

WATSON HOUSES

Property Assessment and Capital Needs



January 2025

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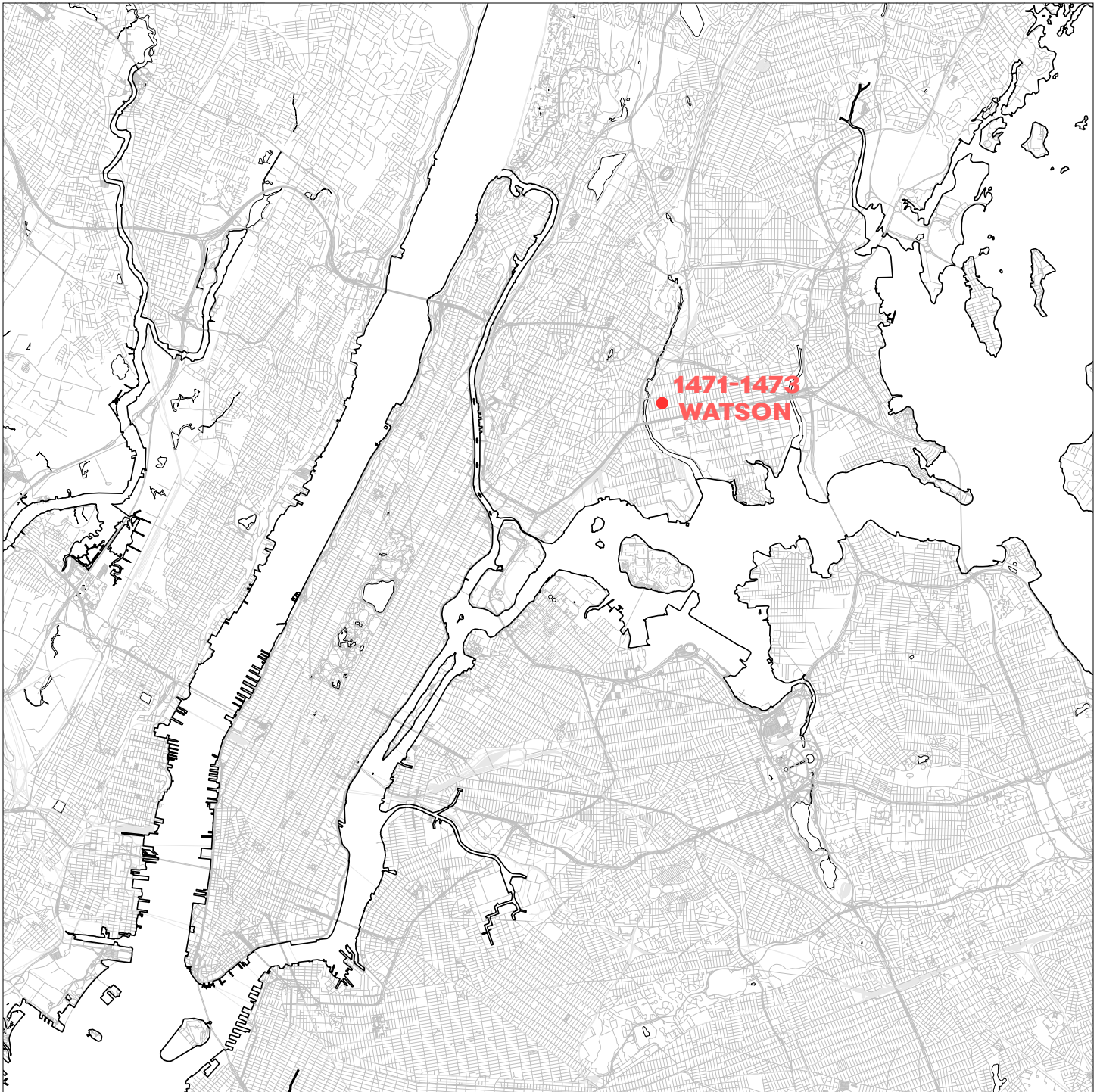
Property Assessment and Capital Needs
January 2025

*With support from the
Altman Foundation*



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MAP OF NEW YORK CITY

Executive Summary

This Property Assessment Report outlines key issues, observations, and subsequent design opportunities on behalf of the residents of Watson Houses.

The Watson Houses, located in Soundview, Bronx, at 1471 and 1473 Watson Ave, face significant deterioration across all mechanical and structural systems, with many components well beyond their intended lifespan. At the invitation of the Community Service Society of New York (CSS), Peterson Rich Office (PRO) and ERA Architects, Inc. collaborated with the Tenant Association Board to compile this report. Our goal is to provide a shared framework to guide residents towards essential renovations, that enhance safety, comfort and quality of life.

Existing Conditions

Watson Houses, constructed in 1970, is a 96-unit residential building bordered by Evergreen Avenue and Colgate Avenue. It serves approximately 140 residents, primarily senior citizens, many of whom have longstanding ties to the community. The building is surrounded by high traffic roads and interstates. The closest subway train station is not accessible. Soundview as a Heat Vulnerability Index of 4 out of 5, identifying the neighborhood as severely at risk for heat related illness and death.

Project Framework

This scoping exercise was guided by a commitment to improve living conditions through targeted, high-priority interventions. During this process, transparent collaboration with the Watson Community has been essential. The recommendations in this report are a result of resident feedback as much as they are developed from site observations. The scoping process followed a multi-phase engagement approach:

Tenant Association Board Meetings: Initial introduction and discussions with resident leadership to develop a working relationship.

Community Engagement: Outreach through Community Day events and door-to-door visits with multiple feedback surveys.

Site Tours: Comprehensive walk-throughs with residents, which included access to interior spaces and occupied units.

Property Assessment Review: Meeting with residents to validate findings/assumptions from site visits and surveys and establish renovation priorities.

Analysis and Recommendations

Overall, the Watson Houses require comprehensive modernization. Comprehensive modernization of a property entails undertaking major renovations across building exteriors, multiple building systems, building and apartment interiors, and holistic site and grounds improvements through a single, integrated project. This document outlines an order of magnitude for repair, identifying and elaborating on the most essential scope items to best guide decision making,

The building's hierarchy of needs is guided by three fundamentals. First, the improvement of resident health and safety. Above all, it is paramount that any renovation addresses outstanding health and safety concerns. Second, improvements of indoor comfort. Finally, an enhancement of common spaces that foster camaraderie and companionship.

Health and Safety - Domestic Water, Waterproofing and Security

Like many buildings of its age and typology, Watson suffers from severely deteriorated mechanical systems that have long surpassed their useful life. As these essential systems degrade, the risks to residents' health and safety grow.

The domestic water system, in particular, poses a significant threat to the well-being of residents. Persistent standing water in the cellar and repeated leaks have led to flooding in common areas. This chronic dampness fosters the growth of mold, which poses serious health risks to occupants. Beyond these environmental hazards, there is an equally urgent concern for physical safety. Unsecured doors often allow trespassers to access the building, where they engage in illicit activities, intrude into unoccupied units, and even access the roof. To address these critical issues, we propose three comprehensive strategies to enhance the health and safety of Watson residents:

The most urgent intervention is the **replacement of all domestic water and sanitary piping**, including risers, branches, and mains. Upgrading these systems is the most effective way to eliminate recurring leaks and flooding, ensuring a more reliable and safe water infrastructure for the building.

Secondly, we would protect against moisture infiltration on the building exterior with **improved waterproofing systems and exterior maintenance**. The solution requires a multifaceted approach that is robust and varied. We recommend installing updated waterproofing and damp-proofing systems for the building's foundation, undertaking critical repairs and maintenance of the brick facade to address deterioration, resealing or replacing windows to prevent water penetration, and renovating the roof membrane to create a durable, watertight barrier.

To complete the health and safety recommendations, we advocate for **strengthening security measures** to bring all residents peace of mind knowing they are protected within their home. Such measures include replacing the existing lobby doors with a more robust system, installing a modern intercom system to enable residents to control building access, and introducing on-site security to deter trespassers and maintain a safe living environment.

Indoor Comfort - Ventilation, Heating and Cooling, and Waste Management.

Watson's indoor comfort is significantly hindered by outdated ventilation, heating, and waste management systems — a common issue in NYCHA masonry buildings from the early 1970s. Addressing these challenges requires comprehensive upgrades across multiple systems to improve air quality, temperature control, and sanitation for residents.

The existing ventilation system, which relies on casement windows and rooftop vent stacks, is insufficient for ensuring proper airflow. Limited fresh air intake and under performing vents have led to poor air quality throughout the building, negatively affecting residents' health and comfort. Improvements should include **cleaning and restoring the rooftop vents, integrating energy recovery ventilators (ERVs) for more efficient mechanical ventilation, and modifying or replacing windows** to enhance fresh air circulation and reduce moisture buildup in critical areas such as bathrooms, kitchens, and living spaces.

The heating system, powered by an aging fuel oil boiler, has also reached the end of its useful life (EUL). Corrosion and inefficiency contribute to frequent overheating, inconsistent temperature control, and noxious odors. **Replacing the heating and domestic water boilers with a modern, energy-efficient system** would provide reliable temperature regulation, reduce energy waste, and improve residents' overall well-being.

The building's waste management infrastructure similarly requires modernization. Outdated trash chutes frequently clog, and the lack of recycling or composting facilities compounds the problem. Enhancements should include **upgrading the trash chutes to reduce blockages, introducing accessible waste disposal stations on each floor with options for recycling and composting, and replacing the obsolete compactors in the cellar with more efficient models.** These measures would ensure cleaner, more sanitary conditions for residents while encouraging sustainable waste practices.

Common Spaces - Community Room and Lobby

The previously outlined recommendations for Health, Safety and Indoor Comfort are critical to safeguarding the physical and mental well-being of Watson residents, and have been prioritized accordingly. This final category of proposals focuses on enhancing personal well-being by improving shared spaces that nurture a sense of community.

The Community Room, while actively used, is currently inadequate due to the absence of essential amenities such as secure storage and functional electrical outlets. **We propose a complete renovation to expand the space and transform it into a clean, inviting environment suitable for professional services, family events, and tenant association meetings.**

Similarly, the existing lobby benefits from ample natural light but falls short in meeting the functional requirements of a modern entryway. It lacks sufficient artificial lighting and dedicated package and parcel storage. **Upgrades to the lobby are recommended to modernize its design, programming, and finishes,** creating a welcoming and elegant space that enhances the daily experience for both residents and guests.

Capital Improvements and Pathways

The final section of this report evaluates the capital investments required to restore Watson to a state of good repair. Projections are derived from the NYCHA Property Needs Assessment 2023 and have undergone review by our design team. These figures are intended as preliminary estimates, providing a rough order of magnitude for each repair scope. A comprehensive cost assessment has not yet been conducted, and further investigation will be necessary to refine these estimates as the project progresses.

Watson is owned and operated by the New York City Housing Authority and funded through Section 9 vouchers. This report outlines potential funding avenues, taking into account resident preferences.

This report remains neutral on which renovation pathway should be pursued, presenting these options to support future resident-led discussions. This inclusive and agnostic booklet suggests potential strategies to ensure they are thoroughly considered, empowering residents towards informed decision making that align with their priorities and needs.

Using This Report and Project Disclaimer

This report represents a framework for modernization, repair, and future development at the Watson Houses with the goal to address both the quantifiable physical needs of the aging building and the more qualitative needs of its residents. During the preparation of this report, the team conducted site tours in partnership with residents, providing valuable insights into the property's conditions. We recommend that the landlord and qualified industry professionals conduct further assessments to verify and build upon these findings, establishing a robust and accurate evaluation of the proposed scope of work. Continued communication with residents will be essential to the success of Watson's redevelopment. It is the intent that this report will serve as a foundation for ongoing collaboration, allowing the scope of work to be refined and expanded through future workshops and engagement sessions.

This document presents an assessment based on conditions observed during limited walk-throughs. No guarantees are made regarding the present or future state of the property. PRO, ERA, and CSS assume no liability for any visible, non-visible, or inaccessible conditions during the observation period, nor for any changes to the property occurring before or after these evaluations.



About the Authors

PETERSON RICH OFFICE

Peterson Rich Office (PRO) is a Brooklyn-based architecture and design practice recognized for its cultural, publicly engaged, and social impact projects. Through an ongoing 8-year partnership with the New York City Housing Authority, PRO has engaged with public housing renovations in all capacities — creating and conducting inclusive community design exercises that provide critical insights and recommendations, property assessments booklets that capture the rehabilitation needs of a particular site, and design reviews of construction documentation for projects receiving critical repairs through integrated delivery processes. In addition to design support, PRO provides technical assistance through decarbonization studies use assist NYCHA construction managers on Local Law and NYCECC compliance.



ERA Architects Inc. (ERA) is an award-winning architecture and planning firm focused on conservation through reactivation. Creative adaptive reuse strategies and building conservation techniques are a core expertise of the firm. Over the 30 years of practice, ERA has expanded their in-house expertise to encompass a broad range of consulting, design, and advocacy work. ERA is known for its groundbreaking work in net zero retrofits, such the Ken Soble Tower, which is the largest Passive House retrofit in North America. ERA has led the deep energy retrofit of more than 1500 units of affordable housing across Ontario, and has prepared planning documents for many thousands more



The Community Service Society of New York (CSS) was established in 1843 to promote economic opportunity and champion an equitable city and state. Working with a broad coalition of New Yorkers—from community members, activists, and volunteers to government officials, civic leaders, and grassroots organizations— CSS has fought for what matters most, especially to those facing economic insecurity or racial injustice. For decades, CSS has worked to educate, empower, and organize public housing and voucher-holding communities to advocate and preserve affordable housing. As the climate crisis disproportionately impacts these communities, CSS is committed to ensuring equitable, resilient, and environmentally healthy living for low-income New Yorkers.

We would like to thank the Altman Foundation for their generous support of our work.



VIEW OF WATSON BACKYARD FACADE

SITE OVERVIEW

Neighborhood and Context



View from Roof of Watson



Site Overview

Neighborhood and Context

Tax Lot Summary

Block: 3737

Lot: 1

Address: 1471 Watson Ave, Bronx, New York. 10472

Zoning District: R6

Owner: NYC Housing Authority

Intersecting Zoning Districts: Transit Zone, FRESH Zone, Coastal Zone

Lot Information

Land Use: Multi-Family Elevator Buildings

Lot Area: 40,000 sq ft

Lot Frontage: 200 sq ft

Lot Depth: 299 sq ft

Neighborhood Information

Community District: Bronx Community District 9

City Council District: Council District 17

School District: 08

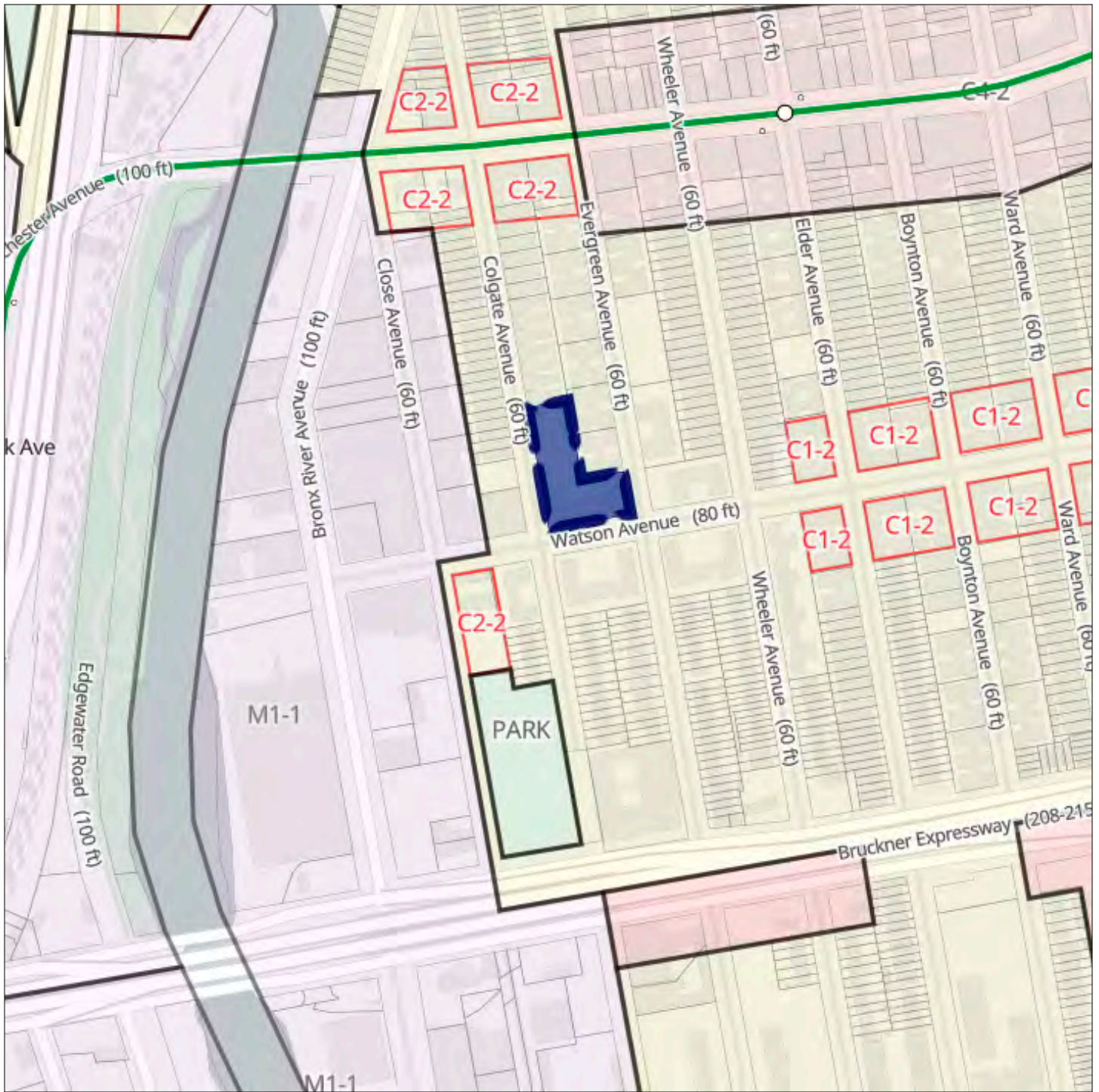
Police Precinct: 43

Fire Company: L054

Sanitation Borough: 2

Sanitation District: 09

Sanitation Subsection: 1A



WATSON ZONING MAP

Site Overview

Neighborhood and Context

Building Metrics

Completion Date: 1970

Units: 94

Population: 144

Residential Buildings: 1

Number of Floors: 6

Gross Floor Area: 79,600 sq ft

R-6 Zoning: Medium Density Non-Contextual Residence District

Allowable FAR Range: 0.78 (single story) - 2.43 (multistory)

Open Space Ratio Range: 27.50-37.50

DU Factor: 680

Parking Restrictions: 70% DU (Basic), 25% DU (IRHU)

Exposure Plane: Starts at 60 feet

Parking: 25% of du for IRHU

Built FAR: 2.0

Built OSR: 33.59

Unused FAR: 17,600 sf

KEY:



FIG 01: TRANSIT AND CONNECTIONS

The Watson Houses are bounded by the Bronx River on the west, Westchester Ave to the north, Bronx Parkway to the east, and US 278 highway on the south, all of which restrict pedestrian circulation to Soundview and surrounding neighborhoods. The site is accessible by the elevated platform of the 6 train at Elder Ave and the BX27, BX4/4A, and BX5 bus service. Elder Ave does not have an elevator.

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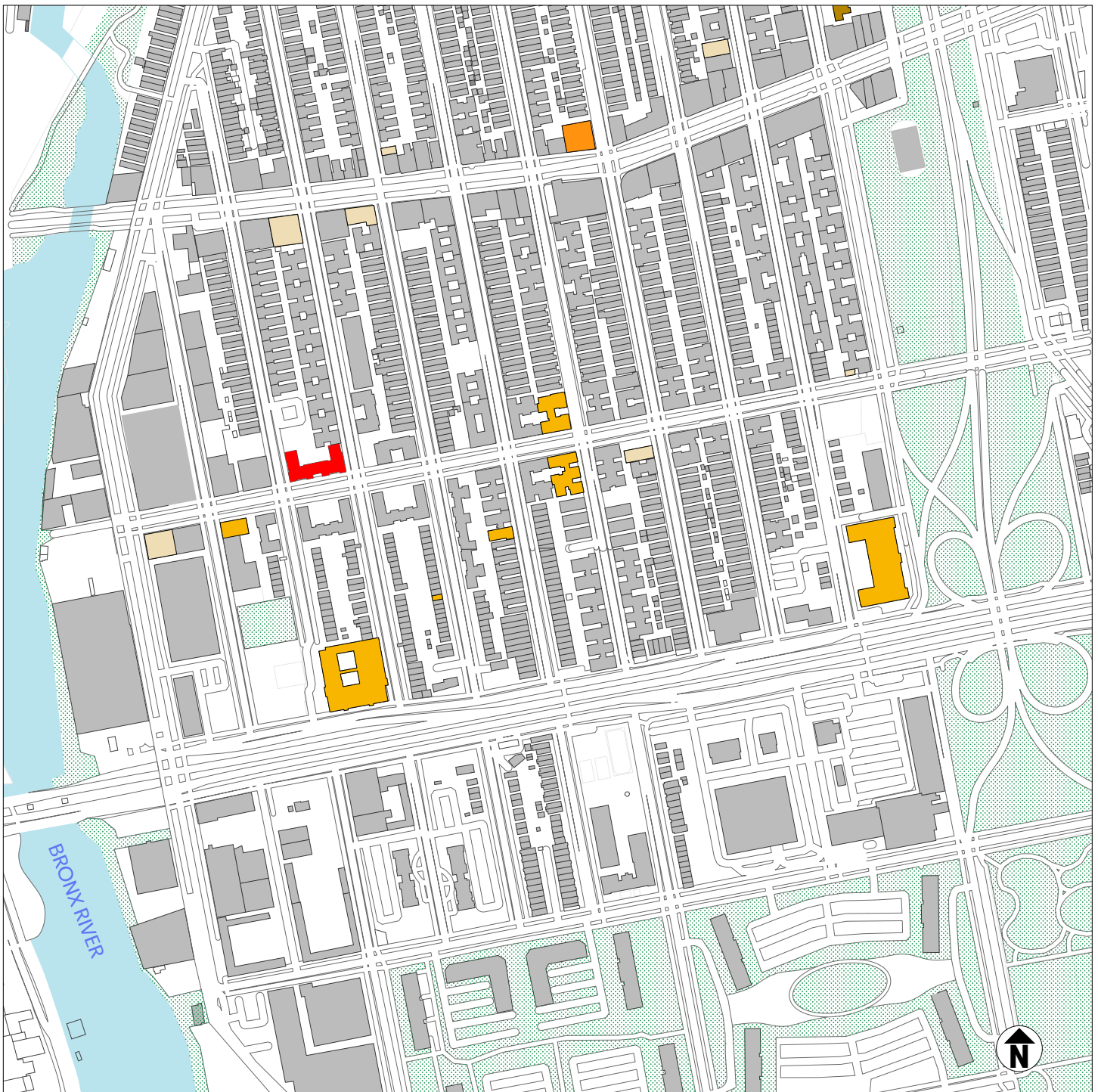


FIG 02: NEIGHBORHOOD SERVICES AND FACILITIES

Access to essential neighborhood services is vital to a thriving community. This map identifies key facilities within a pedestrian friendly, 10 min walk of Watson. It is important to identify that only one health care facility is within this radius and zero post offices.

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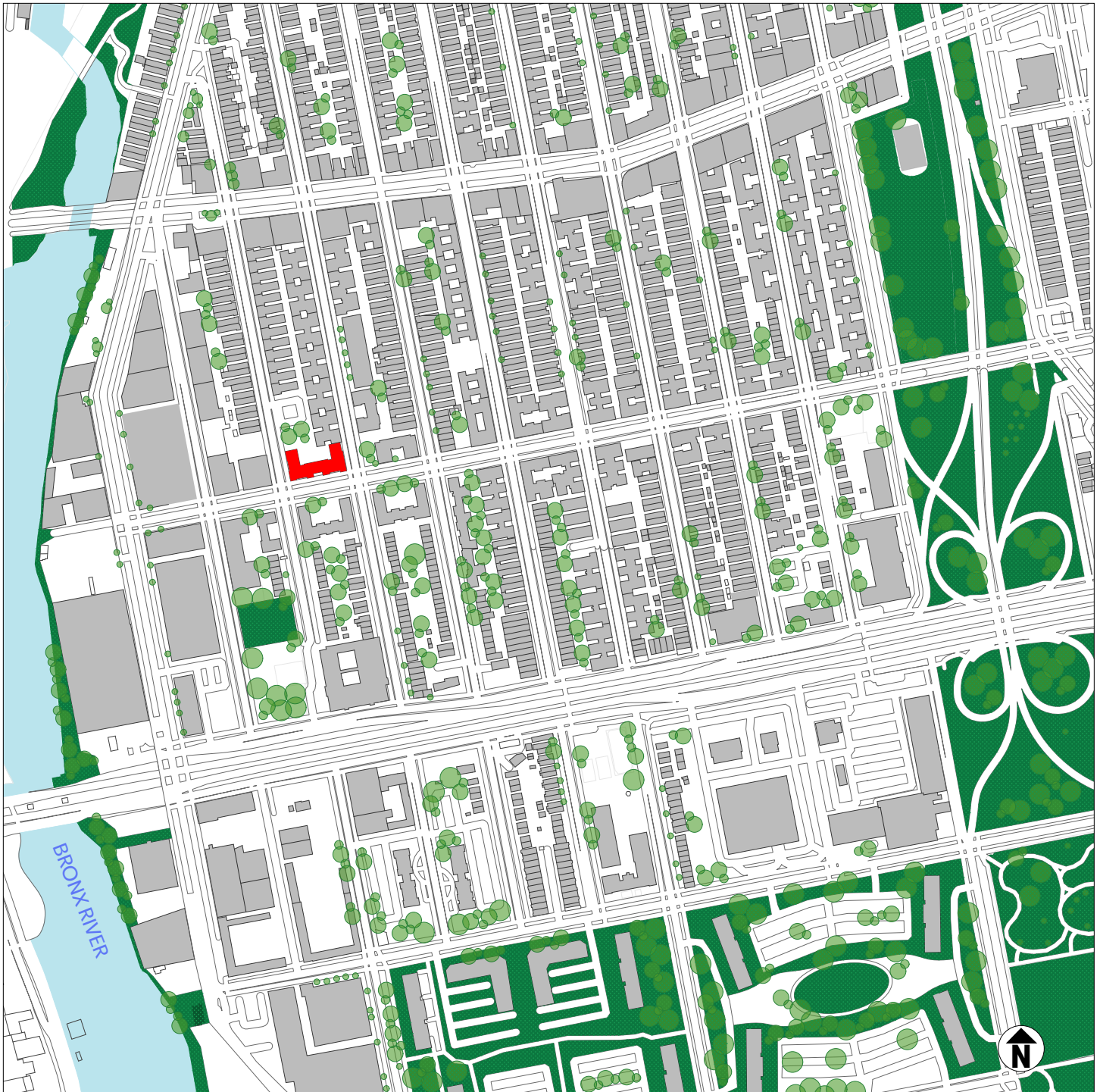


FIG 03: GREEN SPACE AND TREE CANOPY

Green space and tree canopy coverage are essential factors in lowering heat island effect in cities. The neighborhood of Soundview has an extremely high Heat Vulnerability Index, making its residents increasingly susceptible to heat related health risks as yearly temperature averages continue to increase.

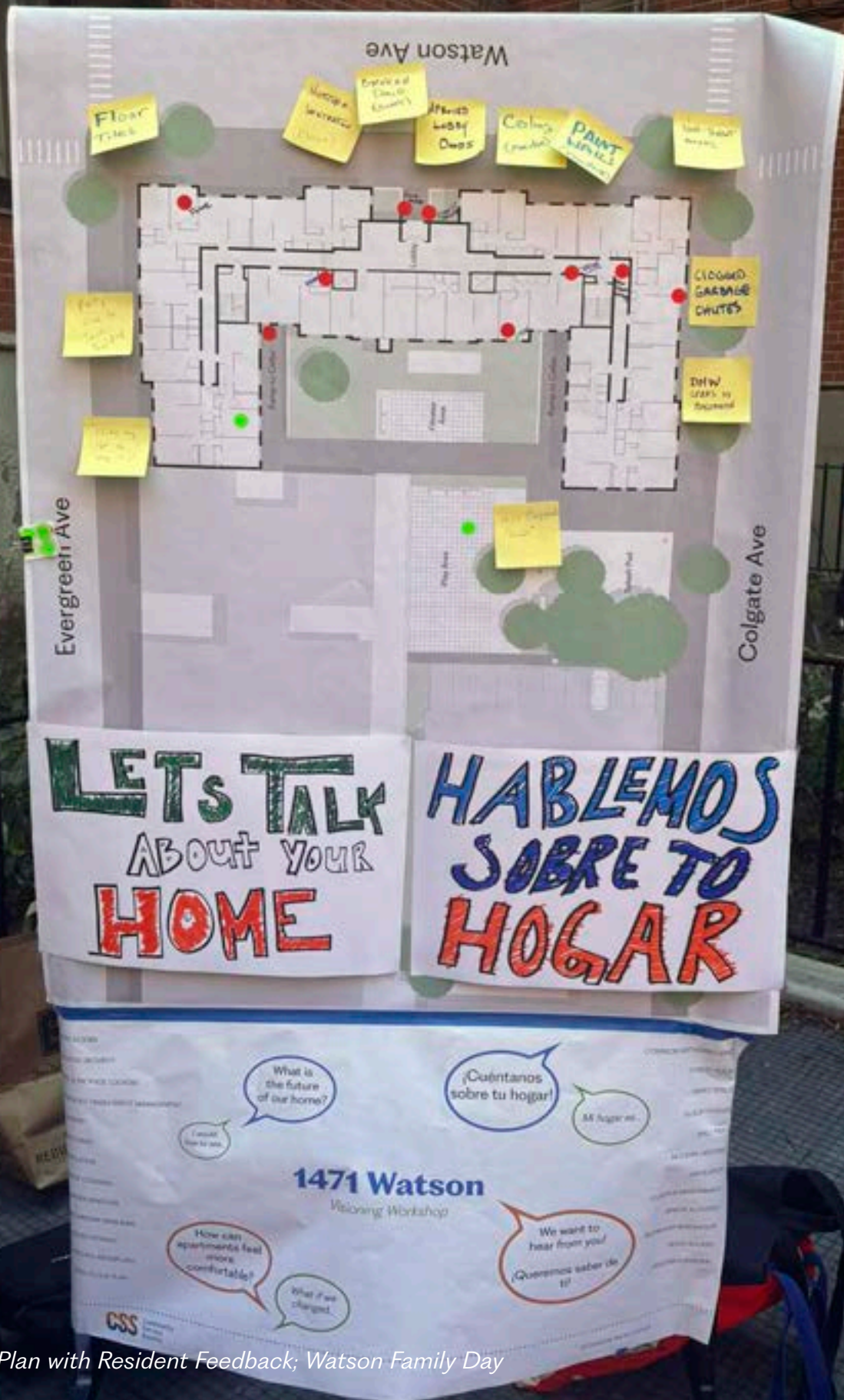
EXISTING CONDITIONS

Engagement and Inspections



Facade from Watson Ave





Interactive Plan with Resident Feedback; Watson Family Day

Existing Conditions

Process and Summary

Built in 1970, the Watson Houses reflect modernist housing ideals that are both emblematic of and distinctly unique to NYCHA's building portfolio. Despite offering housing security, the building faces systemic maintenance challenges common to the Housing Authority's inventory.

Assessment Process

To develop a thoughtful and impactful renovation framework rooted in integrity, health, and safety, it is essential to ground the process in a thorough understanding of the building's existing conditions. This understanding requires more than technical assessments; it also demands attention to the lived experiences and stories of Watson's residents.

The survey process began on Friday, September 13, 2024, when the Design Team met with Tenant Association President Reverend Carmen Hernandez for a walkthrough of the existing conditions at 1471-1473 Watson. The team started in the cellar, gathering in the community room before surveying utility areas and tenant-facing spaces on the ground floor level, followed by residential units.

On Saturday, September 14, 2024, PRO, ERA, and CSS participated in a Family Day event, gathering resident feedback on rehabilitation needs. During the event, PRO and ERA conducted another tour of the cellar, this time accompanied by the building superintendent, to gain additional insights into the property's challenges.

Between October 18 and October 29, 2024, CSS distributed surveys to residents to collect individual feedback and identify priorities for renovation. These combined efforts of technical evaluation and direct resident engagement lay the groundwork for a comprehensive and responsive renovation strategy.

Existing Building Systems

The building is constructed of a masonry exterior and wood structural members supporting its floors. This six story structure houses 94 units, primarily occupied by senior residents, and is equipped with two stairwells and two elevators. Ventilation in bathrooms and kitchens is generally provided by windows. Where natural ventilation is unavailable, mechanical exhaust systems supplement, but are generally found to be non-functional.

Originally outfitted with double-hung windows, the building now has casement window replacements that offer reduced ventilation capacity. Heating and hot water are supplied by centralized boilers consuming fuel oil, while cooling relies on through-wall air conditioning units that are not provided in all units. Domestic water is delivered through a network of aging, deteriorated pipes.

Gas remains the primary cooking fuel, though a recent pilot program transitioned some units to electric stoves. However, the program encountered significant failures, necessitating a return to gas ranges. The roof, subjected to numerous patching attempts over the years, continues to leak, particularly affecting residents on the upper floors.

The following pages document the anecdotes and lived experiences of residents and the existing conditions at Watson observed during visual walk-throughs.

Community Day & Door Knocking

Hearing from Residents

Community Day

An important aspect of this design investigation includes direct feedback from residents at Watson. Information provided from the lived experience is invaluable when defining the scope for essential renovation and rehabilitation. PRO, CSS, and ERA participated in a Community Event Day and Door Knocking exercise to engage directly with the end users and understand their needs.

To being this endeavor, the design team created materials for residents to engage with at the Community Day. Such materials included a multilingual questionnaire and an interactive building plan in which comments could be captured in situ.



IMG 01: RESIDENT SHARING EXPERIENCE

Door Knocking

To elicit more feedback from residents, the team created an additional survey and questionnaire, and distributed these to individual apartments. Conducted and analyzed by CSS, the door-to-door outreach significantly increased the volume of feedback received from the Watson community.

The new page illustrates an analysis of these findings.



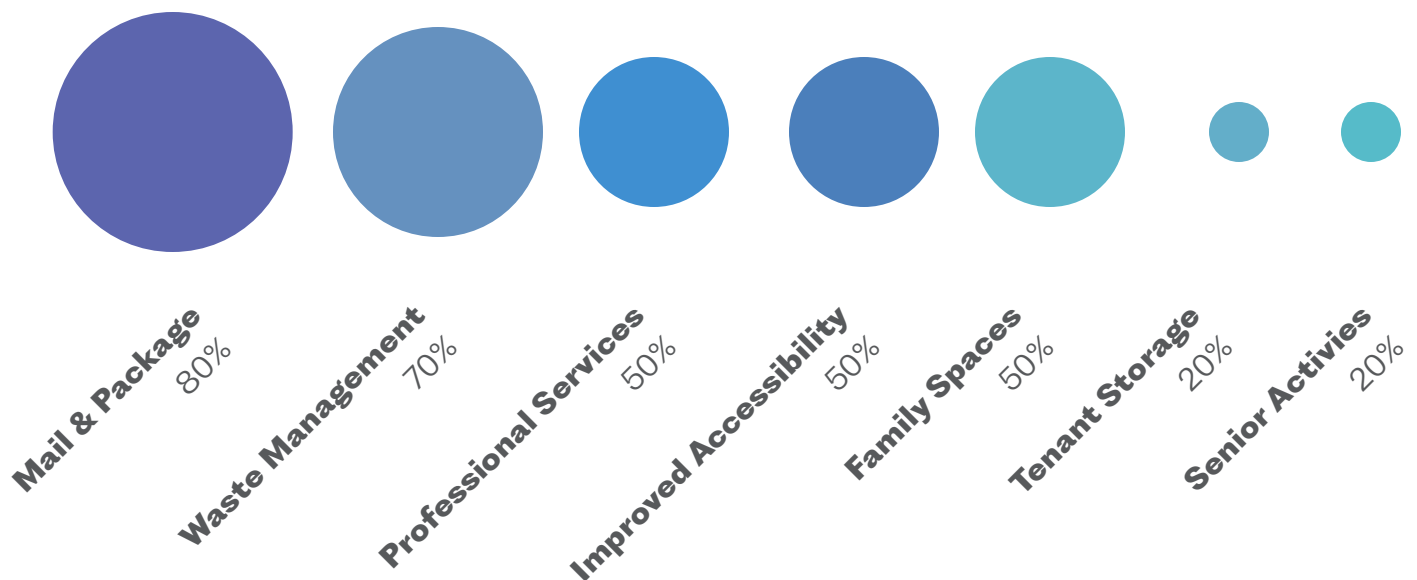
IMG 02: RESIDENT ENGAGING WITH INTERACTIVE SITE PLAN

Resident Feedback

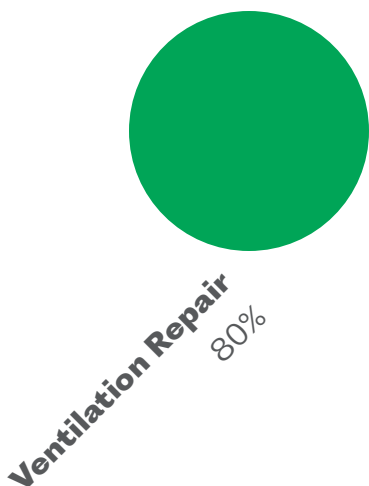
Survey, Questionnaire, and Door-Knocking Results

The values illustrated below reflect the percent interest in various renovation scopes as collected during the resident engagement process.

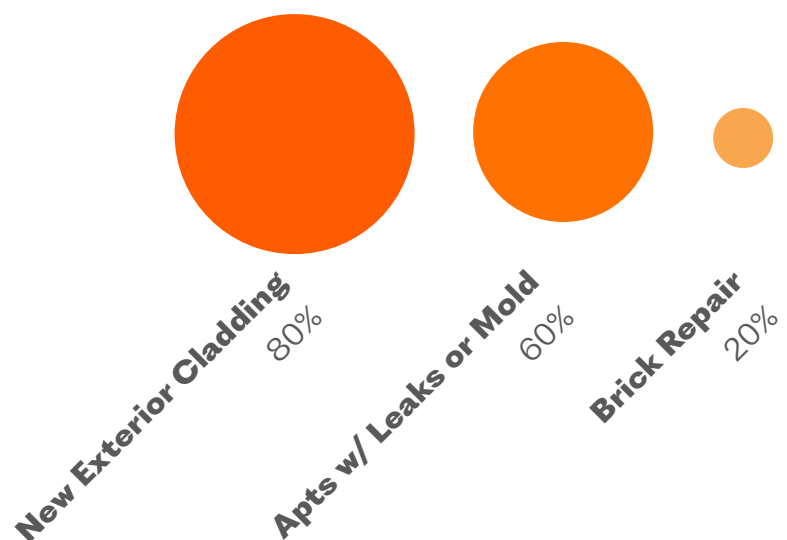
COMMUNITY BENEFITS



INDOOR COMFORT



HEALTHY AND SAFETY



Existing Conditions

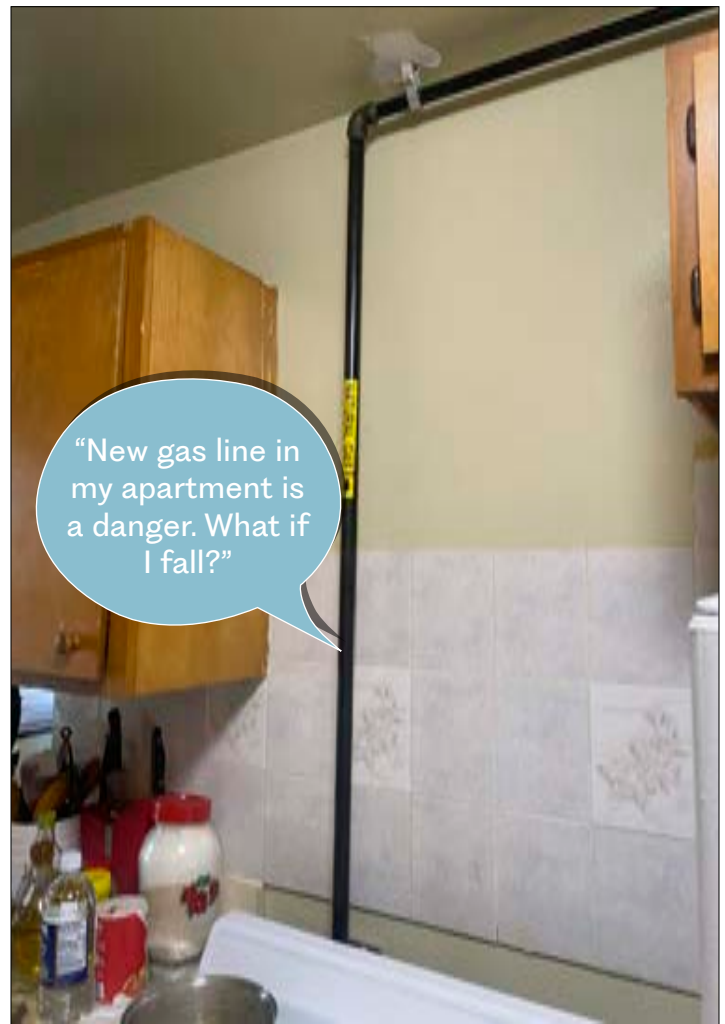
Site Tours

On both visits to Watson, the design team was granted access to the building's interior and exterior grounds.

On the first day, guided by Tenant Association President Reverend Carmen Hernandez, the team observed significant decay in the basement cellar. On the second day, the team was accompanied by the new building superintendent.

Overall, the findings align with typical conditions seen in buildings of similar age and construction methodology: envelope and mechanical systems are visibly deteriorated and generally beyond their useful life. The brick façade shows signs of wear, heating and cooling systems are corroded, and electrical systems are outdated, unable to meet modern demands or support future electrification efforts. Evidence of water damage was visible throughout the cellar, likely caused by damaged or missing below-grade waterproofing and leaks in the domestic water supply. Building-wide ventilation was also found to be inadequate.

Resident feedback gathered during apartment tours and discussions corroborated these observations. Residents reported non-secured access points, including a damaged, unlocked lobby door, which has allowed frequent unauthorized entry by non-residents. Additionally, the team inspected the sixth floor, where a recent fire resulted in the complete evacuation of three apartments. While the cause of the fire is still under investigation, concerns remain that it may have been started by an unauthorized individual accessing the roof.



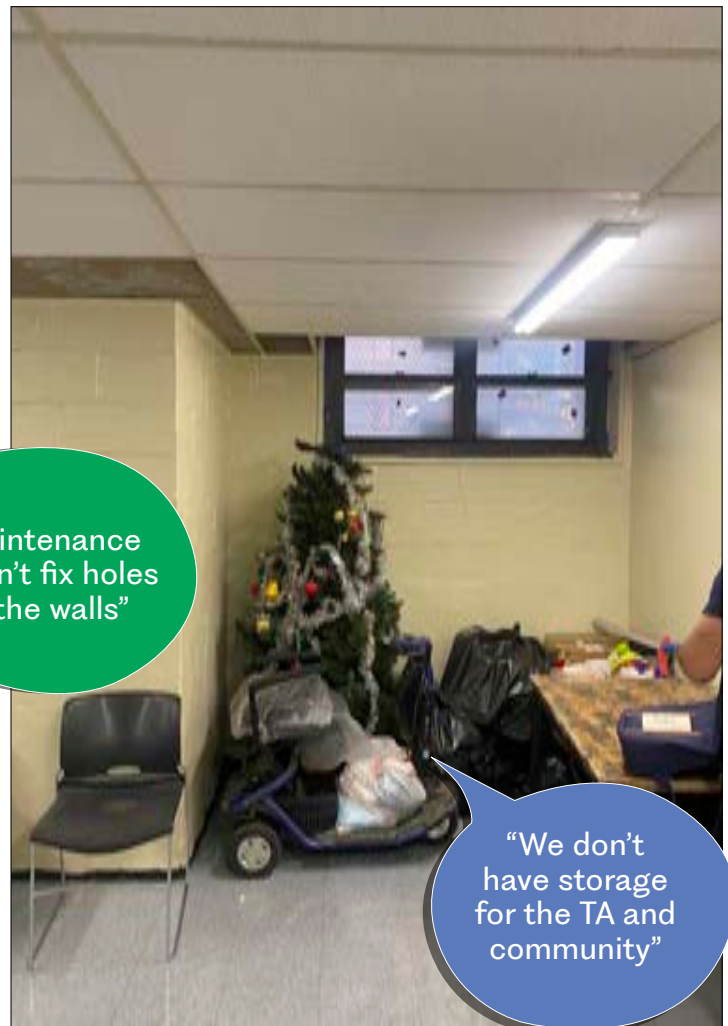
IMG 01: RESIDENT KITCHEN WITH RETROFITTED GAS PIPE

Existing Conditions

Site Tours



IMG 02: RESIDENT BATHROOM

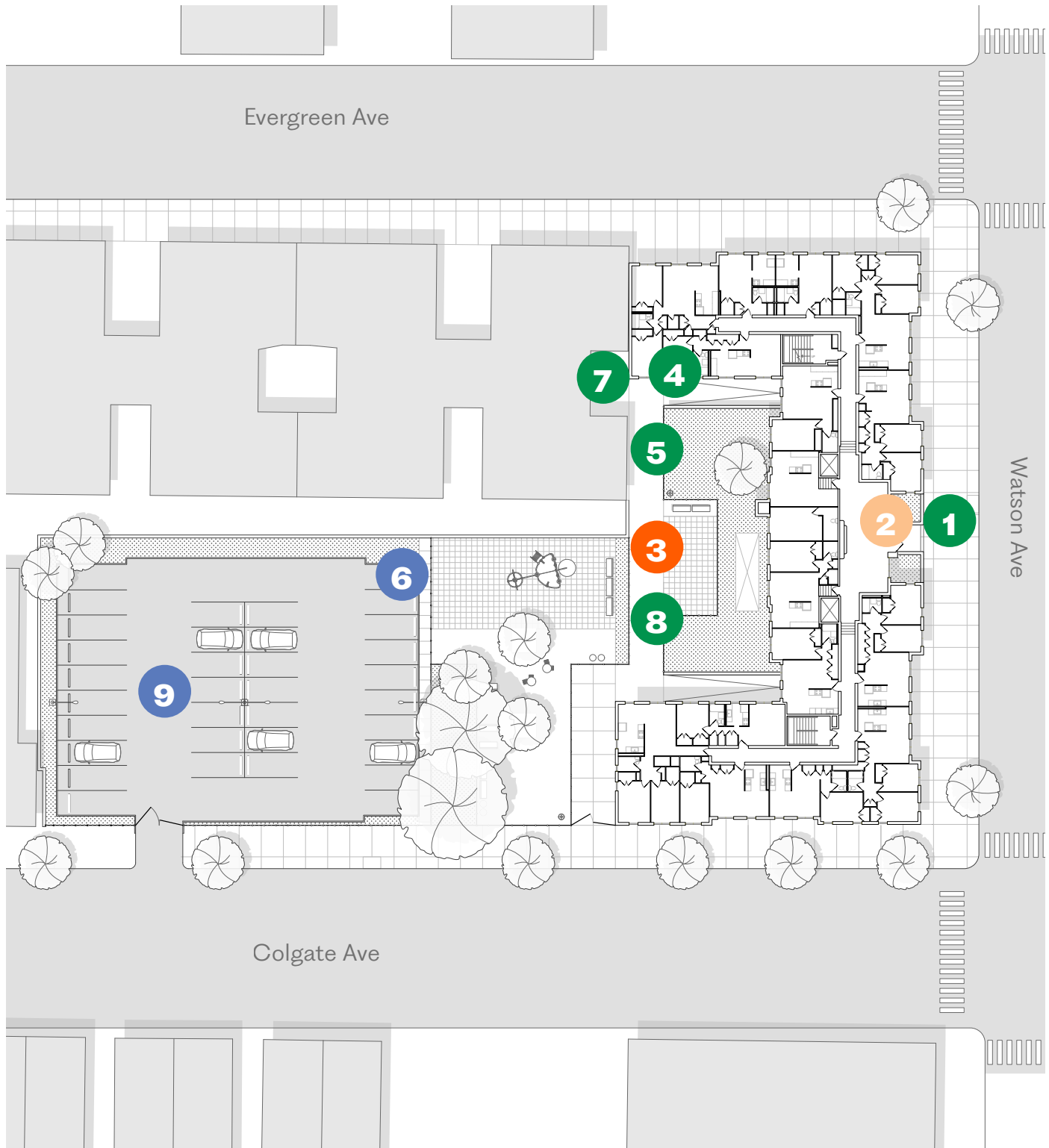


IMG 03: COMMUNITY ROOM

- End of Life Mechanical
- Environmental Health
- Safety & Security
- Exterior Upgrades
- Interior Upgrades
- Waste Management
- Programming
- Accessibility & Aging-In-Place

Existing Conditions

Building Exterior

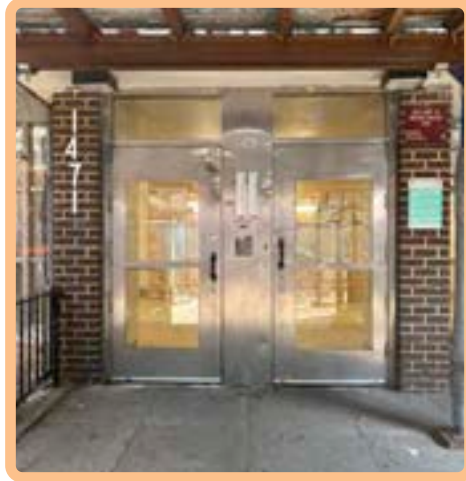


SITE PLAN KEY:

- | | | |
|--------------------------|---------------------|----------------------------------|
| ● End of Life Mechanical | ● Exterior Upgrades | ● Programming |
| ● Environmental Health | ● Interior Upgrades | ● Accessibility & Aging-In-Place |
| ● Safety & Security | ● Waste Management | |



01: Building facade from Watson Ave



02: Lobby doors do not lock from exterior



03: Concrete pad for oil tank



04: Ill fitting window AC unit; creates thermal break



05: Deteriorating and mis-colored brick



06: Recently installed playground with 4' fence



07: Fire stairs



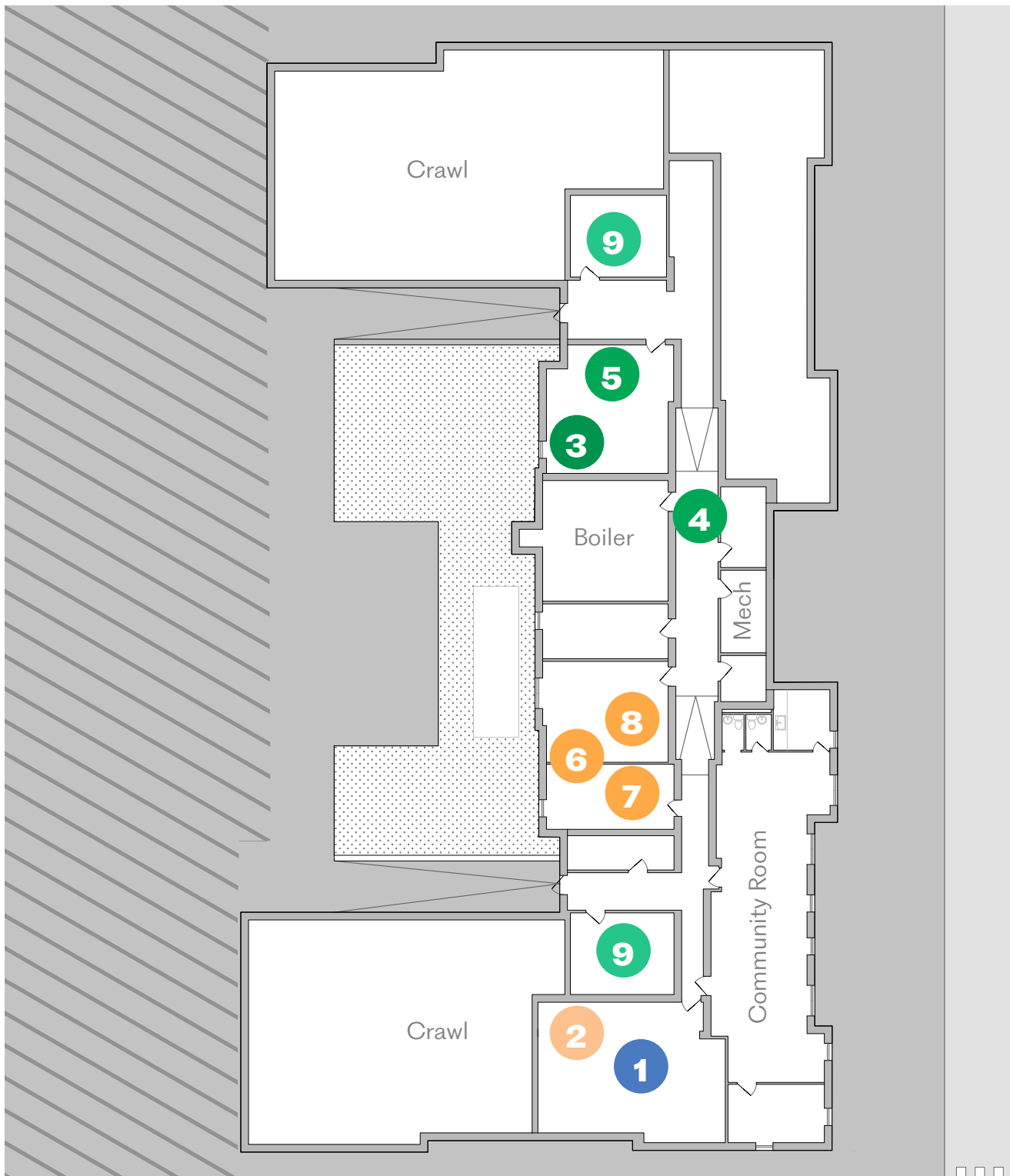
08: Missing window to cellar



09: Under-utilized parking lot

Existing Conditions

Cellar Rooms



SITE PLAN KEY:

- | | | |
|--------------------------|---------------------|----------------------------------|
| ● End of Life Mechanical | ● Exterior Upgrades | ● Programming |
| ● Environmental Health | ● Interior Upgrades | ● Accessibility & Aging-In-Place |
| ● Safety & Security | ● Waste Management | |



01: Under-utilized cellar space



02: Hole in foundation wall



03: Missing window in hot water storage tank room



04: Crack in foundation wall at door frame



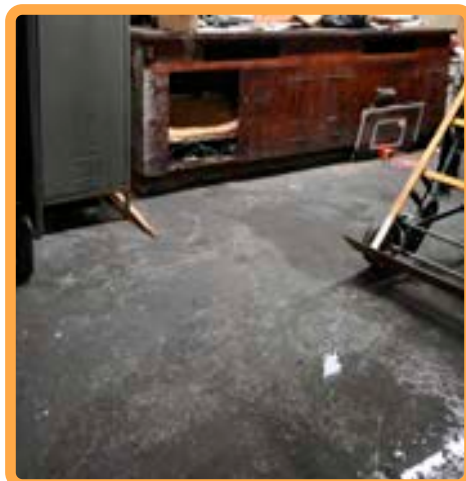
05: Door removed to fit new hot water storage tanks



06: Water damage on foundation wall



07: Water damage and appearance of mold in Office



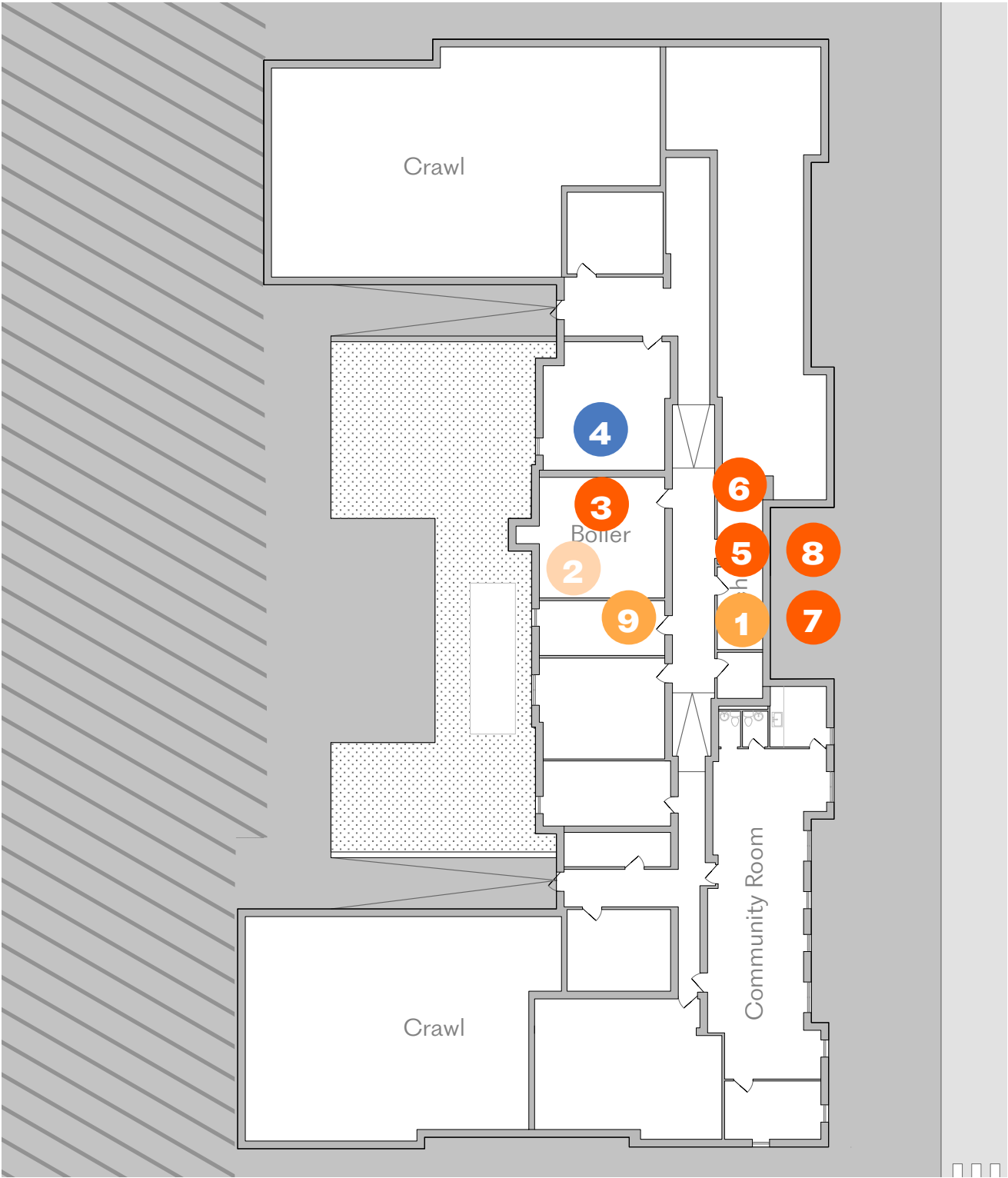
08: Standing water witnessed across a two week period



09: Waste compactor room

Existing Conditions

Cellar Rooms



SITE PLAN KEY:

- | | | |
|------------------------|-------------------|--------------------------------|
| End of Life Mechanical | Exterior Upgrades | Programming |
| Environmental Health | Interior Upgrades | Accessibility & Aging-In-Place |
| Safety & Security | Waste Management | |



01: Leaking pipe main covered with garbage bag



02: Unlocked boiler room creates security concern



03: Existing boiler with corrosion; end of useful life



04: Recently installed hot water storage tanks in Tenant Storage



05: Water intake system



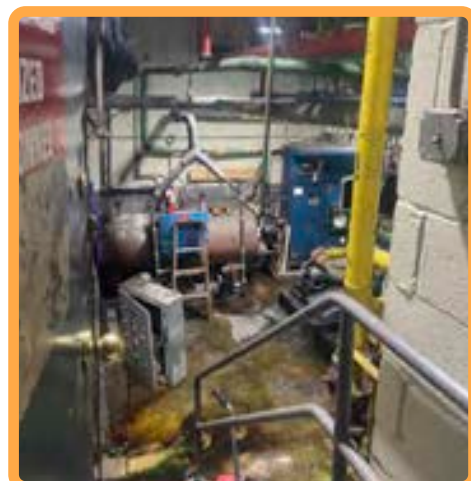
06: Electrical panels at end of useful life



07: Cold water system with corrosion; end of useful life



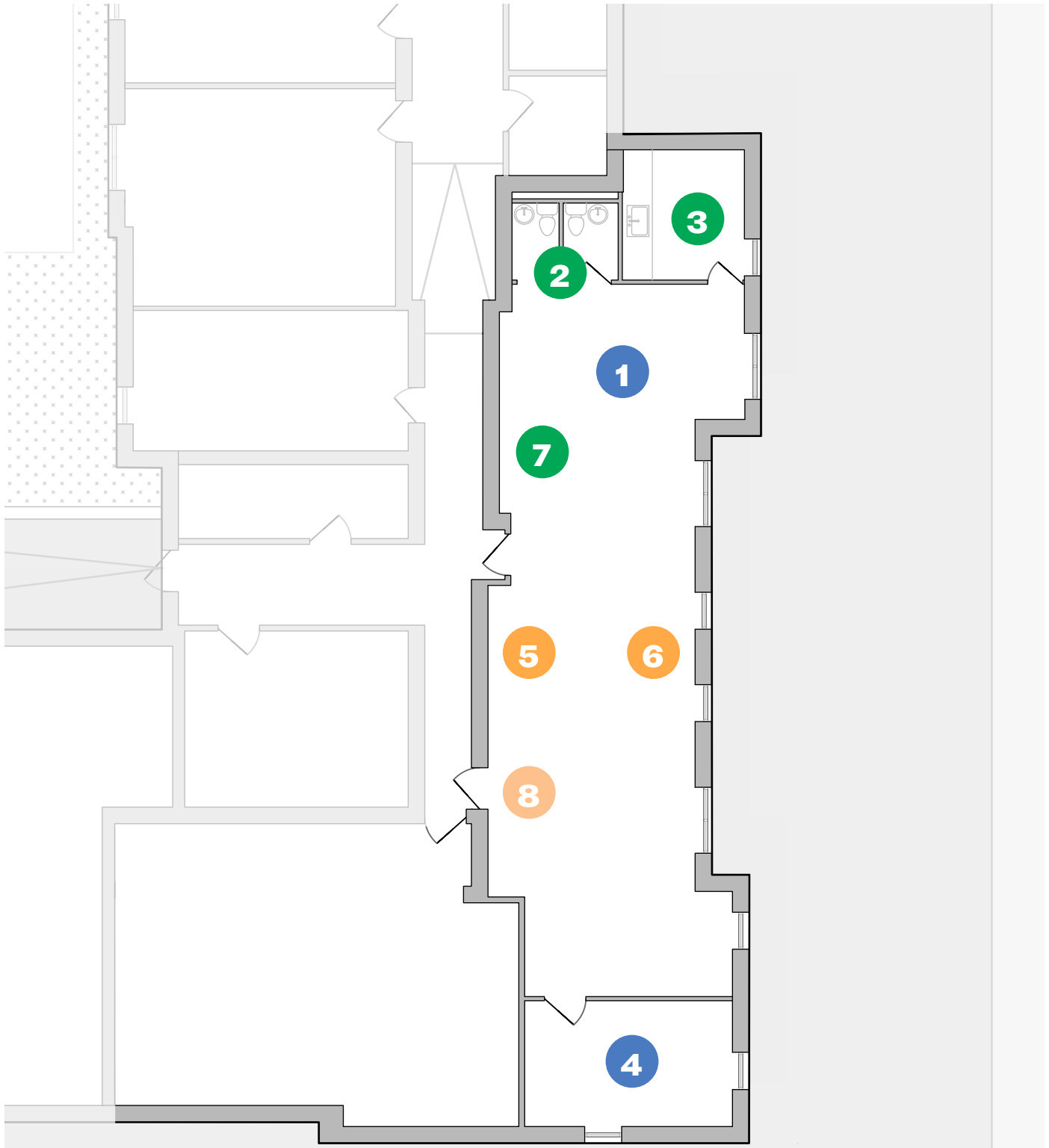
08: Original building switchgear at end of useful life



09: Standing water from DW pipe leak above

Existing Conditions

Community Room



SITE PLAN KEY:

- | | | |
|------------------------|-------------------|--------------------------------|
| End of Life Mechanical | Exterior Upgrades | Programming |
| Environmental Health | Interior Upgrades | Accessibility & Aging-In-Place |
| Safety & Security | Waste Management | |



01: Community Room Overview



02: Restroom in Community Space w/ missing ceiling tile



03: Community Kitchen Overview



04: TA Storage does not have sufficient security



05: Water damage evident on ceiling tiles



06: Drop ceiling blocks light from window



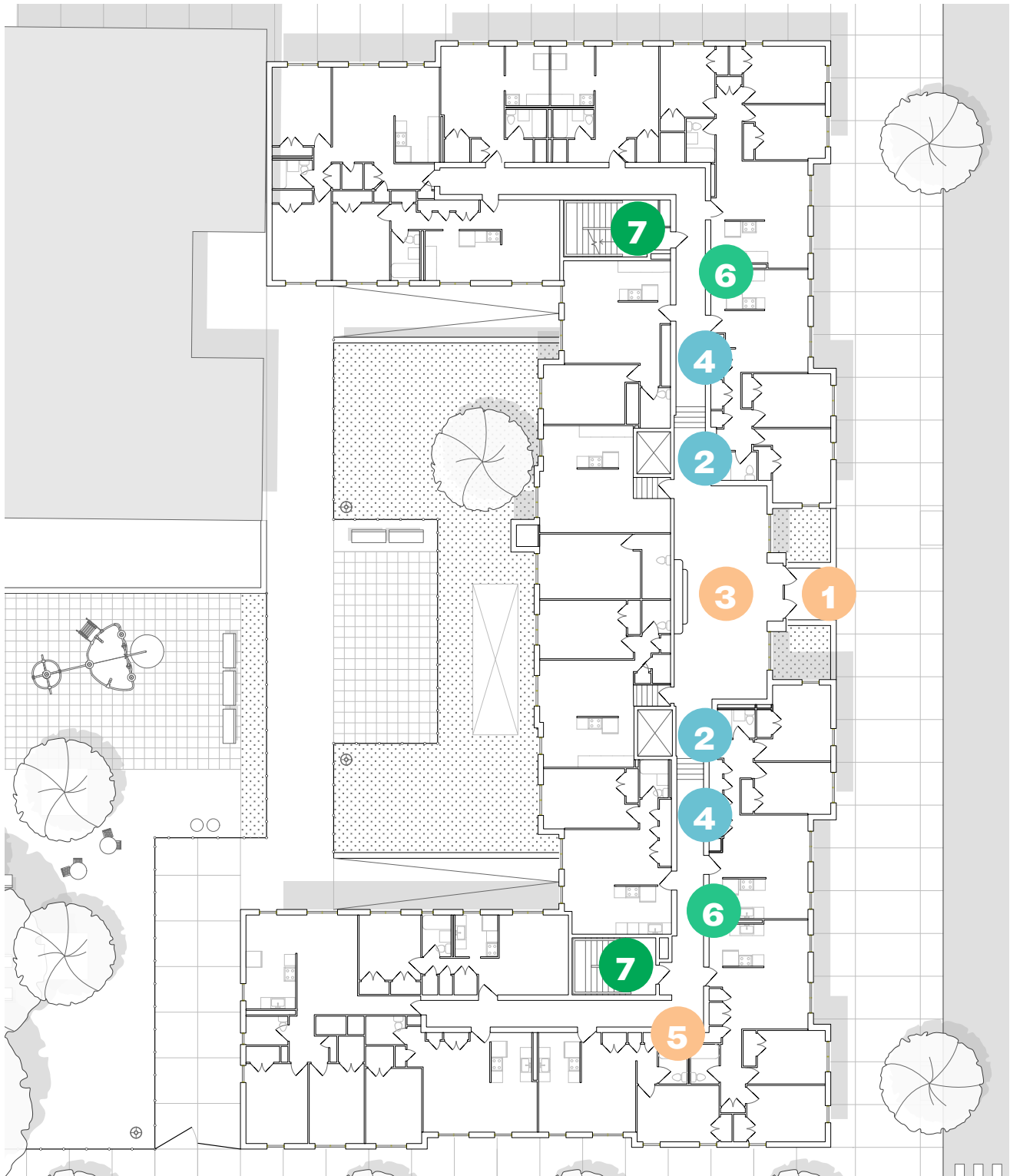
07: Non-functional outlet on wall



08: Locked and blocked metal door to community room

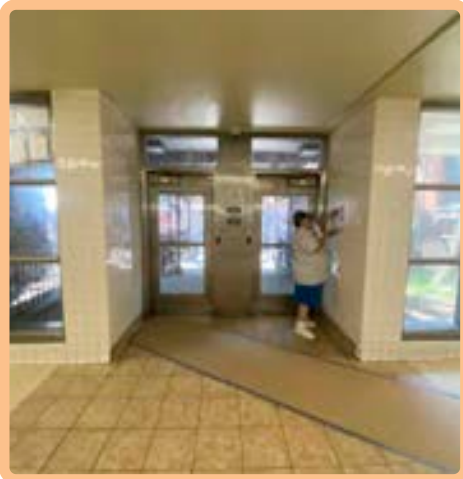
Existing Conditions

Building Common Spaces

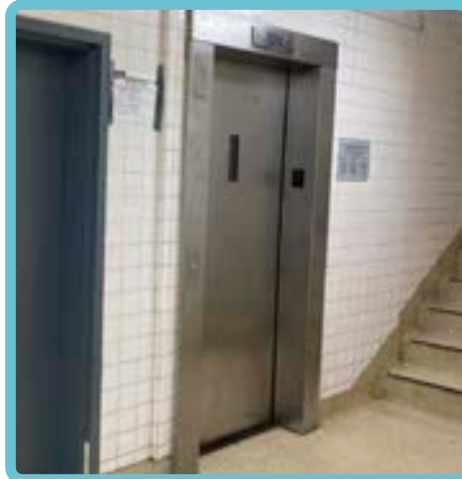


SITE PLAN KEY:

- | | | |
|--------------------------|---------------------|----------------------------------|
| ● End of Life Mechanical | ● Exterior Upgrades | ● Programming |
| ● Environmental Health | ● Interior Upgrades | ● Accessibility & Aging-In-Place |
| ● Safety & Security | ● Waste Management | |



01: Lobby doors do not lock allowing trespassers inside



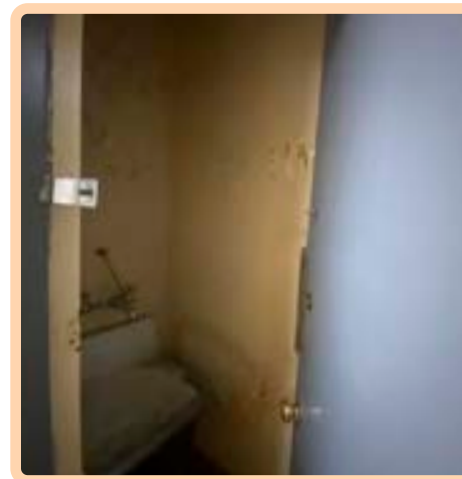
02: Separate elevators serve each half of Watson



03: Unsecured mail area



04: Stairs to units on ground floor



05: Unlocked custodial closet often used by trespassers



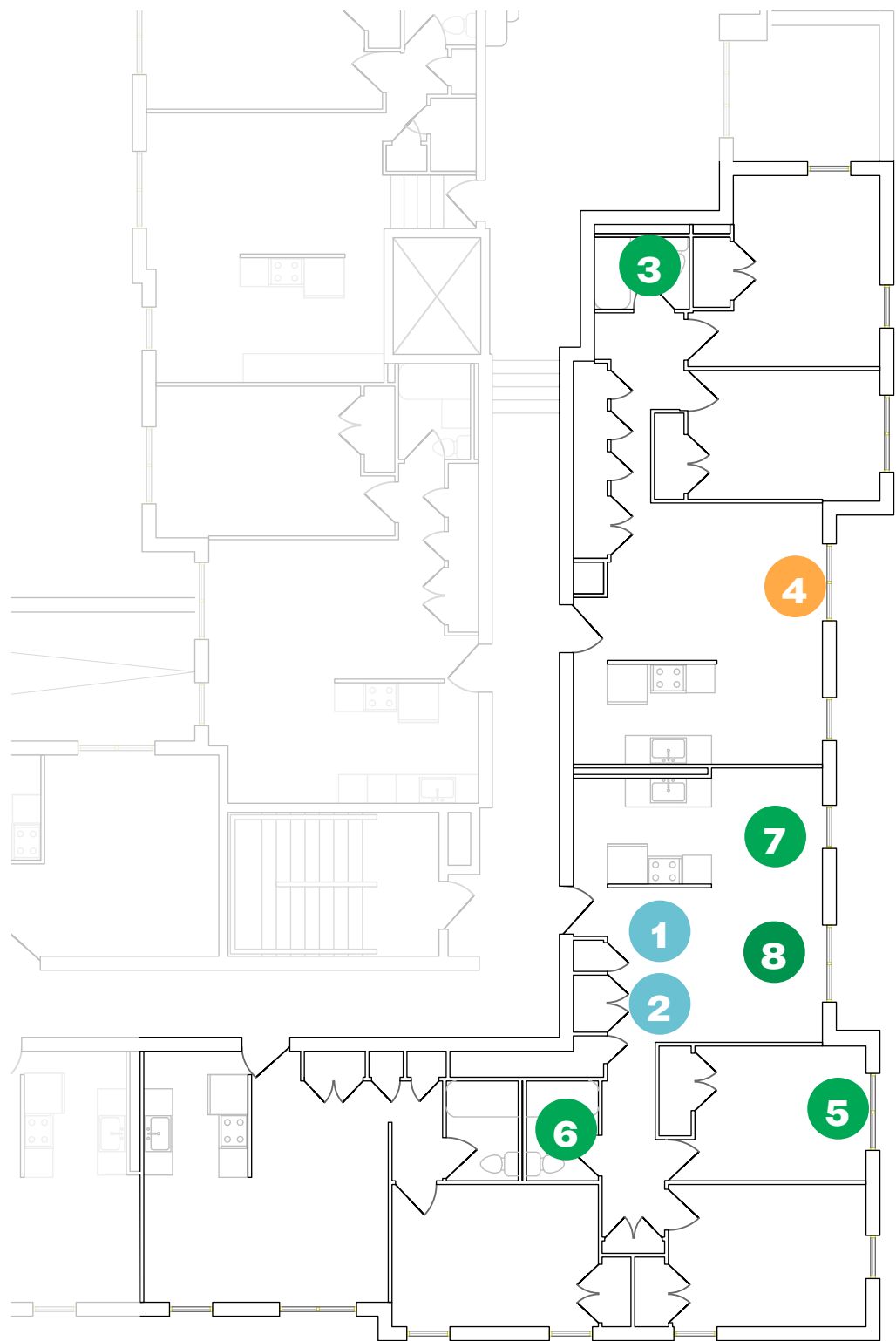
06: Undersized trash chute tends to clog



07: Stairwell with water damage and corrosion

Existing Conditions

Typical Apartments



SITE PLAN KEY:

- | | | |
|------------------------|-------------------|--------------------------------|
| End of Life Mechanical | Exterior Upgrades | Programming |
| Environmental Health | Interior Upgrades | Accessibility & Aging-In-Place |
| Safety & Security | Waste Management | |



01: Retrofit gas creates safety hazard in living room



02: Retrofit gas pipe going through resident's living room



03: Hole in wall covered with tape and plastic by Maintenance



04: New windows are poorly installed; cause moisture buildup



05: Resident provided AC unit



06: Leaks patched with tape and plastic by Maintenance



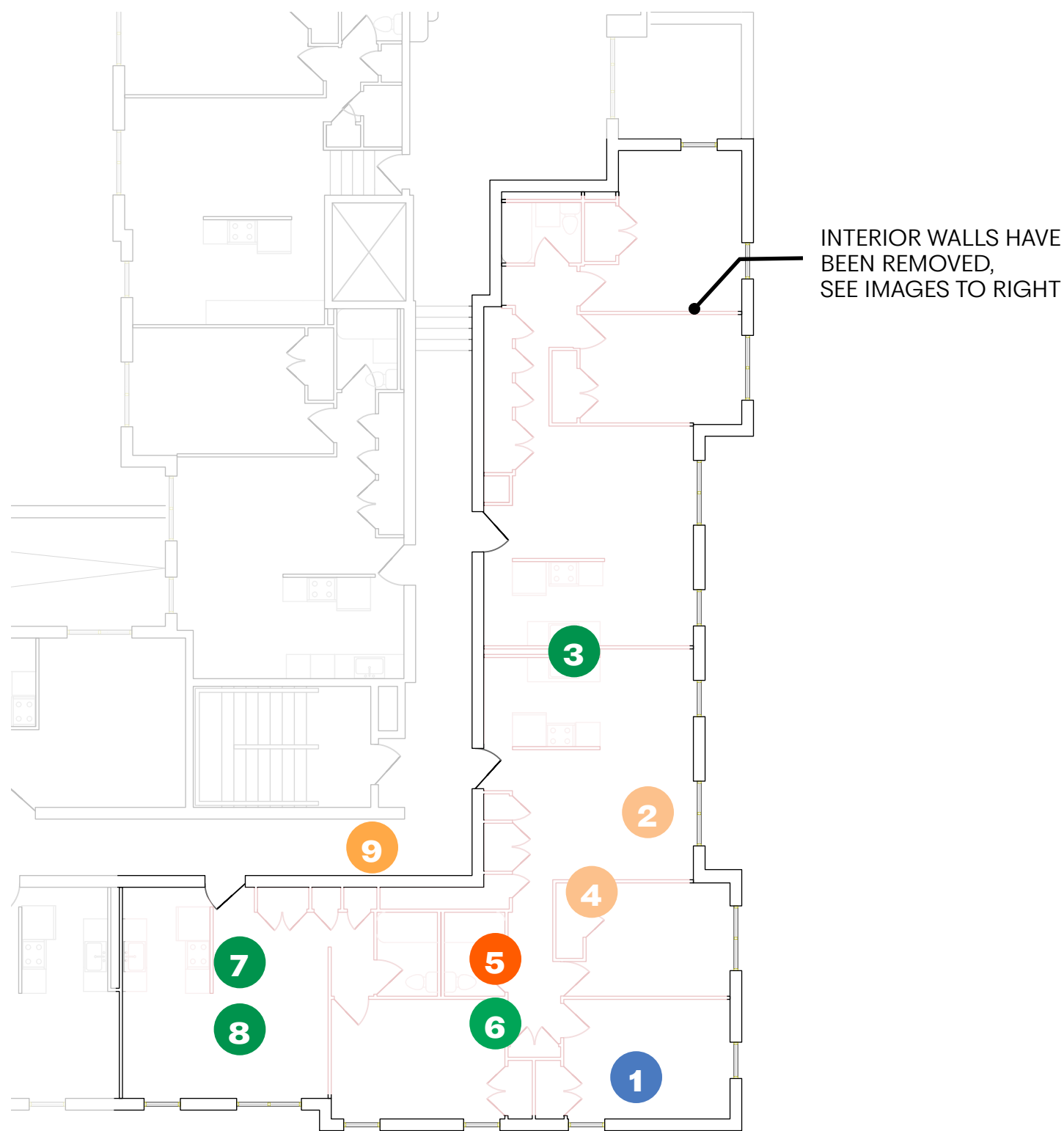
07: Damaged floor tiles



08: Ill fitting AC unit creates thermal breaks in exterior walls

Existing Conditions

Sixth Floor and Roof



SITE PLAN KEY:

- | | | |
|--------------------------|---------------------|----------------------------------|
| ● End of Life Mechanical | ● Exterior Upgrades | ● Programming |
| ● Environmental Health | ● Interior Upgrades | ● Accessibility & Aging-In-Place |
| ● Safety & Security | ● Waste Management | |



01: CMU party wall between apartments



02: Window opening for new



03: Reframed roof with wood structure



04: New structural steel transfer beam



05: Apartment remains with existing end of useful life plumbing



06: Wood sheathing floor



07: Cleaned rooftop fan



08: Roof repair work only above units with fire



09: Ceiling damage on 6th floor hallway

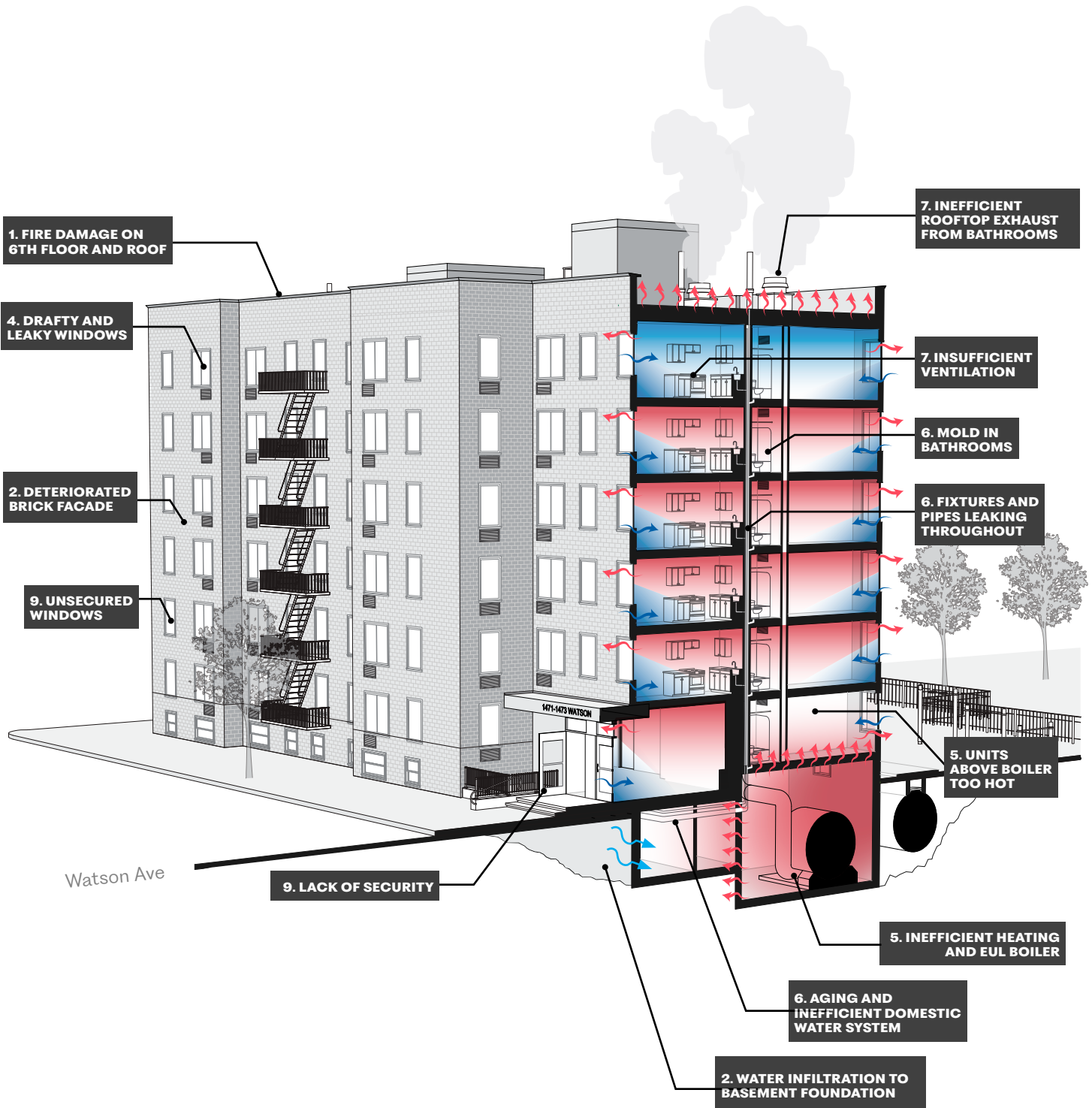
Existing Conditions

Building Systems Summary

- 1 Roof:** At the time of this booklet's creation, the roof is undergoing a patchwork repair to resolve damage from a fire on the 6th floor. Existing insulation qualities of the roof are unknown but expected to not align with current NYCECC and Local Law guidelines, as is typical for buildings of this age and construction. Resident feedback suggests there is leaking in the roof and should be inspected to confirm.
- 2 Facade and Foundation:** The masonry construction shows signs of deterioration and corrosion. Many gaps between window units and exterior walls create thermal bridges in the building, reducing heating and cooling efficiencies. Water has infiltrated the foundation walls in the cellar, creating a damp environment, which is a great health concern.
- 3 Structure:** The building's floors are structurally supported by wood joists. The exterior masonry walls are load bearing.
- 4 Windows:** The original double hung windows were recently replaced with casement open windows. Residents are generally dissatisfied with the installation, citing condensation build up and potential mold.
- 5 Heating and Cooling:** The existing oil powered heating system is well beyond its useful life and overheats apartments on the lower floors. Residents have expressed concerns about fumes that are released from the boiler, often causing headaches. Individual units are cooled with through wall AC units and typically remain installed year round. The upper floors are generally cooler than the lower levels due to the inefficient heating system and thermal bridges throughout the building.
- 6 Domestic Water:** The domestic water system is greatly deteriorated and poses serious health concerns to the Watson community. There are leaks throughout the domestic water system, witnessed in the cellar and described verbally by residents. During the Fall 2024, a pipe in the cellar burst and flooded the surrounding area.
- 7 Ventilation:** Ventilation is primarily provided passively from apartment windows. Bathroom exhausts generally do not work. There are no means of ventilation for the interior corridors. This leads to poor indoor air quality throughout the building.
- 8 Waste Management:** The existing waste management infrastructure does not satisfy 21st century needs as residents often complain of clogged chutes. The compactors are deteriorated and insufficient.
- 9 Security:** Security concerns are of high priority at Watson. The main entry doors are often broken and unlocked, leaving residents vulnerable to intruders. Trespassers have broken into unoccupied units and gained access to the roof and fire escapes in the past.

Existing Conditions

Building Systems Summary

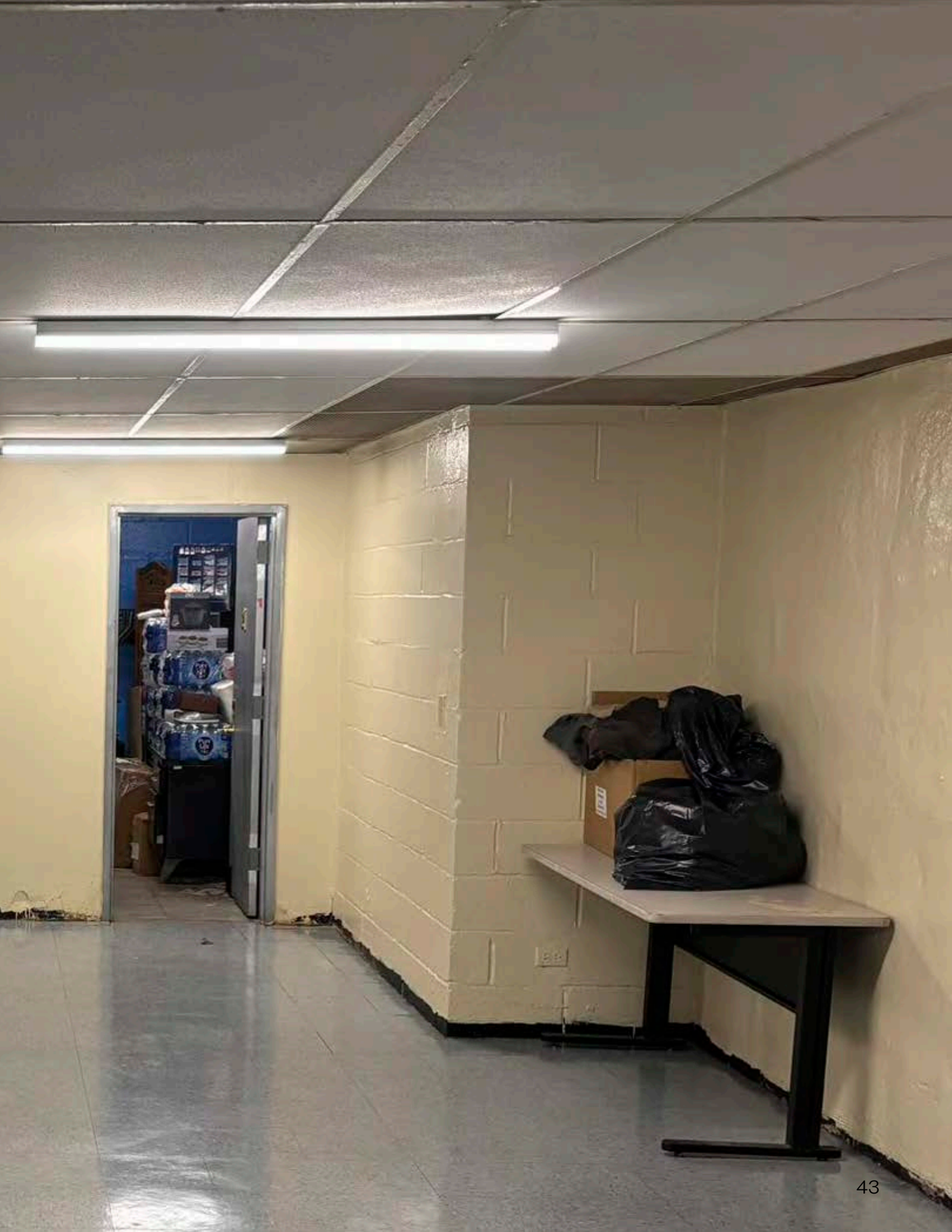


REHABILITATION SCOPE AND VISIONING

The Future of Watson



Watson Community Room





Facade and Exterior from Watson Ave

Rehabilitation Scope and Visioning

The design proposal is guided by a hierarchy of needs, centered on three fundamental pillars: Health and Safety, Indoor Comfort, and Community Benefits.

These pillars respond to the building’s pressing challenges, including aging infrastructure, mechanical systems at the end of their useful life, programmatic deficiencies, and the need for improved accessibility to support aging in place.

Health and Safety

Health and safety improvements form the foundation of the renovation scope, as addressing harmful environmental conditions is essential. The highest priorities are repairing the domestic water system and addressing exterior waterproofing issues. Without comprehensive and thoughtful interventions in these areas, unhealthy conditions will persist, adversely affecting residents’ well-being and accelerating the building’s deterioration.

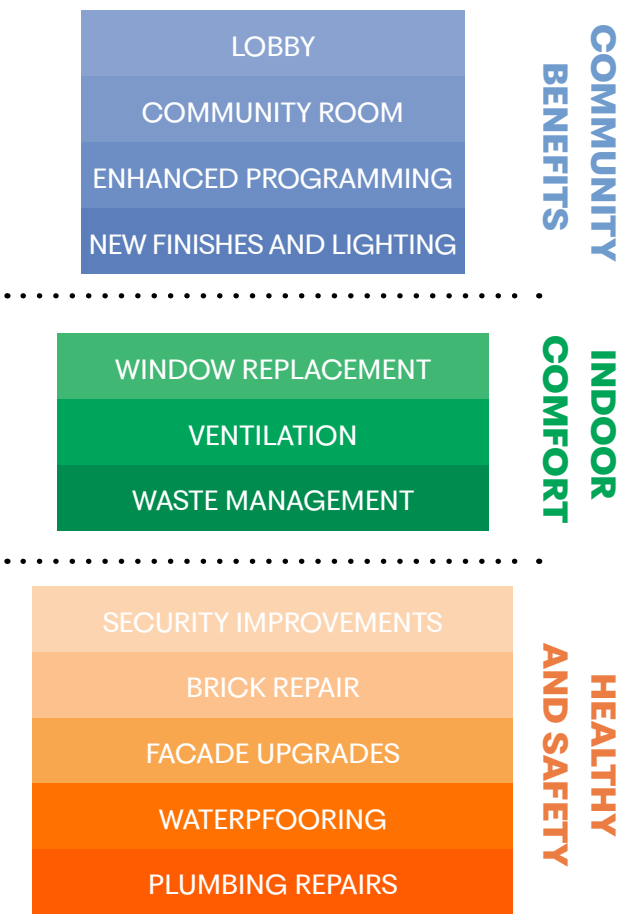
Enhancing building security is another critical priority, aimed at reducing trespassing and fostering a sense of safety and protection for residents.

Indoor Comfort

Indoor comfort improvements build on health and safety efforts, focusing on upgrades to essential building systems. Key recommendations include enhancing ventilation in apartments and common areas, modernizing the waste management infrastructure to improve sanitation, and addressing comfort issues that impact daily living.

Community Benefits

Lastly, updates to shared spaces such as the lobby and community room are proposed to strengthen community life and pride. Modernizing these areas with thoughtful programming and upgraded finishes will enrich residents’ day-to-day experiences and provide valuable amenities that encourage connection and engagement.



Rehabilitation Scope Breakdown

Proposal



PLUMBING REPAIRS

Scope with a snake camera and investigate the true state of repair for the domestic water and sanitary risers and branches to determine extents for system deterioration. Replace aged and failing domestic water lines throughout Watson and in apartments to stop persistent leaks and prevent further water damage. This repair will improve indoor air quality by reducing moisture, which can cause mold and deteriorate air health.



FACADE REPAIRS & WATERPROOFING

Address foundational waterproofing deficiencies by implementing a robust, multifaceted waterproofing system to foundation walls that includes a combination of liquid or sheet applied membranes, improved grading strategies, new drainage, and damp proofing. Repair water-damaged exterior walls by sealing cracks in brick and at thresholds to mitigate health risks and enhance structural integrity, ensure safe and habitable spaces.



SECURITY IMPROVEMENTS

A reliable, secure entry system will reduce unauthorized access, enhancing resident safety and building security. Security improvements, in addition to the recently installed CCTV system, include replacing the existing lobby doors with new, locking ones and an upgraded intercom system. Reinforce lobby doors and rooftop access points with secure locking mechanisms and durable materials.



WASTE MANAGEMENT

A modern waste collection infrastructure, including upgrading trash chutes to prevent clogs and installing easy-to-access waste disposal areas on each floor would reduce waste system failures, promote cleanliness, convenience, and health for residents. In addition to enlarged trash chute opening, this proposal recommends new compactors for the cellar.



VENTILATION & FRESH AIR SUPPLY

A multi-faceted ventilation strategy is paramount and includes both passive and mechanical solutions. Mechanical systems, like energy recovery ventilators (ERVs), alongside cleaning and restoring the existing rooftop vents would enhance airflow. Double-hung windows, which allow for more fresh air intake could passively help reduce moisture in bathrooms and improve air circulation in living spaces and kitchens.



ADDITIONAL UPGRADES

In addition to these immediate concerns, further areas for improvement include the renovation of the community room, lobby, and apartment interiors. The community room, heavily utilized by the active Tenant Association Board, lacks essential amenities and requires modernization to better serve residents. Lobby upgrades would include security improvements and increased storage.

Baseline Scope

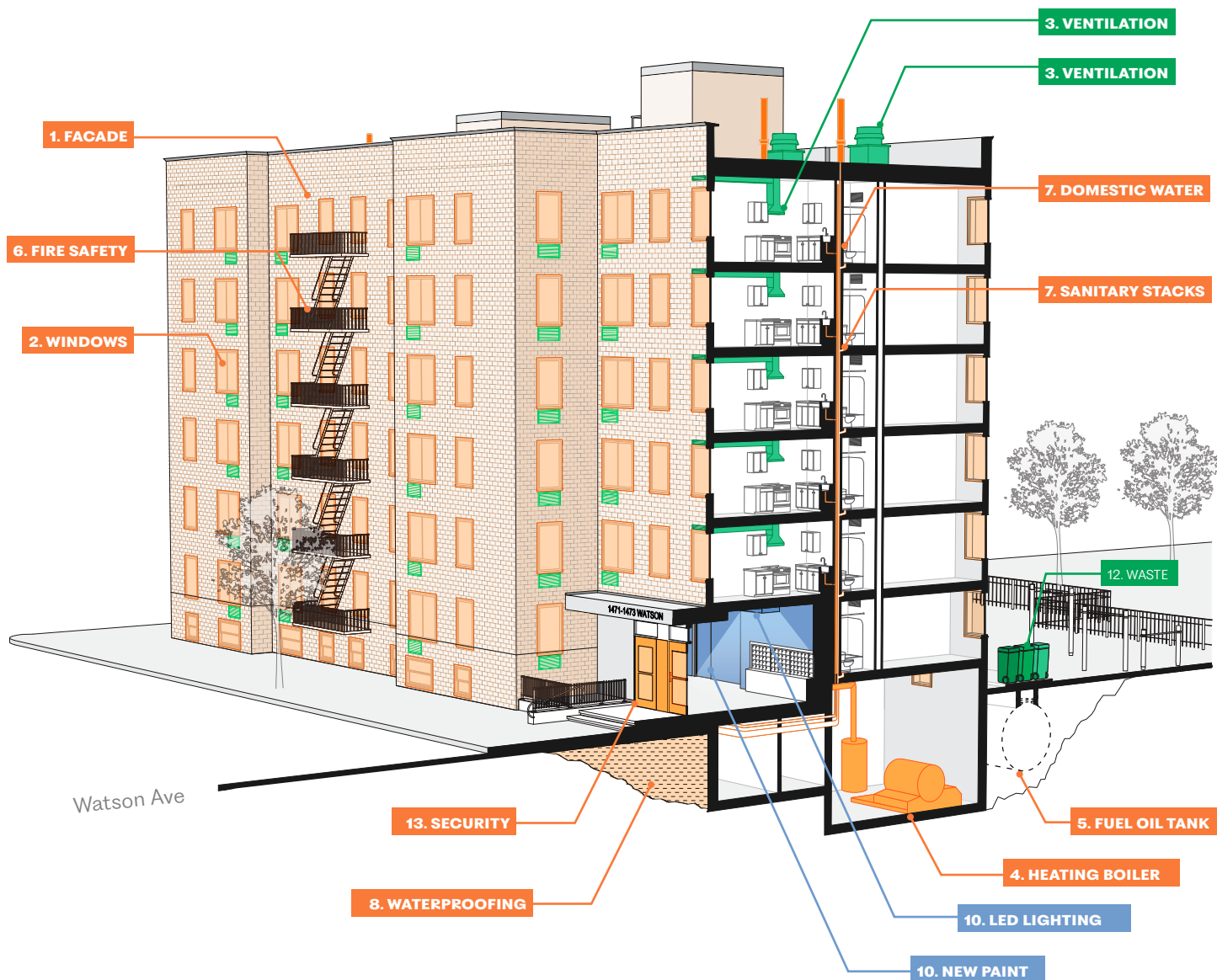
Enabling Work

The most urgent scopes, as reviewed on site and guided by resident feedback, are grouped into the three pillars of Health and Safety, Indoor Comfort and Community Benefits. A comprehensive retrofit is necessary to achieve a good state of repair and to meet the community's needs. We have divided the potential retrofit work into two separate packages. This first package groups urgently needed repair work with enabling work as a first complete phase.

- 1 Facade:** Repair masonry, including localized brick replacements and re-pointing, to ensure weather seal and prevent further deterioration.
- 2 Windows:** Re-seal and repair leaking windows to prevent water ingress. Adjust window mechanisms to allow residents to open windows properly while preserving fall safety measures.
- 3 Ventilation:** Clean ventilation stacks and repair/replace existing rooftop exhaust fans to provide functional exhaust. Provide new range hoods that exhaust to the exterior for all gas ranges in kitchens to reduce combustion gases and provide safe indoor air quality.
- 4 Heating Boiler:** Replace existing fuel-oil heating boiler with new efficient lower temperature boiler. Consider electric boiler air-to-water heat pump to provide more efficient and better heating.
- 5 Fuel Oil Tank:** Decommission and remove existing fuel oil tank buried in rear yard. Test and remediate adjacent soil if required to prevent health and safety hazards.
- 6 Fire Safety:** Engage third-party professionals to do a complete audit of the fire safety systems/procedures and perform recommended upgrades. Review of these systems is especially important in light of the recent fire on the top level and ongoing repairs.
- 7 Domestic Water:** Completely replace existing domestic hot and cold water stacks and distribution systems to address leaks. Replace all components currently at the end of useful life. Replace domestic water boiler with higher efficiency model or use heat-exchanger in conjunction with heating boiler. Recommission hot water storage tanks to increase efficiency and reliability.
- 8 Waterproofing:** Provide waterproofing at cellar and repair cracks in concrete to prevent leaks and keep the basement dry.
- 9 Sanitary Stacks:** Perform camera scope inspection and intrusive investigations to determine if sanitary stacks and distribution need repairs or replacements at the same time as the domestic water stacks.
- 10 Lighting:** Provide new LED common area lighting to improve light levels, safety, and use less power.
- 11 Paint:** Provide minor finish repairs and fresh paint in common areas to improve sense of quality and pride of space.

Baseline Scope

Enabling Work



12 Waste Management: Replace existing trash compactors with modern receptacle-based type, provide options for recycling and waste diversion to prevent pest infestations and maintain clean operating areas.

13 Security: Replace existing doors with a fully secure entry system, including a buzzer intercom connected to each tenant's phone to secure common spaces and allow appropriate access control.

Inclusive Scope

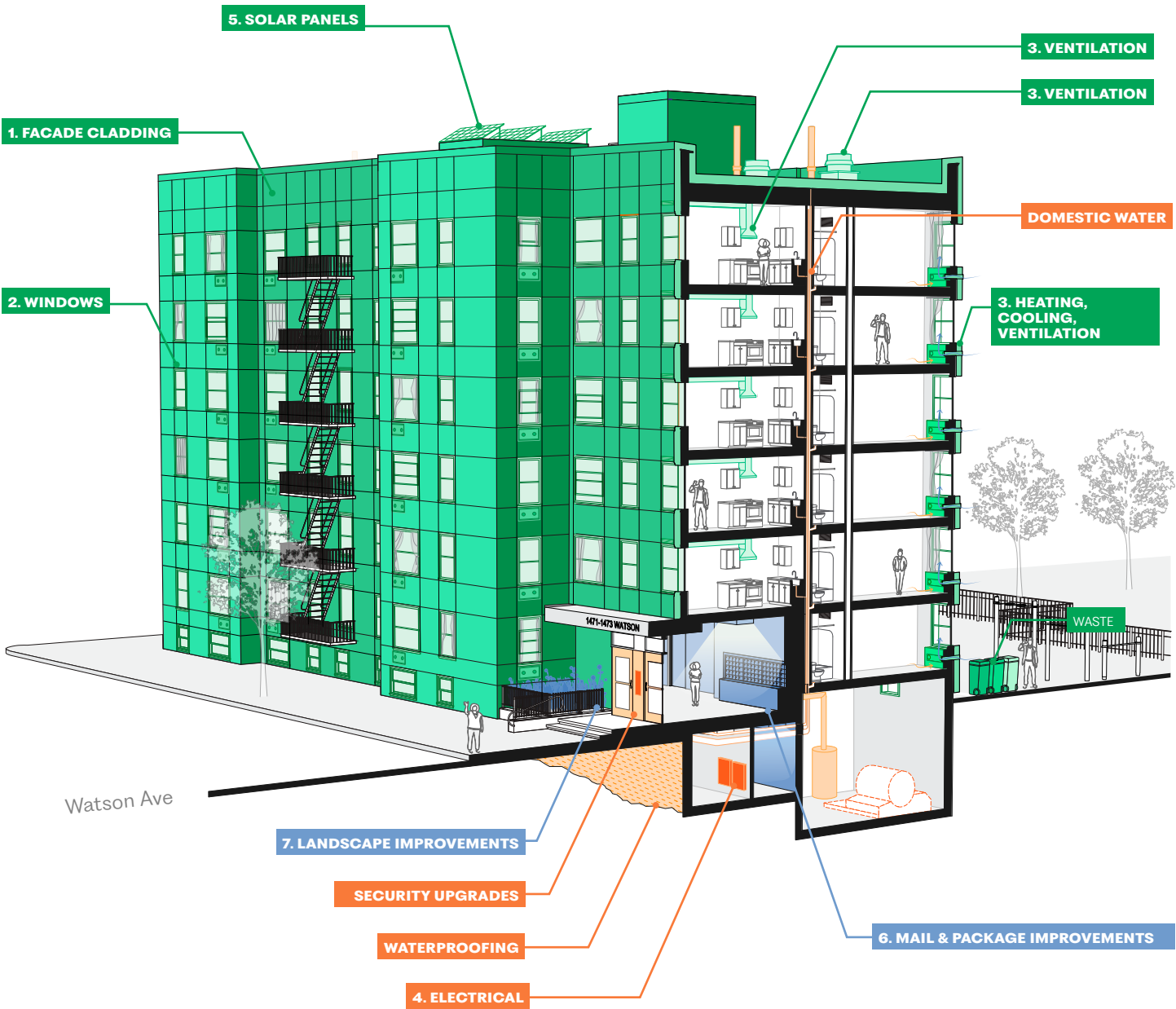
Retrofit Co-Benefits

Building from the Baseline Scope, and recognizing the impact on residents of performing this work, many co-benefits can be achieved through completing a more inclusive deep retrofit. This scale of retrofit would increase scope incrementally but allow for more goals to be achieved, including a much higher level of Indoor Comfort and Community Benefits. It would also future-proof the building by reducing greenhouse gas emissions on site and superseding future capital repairs. In addition to the previous Baseline Scope, the Inclusive Scope package can be completed either as a second phase, or integrated with the Baseline and completed all at once:

- 1 Facade Cladding:** Provide new, durable, and highly insulated wall panels over the existing masonry to increase insulation, reduce drafts, improve thermal comfort and provide a modern look. This is a high priority for residents surveyed.
- 2 Windows:** Provide new high-performance, double hung, fully-operable windows that are integrated with the new cladding system.
- 3 Heating, Cooling and Ventilation:** Remove existing central heating boiler. Provide new individual unit-controlled heat-pumps with integrated ERVs that provide heating, cooling and ventilation for better temperature control, fresh air. These new integrated units will allow residents control over their own apartment temperatures and introduce air conditioning for all residents.
- 4 Electrical:** Upgrade electrical system to accommodate new heating, cooling and ventilation system. Perform studies to see if new electrical servicing from the grid are required.
- 5 Solar Panels:** Provide electrical infrastructure to accommodate roof mounted photo-voltaic arrays. Investigate options for lease-back equipment to offset costs of installation by third parties. Solar panel array can be sized to offset grid emissions for electricity consumed or to generate net-positive energy balances.
- 6 Mail and Package:** Upgrade mail and package area to provide secure and safe area for package deliveries. Install parcel lockers inside of lobby or build out designated package room in underutilized sections of Watson entrance to improve delivery services.
- 7 Landscape Improvements:** Upgrade landscape areas directly adjacent to the building to provide cheerful and pleasant new greenery, accessible hard surfaces and pleasant environments, especially where there are impacts due to construction.

Inclusive Scope

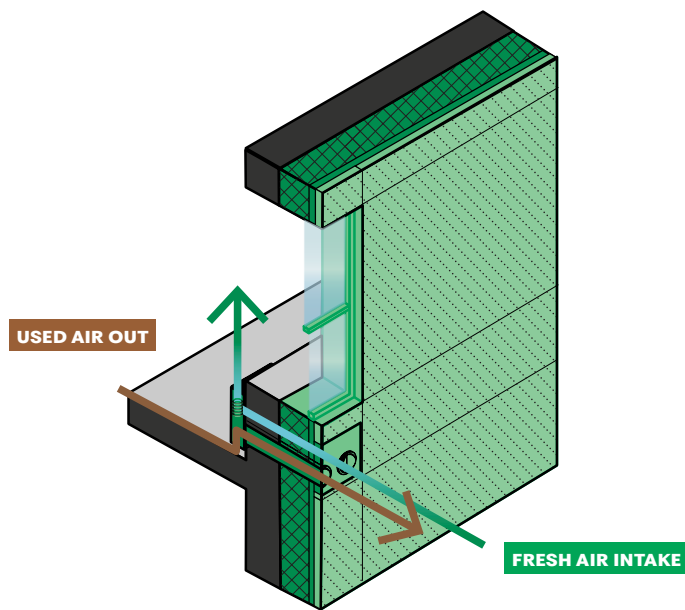
Retrofit Co-Benefits



Heating, Cooling and Ventilation

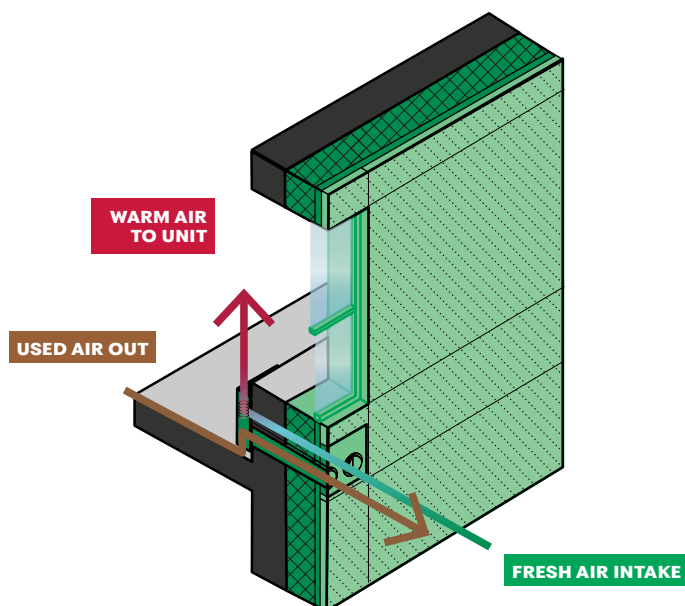
Indoor Comfort and Energy Efficiency

The Inclusive Scope retrofit, aims to improve indoor comfort, reduce energy consumption, and support city and state decarbonization efforts. A proposed solution is the use of unitized heat pumps combined with Energy Recovery Ventilators (ERVs). These compact units, tailored to fit existing air conditioner sleeves or convector boxes, offer individualized thermostats and controls, empowering residents to personalize their indoor climate. The system provides year-round benefits, ensuring optimal heating, cooling, and air quality, even during extreme weather conditions.



FRESH AIR ONLY

ERVs with fresh air intake draw in outdoor air, filter it to remove pollutants, and deliver it indoors. This ensures consistent ventilation, improving air quality by reducing allergens, pollutants, and odors. By utilizing the heat from exhaust air, the ERV maintains indoor temperatures while minimizing energy loss, creating a healthier and more energy-efficient environment.

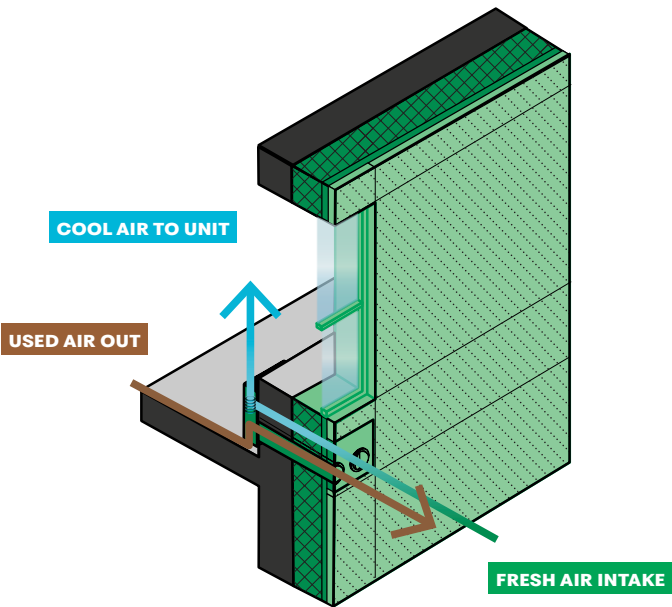


FRESH AIR & HEATING

During the winter months, the integrated ERV pre-conditions incoming fresh air by recovering heat from the exhaust air. The heat pump then efficiently provides supplemental warmth, maintaining a cozy indoor environment while significantly reducing energy demands. This approach ensures that residents enjoy fresh, filtered air without sacrificing warmth or comfort.

Heating, Cooling and Ventilation

Indoor Comfort and Energy Efficiency



FRESH AIR & COLLING

In the summer, the ERV works in tandem with the heat pump to pre-cool fresh air before it enters the room. This reduces the load on the cooling system, ensuring energy efficiency while maintaining a comfortable indoor climate. With extreme heat and humidity becoming more frequent, this system offers a vital solution to protect residents’ well-being and improve their quality of life.

DESIGN PILLARS SUMMARY

Both the Baseline Scope and the Inclusive Scope provide direction on how best to rehabilitate and upgrade the building systems at Watson to improve resident health and safety, indoor comfort, and sense of community. The Baseline takes high consideration to health and safety, but does less for indoor comfort and community benefits. The Inclusive approach receives high merits in each category. The degree to which the scope packages satisfy each design pillar is diagrammed below.

Baseline Scope



Inclusive Scope



Energy Use

Retrofit Co-Benefits

The Watson Houses use far more energy, including electricity, natural gas and fuel oil, than the average New York City apartment building.

At the Watson Houses, electricity is primarily used for plug loads and lighting. Natural gas is primarily used for the gas ranges and domestic hot water heating. Fuel Oil is used for the boiler that serves the heating radiators. These three energy sources contribute to consuming 9,188,128,000 BTUs of energy per year. As dictated by local laws, energy use of buildings is required to be monitored, benchmarked and submitted to the city to receive a grading. While buildings containing affordable housing units are largely exempt, Watson Houses have been assigned a preliminary grading of F for non-compliance.

An average residential building built in New York today has an energy use intensity less than half of that of the Watson Houses, and we estimate with a deep retrofit (inclusive option) the energy use (and therefore utility bills) could be reduced to a quarter of current levels.

The key measures that would reduce energy consumption focus on:

- Improving the building envelope (walls and windows) to reduce the amount of energy needed to heat and cool the building,
- Repairing /replacing aging and inefficient mechanical systems.

Both of these would have the co-benefit of improving resident comfort and indoor environmental quality.

Energy Use On-Site

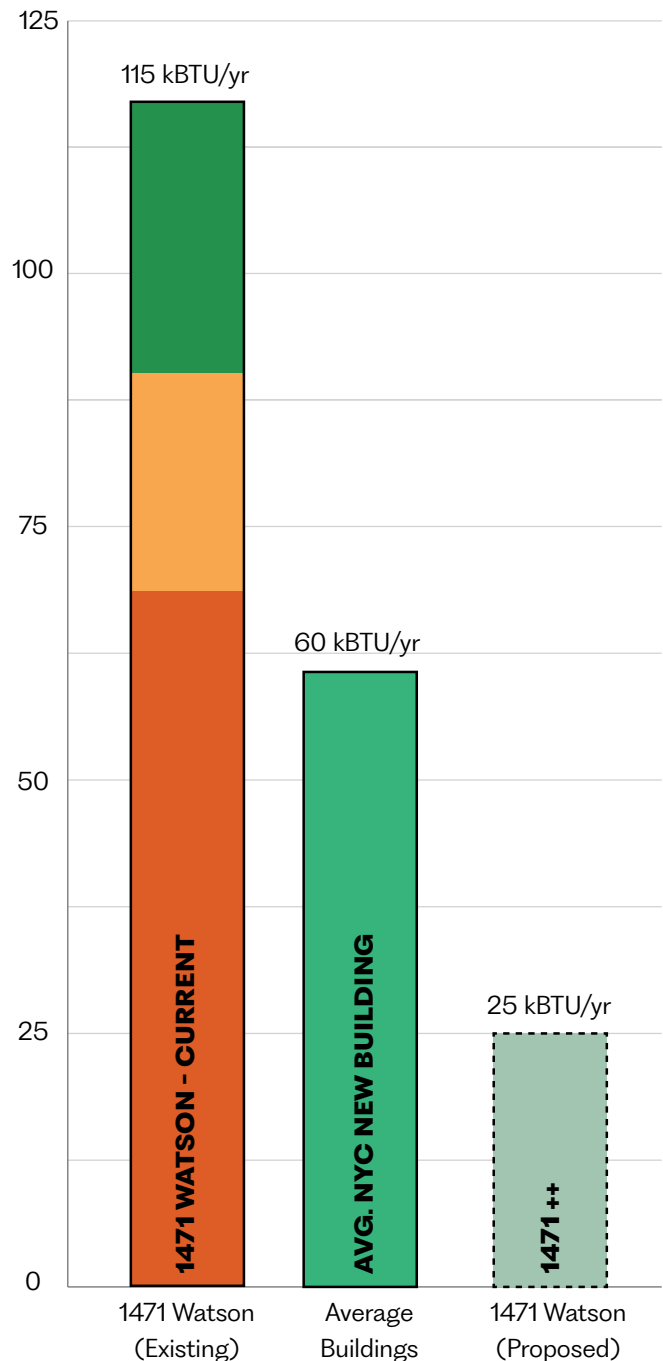


DIAGRAM KEY:

- Electricity
- Gas
- Fuel Oil

Carbon Threshold and LL97

Retrofit Co-Benefits

In 2019, New York City passed Local Law 97 which aims to reduce citywide emissions by 40% by 2030 and 80% by 2050. One of the mechanisms is to impose fines for buildings that exceed an annual greenhouse gas (GHG) limit. Every five years, the law decreases emission allowances, resulting in higher fines for buildings that do not do lower their GHG outputs. While affordable housing has different options for compliance with the law, the Watson Houses already exceed the current limit and produce over 653 tons of CO₂ equivalent per year.

Buildings with affordable and rent-regulated housing are not exempt from LL97, but are treated differently under the law. Many of these buildings are subject to the 'Prescriptive Pathway' which requires buildings to implement a suite of low-cost prescriptive energy conservation measures or voluntarily meet 2030 GHG emissions limits. Other housing, primarily large income-restricted developments, are subject to the '2035 Pathway' and will need to start meeting emissions caps in 2035. With careful planning, owners of affordable housing can strategically decarbonize their buildings to meet LL97 compliance requirements while reducing energy costs, improving indoor air quality, and increasing residents' health, safety, and comfort.¹

The diagram to the right visualizes the projected incremental decrease of carbon at Watson with the Inclusive Scope proposal.

Carbon Threshold & Local Law 97

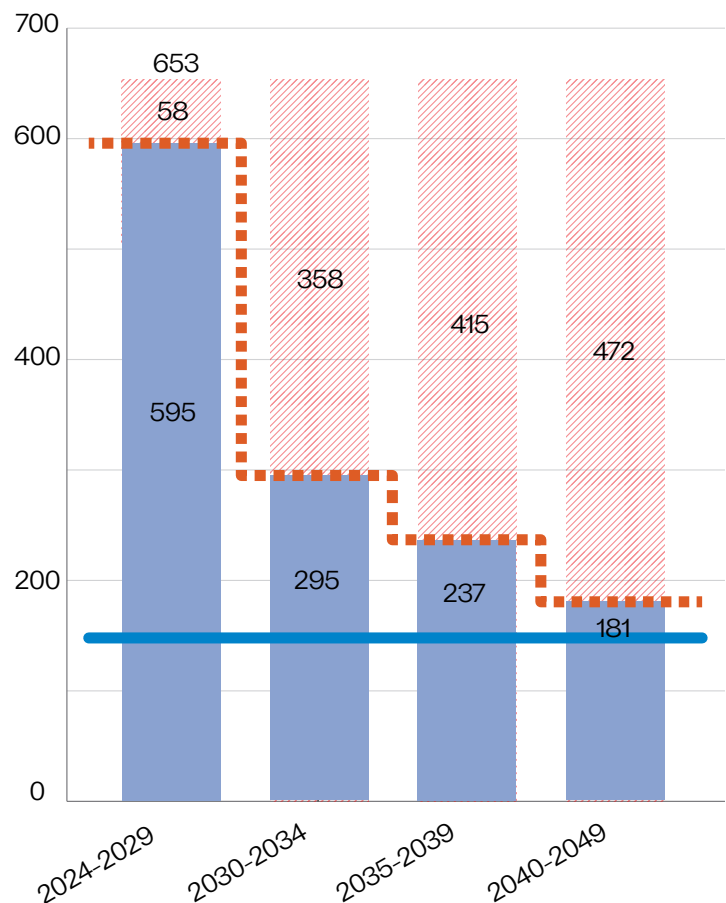


DIAGRAM KEY:

- Emissions Threshold (tCO₂e/yr)
- ⊘ Excess Emissions (tCO₂e/yr)

1. Source: BE-Ex Decarbonization Roadmap for Multifamily Affordable Housing - Best Practises Manual

Community Benefits

Community Room Upgrades

Upgrading the community room at Watson will create an accessible and engaging space for residents. The design would increase secure storage for the Tenant Association, upgrade the kitchen, and enhance programming opportunities by expanding into the adjacent underutilized area. These enhancements make the community room a central space for connection and daily enrichment for residents and families.



Enhanced Kitchen and Restrooms

New kitchen appliances and restroom fixtures to modernize the commonly used spaces of the community room.



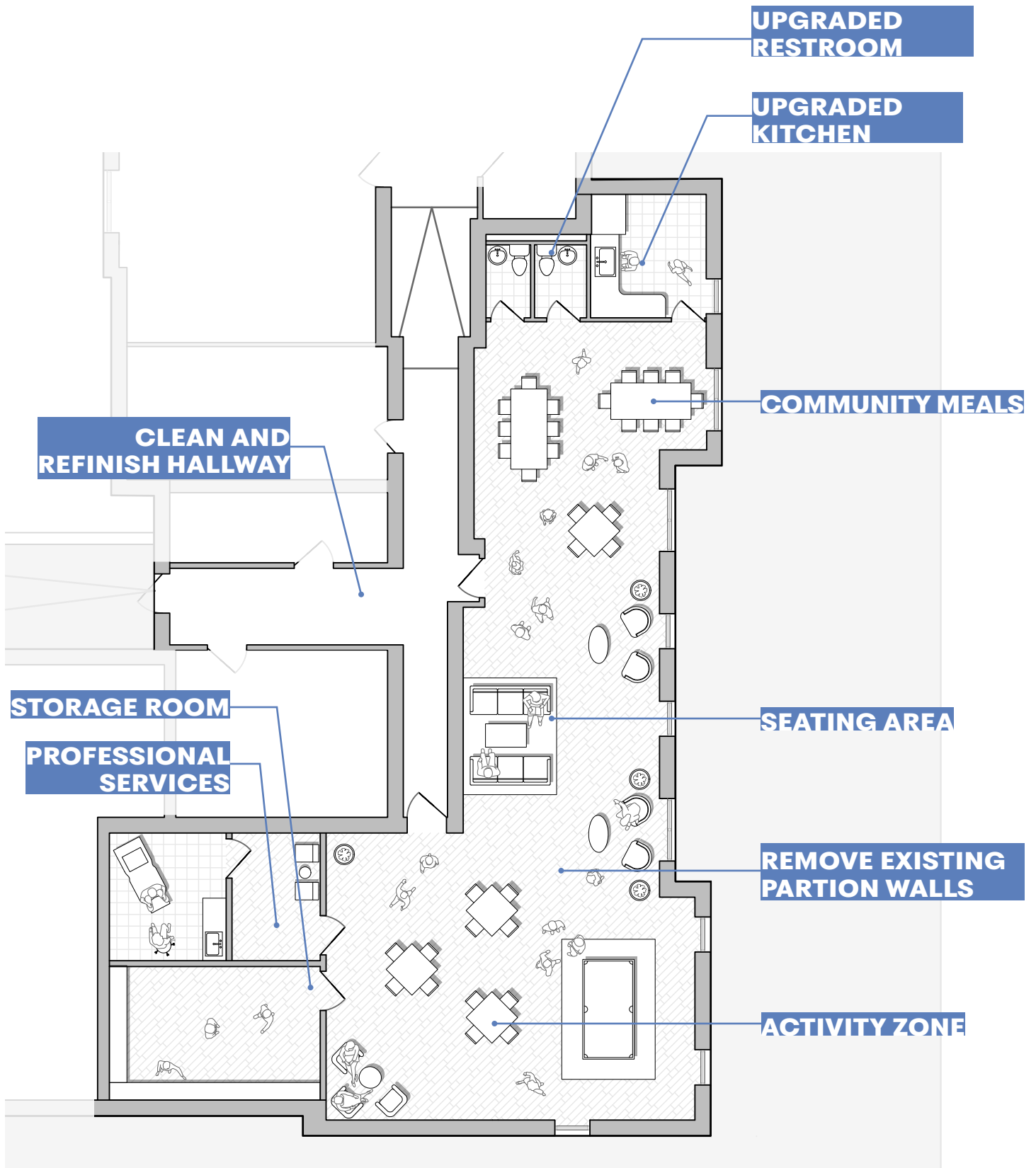
Additional Programming

Updates to the community room could facilitate new programming like workout classes. It could also provide supportive spaces for visiting professionals, like health care providers.



Increased and Secured Storage

Safe and secure storage space would allow the Tenant Association to continue to serve the Watson Community with peace of mind.



COMMUNITY ROOM CONCEPTUAL FLOOR PLAN

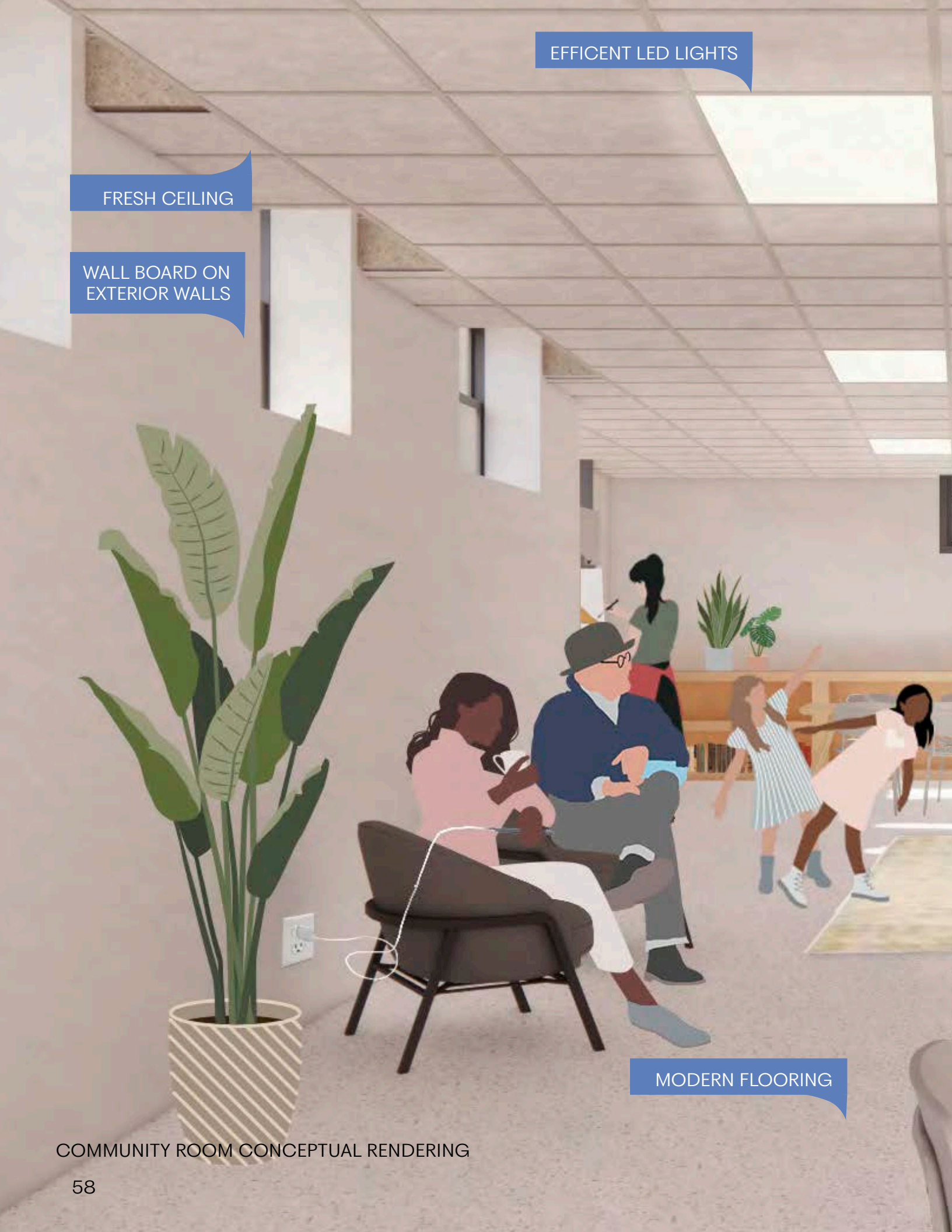
EFFICIENT LED LIGHTS

FRESH CEILING

WALL BOARD ON
EXTERIOR WALLS

MODERN FLOORING

COMMUNITY ROOM CONCEPTUAL RENDERING





MORE STORAGE

ELECTRICAL UPGRADES

Community Benefits

Lobby and Security Updates

Much of the lobby upgrades would encompass security improvements, such as new doors that lock and a new intercom system. New flooring in the lobby would give a welcoming energy to the space. There is space to create a small parcel room that would allow residents to have packages securely delivered inside of the building. New, residential lighting and foliage in the exterior plant beds would also improve the overall experience of the building entry and lobby.



Package and Parcel Space

Locating a package and parcel retention space within the lobby is a priority for residents.



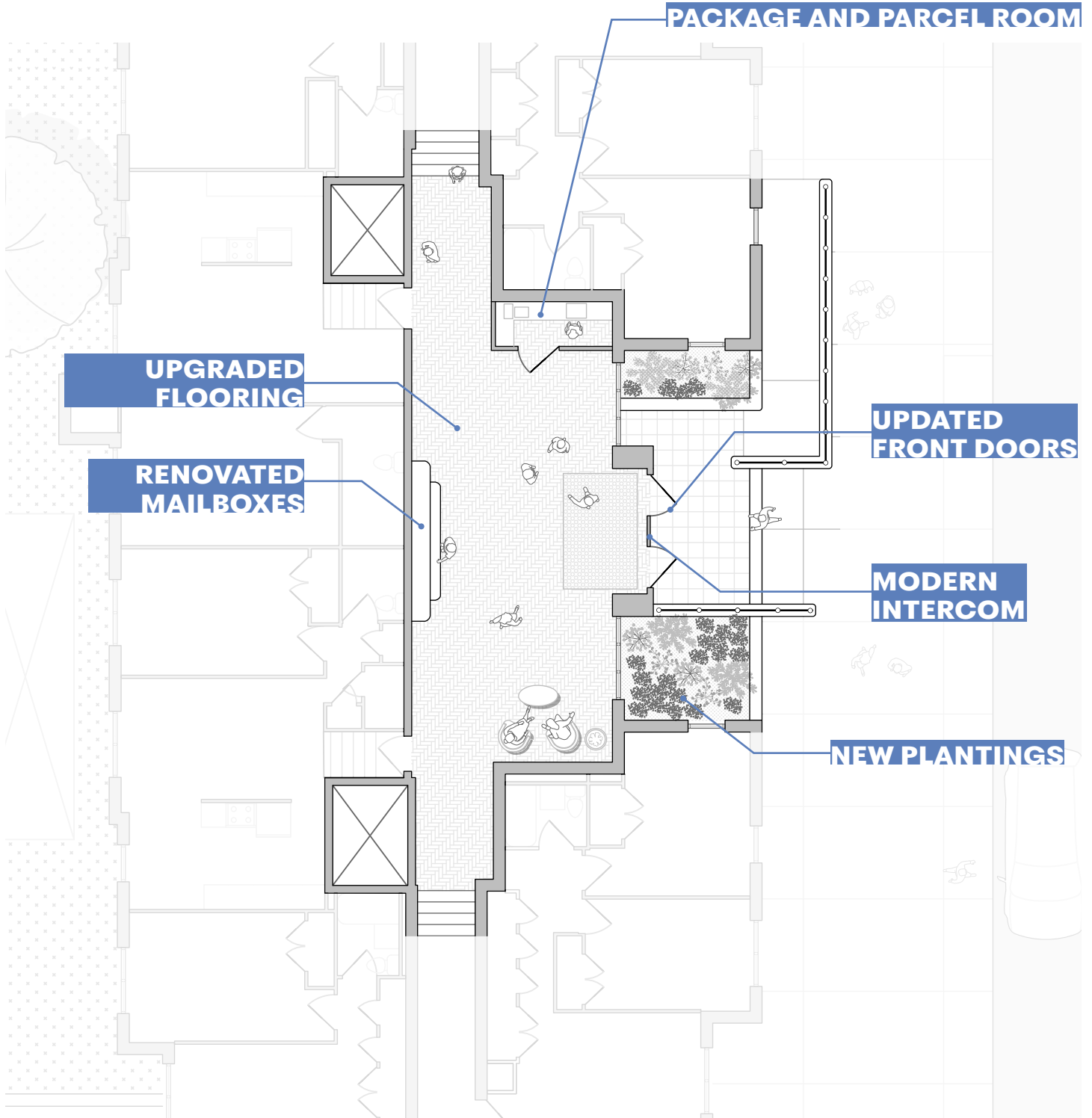
New Intercom System

Upgrading the intercom and key system will enhance the level of security on-site and better control access in and out of the building.



Upgraded Finishes

Efficient LED lighting, fresh paint, and modernized flooring will create a welcoming entry space for residents.



LOBBY AND ENTRY CONCEPTUAL FLOOR PLAN



LED LIGHTING

UPGRADED DOORS

NEW INTERCOM

NATIVE PLANTINGS

LOBBY AND ENTRY CONCEPTUAL RENDERING

An architectural rendering of a modern building facade with brick and large glass windows. The building has a grey horizontal band across the middle with the text 'TSON AVENUE' in large, raised, sans-serif letters. Several blue callout boxes with white text are overlaid on the image, pointing to specific areas of the building. In the foreground, there are stylized human figures: a woman in a black top and blue pants walking, a man in a yellow shirt carrying a box, a man in a white shirt and black pants standing, and a small child in a grey shirt and white pants standing next to a blue scooter. A metal railing runs across the middle ground.

WINDOW RESTORATION

FACADE REPAIR

NEW VENTILATION

PACKAGE AND PARCEL
ROOM OR LOCKERS

Visioning

Comprehensive Upgrades

Accessibility Upgrades¹

Watson was built at a time when accessibility was not a consideration, nor a legal requirement. In comprehensive modernization projects, NYCHA has entered a Voluntary Compliance Agreement with HUD to ensure common spaces and apartments comply with Section 504 of the Rehabilitation Act of 1973. If employed at this site, it is recommended that 5% of apartments would be modified for compliance, including widening door entryways, fully accessible baths and kitchens, lowering light switches, audio/visual smoke/CO alarms, and accessible routes to converted apartments.



**ADA/UFAS
Upgrades**

Apartment Renovations

Comprehensive modernization includes renovations to the apartments. This would capture new finishes like flooring and paint, updated kitchen cabinets, countertops, appliances, and fixtures; fresh, clean, and durable bathroom materials with new fixtures.

Renovating individual apartments is not required to achieve the recommended scope presented within this document but it does improve general well being of residents, as is shared by NYCHA residents that have received a comprehensive renovation.



**Kitchen
Renovation**

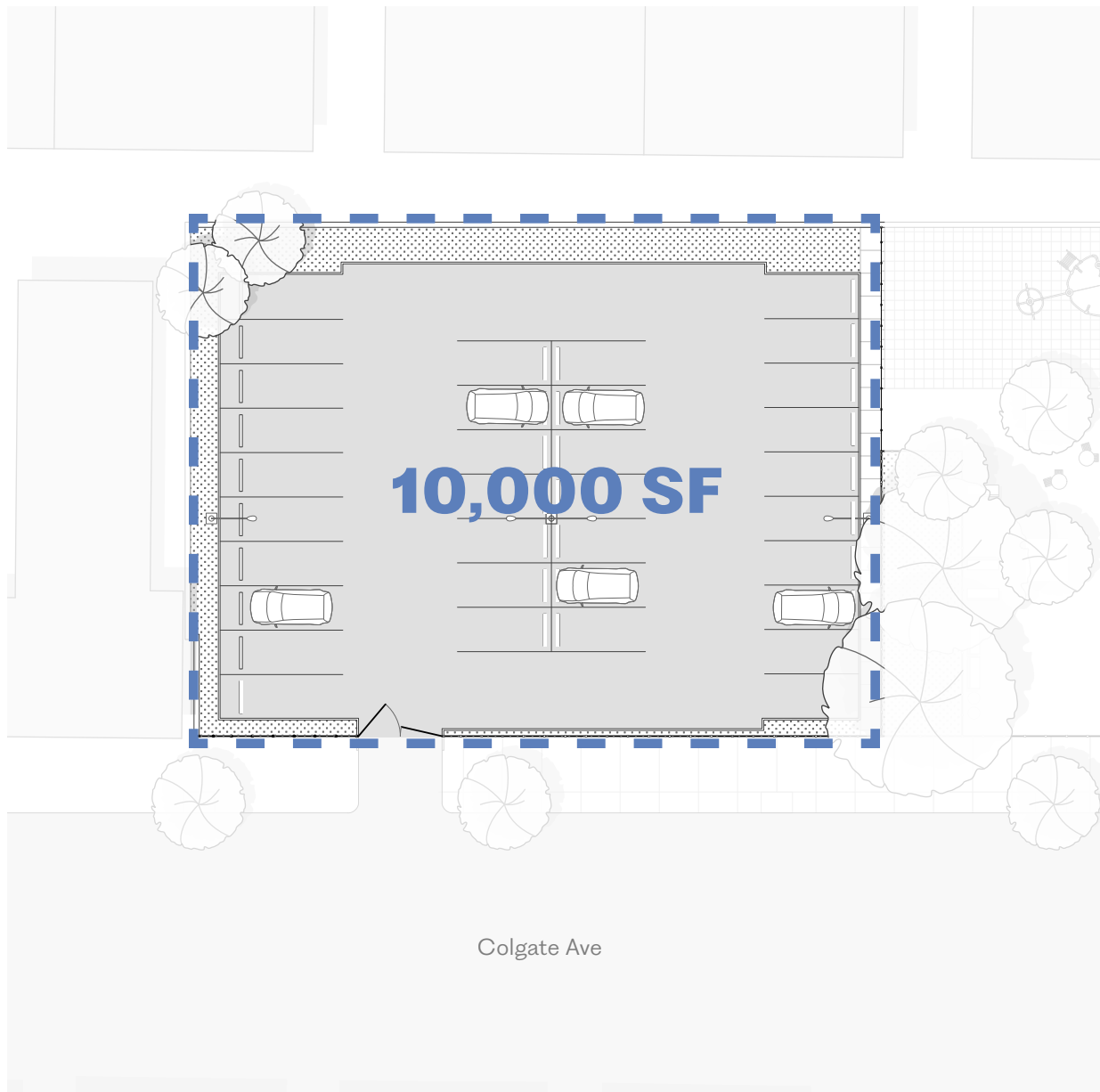
1. Source: NYCH Design Guidelines: Rehabilitation of NYCHA Residential Buildings

New Construction Opportunity

Community Center

The existing parking lot has approximately 10,000 sf of buildable area. Preliminary studies suggest that there is 17,600 sf of available FAR on the site. If desired by residents, there is potential to construct a new, single story building on the parking lot for community uses.

Further investigation is required.

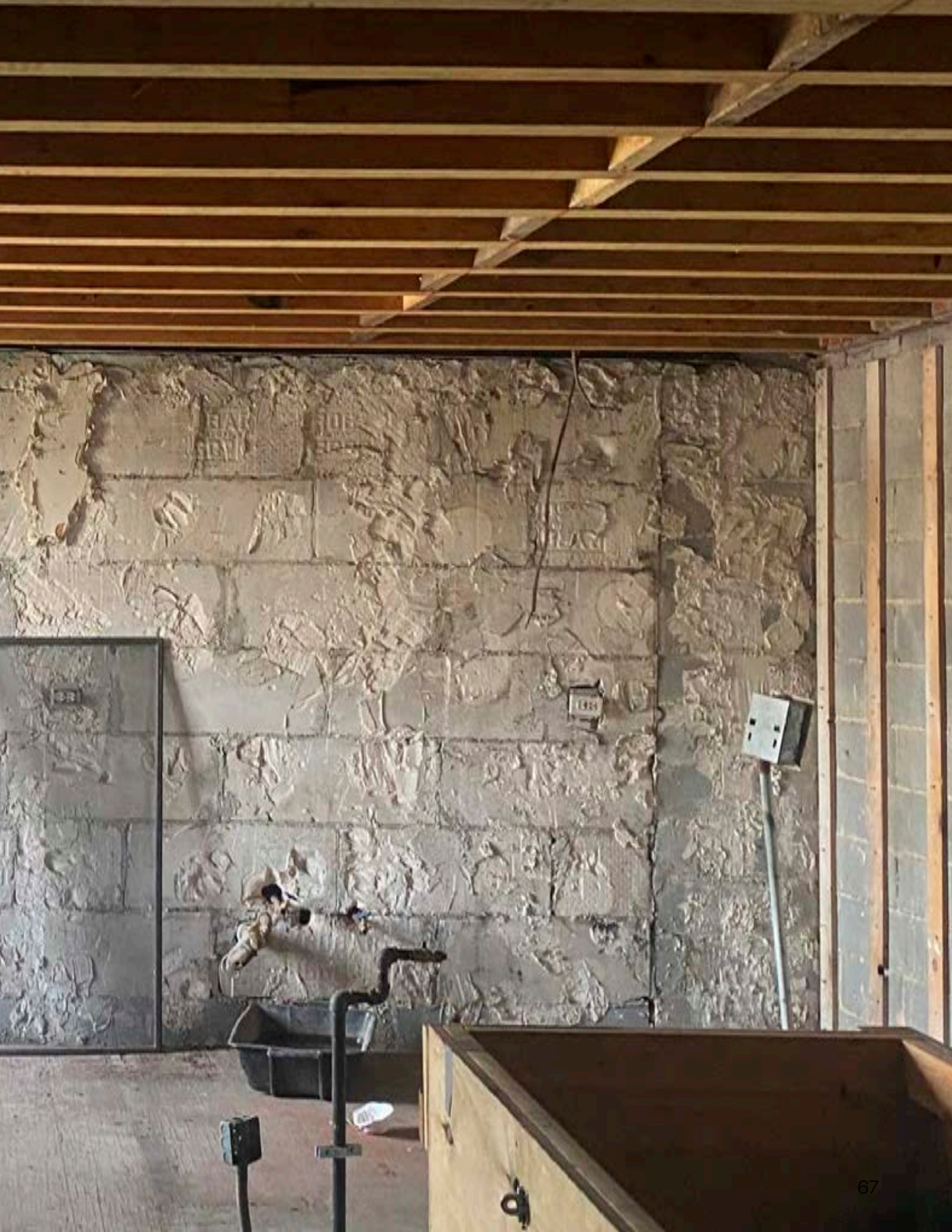


CAPITAL NEEDS

Getting to a Good State of Repair



Sixth Floor Unit Under Construction After Fire





Sixth Floor Unit Under Construction After Fire

Capital Needs Assessment

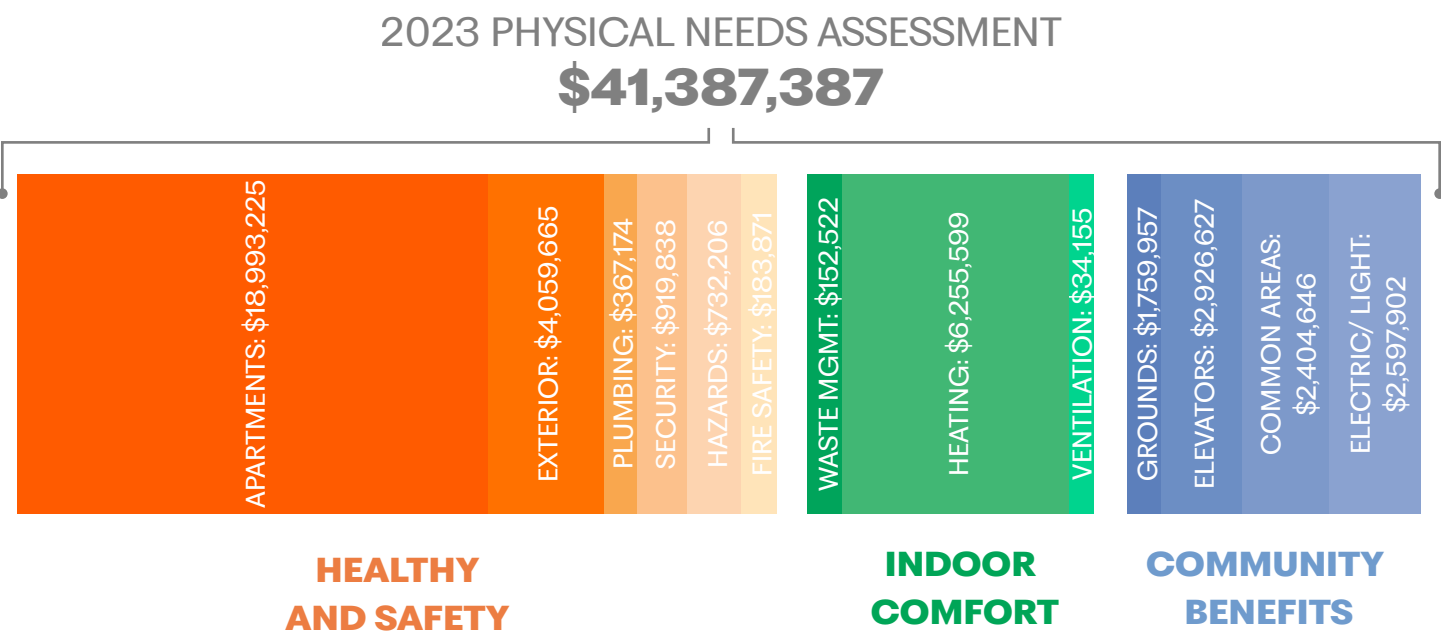
Understanding the investment required to modernize Watson is essential to maintaining a good state of repair. Developing from the Physical Needs Assessment and the recommended rehabilitation scope, this chapter discusses funding needs and pathways.

NYCHA regularly issues a Physical Needs Assessment (PNA) that evaluates the capital investments necessary for a development to be in a good state of repair. This evaluates the general state of repair for mechanical systems, exteriors, apartments, common spaces, and security needs for buildings of similarly typologies in the NYCHA portfolio. The 2023 PNA, provided in good faith, may not be fully accurate to Watson's specific needs and is intended to generate a familiarity with the scale of investment and impact.

The scopes aforementioned, Baseline and Inclusive, are both considered to be integrated rehabilitations. This implies that renovation planning, phasing, and construction will be undertaken as through a single, integrated project.

There are many ways Watson can obtain an integrated rehabilitation, as is explained in the coming chapter. The Comprehensive Modernization program put forth by NYCHA, coupled with the existing PNA, provides a potential framework for renovation at Watson while retrain Section 9 status. Additional integrated delivery means are also outlined.

Additionally, within this chapter is a breakdown of the 2023 PNA for Watson, as well as a summary on completed and on-going capital repairs at the development.



Capital Needs

Assessments and Projects

Physical Needs Assessment

NYCHA's Physical Needs Assessment (PNA) is a critical resource for effectively evaluating capital investment needs, as well as for planning and prioritizing capital investments across NYCHA's properties. Conducted approximately every five years as recommended by the U.S. Department of Housing and Urban Development (HUD), the PNA involves assessing when in the next 20 years the physical assets that make up NYCHA's buildings and campuses will require replacement or upgrade, and then estimating the costs for these renovations based on current market prices.

Current Analysis: 2023 PNA

NYCHA focused the 2023 PNA on inspections at a representative sample of 30 properties to verify and update asset deterioration modeling and forecasts for all properties, as is common practice in the industry.

The PNA results are in terms of 2023 market prices and do not incorporate future market price changes, including basic inflation. For this and a number of other important reasons, the PNA estimates are not the same as detailed cost estimates that would be developed in the course of budgeting a capital investment based on the expected market prices at the time of construction. The PNA estimates do, however, capture the magnitude of capital investment required to comprehensively address the conditions of deteriorating physical assets at each property.

5 Year Capital Needs Investment: \$34,121,711

20 Year Capital Needs Investment: \$41,387,387

Previous & On-Going Work

The Tenant Association at Watson has been actively engaged in getting vital repairs for the building. Over recent years, the complex has seen a number of renovations including new CCTV technology to address security concerns and a new playground and landscape that is maintained in collaboration with the NYC Parks Department. The residents were a part of two pilot programs; one for casement windows that were intended to improve weatherization and building efficiency that were poorly installed, resulting in interior dampness and poor ventilation, and another program to test electrical induction stoves. These appliances were ultimately removed from the building after complaints and concerns from residents. New gas lines have been haphazardly retrofitted back into apartments and create mobility issues within homes.

According to NYCHA's Capital Action Plan for comprehensive modernization across the portfolio, Watson is slated for new waste management infrastructure. A new waste yard with 2 Auger compactors is intended to commence in 2025 and be completed by 2026. New interior compactors are also included in these updates and are intended to be added to the building in 2029.

These upcoming capital improvements align with the renovation scope and hierarchy of needs outlined in this document. It is the recommendation of this team that prior to installation of any new waste infrastructure, the Tenant Association and NYCHA consider the comprehensive updates for the building, and ensure that the renovations are not done in isolation but consider and align to a full building plan for renovation.

ELECTRICAL	ELECTRICAL SYSTEM	\$2,193,445
	INTERIOR FIXTURES	\$323,229
	INTERCOM	\$74,112
	EMERGENCY LIGHTING	\$7,115
COMMONS	INTERIOR STAIRS	\$1,069,324
	COMMON AREA FINISHES	\$608,951
	COMMUNITY KITCHEN	\$422,090
	INTERIOR BUILDING DOORS	\$247,371
	COMMUNITY BATHROOM	\$56,908
VENTILATION	AIR CONDITIONING	\$30,538
	EXHAUST FAN	\$3,616
HEATING	HEATING SYSTEM	\$3,673,311
	BUILDING STEAM PIPING	\$2,504,874
	COMMON RADIATORS	\$77,413
FIRE PROTECTION	FIRE SPRINKLER	\$4,448
	FIRE ALARM	\$179,422
PLUMBING	BUILDING DRAINAGE	\$83,344
	DOMESTIC HOT WATER	\$94,470
	UNDERGROUND HYDRONIC PIPING	\$133,902
	UNDERGROUND GAS PIPING	\$55,456
BUILDING EXTERIOR	BRICKWORK	\$2,308,981
	WINDOWS	\$1,619,691
	ENTRYWAYS	\$114,265
	FOUNDATIONS	\$16,727
APARTMENTS	KITCHEN	\$3,681,499
	APARTMENT RENO	\$10,047,249
	BATHROOM	\$4,437,968
	ENTRANCE DOORS	\$626,507
	APT 504 ACCESS	\$200,000

◀ The 2023 PNA scope has been organized into the three rehabilitation categories identified in this Property Assessment for clarity within this document. Not all project values align with the site specific recommendations put forth in this booklet, as the PNA has generalized categories that capture the largest scope for the breadth of buildings within the NYCHA portfolio.

Avenues for Rehabilitation

Existing Pathways

There are various paths to renovation for the Watson Houses. From our conversations, the resident and Tenant Association would generally prefer an avenue for rehabilitation that retains Section 9 status at Watson, with NYCHA as the landlord and maintenance operator. This preference for remaining in Section 9 was also reflected in a Tenant Association-administered survey prior to the beginning of this project. With this preference in mind, on the following pages, we focus on rehabilitation frameworks and potential financing streams that could be available under the existing program. Ultimately, the means by which the final renovation at Watson will be undertaken are to be coordinated with NYCHA, the Tenant Association, governmental agencies and politicians, and financial partners.

Comprehensive Modernization¹

The "Comp Mod" program has been launched to effectively utilize available capital funding for a property to holistically rehabilitate NYCHA campuses and buildings, to improve building performance, enhance residents' quality of life with improved living conditions, and preserve public housing for current and future residents.

- Under Section 9, which is how Watson is currently funded, the development will continue to be dependent on federal funding allocated annually by Congress.
- Comprehensive Modernization of a property entails undertaking major renovations across building exteriors, multiple building systems, building and apartment interiors, and site and grounds improvements, through a single, integrated project.
- The Comp Mod Outreach Team acts as the primary channel of communication between NYCHA and its residents. They are committed to ensuring that every voice is heard, each concern is addressed, and all inquiries are clarified.
- Rents remain at 30% of income and resident rights continue unchanged.



1. Source: <https://www.nyc.gov/site/nycha/about/comprehensive-modernization.page>

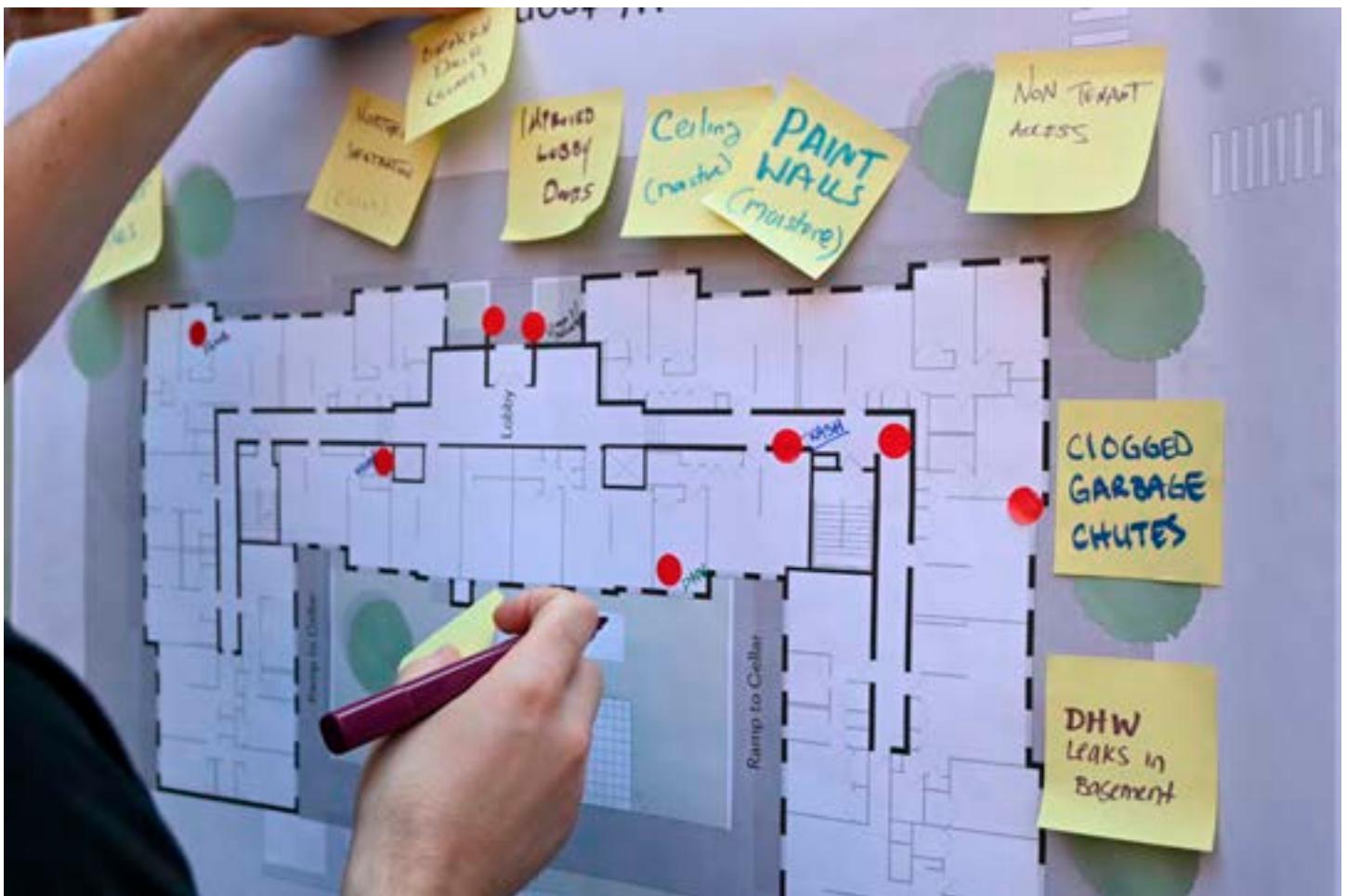


IMAGE OF BUILDING PLAN SHOWING RESIDENT CONCERNS AND RENOVATION PRIORITIES.

For more information on the Comprehensive Modernization program, go to:

https://www.nyc.gov/assets/nycha/downloads/pdf/comp-mod/NYCHA_Comp_Mod_Consultation_White_Paper.pdf

Avenues for Rehabilitation

Potential Financing Options

Opportunities for additional funding streams are alive in the market and waiting to be utilized; from lending to efficiency improvements, there are avenues to finance Watson's rehab.

Community Preservation Corporation

One notable initiative is the Community Preservation Corporation's (CPC) Climate Capital Program, a revolving loan fund made possible through the Inflation Reduction Act (IRA). This program offers financial support to multifamily housing projects, emphasizing carbon reduction and energy efficiency.

The program provides up to \$13 million in loans:

\$5 Million for pre-construction activities, including design and feasibility studies

\$8 Million for construction-phase activities

These loans are contingent upon city and state investment and adherence to strict loan terms. The key requirement mandates that for every \$8,000 in construction-period debt, one ton of carbon must be reduced annually. The target financing goal is to achieve a reduction of 1,000 tons of carbon emissions per year.

Projects must also meet energy efficiency benchmarks, such as a 20% reduction in whole-building energy consumption or achieving a modeled Energy Star score of 75 or higher. These criteria incentivize public housing developments to modernize heating, cooling, and domestic hot water systems, transitioning to cleaner, more sustainable energy sources. Additionally, the program supports pre-construction activities like energy audits, permitting, and design planning, ensuring developments are poised to meet rigorous performance goals. These requirements align with NYC energy initiatives mentioned in previous sections of this booklet.

Leveraging Energy Savings for Upgrades

In some cases, energy savings from upgrades can offset the initial investment. For example, the Department of Housing and Urban Development (HUD) offers Energy Performance Contracts (EPCs) for public housing, which could be instrumental in realizing the 1471 Watson Avenue rehabilitation scope. Drawing from successful models used by other Public Housing Authorities (PHAs), sustainable upgrades can maximize energy efficiency while reducing operating costs.

Renewable Energy Solutions

Installing rooftop solar panels or small co-generation units would further offset electrical demand. These improvements have demonstrated potential annual savings of \$300,000—\$500,000, depending on the scope of the upgrades and the building's baseline consumption.

Potential Upgrades and Savings

Key upgrades that could yield significant savings include:

- **Heating and Hot Water Systems:** Replacing outdated boilers with high-efficiency condensing boilers or heat pump water heaters, as seen in Providence's Chad Brown development, could reduce energy consumption by 20—30%.
- **LED Lighting:** Transitioning all interior and exterior lighting to LEDs may lower electricity use for lighting by 15—20%.
- **Water Conservation Measures:** Installing low-flow toilets (1.6 gallons per flush), faucet aerators, and efficient shower heads could reduce water usage by up to 30%.
- **Building Envelope Improvements:** Adding insulation and weather-stripping would minimize heating and cooling losses, boosting overall efficiency.
- **Energy Star Appliances:** Replacing outdated appliances with Energy Star-rated models could save an additional 10—15% on electricity consumption.

Case Studies in Energy Savings

Numerous Public Housing Authorities (PHAs) have successfully implemented EPCs, achieving substantial financial and energy savings:

- **Buffalo Housing Authority:** Partnered with Siemens, achieving \$750,000 in guaranteed annual savings with costs largely offset by state energy programs.
- **Minneapolis Public Housing Authority:** Saved over \$1 million in the first 18 months of its EPC initiative.
- **Providence, RI:** Realized \$1.2 million in utility savings by decentralizing heating, upgrading to LED lighting, and installing high-efficiency boilers.
- **Boston, MA:** Saved over \$5 million annually across 15 developments through integrated water and energy conservation measures.
- **Stark County, OH:** Achieved nearly \$300,000 in annual savings by upgrading high-rise buildings with geothermal heat pumps and other energy-efficient systems.

Long-Term Impact and Incentives

By integrating these upgrades, PHAs can achieve significant reductions in utility costs while improving resident comfort and environmental sustainability. With state agency incentives, such as those from NYSERDA and HCR, upfront costs can be substantially lowered, enabling payback periods of just 8—12 years. These programs exemplify how targeted investments in sustainability can transform public housing, benefiting residents and the environment alike.



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