heat work order.
 - b. Checks zone valve operation and the position of the zone valve in the tank room.
 - c. While in the tank room, checks the operation of the vacuum and/or condensate pump(s) to determine if there is adequate vacuum in the building and checks the by-pass valve and the circulation pump.
 - d. Must note the actual conditions found in the tank room and the action taken on NYCHA Form 060.074, *Tank Room Log*.
 - e. The following steps are taken regardless of whether Building Management Systems are installed in an apartment:
 - (1) Visit the apartment and take ambient temperature readings in each room. Record the temperature and time of the reading on the work order and add photos of the temperatures taken to the work order.
 - (a) If the daytime temperature is 68°F or above, or the nighttime temperature is 62°F or above, there is technically no issue to resolve. It is recommended to still follow through with the remaining procedure.
 - (2) Check each radiator in the apartment and verify the valve is fully open.
 - (3) Check radiator steam trap for proper operation. If the trap is open and passing steam, replace the element.
 - (4) Check for heat in the risers, both supply and return. If there is no measurable heat in the risers, go to the apartment below and repeat the above steps.
 - (5) Survey area around the radiator or convector. Make sure it is free from debris and there is no furniture blocking the unit.
 - (6) Check windows for any open or improperly closed windows, including broken windows and/or malfunctioning window balances.

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- (7) Look for air conditioners left in the windows causing outside air to enter the room.
 - (8) Report inoperable windows and drafty air conditioners to Property Management for follow up.
 - (9) Check if oven is being used for heat.
 - (10) Check if space heaters are being used for heat.
 - (11) Document all findings on the work order.
 - (12) If the issue cannot be resolved by the in the apartment, advise the resident that work to resolve the issue will be completed as quickly as possible.
 - (13) A work order is not closed if the apartment temperature is below legal limits.
- f. Replaces the thermostatic element, if required.
- g. If the tenant is not at home:
- (1) Leaves NYCHA Form 040.534A, *Notice of Visit by NYCHA Staff*, under tenant's door.
 - (2) Checks the apartments directly above and below for a no-heat condition.

NOTE:	<ul style="list-style-type: none">• In apartments with baseboard heating, temperature sensing valves must be inspected for proper operation.• If an apartment radiator requires valve replacement, refer to manufacturers' orifice setting schedules.
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6. If the complaint cannot be resolved by the heating frontline staff during regular business hours, she or he notifies a Heating Management Services Department supervisor, the property maintenance supervisor, or designee, and Heating Management Services Department or property management staff creates a child work order for skilled trades staff or a vendor.
7. If the complaint cannot be resolved by the heating frontline staff after regular business hours, the After-Hours Heat Desk creates a child work order for skilled trades staff or a vendor.

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8. If a problem has been recognized in a particular tank room, a zone valve opening adjustment must be made.
 - a. For Building Management Systems sites, Heating Management Services Department personnel must verify that the valve is operating automatically. If a condition is observed that precludes automatic operation and requires a manual adjustment via Building Management Systems or by-passing the Building Management Systems controls, the Heating Management Services Department personnel:
 - (1) Informs the heating administrator; and
 - (2) Opens a work order to repair the condition that requires manual operation.
 - b. For non- Building Management Systems sites, the After-Hours Heat Desk dispatches a Roving Team to the location.
9. If there are multiple heat complaints made about the same issue:
 - a. During business hours, all associated work orders relating to a major service disruption must be completed and closed by Heating Management Services Department supervisory staff. Additionally, the property maintenance supervisor, or designee, must advise the residents and the Resident Association President via telephone notification of the resolution of the heat issue.
 - b. After business hours, all associated work orders relating to a major service disruption must be completed and closed by the After-Hours Heat Desk. Additionally, the After-Hours Heat Desk and Emergency Services Department supervisor, or designee, must advise the Resident Association President via telephone notification of the resolution of the heat issue.
10. The heating frontline staff records on each work order the amount of labor and materials expended and processes the completed work order.

C. Heat Complaint Quality Control

1. If heat restoration takes longer than 12 hours, the Environmental Health and Safety Department investigates the failure to do so.
2. The Environmental Health and Safety Department provides a report to the senior vice-president of the Department of Operations Support Services within 45 calendar days after the failure is reported. The report includes the cause of the failure and proposes corrective actions to prevent a reoccurrence.

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3. The senior vice-president of the Department of Operations Support Services accepts or rejects the proposed corrective actions within 14 calendar days.
4. If the senior vice-president rejects the proposed corrective actions, they must provide alternative options. If the Environmental Health and Safety Department agrees with the alternative options, the report is modified accordingly.
5. The senior vice-president of the Department of Operations Support Services provides a quarterly report to the Environmental Health and Safety Department tracking the implementation of corrective actions.

XVII. HOT WATER COMPLAINTS

Hot water work orders must be completed within 24 hours after they are reported.

A. Hot Water Work Orders

The heating assistant superintendent, property maintenance supervisor, assistant property maintenance supervisor and/or property manager must periodically monitor Maximo at 8:00 a.m., 10:00 a.m., 12:00 p.m., and 3:00 p.m. during regular business hours to determine if there are any outstanding heating work orders. After business hours, the After-Hours Heat Desk or ESD supervisory staff must continuously monitor Maximo for heat complaints.

B. Procedures for Hot Water Complaints

1. Upon receiving a hot water complaint, the Customer Contact Center customer service agent creates a service request in Siebel and informs the resident that staff will investigate and correct the condition. Siebel automatically transfers the service request information into Maximo which creates a Priority 7 emergency work order.
2. The CCC customer service agent receiving the complaint must verify the phone number of the resident.
3. Maximo automatically routes the work order to either:
 - a. The heating frontline staff located in the property management office during business hours; or
 - b. The After-Hours Heat Desk if after business hours.
4. The property maintenance supervisor, After-Hours Heat Desk, or ESD supervisor uses Building Management Systems to ensure that the boiler plant is operating properly.
 - a. For non- Building Management Systems sites after business hours, a Roving Team must be dispatched by the After-Hours Heat Desk supervisor.

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5. The heating frontline staff investigating the complaint must complete all steps in the following order:
 - a. Checks for adequate steam pressure entering the tank room.
 - b. Checks the temperature of the water in the domestic hot water tank of the building.
 - c. Must note the actual conditions found and the action taken on NYCHA Form 060.074, *Tank Room Log*.
 - d. Visits the residence and takes a hot water temperature reading from all the faucets. Notes the findings on the hot water work order.
 - e. In the event the tenant is not at home, leaves NYCHA Form 040.534A, *Notice of Visit by NYCHA Staff*, under tenant's door.
 - f. For gas-fired hot water boiler sites:
 - (1) Confirm that there is power, water, and fuel going to the unit.
 - (2) Ensure that the hot water circulating pump is functioning properly, by inspecting the rotation of the impeller.
 - (3) Inspect the flow switch on the unit to ensure it is in the closed position.
 - (4) Confirm the blower motor inside the unit is running.
 - g. If all of the conditions above appear to be normal the HTP investigates other probable or possible causes of the complaint and updates the work order:
 - (1) Probable causes – Generating/Storage Tanks
 - (a) Hand-held shower devices
 - (b) Insufficient steam pressure
 - (c) Improperly adjusted or defective hot water regulator on the domestic hot water storage tank
 - (d) Improperly installed washing machine
 - (e) Defective hot water coil
 - (f) Defective drip trap on steam coil of the domestic hot water storage tank

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- (g) Inoperative hot water circulating pump
 - (h) Defective air-vent off hot water trap
 - (i) Improper vacuum pump or condensate tank operation
- (2) Over-Heated Water in Generating/Storage Tanks – Possible Causes
- (a) Improperly adjusted hot water regulator on the hot water storage tank
 - (b) Defective hot water regulator on the hot water storage tank

NOTE:	Due to the dangers associated with over-heated hot water, for exceedingly high temperatures, open the by-pass valve to allow cold water into the hot water lines. Shut the steam supply valve to the regulator.
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- (3) Probable causes – Instantaneous Hot Water Units
- (a) Hand-held shower devices
 - (b) Insufficient steam pressure
 - (c) Improperly installed washing machine
 - (d) Heat exchanger – Defective hot water coil
 - (e) Excessive scale in Heat exchanger
 - (f) Defective trap
 - (g) Defective Relief Valve
 - (h) Defective hot water circulating pump
 - (i) Improper vacuum pump or condensate tank operation
 - (j) Defective primary or secondary aqua stats
 - (k) Defective domestic water outlet valve
 - (l) Defective primary or secondary temperature control valves
 - (m) Check settings on primary or secondary trim valves
 - (n) Defective solenoid shut-off trim valves

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(o) Cross Connection

- i. If there is a difference in water temperature readings on different floors in the same building line, it is assumed there is a cross connection (a line or valve introducing cold water into the hot water).
 - ii. Inspect the lowest floor to identify appropriate hot water temperatures and work up the line until the floor where the temperatures are cold is identified.
 - iii. Check the shower, kitchen faucet, and basin to identify if there is an illegal appliance hook-up. If so, the resident must remove it.
 - iv. Check all apartments above that floor (shower, kitchen faucet, basin) and take temperatures to ensure they are standard and the issue is resolved.
 - v. If the resident refuses to remove the illegal hook-up or the cause cannot be identified, notify the property maintenance supervisor or assistant property maintenance supervisor for further action.
6. If there are multiple heat and/or hot water complaints made about the same issue, all associated work orders relating to a major service disruption must be completed and closed by Heating Management Services Department staff.
 7. If the complaint cannot be resolved by the heating frontline staff during business hours, he or she notifies the Heating Management Services Department and property maintenance supervisor, or designee, who creates a child work order for the appropriate skilled trades staff or a vendor.
 8. If the complaint cannot be resolved by the heating frontline staff after business hours, the After-Hours Heat Desk creates a child work order for skilled trades staff or a vendor.
 9. The heating frontline staff records on the handheld device the amount of labor and materials expended and processes the completed work order.
 10. After business hours the heating frontline staff calls in the results of the complaint to the After-Hours Heat Desk.

XVIII. OPERATING SAFETY TESTS AND CONTROLS

If any safety device fails, a Heating Management Services Department supervisor must be contacted immediately.

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A. Low Water Cut-Offs

1. Automatic

- a. Test by blowing down the low water cut-off at least once per day.
- b. Burner should recycle back into operation once water levels in the boiler return to normal operating levels.
- c. If the low water cut-off is inoperative, the boiler is removed from service.

2. Manual

- a. Test by blowing down the low water cut-off and boiler remains off, at least once per day.
- b. Burner is put back into service by resetting the manual reset switch.

B. High Water Alarms

Boilers with high water alarms should be blown down to remove sediment, prior to testing.

C. Feedwater Regulators

1. Inspect the feedwater valve for proper operation.
2. Periodically, blow the control down to remove sediment and test for proper operation.

D. Flame Failure

When the fuel supply to the burner is interrupted, the programming control should lockout within the time specified by the control manufacturer.

1. Perform flame failure test by one of the following methods, based on burner manufacturer type:
 - a. Remove the flame scanner.
 - b. Shut off the fuel supply.
2. If the burner does not shut down, take the boiler out of service, record the problem in the appropriate logbook and immediately notify Heating Management Services Department supervisor(s).

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E. Vaporstat/Air Proving Switch

A device that senses air pressure at the burner.

F. Gas-Electric Ignition

The assembly that lights the main flame. To test this device, visually inspect and confirm that the gas pilot light ignites. Be certain that the sight glass is present, prior to observing the gas pilot light ignition.

G. Magnetic Gas and Oil Valves

Identified as solenoid valves that open when ignition is established and allow main flame to be maintained. To test, check operation of all fuel valves. Defective valves must be repaired or replaced immediately.

H. Burner Interlocks

Disconnect the electric air-oil interlock and if the flame does not extinguish, check the device for defects. If the device is defective, remove the burner from operation and repair immediately. Note any actions taken in the appropriate logbook.

I. Boiler Safety Valves

1. Testing

- a. Boiler safety valves are set at a maximum pressure threshold of fifteen (15) psi (pounds of pressure per square inch).
- b. These valves must be tested monthly to ensure that they are operating properly. Replace malfunctioning valves, as needed.

2. Replacement of Malfunctioning Valves

- a. When installing replacement valves, size reducing couplings or bushings must not be used. The replacement valve must be consistent with the manufacturer's recommendation.
- b. Replaced valves must have discharge piping emptying to a trough or common dump. Additional outlet piping should be as short and straight as possible, and the outlet pipe size should be no less than the size of the valve outlet. Ensure that additional outlet piping is supported independent of the valve.

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J. Lubrication

The heating superintendent assigns and schedules staff to lubricate all equipment, where required. Inspections are intermittently performed to ensure that proper lubrication is provided to all equipment in the development, as required.

1. Proper lubricants must be used, as established under the Standard Specifications for the various types of equipment.
2. Lubricate unsealed bearings, as per manufacturer's instructions.
3. Inspect oil bearings daily and add oil, as needed. Drain the reservoir and replace with fresh oil quarterly.
4. Change the oil in the crankcase of air compressors, as per manufacturer's instructions, or annually. Note this action in the handheld device.
5. Record lubrication work on NYCHA Form 060.072, *Mechanical Equipment Record*. Write dates of lubrication in red. Record repairs or re-packing of bearings on the reverse side.

K. Scheduled Tests

The tables below list the types of scheduled testing to be performed on the heating plant on a daily, weekly, monthly and semi-annual basis.

SCHEDULED ASSIGNMENTS – DAILY		
Test		Employee Performing Test
Before Steaming	Gauge Glass	Heating frontline staff
	Tri-Cocks	Heating frontline staff
	Surface Blowdown	Heating frontline staff
	Bottom Blowdown	Heating frontline staff
During Steaming	Low Water Cut-Off (both manual and automatic)	Heating frontline staff
	Flame Failure	Heating frontline staff
Stick all fuel oil tanks with a sounding stick beginning at 9:00 a.m. Record in the logbook the amount of fuel oil on hand in each tank.		Heating frontline staff
Record the date and time in the logbook when a fuel oil tank is switched.		Heating frontline staff

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Record and report any abnormalities or problems related to development fuel oil tanks to a supervisor immediately.	Heating frontline staff
Test feedwater in operating boilers.	Heating frontline staff
Carbon Dioxide (CO ₂) Reading – 8% to 9½% preferred for gas 10% to 12½% preferred for #2 oil	Heating frontline staff

SCHEDULED ASSIGNMENTS – WEEKLY

Test	Employee Performing Test
Inspect refractory	Heating frontline staff
Air compressor, safety valves and belts	Heating frontline staff

SCHEDULED ASSIGNMENTS – MONTHLY

Test	Employee Performing Test
Carbon Dioxide (CO ₂) Reading	Heating Assistant Superintendent
Test feedwater in operating boilers	Heating Assistant Superintendent
Building Management Systems or Sensaphone Test	Heating Assistant Superintendent
Boiler Safety Valve: manually pull chain or lift by hand	Heating frontline staff
Boiler Room Fire Safety System Remote Control Switch (First Monday of Each Month)	Heating frontline staff (in the presence of the Heating Assistant Superintendent)
High/Low Gas Pressure Switch Test	Heating frontline staff (in the presence of the Heating Assistant Superintendent)
Bottom Blowdown on Hot Water Tanks	Heating frontline staff
Bottom Blowdown on Condensate Tanks	Heating frontline staff
Bottom Blowdown on Feedwater Regulator	Heating frontline staff

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SCHEDULED ASSIGNMENTS – ANNUALLY	
Test	Employee Performing Test
Accumulation Test	Heating frontline staff (in the presence of the Heating Assistant Superintendent)
Evaporation Test	Heating frontline staff (in the presence of the Heating Assistant Superintendent)

L. Hydrostatic Test Procedure for Minor Welding Repairs (Unscheduled)

Perform this test following minor welding repairs (i.e., staybolt replacement, tube replacement, manhole/handhole replacements, seam welding, and the annual tightness test for boiler inspection) made on low-pressure boilers.

Either the heating superintendent or heating assistant superintendent must be present when the test is performed. Report results on NYCHA Form 060.240, *Boiler Hydrostatic Report*.

1. Boiler Hydrostatic Test Report

a. Secure the boiler

(1) Close valves for steam

(2) Close valves for oil

(3) Close valves for gas

(4) Shut electric switches and associated circuit breakers

(5) Close valves for feedwater

(6) Employ all safety disconnect switches

(7) Remove fuses

(8) Hang appropriate signs on oil/gas burners

(9) Adhere to all protocols in NYCHA Standard Procedure 158:04:1, *Lockout/Tagout (LO/TO)*.

b. Fill the boiler with water from the feedwater supply line until water begins to come out of the vent at the top of the boiler.

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- c. Close the vent valves and apply water pressure from the feedwater supply line until ten (10) psi of pressure is attained on the boiler pressure gauge.
- d. Secure the valve on the supply line.
- e. Inspect the boiler for both internal and external leaks.
- f. If the boiler pressure drops rapidly below ten (10) psi, immediately inspect for leaks.
- g. Mark area(s) where leak(s) were found and discontinue test until the required repairs are made. Re-test the boiler following repairs.
- h. When the test is completed, drain the boiler through the blowdown lines and open the vent valve at the top of the boiler to prevent the creation of a vacuum inside the boiler. Drain the boiler until the water level decreases to the normal operating level.
- i. Treat boiler, as required.
- j. Return the boiler back into operation.

M. Hydrostatic Test for Major Welding Repairs (Unscheduled)

Perform this test following major welding repairs (i.e., re-enforcement plates on mudlegs, replacement of mudlegs, internal and external boiler plates, complete tube replacements, and complete staybolt replacements) made on low-pressure boilers.

An authorized boiler inspector or a heating superintendent must be present when the test is performed. Report results on NYCHA Form 060.240, *Boiler Hydrostatic Test Report*.

1. Follow steps for a Hydrostatic test for a minor welding repair, as outlined directly above in Section XVIII.L.
2. Remove the pop safety valve or use a gag clamp on all pop safety valves. The gag clamp must be fitted properly.
3. Blank-off all low water cut-off controls, remove all pressure controls and secure all gauge glass tri-cocks.
4. Apply water pressure from feedwater supply line (or special hydro-pump) until a pressure of 22½ psi is reached. No more than 1½ times the boiler's maximum operating pressure is to be applied to the boiler under any circumstances. When the appropriate pressure is attained, perform an internal and external inspection of the boiler, with particular attention given to the area(s) that was repaired.

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5. If a leak(s) exists, mark the area(s) it is coming from. Discontinue the test and perform repairs. When the repairs are complete, re-test the boiler.
6. When the test is complete, drain the water from the boiler through the boiler blowdown lines. Open gauge glass try-cock valves and open the vent valve on the top of the boiler. Drain the water from the boiler until the water level reaches normal operating levels in the gauge glass.
7. Remove all gag clamps from safety valves; replace Pressuretrol and re-install low water cut-off controls.
8. Place boiler back in operation. Make certain that all oil, gas, steam and feedwater valves are open and in proper operating position. Test all safety equipment.
9. Prepare NYCHA Form 060.240, *Boiler Hydrostatic Test Report*. Distribute as follows:

Original	Heating Superintendent
Copy	Development Heating Folder

NOTE:	If personnel experience any problems during hydrostatic testing, they must immediately contact the heating administrator.
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XIX. BOILER WATER TREATMENT

A. Introduction

Lack of proper boiler water treatment decreases the efficiency of the system and corrodes a boiler, resulting in unreliable service and inability to meet the expected life of the boiler.

1. Boilers with treated water require less maintenance, fewer repairs, and use less fuel than boilers with untreated water.
2. Introducing fresh water into the boiler corrodes the boiler and shortens the productive life of the boiler.

B. Feedwater – Purpose for Treatment

There are two (2) sources of feedwater: untreated water (city water) and return condensate. Steam heating systems are closed systems designed to use return condensate as the primary feedwater, with minimal make-up water needed. Recovery and re-use of return condensate water improves boiler operation by:

1. Improving make-up water quality.

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2. Reducing the concentration of solids.
3. Decreasing the cycles of concentration.
4. Decreasing blowdowns.
5. Increasing the feedwater temperature.
6. Reducing the amount of chemical treatment.
7. Reducing fuel expenditures.

C. Chemical Treatment

The amount of chemicals added to the feedwater is directly related to the amount of impurities in the water, the level of pH, and the amount of dissolved oxygen in the make-up water.

1. Nitrailotriacetic Acid (NTA)

Make-up water contains impurities and solids (Calcium and Magnesium) that cause hardness of the water and scale formation, when subjected to boiler pressures and temperatures. The amount of softening chemicals (NTA) needed depends on the feedwater hardness.

2. Alkalinity

The amount of alkalinity (sodium hydroxide) needed depends on the pH reading. The boiler Ph range should be maintained at 11.

3. Sulfites

The amount of oxygen scavenger (Sulfite Powder) required is related to make-up water usage, and if raw water is entering the tank as a result of a coil leak.

4. Amines

The amount of amines required to obtain the proper pH level is determined by the condensate sample obtained from the furthest building from the heating plant. Condensate return water pH should range between 8 and 9.

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D. Magnetic Water Conditioning

Magnetic treatment can be used in conjunction with treating feedwater with NTA's and assists in limiting the frequency of blowdowns. For more information, see Section XIX.C, Chemical Treatment, directly above.

Water is passed through a strong magnetic field resulting in a reaction between positively and negatively charged ions (molecular charging). The reaction causes the precipitate matter (made up of calcium (Ca), magnesium (Mg) and iron (Fe)) to become non-adherent, meaning that it does not stick to the boiler heating surface. The magnetic charge results in the prevention of scale buildup on the waterside surface of the boiler. When scale accumulates on the waterside of the boiler, conductivity readings rise, and may compromise the efficiency of the boiler. Blowdowns are performed when conductivity readings are above 3,000.

Magnetic treatment of boiler water is a safe, low cost way of reducing the use of the chemical NTA. Since the magnetic treatment of feedwater prevents Mg and Ca from adhering to the waterside boiler surface, the need for treatment with NTA is reduced.

NOTE:	If make-up water usage is more than forty (40) gallons per dwelling unit per month, NTAs must be added to the boiler to bring NTAs into 20-30 PPM range.
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E. Frequency of Boiler Feedwater Testing

All developments, except those using utility steam, must have a boiler test kit and a conductivity meter. Heating frontline staff must conduct a daily boiler water analysis on all boilers in service and treat, if necessary.

Results are entered on NYCHA Form 060.175, *Boiler Feedwater Analysis*. A copy of this form must be forwarded to the Heating Management Services Department for review, at the end of each month. Note the performance of tests in the Boiler Room Logbook.

1. Responsibilities

a. Heating Administrator

- (1) Administers and supervises the Feedwater Program; Reviews NYCHA Form 060.175, *Boiler Feedwater Analysis*. Directs heating superintendents to ascertain the cause of any deficiencies found on the monthly report.
- (2) Reviews make-up water usage and initiates abatement, if overuse is discovered. Instructs heating superintendents to investigate concerns or report discrepancies.

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b. Heating Superintendent

- (1) Monitors and supervises the administration of the feedwater program within his/her designated area.
- (2) Assures that all staff is adequately trained on the testing and administering of chemical treatment.
- (3) Visits all heating plants within their designated area to ensure compliance with the testing and treatment guidelines.
- (4) Periodically, performs a boiler feedwater analysis.
- (5) Inspects all major welds/repairs and witnesses the hydrostatic test.
- (6) Ensures that each development procures necessary chemicals and testing equipment.
- (7) Coordinates with the property maintenance supervisor and the Borough Property Management Department supervisor of plumbers to have any leaks found in any boilers repaired immediately.

c. Heating Assistant Superintendent

- (1) Ensures that all heating frontline staff are trained to perform the feedwater analysis.
- (2) Ensures the assigned heating frontline staff perform the feedwater analysis daily on all operating boilers.
- (3) Reviews the feedwater analysis weekly.
- (4) Maintains sufficient stock of chemicals, reagents, and Personal Protective Equipment (PPE).
- (5) Ensures that all make-up water meters are accurate and are read, and the results recorded, with all the fixed numbers and multipliers. Ensures that if the meter is read in cubic feet, the reading is multiplied by $7\frac{1}{2}$ (7.5).
- (6) Reports excessive make-up water usage to the heating superintendent.
- (7) Reduces make-up water usage by identifying leaks

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d. Property Maintenance Supervisor

- (1) Informs the Heating Management Services Department immediately of leaks or locations of concern

e. Heating Frontline Staff

- (1) Performs the Boiler Feedwater Analysis and treats feedwater, as necessary.
- (2) During the warranty period of a new boiler plant installation, performs the feedwater analysis twice weekly to ensure that the contractor is in accordance with NYCHA and/or manufacturer's guidelines.
- (3) Informs the heating assistant superintendent of (or if the heating assistant superintendent is not available, informs the heating superintendent):
 - (a) Leaks or locations of concern, immediately.
 - (b) Status of the chemical Inventory.
 - (c) Excessive make-up water usage.

F. Feedwater Treatment and Corresponding Boiler Maintenance

1. Chemical Treatment

Boiler water may be treated:

- a. Internally, through the use of chemicals.
- b. Externally, through the use of magnets installed in the feedwater supply line.
- c. Through a combination of both methods.

2. Chemical Products

a. Sodium Hydroxide (NaOH)

- (1) Increases alkalinity.
- (2) Raises pH.
- (3) Precipitates Calcium Sulfate as Carbonate.

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b. Sodium Sulfite

- (1) Oxygen scavenger used to reduce oxygen levels in boiler feedwater.
- (2) Prevents Oxygen corrosion.
- (3) Forms Sodium Sulfates in the form of harmless sludge.

c. Nitratotriacetic Acid (NTA)

- (1) Controls metal ions in aqueous solutions.
- (2) If the development has a magnetic program, NTA is maintained at 20-30 PPM, if the development is using make-up water at a rate of 40 gallons per month, per dwelling unit.

d. Amines (Diethylethanolamine)

- (1) Volatile.
- (2) Added to the condensate tank to control acidity in the steam and condensate lines.
- (3) Neutralizes CO₂.
- (4) pH of condensate should be between 8 and 9 for optimum results. pH should not be higher than 9.

3. Water Damage

a. Boiler Scale Development

All water contains mineral ions. When the water is heated, these ions become excited and collide. The colliding ions cause the minerals to precipitate out of the boiler water solution. These minerals adhere to the heating surface of the boiler (tubes and waterside) and form scale.

b. Boiler Scale Composition

Scale is comprised of the following minerals:

- (1) Calcium (Ca)
- (2) Magnesium (Mg)
- (3) Other metals, including Iron (Fe)

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c. Boiler Scale Prevention

The following actions/conditions help to reduce scale on boiler heating surfaces:

- (1) Reduce make-up water usage by repairing all condensate return leaks.
- (2) Sludge in the boiler water must be readily removable by blowdown.
- (3) The concentration of dissolved solids in the boiler water must be controlled.
- (4) Do not allow the concentration to become so high as to require excessive blowdown or dumping of the boiler.
- (5) When making steam, a reduction of dissolved solids allows the water to boil smoothly, without foaming or priming.
- (6) Utilization of magnetic feedwater treatments greatly reduces the likelihood of scale on the waterside of the boiler

4. Causes of Boiler Corrosion

- a. All city water contains dissolved gasses such as oxygen (O₂) and carbon dioxide (CO₂). These dissolved gasses contribute to corrosion in the parts of the boiler they contact. This may be due to direct oxidation, or to an indirect function in the boiler water solution where wasting of surfaces is evident, such as pitting and gradual deterioration of metal surfaces.
- b. High temperatures accelerate these reactions.
- c. Serious pitting may result, and boiler tubes may rupture, if the boiler water solution is not treated immediately.
- d. Signs of corrosion: Rusty water in the gauge-glass is a common sign of corrosion in the boiler.
- e. Corrosion control neutralizes carbonic acid in the distribution system.
 - (1) Adding amines neutralizes carbonic acid. Amines are volatile, and carry through the steam throughout the distribution system, raising the system's overall pH.
 - (2) Maintains the system's pH between 8 and 9.

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5. Boiler Blowdown Principles

When water is heated and converted into steam, very little mineral matter exits the boiler, increasing the concentration of solids inside the boiler as more make-up water is added. Excessive mineral concentration creates difficulties in boiler operation.

When concentrations reach a pre-determined level, a portion of the boiler water must be removed to lower the mineral concentration in the boiler water solution. Sludge is removed at the same time. This is what is known as a boiler blowdown.

NOTE:	Blowdowns should be kept to a minimum to reduce the amount of make-up water needed in the system, and to reduce the amount of lost treated water.
--------------	---

6. Blowdown Procedure

- a. Remove the boiler from service (for more information see Section XXI, Removing a Boiler From Service, below) and allow impurities to settle.
 - (1) Secure fire to the boiler.
 - (2) Secure the feedwater valves to the boiler.
- b. Perform a bottom blowdown prior to adding chemical treatments to avoid losing treated water.
- c. Blowdowns are given to each valve in one (1) to three (3) second intervals over a period of time long enough to allow solids in the boiler to settle for easy removal (approximately one hour). Blowdowns must be performed in adherence to the following rules, designed to ensure the safety of the staff member and boiler:
 - (1) Secure all fires.
 - (2) Blowdowns are one (1) to three (3) seconds in duration. The height of the water in the gauge glass is not to be reduced more than one (1) inch.
 - (3) Following the blowdown, gradually open the feedwater regulator valves to permit the slow feeding of water into the boiler until the normal operating level is obtained.
 - (4) Blowdown valves are maintained in a tight closed position to avoid loss of boiler water and chemicals.

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7. Chemical Products Packaging

- a. Safety Data Sheets (formerly MSDS) information must be maintained in the boiler room.
- b. Liquid sodium hydroxide, sodium sulfite, NTA and amines must be in clearly labeled or stenciled packaging.
- c. Labels must include product:
 - (1) Name and Description
 - (2) Freezing Point
 - (3) Percentage of Product in Solution
 - (4) Ph Level
 - (5) Density of Product in Pounds per Gallon (lbs./gal.)

For more information on chemical products labeling, refer to SP 158:02:1, *Hazard Communication Procedure (HAZCOM)*.

8. Chemicals and Feeding Methods

- a. Precautions
 - (1) When handling any chemicals, follow manufacturer's recommendations.
 - (2) Directions printed on containers must be rigidly adhered to.
 - (3) Personal Protective Equipment (PPE) must be used when handling chemicals, as per the manufacturer's recommendations.
 - (4) Each chemical should be mixed and added to the feedwater separately.
- b. Powdered Chemicals
 - (1) Dissolve the granulated chemical in warm water. Mixing should occur in a separate container, especially if the amount of chemical to be dissolved is small (not more than a few pounds).
 - (2) Stir continuously until the entire granulated chemical is dissolved. Do not allow chemical to mat at the bottom of the container.

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(3) Inject the solution into the boiler water by means of a shunt feeder or proportional feeders provided at the boiler.

c. Liquid Chemicals

(1) Sodium Hydroxide is specified fifty percent (50%) in solution. Care must be exercised when handling liquid chemical, as it is strongly alkaline and freezes at 58° Fahrenheit.

(2) Inject the concentrated chemical directly into the shunt or proportional feeder.

(3) Pour amines into the condensate-receiving tank to maintain the required Ph (between 8 and 9).

9. Charging Shunt or Proportional Feeders

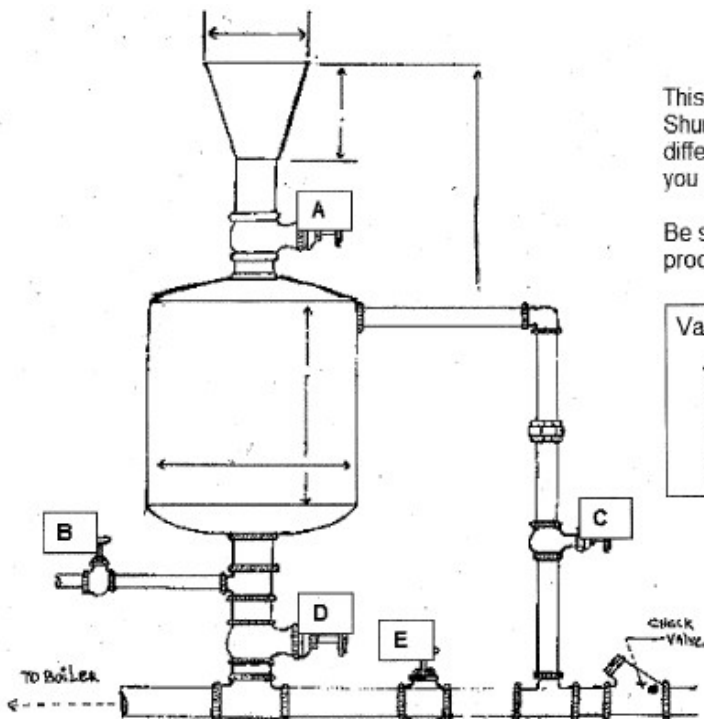


FIGURE 1

This figure depicts a typical installation. The Shunt feeder at your location may be slightly different. If so, have your supervisor instruct you on the proper procedure for use.

Be sure to shut down the burner before proceeding with chemical treatment.

Valves - Showing default positions for charging

A Inlet Valve	Closed
B Drain Valve	Closed
C By-pass Feed Valve	Closed
D Outlet Valve	Closed
E In-Line Gate Valve	Open

To charge shunt or proportional feeders:

- Ensure all valves are in the positions (shown in Figure 1 above).
- Open the Drain Valve (B).
- Slowly open the Inlet Valve (A).

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- d. Close the Drain Valve (B).
- e. Administer the chemical (or diluted mixture) into the funnel of the shunt feeder.
- f. Close the Inlet Valve (A).
- g. Close the In-Line Gate Valve (E).
- h. Open the By-Pass Feed Valve (C).
- i. Open the Outlet Valve (D).
- j. If there is a condensate pump for each boiler, move the pump controller to “hand” or “continuous” for 1-2 minutes, then return to “automatic.” If a motorized valve is utilized to regulate the feedwater, open the bypass valve of the motorized valve for 1-2 minutes, then close the valve.
- k. Close the By-Pass Feed Valve (C).
- l. Close the Outlet Valve (D).
- m. Open the In-Line Gate Valve (E).
- n. Open the Drain Valve (B).
- o. Slowly open the Inlet Valve (A).
- p. Close the Inlet Valve (A).
- q. Close the Drain Valve (B).
- r. Turn the burner on.

10. Conductivity Tester

The conductivity tester is a hand-held device that measures total dissolved solids in water systems. It is capable of testing in units, tens, hundreds, and up to ten thousand (10,000) parts per million (PPM). This device provides quick and accurate measurements. Its purpose is to determine the cycles of concentration of dissolved solids and sludge in suspension in boiler water.

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11. To Neutralize Boiler Sample for Testing in Conductivity Meter

Check the pH of the boiler water. If the sample of boiler water has a pH of ten (10) or more, the solution must be neutralized. Perform an alkalinity test to neutralize the sample. For more information on alkalinity tests, see Section XIX.L., Chemical Tests of Boiler Water, below.

12. Conductivity Test

- a. Pour solution into the holding cup of the conductivity meter. Fill the sample cup to the ring of the meter. The sample should be room temperature.
- b. Turn the knob to the desired scale and hold down the button.
 - (1) Read the meter to measure the specific conductance of the sample.
 - (2) If the reading exceeds 3,000, a bottom blowdown is required.

G. Magnetic Water Conditioning - Chemical Tests and Treatments of Low Pressure Steam Boilers

The table below provides a guideline for the standard treatment program of locations employing the Magnetic Water Conditioning Program. This table should be used as a baseline; actual dosages in individual boilers may vary, based on boiler horsepower, make-up water usage, etc.

OPERATING RANGE AND DOSAGE CHART-MAGNET PROGRAM			
PHENOLPHTALEIN – ALKALINITY READING			
Sodium Hydroxide			
Standard Operating Range		Treatment	
300 PPM +		Satisfactory, no treatment necessary	
200-300 PPM		1 Pint of Sodium Hydroxide (16 oz.)	
100-200 PPM		1½ Pints (24 oz.)	
0-100 PPM		2 Quarts (64 oz.)	
<p>NOTE: Do not mix Sodium Hydroxide with hot water. Boiler water sample must have a Ph of 11.</p>			
Sodium Sulfite			
50 PPM +		Satisfactory, no treatment necessary	
40-50 PPM		Powder Sulfite: ½ lb.	Liquid Sulfite: 30 oz.
20-30 PPM		Powder Sulfite: ½ lb.	Liquid Sulfite: 30 oz.
10-20 PPM		Powder Sulfite: 1 lb.	Liquid Sulfite: 40 oz.

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0-10 PPM	Powder Sulfite: 2	Liquid Sulfite: 60 oz.
Conductivity Meter Readings		
2,100-3,000	No blowdown necessary	
3,000+	Short Bottom blowdown, 1 to 3 seconds Follow NYCHA procedure for performing bottom blowdowns (Section XIX.F.5.-XIX.F.6., above)	
<p>NOTE: If the boiler water Ph is 10 or more, the solution must be neutralized by filling the sample bottle to 25 ml and adding neutralizing solution (Taylor reagent # R722) until the red color disappears. Place the sample in the conductivity meter and check the new reading. The sample is neutralized after the alkalinity test is performed and the sample is clear.</p>		
pH Level in the Boiler		
Standard Operating Range: 9 to 11	pH falls below the Acceptable Range, sodium hydroxide must be added.	
NOTE: Use hydrion paper or a pH tester when performing this test.		
Amines Test – pH Level in the Condensate Receiver Tank		
Standard Operating Range: 8 to 9	If the pH is below 7½: Add 3 ounces of amines per day, until the pH is back within the Standard Operating Range. If an automatic amines pumping system is installed, follow the manufacturer's recommendations in setting up the pump.	
<p>NOTE: The Condensate Receiving Tank sample is taken from the casing vent on the feedwater pump. A sample must also come from the main steam header drip trap located in the furthest building from the boiler room. This assures that the amines are traveling to the furthest point in the distribution system. Contact the Heating Management Services Department heating superintendent if problems or questions arise with the guidelines established on this chart. Use hydrion paper or a pH tester when performing these tests.</p> <p style="text-align: center;">Never mix chemicals together.</p>		

H. Non-Magnetic Water Conditioning – Chemical Tests and Treatments of Low Pressure Steam Boilers

The table below provides a guideline for the standard treatment program of locations not employing the Magnetic Water Conditioning Program. This table should be used as a baseline; actual dosages in individual boilers may vary, based on boiler horsepower, make-up water usage, etc.

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OPERATING RANGE AND DOSAGE CHART- NO MAGNET PROGRAM		
PHENOLPHTALEIN – ALKALINITY READING		
Sodium Hydroxide		
Standard Operating Range	Treatment	
300 PPM +	Satisfactory, no treatment necessary	
200-300 PPM	1 Pint of Sodium Hydroxide (16 oz.)	
100-200 PPM	1½ Pints (24 oz.)	
0-100 PPM	2 Quarts (64 oz.)	
<p>NOTE: Do not mix Sodium Hydroxide with hot water. Boiler water sample must have a pH of 11.</p>		
Sodium Sulfite		
50 PPM +	Satisfactory, no treatment necessary	
40-50 PPM	Powder Sulfite: ½ lb.	Liquid Sulfite: 30 oz.
20-30 PPM	Powder Sulfite: ½ lb.	Liquid Sulfite: 30 oz.
10-20 PPM	Powder Sulfite: 1 lb.	Liquid Sulfite: 40 oz.
0-10 PPM	Powder Sulfite: 2 lbs.	Liquid Sulfite: 60 oz.
Conductivity Meter Readings		
2,100-3,000	No blowdown necessary	
3,000+	Short Bottom blowdown, 1 to 3 seconds Follow NYCHA procedure for performing bottom blowdowns (Section XIX.F.5.-XIX.F.6., above)	
<p>NOTE: If the boiler water Ph is 10 or more, the solution must be neutralized by filling the sample bottle to 25 ml and adding neutralizing solution (Taylor reagent # R722) until the red color disappears. Place the sample in the conductivity meter and check the new reading. The sample is neutralized after the alkalinity test is performed and the sample is clear.</p>		
Amines Test – Ph Level in the Condensate Receiver Tank		
Standard Operating Range: 8½ to 9	If the Ph is below 7½: Add 3 ounces of amines per day, until the Ph is back within the Standard Operating Range. If an automatic amines pumping system is installed, follow the manufacturer's recommendations in setting up the pump.	
<p>NOTE: The Condensate Receiving Tank sample is taken from the casing vent on the feedwater pump. A sample must also come from the main steam header drip trap located in the furthest building from the boiler room. This assures that the amines are traveling to the furthest point in the distribution system. Contact the Heating Management Services Department heating superintendent if problems or questions arise with the guidelines established on this chart. Use hydriion paper or a Ph tester when performing these tests.</p>		
Never mix chemicals together.		
NTA Readings		
30 PPM	Satisfactory, no treatment necessary	
20-30 PPM	½ lb. Powder	30 oz. Liquid
10-20 PPM	1 lb. Powder	40 oz. Liquid
0-10 PPM	2 lbs. Powder	60 oz. Liquid

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I. Chemical Tests and Treatments of Hot Water Heating Systems that Utilize Steel Boilers

The tests and treatments provided on the table below are performed on hot water heating systems. This table should be used as a baseline. Actual dosages in individual boilers may vary, based on boiler horsepower, make-up water usage, etc.

HOT WATER HEATING SYSTEMS THAT UTILIZE STEEL BOILERS OPERATING RANGES	
Sodium Hydroxide	
Standard Operating Range	Treatment
40-120 PPM	Satisfactory, No Treatment Necessary
Sodium Sulfite	
20-40 PPM	Satisfactory, No Treatment Necessary

J. Chemical Kit

1. Performs quick tests on boiler feedwater and tank water.
2. Contains reagents that determine the:
 - a. Alkalinity of water
 - b. Amount of sulfite in water
 - c. Amount of chlorides in water
 - d. Level of NTAs
 - e. Hardness of water

K. Preparation of Sample

1. Turbid water samples should be filtered to remove scale, sludge, and rust, prior to testing. Suspended matter in the sample introduces errors in the hardness test.
2. Filtration is not advisable when accurate results are required in determining caustic alkalinity, by titrating in the presence of phenolphthalein. The filtration may cause changes in the caustic content.

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L. Chemical Tests of Boiler Water

NOTE:	Dropper bottles must be held in a vertical position when drops are being added to a solution. Different angles alter the amount in each drop. Samples must be cooled to room temperature before testing.
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1. Alkalinity Test

- a. Rinse the sample tube well with clear sample water.
- b. Fill the tube to the twenty-five (25) milliliter (ml) mark.
- c. Add three (3) drops of Phenolphthalein (Reagent # 638).
- d. If the sample has alkalinity (as is often the case with boiler water), it turns red.
- e. If the sample is raw water, it usually remains colorless.
- f. Test samples that turn red:
 - (1) Standard Sulfuric Acid is added (Reagent # 687), one-drop at a time (mix well after each drop).
 - (2) Continue to add drops to the sample until all the red color disappears and the sample is clear.
 - (3) Record the number of drops of Standard Sulfuric Acid necessary to procure the clear solution. This number is the Total Alkalinity Reading.

Each drop of Standard Sulfuric Acid is equal to 10 PPM of calcium carbonate.

2. Sulfite Test

- a. Rinse the sample tube well with clear sample water.
- b. Add 25-ml of sample water to the tube.

NOTE:	Do not filter the sample. Exposure to air removes sulfites from the solution and may lead to inaccurate readings.
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- c. Add one (1) drop of Phenolphthalein (Reagent # 638) and mix gently.
- d. The sample should turn red.

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- e. Add one dipper of Acid Starch Indicator Powder (Reagent # 725), mixing gently after each dipper, until the red color disappears.
- f. Add Iodide-Iodate (Reagent # 699) by the drop, mixing gently after each drop, until a faint but permanent blue color appears. Record the number of drops used.

Each drop of Iodide-Iodate (Reagent # 699) is equal to 10 PPM of sodium sulfate.

3. Hardness Test

- a. Rinse the sample tube well with clear, filtered sample water.
- b. Add sample water to 25-ml mark on the tube.
- c. Add five (5) drops of Hardness Buffer (Reagent # 619), and one (1) dipper of Hardness Indicator Powder (Reagent # 620). Mix gently until the indicator is dissolved.
- d. If hardness is present, the sample turns red. If no hardness is present, the sample turns blue.

- e. Test samples that turn red:

- (1) Add Hardness Reagent (Reagent # 683) by the drop, mixing well following each drop.
- (2) Continue until the sample has changed completely from red to blue.
- (3) Record the number of drops used.

Each drop used is equivalent to 10 PPM of hardness.

M. Laying-Up Idle Boilers

Prior to laying up any boiler, wet or dry, contact the heating superintendent. There are two primary methods to lay-up an idle boiler:

1. Wet Method

Wet method is the preferred method to lay-up boilers that are left idle for short periods of time (defined as one-month or less). Boilers laid-up wet are capable of being put back into operation quickly.

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- a. The boiler is filled to the top of the gauge glass with water. This water is treated so that it carries as much as 700 PPM of causticity and reduces oxygen into its steam.
 - (1) 100 PPM of sodium sulfite consumes any oxygen that may be present in the water.
 - (2) Full boilers do not allow air to enter into the vessel.
 - (3) Chemical concentrations must be distributed uniformly through the boiler to prevent an electrolytic type of corrosion.
- b. Chemical Treatment needed to attain 700 PPM of causticity.
 - (1) One ounce of caustic soda, or six (6) ounces of sodium hydroxide ash, for every 100 pounds of water.
 - (2) Two ounces of sodium sulfite, for every 100 pounds of water.

2. Dry Method

For boilers that are laid-up for three or more months.

- a. Empty the boiler.
- b. Close up the boiler.
- c. Keep the boiler thoroughly dry by using quicklime inside the boiler.

N. Chemically Testing Hot Water Tank Coil Leaks

- 1. Obtain a sample of condensate from the last coil pass from the hot water tank condensate return line, at any convenient fitting (e.g., traps, plugs, or unions).
- 2. Rinse the sample tube and clean the testing tube thoroughly with a soft paper towel to remove traces of testing chemicals, or city water, left behind by previous tests.
- 3. Fill the sample tube to the 25-ml mark.
- 4. Add five (5) drops of Hardness Buffer (Reagent # 619).
- 5. Add one dipper of Hardness Indicator Powder (Reagent # 620).
- 6. The sample turns red, if hardness is present. Water hardness indicates a possible coil leak.

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7. The sample turns blue, if no hardness is present, and therefore, no leak is detected.
8. Re-test the condensate water. A red result on the second test indicates that the condensate has city water in it.
9. If the sample is red indicating water hardness, and by extension has a coil leak, perform the Hardness Test to determine the source of the leak. For more information, see Section XIX.L.3., Hardness Test, above.
 - a. Rinse and fill sample tube to the 25-ml mark.
 - b. Add five (5) drops of Hardness Buffer (Reagent # 619) and one dipper of Hardness Indicator Powder (Reagent # 620). Mix gently until the indicator is dissolved. Sample turns red if hardness is present.
 - c. Add Hardness Reagent (Reagent # 683) drop by drop, mixing after each drop until color changes from red to blue. Record the number of drops required to change the color of the solution.
 - d. Multiply the number of drops of Hardness Reagent (Reagent # 683) by ten (10) to discern the PPM of hardness.
 - e. Using the table below as a guide, determine if a leak is present. If a leak is found to exist, contact the heating administrator and the Maintenance, Repairs, and Skilled Trades Department plumbing supervisor

Selected Water Type	PPM of Hardness
Steam/Condensate	0
Mixture of City Water/Steam or Mixture of City Water and Condensate	10 – 20
City Water	20 – 40
Ground Water	80 – 250
Sewer Water	250 – 2,000

XX. MAINTENANCE, REPAIR, AND INSPECTION OF HEATING PLANT EQUIPMENT

IMPORTANT:	Employees must review and adhere to Standard Procedure 158:04:1, <i>Lockout/Tagout (LO/TO)</i> , when performing work on heating plant equipment.
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A. Recordkeeping

1. Development Heating Folder

The heating superintendent establishes a permanent folder for each heating plant. This folder documents the history of all work, repairs, maintenance, etc., performed on that boiler. Original documents must be maintained in the Heating Management Services Department and copies maintained at the property maintenance supervisor's office. The folder includes, but is not limited to, the following:

- a. Annual Boiler Preventive Maintenance Work Order
- b. Repair/Contract Work documentation
- c. NYCHA Form 060.242, *Oil/Gas Burner & Boiler Service Report*
- d. Authorizations for Welding Repairs
- e. Results from Hydrostatic Tests (NYCHA Form 060.240, *Boiler Hydrostatic Test Report*)
- f. Annual Hot Water Preventive Maintenance Work Order
- g. Copies of all NYCHA Form 060.072, *Mechanical Equipment Record*

NOTE: Contents of the Heating Folders may be maintained in a digital file.

B. Annual Boiler Tune-up

1. HMSD analyzes all conventional style boilers' efficiency during pre-testing.
2. EPA Boiler Assessment

Heating maintenance workers:

- a. Perform EPA boiler assessments on all boilers every two to five years.
- b. Conduct a pre-assessment on the operating boiler.
- c. Check readings on low-fire first.
- d. Make adjustments according to the manufacturer's specification, if available.
- e. Take a screen shot of the recordings.

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- f. After adjustments are completed on low-fire, repeat steps 3.d. and 3.e. directly above while the boiler is in hi-fire.
3. The heating administrator ensures:
 - a. After the tune-up process is completed, the low-fire and hi-fire readings are uploaded into the EPA Data Base at <http://cdx.epa.gov/>.
 - b. The readings are uploaded on the Sharepoint site at <http://connect/private/CCO/EA/Forms/AllItems.aspx>.
 - c. A hard copy of the readings is filed in the Heating Management Services Department office.

4. Post-testing

Heating maintenance workers:

- a. Compare readings and make all final necessary adjustments to increase the overall firing efficiency.
- b. If results show an efficiency of 83 percent or more, return the boiler to service.
- c. If the results show an efficiency of less than 83 percent, further analyze the boiler to determine the cause and make necessary adjustments to return the boiler back to service.
- d. Files the results as part of the preventive maintenance process.

C. Testing and Planning for Annual Inspections

On January 1 of every year, Maximo generates a Preventive Maintenance (PM) Work Order with a status of "Waiting to Schedule." The heating superintendent schedules the Preventive Maintenance Work Order. Depending upon the results entered on the Preventive Maintenance Work Order, a child work order may be generated.

1. Testing

Dead end tests and house tests must be performed by Heating Management Services Department staff on the vacuum pumps and heating system, to ensure that the system is tight at the beginning and end of every heating season, and at any other time it is deemed necessary.

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Each tank is required to hold twenty-five (25) inches of vacuum pressure for a period of one half-hour. If leaks are indicated during the tests, repairs are made, as necessary, to ensure that the system is prepared for the next heating season.

2. Planning

The following items must be included in the Annual Preventive Maintenance Work Order in boiler rooms and tank rooms completed by Heating Management Services Department staff:

- a. Clean combustion control equipment, heating controls, and controls on all other electrical equipment.
- b. Repair boiler, hot water generator, pipe and tank coverings, where necessary.
- c. Clean and, if necessary, repair and/or overhaul all burners.
- d. Inspect and replace packing and mechanical seals on all rotating equipment, as necessary.
- e. Adjust, clean and repair, where necessary – feedwater, hot water, pressure and temperature regulators.

NOTE:	Sewage ejector pump repairs and clean out are the responsibility of property management staff regardless of location. Property management staff are also responsible for repair and cleanout of all sump pumps not located in the boiler room or tank room.
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- f. Check, clean, lubricate and repair all valves.
- g. Clean the insect screens on fixed air louvers.
- h. Inspect and test all basement traps during the heating season. If necessary, test the trap with the Infrared Temperature Sensing Gun:
 - (1) Aim the gun through the body of the trap. Record the temperature.
 - (2) Aim the gun four (4) feet away from the trap on the return line. Record the temperature.
 - (3) The difference in temperatures should be around 25° F.
 - (4) If the difference is less than 25°, the trap must be overhauled.
 - (5) Rebuild and repair, as needed.

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- (6) Affix a tag, indicating the date of completion, inlet and outlet temperatures and the name of the employee completing the overhaul to all traps.

D. Annual Boiler Inspection

1. Hydrostatic Test

Perform the Hydrostatic Test before and after all work to check for leaks.

2. External (Fireside/Lagging)

- a. Properly secure boiler for steam, oil, electricity, and feedwater, by closing valves, opening safety disconnect switches, removing fuses, and hanging the appropriate sign on the oil burner. Adhere to all protocols in Standard Procedure 158:04:1, *Lockout/Tagout (LO/TO)*.
- b. After a twenty-four (24) hour cooling period, punch all tubes to remove soot deposits, scale, and foreign matter.
- c. Scrub all fireside surfaces with a wire brush.
- d. Clean soot deposits from the smoke box and smoke bonnet.
- e. Remove slag from combustion chamber refractory. Review and adhere to Standard Procedure 060:94:1, *Confined Space Safety Procedure*. Use all appropriate Personal Protective Equipment.
- f. Clean secondary airways.
- g. Clean soot deposits from flue connections, breechings, and uptakes.
- h. Repair lagging on boilers.

3. Internal (Waterside/Fireside)

- a. Properly secure boiler for steam, oil, electricity, and feedwater, by closing valves, opening safety disconnect switches, removing fuses, and hanging the appropriate sign on the oil burner. Adhere to all protocols in Standard Procedure 158:04:1, *Lockout/Tagout (LO/TO)*.
- b. Following a forty-eight (48) hour cooling period, vent the boiler and drain the water.
- c. Remove manhole and all handhole covers and wash boiler internally.
- d. Wash down waterside immediately after draining.

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- e. Scrape off rust and scale from manhole and handhole cover surfaces.
 - f. Apply Direct to Metal (DTM) type paint to the external surfaces of the covers.
 - g. Cover the gasket surfaces of the manhole and handhole covers with a light coat of graphite oil, prior to fitting the gaskets on the covers.
 - h. Be certain to center manhole and handhole covers when re-installing, to prevent water leaks.
 - i. Remove feedwater regulator valves and low-water cut-offs from the boiler, and clean off rust and scale. Replace parts, as needed.
4. The heating superintendent, or designee, performs the annual inspection of the boiler.

During the annual inspection review, the inspector uses the handheld device to electronically record the current status of the equipment, recording any item(s) that are deficient, and noting any additional specifics. If a handheld device is not available, a paper work order is completed and inspection results are manually entered into Maximo.

5. Once the inspection is complete and signed off, the inspector enters the inspection results in Maximo and child work orders are created in Maximo to correct the noted deficiencies.
6. Equipment is not assembled until the inspection is complete. Unused boilers are laid up "wet." Fill the boiler with warm water to the top row of tubes. Add the prescribed amount of feedwater treatment. Heat and re-circulate the mixture through the boiler. Raise the water level within the boiler to the stop valve.

E. Annual Boiler Room Inspection

The boiler room inspection process is utilized by the Heating Management Services Department to inspect, test and record information regarding the equipment found within the boiler room in order to verify compliance with standard operating guidelines.

The heating superintendent performs an annual inspection of the boiler room. During the review, the inspector uses the handheld device to electronically record the current status of the equipment, recording any item(s) that are deficient, and noting any additional specifics. If a handheld device is not available, a paper work order is completed, and inspection results are manually entered into Maximo.

Once the inspection is complete and signed off, the inspector enters the inspection results in Maximo and child work orders are created in Maximo to correct the noted deficiencies.

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F. Burner Equipment Maintenance

The heating superintendent ensures that staff adheres to manufacturer's guidelines when maintaining burner equipment:

1. Inspect burner motor and fan belts; replace, as needed.
2. Clean fuel oil duplex suction strainers once per week (Tuesday), more often, if necessary.
3. Clean burner strainers for fuel oil daily, when operating on oil. When operating on gas, clean burner strainers once per week (Tuesday).
4. Inspect for oil leaks and address and repair any leaks immediately.
5. Ensure that all gauges are operative. Replace defective gauges with gauges matching manufacturer's recommendations.
6. Test and clean all smoke indicators at the breeching. Record results in the Boiler Room Preventive Maintenance Logbook (blue). This test is performed monthly.
7. Fresh air louvers, dampers and sequential air louvers must be kept in operation at all times.
8. Breeching dampers must be kept in operation at all times.
9. If any combustion controls are inoperative, the heating administrator, or designee, must be notified immediately and arrange for the immediate remediation of the malfunction.

G. Generating Controls

1. Boiler Pressure Controls

a. Automatic Pressuretrol

Turns boilers on and off at predetermined set points (steam pressure).

b. Manual Reset Pressuretrol

A safety that, at predetermined set points, locks out in the off position until manually reset

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c. Master Pressuretrol

A safety device, located on the steam header, that shuts off all boilers in a heating plant, in case the automatic and manual pressuretrols fail.

NOTE:	There should be no shut-off valves between the pressuretrols and the vessel. The heating superintendent must visually inspect annually the Pressuretrol and Master Pressuretrol.
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H. Building Management Systems – Lead/Lag Boiler Control Panels

The following are different types of Building Management Systems Lead/Lag controllers:

1. Mod-4

Capable of sequencing up to four (4) fully modulating stages (boilers), for temperature or pressure.

2. Multi-Mod

Capable of sequencing up to four (4) fully modulating stages (boilers), for temperature or pressure.

3. Multi-Mod with Extension

Capable of sequencing up to eight (8) fully modulating stages (boilers), for temperature or pressure.

4. Auto-Flame

Computerized system, capable of sequencing up to eight (8) or more fully modulating stages (boilers), for temperature or pressure.

5. Preferred Chief Dispatcher

Capable of sequencing up to eight (8) fully modulating stages (boilers), for temperature or pressure.

I. Hydrotherm Model S1000

The Hydrotherm Model S1000 is currently not monitored via Building Management Systems. This type of controller is capable of being monitored, but due to the size of the operation it is not deemed necessary. The system is protected from unauthorized access by requiring password(s) for permission to access.

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The control has sixteen (16) outputs to control heating boilers, domestic hot water boilers, motorized valves, combustion dampers, draft inducers, etc. The sixteen (16) inputs allow for the addition of temperature sensors and prove switches for a wide range of safety functions, data collection and system monitoring.

XXI. REMOVING A BOILER FROM SERVICE

A. Steps to Remove a Boiler from Service

Heating frontline staff is responsible for removing a boiler(s) from service. The following steps must be adhered to:

1. Seek approval from a supervisor prior to removal of a boiler.
2. Reduce the firing rate.
3. Turn the burner off from the lead/lag panel.
4. Switch the Control Panel to the off position.
5. Secure the fuel valves (oil and gas).

NOTE:	Wait one hour before closing the Steam Stop Valve to ensure that the pressure has been reduced.
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6. Close the feedwater valve(s) once the boiler water level stabilizes.
7. Place appropriate signs on the front of the boiler, indicating that the boiler is offline and that fuel valves and feedwater lines have been secured.
8. If the boiler is out of service for an extended period of time, refer to Section XIX.M., Laying-Up Idle Boilers, above.
9. If there is a disruption of service, notify (or if the heating assistant superintendent is not available, notify the heating superintendent):
 - a. Heating assistant superintendent
 - b. Property maintenance supervisor.
 - c. After-Hours Heat Desk
10. Record that the boiler(s) has been removed from service and list the reason(s) for removal in the Boiler Room Logbook.

XXII. ADD A BOILER INTO SERVICE AND RESTARTING BOILER OPERATIONS

A. Return/Add a Boiler to Service

Boilers returned to service after repairs, shut-down, or periods of inactivity, are attended by a qualified heating frontline staff who remains in the boiler room until normal operating pressure is reached, and the boiler is functioning properly under automatic control. To return or add a boiler(s) into service, staff must adhere to the following procedure:

1. Fill the boiler with make-up water from the condensate receiver to a level that the rise in water level, caused by heating to make steam, brings boiler water level to its normal position at full working pressure and steam output.
 - a. When the boiler has been filled to the proper water level, close the by-pass connections and activate the feedwater regulator valves.
 - b. While filling the boiler, ensure the boiler vent valve is open.
2. Prior to starting a boiler, inspect the inside of the boiler to make certain that it is free of tools and foreign matter, and close the manhole openings. Follow regulations provided in Standard Procedure 060:94:1, *Confined Space Safety Procedure*.
3. Inspect the combustion chamber and gas passages. Ensure they are clean and in operating condition. Ensure that all cleanout doors in the setting are closed tightly.
 - a. If sequence draft controls are installed, ensure that they are functioning.
4. Inspect all blowdown valves, piping, water columns and water glass drains, gauge cocks and feedwater regulator valves to ensure that they are in operating condition and left closed.
5. Open the gauge cocks and the blowdown valves on the water column and water glass. Ensure that all connections are free and clear of obstructions, etc. Close the gauge cocks and blowdown valves on the water column and water glass.
6. Inspect the stopcock at the steam pressure gauge to ensure that it is open.
7. Examine the safety valves to ensure that “gags” have been removed and that the valves are in working order.
8. Heat the boiler by setting the Boiler Master Control in manual position and adjusting the firing rate to the lowest setting.
9. Check the water level in the gauge glass by using the tri-cocks, as the water in the boiler becomes heated.

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10. Examine the blow-off valves for leaks.
11. Allow steam to escape through the vent valve for a few minutes, and then close the vent valve.
12. When the vent valve is closed, increase the firing rate and slowly increase the pressure inside the boiler.
13. Monitor the water level in the gauge glass at all times.
14. When the operating pressure is reached, test the pop safeties by hand.
15. When the amount of steam pressure nears the amount of pressure in the main header, open the Steam Stop Valve slowly, to equalize the pressure.
16. The boiler can now be safely brought on line.
17. Notify the heating assistant superintendent and the property maintenance supervisor that the boiler has been returned to (or brought into) service. If the heating assistant superintendent is not available, notify the heating superintendent.

B. Recordkeeping

Record when each boiler has been brought on line in the Boiler Room Logbook.

XXIII. ANNUAL HOT WATER GENERATOR INSPECTION

A. Annual Hot Water Tank Inspection

1. The heating superintendent or heating assistant superintendent:
 - a. Performs the inspections.
 - b. Completes the PM Annual Overhaul Work Order on the handheld. If handheld is not available uses paper work order.
2. Protocol
 - a. The heating superintendent must give the property manager at least five days (5) days prior notice when the hot water generator(s) is inspected.
 - b. The heating frontline staff inspects the tank rooms one week prior to the inspection to ensure that the floor drains are clear. If they are not, he or she must contact the property maintenance supervisor and inform him/her of the problem.

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- c. Property management staff notifies residents forty-eight (48) hours prior to removing the hot water generator from service. This notice indicates an estimated time of hot water restoration.
- d. Heating Management Services Department supervisor, or designee, notifies the Emergency Services Department (ESD) and the Resident Association President of the removal from service of the hot water generator, twenty-four (24) hours prior to the commencement of the inspection.
- e. After-Hours Heat Desk staff, or a designated NYCHA employee, closes the steam stop-valve to the hot water coil at approximately 10:00 p.m., on the night prior to the inspection. Hot water is gradually drawn off by residents, allowing for the gradual cooling of the tank.

3. Inspection and cleaning

- a. Prior to draining the tank, open the cold-water bypass to introduce cold water into the domestic hot water system before the hot water tank is isolated. Detailed instructions must be provided to property management staff to prevent dry lines and possible flooding conditions.
- b. When the tank is isolated, vent and drain it.
- c. Remove the manhole cover from the drained tank, showing care not to drop it into the tank and damage the tank lining.
- d. Tank linings, openings, coils and tube supports must be clean and undamaged. Scale, rust, etc., must be removed.
- e. Inspect the tank linings for cracks, chips, corrosion, etc. If required, make arrangements to repair the tank.

NOTE:	If the tank is under warranty and defects are found, the heating superintendent contacts Capital Projects prior to the opening and inspecting of the tank, to prevent delay in the restoration of service.
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- f. Clean, scrape and spot-prime the external surface of manhole covers.
- g. Clean, scrape and patch, or re-surface the tank lining with Hydrolithic cement (not Portland cement).
- h. Install non-graphite gaskets and re-install the cover, carefully centering it to prevent leaks.
- i. Do not cement probes and valves.

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- j. Remove all caps, plugs and rags prior to putting the tank back into service.
- k. Re-fill the tank with cold water.
- l. Be certain the air-vent is operative, if equipped.
- m. Return the tank into service, and close cold-water bypass.
- n. Make certain that all water lines are reconnected to the system prior to opening the steam valve. This allows the system to heat gradually.
- o. Re-tighten manholes the day following the inspection to prevent leaks.

B. Annual Instantaneous Hot Water Unit Inspection

1. The heating superintendent or designee:

- a. Performs the inspections.
- b. Completes Maximo Annual Hot Water Generator Inspection Work Order and closes the work order via handheld device.

2. Protocol

- a. The heating superintendent must give the property manager at least five (5) days prior notice when the instantaneous hot water unit is inspected.
- b. The heating frontline staff inspects the tank rooms one week prior to the inspection to ensure that the floor drains are clear.

If they are not, he or she must contact the development property maintenance supervisor and inform him/her of the problem.

- c. If both units are being serviced simultaneously:
 - (1) Property management staff notifies residents forty-eight (48) hours prior to removing the instantaneous hot water unit from service. This notice indicates an estimated time of hot water restoration.
 - (2) The Heating Management Services Department notifies the Emergency Services Department (ESD) of the removal from service of the instantaneous hot water unit, twenty-four (24) hours prior to the commencement of the inspection.
- d. Instantaneous hot water units must be shut down one (1) hour prior to the inspection to allow for the unit to cool.

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3. Removing the Heat Exchangers from Service

- a. Shut the steam valve to the section of the unit being serviced. If both sides are to be cleaned, ensure that the valve for each side is closed.
- b. Allow a flow of potable water until both heat exchangers feel cold.
- c. Double-check that the primary temperature control valves are closed.
- d. Shut off the inlet and outlet water isolation valves for one or both sides.
- e. Disconnect electrical power.

4. Materials Required

- a. Acid based cleaner or a mild biodegradable product
- b. A liquid descaler such as ScaleBreak-SS, Rydlyme, or a similar fluid that is suitable for stainless steel application
- c. One five-gallon bucket
- d. A chemical pump with suitable plastic hose

5. Preparation

- a. Check that the heat exchangers feel cold.
- b. Shut off cold water inlet and outlet to unit to be cleaned.
- c. Open pressure relief valve on the unit to assure zero system pressure.
- d. Close when fully relieved.
- e. Locate the bronze plug at the top of the waterside plumbing on the heat exchanger.
- f. Remove the plug and keep it in a safe place.
- g. Locate the bronze plug at the bottom of the heat exchanger.
- h. Remove the bottom bronze plug enough to permit water to fully drain.
- i. Heat exchanger is now ready for cleaning.

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6. Cleaning the Heat Exchanger

- a. Place bucket with acidic cleaner under bottom fitting.
- b. Place the submersible pump in the bucket.
- c. Run tubing from the pump outlet into the top fitting to enable solution recirculation.

Acidic cleaner becomes neutralized when it is applied to the scale.

- d. Additional acidic cleaner should be added to the bucket, as needed.
- e. When it is determined that the scale has been removed, the coil surfaces must be inspected.

Under normal operation, the upper section of the heat exchanger is subject to the greatest amount of scale development.

- f. When cleaning is completed, flush the heat exchanger thoroughly with water, rinsing all surfaces well.
- g. Insert two bronze plugs into cross fittings and tighten, using a stainless steel suitable pipe sealant.
- h. Open water inlet valve to the heat exchanger. Check for leaks and tighten, if required.
- i. Open the outlet valve.
- j. Open the relief valve to permit flow through the heat exchanger to eliminate any air pockets.
- k. Close the relief valve when no air is present.
- l. Open steam valve and re-commission unit, following normal start-up instructions.
- m. The unit is now ready to operate.

XXIV. TESTING – FIRE SAFETY SYSTEM REMOTE CONTROL SWITCH (ASCO)

This test ensures the proper operation of the automatic remote control switch, in the event of a fire in the boiler room.

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A. Frequency and Timing

The Fire Safety System Remote Control Switch must be tested on a monthly basis on Monday or Tuesday before 1:00 p.m.

NOTE:	This test NEVER should be performed on Friday or scheduled during extremely cold weather conditions since testing may cause a disruption of service.
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B. Responsibility

This test is performed by the heating frontline staff, in addition to the daily visual inspection test of the fusible links. The daily results are recorded on the handheld device.

C. Testing Procedures

There are three types of switches*:

Switch Type	Location	Action to Test	To Reinstate
Fire Safety Remote Switch	Entrance/Exit*	Unscrew Faceplate	Screw Faceplate
Burner Firematic Remote Switch	Burner	Unscrew Firematic	Screw Firematic
Linkage Spring Loaded Micro-Switch Valve	Burner Smoke Doors	Release Valve	Engage Valve to Activate Micro-Switch

*Switches are located near the entrance and exit doors of the heating plant.

NOTE:	A test is successful if equipment does not restart once the Remote Switch is activated.
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1. Remove all but one boiler from service.
2. Remove all unnecessary equipment from service to reduce the load and avoid arcing on the Fire Safety System Remote Control Switch.
3. Begin the test by removing the faceplate from the one of the Remote Switches at the entrance/exit of the heating plant.
 - a. Result: The ASCO shuts down the power to the entire plant with the exception of the lights.
 - b. Reattach the faceplate to the Remote Switch.

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c. Boiler and any equipment that was previously shutdown should not restart for the test to be successful.

d. Do NOT reset the Fire Safety System Remote Control Switch (ASCO).

4. Test the next switch.

Refer to the table above, for the required action.

5. After each test, reset the Fire Safety System Remote Control Switch (ASCO).

The test is considered to be successful if equipment does not restart.

6. Repeat steps 4 and 5 until all switches have been tested.

D. Return Heating Plant to Service

1. Reset the Fire Safety System Remote Control Switch.

2. Do NOT add additional boilers to operation before the plant is fully functional.

3. Add the required numbers of boilers and equipment to the heating plant to provide service to the residents.

4. Report the test results in the Boiler Room Logbook and on the handheld device.

5. Notify the heating administrator or heating superintendent if any equipment is not working properly.

E. Test Failure

In the event that a plant fails an automatic remote control switch (ASCO) test, a Heating Management Services Department staff member must remain in the plant until the malfunction is rectified, or the inoperative switch is replaced.

NOTE:	No plant should be left unattended during the time that a temporary emergency repair necessitates bypassing or deactivating the automatic remote control switch (ASCO).
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XXV. FUEL OIL TANK MONITORING SYSTEM

A. Purpose

The system assists in the inventory management of oil. It monitors gross and net gallons of oil in tanks and allows operators to choose either inventory or delivery printed reports. This system is not presently installed at all sites.

B. Location

The Fuel Oil Tank Monitoring System is located in the heating frontline staff's office or in the boiler room. The location is noted on the location drawings.

C. Approvals/Certifications

The Fuel Oil Remediation Unit of the Technical Services Department inspects all Fuel Oil Tank Monitoring Systems following installation. The system is UL (Underwriters Laboratories) listed and is approved by the New York City Board of Standards and Appeals and/or the New York City Fire Department, and the New York State Department of Environmental Conservation (NYS-DEC).

D. Inventory Heating Management Services Department Reports

1. Inventory is monitored and measured in gallons.
2. A combination of automatic and manually outputted reports is produced for each tank. The reports include the following:
 - a. Fuel volume
 - b. Fuel height
 - c. Previous inventory increase amount
 - d. Previous in-tank Leak Test results
 - e. Time and date
 - f. Tank identification
 - g. Fuel type identification
 - h. Ninety percent (90%)

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3. Printouts of inventory status are generated while the system is in a normal operating phase.
4. A delivery report is produced after every oil delivery. This report includes:
 - a. Development location
 - b. Type of fuel oil delivered
 - c. Date
 - d. Time delivery began and time delivery was completed
 - e. Volume of oil in the tank before the delivery and after the completion of the delivery
 - f. Net volume increase
5. Reports may be generated as a printout.
6. Heating frontline staff prints the Fuel Management Status Report weekly on Wednesdays, when the user selects the "Print" option while the system is operating in its normal phase. As required by NYS DEC, developments with Fuel Oil Tank Monitoring Systems must print the weekly product inventory report and staple it daily into the Boiler Room Logbook. A photograph is to be taken of the receipt and attached to the Petroleum Bulk Storage (PBS) Inspection Work Order and closed via the handheld device. A follow up child work order can be generated at this time if the inspection result is "unsatisfactory." Failure to provide the report upon a NYS DEC inspection results in a violation being issued.

E. Alarms

1. Audible and visual alarms are actuated in the event of an in-tank leak, a product line leak, or an external condition that may trigger an alarm function.
2. Alarm conditions identified on the panel include the following:
 - a. Maximum Product Level
 - b. High Level Limit
 - c. Overfill Alarm
 - d. Low Limit
 - e. Theft

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3. The system permits the user to disable the audible alarm from remote locations; however, the visual alarm cannot be disabled until the alarm condition is corrected.
4. The system has external audible and visual alarms located in an enclosed outdoor location, either on the external wall of the boiler room or at some other location near the site of the tanks. The exact location of these alarm boxes is determined by the location conditions. Acknowledgement switches are located at these external sites.

F. Guarantees

The contractor installing the system is required to maintain all software and equipment for one year following installation.

G. Repairs

The Fuel Oil Remediation Unit of the Technical Services Department is responsible for completing repairs to the Fuel Oil Tank Monitoring System for all locations. Maximo work orders for Fuel Oil Tank Monitoring System repairs are processed as follows:

1. Property maintenance supervisor or heating frontline staff creates a work order in Maximo to repair damage to the Fuel Oil Tank Monitoring System.
2. A Technical Services Department supervisor reviews the work order request.
3. Work order is scheduled and assigned to a Technical Services Department supervisor.
4. Technical Services Department supervisor dispatches the work order to the appropriate craft worker.
5. Upon completion of the work, the appropriate supervisor changes the status of the work order to Complete.

XXVI.RECEIVING, INSPECTING, AND RECORDING FUEL OIL DELIVERIES

A. Introduction

The Accounts Payable and Utility Management Department (APUMD) administers all fuel oil contracts. Accordingly, heating frontline staff must refer discrepancies, inquiries, complaints and reports to the heating assistant superintendent, for follow up with the APUMD. If the heating assistant superintendent is not available, report to the heating superintendent.

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NYCHA personnel should maintain a four (4) day supply of fuel oil at all times. An order for fuel oil should only be placed if a tank has capacity to receive a full load of fuel oil (6,500 gallons).

Heating assistant superintendents must continue to monitor fuel inventory, particularly during severely cold weather, and plan deliveries accordingly, and must also ensure that the information in Appendix E, Fuel Oil Spills or Seepage, is posted on all maintenance bulletin boards and in all boiler rooms.

B. Procurement of Oil

1. Schedule of Deliveries by Vendor

Under normal circumstances, the heating superintendent, or designee, schedules deliveries of fuel oil with APUMD. APUMD coordinates with the Heating Management Services Department to secure a timely delivery from the vendor as follows:

- a. The heating superintendent, or designee, creates a work order in Maximo and enters a target start date on the work order.
- b. The heating superintendent, or designee, changes the status of the work order to Approved and selects APUMD as the Owner Group.
- c. After the work order is saved in Maximo, an e-mail notification is automatically generated to APUMD advising them of the fuel oil delivery request.
- d. APUMD notifies the vendor of the target start date.
- e. After the delivery is completed by the designated vendor, the Heating Management Services Department supervisor or designee, changes the status of the work order to Complete and Closed.

2. Emergency Deliveries

APUMD prioritizes and orders fuel oil deliveries during declared emergencies (i.e., extreme weather conditions), and coordinates deliveries with oil vendors, Heating Management Services Department supervisors, the After-Hours Heat Desk, and the Emergency Services Department and Technical Services Department.

3. Fuel Oil Delivery Hours During the Heating Season (October 1 through May 31)

- a. Non-emergency delivery hours are from 8:00 a.m. to 4:00 p.m., Monday through Friday.

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- b. Emergency delivery hours are from 4:00 p.m. to 11:00 p.m., Monday through Friday; 8:00 a.m. to 4:00 p.m. on weekends and holidays.
4. Fuel Oil Delivery Hours during the Non-Heating Season (June 1 through September 30)

Between 8:00 a.m. to 4:00 p.m. three days per week: Days are specified by agreement between NYCHA and the vendor. If an agreement cannot be made, NYCHA reserves the right to designate the days. If a holiday falls on a scheduled delivery day, the delivery is made on the previous day.

C. Receipt of Fuel Oil Deliveries – Responsibilities

1. Heating Frontline Staff

- a. Adheres to all prescribed safety measures during oil deliveries.
- b. Examines Fuel Oil Request/Delivery Work Order, to match the delivery with the load number.

NOTE:	Under no circumstances must a load intended for a particular development be accepted by any other development, unless authorization is received from APUMD.
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- c. Identifies the proper tank and fill line.
- d. Sticks the tank in the presence of the oil truck driver to ensure adequate space is available in the tank; stick readings must be written on the back of the invoice provided by the vendor.

NOTE:	All calibrated rod or “stick” readings must be calibrated by quarter-inch (1/4”) gradations. This fractional reading must be included on the development’s computation of oil received and present in the storage tank. All calibrated sticks must be in proper measuring condition.
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- e. Ensures that the truck meter is operational and set at 0000 to begin fuel pumping.
- f. Remains with the oil truck driver, maintaining visual contact with the fill and vent lines, until the delivery is completed and the driver has purged the lines of any oil residue.
- g. Records the truck meter’s final reading on the Fuel Request/Delivery Work Order.
- h. Repeats “stick” reading following the completion of the delivery and records the inches (to the quarter inch) and converts inches into the gallon equivalent on the rear portion of the delivery order (invoice).

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- i. Records the actual number of gallons received on the Fuel Request/Delivery Work Order.
- j. Uses the delivery stamp to mark the rear portion of the delivery order.
- k. Ensures that the driver cleans and wipes the fill-box. Rags used for this purpose are to be disposed of in the fifty-five (55) gallon drum labeled for this type of disposal.
- l. When the drum is half full, contacts the Fuel Oil Remediation Unit in the Technical Services Department to have the drum and its contents removed.
- m. Secures the fill lines and inspects for spills; if a spill occurs, follow the current oil spill procedure. For more information, see Appendix E., Fuel Oil Spills or Seepage.
- n. Reports any and all complications (including fuel oil spills, failure of the vendor to deliver, etc.) to the property maintenance supervisor or the nearest supervisory staff member. Ensures that a Heating Management Services Department supervisor is informed of the spill.
- o. Attaches delivery order and enters the pertinent information into the Boiler Room Logbook. Uses the delivery stamp to mark the appropriate Boiler Room Logbook.

2. Accounts Payable and Utility Management Department (APUMD)

- a. Receives and reviews the Maximo fuel oil request work orders. Attaches the truck delivery ticket to the work order when received from the Property Management Department.
- b. Dispatches a payment to the vendor, upon receipt of the invoice.

D. Fuel Oil Shortages

Refer to NYCHA's Emergency Procedure Manual for information on fuel shortages.

E. Color Coding of Storage Facilities

All fuel oil tank suction and return shut-off valves in boiler rooms must have a sign indicating the tank number and whether these valves are in the open or closed position.

Additionally, all fuel oil tank suction and return shut-off valves, including lines from tanks, vent line caps, fill and sounding ports, are to be painted in accordance with the standard NYCHA color code (see table below). Heating Management Services Department supervisory personnel are responsible for ensuring that all color coding for fuel tanks, lines and valves is accurate and clear.

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STANDARD COLOR CODE FOR FUEL OIL TANKS		
TANK NUMBER	COLOR	PAINT NUMBER
#1 Tank	Red	5-109
#2 Tank	Yellow	5-106
#3 Tank	Orange	5-167
#4 Tank	Blue	5-138
All Oil Lines	Blue	5-144

NOTE:	<ul style="list-style-type: none">• In accordance with New York State Environmental Conservation Law, heating plants burning #2 Grade fuel oil must permanently mark oil fill ports to identify the product in the tanks.• The symbol to use for #2 Grade fuel oil is a hexagon, colored green (paint number 5-156). This hexagonal sign is to be painted on the pavement approximately 4 inches below the fill ports.
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XXVII. FUEL OIL STORAGE TANKS

A. Vaulted Tank Inspections

1. Frequency

- a. Tanks are inspected monthly by personnel from the Fuel Oil Remediation Unit of the Technical Services Department, unless otherwise directed.
- b. Inspection is required by the New York State Department of Environmental Conservation (NYS-DEC).
- c. An Inspection Report must be provided to NYS-DEC personnel, upon request.
- d. Completed Inspection Reports are attached to the entry door of the vault that has been inspected.
- e. Confined space training is required before entering any vaulted tank.

2. Labels

Vaulted tanks must have legible labels providing the following information:

- a. Tank capacity
- b. Fuel type

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- c. Tank number
- d. Inspection form histories mounted upon the entry door

3. Exterior Inspection

The presence of any of the following flaws must be noted on the Inspection Report and remedied, as appropriate:

- a. Discoloration
- b. Corrosion
- c. Cracks
- d. Bulges

4. Secondary Containment Area Inspection

The presence of any of the following flaws on the secondary containment area must be noted on the inspection report and remedied, as appropriate:

- a. Cracks in the saddle
- b. Cracks in the flooring
- c. Cracks in the walls
- d. Water penetration through ceilings, walls, or floors
- e. Inadequate lighting
- f. Floor Drains

B. Oil Pumps

1. Every boiler plant is outfitted with duplex fuel oil transfer pumps.
2. Pumps are heavy duty, positive displacement pumps that are electric motor driven and rotary type. They are connected to the motor either directly or indirectly and must be fitted with a suitable guard.
3. Each pump, with its motor, is mounted on a cast iron bedplate, with a raised lip.

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4. Oil pump(s) must be in operation at all times, unless the instructions for a new plant dictate adherence to an alternative method.
5. Each pump must have a Pressure Relief Valve above the discharge side of the pump.
6. Single and dual tanks must have either mechanical or electrical Pressure Release Valves placed on the return line, between the inlet and outlet side of the valve.

XXVIII. FIXED AIR COMPRESSORS IN BOILER ROOMS

A. Restrictions

Personnel operating fixed air compressors in NYCHA boiler rooms must obtain a Certificate of Fitness, G-35, Operation of Air Compressors.

B. Five Year Tests

1. Fixed air compressors with storage tanks must pass a pressure test every five years.
2. NYCHA contractors who are certified to perform these tests are procured through the Property Management Office.
3. Heating superintendents must ensure that these tests are performed, and documentation is retained in the Heating Management Services Department and Property Management Office Heating Folders.
4. Contractors must mount a tag or sticker on the inspected equipment to provide proof that the equipment was inspected.

C. Maintenance

Certified heating frontline staff inspect and maintain air compressors, using the manufacturer's recommendations as a guideline for routine maintenance and repairs.

XXIX. TEMPORARY HEATING AND HOT WATER

Occasionally, heating plants may require the hookup of additional boilers to ensure proper heating and hot water service to residents. Portable Mobile Boilers may be procured and brought on line to provide service in the event of construction or repair activities in NYCHA heating plants.

Temporary boilers are procured either directly by NYCHA staff, or through the use of a contracted firm. Firms performing major repairs, or constructing boiler plants, may provide temporary heating service, in addition to their service and repair responsibilities.

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A. Requesting Portable Mobile Boilers

1. Heating Management Services Department supervisory personnel determines that an additional boiler(s) is required to provide adequate heat and hot water to development residents and requests a portable mobile boiler by contacting the Heating Management Services Department heating deputy director.
2. The heating deputy director authorizes Heating Management Services Department personnel to order a portable mobile boiler using a blanket purchase agreement.
3. The operations deputy director must provide the director of the Account Payable and Utility Management Department (APUMD) with details relating to the temporary boiler.

B. Portable Mobile Boilers Provided by Contractors

1. Heating Management Services Department personnel contacts the contractor and informs him/her of the request.
2. Contractor staff configures the equipment and brings the boiler on line.
3. All maintenance, repair, certifications and insurance coverage are the responsibilities of the contracted firm.
4. NYCHA Heating Management Services Department heating staff shut down contracted mobile boilers in cases of emergency, or in the event that the boiler is emitting dense smoke in violation of New York State or New York City environmental law. In the event of a shutdown, staff must initially contact the contracted firm and then notify their immediate supervisor, property management staff and/or Emergency Services Department of the situation. Additionally, staff must log all information pertaining to the shutdown in the appropriate log book.
5. NYCHA is responsible for fuel costs, unless other arrangements have been made through the language of the service contract.
6. Portable mobile boilers must provide:
 - a. One third ($\frac{1}{3}$) of the development's required maximum horsepower, when operating during NYCHA summer season.
 - b. One hundred percent (100%) of the development's required horsepower, when operating during NYCHA winter season.

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NOTE:	Portable Mobile Boilers and fuel storage tanks provided by contractors that are placed on a public street must be registered with the New York City Department of Transportation (NYC DOT). The contractor registers rented boilers and storage tanks.
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C. Portable Mobile Boilers Provided by NYCHA

1. A Heating Management Services Department supervisor contacts Heating Management Services Department heating deputy director and informs them of the request.
2. Upon notification, the Heating Management Services Department ensures an employee dispatches an oil delivery truck to provide fuel for the boiler when it reaches the site.
3. Plumbers from the Maintenance Repairs and Skilled Trades Department hook up the Portable Mobile Boiler.
4. Electricians are provided by either the Maintenance, Repairs, and Skilled Trades Department or Borough Property Management Department.
5. Heating frontline staff is responsible for the maintenance, chemical testing, and repairs while the boiler is located at the development.
6. The Heating Management Services Department ensures an employee empties the fuel tank and disconnects the boiler when the unit is no longer required to maintain heat and hot water.
7. The Heating Management Services Department coordinates the transport of the portable mobile boiler back to its storage location.
8. Heating frontline staff overhaul NYCHA-owned portable mobile boilers.

D. Mobile Boiler installation

In the event of a catastrophic boiler room failure (emergency), the Heating Management Services Department uses a mobile boiler to restore heat.

NOTE:	All mobile boilers NYCHA owned or rented by NYCHA must be registered with the NYC Department of Buildings and NYC Department of Environmental Protection.
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1. Staging

- a. Heating Management Services Department staff assess the location for the best possible mobile boiler connection entry point. The entry point must account for steam, water, electrical, and fuel oil line connections.
- b. If a mobile boiler will be placed in a street, an NYC Department of Transportation street permit is required. The permit is not required if a mobile boiler will be placed within NYCHA property lines. See Section XXIX.D.2., below.
- c. Mobile boilers and portable fuel oil tanks considered to be oversized loads that will be transported on weight-restricted roads and/or bridges:
 - (1) Require a NYC Department of Transportation Permit for Overdimensional Vehicles.
 - (2) Only may be transported between 10:00 p.m. and 6:00 a.m.
- d. The Heating Management Services Department determines internal boiler horsepower to ensure the correct sized mobile boiler is used to meet the required heating plant load.
- e. The Heating Management Services Department determines if a development's in-ground oil tank will be used to support the mobile boiler fuel needs.
 - (1) A portable fuel oil tank is used if the in-ground fuel oil tank will not be used.
- f. An Electrical Supervisor determines:
 - (1) The mobile boiler's electrical need.
 - (2) If the building's existing electrical amperage/voltage are capable of sustaining the required mobile boiler/s.
- g. The Heating Management Services Department coordinates with property management supervisors when internal and external wooden scaffolds are needed to support the entry point connects (steam, water, electrical, and fuel lines)

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2. Permits Required Prior to Delivery of the Mobile Boiler

Mobile boilers owned or rented by NYCHA require the following permits before being shipped to a location:

- a. NYC Department of Transportation #0204 permit (Needed for mobiles being placed in the street or a sidewalk)
- b. NYC Department of Buildings electrical work permit

3. Mobile Boiler Registration / Limited Alteration Application

- a. An NYC Department of Buildings site inspection is scheduled through an online application by a Professional Engineer, Licensed Oil Burner Installer, or Licensed Master Plumber.
- b. After DOB passes the unit for its inspection, DOB provides a Mobile Boiler Registration number.
- c. After receiving the mobile boiler registration number, a certified oil burner installer (vendor) files a Limited Alteration Application (LAA) with the DOB.
- d. The LAA allows for the alteration of the internal heating plant's application to allow for the mobile boiler installation, including running oil lines to the mobile boiler.

4. Emergencies

- a. The Heating Management Services Department must procure a vendor that is a certified oil burner installer or licensed master plumber. The vendor submits an online application to file an Emergency Work Permit (EWP) with the NYC DOB.
- b. The EWP allows the Heating Management Services Department to begin the mobile boiler installation with the requirement that all required permits and the Limited Alteration Application are filled within 72 hours of the EWP filing.

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XXX. ACCEPTANCE OF NEW BOILER PLANTS

Capital Projects administers the transfer and acceptance of new boiler plants.

A. Inspection and Transfer of New Boiler Plants

1. The contractor who installs the plant must ensure that the plant passes the initial inspections conducted by the New York City Department of Buildings (NYC-DOB), and receives:
 - a. A Certificate of Approval and Certificate of Boiler Inspection
 - b. A Certificate of Operation from New York City Department of Environmental Protection

Once a Certificate of Approval and Certificate of Boiler Inspection are procured, the contractor may initiate the process of turning the plant over to NYCHA.

2. When the contractor is in receipt of the Certificate of Approval and Certificate of Boiler Inspection, the Heating Management Services Department director, or designee, and the assigned inspector from Capital Projects inspect the plant.

Representatives from the groups above, inspect:

- a. Safety devices on all boilers and oil burning equipment.
 - b. All heating plant permits/certificates on site.
3. Contractor
 - a. Performs safety tests on all equipment and gas curtailment switches in the presence of this group.
 - b. Provides training classes for NYCHA personnel. These classes provide basic information on the safety devices and proper maintenance of the new boilers.
 4. When the Plant Is Accepted
 - a. When the inspecting group accepts the plant (Substantial Completion), the contractor provides the original Certificate of Approval and Certificate of Boiler Inspection to the assigned inspector.

The warranty for the accepted heating plant begins at this time.

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- b. Copies of the certifications are forwarded to the Utility Control Division in APUMD and the heating administrator.
- c. The contractor contacts the New York City Department of Environmental Protection (NYC-DEP), Department of Air Resources (DAR), and requests testing to be performed.
 - (1) If the boilers pass these tests, the NYC-DEP issues either a Certificate of Registration or a Certificate of Operation, depending on the size and output of the new boilers, see Section VI.D., NYC-DEP Boiler Permits and Registration, above.
 - (2) If the boilers do not pass these tests performed by NYC-DEP:
 - (a) NYC-DEP must provide a list of causes for the failure of the equipment to NYCHA.
 - (b) NYCHA provides this list to the contractor who corrects the deficiencies, and informs Capital Projects which schedules a new test with NYC-DEP.

5. Permits

The following permits must be procured for new heating plants and must always be available in NYCHA heating plants. Also see Section VI., Required Permits, Registrations, Certificates of Fitness, above.

- a. Certificate of Approval (NYC-DOB)
- b. Certificate of Boiler Inspection (NYC-DOB)
- c. Certificate of Operation/Certificate of Registration (NYC-DEP)
- d. Certificate of Fitness for the heating frontline staff (FDNY)
- e. Air Facility Registration/Air State Facility Permits (NYS-DEC), as required by the size and Nitrous Oxide output of the plant

B. Warranties

Warranty information for all NYCHA boilers is located on the back of the Contract Agreement between the contractor and NYCHA. The warranty period begins at Substantial Completion, unless other arrangements have been specifically prepared. Capital Projects distributes copies of the Contract Agreement. The following must maintain copies of the warranty:

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1. Property Maintenance Supervisor
2. Capital Projects
3. Risk Management Department
4. Technical Services Department, Contract Services Division
5. Heating Superintendent
6. Contractor of Record

C. First Year of New Heating Plant Operation

1. The contractor provides maintenance manuals for all new equipment:
 - a. Maintenance manuals, and/or compact discs, are provided at the Exit Meeting.
 - b. Manuals are kept in the permanent development records.
2. Based upon contractual terms, either NYCHA personnel or contractor personnel clean boilers and condensate tanks as specified within the contract.
3. Based upon contractual terms, either NYCHA personnel or contractor personnel clean all basement F&T traps, thermostatic traps, and strainers every two (2) months:

Fasten a tag with the employee's name, and the date of the cleaning, on to the trap.
4. Based upon contractual terms, either NYCHA personnel or contractor personnel clean scale pockets after six (6) months of operation. Clean more frequently, if necessary.
5. Based upon contractual terms, either NYCHA personnel or contractor personnel perform feedwater testing and treatment. In the event the contractor is responsible for feedwater testing and treatment before and during the warranty period, the contractor must test and treat feedwater in accordance with the following guidelines:
 - a. Testing and treatment are performed on a weekly basis.
 - b. Testing and treatment must be witnessed and signed off by the heating superintendent, or designee.
 - c. Testing and treatment must conform with NYCHA testing and treatment standards.
 - d. Testing and treatment results must be recorded on NYCHA Form 060.175, *Boiler Feedwater Analysis*.

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6. Based upon contractual terms, either NYCHA personnel or contractor personnel lubricate all moving parts, as needed.
7. If the warranty is still in effect, and troubleshooting indicates an equipment malfunction, the Heating Management Services Department heating superintendent must contact the contractor:
 - a. If the contractor fails to respond, the heating superintendent must contact the department administering the contract.
 - b. If the malfunction occurs during non-office hours, responding personnel must contact the Emergency Services Department (ESD). The Emergency Services Department contacts the contractor, or any appropriate NYCHA personnel.
8. Quarterly warranty verification inspections are required to be performed jointly by the heating superintendent and the Capital Projects contract inspector. Any items found to be malfunctioning during these inspections are to be corrected according to the existing warranty. **After the third quarterly inspection, monthly warranty verification inspections are required.**

D. Warranty Expiration

One month prior to the expiration of the warranty period, the heating superintendent or heating assistant superintendent must inspect the plant to identify any warranty issues requiring service or repair.

XXXI.DEVELOPMENT PERSONNEL – DUTIES AND RESPONSIBILITIES

A. Property Manager

1. Performs a monthly inspection of all heating plants and 50% of tank rooms.
2. Signs in and out of the required logbooks upon entering or exiting the boiler room or tank room.
3. Reviews temperature readings (in Maximo) taken by maintenance personnel every two weeks during heating season. Ensures that appropriate heating standards are maintained.
4. Reports service disruptions to the deputy director of the Heating Management Services Department.
5. Notifies police if any heating equipment is vandalized or missing.

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6. Ensures that checks for boiler rooms and Building Management Systems equipment are carried out on a daily basis by the property maintenance supervisor, or designee.

B. Property Maintenance Supervisor

1. Performs a daily inspection of development boiler room(s) and Building Management Systems equipment.
2. Effectively uses Building Management Systems to view their respective plants if the plants are in Building Management Systems.

At least once a day, logs in to Building Management Systems and reviews all heating plants that they are responsible for.

3. Inspects all house and booster pumps and 50% of tank rooms for proper operation monthly, during the building inspection.
4. Ensures that follow-up action is taken to repair inoperative house and booster pumps.
5. Ensures that staff enters heat and hot water temperature readings on the Maximo work order.
6. Reviews temperature readings (using Maximo) taken by maintenance personnel daily during heating season. Ensures that appropriate heating standards are maintained.
7. Ensures that emergency lighting in the heating plant and tank rooms is operational.
8. Ensures that heating plants and tank rooms are secure.
9. Notifies police if any heating equipment is vandalized or missing.
10. Maintains copies of the New York State Department of Environmental Conservation (DEC) Inspection Folder.

NOTE:	Information on the requirements and contents of the NYS-DEC Inspection Folder can be found in Section VI.G., NYS-DEC Inspections, above.
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11. Collects daily reports from the heating frontline staff and forwards them to the assistant heating superintendent, after review. If the heating assistant superintendent is not available, forward them to the heating superintendent.
12. Enters data into the Emergency Fuel System (EFS).

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13. Ensures that operational, inspected, and appropriate class fire extinguishers are available in all heating plant areas.
14. Immediately responds to any fuel oil spills and informs supervisory staff.
15. Responds to and assists Emergency Services Department, or heating plant personnel, in emergency situations.
16. Ensures that gas meter readings recorded by the utility company, when their representative reads the meter, are called in to the heating superintendent, in gas- only (firm gas) or interruptible (dual fuel) developments.
17. Takes meter readings on a daily basis and records on NYCHA Form 060.184, *Electric &/Or Gas Meter Dial Readings*.
18. Notifies the After-Hours Heat Desk if Building Management Systems alarms are not functioning correctly. Notifications can also be made by the heating superintendent or heating assistant superintendent.

C. Assistant Property Maintenance Supervisor

1. The assistant property maintenance supervisor manages the property maintenance supervisor's duties if they are unavailable.

D. Development Maintenance Staff

1. Each maintenance employee must list the following temperature readings on all maintenance work orders on a daily basis:
 - a. Heating Season (10/1-5/31) - Apartment and hot water temperature readings.
 - b. Non-Heating Season (6/1-9/30) - Hot water temperature readingsReadings must be taken in separate apartments.
2. Sample readings are recorded on the work orders.
3. Readings are to be entered into the handheld device when the work order is completed and closed.

XXXII. CITY-WIDE SUPPORT PERSONNEL – DUTIES AND RESPONSIBILITIES

A. Technical Services Department, Fuel Oil Remediation Unit

The Technical Services Department's Fuel Oil Remediation Unit oversees all aspects of fuel oil recovery for NYCHA. The Heating Management Services Department, Property Management, or Emergency Services Department staff are required to contact the Fuel Oil Remediation Unit Coordinator immediately whenever they become aware of an oil spill, including any indicator lights signifying an oil spill, or if there is a visible sign of an oil leak, including losses suspected as a result of daily stick test readings.

Additionally, the Fuel Oil Remediation Unit assists the Accounts Payable and Utility Management Department (APUMD) in providing oil to developments in emergency situations, such as when the contracted vendor cannot accommodate the request. This unit is also responsible for providing NYCHA owned Portable Mobile Boilers to developments and-for making repairs to the Fuel Oil Monitoring System.

1. In the event of an oil spill (seepage, or inventory loss), staff immediately contacts the Fuel Oil Remediation Unit coordinator who contacts the New York State Department of Environmental Conservation to apprise them of the situation.
 - a. The Fuel Oil Remediation Unit coordinator completes NYCHA Form 128.079, *Report of Environmental Damage/Loss*.
 - b. The original form is submitted to the Risk Management Department.
 - c. Fuel Oil Remediation Unit staff files a copy of the form and copies are sent to the property maintenance supervisor and the heating assistant superintendent, to be stored in the development and heating plant files, respectively.

2. Recovery Systems

The Fuel Oil Remediation Unit is responsible for all repairs and modifications to all oil recovery systems. These systems may consist of compressors, pumps and water separators and wells.

If any problems or alarms occur with these systems, notify the Fuel Oil Remediation Unit Coordinator for repairs.

3. Emergency Fuel Oil Delivery by Technical Services Department

- a. If APUMD cannot secure a timely delivery of fuel oil in an emergency situation the APUMD deputy director, or designee:

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- (1) Transfers ownership of the work order to the Technical Services Department Fuel Oil Remediation Unit.
 - (2) Informs the Fuel Oil Remediation Unit coordinator how much fuel oil is required and how many deliveries are necessary.
 - (3) Provides the Fuel Oil Remediation Unit coordinator with the following information:
 - (a) Name of development
 - (b) Amount of oil currently available at the development
 - (c) Amount of oil requested
 - (d) Daily oil usage for the development
 - b. Fuel Oil Remediation Unit staff delivers the requested amount of fuel oil as soon as possible.
 - c. After the delivery is completed by the Technical Services Department Fuel Oil Remediation Unit, Technical Services changes the status of the work order to Complete and Closed.
4. Fuel Oil Tank Monitoring System
- a. The Fuel Oil Remediation Unit:
 - (1) Inspects fuel oil monitoring systems to ensure installation is in accordance with the contract parameters.
 - (2) Makes repairs to the Fuel Oil Tank Monitoring System for all locations.
 - (3) Maintains all records of repair work for Fuel Oil Tank Monitoring Systems.
 - b. Warranties for Fuel Oil Tank Monitoring Systems are maintained by the corresponding project administrator in Capital Projects.

B. Technical Services Department Violations Unit

1. Certificates of Fitness (Application)

To apply for a testing opportunity or a renewal for a Certificate of Fitness, the assistant heating superintendent submits a memorandum, or e-mail to the attention of the administrator of the Technical Services Department Violations Unit. This memo includes the following information:

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- a. Employee's name
- b. Employee's social security number
- c. Employee's length of service with NYCHA
- d. Locations and addresses of the boiler rooms and air compressors

2. Acceptance

Once all requirements are provided, the Technical Services Department Violations Unit sends the assistant heating superintendent (or if the heating assistant superintendent is not available, send it to the heating superintendent) the letter of approval.

C. Accounts Payable and Utility Management Department (APUMD)

APUMD is responsible for purchasing oil and heating and cooking gas to meet the heating needs of NYCHA developments. APUMD also secures the renewals of NYC-DEP and NYS-DEC certificates that are required by law.

D. Office of Safety and Security

Employees using respirators must comply with Standard Procedure 001:17:2, *Respirator Protection Safety Program*, administered by the Office of Safety and Security.

E. Capital Projects

Capital Projects is responsible for overseeing and administering the process of designing, inspecting, and accepting new boiler plants from the firms contracted to provide these plants.

F. Risk Management Department

1. The Risk Management Department oversees all NYCHA Property Insurance policies. Refer to GM 3737, *Reporting Fire and Boiler-Related Machinery Damages*, for more information on the protocols for filing insurance claims.
2. The development property manager and property maintenance supervisor complete NYCHA Form 128.025, *Report of Property Damage*, to report an incident of fire, boiler, or machinery damage and estimated costs.
3. The heating administrator completes NYCHA Form 128.004, *Statement of Property Damage Cost*, and submits it to the Risk Management Department to indicate the final cost of an incident of fire, boiler, or machinery damage.

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XXXIII. PERFORMANCE METRICS

- A. Percentage of heating outages restored within 24 hours. The Agreement requires the percentage to be a minimum of 85 percent.
- B. Percentage of heating outages restored within 48 hours, as required by the Agreement.
- C. Average number of hours to restore a heating outage. The Agreement requires the average to be 12 hours or less.
- D. Percentage of hot water outages restored within 24 hours.

XXXIV. NON-COMPLIANCE

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

XXXV. FORMS

- A. NYCHA Form 040.534A, Notice of Visit by NYCHA Staff
- B. NYCHA Form 040.689, CHAS Readiness Checklist
- C. NYCHA Form 060.059B, Emergency Notice – Interruption of Services
- D. NYCHA Form 060.064, Certificate of Final Acceptance
- E. NYCHA Form 060.072, Mechanical Equipment Record
- F. NYCHA Form 060.073, Twice-Weekly Tank Room Inspection Report
- G. NYCHA Form 060.074, Tank Room Log
- H. NYCHA Form 060.175, Boiler Feedwater Analysis
- I. NYCHA Form 060.184, Electric and/or Gas Meters - Dial Readings
- J. NYCHA Form 060.240, Boiler Hydrostatic Test Report
- K. NYCHA Form 060.242, Oil/Gas Burner & Boiler Service Report
- L. NYCHA Form 060.248, Request for Relining Hot Water Storage Tanks

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- M. NYCHA Form 060.263, Confined Spaces Entry Permit
- N. NYCHA Form 060.296, Heating Plant Service Area Nightly Report
- O. NYCHA Form 061.064, Mechanical Inspection Record – Phase #1
- P. NYCHA Form 061.064A, Mechanical Inspection Record – Phase #2
- Q. NYCHA Form 061.064B, Mechanical Inspection Record – Phase #3
- R. NYCHA Form 061.064C, Mechanical Inspection Record – Phase #4
- S. NYCHA Form 128.079, Report of Environmental Damage/Loss
- T. NYCHA Form 158.001A, Confined Space Survey Form - Boiler Room Breaching
- U. NYCHA Form 158.001B, Confined Space Survey Form - Fuel Oil Tank
- V. NYCHA Form 158.001C, Confined Space Survey Form - Sump Pump Ejector Pit
- W. NYCHA Form 158.001D, Confined Space Survey Form - Boiler Condensate Return Tank
- X. NYCHA Form 158.001E, Confined Space Survey Form - Boiler Firing Chamber
- Y. NYCHA Form 158.001F, Confined Space Survey Form - Roof Tank
- Z. NYCHA Form 158.001G, Confined Space Survey Form - Vacuum Tank Pit
- AA. NYCHA Form 158.001H, Confined Space Survey Form - Hot Water Tank
- BB. NYCHA Form 158.001I, Confined Space Survey Form - Crawl Space

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XXXVI. REVIEW/REVISION HISTORY PAGE

HEATING AND DOMESTIC HOT WATER

060:63:1

Review/ Revision	Review/ Revision Date	Sections Amended
1.	5/4/16	Banner
2.	5/4/16	II. Policy
3.	5/4/16	Throughout document, replaced Management Department with Heating Department for all Heating Department Titles
4.	5/4/16	XVI. Heat Complaints
5.	5/4/16	Added Section XXXIX, Review Revision History Page
6.	5/4/16	Added Appendix H – Manual Operation of Heat Control Panels and Zone Valves
7.	5/25/16	Section II. Policy
8.	10/4/18	The following sections were removed: Section III, Terminology; Section VII, Emergency Services Department; Section XV, Heating Plants Administered by Contracted Firms; Section XVIII, Dual (Interruptible) Fuel Developments; Section XXXII, Boiler Performance Tests and Inspections, Appendix G, CHAS Helpline Process
9.	10/4/18	Remaining sections reorganized within procedure beginning with Section III. All sections and appendices updated.
10.	10/4/18	Added Appendix B, Maximo Work Orders
11.	10/4/18	Added Appendix H, Heat Complaint Protocol for Indoor Temperature Sensor Locations
12.	10/12/18	Appendix I, Manual Operation of Heat Control Panels and Zone Valves
13.	9/30/19	Procedure Name
14.	9/30/19	Banner
15.	9/30/19	Section I. Purpose
16.	9/30/19	Section II. Policy
17.	9/30/19	Added Section III. Review Cycle
18.	9/30/19	Added Section IV. Responsibilities
19.	9/30/19	Section V. Safety Rules and Regulations
20.	9/30/19	Section VI. Required Permits, Registrations, Certificates of Fitness
21.	9/30/19	Added Section VII. Heat Desk
22.	9/30/19	Added Section VIII. Heating Management Services Department Personnel General Duties and Responsibilities

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23.	9/30/19	Added Section IX. Employee Safety Check-In
24.	9/30/19	Section XI. Response to Heating Plant Alarms
25.	9/30/19	Section XII. Logbooks and Reports
26.	9/30/19	Section XIV. Tank Room Inspection Process
27.	9/30/19	Added Section XV. Resident Communications
28.	9/30/19	Section XVI. Heat Complaints
29.	9/30/19	Section XVII. Hot Water Complaints
30.	9/30/19	Section XIX. Boiler Water Treatment
31.	9/30/19	Section XXI. Removing a Boiler From Service
32.	9/30/19	Section XXII. Add a Boiler Into Service And Restarting Boiler Operations
33.	9/30/19	Section XXVI. Receiving, Inspecting, and Recording Fuel Oil Deliveries
34.	9/30/19	Section XXIX. Temporary Heating and Hot Water
35.	9/30/19	Section XXXI. Development Personnel – Duties and Responsibilities
36.	9/30/19	Section XXXII. City-Wide Support Personnel – Duties and Responsibilities
37.	9/30/19	Added Section XXXIII. Performance Metrics
38.	9/30/19	Added Section XXXIV. Non-Compliance
39.	9/30/19	Added Section XXXV. Forms
40.	9/30/19	Appendix D, Applicable Regulations
41.	9/30/19	Appendix F, Maintenance and Testing Overview
42.	9/30/19	Appendix H, Heat Complaint Protocol for Indoor Temperature Sensor Locations
43.	9/30/19	Added Appendix J, Shift Duties

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XXXVII. APPENDICES

A. APPENDIX A – SUMMARY OF PAPER FORMS

1. NYCHA Form 060.064, Certificate of Final Acceptance

To be signed when a heating plant is accepted by NYCHA personnel, and becomes NYCHA property. Distribution is as follows:

Original	Department Administering the Contract, Program Administrator
Copy	In-House Construction Manager
Copy	Contract Inspector
Copy	Heating Administrator
Copy	Heating Superintendent
Copy	APUMD, Utility Control Division
Copy	Technical Services Department, Contract Services Unit
Copy	Contractor

2. NYCHA Form 060.073, Twice-Weekly Tank Room Inspection Report

Provides information on mechanical room equipment, as recorded by the heating frontline staff performing the inspection. Distribution is as follows:

Original	Development Heating Folder
Faxed	Heating Assistant Superintendent
Copy	

3. NYCHA Form 060.074, Tank Room Log

Provides information on tank room equipment, as recorded by the heating frontline staff performing the twice weekly inspection. Form is to be kept in the Tank Room until the end of the week. Distribution is as follows:

Original	Heating Superintendent
Copy	Heating Assistant Superintendent

4. NYCHA Form 060.240, Boiler Hydrostatic Test Report

All boilers are hydrostatically tested, before the Annual Boiler Inspection, and following the completion of any welding repairs. The test discloses any leaks in the boiler and

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allows for repairs to be made before the boiler is placed back on line. The completed form is distributed as follows:

Original	Heating Administrator
Copy	Heating Superintendent
Copy	NYS-DEC Inspection Folder
Copy	Development Heating Folder

5. NYCHA Form 060.242, Oil/Gas Burner & Boiler Service Report

Provides information on service and maintenance. Distribution is as follows:

Original	Heating Superintendent
Copy	Heating Administrator
Copy	Heating Assistant Superintendent
Copy	Mechanic
Copy	NYS-DEC Inspection Folder
Copy	Development Heating Folder

6. NYCHA Form 060.248, Request for Relining Hot Water Storage Tanks

Requests for relining damaged or aged water tanks. Distribution is as follows:

Original	Heating Administrator
Copy	Heating Superintendent
Copy	Development Heating Folder

7. NYCHA Form 060.296, Heating Plant Service Area Nightly Report

Report provided by the Roving Team to the heating superintendent that provides a background on the duties performed during the Roving Team's shift. Distribution is as follows:

Original	Heating Superintendent, or designee
Copy	Roving Team Members

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8. NYCHA Form 128.004, Statement of Property Damage Cost

Completed and signed by the heating administrator. This form notifies the Risk Management Department of the final cost of an incident of fire, boiler, or machinery damage. Distribution is as follows:

Original	Risk Management Department
Copy	Financial Accounting and Reporting Services Department
Copy	Property Management Department Director
Copy	Heating Management Services Department
Copy	Fire Damage Folder, Development File
Copy	Development Heating Folder
Copy	Insurance Broker (if damage of \$25,000 or more)
Copy	Insurance Adjustor (if damage of \$25,000 or more)

9. NYCHA Form 128.025, Report of Property Damage

Completed and signed by the development property maintenance supervisor and property manager. This form notifies all interested parties of an incidence of fire, boiler, or machinery damage and estimates costs. Distribution as follows:

Original	Risk Management Department
Copy	Heating Management Services Department Director
Copy	Heating Administrator
Copy	Fire Damage Folder, Development File
Copy	Insurance Broker (if estimated damage of \$25,000 or more)
Copy	Insurance Broker (if estimated damage of \$25,000 or more)

10. NYCHA Form 128.079, Report of Environmental Damage/Loss

Completed by the Fuel Oil Remediation Unit coordinator after any incident involving environmental damage, such as an oil spill. Distribution is as follows:

Original	Risk Management Department
Copy	Technical Services Department, Fuel Oil Remediation Unit
Copy	Heating Administrator
Copy	Property Maintenance Supervisor

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B. APPENDIX B – MAXIMO WORK ORDERS

The following forms have been replaced with Maximo work orders. These work orders must be completed on the handheld.

1. Boiler Room Daily Inspection Work Order

The Boiler Room Daily Inspection replaced NYCHA Form 060.035, *Boiler Room Daily Report*.

This work order must be completed by heating frontline staff on their handhelds twice per day, once in the morning and once in the afternoon.

There are three variations of question on this work order depending on the type of boilers located in the individual boiler rooms.

- a. Conventional boiler(s) only
- b. Hydrotherm boiler(s) only
- c. Conventional and Hydrotherm boilers

2. Fuel Request & Delivery Work Order

The Fuel Request & Delivery Work Order replaced NYCHA Form 060.063, *Receiving and Inspection Report Fuel Oil*.

This work order must be completed by heating frontline staff on their handhelds.

Heating supervisors may approve/modify this work order on their handheld or desktop. This work order is associated with the related Boiler Room Daily Inspection as well as the specific Petroleum Bulk Storage tank that the fuel is being requested for.

3. Outage Work Order

The Outage Work Order is used to track interruptions in heat and/or hot water service. This work order:

- a. Drives Notification to residents and external stakeholders
- b. Links needed repairs to the interruption in service
- c. Tracks the cause of the interruption
- d. Records temperature samples upon restoration of service
- e. Drives data to inform business improvements

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4. Annual Hot Water Preventive Maintenance Work Order

This work order replaces NYCHA Form 060.174, *Annual Hot Water Generator Inspection Report*.

The heating superintendent reviews this work order in Maximo.

5. Annual Boiler Preventive Maintenance Work Order

This work order replaces NYCHA Form 060.173, *Annual Boiler Inspection Report*.

The heating superintendent reviews this work order in Maximo.

6. Heating Plant Operations Record

The Heating Plant Operations Record on the handheld device replaces NYCHA Form 060.066, *Heating Operation Record*. Heating frontline staff enters the daily log of inspections and/or tests on individual boilers and prints out the record from Maximo and posts it on the boiler bulletin board.

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C. APPENDIX C – HA NUMBERS

All components that can be ordered through NYCHA's Oracle iProcurement are assigned a Housing Authority Number (HA Number). Following is a list of HA Numbers that relate to chemicals and testing kits that are used in heating plants. Every heating plant must store the below chemicals and testing kits in order to perform boiler chemical testing.

HA Number	Keyword	Description	Quantity
1513939136	Feeders	Vertical Style—dish bottom out, 200 psi max. Chemical BI – pass shunt feed, made by Dayton Supply	Each
0817997490	Formula #1	NTA Formula #1, dry powder in fifty (50) Pound bag	Bag
0817997491	Sulfite	Sodium Sulfite, anhydrous dry powder; fifty (50) Pound bag	Bag
0817997494	Amines	Diethylethanol in one (1) gallon containers, four (4) per case	Case
0817997495	Sodium	Hydroxide liquid, 50% solution in five (5) gallon containers	Each
1701956745	Meter	Conductivity meter, Four (4) separate, Ranges 0-10,000, made by Myron-L	Each
1701956746	Case	Conductivity meter made by Myron-L	Each
0817943201	Test	Ph indicator strips, Range 0 to 14, Category 9590, One hundred (100) strips per pack, made by Scientific	Pack
0817997492	Kit	Feedwater test kit #1683, made by Taylor	Each
0817983395	Tube	Test sample tube #9198, made by Taylor	Each
1906986933	Protector	Hearing, 25 Db NNR worn over head, HB-25, made by UVEX	Each
1906050010	Shield	Clear face, #AF2000/4128, made by Allsafe	Each
1906992895	Respirator	Twin cartridge exchangeable, for boiler room, #8032, made by Moldex	Each
0907989570	Apron	Bib type, 35" x 45" heavy duty neoprene, made by Loveline	Each
0907968175	Gloves	14" gauntlet, double coated PVC	Pair
1701984165	Scale	For measuring powder, Made by Chatillon	Each
1701942541	Bottles	Sample boiler water, Widemouth, clear Poly-carbonate, 500 ml, # P-6105- 50, made by Cole-Parmer	Each
1701942542	Measure	Quick and accurate in quarts and liters, One (1) gallon container # P- 06004-95, made by Cole-Parmer	Each
0816954553	Spill Kits	Container spill, ninety five (95) gallon polyethylene with twist-on lid	Each
0804934902	Drum	Menna Drum	Each
0816967323	Wipes	Oil Wipes	Bale
0816970240	Drum	Over Pack Kit	Kit

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D. APPENDIX D – APPLICABLE REGULATIONS

1. New York City Administrative Code, Title 27, Chapter 2, Article 8, § 27-2029

Requires that between October 1 and May 31, heat must be maintained as follows:

- a. Between the hours of six a.m. and ten p.m., a temperature of at least 68 degrees Fahrenheit whenever the outside temperature falls below 55 degrees; and
- b. Between the hours of ten p.m. and six a.m., a temperature of at least 62 degrees Fahrenheit.

NOTE:	Section 79(1) of the New York State Multiple Dwelling Law requires that: <ul style="list-style-type: none">• 68° Fahrenheit is maintained in all dwelling units between the hours of 6:00 a.m. and 10:00 p.m., when the outside temperature falls below 55° Fahrenheit• 55° Fahrenheit is maintained in all dwelling units between the hours of 10:00 p.m. and 6:00 a.m., when the outside temperature falls below 40° Fahrenheit. The more stringent requirements of the New York City Administrative Code must be followed.
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2. New York City Administrative Code, Title 27, Chapter 2, Article 8, § 27-2031 and Section 75 of New York State Multiple Dwelling Law

Requires that all tenant occupied dwellings that are three (3) or more stories in height erected after April 18, 1929, or erected after January 1, 1951:

- Must maintain a constant minimum hot water temperature of 120° Fahrenheit at the equipment outlet
 - Apartment hot water temperatures should be no less than 110° Fahrenheit
- All other dwellings must provide a constant minimum hot water temperature of at least 120° Fahrenheit from 6:00 A.M. to 12:00 Midnight

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3. New York City Housing Maintenance Code, Chapter 2, Sub-Chapter 2, Article 8, § 27-2031

“Except as otherwise provided in this article, every bath, shower, washbasin and sink in any dwelling unit in a multiple dwelling or tenant-occupied one-family or two-family dwelling shall be supplied at all times between the hours of six a. m. and midnight with hot water at a constant minimum temperature of one hundred twenty degrees (120°) Fahrenheit from a central source of supply constructed in accordance with the provisions of the Building Code and the regulations of the Department, provided however that baths and showers equipped with balanced-pressure mixing valves, thermostatic mixing valves or combination pressure balancing/thermostatic valves may produce a discharge temperature less than one hundred twenty (120°) degrees Fahrenheit but in no event less than one hundred ten (110°) degrees Fahrenheit.”

4. NYS-DEC Code of Rules and Regulations Chapter III, § 201-5

Sets the provisions and regulations governing the issuance, revision and renewal of Air State Facility Permits. Air State Facility Permits and Air Facility Registrations are maintained and renewed by the Utility Control Division in APUMD.

5. NYC Administrative Code, Title 24, Chapter I, Sub-Chapter 2, § 24-108 (f)

“The owner of every building...shall make the area where the heating system...is located readily accessible to members of the department...”

6. NYC Administrative Code, Title 27, Chapter 4, Sub-Chapter 8, § 27-4055

Establishes guidelines for the installation, registration and maintenance of petroleum storage tanks. Includes specifications for below-ground and vaulted storage tanks.

7. NYC Administrative Code, Title 11, Chapter 2, Sub-Chapter 2, Part 4, § 11-266

Specifies that fines and/or penalties will be levied against NYCHA for non-adherence to the section of the code that deals with Air Pollution.

8. NYC Health Code, Title 24, § 47.41(d)

Specifies that in children’s centers, or day care facilities, water in wash basins adjacent to lavatories may not exceed 115° Fahrenheit.

The New York State Department of Environmental Conservation Law states (in part): “... any individual with knowledge of a spill of petroleum... must report the incident within two hours of discovery...” NYCHA personnel must report all fuel oil spills to the Fuel Oil Remediation Unit of the Technical Services Department.

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E. APPENDIX E – FUEL OIL SPILLS OR SEEPAGE

The New York State Department of Environmental Conservation Law states (in part): "... any individual with knowledge of a spill of petroleum... must report the incident within two hours of discovery..." **NYCHA personnel must report all fuel oil spills to the Fuel Oil Remediation Unit of the Technical Services Department.**

1. Reporting an Oil Spill During Regular Business Hours

When a NYCHA employee detects an oil spill during regular business hours, he/she must act without delay, as follows:

- a. Any employee that discovers an oil spill or oil seepage (or any other type of hazardous spill) during office hours (8:00 a.m. to 4:00 p.m., Monday through Friday, excluding holidays) must immediately notify the property manager or property maintenance supervisor and a Heating Management Services Department supervisor. In the absence of any of the aforementioned, the highest ranking employee present is authorized to assume supervisory responsibility and must contact the Fuel Oil Remediation Unit of the Technical Services Department.
- b. The Heating Management Services Department supervisor immediately dispatches personnel to the site to assess the extent of the spill and to provide assistance to personnel on the scene.
- c. The property maintenance supervisor or Heating Management Service Department staff manually creates an emergency work order in Maximo.
- d. The work order is routed to the Technical Services Department's Fuel Oil Remediation Unit. The Technical Services Department Fuel Oil Remediation Unit supervisor reviews the history, plans and schedules the work order for immediate dispatch.
 - (1) The Fuel Oil Remediation Unit coordinator may immediately dispatch the NYCHA Emergency Spill Response contractor to the spill site to begin clean up procedures.
- e. If regulatory notification is required, the Technical Services Department supervisor contacts the NYS-DEC. The NYS-DEC assigns a Spill Identification Number (SIN) to the case. This number appears on all correspondence associated with the spill.
- f. Heating frontline staff and the property maintenance supervisor, or designee, manages the work order services and determines if there are any materials for direct issue or storeroom replenishment.

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- g. Heating Management Services Department staff and the property maintenance supervisor, or designee, waits for the Technical Services Department staff to arrive and briefs Technical Services Department staff upon arrival.
 - h. Technical Services Department staff records the work completed and outcome on the handheld device and updates Heating and Management Services Department staff and the property maintenance supervisor, or designee.
2. Reporting an Oil Spill During Non-Office Hours or Weekends
- a. Any employee that discovers an oil spill or oil seepage (or any other type of hazardous spill) after regular business hours or on weekends and holidays must immediately notify both the After-Hours Heat Desk and the Emergency Services Department.
 - b. The After-Hours Heat Desk supervisor or Emergency Services Department supervisor:
 - (1) Immediately dispatches personnel to the site to assess the extent of the spill and to provide assistance to personnel on the scene.
 - (2) Contacts the Fuel Oil Remediation Unit coordinator or the shift supervisor on duty with all essential information, based on the initial inspection (i.e., location of the spill, suspected cause and origin, estimated quantity of spill, type of fuel spilled, and the steps taken to contain the spill).
 - c. The Fuel Oil Remediation Unit coordinator or shift supervisor dispatches staff to the scene and/or may immediately dispatch the NYCHA Emergency Spill Response contractor to the spill site to begin clean up procedures.
 - d. If regulatory notification is required, the Fuel Oil Remediation Unit coordinator or shift supervisor contacts the New York State Department of Environmental Conservation (NYS-DEC) in Albany. The NYS- DEC assigns a Spill Identification Number (SIN) to the case. This number appears on all correspondence associated with the spill.
3. Actions to Address an Oil Spill
- a. Staff must prevent oil from entering the city sewer system.

Heating assistant superintendents must ensure that spill-kits are present in all boiler rooms. Kits may be procured through the NYCHA Procurement System, HA Number 0816954553.

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- b. Staff immediately uses available, granular absorbent materials to build dikes or barricades around catch basins, storm drains and sewers; this can occasionally mitigate surface spills. Supplies of these materials must be available in all developments. If absorbent granular material cannot be used, barricades may be constructed using sand or soil.
 - c. If a spill or seepage occurs inside a heating plant, or seeps from the outside into the plant, staff must immediately shut down the heating plant sump pumps.
 - d. Supervising employee attempts to locate the origin of the spill and ensures that the flow of oil is stopped.
4. On-site Training for Oil Spill Response

Heating administrators/heating superintendents/heating assistant superintendents must conduct on-site training for all property management employees on the established oil spill response protocols.

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F. APPENDIX F – MAINTENANCE AND TESTING OVERVIEW

1. Daily Maintenance and Safety Testing

Task *	Carried out by **
Checks all centrally located Building Management Systems equipment is in place and functioning	Heating frontline staff
At least once per day, logs-in to Building Management Systems and reviews all heating plants within their cluster to ensure that automatic settings are maintained	Heating Superintendent
Checks for work orders. Picks up work orders: - Four (4) times a day, during heating season - A minimum of twice a day during non-heating season	Heating frontline staff
Completes the <i>Boiler Room Daily Report</i>	Heating frontline staff
Oil tank stick reading (Initiates order for oil, if required)	Heating frontline staff
Cleans burner strainers, when operating on oil	Heating frontline staff
Flue Gas Analysis on all boilers (in operation)	Heating frontline staff
Completed forms/reports are sent to the Heating Assistant Superintendent - <i>Boiler Room Daily Report</i>	Property Management Office
<i>Heating Plant Operations Record</i> is completed and posted on the bulletin board in the boiler room	Heating frontline staff
Steam meter readings - for heating plants that are supplied steam by a utility company (daily log)	Heating frontline staff
Apartments must be checked and reading taken for: Ambient temperature Hot water temperature	Property Maintenance Staff; Heating Plant Technicians; Advance Heating Plant Technicians
For every complaint regarding heat or hot water, the following readings must be taken in the apartment and logged on the related order: Ambient temperature Hot water temperature	Heating frontline staff

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Inspection Testing of Low Water Cut-Offs – Automatic and Manual	Heating frontline staff
Inspects oil bearings daily and adds oil, as needed	Heating frontline staff
Performs Boiler and Tank Testing	Heating frontline staff
Review Maximo Heat and Hot Water complaints at least twice a day to ensure that all orders have been closed-out or escalated	Heating Assistant Superintendent, Property Maintenance Supervisor and/or Property Manager
Daily inspection of boiler room(s) and Building Management Systems equipment	Property Maintenance Supervisor
Record daily meter readings	Property Maintenance Supervisor

* All tasks are carried out between the hours of 8:00 a.m. and 4:00 p.m.

** A supervisor may designate other staff to carry out the task.

2. Twice Weekly Maintenance and Testing

Task *	Carried out by **
Twice-Weekly Tank Room Inspection Report	Heating frontline staff
During the warranty period of a new boiler plant installation, performs the feedwater analysis twice weekly to ensure that the contractor is in accordance with NYCHA and/or manufacturer's guidelines	Heating frontline staff

* All tasks are carried out between the hours of 8:00 a.m. and 4:00 p.m.

** A supervisor may designate other staff to carry out the task.

3. Weekly Maintenance and Testing

Task *	Carried out by **
When operating on gas, cleans burner strainers - Every Tuesday	Heating frontline staff
Review of <i>Boiler Feedwater Analysis</i>	Heating Superintendent
Test of Dual Fuel Boilers Every Tuesday for a minimum of 4 hours (continuous)	Heating frontline staff

* All tasks are carried out between the hours of 8:00 a.m. and 4:00 p.m.

** A supervisor may designate other staff to carry out the task.

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4. Monthly Maintenance and Testing

Task *	Carried out by **
<i>Tank Room Log</i> (Submitted Monthly)	Heating frontline staff
Sensaphone System test (Non- Building Management Systems Heating Plants)	Heating Assistant Superintendent
Remote Control Safety Switch (ASCO) test	Heating frontline staff
Inspection of all heating plants and 50% of tank rooms	Property Manager
Inspection of all house pumps and 50% of tank rooms	Property Maintenance Supervisor
<i>Heating Plant Operations Record</i>	Heating frontline staff
Steam meter readings for heating plants that are supplied steam by a utility company	Heating frontline staff
Burner Equipment Maintenance tests. Cleans all smoke indicators at the breeching	Heating frontline staff
Boiler safety valves test	Heating frontline staff
Hot Water Heaters – Bottom blowdown first Monday of each month	Heating frontline staff

* All tasks are carried out between the hours of 8:00 a.m. and 4:00 p.m.

** A supervisor may designate other staff to carry out the task.

5. Semi-Annual Maintenance and Testing

Task	Carried out by
Lubrication: Inspect oil bearings and add oil, as needed. Drain the reservoir and replace with fresh oil quarterly	Heating Superintendent

6. Annual Maintenance and Testing

Task *	Carried out by **
Schedules, prepares and conducts annual Inspections of boilers, hot water tanks, mechanical equipment and Building Management Systems equipment	Heating Superintendent
<i>Annual Hot Water Generator Inspection Report</i>	Heating Superintendent and/or Heating Assistant Superintendent

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Annual Instantaneous Hot Water Unit Inspection	Heating Superintendent and/or Heating Assistant Superintendent
Low pressure boilers	NYC DEP with NYCHA employee
Reviews and signs <i>Boiler Hydrostatic Test Report</i> <i>Annual Hot Water Generator Inspection Report</i> <i>Annual Boiler Inspection Report</i>	Heating Superintendent
Portable Mobile Boilers - Overhaul	Heating frontline staff
Dead end tests and house tests	Heating Management Services Department personnel
Annual Boiler Overhaul	Heating Management Services Department personnel
Lubrication of equipment	Heating frontline staff
Accumulation Test	Heating frontline staff with Heating Superintendent
Evaporation Test	Heating frontline staff with Heating Superintendent

* All tasks are carried out daily between the hours of 8:00 a.m. and 4:00 p.m.

** A supervisor may designate other staff to carry out the task.

7. Five Year Maintenance and Testing

Task	Carried out by
Pressure test for fixed air compressors with storage tanks	Certified contractors with the Heating Administrator and/or Heating Superintendent

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G. APPENDIX G – EMERGENCY SHUTDOWN GUIDELINES FOR INSTANTANEOUS HOT WATER HEATER

Abbreviations:

O&M – Operation and Maintenance Manual

HWS – Hot Water Supply

CWS – Cold Water Supply

HWR – Hot Water Return

1. Emergency Hot Water Shut Down and Restoration

a. Shut Down

In the event of an emergency Hot Water Supply (HWS) shutdown, staff must perform the following tasks:

- (1) Shut down the steam inlet valves to the affected hot water skids (platforms)
- (2) Open the strainer valves on the condensate lines
- (3) Shut off the HWR pump. The instantaneous unit pump switch should be in the middle position between pump 1 and pump 2 to shut down the pumps. Refer to manufacturers Operation and Maintenance [O & M] manual for the HWR pump shut down procedure.
- (4) Shut down the Hot Water Return (HWR) line house valve
- (5) Shut down the HWS valves on the skid
- (6) Shut down the Cold Water Supply (CWS) house valve

b. Restoration

When hot water is ready to be restored:

- (1) Open the cold water by-pass house valve to help fill building
- (2) Open the HWR house valve going to the hot water skid
- (3) Open the CWS house valve going to the skid slowly!
- (4) Open the HWS valves on skid
- (5) Turn the HWR pump on according to open valve position on re-circulation line

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- (6) Open the drain valve on HWR line to allow air to escape from house piping and keep the recirculation pumps from being air bound
- (7) Open the steam inlet valves slowly! DO NOT FULLY OPEN STEAM VALVE
- (8) Allow the condensate water to escape from the condensate strainer valves until water is fully released and full steam is coming from valves
- (9) Close the condensate strainer valves
- (10) Open the steam inlet valves fully
- (11) When air is out of the house piping system, close the HWR drain valve
- (12) When the hot water skid is fully functional, close the house cold water by-pass valve

Upon completion of the above actions, the instantaneous hot water unit should be fully operational. Staff must check temperature in the HWS going to the building (Normal =120°F) and temperature in the HWR line (Normal =70°F or higher) and allow time for return water to re-circulate in the building. If normal water temperatures are not met, refer to manufacturer's trouble-shooting guide to regain temperature before calling the manufacturer for assistance.

2. Loss of Electrical Power to Units

NOTE:	Note: When opening any steam lines after a prolonged shut down, open pipe valves slowly in order to avoid water hammer and ruptured plumbing lines.
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a. Shut Down

In the event of a power outage due to a black out, power failure or prolonged power failure, staff must perform the following tasks:

- (1) Shut down the steam inlet valves to the affected hot water skids
- (2) Open the strainer valves on the condensate lines
- (3) Shut off the HWR pump. Instantaneous unit pump switch should be in the middle position between pump 1 and pump 2 to shut down the pumps. Refer to manufacturer's O & M manual for the HWR pump shut down procedure.
- (4) Shut down the HWR line house valve

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(5) Shut down the HWS valves on skid

(6) Shut down the CWS house valve

b. Electrical Power Restoration

When electrical power is restored:

(1) Open the water by-pass house valve to help fill building

(2) Open the house valve going to the hot water skid

(3) Open the CWS house valve going to the skid slowly!

(4) Open the HWS valves on skid

(5) Turn the HWR pump on according to the open valve position on re-circulation line

(6) Open the drain valve on the HWR line to allow air to escape from house piping and prevent recirculation pumps from being air bound

(7) Open steam inlet valves slowly! DO NOT FULLY OPEN STEAM VALVE

(8) Allow the condensate water to escape from the condensate strainer valves until water is released and full steam is coming from valves

(9) Close condensate strainer valves

(10) Open steam inlet valves fully

(11) When air is out of house piping system, close the HWR drain valve

(12) When hot water skid is fully functional, close the house cold water by-pass valve

Upon completion of the above mention actions, the instantaneous hot water unit should be fully operational. Staff must check temperature in the HWS going to the building (Normal -120°F) and temperature in the HWR line (Normal -70°F or higher) and allow time for return water to re-circulate in the building. If normal water temperatures are not met, refer to manufactures trouble-shooting guide to regain temperature before calling manufacturer for assistance.

NYCHA STANDARD PROCEDURE MANUAL

3. Condensate Vacuum System Failure

In the event of a vacuum or condensate tank failure, staff must perform the following tasks:

- a. Isolate the condensate line going to the vacuum system

NOTE: The LESLIE unit has isolation valves located on the condensate line. P.V.I. unit has no isolation valves.

- b. The steam inlet valves must be shut to work on the condensate line and tank
- c. Open the union after the condensate steam traps to allow the condensate water to escape. This process prevents flooding of the heat exchanger and allows for the proper functioning of the heat exchanger.
- d. When the vacuum system is back on line, isolate the condensate line and tank and retighten the unions
- e. Open all the isolated lines

4. Special Instructions

For instantaneous hot water heaters, the skid and installation may differ. Refer to each of the manufacturer's Operation and Maintenance Manuals and trouble-shooting guides for differences in pumps, valves, and related equipment.

5. If there is no drain valve on the HWR line, staff must isolate the inlet and outlet side of the pump on the HWR line, between the pump inlet and the check valve downstream of the pump outlet, and remove the plug to allow the air to escape.

NOTE: When removing plug from HWR line, loosen the plug gradually until all water/air pressure is completely released, then remove the plug.

NYCHA STANDARD PROCEDURE MANUAL

H. APPENDIX H – HEAT COMPLAINT PROTOCOL FOR INDOOR TEMPERATURE SENSOR LOCATIONS

1. Personnel in locations with indoor temperature sensors must:
 - a. Use Building Management Systems to ensure that the boiler plant is operating properly
 - b. Check the apartment temperatures through Building Management Systems to confirm:
 - (1) The average building temperature conforms to temperature set points and meets legal requirements; and
 - (2) The temperature reported in the apartment that is the subject of the heat complaint, where available.
2. Any time the Building Management Systems records a temperature below the legal limits:

This process is effective October 1, 2019.

- a. Review Maximo for open work orders in the apartment.
- b. If a work order has not been generated, call the resident to confirm if they have heat.
- c. Schedule an apartment visit at the resident's convenience.
- d. When you arrive at the apartment, follow the process for unit inspection as outlined in Section XVI.B., Procedures for Heat Complaints.

NYCHA STANDARD PROCEDURE MANUAL

I. APPENDIX I – MANUAL OPERATION OF HEAT CONTROL PANELS AND ZONE VALVES

The following is a reference chart to be used in the event automatic systems are not functioning. The valves on Heat Control Panels must be manually set to the appropriate range as follows:

OUTSIDE TEMPERATURE (° Fahrenheit)	ZONE VALVE SETTING
55 to 51	15%
50 to 46	20%
45 to 41	25%
40 to 36	30%
35 to 31	35%
30 to 26	40%
25 to 21	45%
20 to 16	50%
15 to 11	55%
10 to 6	60%
5 to 0	65%

In cases where the heat control panel does not respond to automatic or manual adjustments, the required settings can be duplicated by opening the building's heating control by-pass valve in one quarter turn increments. Every quarter turn on the by-pass valve's wheel, is the equivalent of a 25% zone valve value.

NYCHA STANDARD PROCEDURE MANUAL

J. APPENDIX J – SHIFT DUTIES

AM Watch

5:00 a.m. – 5:30 a.m.	<ul style="list-style-type: none"> • HPT enters boiler room turns on the lights and checks the previous log entries • Visual inspection of boiler room condition
5:30 a.m. – 8:00 a.m.	<ul style="list-style-type: none"> • Performs safety test on all functional and operating boiler (monthly ASCO test) • Begins to complete the daily inspection work order (manual or handheld) • Take all fuel and water meter readings
8:00 a.m. – 9:00 a.m.	<ul style="list-style-type: none"> • Take water samples to perform feed water analysis on all operating boilers, and allows water to cool (subject to change as per the needs of the heating department) • Take a fuel oil stick reading for each oil tank and record findings in the Boiler Room Logbook and daily inspection work order • Check in with PM supervisors to announce their attendance for the day • Checks in with the area Heating supervisor for that cluster
9:00 a.m. – 11:00 a.m.	<ul style="list-style-type: none"> • HPT will address any open WO for the location • Perform all needed Janitorial duties the boiler room • Ensure boiler plant maintains adequate steam pressure for the development
11:00 a.m. – 1:00 p.m.	<ul style="list-style-type: none"> • HPT will address any open WO for the location • Perform all needed Janitorial duties the boiler room • Ensure boiler plant maintains adequate steam pressure for the development

8:00 a.m. to 4:30 p.m. Shift

8:00 a.m. – 9:00 a.m.	<ul style="list-style-type: none"> • Checking tank rooms twice a week or as needed
9:00 a.m. – 4:30 p.m.	<ul style="list-style-type: none"> • Checking handheld device for tickets and prevent maintenance on heating equipment (Note: may require going to more than one plant.) • Any other duties assigned by the superintendent

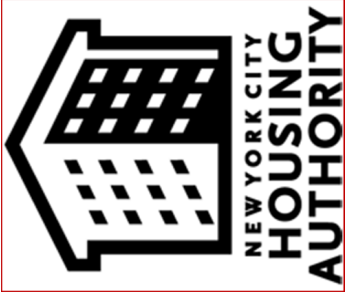
NYCHA STANDARD PROCEDURE MANUAL

2:00 p.m. - 10 p.m. Shift

2:00 p.m. – 6:00 p.m.	<ul style="list-style-type: none"> • Read logbook from previous shift. • Check the plant. • Perform blowdowns. • Check equipment. • Visual inspections. • Begins to complete the daily inspection work order (manual or handheld). • Take all fuel and water meter readings. • Take a fuel oil stick reading for each oil tank and record findings in the Boiler Room Logbook and daily inspection work order • Record shift entry log book (and daily report) check work orders, address work orders
6:00 p.m. – 9:30 p.m.	<ul style="list-style-type: none"> • Perform chemical testing and treatment. • Perform janitorial. • Address special assignments
9:30 p.m. – 10:00 p.m.	<ul style="list-style-type: none"> • Closing plant.

Roving Teams

4:00 p.m. – 12:00 a.m.	<ul style="list-style-type: none"> • Meet with Supervisors • Vehicle check • Check for equipment in vehicle • Call for attendance by 4:30 p.m. (Heat Desk) • Perform assignment given by Heat Desk • If no assignment, perform routine Plant check • Write down follow up repairs in tank room log sheets and boiler room logs • Contact Heat Desk at least 30 minutes before end of shift
12:00 a.m. – 8:00 a.m.	<ul style="list-style-type: none"> • Vehicle Check • Check for equipment in vehicle • Call for attendance by 12:30 a.m. (Heat Desk) • Perform assignments given by Heat Desk • If no assignment, perform routine Plant check • Write down follow up repairs in tank room log sheets and boiler room logs • Contact Heat Desk at least 30 minutes before end of shift



HEATING ACTION PLAN WORKFLOW

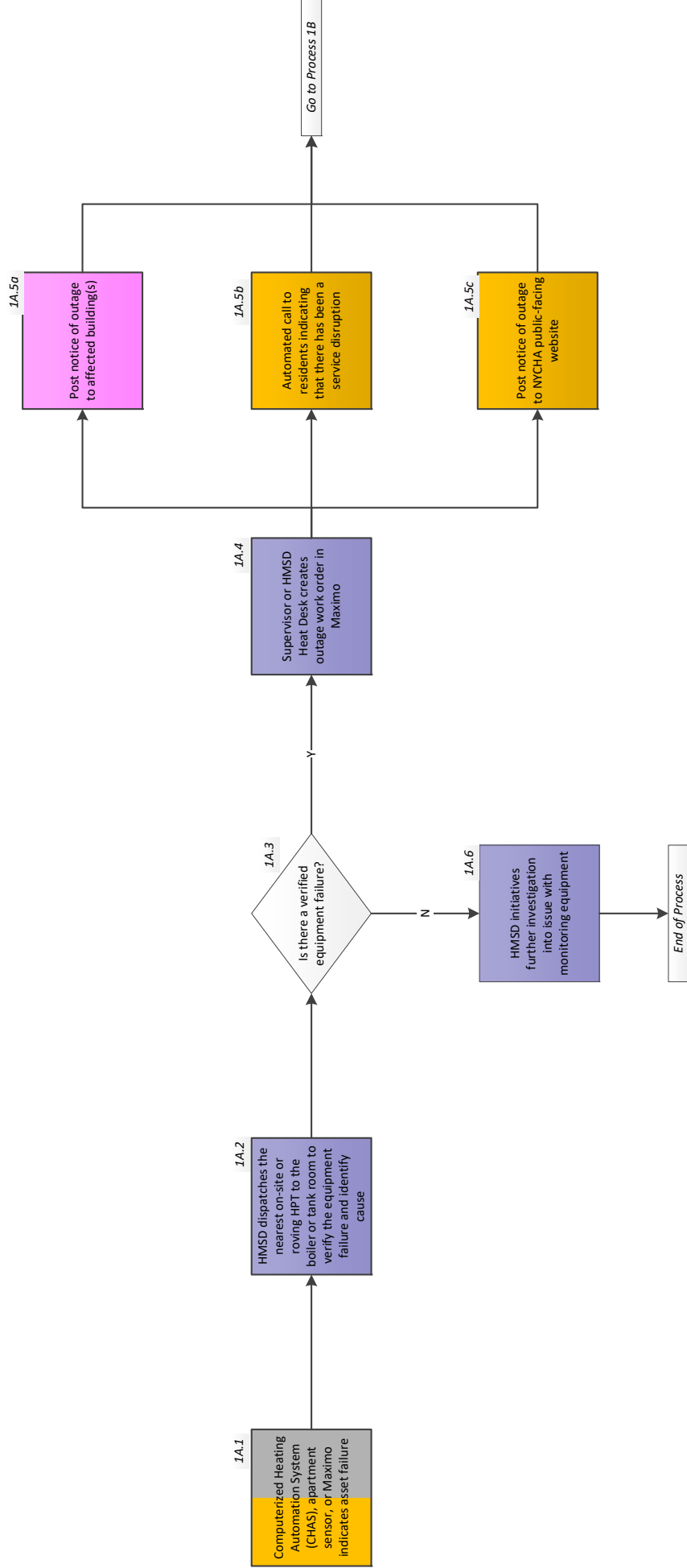
CURRENT STATE HEATING PROCESS

(HEATING SEASON: OCT 1 – MAY 31)

Heating Management Services Department
Compliance Integration Reporting and Evaluation Unit
September 2019

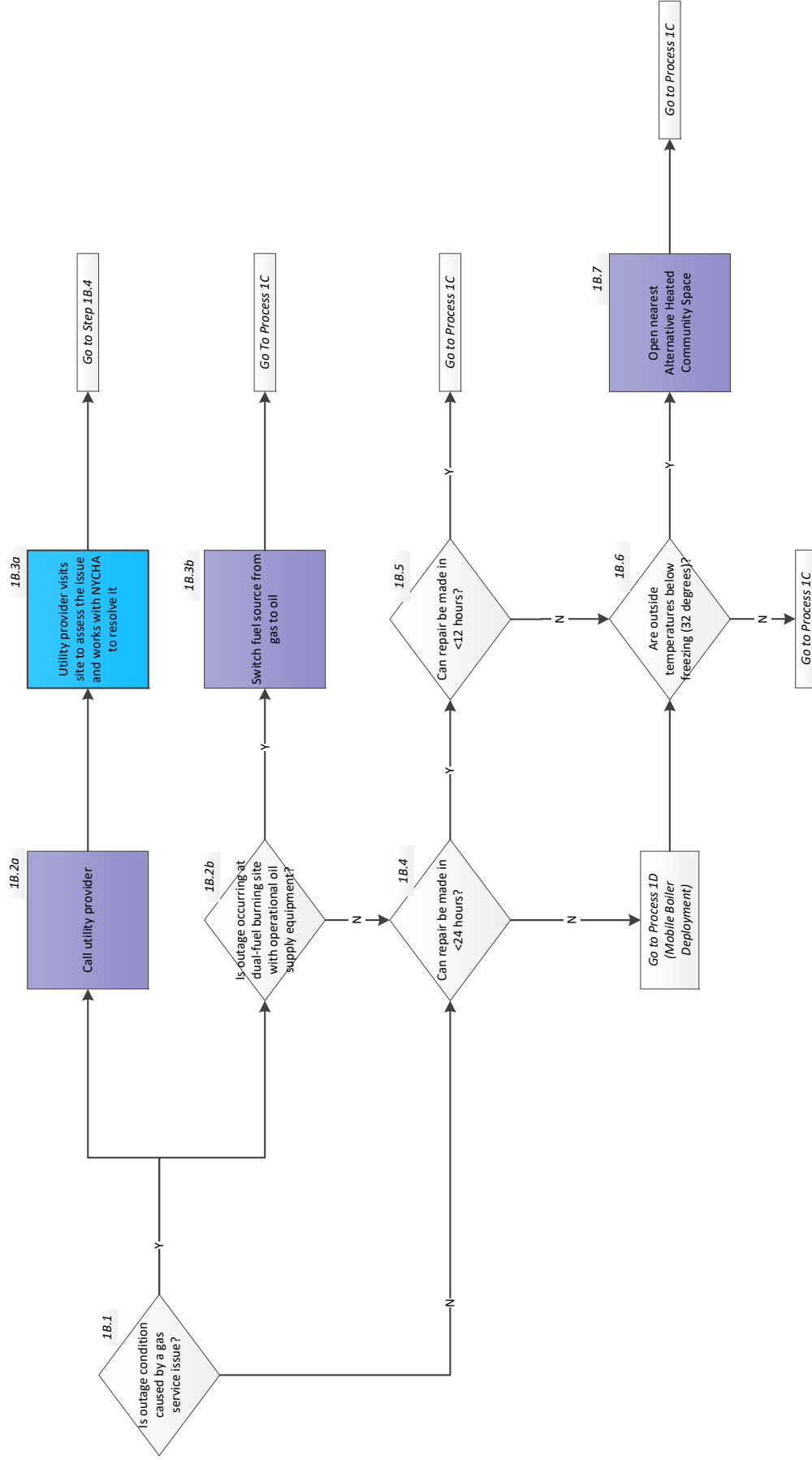
If temperature is below 15 degrees Fahrenheit, the General Manager may activate the Situation Room and Warming Centers.

Heating Response Action Plan Process 1A: Diagnosing the Issue

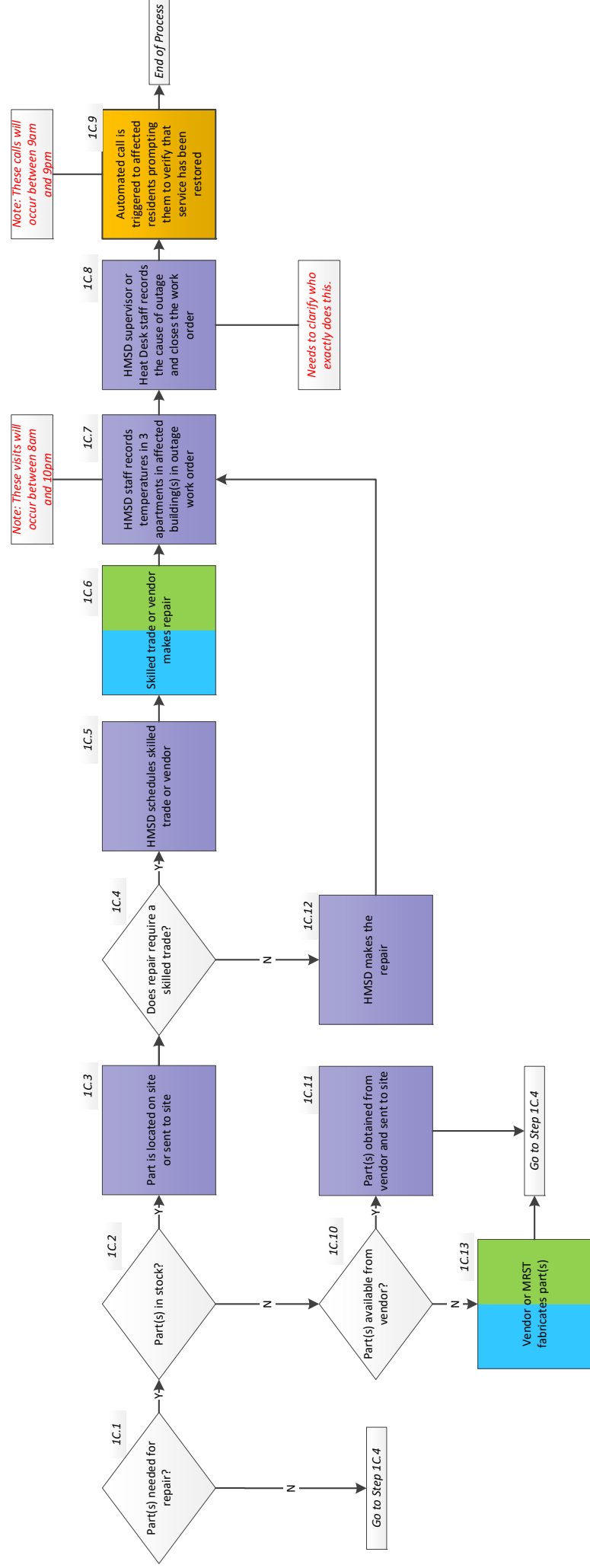


Monitoring Systems (CHAS and Apartment Sensor)	Maximo	Maintenance, Repair & Skill Trades (MRST)	Resident	Vendor	Heating Management Services Department (HMSD)	Development Staff
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Heating Response Action Plan Process 1B: Identifying A Solution

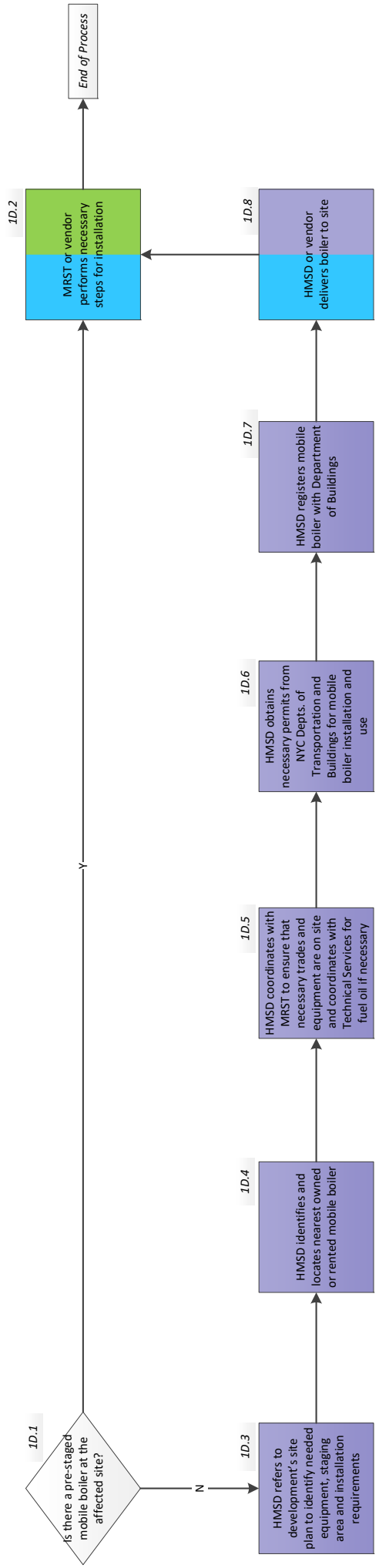


Heating Response Action Plan Process 1C: Deploy Resources



Heating Response Action Plan Process 1D: Deploy Mobile Boiler

**This process flow applies to mobile boilers with on-board fuel tanks. If a fuel line needs to be run to the mobile boiler, NYCHA enlists a vendor to do so*



Monitoring Systems (CHAS and Apartment Sensor)	Maximo	Maintenance, Repair & Skill Trades (MRST)	Resident	Vendor	Heating Management Services Department (HMDS)	Development Staff
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Third Party Managed Sites

Development	Status as of October 1, 2019
303 VERNON AVENUE	Currently Managed by 3rd Party
ALBANY	Currently Managed by 3rd Party
ALBANY II	Currently Managed by 3rd Party
ASTORIA	Currently Managed by 3rd Party
BEACH 41ST STREET-BEACH CHANNEL DRIVE	Currently Managed by 3rd Party
BOULEVARD	Currently Managed by 3rd Party
BRONX RIVER	Currently Managed by 3rd Party
BROWNSVILLE	Currently Managed by 3rd Party
CAREY GARDENS	Planning - Transition Date TBD
CARLETON MANOR	Planning - Transition Date TBD
CONEY ISLAND	Currently Managed by 3rd Party
CONEY ISLAND I (SITE 1B)	Currently Managed by 3rd Party
CONEY ISLAND I (SITE 8)	Currently Managed by 3rd Party
CONEY ISLAND I (SITES 4 & 5)	Currently Managed by 3rd Party
CONLON LIHFE TOWER	Currently Managed by 3rd Party
COOPER PARK	Currently Managed by 3rd Party
CORSI HOUSES	Currently Managed by 3rd Party
CYPRESS HILLS	Planning - Transition Date TBD
EAST RIVER	Currently Managed by 3rd Party
ELLIOTT	Currently Managed by 3rd Party
FIorentino PLAZA	Currently Managed by 3rd Party
GLENMORE PLAZA	Currently Managed by 3rd Party
GOWANUS	Planning - Transition Date TBD
GRAVESEND	Planning - Transition Date TBD
HABER	Currently Managed by 3rd Party
HAMMEL	Planning - Transition Date TBD
HIGHBRIDGE GARDENS	Currently Managed by 3rd Party
HOWARD	Currently Managed by 3rd Party
HUGHES APARTMENTS	Currently Managed by 3rd Party
INGERSOLL	Planning - Transition Date TBD
INTERNATIONAL TOWER	Planning - Transition Date TBD
JEFFERSON	Currently Managed by 3rd Party
KINGSBOROUGH	Currently Managed by 3rd Party
KINGSBOROUGH EXTENSION	Currently Managed by 3rd Party
LEXINGTON	Currently Managed by 3rd Party
LINDEN	Currently Managed by 3rd Party
LOW HOUSES	Currently Managed by 3rd Party
OCEAN BAY APARTMENTS (OCEANSIDE)	Planning - Transition Date TBD
O'DWYER GARDENS	Planning - Transition Date TBD
PATTERSON	Planning - Transition Date TBD
PINK	Currently Managed by 3rd Party
QUEENSBRIDGE NORTH	Currently Managed by 3rd Party
QUEENSBRIDGE SOUTH	Currently Managed by 3rd Party
RANGEL	Currently Managed by 3rd Party
REDFERN	Planning - Transition Date TBD
ROOSEVELT I	Currently Managed by 3rd Party
ROOSEVELT II	Currently Managed by 3rd Party
SHELTON HOUSE	Currently Managed by 3rd Party
SUMNER	Currently Managed by 3rd Party
SURFSIDE GARDENS	Planning - Transition Date TBD

Third Party Managed Sites

Development	Status as of October 1, 2019
TILDEN	Currently Managed by 3rd Party
TWO BRIDGES URA (SITE 7)	Planning - Transition Date TBD
UNITY PLAZA (SITES 17,24,25A)	Currently Managed by 3rd Party
UNITY PLAZA (SITES 4-27)	Currently Managed by 3rd Party
LONG ISLAND BAPTIST HOUSES	Currently Managed by 3rd Party
VAN DYKE I	Currently Managed by 3rd Party
VAN DYKE II	Currently Managed by 3rd Party
VANDALIA AVENUE	Currently Managed by 3rd Party
WAGNER	Currently Managed by 3rd Party
WASHINGTON	Currently Managed by 3rd Party
WHITMAN	Planning - Transition Date TBD
WILLIAMSBURG	Currently Managed by 3rd Party
WOODSON	Currently Managed by 3rd Party
WYCKOFF GARDENS	Planning - Transition Date TBD

Mobile Boiler Locations

Development	Borough	Zip Code	Mobile Boiler Address	Date mobile boiler installed at current location	CPD, Sandy or Operations
Astoria	Queens	11102	3-04 27th Ave.	1/6/2018	Operations
CAREY GARDENS	BROOKLYN	11224	2832 WEST 23RD STREET	8/8/2014	Sandy
CAREY GARDENS	BROOKLYN	11224	2832 WEST 23RD STREET	8/8/2014	Sandy
CAREY GARDENS	BROOKLYN	11224	2955 WEST 24th STREET	8/29/2014	Sandy
CAREY GARDENS	BROOKLYN	11224	2955 WEST 24th STREET	8/29/2014	Sandy
CARLETON MANOR	QUEENS	11692	71-15 BEACH CHANNEL DRIVE	10/11/2014	Sandy
CARLETON MANOR	QUEENS	11692	71-15 BEACH CHANNEL DRIVE	10/11/2014	Sandy
CONEY ISLAND 1B	BROOKLYN	11224	2007 SURF AVENUE	2/16/2015	Sandy
CONEY ISLAND HOUSES	BROOKLYN	11224	3020 SURF AVENUE	9/20/2014	Sandy
CONEY ISLAND HOUSES	BROOKLYN	11224	3020 SURF AVENUE	9/20/2014	Sandy
CONEY ISLAND I (SITE 8)	BROOKLYN	11224	2950 WEST 35TH STREET	8/31/2014	Sandy
CONEY ISLAND I (SITE 8)	BROOKLYN	11224	2950 WEST 35TH STREET	11/3/2014	Sandy
FARRAGUT	BROOKLYN	11234	5913 GLENWOOD ROAD	12/12/2018	CPD
FIORENTINO	BROOKLYN	11205	102 CUMBERLAND WALK	9/17/2018	CPD
Frederick Samuel	Manhattan	10030	129 WEST 144 STREET	1/19/2016	Operations
GLENWOOD	BROOKLYN	11234	5913 GLENWOOD ROAD	12/12/2018	CPD
GLENWOOD	BROOKLYN	11234	5913 GLENWOOD ROAD	12/12/2018	CPD
GRAVESEND HOUSES	BROOKLYN	11224	2719 WEST 33RD STREET	9/24/2014	Sandy
GRAVESEND HOUSES	BROOKLYN	11224	2719 WEST 33RD STREET	9/24/2014	Sandy
HABER	BROOKLYN	11224	WEST 25TH STREET	4/22/2019	Sandy
HAMMEL	QUEENS	11693	84-16 ROCKAWAY BEACH BOULEVARD	10/18/2014	Sandy
HAMMEL	QUEENS	11693	84-16 ROCKAWAY BEACH BOULEVARD	10/18/2014	Sandy
Hope Gardens (no longer at this location)	Brooklyn	11237	399 Central	1/19/2016	Operations
HOWARD AVENUE-PARK PLACE	BROOKLYN	11212	1790 STERLING PLACE		CPD
Howard Ave-Park Place	Brooklyn	11212	1804 Sterling Place	11/5/2018	Operations
Independence	Brooklyn	11211	130 Clymer	10/6/2015	Operations
Independence	Brooklyn	11211	130 Clymer	12/1/2016	Operations
Manhattanville	Manhattan	10027	529 W. 133rd St.	9/10/2018	Operations
Melrose	Bronx	10451	304 E. 156th St.	8/29/2018	Operations
Metro North Plaza	Manhattan	10029	306 East 102nd Street	11/14/2017	Operations
Morrisania	Bronx	10451	3204 Park Ave.	1/16/2018	Operations
O'DWYER GARDENS	BROOKLYN	11224	2951 WEST 33RD STREET	9/21/2014	Sandy
O'DWYER GARDENS	BROOKLYN	11224	2951 WEST 33RD STREET	9/21/2014	Sandy
Patterson	Bronx	10451	314 East 143rd St.	9/28/2015	Operations
Patterson	Bronx	10451	320 Morris Ave.	9/29/2017	Operations
Patterson	Bronx	10451	314 East 143rd St.	12/13/2016	Operations
PATTERSON	Bronx	10451	314 East 143rd St.	1/28/2018	CPD
Pelham	Bronx	10469	840 Astor	10/10/2017	Operations
Pelham	Bronx	10469	2215 Bronxwood Ave.	1/6/2017	Operations
RED HOOK EAST	BROOKLYN	11231	770 HENRY STREET	7/15/2014	Sandy
RED HOOK EAST	BROOKLYN	11231	770 HENRY STREET	7/15/2014	Sandy
RED HOOK WEST	BROOKLYN	11231	79 LORRAINE STREET	8/15/2014	Sandy
RED HOOK WEST	BROOKLYN	11231	79 LORRAINE STREET	8/15/2014	Sandy
RED HOOK WEST	BROOKLYN	11231	35 DWIGHT STREET	8/16/2014	Sandy
RED HOOK WEST	BROOKLYN	11231	35 DWIGHT STREET	8/16/2014	Sandy
RED HOOK WEST	BROOKLYN	11231	9 LORRAINE STREET	8/17/2014	Sandy
RED HOOK WEST	BROOKLYN	11231	9 LORRAINE STREET	10/28/2014	Sandy
RED HOOK WEST	BROOKLYN	11231	80 DWIGHT STREET	8/12/2014	Sandy
RED HOOK WEST	BROOKLYN	11231	80 DWIGHT STREET	10/28/2014	Sandy
REDFERN HOUSES	QUEENS	11691	14-72 BEACH CHANNEL DRIVE	10/19/2014	Sandy
REDFERN HOUSES	QUEENS	11691	14-72 BEACH CHANNEL DRIVE	11/7/2014	Sandy
Robinson	Manhattan	10035	110 E. 129th St.	8/31/2018	Operations
Rutland Towers	Brooklyn	11212	955 Rutland	8/2/2018	Operations
SOTOMAYOR	BROOKLYN	11212	1790 STERLING PLACE		CPD
Soundview	Bronx	10472	615 Rosedale	2/1/2016	Operations
Sterling Place Rehabs	Brooklyn	11212	1506 Sterling Place	1/27/2017	Operations
SURFSIDE GARDENS	BROOKLYN	11224	2940 WEST 31ST STREET	8/26/2014	Sandy
SURFSIDE GARDENS	BROOKLYN	11224	2940 WEST 31ST STREET	8/26/2014	Sandy
SURFSIDE GARDENS	BROOKLYN	11224	2839 WEST 33RD STREET	9/1/2014	Sandy
SURFSIDE GARDENS	BROOKLYN	11224	2839 WEST 33RD STREET	11/14/2014	Sandy
Taft	Manhattan	10029	1712 Madison Ave.	8/29/2018	Operations
Tapscott Rehab (no longer at this location)	Brooklyn	11203	728 Howard	2016	Operations

Mobile Boiler Locations

Development	Borough	Zip Code	Mobile Boiler Address	Date mobile boiler installed at current location	CPD, Sandy or Operations
Throggsneck	Bronx	10465	2705 Schley Avenue	11/17/2017	Operations
Throggsneck Storage Yard					Operations
TWO BRIDGES	MANHATTAN	10002	286 SOUTH STREET	11/16/2017	Sandy
TWO BRIDGES	MANHATTAN	10002	286 SOUTH STREET	11/16/2017	Sandy
Whitman	BROOKLYN	11205	102 CUMBERLAND WALK	9/17/2018	CPD
Wise	Manhattan	10024	54 West 94th Street	10/27/2017	Operations
Wyckoff	Brooklyn	11217	272 Wckoff Ave	5/30/2018	Operations
Wyckoff	Brooklyn	11217	272 Wckoff Ave	10/11/2018	Operations

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
180	1010 EAST 178TH STREET	BRONX	1	Community Center	Phipps Community Development	0.00	1030 East 178th Street
242	104-14 TAPSCOTT STREET	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.44	20 Amboy Street
242	104-14 TAPSCOTT STREET	BROOKLYN	2	Senior Center	Fort Greene Senior Citizens Council	0.48	1440 East New York Avenue
233	1162-1176 WASHINGTON AVENUE	BRONX	1	Community Center - COMPASS	Claremont Neighborhood Center	0.23	489 East 169th Street
154	131 SAINT NICHOLAS AVENUE	MANHATTAN	1	Senior Center	Presbyterian Senior Services	0.30	50 Lenox Avenue
154	131 SAINT NICHOLAS AVENUE	MANHATTAN	2	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.39	2 West 115th Street
214	1471 WATSON AVENUE	BRONX	1	Community Center - Cornerstone	Children's Arts and Science Workshop, Inc.	0.63	1619 East 174th Street
214	1471 WATSON AVENUE	BRONX	1	Senior Center	IPRHE / Acacia Network	0.63	1619 East 174th Street
359	154 WEST 84TH STREET	MANHATTAN	1	Community Center	Goddard Riverside Community Center	0.40	647 Columbus Avenue
156	303 VERNON AVENUE	BROOKLYN	1	Community Center - Cornerstone	St. Nicks Alliance	0.14	862 Park Avenue
156	303 VERNON AVENUE	BROOKLYN	1	Senior Center	NYCHA	0.14	862 Park Avenue
203	335 EAST 111TH STREET	MANHATTAN	1	Senior Center/ Community Center - COMPASS	Union Settlement Association	0.10	2205 First Avenue
185	344 EAST 28TH STREET	MANHATTAN	1	Community Center - Cornerstone	University Settlement Society of New York, Inc.	0.75	611 East 13th Street
265	45 ALLEN STREET	MANHATTAN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.17	56 Essex Street
196	572 WARREN STREET	BROOKLYN	1	Community Center - Cornerstone	St. Vincent's Heartshare Services	0.07	280 Wyckoff Street
196	572 WARREN STREET	BROOKLYN	1	Senior Center	Spanish Speaking Elderly Council - RAICES, Inc.	0.07	280 Wyckoff Street
150	830 AMSTERDAM AVENUE	MANHATTAN	1	Senior Center	West Side Federation for Senior and Supportive Housing, Inc.	0.07	868 Amsterdam Avenue
118	ADAMS	BRONX	1	Senior Center	Neighborhood SHOPP	0.00	735 East 152nd Street
031	ALBANY	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.00	164 Troy Avenue
085	ALBANY II	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.02	164 Troy Avenue
022	AMSTERDAM	MANHATTAN	1	Senior Center/ NORC / Community Center	Goddard Riverside Community Center	0.07	250 West 65th Street
187	AMSTERDAM ADDITION	MANHATTAN	1	Senior Center/ NORC / Community Center	Goddard Riverside Community Center	0.00	250 West 65th Street
210	ARMSTRONG I	BROOKLYN	1	Senior Center	Wayside Out-Reach Development Corporation, Inc.	0.00	360 Nostrand Avenue
228	ARMSTRONG II	BROOKLYN	1	Community Center - COMPASS	Police Athletic League, Inc.	0.00	495 Gates Avenue
026	ASTORIA	QUEENS	1	Community Center - Cornerstone	Hellenic American Neighborhood Action Committee (HANAC)	0.00	4-05 Astoria Boulevard
026	ASTORIA	QUEENS	1	Senior Center	NYCHA	0.00	4-05 Astoria Boulevard
256	ATLANTIC TERMINAL SITE 4B	BROOKLYN	1	Community Center - Cornerstone	University Settlement Society of New York, Inc.	0.00	501 Carlton Avenue
125	AUDUBON	MANHATTAN	1	Senior Center	COTHOA - Church on The Hill	0.14	1970 Amsterdam Avenue
202	BAILEY AVENUE-WEST 193RD STREET	BRONX	1	Senior Center	Regional Aid For Interim Needs, Inc.	0.00	2660 Bailey Avenue
091	BAISLEY PARK	QUEENS	1	Senior Center	NYCHA	0.00	116-80 Guy Brewer Boulevard
060	BARUCH	MANHATTAN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.00	605 FDR Drive
198	BARUCH HOUSES ADDITION	MANHATTAN	1	Senior Center/ Community Center/ Child Care	Grand Street Settlement, Inc.	0.14	80 Pitt Street
092	BAY VIEW	BROOKLYN	1	Community Center - Cornerstone	Millennium Development Corp.	0.00	5955 Shore Parkway
165	BEACH 41ST STREET-BEACH CHANNEL DRIVE	QUEENS	1	Community Center - Cornerstone	CCNY (The Child Center of New York)	0.00	426 Beach 40th Street
311	BEDFORD-STUYVESANT REHAB	BROOKLYN	1	Community Center - Cornerstone	St. Nicks Alliance	0.22	862 Park Avenue
311	BEDFORD-STUYVESANT REHAB	BROOKLYN	1	Senior Center	NYCHA	0.22	862 Park Avenue

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
345	BELMONT-SUTTER AREA	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.57	576 Blake Avenue
052	BERRY	STATEN ISLAND	1	Community Center - Cornerstone	United Activities Unlimited Inc	0.00	211 Jefferson Street
357	BERRY STREET-SOUTH 9TH STREET	BROOKLYN	1	Community Center - Cornerstone	El Puente De Williamsburg	0.18	114 Taylor Street
357	BERRY STREET-SOUTH 9TH STREET	BROOKLYN	1	Senior Center	Millennium Development Corp.	0.18	114 Taylor Street
160	BETHUNE GARDENS	MANHATTAN	1	Senior Center	COTHOA - Church on The Hill	0.04	1970 Amsterdam Avenue
054	BLAND	QUEENS	1	Senior Center	NYCHA	0.00	40-15 College Point Boulevard
243	BORINQUEN PLAZA I	BROOKLYN	1	Community Center - COMPASS	YMCA of Greater New York	0.00	125 Humboldt Street
243	BORINQUEN PLAZA I	BROOKLYN	1	Senior Center	Riseboro Community Partnership, Inc.	0.00	80 Seigel Street
271	BORINQUEN PLAZA II	BROOKLYN	1	Community Center - COMPASS	YMCA of Greater New York	0.03	125 Humboldt Street
189	BOSTON ROAD PLAZA	BRONX	1	Senior Center	Regional Aid For Interim Needs, Inc.	0.00	2424 Boston Road
138	BOSTON SECOR	BRONX	1	Community Center - Cornerstone	Mosholu Montefiore Community Center Inc.	0.00	3540 Bivona Street
138	BOSTON SECOR	BRONX	1	School	NYC Department of Education	0.00	3540 Bivona Street
138	BOSTON SECOR	BRONX	1	Senior Center	Regional Aid For Interim Needs, Inc.	0.00	3540 Bivona Street
046	BOULEVARD	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.00	726 Stanley Avenue
346	BOYNTON AVENUE REHAB	BRONX	1	Community Center - Cornerstone	Phipps Community Development	0.50	1000 Rosedale Avenue
264	BRACETTI PLAZA	MANHATTAN	1	Senior Center	Unifed Jewish Council	0.17	12 Avenue D
264	BRACETTI PLAZA	MANHATTAN	2	Community Center - COMPASS	Henry Street Settlement, Inc.	0.22	888 East 6th Street
056	BREUKELEN	BROOKLYN	1	Community Center - Cornerstone	Police Athletic League, Inc.	0.00	715 East 105th Street
065	BREVOORT	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.00	280 Ralph Avenue
065	BREVOORT	BROOKLYN	1	Senior Center	Riseboro Community Partnership, Inc.	0.00	280 Ralph Avenue
032	BRONX RIVER	BRONX	1	Community Center - Cornerstone	Children's Arts and Science Workshop, Inc.	0.00	1619 East 174th Street
032	BRONX RIVER	BRONX	1	Senior Center	IPRHE / Acacia Network	0.00	1619 East 174th Street
157	BRONX RIVER ADDITION	BRONX	1	Community Center - Cornerstone	Children's Arts and Science Workshop, Inc.	0.08	1619 East 174th Street
157	BRONX RIVER ADDITION	BRONX	1	Senior Center	IPRHE / Acacia Network	0.08	1619 East 174th Street
325	BROWN	BROOKLYN	1	Senior Center	Wayside Out-Reach Development Corporation, Inc.	0.00	1630 Saint Marks Avenue
016	BROWNSVILLE	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.00	528 Mother Gaston Blvd.
016	BROWNSVILLE	BROOKLYN	1	Senior Center	NYCHA	0.00	528 Mother Gaston Blvd.
235	BRYANT AVENUE-EAST 174TH STREET	BRONX	1	Community Center	Phipps Community Development	0.44	1030 East 178th Street
086	BUSHWICK	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.00	50 Humboldt Street
086	BUSHWICK	BROOKLYN	1	NORC	Jewish Association Services For the Aged	0.00	50 Humboldt Street
113	BUTLER	BRONX	1	Community Center - Cornerstone	Directions For Our Youth, Inc.	0.00	1368 Webster Avenue
113	BUTLER	BRONX	1	Senior Center	William Hodson Senior Center, Inc.	0.00	1320 Webster Avenue
286	CAMPOS PLAZA II	MANHATTAN	1	Community Center - Cornerstone	University Settlement Society of New York, Inc.	0.00	611 East 13th Street
166	CAREY GARDENS	BROOKLYN	1	Community Center - Cornerstone	Brooklyn Bureau of Comm. Service	0.00	2315 Surf Avenue
164	CARLETON MANOR	QUEENS	1	Community Center - Cornerstone	CCNY (The Child Center of New York)	0.42	81-14 Rockaway Beach Boulevard
058	CARVER	MANHATTAN	1	Senior Center	IPRHE / Acacia Network	0.00	55 East 102nd Street
206	CASSIDY-LAFAYETTE	STATEN ISLAND	1	Senior Center	Community Agency for Senior Citizens, Inc.	0.00	125 Cassidy Place
080	CASTLE HILL	BRONX	1	Community Center/Senior Center	Kips Bay Boys & Girls Club	0.00	625 Castle Hill Avenue

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
134	CHELSEA	MANHATTAN	1	NORC/ Child Care / Community Center - COMPASS / Health Clinic	Hudson Guild	0.03	441 West 26th Street
176	CHELSEA ADDITION	MANHATTAN	1	NORC/ Child Care / Community Center - COMPASS / Health Clinic	Hudson Guild	0.00	441 West 26th Street
334	CLAREMONT PARKWAY-FRANKLIN AVENUE	BRONX	1	Senior Center	IPRHE / Acacia Network	0.00	1315 Franklin Avenue
307	CLAREMONT REHAB (GROUP 2)	BRONX	1	Senior Center	William Hodson Senior Center, Inc.	0.05	1320 Webster Avenue
307	CLAREMONT REHAB (GROUP 2)	BRONX	2	Community Center - Cornerstone	Directions For Our Youth, Inc.	0.16	1368 Webster Avenue
308	CLAREMONT REHAB (GROUP 3)	BRONX	1	Senior Center	William Hodson Senior Center, Inc.	0.34	1320 Webster Avenue
308	CLAREMONT REHAB (GROUP 3)	BRONX	2	Senior Center	Presbyterian Senior Services	0.35	3135 Park Avenue 20th Floor
308	CLAREMONT REHAB (GROUP 3)	BRONX	3	Community Center - COMPASS	Claremont Neighborhood Center	0.42	489 East 169th Street
308	CLAREMONT REHAB (GROUP 3)	BRONX	4	Community Center - Cornerstone	Directions For Our Youth, Inc.	0.45	1368 Webster Avenue
335	CLAREMONT REHAB (GROUP 4)	BRONX	1	Senior Center	William Hodson Senior Center, Inc.	0.09	1320 Webster Avenue
335	CLAREMONT REHAB (GROUP 4)	BRONX	2	Community Center - Cornerstone	Directions For Our Youth, Inc.	0.21	1368 Webster Avenue
336	CLAREMONT REHAB (GROUP 5)	BRONX	1	Senior Center	William Hodson Senior Center, Inc.	0.32	1320 Webster Avenue
336	CLAREMONT REHAB (GROUP 5)	BRONX	2	Community Center - Cornerstone	Directions For Our Youth, Inc.	0.43	1368 Webster Avenue
011	CLASON POINT GARDENS	BRONX	1	Senior Center	NYCHA	0.03	1674 Seward Avenue
011	CLASON POINT GARDENS	BRONX	2	Community Center - Cornerstone	Phipps Community Development	0.03	1680 Seward Avenue
123	CLINTON	MANHATTAN	1	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.00	120 East 110th Street
236	COLLEGE AVENUE-EAST 165TH STREET	BRONX	1	Senior Center	Presbyterian Senior Services	0.33	3135 Park Avenue 20th Floor
094	CONEY ISLAND	BROOKLYN	1	Community Center - Cornerstone	Brooklyn Bureau of Comm. Service	0.10	2945 West 33rd Street
239	CONEY ISLAND I (SITE 1B)	BROOKLYN	1	Community Center - Cornerstone	Brooklyn Bureau of Comm. Service	0.16	2315 Surf Avenue
238	CONEY ISLAND I (SITE 8)	BROOKLYN	1	Community Center - Cornerstone	Brooklyn Bureau of Comm. Service	0.09	2945 West 33rd Street
216	CONEY ISLAND I (SITES 4 & 5)	BROOKLYN	1	Community Center - Cornerstone	Brooklyn Bureau of Comm. Service	0.09	2315 Surf Avenue
232	CONLON LIHFE TOWER	QUEENS	1	Senior Center	Jamaica Service Program for Older Adults (JSPOA)	0.00	92-33 170th Street
069	COOPER PARK	BROOKLYN	1	Community Center - Cornerstone	Coalition for Hispanic Family Services	0.00	76 Kingsland Avenue
069	COOPER PARK	BROOKLYN	1	Senior Center	Jewish Association Services For the Aged	0.00	288 Frost Street
199	CORSI HOUSES	MANHATTAN	1	Senior Center	Union Settlement Association	0.00	307 East 116th Street
312	CROWN HEIGHTS	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.10	447 Kingsborough 4th Walk 2nd floor
070	CYPRESS HILLS	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.00	475 Fountain Avenue
070	CYPRESS HILLS	BROOKLYN	1	Senior Center	NYCHA	0.00	475 Fountain Avenue
190	DAVIDSON	BRONX	1	Community Center - Cornerstone	SOBRO	0.00	1221 Prospect Avenue
155	DE HOSTOS APARTMENTS	MANHATTAN	1	Community Center - COMPASS	Strycker's Bay Neighborhood Council, Inc./The Dome Project	0.00	696 Amsterdam Avenue
148	DOUGLASS ADDITION	MANHATTAN	1	Senior Center	West Side Federation for Senior and Supportive Housing, Inc.	0.00	868 Amsterdam Avenue
082	DOUGLASS I	MANHATTAN	1	Child Care /Community Center - COMPASS	Children's Aid Society, Inc.	0.00	885 Columbus Avenue
582	DOUGLASS II	MANHATTAN	1	Senior Center	West Side Federation for Senior and Supportive Housing, Inc.	0.03	868 Amsterdam Avenue
111	DREW-HAMILTON	MANHATTAN	1	Community Center - Cornerstone	Children's Village	0.00	220 West 143rd Street
111	DREW-HAMILTON	MANHATTAN	1	Senior Center	SAGE, Inc.	0.00	220 West 143rd Street
041	DYCKMAN	MANHATTAN	1	Community Center - Cornerstone	Catholic Charities Community Services Archdiocese of NY	0.00	3782 Tenth Avenue

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
041	DYCKMAN	MANHATTAN	1	Senior Center	New York Foundation For Senior Citizens	0.00	3754 Tenth Avenue
224	EAGLE AVENUE-EAST 163RD STREET	BRONX	1	Community Center - COMPASS	Southeast Bronx Neighborhood Centers, Inc.	0.21	751 East 161st Street
237	EAST 152ND STREET-COURTLANDT AVENUE	BRONX	1	Senior Center	East Side House Settlement	0.00	372 East 152nd Street
304	EAST 165TH STREET-BRYANT AVENUE	BRONX	1	Community Center - Cornerstone	SOBRO	0.46	1221 Prospect Avenue
338	EAST 173RD STREET-VYSE AVENUE	BRONX	1	Community Center	Phipps Community Development	0.56	1030 East 178th Street
208	EAST 180TH STREET-MONTEREY AVENUE	BRONX	1	Community Center - Cornerstone	Good Shepherd Services	0.00	2100 Monterey Avenue
208	EAST 180TH STREET-MONTEREY AVENUE	BRONX	1	School	NYC Department of Education	0.00	2120 Quarry Road
263	EAST NEW YORK CITY LINE	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.04	475 Fountain Avenue
263	EAST NEW YORK CITY LINE	BROOKLYN	1	Senior Center	NYCHA	0.04	475 Fountain Avenue
009	EAST RIVER	MANHATTAN	1	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.00	402 - 404 East 105th Street
034	EASTCHESTER GARDENS	BRONX	1	Community Center - Cornerstone	Neighborhood Initiatives Development Corporation	0.00	3016 Yates Avenue
034	EASTCHESTER GARDENS	BRONX	1	Senior Center	Regional Aid For Interim Needs, Inc.	0.00	1246 Burke Avenue
057	EDENWALD	BRONX	1	Community Center - Cornerstone	Mosholu Montefiore Community Center Inc.	0.00	1150 East 229th Street
015	ELLIOTT	MANHATTAN	1	NORC/ Child Care / Community Center - COMPASS / Health Clinic	Hudson Guild	0.01	441 West 26th Street
029	FARRAGUT	BROOKLYN	1	Community Center - Cornerstone	Brooklyn Bureau of Comm. Service	0.00	228 York Street
029	FARRAGUT	BROOKLYN	1	Senior Center	Spanish Speaking Elderly Council - RAICES, Inc.	0.00	228 York Street
205	FENIMORE-LEFFERTS	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.19	720 East New York Avenue
207	FIORENTINO PLAZA	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.42	576 Blake Avenue
001	FIRST HOUSES	MANHATTAN	1	Senior Center	University Settlement Society of New York, Inc.	0.04	94 East 1st Street
059	FOREST	BRONX	1	Community Center	Southeast Bronx Neighborhood Centers, Inc.	0.00	955 Tinton Avenue
197	FORT INDEPENDENCE STREET-HEATH AVENUE	BRONX	1	Senior Center/ Community Center - Cornerstone	Mosholu Montefiore Community Center Inc.	0.00	3350 Bailey Avenue
309	FORT WASHINGTON AVENUE REHAB	MANHATTAN	1	Senior Center	Riverstone Senior Life Services, Inc.	0.00	99 Fort Washington Avenue
136	FULTON	MANHATTAN	1	Senior Center	Hudson Guild	0.00	119 9th Avenue
252	GARVEY (GROUP A)	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.00	20 Amboy Street
252	GARVEY (GROUP A)	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.00	1440 East New York Avenue
225	GLEBE AVENUE-WESTCHESTER AVENUE	BRONX	1	Senior Center / Job Readiness / ESL	YMCA of Greater New York	0.00	2125 Glebe Avenue
171	GLENMORE PLAZA	BROOKLYN	1	Senior Center	NYCHA	0.00	1777 Pitkin Avenue
044	GLENWOOD	BROOKLYN	1	Community Center - Cornerstone	Flatbush Development	0.00	5816 Farragut Road
044	GLENWOOD	BROOKLYN	1	Senior Center	Catholic Charities Neighborhood Services, Inc.	0.00	5701 -5703 Avenue H
100	GOMPERS	MANHATTAN	1	Senior Center/ Community Center/ Child Care	Grand Street Settlement, Inc.	0.00	80 Pitt Street
025	GOWANUS	BROOKLYN	1	Senior Center	Spanish Speaking Elderly Council - RAICES, Inc.	0.00	420 Baltic Street
281	GRAMPION	MANHATTAN	1	Community Center	Harlem Children's Zone, Inc.	0.41	2374 Frederick Douglass Boulevard
087	GRANT	MANHATTAN	1	Community Center - Cornerstone	Mosholu Montefiore Community Center Inc.	0.00	1301 Amsterdam Avenue
087	GRANT	MANHATTAN	1	Senior Center	Charles A. Walburg Multi-Service, Inc.	0.00	1301 Amsterdam Avenue
068	GRAVESEND	BROOKLYN	1	Community Center - Cornerstone	Brooklyn Bureau of Comm. Service	0.25	2945 West 33rd Street
040	GUN HILL	BRONX	1	Community Center - Cornerstone	Mosholu Montefiore Community Center Inc.	0.00	745 Magenta Street

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
142	HABER	BROOKLYN	1	Senior Center	Jewish Community Council of Coney Island	0.00	3024 West 24th Street
075	HAMMEL	QUEENS	1	Community Center - Cornerstone	CCNY (The Child Center of New York)	0.00	81-14 Rockaway Beach Boulevard
262	HARBORVIEW TERRACE	MANHATTAN	1	Senior Center	Find Aid for The Aged, Inc.	0.00	530 West 55th Street
003	HARLEM RIVER	MANHATTAN	1	Library	NYC Public Library	0.00	2650 A C Powell Boulevard
147	HARLEM RIVER II	MANHATTAN	1	Library	NYC Public Library	0.10	2650 A C Powell Boulevard
347	HARRISON AVENUE REHAB (GROUP A)	BRONX	1	Community Center - Cornerstone	(ACDP) Community Association for Progressive Dominicans	0.77	1553 University Avenue
347	HARRISON AVENUE REHAB (GROUP A)	BRONX	1	Senior Center	NYCHA	0.77	1553 University Avenue
547	HARRISON AVENUE REHAB (GROUP B)	BRONX	1	Community Center - Cornerstone	(ACDP) Community Association for Progressive Dominicans	0.66	1553 University Avenue
547	HARRISON AVENUE REHAB (GROUP B)	BRONX	1	Senior Center	NYCHA	0.66	1553 University Avenue
184	HERNANDEZ	MANHATTAN	1	Senior Center	University Settlement Society of New York, Inc.	0.00	189 Allen Street
078	HIGHBRIDGE GARDENS	BRONX	1	Community Center - Cornerstone	Catholic Charities Community Services Archdiocese of NY	0.00	1155 University Avenue
078	HIGHBRIDGE GARDENS	BRONX	1	Senior Center	NYCHA	0.00	1145 University Avenue
215	HOE AVENUE-EAST 173RD STREET	BRONX	1	Community Center	Phipps Community Development	0.47	1030 East 178th Street
159	HOLMES TOWERS	MANHATTAN	1	Community Center	Stanley M. Isaacs Neighborhood Center	0.00	1792 1st Avenue
072	HOWARD	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.00	90 Watkins Street
339	HOWARD AVENUE	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.26	20 Amboy Street
339	HOWARD AVENUE	BROOKLYN	2	Senior Center	Fort Greene Senior Citizens Council	0.30	1440 East New York Avenue
365	HOWARD AVENUE-PARK PLACE	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.19	20 Amboy Street
365	HOWARD AVENUE-PARK PLACE	BROOKLYN	2	Senior Center	Fort Greene Senior Citizens Council	0.21	1440 East New York Avenue
168	HUGHES APARTMENTS	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.00	301 Sutter Avenue
168	HUGHES APARTMENTS	BROOKLYN	1	Senior Center	NYCHA	0.00	301 Sutter Avenue
367	HUNTS POINT AVENUE REHAB	BRONX	1	Senior Center	Presbyterian Senior Services	0.70	950 Union Avenue
109	HYLAN	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.04	50 Humboldt Street
109	HYLAN	BROOKLYN	1	NORC	Jewish Association Services For the Aged	0.04	50 Humboldt Street
140	INDEPENDENCE	BROOKLYN	1	Community Center - Cornerstone	El Puente De Williamsburg	0.00	114 Taylor Street
140	INDEPENDENCE	BROOKLYN	1	Senior Center	Millennium Development Corp.	0.00	114 Taylor Street
014	INGERSOLL	BROOKLYN	1	Community Center - Cornerstone	University Settlement Society of New York, Inc.	0.00	177 Myrtle Avenue
316	INTERNATIONAL TOWER	QUEENS	1	Senior Center	Jamaica Service Program for Older Adults (JSPOA)	0.00	90-20 170th Street
139	ISAACS	MANHATTAN	1	Senior Center	Stanley M. Isaacs Neighborhood Center	0.00	415 East 93rd Street
120	JACKSON	BRONX	1	Senior Center	Presbyterian Senior Services	0.00	325 East 156th Street
064	JEFFERSON	MANHATTAN	1	Senior Center/ Community Center - COMPASS	Union Settlement Association	0.00	2205 First Avenue
017	JOHNSON	MANHATTAN	1	Community Center - Cornerstone	Stanley M. Isaacs Neighborhood Center	0.00	1833 Lexington Avenue
030	KING TOWERS	MANHATTAN	1	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.00	2 West 115th Street
030	KING TOWERS	MANHATTAN	1	Senior Center	Presbyterian Senior Services	0.00	50 Lenox Avenue
010	KINGSBOROUGH	BROOKLYN	1	Community Center - Cornerstone	Flatbush Development	0.00	129 Kingsborough 1st Walk
161	KINGSBOROUGH EXTENSION	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.00	447 Kingsborough 4th Walk 2nd floor

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
076	LA GUARDIA	MANHATTAN	1	Senior Center	New York Foundation For Senior Citizens	0.00	280 Cherry Street
152	LA GUARDIA ADDITION	MANHATTAN	1	Senior Center	New York Foundation For Senior Citizens	0.00	280 Cherry Street
122	LAFAYETTE	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.00	442 Dekalb Avenue
186	LATIMER GARDENS	QUEENS	1	Community Center - Cornerstone	CCNY (The Child Center of New York)	0.00	34-30 137th Street
186	LATIMER GARDENS	QUEENS	1	Senior Center	Self Help Community Services, Inc	0.00	34-30 137th Street
201	LEAVITT STREET-34TH AVENUE	QUEENS	1	Community Center - Cornerstone	CCNY (The Child Center of New York)	0.09	34-30 137th Street
201	LEAVITT STREET-34TH AVENUE	QUEENS	1	Senior Center	Self Help Community Services, Inc	0.09	34-30 137th Street
101	LEHMAN VILLAGE	MANHATTAN	1	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.00	1589 Madison Avenue
101	LEHMAN VILLAGE	MANHATTAN	1	Senior Center	Carter Burden	0.00	1641 Madison Avenue
348	LENOX ROAD-ROCKAWAY PARKWAY	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.67	630 Mother Gaston Boulevard
348	LENOX ROAD-ROCKAWAY PARKWAY	BROOKLYN	1	Senior Center	Wayside Out-Reach Development Corporation, Inc.	0.67	630 Mother Gaston Boulevard
050	LEXINGTON	MANHATTAN	1	Community Center	Union Settlement Association	0.04	1761 Third Avenue
050	LEXINGTON	MANHATTAN	2	Community Center - COMPASS / Senior Center	Union Settlement Association	0.06	1775 Third Avenue
020	LINCOLN	MANHATTAN	1	Community Center	Harlem Children's Zone, Inc.	0.00	2110 Madison Avenue
020	LINCOLN	MANHATTAN	1	Senior Center	NYCHA	0.00	60 East 135th Street
095	LINDEN	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.07	895 Pennsylvania Avenue
095	LINDEN	BROOKLYN	1	Senior Center	Millennium Development Corp.	0.07	895 Pennsylvania Avenue
276	LONG ISLAND BAPTIST HOUSES	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.02	576 Blake Avenue
362	LONGFELLOW AVENUE REHAB	BRONX	1	Community Center - Cornerstone	SOBRO	0.55	1221 Prospect Avenue
169	LOW HOUSES	BROOKLYN	1	Community Center - Cornerstone	Brooklyn Bureau of Comm. Service	0.00	137 Belmont Avenue
169	LOW HOUSES	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.00	137 Belmont Avenue
326	LOWER EAST SIDE I INFILL	MANHATTAN	1	Community Center	Greenwich Village Youth Council	0.00	213 Eldridge Street
326	LOWER EAST SIDE I INFILL	MANHATTAN	1	Community Center	University Settlement Society of New York, Inc.	0.00	175 Eldridge Street
337	LOWER EAST SIDE II	MANHATTAN	1	Community Center - Cornerstone	Henry Street Settlement, Inc.	0.06	80 Avenue D / 807 East 6th Street
364	LOWER EAST SIDE III	MANHATTAN	1	Community Center - Cornerstone	Henry Street Settlement, Inc.	0.11	80 Avenue D / 807 East 6th Street
292	LOWER EAST SIDE REHAB (GROUP 5)	MANHATTAN	1	Community Center - Cornerstone	Henry Street Settlement, Inc.	0.18	80 Avenue D / 807 East 6th Street
081	MANHATTANVILLE	MANHATTAN	1	Community Center - Cornerstone	Graham Windham Services to Families & Children	0.00	530 West 133rd Street
081	MANHATTANVILLE	MANHATTAN	1	Senior Center	Presbyterian Senior Services	0.00	530 West 133rd Street
296	MANHATTANVILLE REHAB (GROUP 2)	MANHATTAN	1	Community Center - Cornerstone	Graham Windham Services to Families & Children	0.07	530 West 133rd Street
296	MANHATTANVILLE REHAB (GROUP 2)	MANHATTAN	1	Senior Center	Presbyterian Senior Services	0.07	530 West 133rd Street
297	MANHATTANVILLE REHAB (GROUP 3)	MANHATTAN	1	Community Center - Cornerstone	Graham Windham Services to Families & Children	0.03	530 West 133rd Street
297	MANHATTANVILLE REHAB (GROUP 3)	MANHATTAN	1	Senior Center	Presbyterian Senior Services	0.03	530 West 133rd Street
049	MARBLE HILL	BRONX	1	Senior Center/ Community Center - Cornerstone	Mosholu Montefiore Community Center Inc.	0.00	5365 Broadway
021	MARCY	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.19	736 Park Avenue
363	MARCY AVENUE-GREENE AVENUE SITE A	BROOKLYN	1	Senior Center	Wayside Out-Reach Development Corporation, Inc.	0.07	360 Nostrand Avenue
358	MARCY AVENUE-GREENE AVENUE SITE B	BROOKLYN	1	Senior Center	Wayside Out-Reach Development Corporation, Inc.	0.04	360 Nostrand Avenue

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
077	MARINER'S HARBOR	STATEN ISLAND	1	Community Center - Cornerstone	United Activities Unlimited Inc	0.00	157 Brabant Street
083	MARLBORO	BROOKLYN	1	Community Center - Cornerstone	Federation of Italian American Organizations of Brooklyn	0.00	2298 West 8th Street
083	MARLBORO	BROOKLYN	1	Senior Center	Jewish Community Council of Coney Island	0.00	2298 West 8th Street
344	MARSHALL PLAZA	MANHATTAN	1	Senior Center	COTHOA - Church on The Hill	0.00	1970 Amsterdam Avenue
103	MCKINLEY	BRONX	1	Community Center - COMPASS	Southeast Bronx Neighborhood Centers, Inc.	0.00	751 East 161st Street
028	MELROSE	BRONX	1	Community Center - Cornerstone	Bronxworks, Inc.	0.00	286 East 156th Street
183	MELTZER TOWER	MANHATTAN	1	Senior Center	University Settlement Society of New York, Inc.	0.00	94 East 1st Street
181	METRO NORTH PLAZA	MANHATTAN	1	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.11	402 - 404 East 105th Street
191	MIDDLETOWN PLAZA	BRONX	1	Senior Center	Regional Aid For Interim Needs, Inc.	0.00	3035 Middletown Road
084	MILL BROOK	BRONX	1	Child Care / Jobs Plus / Community Center	East Side House Settlement	0.00	201 St. Anns Avenue
084	MILL BROOK	BRONX	1	Senior Center	IPRHE / Acacia Network	0.00	201 St. Anns Avenue
132	MILL BROOK EXTENSION	BRONX	1	Child Care / Jobs Plus / Community Center	East Side House Settlement	0.17	201 St. Anns Avenue
132	MILL BROOK EXTENSION	BRONX	1	Senior Center	IPRHE / Acacia Network	0.17	201 St. Anns Avenue
145	MITCHEL	BRONX	1	Community Center - COMPASS	East Side House Settlement	0.00	210 Alexander Avenue
145	MITCHEL	BRONX	1	Senior Center	East Side House Settlement	0.00	188 / 182 Lincoln Avenue
088	MONROE	BRONX	1	Senior Center	IPRHE / Acacia Network	0.00	1776 Story Avenue
129	MOORE	BRONX	1	Senior Center	Bronxworks, Inc.	0.00	515 Jackson Avenue
102	MORRIS I	BRONX	1	Community Center - COMPASS	Claremont Neighborhood Center	0.00	489 East 169th Street
502	MORRIS II	BRONX	1	Community Center - Cornerstone	Directions For Our Youth, Inc.	0.12	1368 Webster Avenue
277	MORRIS PARK SENIOR CITIZENS HOME	MANHATTAN	1	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.29	110 East 129th Street
130	MORRISANIA	BRONX	1	Community Center - COMPASS	Claremont Neighborhood Center	0.04	489 East 169th Street
267	MORRISANIA AIR RIGHTS	BRONX	1	Senior Center	Presbyterian Senior Services	0.00	3135 Park Avenue 20th Floor
121	MOTT HAVEN	BRONX	1	Community Center - COMPASS	East Side House Settlement	0.11	340 Morris Avenue
121	MOTT HAVEN	BRONX	2	Senior Center	East Side House Settlement	0.12	308 East 145th Street
314	NEW LANE AREA	STATEN ISLAND	1	Senior Center	Community Agency for Senior Citizens, Inc.	0.00	70 New Lane
043	NOSTRAND	BROOKLYN	1	Community Center - COMPASS	Kings Bay YM-YWHA	0.00	3043 Avenue W
172	O'DWYER GARDENS	BROOKLYN	1	Community Center - Cornerstone	Brooklyn Bureau of Comm. Service	0.00	2945 West 33rd Street
051	OCEAN BAY APARTMENTS (OCEANSIDE)	QUEENS	1	Community Center - Cornerstone	CCNY (The Child Center of New York)	0.64	426 Beach 40th Street
313	OCEAN HILL-BROWNSVILLE	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.24	447 Kingsborough 4th Walk 2nd floor
162	OCEAN HILL APARTMENTS	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.53	940 Hancock Street
204	PARK AVENUE-EAST 122ND, 123RD STREETS	MANHATTAN	1	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.30	110 East 129th Street
351	PARK ROCK REHAB	BROOKLYN	1	Community Center - Cornerstone	Flatbush Development	0.25	129 Kingsborough 1st Walk
047	PARKSIDE	BRONX	1	Community Center - Cornerstone	Mosholu Montefiore Community Center Inc.	0.00	2972 / 2968 Bronx Park East
047	PARKSIDE	BRONX	1	Senior Center	Presbyterian Senior Services	0.00	644 Adee Avenue
024	PATTERSON	BRONX	1	Community Center - COMPASS	East Side House Settlement	0.00	340 Morris Avenue
024	PATTERSON	BRONX	1	Senior Center	East Side House Settlement	0.00	308 East 145th Street
039	PELHAM PARKWAY	BRONX	1	Community Center - Cornerstone	Mosholu Montefiore Community Center Inc.	0.00	785 Pelham Pkway N
039	PELHAM PARKWAY	BRONX	1	Community Center - Developmental Disabilities	New York State Association for Retarded Children, Inc.	0.00	2280 Wallace Avenue
039	PELHAM PARKWAY	BRONX	1	NORC	Bronx Jewish Community Council	0.00	2425 Williamsbridge Road

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
039	PELHAM PARKWAY	BRONX	1	Senior Center	Jewish Association Services For the Aged	0.00	975 Waring Avenue
194	PENNSYLVANIA AVENUE- WORTMAN AVENUE	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.00	895 Pennsylvania Avenue
194	PENNSYLVANIA AVENUE- WORTMAN AVENUE	BROOKLYN	1	School	NYC Department of Education	0.00	530 Stanley Avenue
194	PENNSYLVANIA AVENUE- WORTMAN AVENUE	BROOKLYN	1	Senior Center	Millennium Development Corp.	0.00	895 Pennsylvania Avenue
089	PINK	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.00	2702 Linden Boulevard
089	PINK	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.00	2702 Linden Boulevard
149	POLO GROUNDS TOWERS	MANHATTAN	1	Community Center - Cornerstone	Police Athletic League, Inc.	0.00	3005 Frederick Douglass Boulevard
149	POLO GROUNDS TOWERS	MANHATTAN	1	Senior Center	COTHOA - Church on The Hill	0.00	2965 Frederick Douglass Boulevard
053	POMONOK	QUEENS	1	Senior Center/ Community Center - COMPASS	Queens Community House, Inc.	0.00	67-09 Kissena Boulevard
340	PUBLIC SCHOOL 139 (CONVERSION)	MANHATTAN	1	Senior Center	ARC XVI Ft. Washington, Inc.	0.00	120 West 140th Street
505	QUEENSBRIDGE NORTH	QUEENS	1	Community Center / Senior Center	Jacob A. Riis Neighborhood Settlement, Inc.	0.00	40-11 10th Street
505	QUEENSBRIDGE NORTH	QUEENS	1	Education /Literacy Center	Queens Borough Public Library	0.00	10-43 41st Avenue
505	QUEENSBRIDGE NORTH	QUEENS	1	Senior Center/ Community Center - COMPASS	Jacob A. Riis Neighborhood Settlement, Inc.	0.00	10-25 41st Avenue
005	QUEENSBRIDGE SOUTH	QUEENS	1	Education /Literacy Center	Queens Borough Public Library	0.01	10-43 41st Avenue
005	QUEENSBRIDGE SOUTH	QUEENS	2	Community Center / Senior Center	Jacob A. Riis Neighborhood Settlement, Inc.	0.03	40-11 10th Street
005	QUEENSBRIDGE SOUTH	QUEENS	3	Senior Center/ Community Center - COMPASS	Jacob A. Riis Neighborhood Settlement, Inc.	0.04	10-25 41st Avenue
352	RALPH AVENUE REHAB	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.47	20 Amboy Street
352	RALPH AVENUE REHAB	BROOKLYN	2	Senior Center	Fort Greene Senior Citizens Council	0.51	1440 East New York Avenue
245	RANDALL AVENUE-BALCOM AVENUE	BRONX	1	Senior Center	Jewish Association Services For the Aged	0.00	2705 Schley Avenue
037	RANGEL	MANHATTAN	1	Community Center - COMPASS	Catholic Charities Community Services Archdiocese of NY	0.00	159-36 Harlem River Drive
037	RANGEL	MANHATTAN	1	Senior Center	COTHOA - Church on The Hill	0.00	159-36 Harlem River Drive
048	RAVENSWOOD	QUEENS	1	Community Center - Cornerstone	Jacob A. Riis Neighborhood Settlement, Inc.	0.00	35-40 21st Street
048	RAVENSWOOD	QUEENS	1	Senior Center	Hellenic American Neighborhood Action Committee (HANAC)	0.00	34-35A 12th Street
004	RED HOOK EAST	BROOKLYN	1	Community Center - Cornerstone	Good Shepherd Services	0.00	110 West 9th Street
004	RED HOOK EAST	BROOKLYN	1	Senior Center	Spanish Speaking Elderly Council - RAICES, Inc.	0.00	120 West 9th Street
079	RED HOOK WEST	BROOKLYN	1	Community Center - Cornerstone	Good Shepherd Services	0.24	110 West 9th Street
079	RED HOOK WEST	BROOKLYN	2	Senior Center	Spanish Speaking Elderly Council - RAICES, Inc.	0.26	120 West 9th Street
055	REDFERN	QUEENS	1	Community Center - Cornerstone	CCNY (The Child Center of New York)	0.00	15-44 Hassock Street
143	REHAB PROGRAM (COLLEGE POINT)	QUEENS	1	Community Center - Cornerstone	CCNY (The Child Center of New York)	1.19	34-30 137th Street
143	REHAB PROGRAM (COLLEGE POINT)	QUEENS	1	Senior Center	Self Help Community Services, Inc	1.19	34-30 137th Street
515	REHAB PROGRAM (DOUGLASS REHABS)	MANHATTAN	1	Senior Center	West Side Federation for Senior and Supportive Housing, Inc.	0.10	868 Amsterdam Avenue
516	REHAB PROGRAM (TAFT REHABS)	MANHATTAN	1	Senior Center	Presbyterian Senior Services	0.25	50 Lenox Avenue
516	REHAB PROGRAM (TAFT REHABS)	MANHATTAN	2	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.27	2 West 115th Street
517	REHAB PROGRAM (WISE REHAB)	MANHATTAN	1	Community Center	Goddard Riverside Community Center	0.11	647 Columbus Avenue

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
167	REID APARTMENTS	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.00	720 East New York Avenue
117	RICHMOND TERRACE	STATEN ISLAND	1	Community Center - Cornerstone	Jewish Community Center of Staten Island	0.00	71 Jersey Street
018	RIIS	MANHATTAN	1	Community Center - Cornerstone	Henry Street Settlement, Inc.	0.08	80 Avenue D / 807 East 6th Street
019	RIIS II	MANHATTAN	1	Community Center - Cornerstone	Henry Street Settlement, Inc.	0.00	80 Avenue D / 807 East 6th Street
218	ROBBINS PLAZA	MANHATTAN	1	Senior Center	Lenox Hill Neighborhood House	0.00	343 East 70th Street
241	ROBINSON	MANHATTAN	1	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.00	110 East 129th Street
135	ROOSEVELT I	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.05	400 Hart Street
135	ROOSEVELT I	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.05	400 Hart Street
177	ROOSEVELT II	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.00	400 Hart Street
177	ROOSEVELT II	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.00	400 Hart Street
099	RUTGERS	MANHATTAN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.00	200 Madison Street
282	RUTLAND TOWERS	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.51	720 East New York Avenue
280	SACK WERN	BRONX	1	Community Center - Cornerstone	Phipps Community Development	0.06	1680 Seward Avenue
280	SACK WERN	BRONX	2	Senior Center	NYCHA	0.10	1674 Seward Avenue
093	SAINT MARY'S PARK	BRONX	1	Community Center - Cornerstone	Bronxworks, Inc.	0.00	595 Trinity Avenue
038	SAINT NICHOLAS	MANHATTAN	1	Community Center	Harlem Children's Zone, Inc.	0.00	2374 Frederick Douglass Boulevard
038	SAINT NICHOLAS	MANHATTAN	1	Senior Center	Central Harlem Senior Center	0.00	210 West 131st Street
377	SAMUEL (CITY)	MANHATTAN	1	Community Center	Abyssinian Baptist Church	0.00	669 Lenox Avenue
389	SAMUEL (MHOP) I	MANHATTAN	1	Senior Center	ARC XVI Ft. Washington, Inc.	0.05	120 West 140th Street
398	SAMUEL (MHOP) II	MANHATTAN	1	Senior Center	ARC XVI Ft. Washington, Inc.	0.02	120 West 140th Street
399	SAMUEL (MHOP) III	MANHATTAN	1	Community Center	Abyssinian Baptist Church	0.11	669 Lenox Avenue
158	SARATOGA VILLAGE	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.00	940 Hancock Street
045	SEDGWICK	BRONX	1	Community Center - Cornerstone	(ACDP) Community Association for Progressive Dominicans	0.00	1553 University Avenue
045	SEDGWICK	BRONX	1	Senior Center	NYCHA	0.00	1553 University Avenue
192	SEWARD PARK EXTENSION	MANHATTAN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.00	56 Essex Street
036	SHEEPSHEAD BAY	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.00	3679 Nostrand Avenue
036	SHEEPSHEAD BAY	BROOKLYN	1	NORC	Catholic Charities Neighborhood Services, Inc.	0.00	3677 Nostrand Ave
036	SHEEPSHEAD BAY	BROOKLYN	1	Senior Center	Catholic Charities Neighborhood Services, Inc.	0.00	3643 Nostrand Avenue
279	SHELTON HOUSE	QUEENS	1	Senior Center	Jamaica Service Program for Older Adults (JSPOA)	0.00	89-09 162nd Street
027	SMITH	MANHATTAN	1	Senior Center/NORC/ Child Care/ Community Center	Hamilton-Madison House, Inc.	0.00	50 Madison Street
067	SOTOMAYOR HOUSES	BRONX	1	Community Center - Cornerstone	Phipps Community Development	0.00	1000 Rosedale Avenue
071	SOUNDVIEW	BRONX	1	Community Center - Cornerstone	Phipps Community Development	0.00	1680 Seward Avenue
071	SOUNDVIEW	BRONX	1	Senior Center	NYCHA	0.00	1674 Seward Avenue
035	SOUTH BEACH	STATEN ISLAND	1	Community Center - Cornerstone	United Activities Unlimited Inc	0.00	155 Norway Avenue
305	SOUTH BRONX AREA (SITE 402)	BRONX	1	Community Center - COMPASS	Southeast Bronx Neighborhood Centers, Inc.	0.16	751 East 161st Street
008	SOUTH JAMAICA I	QUEENS	1	Community Center - Cornerstone	Southern Queens Park Association	0.05	109-04 160th Street
066	SOUTH JAMAICA II	QUEENS	1	Community Center - Cornerstone	Southern Queens Park Association	0.00	109-04 160th Street
559	STANTON STREET	MANHATTAN	1	Senior Center/ Community Center/ Child Care	Grand Street Settlement, Inc.	0.13	80 Pitt Street

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
114	STAPLETON	STATEN ISLAND	1	Community Center - Cornerstone	Jewish Community Center of Staten Island	0.00	230 Broad St.
114	STAPLETON	STATEN ISLAND	1	Senior Center	Jewish Community Center of Staten Island	0.00	189 Gordon Street
353	STEBBINS AVENUE-HEWITT PLACE	BRONX	1	Senior Center	Presbyterian Senior Services	0.21	950 Union Avenue
366	STERLING PLACE REHABS (SAINT JOHNS-STERLING)	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.28	447 Kingsborough 4th Walk 2nd floor
368	STERLING PLACE REHABS (STERLING-BUFFALO)	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.25	447 Kingsborough 4th Walk 2nd floor
153	STRAUS	MANHATTAN	1	Community Center - Cornerstone	University Settlement Society of New York, Inc.	0.82	611 East 13th Street
221	STUYVESANT GARDENS I	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.00	214 Stuyvesant Avenue
333	STUYVESANT GARDENS II	BROOKLYN	1	Senior Center	Riseboro Community Partnership, Inc.	0.00	150 Malcolm X Boulevard
073	SUMNER	BROOKLYN	1	Community Center - Cornerstone	St. Nicks Alliance	0.00	862 Park Avenue
073	SUMNER	BROOKLYN	1	Senior Center	NYCHA	0.00	862 Park Avenue
170	SURFSIDE GARDENS	BROOKLYN	1	Community Center - Cornerstone	Brooklyn Bureau of Comm. Service	0.02	2945 West 33rd Street
369	SUTTER AVENUE-UNION STREET	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.40	20 Amboy Street
369	SUTTER AVENUE-UNION STREET	BROOKLYN	2	Senior Center	Fort Greene Senior Citizens Council	0.45	1440 East New York Avenue
097	TAFT	MANHATTAN	1	Community Center	Children's Aid Society, Inc.	0.00	1732 Madison Avenue
097	TAFT	MANHATTAN	1	Senior Center	NYCHA	0.00	1365 5th Avenue
354	TAPSCOTT STREET REHAB	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.42	20 Amboy Street
354	TAPSCOTT STREET REHAB	BROOKLYN	2	Senior Center	Fort Greene Senior Citizens Council	0.47	1440 East New York Avenue
234	TAYLOR STREET-WYTHE AVENUE	BROOKLYN	1	Community Center - Cornerstone	El Puente De Williamsburg	0.00	80 Clymer Street
223	TELLER AVENUE-EAST 166TH STREET	BRONX	1	Senior Center	William Hodson Senior Center, Inc.	0.34	1320 Webster Avenue
268	THOMAS APARTMENTS	MANHATTAN	1	Community Center	Goddard Riverside Community Center	0.05	647 Columbus Avenue
063	THROGGS NECK	BRONX	1	Community Center - COMPASS	Kips Bay Boys & Girls Club	0.05	550 Balcom Avenue
193	THROGGS NECK ADDITION	BRONX	1	Community Center - COMPASS	Kips Bay Boys & Girls Club	0.00	550 Balcom Avenue
096	TILDEN	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.00	630 Mother Gaston Boulevard
096	TILDEN	BROOKLYN	1	Senior Center	Wayside Out-Reach Development Corporation, Inc.	0.00	630 Mother Gaston Boulevard
042	TODT HILL	STATEN ISLAND	1	Community Center - Cornerstone	Jewish Community Center of Staten Island	0.00	255 Westwood Avenue
042	TODT HILL	STATEN ISLAND	1	Senior Center	Staten Island Comm Servs Friendship Club, Inc.	0.00	184 Schmidts Lane
131	TOMPKINS	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.00	736 Park Avenue
287	TWIN PARKS EAST (SITE 9)	BRONX	1	Senior Center	Neighborhood SHOPP	0.00	2070 Clinton Avenue
266	TWO BRIDGES URA (SITE 7)	MANHATTAN	1	Community Center - Cornerstone	YMCA of Greater New York - Chinatown	0.00	286 South Street
342	UNION AVENUE-EAST 163RD STREET	BRONX	1	Senior Center	Presbyterian Senior Services	0.00	950 Union Avenue
356	UNION AVENUE-EAST 166TH STREET	BRONX	1	Community Center - Cornerstone	SOBRO	0.02	1221 Prospect Avenue
240	UNITY PLAZA (SITES 17,24,25A)	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.04	576 Blake Avenue
261	UNITY PLAZA (SITES 4-27)	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.00	576 Blake Avenue
341	UNIVERSITY AVENUE REHAB	BRONX	1	Community Center - Cornerstone	(ACDP) Community Association for Progressive Dominicans	0.54	1553 University Avenue
341	UNIVERSITY AVENUE REHAB	BRONX	1	Senior Center	NYCHA	0.54	1553 University Avenue
343	UPACA (SITE 5)	MANHATTAN	1	Senior Center	Union Settlement Association	0.34	307 East 116th Street
355	UPACA (SITE 6)	MANHATTAN	1	Community Center - Cornerstone	Stanley M. Isaacs Neighborhood Center	0.31	1833 Lexington Avenue

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
061	VAN DYKE I	BROOKLYN	1	Community Center - Cornerstone	Research Foundation of CUNY / Medgar Evers College	0.00	392 Blake Avenue
146	VAN DYKE II	BROOKLYN	1	Senior Center	Wayside Out-Reach Development Corporation, Inc.	0.00	430 Dumont Avenue
315	VANDALIA AVENUE	BROOKLYN	1	Senior Center	Millennium Development Corp.	0.00	47 Vandalia Avenue
006	VLADECK	MANHATTAN	1	NORC	Henry Street Settlement, Inc.	0.00	351 Madison Street
006	VLADECK	MANHATTAN	1	Senior Center	Henry Street Settlement, Inc.	0.00	334 Madison Street
007	VLADECK II	MANHATTAN	1	NORC	Henry Street Settlement, Inc.	0.11	351 Madison Street
007	VLADECK II	MANHATTAN	2	Senior Center	Henry Street Settlement, Inc.	0.11	334 Madison Street
074	WAGNER	MANHATTAN	1	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.00	435 East 120th Street
074	WAGNER	MANHATTAN	1	Senior Center	NYCHA	0.00	435 East 120th Street
023	WALD	MANHATTAN	1	Community Center - COMPASS	Henry Street Settlement, Inc.	0.00	888 East 6th Street
023	WALD	MANHATTAN	1	Senior Center	United Jewish Council	0.00	12 Avenue D
062	WASHINGTON	MANHATTAN	1	Community Center	Union Settlement Association	0.00	1761 Third Avenue
062	WASHINGTON	MANHATTAN	1	Community Center - COMPASS / Senior Center	Union Settlement Association	0.00	1775 Third Avenue
293	WASHINGTON HEIGHTS REHAB (GROUPS 1&2)	MANHATTAN	1	Community Center	Dominican Women's Development Center, Inc.	0.00	2340 Amsterdam Avenue
523	WASHINGTON HEIGHTS REHAB PHASE III (FORT WASHINGTON)	MANHATTAN	1	Community Center - COMPASS	Catholic Charities Community Services Archdiocese of NY	0.26	159-36 Harlem River Drive
523	WASHINGTON HEIGHTS REHAB PHASE III (FORT WASHINGTON)	MANHATTAN	1	Senior Center	COTHOA - Church on The Hill	0.26	159-36 Harlem River Drive
329	WASHINGTON HEIGHTS REHAB PHASE III (HARLEM RIVER)	MANHATTAN	1	Senior Center	COTHOA - Church on The Hill	0.11	1970 Amsterdam Avenue
330	WASHINGTON HEIGHTS REHAB PHASE IV (C)	MANHATTAN	1	Community Center	Dominican Women's Development Center, Inc.	0.01	2340 Amsterdam Avenue
331	WASHINGTON HEIGHTS REHAB PHASE IV (D)	MANHATTAN	1	Community Center	Dominican Women's Development Center, Inc.	0.04	2340 Amsterdam Avenue
141	WEBSTER	BRONX	1	Senior Center	William Hodson Senior Center, Inc.	0.03	1320 Webster Avenue
229	WEEKSVILLE GARDENS	BROOKLYN	1	Community Center - Cornerstone	CAMBA	0.15	164 Troy Avenue
116	WEST BRIGHTON I	STATEN ISLAND	1	Community Center - Cornerstone	United Activities Unlimited Inc	0.00	230 Broadway
116	WEST BRIGHTON I	STATEN ISLAND	1	Senior Center	Catholic Charities Community Services Archdiocese of NY	0.00	230 Broadway
175	WEST BRIGHTON II	STATEN ISLAND	1	Community Center - Cornerstone	United Activities Unlimited Inc	0.02	230 Broadway
175	WEST BRIGHTON II	STATEN ISLAND	1	Senior Center	Catholic Charities Community Services Archdiocese of NY	0.02	230 Broadway
360	WEST FARMS ROAD REHAB	BRONX	1	Community Center - Cornerstone	SOBRO	0.46	1221 Prospect Avenue
526	WEST FARMS SQUARE CONVENTIONAL	BRONX	1	Community Center - Cornerstone	SOBRO	0.54	1221 Prospect Avenue
246	WEST TREMONT AVENUE- SEDGWICK AVENUE AREA	BRONX	1	Community Center - Cornerstone	(ACDP) Community Association for Progressive Dominicans	0.43	1553 University Avenue
246	WEST TREMONT AVENUE- SEDGWICK AVENUE AREA	BRONX	1	Senior Center	NYCHA	0.43	1553 University Avenue
124	WHITE	MANHATTAN	1	Child Care /Community Center/Credit Union	Union Settlement Association	0.00	237 East 104th Street
124	WHITE	MANHATTAN	1	Senior Center	Union Settlement Association	0.00	2029 2nd Avenue
514	WHITMAN	BROOKLYN	1	Senior Center	Fort Greene Senior Citizens Council	0.00	105 North Portland Avenue
128	WILLIAMS PLAZA	BROOKLYN	1	Community Center - Cornerstone	El Puente De Williamsburg	0.00	323 Roebling Street
002	WILLIAMSBURG	BROOKLYN	1	Community Center - Cornerstone	Grand Street Settlement, Inc.	0.00	195 Graham Avenue
002	WILLIAMSBURG	BROOKLYN	1	Senior Center	Jewish Association Services For the Aged	0.00	202-206 Graham Avenue
112	WILSON	MANHATTAN	1	Community Center - Cornerstone	SCAN Supportive Children's Advocacy Network	0.06	402 - 404 East 105th Street
127	WISE TOWERS	MANHATTAN	1	Community Center	Goddard Riverside Community Center	0.07	647 Columbus Avenue

Potential Alternative Heated Community Spaces

TDS#	DEVELOPMENT	BOROUGH	RANK	Facility Type	Facility Sponsor	Distance to Facility from Dev. (Miles)	Facility Address
033	WOODSIDE	QUEENS	1	Community Center - Cornerstone	Sunnyside Community Services	0.00	50-19 Broadway
033	WOODSIDE	QUEENS	1	Senior Center	Samaritan Village	0.00	50-37 Newtown Road
182	WOODSON	BROOKLYN	1	Senior Center	Wayside Out-Reach Development Corporation, Inc.	0.00	460 Dumont Avenue
178	WSUR (BROWNSTONES)	MANHATTAN	1	Community Center	Goddard Riverside Community Center	0.03	647 Columbus Avenue
151	WSUR (SITE A) 120 WEST 94TH STREET	MANHATTAN	1	Community Center - COMPASS	Strycker's Bay Neighborhood Council, Inc./The Dome Project	0.09	696 Amsterdam Avenue
173	WSUR (SITE B) 74 WEST 92ND STREET	MANHATTAN	1	Community Center	Goddard Riverside Community Center	0.00	647 Columbus Avenue
174	WSUR (SITE C) 589 AMSTERDAM AVENUE	MANHATTAN	1	Community Center	Goddard Riverside Community Center	0.20	647 Columbus Avenue
163	WYCKOFF GARDENS	BROOKLYN	1	Community Center	Colony South Brooklyn Houses	0.00	272 Wyckoff Street
163	WYCKOFF GARDENS	BROOKLYN	1	Community Center - Cornerstone	St. Vincent's Heartshare Services	0.00	280 Wyckoff Street
163	WYCKOFF GARDENS	BROOKLYN	1	Senior Center	Spanish Speaking Elderly Council - RAICES, Inc.	0.00	280 Wyckoff Street

NYCHA STANDARD PROCEDURE MANUAL

SP 040:17:3, ACCESSING PUBLIC HOUSING APARTMENTS WHEN TENANT NOT HOME TO ADDRESS DEFICIENCIES RELATED TO LEAKS, MOLD, AND LEAD-BASED PAINT

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SUBJECT	PROCEDURE OWNER	APPROVED DATE	APPROVED BY	INDEX NO.
<p style="text-align: center;">ACCESSING PUBLIC HOUSING APARTMENTS WHEN TENANT NOT HOME TO ADDRESS DEFICIENCIES RELATED TO LEAKS, MOLD, AND LEAD-BASED PAINT</p>	<p style="text-align: center;">OPERATIONS MANAGEMENT SERVICES</p>	<p>Date: _____</p>	<p style="text-align: center;">Brian Clarke Senior Vice-President for Operations</p> <p style="text-align: center;">Janet Abrahams Senior Vice-President for Next Generation Operations</p> <p style="text-align: center;">Michael P. Kelly General Manager</p>	<p style="text-align: center;">040:17:3</p>

I. PURPOSE

This Standard Procedure provides instructions to NYCHA employees to access public housing apartments to address health and safety issues related to leaks, mold, lead-based paint, and emergencies when tenants are not home.

II. POLICY

It is NYCHA's policy to comply with 24 C.F.R. § 966.4 of Department of Housing and Urban Development (HUD) regulations and to establish the corresponding obligations set forth under NYCHA's lease provisions.

III. APPLICABILITY

This Standard Procedure applies to NYCHA employees who authorize, schedule, and/or perform maintenance and repairs in public housing apartments related to leaks, mold, and lead-based paint.

IV. DEFINITIONS

A. Hook Key

A key maintained by development staff that can be used to access a tenant's apartment. Every apartment in NYCHA residential buildings has a separate hook key.

B. Informer Work Management Application

An application loaded onto a NYCHA-issued handheld device used to process, track, and record data for work orders, including materials, personnel, and associated tasks.

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C. Maximo

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

D. NYCHA Normal Business Hours

For the purposes of this Standard Procedure, NYCHA normal business hours are 8:30 a.m.-4:30 p.m., Monday-Friday, excluding applicable holidays.

V. REVIEW CYCLE

This Standard Procedure will be reviewed by the Operations Department, Management Services Department, every three (3) years, and will be revised if necessary.

VI. RESPONSIBILITIES

A. Development Office Supervisory Staff

1. For the purposes of this Standard Procedure, development office supervisory staff refers to:
 - a. Property managers
 - b. Assistant property managers
 - c. Property maintenance supervisors
 - d. Assistant property maintenance supervisors
2. Development office supervisory staff shall:
 - a. Conduct a tenant file review to determine whether to access an apartment when a tenant is not home.
 - b. Provide authorization to access an apartment when a tenant is not home to address repairs for:
 - (1) Emergencies (indicated as priority 7, 8, and 9 work orders in Maximo; and priority 1, 2, and 3 service requests in Siebel).
 - (2) Leaks (including leaks from above), including scheduled and unscheduled maintenance or skilled trade appointments.
 - (3) Mold and mildew, including scheduled and unscheduled maintenance or skilled trade appointments.

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- (4) Lead-based paint, including scheduled and unscheduled maintenance or skilled trade appointments.
 - (5) Court-ordered scheduled and unscheduled maintenance or skilled trade appointments for leaks, mold and mildew, and lead-based paint, if all listed access dates were exhausted.
 - c. Print and provide a hard copy of the work order to leave in the apartment.
 - d. Provide hook key and other cylinder changing equipment as necessary.
 - e. Oversee the apartment access process.
 - f. Ensure the appropriate entries are made using the handheld device or in Maximo to indicate whether an apartment was accessed and whether a door cylinder was changed due to a tenant not home.
 - g. Ensure the work order is closed as follows:
 - (1) At the end of the business day following completion of repairs when a tenant is not home, if a NYCHA-owned cylinder was changed.
 - (2) Within one (1) hour of completion of repairs when a tenant is not home, if a NYCHA-owned cylinder was not changed.
- B. Employees Who Schedule and/or Perform Maintenance and Repairs in Tenants' Apartments ("Employees")
- 1. Property Management and Maintenance, Repairs, and Skilled Trades
- Employees shall:
- a. Communicate with tenants regarding scheduled maintenance and repair appointments.
 - b. Visit apartments for scheduled maintenance and repair appointments.
 - c. Report to development office supervisory staff if the tenant is not home.
 - d. Contact tenants and/or emergency contact(s) to verify if a tenant is not home.
 - e. If authorized by development office supervisory staff, access the apartment to complete maintenance and repairs as indicated on the work order.
 - f. Ensure the appropriate documentation is provided to inform tenant that access was made into the apartment and to advise tenant of the repair work completed in the apartment.

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2. Emergency Services

Employees shall:

- a. Visit apartments for emergency maintenance and repairs outside of NYCHA normal business hours.
- b. Request assistance from FDNY and/or NYPD to access an apartment if necessary.
- c. Ensure the appropriate documentation is provided to inform tenant that access was made into the apartment and to advise tenant of the repair work completed in the apartment.

3. Customer Contact Center (CCC)

Customer information representatives shall:

- a. Communicate all relevant information to tenants who call to schedule maintenance or repair work.
- b. Confirm tenants' address and contact information is current.

VII. PROCEDURE

A. Scheduling a Maintenance or Repair Appointment

1. When a tenant calls the Customer Contact Center (CCC) to report an emergency or maintenance condition, a customer information representative:
 - a. Informs the tenant that he/she must ensure he/she is home, or an adult 18 or older is present, to provide access to the apartment at the time of the scheduled appointment.
 - b. Informs the tenant if he/she is unable to keep the appointment, the tenant is required to contact the CCC to cancel or reschedule the appointment at least one (1) business day before the scheduled appointment.
 - c. Informs the tenant if he/she misses a scheduled appointment for leaks, mold, or lead-based paint, NYCHA will issue NYCHA form 042.727, *48 Hour Notice for Health and Safety Repairs*, with a new appointment date. The new date is two (2) business days from the date of the actual visit.

NOTE:	The tenant must receive the original form, and the property management office receives the copy.
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- d. Informs the tenant that NYCHA staff will return on the date listed on NYCHA form 042.727, *48 Hour Notice for Health and Safety Repairs*, and if no one answers the door, the employee will request authorization from development office supervisory staff to access the apartment.
- e. Verifies the tenant's contact information.

For more information, see Attachment A – Customer Contact Center Script.

- 2. When a maintenance or repair task is generated as a result of a signed court-ordered stipulation, development office supervisory staff:
 - a. Ensures a work order is created for the task in Maximo.
 - (1) Attaches a copy of the signed stipulation to the work order.
 - (2) Includes all listed access dates in the work order.
 - b. Ensures all tasks are scheduled according to access dates listed on the stipulation.
 - c. After the tasks are scheduled, ensures the tenant is informed that he/she must ensure he/she is home, or an adult 18 or older is present, to provide access to the apartment at the scheduled time of the appointment.
 - d. Ensures the tenant is informed if he/she is unable to keep the appointment, the tenant is required to contact the development office to cancel or reschedule the appointment at least one (1) business day before the scheduled appointment.

B. Authorization to Access an Apartment for Scheduled Maintenance and Repairs – First Scheduled Appointment

An employee assigned to perform scheduled maintenance and repairs in a tenant's apartment:

- 1. Arrives at the apartment at the scheduled time.
- 2. Knocks loudly on the door and/or rings the bell and announces he/she is with NYCHA's maintenance staff. If there is no answer, employee waits five (5) minutes and knocks/rings again.
- 3. Displays his/her NYCHA identification when someone opens the door.
 - a. If an adult opens the door, confirms the work that is to be done in the apartment.
 - b. If a minor opens the door, asks if an adult is home. **If there are no adults present, the employee must not access the apartment.**

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4. If there is no answer, an adult is not present, or if the employee is unsure if the person opening the door is a minor, the employee informs development office supervisory staff via telephone or radio.
5. A housing assistant, receptionist, or other clerical staff attempts to contact the tenant and/or the tenant's emergency contact(s).
6. If the Property Management office confirms the tenant is not home or cannot contact the tenant or the tenant's emergency contact(s), the employee completes NYCHA form 042.727, *48 Hour Notice for Health and Safety Repairs*, advising the tenant that a worker will return in two (2) business days to perform the work during NYCHA normal business hours.

When the form is completed, the employee:

- a. Takes a photograph of the form and apartment door with a NYCHA-issued handheld device, if available.
 - (1) The devices are defaulted to print photographs with a timestamp. If there is no timestamp visible, the employee takes a photograph with a newspaper if possible, and informs development office supervisory staff that the timestamp is not visible.
 - b. Uploads the photograph to the work order, if possible.
 - c. Leaves the original form under the apartment door.
 - d. Provides a copy of the form to development office supervisory staff by the end of the business day.
 - e. Property Management staff ensures a copy of the form is filed in the tenant's folder. If not possible using the NYCHA-issued handheld device, ensures a copy of the form is attached to the work order in Maximo.
- C. Authorization to Access an Apartment for Scheduled Maintenance and Repairs When a Tenant is Not Home – Second Scheduled Appointment

This section applies to work orders coded as Maximo priority 3, service requests coded as Siebel priority 6, and court-ordered work orders if all listed access dates were exhausted.

1. Two (2) business days after NYCHA form 042.727, *48 Hour Notice for Health and Safety Repairs*, was left, the employee returns to the apartment and follows the same procedure as outlined above in Sections VII.B.1.-VII.B.3, Accessing an Apartment for Scheduled Maintenance and Repairs – First Scheduled Appointment.

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2. If there is no answer, an adult is not present, or the employee is unsure if the person opening the door is a minor the employee informs development office supervisory staff via telephone or radio.
3. A housing assistant, receptionist, or other clerical staff attempts to contact the tenant and/or the tenant's emergency contact(s).
4. If the housing assistant, receptionist, or other clerical staff is unable to contact the tenant or the emergency contact(s), development office supervisory staff:

- a. Reviews the tenant's folder and refers to Attachment B – Tenant Not at Home Property Management Checklist, to make a determination whether to authorize access into the apartment. If the tenant's folder reveals any of the following, development office supervisory staff does not authorize access to the apartment:

- (1) Household member with a disability or life-sustaining equipment

Development office supervisory staff uses his/her discretion to determine if the disability prevents the tenant or household member from providing access to the apartment.

- (2) History or suspicion of illegal activity

- (3) Household member with a history of mental illness

- b. Reviews the work order in Maximo. If Maximo reveals any of the following, development office supervisory staff does not authorize access to the apartment:

- (1) The work order was cancelled in Maximo.

- (2) The repairs would require the tenant to prepare the apartment ahead of time, including but not limited to moving furniture, removing items from a closet or cabinet, or preparing items infested with bed bugs for removal.

- (3) There is no documentation to support that NYCHA form 042.727, *48 Hour Notice for Health and Safety Repairs*, was provided to the tenant during the last visit (e.g. copy of the form on file or notes in Maximo).

- (4) The request to access the unit to complete non-emergency repairs is made less than two (2) business days from when NYCHA form 042.727, *48 Hour Notice for Health and Safety Repairs*, was provided.

- (5) The return date listed on NYCHA form 042.727, *48 Hour Notice for Health and Safety Repairs*, is not the same date on which authorization is being requested to access the apartment.

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(6) Court-ordered repairs

- (a) All of the scheduled access dates listed on the court order are not exhausted.
 - (b) The date that access is being requested for is less than two (2) days after the last scheduled access date.
- c. Reviews the conditions with the employee onsite. If any of the following conditions exist, development office supervisory staff does not authorize access to the apartment:
- (1) Only a minor is present.
 - (2) The presence of a cat or dog.

For more information, see Section VII.E.5., Employee Safety, below.

D. Authorization to Access an Apartment for Emergency Maintenance and Repairs

This section applies to all work orders indicated as priority 7, 8, and 9 in Maximo, and priority 1, 2, and 3 service requests in Siebel. See Attachment C – Siebel and Maximo Emergency Priority Levels.

1. During NYCHA Normal Business Hours

An employee assigned to perform emergency maintenance and repairs in a tenant's apartment during NYCHA normal business hours:

- a. Follows the same procedure as outlined above in Sections VII.B.1.-VII.B.3., Accessing an Apartment for Scheduled Maintenance and Repairs – First Scheduled Appointment.
- b. If there is no answer or an adult is not present, informs development office supervisory staff. A housing assistant, receptionist, or other clerical staff attempts to contact the tenant and/or the tenant's emergency contact(s).

NOTE:	If only a minor is present, development office supervisory staff determines if the situation should be reported to law enforcement.
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- c. If the housing assistant, receptionist, or other clerical staff is unable to contact the tenant or the emergency contact, development office supervisory staff may provide authorization to access the apartment depending on the nature of the emergency.

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2. Outside of NYCHA Normal Business Hours

- a. An employee assigned to perform emergency maintenance and repairs in a tenant's apartment outside of NYCHA normal business hours:

- (1) Follows the same procedure as outlined above in Sections VII.B.1.-VII.B.3., Accessing an Apartment for Scheduled Maintenance and Repairs – First Scheduled Appointment.
- (2) If there is no answer or an adult is not present, requests assistance from FDNY and/or NYPD, whichever is more appropriate for the situation. Employees do not access an apartment outside of NYCHA normal business hours without the presence of the FDNY and/or NYPD.

NOTE:	FDNY and/or NYPD already may be present based on the circumstances of the situation.
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(3) Heat or Steam Emergency

If there is no answer or an adult is not present, the employee visits the apartments above, below, and adjacent to the apartment. If heat and steam conditions are found to be normal in those additional apartments, the employee does not access the apartment.

E. Accessing an Apartment When a Tenant is Not Home

1. Hook Keys

- a. After development office supervisory staff provides authorization to access the apartment, he/she obtains the hook key and a copy of the work order, and brings both to the apartment.
- b. Development office supervisory staff remains at the apartment to oversee the apartment access process.

Please refer to NYCHA Standard Procedure 060:66:3, *Security and Hardware Unit and The Control and Distribution of Development Keys*, for proper storage, handling, and maintenance of hook keys.

2. Removing Locks

- a. During NYCHA normal business hours, if a hook key for an apartment is unavailable or does not open the door, development office supervisory staff retrieves the appropriate materials to remove the apartment door locks, such as a drill.

NOTE:	In cases when a NYCHA-owned lock is removed, NYCHA repairs or replaces the lock at no charge to the tenant.
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- b. During NYCHA normal business hours, if a tenant-owned lock is locked and the tenant cannot be contacted and/or the key for the tenant-owned lock is not available, the employee may remove the lock with authorization from development office supervisory staff.

NOTE:	Under these circumstances, NYCHA is not responsible for repairing or replacing the tenant-owned lock.
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- c. If an employee arrives at an apartment outside of the indicated time, he/she cannot remove a lock to access the apartment.

For information about replacing locks that were removed, see Section VII.E.6., Exiting the Apartment, below.

3. If the situation is an emergency outside of NYCHA normal business hours, the employee removes the lock to access the apartment. The exception is if FDNY gains access to the apartment instead.
4. Accessing the Apartment
 - a. Development office supervisory staff accompanies the employee when accessing an apartment when the tenant is not home. If they are not available, two employees may access the apartment. If they are not available, development office supervisory staff ensures that two (2) employees are present when accessing the apartment.
 - b. The employee places a door tag on the outside of the door to indicate there are NYCHA employees working inside the apartment. See Attachment D – Sample Door Tag.
 - c. The employee opens the door slowly and loudly announces his/her presence while slowly accessing the apartment.
 - d. The employee checks all rooms in the apartment to confirm no one is present.

5. Employee Safety

No work is performed under any of the following conditions. An employee who observes any of these conditions must include it in the notes for the work order, using the NYCHA-issued handheld device or in Maximo.

- a. If at any point an employee is uncomfortable proceeding with work, he/she ceases work, exits the apartment, and notifies development office supervisory staff immediately. See NYCHA Standard Procedure 001:15:3, *Make It Safe Process*, for more information. The employee ensures the door is secured, if able to do so without endangering him or herself.

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- b. NYCHA Standard Procedure 001:97:2, *Workplace Violence Policy*, advises employees to retreat rather than engage in any situation that may lead to potential workplace violence. Employees must act professionally if confronted or provoked and immediately must notify development office supervisory staff and the Office of Safety and Security if they experience or witness:

(1) Imminent or actual workplace violence incident(s)

(2) Victimization by verbal or physical workplace violence behavior

For more information, see NYCHA Standard Procedure 001:97:2, *Workplace Violence Policy*.

NOTE:	If the employee believes the situation to be life threatening, he/she must call 911.
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- c. If an employee observes lease violations; and/or suspicious, unhealthy, unsafe, or illegal conditions and/or activities; he/she informs development office supervisory staff. If a condition or activity requires immediate attention, he/she contacts development office supervisory staff immediately. Development office supervisory staff determines if the situation should be reported to law enforcement and/or if administrative action should be taken.
- d. If an employee observes a person in the apartment and the person is unable or unwilling to grant access, the employee exits the apartment, ensures the door is secure if able to do so without endangering him or herself, and notifies development office supervisory staff.

NOTE:	If the person is a minor, development office supervisory staff determines if the situation should be reported to law enforcement.
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- e. If an employee observes a cat or dog in the apartment that is not secured, he/she exits the apartment, ensures the door is secure if able to do so without endangering him or herself, and notifies development office supervisory staff.

6. Exiting the Apartment

After repairs are completed, the employee:

- a. Leaves a copy of the work order in the apartment, indicating all work that was performed.
- b. Turns over the door tag on the doorknob to indicate work was completed in the apartment, and to indicate if a cylinder was changed. See Attachment D – Sample Door Tag.

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c. Secures the premises.

- (1) If the apartment was accessed using the hook key, the employee uses it to lock the door.
- (2) If a NYCHA-owned lock had to be removed to access the apartment during NYCHA normal business hours, the employee installs a new apartment door lock to secure the door.
- (3) If a tenant-owned lock had to be removed to access the apartment during NYCHA normal business hours, the employee installs a plate cover to cover the space.
- (4) If the apartment was entered outside of NYCHA normal business hours, the employee installs a hasp and padlock.

F. Key Pick-Up for Tenants

1. If a new NYCHA-owned lock was installed, the employee indicates on the door tag that a cylinder was changed.
2. The property manager ensures that:
 - a. A copy of the key is made.
 - b. The duplicate key is made available for an authorized adult household member to pick up from the Property Management office between 8:30 a.m. and 4:30 p.m. on the day the repairs are made.
 - c. If the key is not picked up by 4:30 p.m., it is provided to the nearest Police Service Area or precinct with a list of the family composition. Once proper proof of identification has been provided, the Police Service Area or precinct gives the key only to an authorized adult household member of the apartment.
3. If a hasp and padlock were used to secure the door because work was conducted outside of NYCHA normal business hours, the door tag instructs the resident to contact the CCC to schedule installation of a new lock.
 - a. The employee attaches a tag to the padlock key indicating the apartment address/number and the head of household's name and date of birth. The employee delivers the key to the nearest precinct or police service area for the tenant to pick up.
 - b. The tag instructs the tenant to call the CCC upon receipt of the keys to have the hasp removed and a new lock installed.

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- c. If the appointment is scheduled during NYCHA normal business hours, the lock is installed the same day.
- d. If the appointment is scheduled after NYCHA normal business hours, the lock is installed the next morning.

G. Work Order Close Out

1. If a NYCHA-Owned Lock is Not Changed

The employee follows the standard process using the handheld device to close out the work order. For more information, see Attachment E – Informer Work Management Cheat Sheet.

- a. In the section “Apartment Ad Hoc Details,” the employee selects the option to indicate that apartment access was authorized.
- b. If the work was performed during NYCHA normal business hours, development office supervisory staff ensures the work order is closed within one (1) hour following completion of repairs when accessing an apartment when a tenant is not home.

If the work was performed outside of NYCHA normal business hours, Emergency Services Department supervisory staff ensures the work order is closed within one (1) hour following completion of repairs when accessing an apartment when a tenant is not home.

- c. If the handheld device is not available, the work order must be closed using Maximo.

2. If a NYCHA-Owned Lock is Changed

The employee follows the standard process using the handheld device to add the required details to the work order. The employee does **not** close the work order.

When a NYCHA-owned lock is changed, development office supervisory staff or Emergency Services Department supervisory staff is required to close out the work order using Maximo.

- a. In the section “Apartment Ad Hoc Details,” development office supervisory staff:
 - (1) Selects the option to indicate that apartment access was authorized.
 - (2) Selects the option to indicate the NYCHA-owned lock was changed.
- b. If the work was performed during NYCHA normal business hours, development office supervisory staff ensures the work order is closed by the end of the business

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day following completion of repairs when accessing an apartment when a tenant is not home.

If the work was performed outside of NYCHA normal business hours, Emergency Services Department supervisory staff ensures the work order is closed within one (1) hour following completion of repairs when accessing an apartment when a tenant is not home.

- c. If an authorized adult household member does not pick up the key from the Property Management Office by the end of the business day, development office supervisory staff must enter notes to provide the name, street address, and telephone number of the Police Service Area (PSA) or police precinct to which the key will be delivered. The Customer Contact Center (CCC) will provide this information to the tenant.
- d. If the handheld device is not available, the required details must be added using Maximo.

VIII. OUTPUTS, REPORTS, AND RECORDKEEPING

A. Outputs

Completed work orders for repairs related to leaks, mold, and lead-based paint when tenants are not home.

B. Reports

Development office supervisory staff can monitor access rates for repairs related to leaks, mold, and lead-based paint over a specific time frame by running a query in the Data Warehouse.

1. Data Warehouse

- a. Select "GM Reports"
- b. Select "Operations Reports"
- c. From the drop-down menu, select "Productivity Report"
- d. Choose a Craft, Work Unit, or Work Location and click "Submit"
- e. Use the scroll bar at the bottom of the screen to scroll across to the tenant not home column ("Pct Not Home")

C. Recordkeeping

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1. Copies of NYCHA Form 042.727, *48 Hour Notice for Health and Safety Repairs*, are kept in tenants' folders at the developments.
2. Copies of work orders are kept in tenants' folders at the development, if a handheld device was unavailable.

IX. TRAINING REQUIREMENTS

The Human Resources Department Professional Development and Training Unit, in partnership with Property Management departments, provide applicable new supervisors and employees with training on accessing public housing apartments to address health and safety issues related to leaks, mold, and lead-based paint when tenants are not home. Property Management provides refresher training.

X. PERFORMANCE METRICS

Measure of annual tenant not home rate for repairs related to leaks, mold, and lead-based paint.

XI. NON-COMPLIANCE

Failure to comply with the requirements of this Standard Procedure may result in disciplinary actions.

XII. FORMS

NYCHA form 042.727, *48 Hour Notice for Health and Safety Repairs*

XIII. WORKFLOW

This section intentionally left blank.

XIV. REVIEW/REVISION HISTORY PAGE

ACCESSING PUBLIC HOUSING APARTMENTS WHEN TENANT NOT HOME TO ADDRESS DEFICIENCIES RELATED TO LEAKS, MOLD, AND LEAD-BASED PAINT

040:17:3

This section intentionally left blank.

Review/ Revision	Review/ Revision Date	Sections Amended

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XV. APPENDICES

ATTACHMENT A – CUSTOMER CONTACT CENTER SCRIPT

Customer Contact Center Script for emergency appointments (Maximo 7, 8, and 9; Siebel 1, 2, and 3):

A maintenance worker will be at your apartment in the next 24 hours. Please make sure you or another adult over 18 is home. Because this is an emergency, if no one answers the door, we will exercise our right to go into your apartment to make the repair. That means we may need to remove one or more locks installed in your apartment.

Please provide me with the best way to reach you over the next 24 hours. Also, please confirm the contact information that we have on file for you.

Once again, please make every effort to be home for the next 24 hours. If the repair(s) in your apartment is (are) no longer required, please call the Customer Contact Center at (718) 707-7771 to cancel the work order.

Customer Contact Center Script for scheduled appointments:

A maintenance worker will arrive at your apartment on <<DATE>> between the hours of [] and []. Please make every effort to be at home or make sure another adult over the age of 18 is at your apartment at the time of your appointment. Otherwise, we will need to reschedule which will delay us in addressing this issue.

If you are unable to keep your appointment or if the repair(s) in your apartment is (are) no longer required, you must call the Customer Contact Center at (718) 707-7771 at least 24 hours in advance to reschedule or cancel your appointment. Finally, please confirm the contact information that we have on file for you.

Script for RoboCall reminders for scheduled appointments:

A maintenance worker will be at your apartment on <<DATE>> between the hours of [] and [] to make the repairs you scheduled. You or another adult over age 18 must be home. If you miss the appointment, we will leave a written notice with a new appointment time under your door.

If you miss your second appointment, NYCHA will use its right to enter your apartment to make repairs. That means we may need to remove one or more locks installed in your apartment.

If you can't keep your appointment or no longer need repairs, you must call the Customer Contact Center at (718) 707-7771 at least 24 hours in advance to reschedule or cancel your appointment.

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ATTACHMENT B – TENANT NOT AT HOME PROPERTY MANAGEMENT CHECKLIST

Prior to authorizing access into an apartment, development office supervisory staff (property managers, assistant property managers, property maintenance supervisors, and assistant property maintenance supervisors) must answer the following checklist questions:

1. Is there a household member with a disability or life-sustaining equipment?
2. Is there a history or suspicion of illegal activity in the apartment?
3. Is there a household member with a history of mental illness?
4. Is the work order closed in Maximo?
5. Do the repairs require the tenant to prepare the apartment ahead of time?
6. Was NYCHA form 042.727, *48 Hour Notice for Health and Safety Repairs*, provided to the tenant during the last visit?
7. Is the date of the request to access the apartment to complete non-emergency repairs at least two (2) business days from the date on which NYCHA Form 042.727, *48 Hour Notice for Health and Safety Repairs*, was provided?
8. Is the return date listed on NYCHA form 042.727, *48 Hour Notice for Health and Safety Repairs*, the same date on which authorization is being requested to access the apartment?
9. Is this a court-ordered work order with listed scheduled access dates?
 - a. If so, have all of the listed access dates been exhausted?
 - b. Is the date on which authorization is being requested to access the apartment at least two (2) days after the last listed access date?
10. Is there a minor present?
11. Is there a dog or cat present?





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ATTACHMENT C – SIEBEL AND MAXIMO EMERGENCY PRIORITY LEVELS

<u>Siebel Service Priority Level</u>	<u>Maximo Priority Level</u>	<u>Response Time</u>	
1	9	Respond within 1 hour	EMERGENCY
2	8	Correct within 10 hours	EMERGENCY
3	7	Correct within 24 hours	EMERGENCY
4	5	Correct within 48 hours	
5	4	Correct within 10 days	
6	3	As scheduled	
7	1	Waiting on resources or approval	

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ATTACHMENT D – DOOR TAG

FRONT	BACK
 NYCHA REPAIRS 	 NYCHA REPAIRS 
NYCHA Staff Working Inside	We were working in your home today
<hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	<input type="checkbox"/> If this box is checked, NYCHA staff changed your lock. Please call the Customer Contact Center at 718-707-7771 for assistance. <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>

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ATTACHMENT E – INFORMER WORK MANAGEMENT CHEAT SHEET



Informer Work Management (iWM) Cheat Sheet

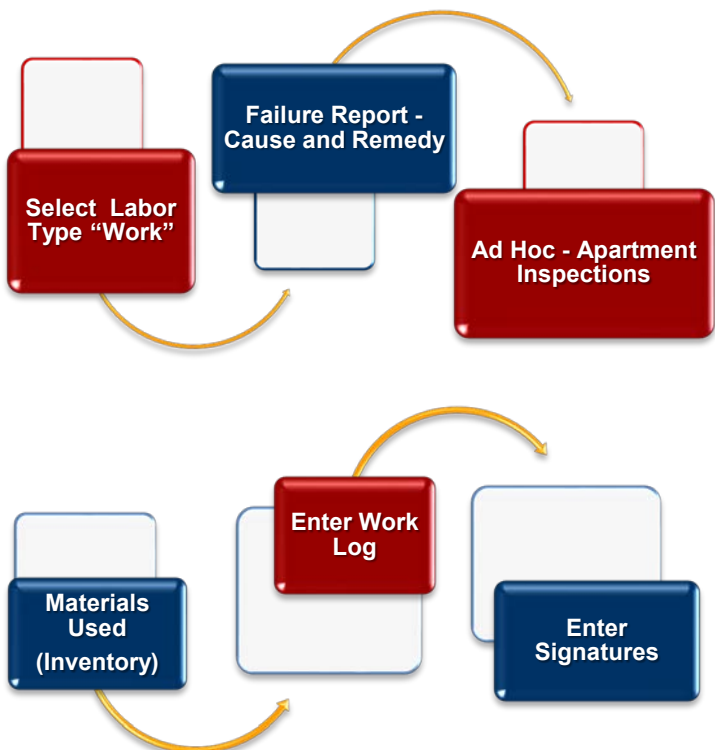


Before you begin work...



- 1) **Select The Work Order** (tap on it to go to Work Order Details).
- 2) You can now view the work order's Details, Work Logs, Attachments and Related work orders.
- 3) **ALWAYS Start Labor Timer first** to start your time.

Doing the work...



- 1) Go to **LABOR Type** and tap on the correct labor **Type**.
 - **Work** = You did the whole job, with maybe a helper or two.
 - **Work with Sequence** = You did some of the job and will be creating a child Work Order to sequence out the rest of the work.
 - **No Work with Sequence** = You are just verifying the job and will be creating a child Work Order to sequence out the rest of the work.
 - **Resident Not Home**
 - **Condition Not Found**
- 2) **FAILURE REPORT:** input the **Cause** and **Repair Code** after you have completed the onsite work.
- 3) **AD HOC INSP:** answer Ad Hoc Apartment Inspection Details (this can be done before or after you do the onsite work) – make sure to **SAVE** at the end AFTER you have reviewed your data entry.
 - **Satisfactory:** there is no issue
 - **Unsatisfactory:** there is an issue but you were unable to fix it. *An open Work Order will be created.
 - **CAT(Corrective Action Taken):** you fixed the issue. A closed Work Order will be created, so you get credit for the fix.
- 4) Enter Materials Used

5) **WORK LOGs:** enter any notes about this job OR view any existing work logs/notes.

6) Add **Photo Attachment** (if needed)

7) **SIGNATURES:** add the **Resident** and **Worker** signatures

Ending the work...



1) **Labor:** Add additional helper/worker in LABOR tab ONLY if needed. Need to input Type for this too. When you have finished doing your work and inputting data, **Stop Labor Timer.**

*An IN PROGRESS labor record for the worker will be shown until the labor timer is stopped.

2) **Edit any missing Validations.**

➤ Create a **Child Work Order** only if additional work is needed for the same issue/problem. This can only be done after timer has been stopped and Labor Type has been input:

Enter Description, Failure Class, Problem Code, Craft and Responsible Scheduler: SIEBEL for child Work Order.

* *If there's completely new issue, the resident should call CCC to have the parent work order created.*

3) **CLOSE** the Work Order by tapping on the Gray Bar. It will then disappear from your list.

4) **Check related Work Orders.**

- You will see all of the related Work Orders for that same apartment.
- If you need to start on a related Work Order. Select it and start process over.
- If you are done, return to the Work Order List Screen.

Some things to remember...

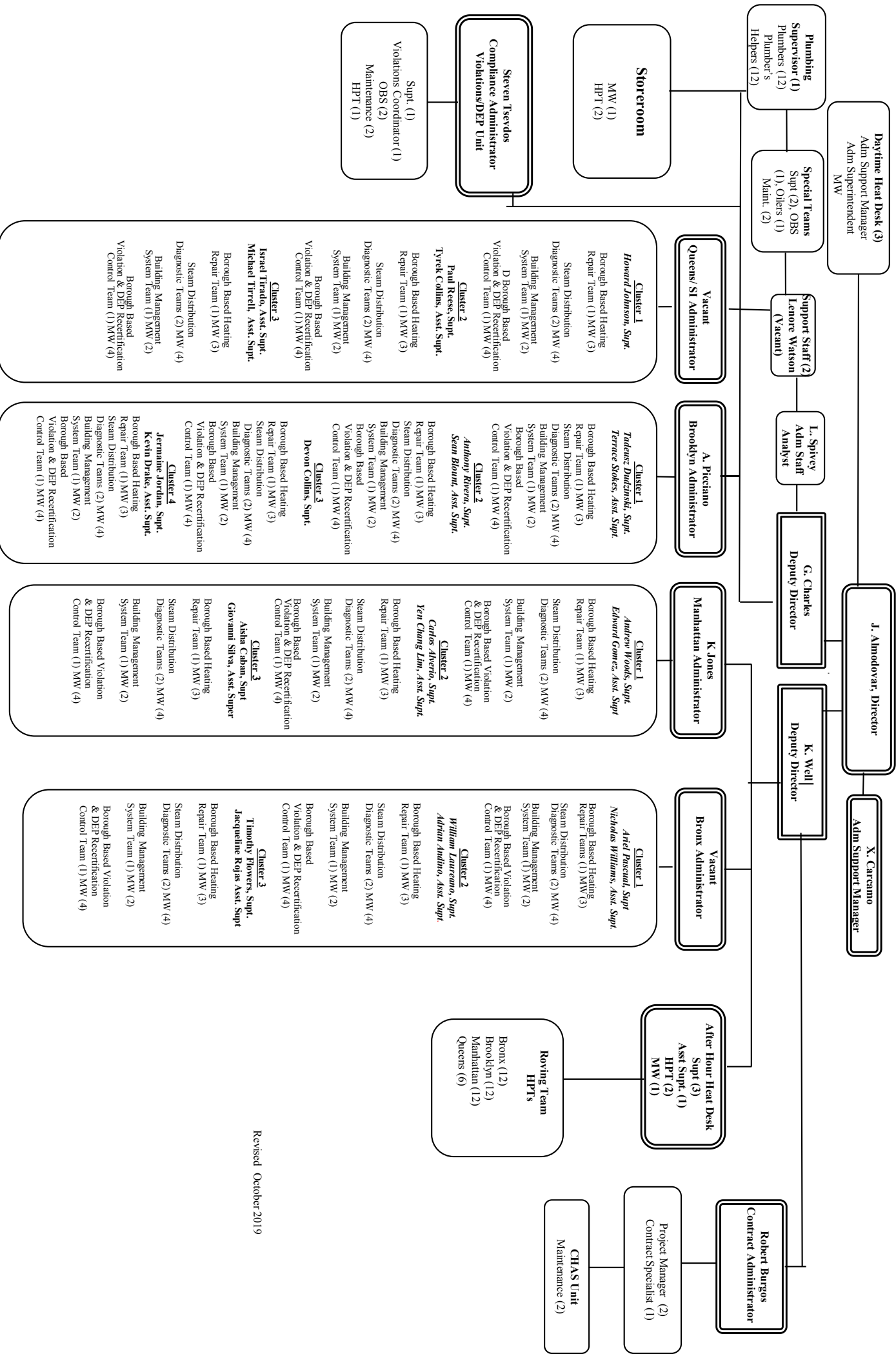
- ✓ This job aid shows the work flow of a typical Maintenance worker's work order.
- ✓ Once you start the timer on a work order, you are in iWM's "Stepper". You answer questions on the screen and it will bring you to the next step of the work flow.
- ✓ The work flow may be different for each work order, depending how you answer the questions on each screen.
- ✓ When adding a work log or labor record, be aware of the labor type it's using for that entry. If they were entered as Work and you had chosen Tenant Not Home, as the labor type for this work order, it will ask you for a failure and repair code, even though no work was done.

- **Ad Hoc** is also known as a safety inspection.
 - If the “*Bed Bugs?*” ad hoc question is answered *YES*, an open exterminator work order will be created for that apartment.
 - If *CAT*(Corrective Action Taken) is answered to any ad hoc question, a closed work order, with you as the laborer, will be created, giving you credit for the repair.
 - If *Unsatisfactory* is answered to any ad hoc question, an open work order will be created for that repair.
- If there was any work performed, including verification, you should choose Work, Work With Sequence or No Work With Sequence as the labor type.
- Your work order will not be updated in Maximo if you are connected to WIFI
- Every time you start and stop the timer, it will add a new labor record. *Your labor time must be more than a minute or you’ll get an error(Blue Bar).*
- **Materials:** You cannot add new materials from the device. The storeroom person has to do that. The “Add Materials” button is for adding what you used from your personal bin.
- **Need to Refresh a Screen?:** “Pull Down” swipe
- **Roles and Viewing:** iWM knows your role. What you can see and do is specific to your role.
- “**My Assigned Work Orders**” is the default screen when you first log into iWM. If you don’t have any work orders assigned to you, you’ll see “**Unassigned Work Orders**”. Supervisors and Skilled trades will also see “**Assigned Work Orders**”.
- The **Signatures** screen defaults to landscape.
- A combination of the Labor Type chosen and the work order type **determines the work flow of a work order.**

Root Cause Failure Analysis (RCFA) Process

Step	Description	Decision Point	Result
1	Heating Oversight Team Administrator(HOTA) reviews outage work order details	N/A	N/A
2	Is there enough information in the work order to initiate an RCFA?	Yes	Go to step 3
		No	Go to step 2a
2a	HOTA contacts the Heating Management Services Department (HMSD) designee for additional details	N/A	N/A
3	HOTA assigns an Heating Oversight Team Specialist (HOTS) to lead the RCFA Team and appoints appropriate HOTS to RCFA	N/A	N/A
4	The HOTA requests HMSD and Quality Assurance (QA) appoint appropriate personnel to the RCFA team. If necessary, additional departments (ex. Emergency Services, Technical Services, Property Management) will be requested to join the RCFA Team by the HOTA.	N/A	N/A
5	RCFA Team reviews details of outage, SP 060:63:1 and any other guiding documents to develop the problem statement.	N/A	N/A
6	Has enough information been gathered to conduct an RCFA?	Yes	Go to step 7.
		No	Go to step 6a
6a	RCFA Team requests and secures necessary data/facts from HMSD designee.	N/A	N/A
7	RCFA Team Lead develops RCFA Plan and submits to HOTA for review and approval	N/A	N/A
8	HOTA reviews plan and approves?	Yes	Go to step 9
		No	Return to step 7
9	RCFA Team conducts analysis (document review, field visit, employee interviews) and documents findings	N/A	N/A
10	RCFA Team Lead synthesizes findings and drafts written report, identifying the root cause and corrective action recommendations, for HOTA review and approval.	N/A	N/A
		N/A	N/A
11	HOTA approves?	Yes	Go to step 12
		No	Return to step 10
12	HOTA submits RCFA Report to EHS VP for review and approval	N/A	N/A
13	EHS VP approves	Yes	Go to step 14
		No	Return to step 12
14	EHS VP submits RCFA Report to SVP Support Services for feedback and approval	N/A	N/A
15	SVP Support Services approves?	Yes	Go to step 16
		No	Return to step 13
16	Completed RCFA Report posted to HMSD share drive by HMSD Director	N/A	N/A

HEATING MANAGEMENT SERVICES DEPARTMENT ORGANIZATION CHART

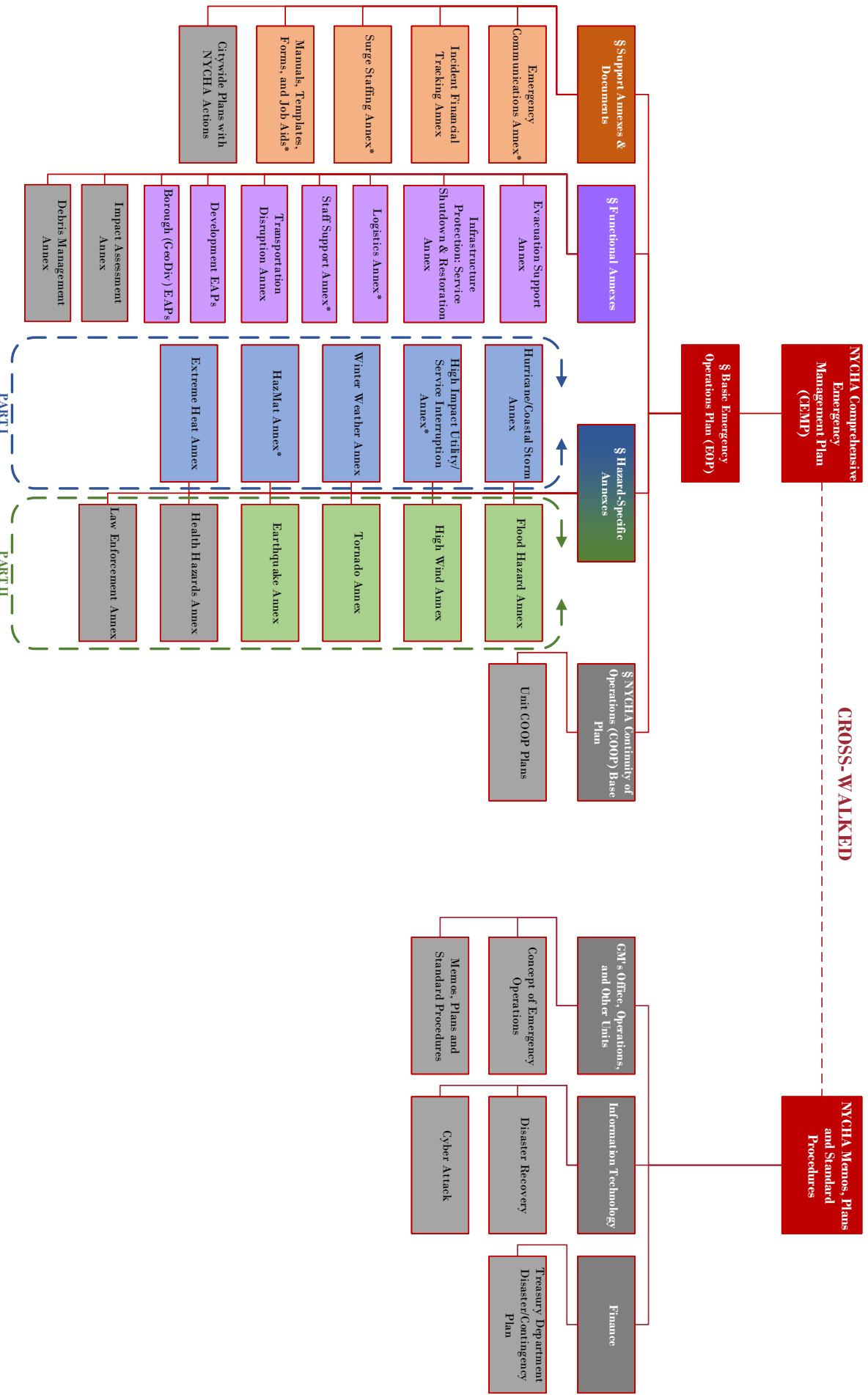


44 Developments Receiving new BMS as per the Agreement

Development	TDS	Start Date	Planned Completion Date
Whitman	514	5/14/18	10/30/19
Vladeck	061	3/4/19	10/30/19
Vladeck II	146	3/4/19	10/30/19
303 VERNON AVENUE	156	2/18/19	12/31/19
BROWNSVILLE	016	5/24/19	12/31/19
ROOSEVELT II	177	5/20/19	12/31/19
FIorentino PLAZA	207	5/15/19	12/31/19
UNITY PLAZA (SITES 17,24,25A)	240	5/15/19	12/31/19
LONG ISLAND BAPTIST HOUSES	276	4/29/19	12/31/19
VAN DYKE I	061	6/15/19	12/31/19
VAN DYKE II	146	8/15/19	12/31/19
WOODSON	182	9/16/19	12/31/19
LOW HOUSES	169	9/30/19	12/31/19
UNITY PLAZA (SITES 04-27)	261	5/26/19	12/31/19
COOPER PARK	069	5/5/19	12/31/19
PINK	089	8/8/19	12/31/19
KINGSBOROUGH	010	6/26/19	12/31/19
KINGSBOROUGH EXTENSION	161	7/8/19	12/31/19
CYPRESS HILLS	070	7/29/19	12/31/19
SUMNER	073	6/10/19	12/31/19
ROOSEVELT I	135	5/20/19	12/31/19
HUGHES APARTMENTS	168	8/3/19	12/31/19
TILDEN	096	4/2/19	12/31/19
GLENMORE PLAZA	171	4/25/19	12/31/19
HOWARD	072	2/5/19	12/31/19
WILLIAMSBURG	002	2/20/19	12/31/19
ASTORIA	026	6/17/19	3/15/20
CAMPOS PLAZA II	286	6/11/19	12/31/19
CAREY GARDENS	166	8/2/19	4/28/20
CARLETON MANOR	164	7/12/19	12/31/19
CONEY ISLAND	094	9/19/19	12/31/19
CONEY ISLAND I (SITE 1B)	239	5/29/19	12/31/19
CONEY ISLAND I (SITES 4 & 5)	216	8/19/19	12/31/19
EAST RIVER	009	6/11/19	12/31/19
GOWANUS	025	4/30/19	12/31/19
GRAVESEND	068	7/24/19	3/27/20
HABER	142		6/30/20
LA GUARDIA	076	5/25/19	12/31/19

44 Developments Receiving new BMS as per the Agreement

Development	TDS	Start Date	Planned Completion Date
LA GUARDIA ADDITION	152	7/18/19	12/31/19
LOWER EAST SIDE REHAB (GROUP 5)	292	5/19/19	12/31/19
RANGEL	037	5/8/19	12/31/19
REDFERN	055	8/8/19	3/28/20
SMITH	027	5/25/19	12/31/19
TWO BRIDGES URA (SITE 7)	266	6/11/19	12/31/19



CROSS-WALKED

NYCHA Comprehensive Emergency Management Plan (CEMP)

\$ Basic Emergency Operations Plan (EOP)

\$ Hazard-Specific Annexes

\$ NYCHA Continuity of Operations (COOP) Base Plan

GMT's Office, Operations, and Other Units

Information Technology

Finance

NYCHA Memos, Plans and Standard Procedures

Concept of Emergency Operations

Disaster Recovery

Treasury Department Disaster/Contingency Plan

Emergency Communications Annex*

Incident Financial Tracking Annex

Surge Staffing Annex*

Manuals, Templates, Forms, and Job Aids*

Citywide Plans with NYCHA Actions

Evacuation Support Annex

Infrastructure Protection: Service Shutdown & Restoration Annex

Logistics Annex*

Staff Support Annex*

Transportation Disruption Annex

Development EAPs

Borough (GovDiv) EAPs

Impact Assessment Annex

Debris Management Annex

Hurricane/Coastal Storm Annex

High Impact Utility/Service Interruption Annex*

Winter Weather Annex

HazMat Annex*

Extreme Heat Annex

Flood Hazard Annex

High Wind Annex

Tornado Annex

Earthquake Annex

Health Hazards Annex

Law Enforcement Annex

Unit COOP Plans

PART I

PART II

Support Annexes & Documents

Emergency Communications Annex

- Internal Communications
 - Notifications and Alerts
 - Radio Infrastructure
- External Communications
 - Notifications and Alerts

Surge Staffing Annex

- Flexible Staff Hours
- Duty Deferral and Staff Reallocation
- Staff Augmentation
- Temporary Emergency Labor Program

Manuals, Templates, Forms, and Job Aids

- Situation Room (Sit Room)/Emergency Operations Center (EOC) Activation Manual
- Incident Action Plan (IAP) Template
- Incident Situation Report (Sit Rep) Template
- Incident Forms
- Incident Checklists
- Development EAP Template
- Borough (Geo/Div) Emergency Action Plan (EAP) Template

Functional Annexes

Logistics Annex

- Equipment
- Material

Staff Support Annex

- Dorrning
- Feeding

Hazard-Specific Annexes

High Impact Utility/Service Disruption Annex

- Electricity
- Elevators
- Gas
- Heat
- Hot Water
- Potable Water
- Waste Removal

HazMat Annex

- Explosive
- Flammable
- Combustible
- Poisonous
- Radioactive