



**NEW YORK CITY
BUILD IT BACK PROGRAM**

**HOUSING REHABILITATION PROGRAM
MINIMUM PROGRAM STANDARDS**

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NYC Build It Back Housing Rehabilitation Standards

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I PREFACE & GUIDING PRINCIPLES

The purpose of this document is to establish the eligible and ineligible scope under the NYC Build it Back – Housing Rehabilitation program. Please note that there will be differences in the scope for Substantially damaged and Non-substantially damaged homes. There are also differences in both NYC and NYS codes for multiple dwellings (3 – 4 units). The architect, engineer and contractors performing design or construction services for the Build It Back program are expected to be knowledgeable in the requisite codes and required inspections. Additionally, this document provides design standards and other requirements where not otherwise determined – or expressly covered – by program specifications or code. It is designed to assist in achieving consistency throughout rehabilitation activities funded with CDBG Disaster Recovery Funds; to ensure that all applicants receive an equal assessment, and that inspectors apply a uniform method during each inspection.

Substantially damaged homes, those homes damaged 50% or more of their pre-storm value, will be elevated to meet the requirements of the City of New York & FEMA. Non-substantially damaged homes will be inspected for weather tightness, storm related damage and Life Safety. Conditions will be repaired as indicated in this document.

This document is not intended to reduce or exclude any applicable city, state or federal laws, codes or regulations.

This document assumes that a knowledgeable inspector will thoroughly inspect each dwelling to verify the presence and condition of all components, systems and equipment of the dwelling.

A. NYC Build it Back Guiding Principles for Rehabilitation Work

New York City’s Action Plan¹ identifies specific objectives related to housing rehabilitation, including:

- Helping people affected by Sandy directly by replacing and rehabilitating housing units, including identifying opportunities for mitigation enhancement measures;
- Helping people affected by Sandy by improving the resilience of their housing units while restoring their buildings/residences;
- Supporting resilience improvements to reduce risk and strengthen neighborhoods in flood zones.

In determining whether certain work is considered program eligible or ineligible, the underlying principle is to ensure that low and moderate income persons affected by Hurricane Sandy are left with safe, decent and sanitary housing. To this end, assistance will not be used for luxury items, including but not limited to, garage door openers, security systems, swimming pools, fences, and television satellite dishes or cable wiring. Build it Back will rehabilitate areas of the home, including but not limited to:

- Site (limited)
- Exterior Building Surfaces
- Foundations & Structure
- Windows & Doors
- Roofing
- Insulation & Ventilation

¹ <http://www.nyc.gov/html/cdbg/html/plan/read.shtml>

- Electric
- Plumbing Systems
- HVAC
- Appliances
- Elevation of Substantially Damaged Homes
- Lead-based paint and asbestos abatement and mold remediation (as required by law).

B. Safe, Decent and Sanitary Housing

The inspector shall inspect the entire home to determine areas of damage related to Hurricane Sandy. If a home is determined to be substantially damaged, the entire home is to be brought up to the applicable NYC building code only where required, including all interior rooms, exterior components, and site conditions, to ensure that all components, systems and equipment of a dwelling referenced in this document shall be in good working order and condition and be capable of being used for the purpose in which they were intended and/or designed. Areas that were storm damaged in non-substantially damaged homes or are required to be upgraded by Green Building Standards shall be rehabilitated to the extent necessary. Any reconstructed building will meet all applicable codes and be Energy Star certifiable.

C. Repair v. Replace

Storm damaged components, systems and/or equipment that are not in good working order and condition shall be repaired, provided that the contractor will be able to warranty and guarantee the safety of the repair. When the item cannot be repaired, it shall be replaced in accordance with all code and program requirements. In substantially damaged homes, all utilities must meet NYC code and green building standards, whichever is the more restrictive.

Materials may be matched to existing when feasible and cost effective.

D. Underlying Conditions

The program will rehabilitate/abate only those underlying conditions that must be addressed order to restore an element or system affected by storm damage, or to remediate any Life Safety hazards. **The program will not repair damage due to deferred maintenance if not storm damaged.**

E. Interior

All interior ceilings, walls and floors must not have any serious defects such as severe bulging or leaning, medium to large holes, loose surface materials, severe buckling, missing components or other serious damage that could result in structural failure. The condition of the egress route for all interior stairs, halls, porches, walkways, etc. must not present a danger of tripping or falling.

F. Exterior

Storm damaged above grade exterior envelope must be sealed and secure so as to resist damage from future weather conditions. All exterior walls (including foundation walls) or roof must not have any serious defects such as leaning, buckling, sagging, large holes, or defects that may result in the structural failure. The condition of all exterior stairs, porches, walkways, etc., on a path of egress only, must not present a danger of tripping or falling or provide any obstructions to safe exiting.

G. Mitigation

Based on degree of damage, the program requires certain mitigation measures that reduce risk for future disasters that may go above and beyond federal, state, or local construction or code requirements. Any required mitigation measure is specified within each section of this document.

H. Resiliency – Elevating Utilities²

New York City recommended Flood Resiliency Measures include elevation or other flood protection of the following critical building equipment and utilities: fire protection equipment ; electrical equipment (including panels, switch gear, and transformers); heating, ventilation, and air conditioning (HVAC) equipment (including boilers, furnaces, and burners); plumbing equipment (including domestic water equipment and sump pump power feeds); telecommunications equipment; elevator equipment; and emergency generators and associated fuel tanks and pumps (subject to the approval of the Code amendments under review).

Elevation or flood-proofing of this equipment will be required to meet the standard of the higher of the BFE, as set forth in the PWMs, or the FIRMs in effect at this time, in each case, plus 1 to 2 feet of freeboard (as applicable). Upon adoption of the new FIRMs, elevation will be required to meet the standard of the BFE, as set forth in the new FIRMs, plus 1 to 2 feet of freeboard (as applicable).

To comply with this goal, the Build It Back program will offer to elevate most utilities in non-substantially damaged homes to levels above the Design Flood Elevation (DFE = Base Flood Elevation plus Freeboard) to the best of its ability where feasible.

In those homes where utilities will be elevated, the Contractor’s surveyor must provide a datum line indicating the DFE.

NOTE: Newly repaired or installed utilities will only be elevated if the newly installed equipment, provided it is currently working and usable; can be reused in the elevation and elevation is feasible. No newly installed, functioning, utilities will be discarded. Selected utilities, such as electrical panels, may be elevated when elevation of all utilities is not possible. Homeowner’s may choose not to have utilities elevated.

Steam or oil-fired boilers will not be elevated in non-substantially damaged homes. In non-substantially damaged homes, existing air conditioning compressors, even if being repaired or replaced, will not be elevated.

References:

[FEMA Hurricane Sandy Recovery Advisory – RA3, Restoring Mechanical, Electrical and Plumbing Systems in Non-Substantially Damaged Residential Buildings.](http://www.fema.gov/media-library-data/20130726-1906-25045-0662/sandy_ra3_restoringmep_final_508.pdf)³

I. Green Building Requirements

² http://www.nyc.gov/html/sirr/downloads/pdf/final_report/Ch4_Buildings_FINAL_singles.pdf

³ http://www.fema.gov/media-library-data/20130726-1906-25045-0662/sandy_ra3_restoringmep_final_508.pdf

The program requires compliance with the CPD Green Retrofit Checklist for Non-substantially damaged buildings, Enterprise Green Communities for Substantially damaged buildings and Energy Star certification for reconstructions. Rehabilitation work must follow and apply the appropriate checklist to the extent applicable in relation to the work being performed. The phrase “when replacing” in the Checklist refers to the mandatory replacement only when replacing such system as required by the program or code. If the item/equipment is not being replaced by the program, compliance is not required. [See specific requirements for each standard.](#)

J. Accessibility Accommodations

All program participants are eligible to receive options for a basic “accessibility package” in areas being repaired such as grab bars and lever handles.

The program will rehabilitate and/or install certain accessibility options, including ramps and/or lifts (lifts for elevated homes only), bathrooms and kitchen accommodations for program participants deemed eligible during Program intake in areas being repaired only.

K. Code Compliance

In order to ensure that the program leaves residents with safe, decent and sanitary housing, we will repair certain code compliance issues observed in the home where required by NYC Building Code. This will include addressing life safety hazards in the storm damaged and non-storm damaged areas of the home as noted in the [Life Safety](#) section. Systems that were compliant when built, such as cloth wiring in electrical systems, will not be changed unless they present an imminent threat to life.

Depending on year built and the work being performed, homes in the Build It Back program are covered by different NYC Building Codes. They may be covered by the 1938 Code, the 1968 Code, the 2008 Code or the 2014 Code. It is the responsibility of the Consultant and/or Contractor to be knowledgeable about the appropriate, applicable code(s) for every home.

Please see 2008 “[Effective Code Construction Dates](#)”⁴ on the New York City DOB website for assistance. The [2014 NYC Construction Codes](#) went into effect on December 31, 2014⁵.

Please note that it is the expectation of the Build It Back program and the responsibility of all consultants to be knowledgeable about and apply all applicable codes. Codes change or are amended in the City of New York on a continuing basis and information can always be found on the [Department of Buildings](#)⁶ or the New York City Council website. Significant code changes and/or updates went into effect on December 31, 2014 as per Local Law 141 of 2013, including changes to Appendix G and a [new requirement for products with specified mold resistant ratings in assemblies in selected locations](#).

Changes regarding the implementation of a Coastal A zone in New York City will be implemented immediately. This may require some additional coordination with the Department of Buildings when filing applications. [See elevation section for more details.](#)

L. Existing Code Violations

⁴ http://www.nyc.gov/html/dob/html/codes_and_reference_materials/effectivedate.shtml

⁵

http://www.nyc.gov/html/dob/html/codes_and_reference_materials/2014_cons_codes_table_of_contents.shtml

⁶ <http://www.nyc.gov/html/dob/html/home/home.shtml>

Violations are issued by the Department of Buildings when a property does not comply with a part of the New York City Construction Codes and or Zoning Resolution, or work has been performed without required permitting. In most cases, the homeowner must resolve the violation and pay any outstanding fines before the program will proceed with any work.

M. Critical Life Safety Issues Observed

Life Safety issues addressed by the program only apply to imminent threats to life as noted in this section. The program is not undertaking the construction of items that the homeowner has not provided which may be required by code, but are not storm damaged. The program is neither an enforcement nor a compliance agency. It is the responsibility of the Department of Buildings to insure compliance and issue violations. If the program assessors, contractors or inspectors become aware of a condition in the home that involves a critical Life Safety issue, these repairs will be included in our scope of work. These repairs should be included regardless of whether or not the area was damaged by the storm. There are two types of this work:

1. Immediately Hazardous Life Safety Conditions: Defined as “A” type complaint issues⁷ by the DOB. The presence of these issues requires notification to DOB (process TBD). Examples of these issues include:
 - a) Unsafe material storage
 - b) Building shaking, vibrating, affected stability
 - c) Egress – locked, blocked, improper or no secondary means of egress where required.
 - d) Boiler- fumes, smoke, carbon monoxide
 - e) Gas hook-up/piping- illegal or defective
 - f) Falling debris of any kind
 - g) Unsafe/illegal demolition

2. Other Critical Life Safety Issues: Any conditions observed in the home that would prevent a homeowner from safely occupying their home should be looked at in all homes and added to the scope of work, including:
 - a) Smoke and carbon monoxide to current code in substantially damaged homes. Sealed battery units will be installed in non-substantially damaged homes, unless replacing an existing hard wired unit.
 - b) Operable windows where required in substantially damaged homes and limited to areas being repaired in non-substantially damaged homes.
 - c) Obvious unsafe electrical conditions (exposed wiring, dangling fixtures, etc)

⁷ http://www.nyc.gov/html/dob/downloads/pdf/complaint_category.pdf

- d) Obvious unsafe gas/boiler conditions (leaking gas pipes, illegal/improper venting, missing chimney liners)
- 3. The program will make sure that there are no obstacles on the primary path of egress. The program will not rebuild non-compliant stairways (interior or exterior) or add ramps (unless the primary exterior egress stair was destroyed by the storm), will not add lifts to non-substantially damaged homes, may add an egress railing on a primary path of egress where required. The program may repair or replace the walk to the NYC street or sidewalk, but will not repair NYC sidewalks unless damaged during construction. Site work to reconfigure drainage conditions is not a program eligible activity.

N. Open Permits or Ongoing Work

All in-progress repairs must be completed and all construction must be stopped prior to the program starting the damage assessment process.

The program may require certain types of open permits to be closed in order for the applicant to move forward with the Build it Back program

O. Compliance with applicable New York City Building Codes

- 1. Structures that are determined to be substantially damaged and rehabilitated will be required to be brought into full compliance with the appropriate NYC building code as required, including the repair of non-code compliant scope items which were not damaged by Sandy. Additional cost factors will be determined to account for required, anticipated compliance with applicable code to areas and systems of the structure not damaged by the storm.
 - a) On October 9, 2013 the City Council adopted the Flood Resilience Zoning Text Amendment. The zoning text changes are now in effect. Additional amendments may be implemented to address ongoing concerns with zoning compliance. Please refer to [Article VI: Special Regulations Applicable to Certain Areas, Chapter 4 – Special Regulations Applying in Flood Hazard Areas](#) for the most current information.
 - a) For non-substantially damaged homes, the system being repaired needs to be brought up to compliance for that specific work type (ie electrical, plumbing) for the entire home only when required by the Department of Buildings. Items that were in compliance when constructed and do not represent an imminent threat to life safety, do not generally have to be replaced. . If BiB scope is electrical work only, no other systems need to be addressed unless life safety hazards (as addressed elsewhere in this document) are observed.
 - b) Contractor or their subcontractor would pull the permit for a specific work type and DOB will only inspect what is on the application. The application must indicate exactly what work is being done on the system.

2. Non-compliances (“grandfathered”) unrelated to the system being repaired do not need to be fixed unless they present life safety issues. For example, a bedroom window not meeting current egress requirements would not have to be enlarged if work was being performed on the plumbing system.

P. Ineligible Scope

The Program has currently determined the following items to be excluded from the BIB Scope of Work:

1. Repair or replacement of detached structures such as sheds and garages, detached decks, porches, patios or gazebos, swimming pools, hot tubs, saunas, docks or boat ramps.
2. Replacement of special features, trims, and designer features that exceed basic livability requirements and features of standard grade homes such as solar panels, skylights, wainscoting and wood paneling, built-in bookshelves or closet systems, custom millwork, Jacuzzis, copper gutters and roofs, unless the damage to these items present a health or safety hazard (whereby they will be replaced with the program standard quality of material) or are determined to be protected historic features.
3. Base shoe moldings, chairrails, wood trim profiles and species beyond standard builder’s grade, except in cases of minor repairs to match existing.
4. Repair or replacement of fencing or retaining walls (unless affecting structural stability of home).
5. Repair or replacement of cable or security systems.
6. Replacement of clothes washer and/or dryer.
7. Repair or replacement of items not damaged by the storm.
8. Repair or replacement of specialty finishes, extra kitchens, replacement of bathrooms or kitchens or non-vital equipment in cellars and basements that are below Base Flood Elevation in non-substantially damaged structures unless the basement contains a legal residential unit documented by the Department of Building. Limited repairs will be made in basements containing legally habitable spaces. See [Basements & Cellars](#)
9. Garage door openers.
10. Repair or replacement of storm damaged items that have already been repaired or replaced
11. Replacement of items impacted by storm, but not damaged.
12. Repair or replacement of deferred maintenance, except where required to protect program investment.
13. Removal and replacement of landscaping or other site work – except where required by the Department of Buildings or Green Building Standards.

14. Irrigations systems, fountains, ponds, etc., driveways, sidewalks, and paths along the side of a home, decorative exterior walls, decorative paving, terraces or patios. (Exception: If work completed prior to BIB is not impacted by the scope and not required to be removed to complete the scope, but is damaged by construction, it would be repaired).
15. Repair or replacement of any home furnishings
16. Portable appliances (air conditioners, electric heaters, etc)
17. Replacement window or door screens if window or door is not being replaced.
18. Ornamental iron security window or door grilles. Existing should be removed if underlying window or door needs repair. Homeowner must reinstall later.
19. Custom doors or windows.

Q. Compliance Requirements

1. Housing that is constructed or rehabilitated with CDBG funds must meet all applicable local, state & federal codes and regulations, rehabilitation standards, ordinances, and zoning ordinances at the time of project completion.
2. Green Building Retrofit Checklist or Enterprise Green Communities.–The HUD CPD Green Retrofit Checklist or Enterprise Green Communities Criteria promote energy efficiency and green building practices for residential retrofit projects. Grantees must follow the checklist as outlined in the subsequent program requirements.
3. NYC Energy Code Compliance –Applicable to areas being rehabilitated. See Code Compliance Guide for information on Energy Code requirements

II GENERAL PROGRAM STANDARDS FOR ALL HOMES

A. General

1. Homeowner Selections - Homeowners have a limited choice in style and color for select items. Selections are only applicable if the area covered by the selection is being repaired or resiliency measures are being installed. Refer to “Program Specifications” and the “Homeowner Selection Brochure” for complete standards and specifications. No other alternatives will be offered or installed except as follows. Homeowners selecting the Choose Your Own Contractor (CYOC) Program will have limited options to upgrade selections. Upon signing a Tri-Party agreement, all selections become final and no changes will be permitted.
2. Water Conserving Fixtures
 - a) . Install or retrofit water-conserving fixtures in all units and any common facilities with the following specifications when replacing: Toilets — 1.28 gpf.

3. Where feasible, utilities in non-substantially damaged homes will be elevated above the Design Flood Elevation as defined by 1 RCNY §3606-04 - Appendix G of the NYC Building Code.
 - a. Due to a potential loss of usable floor space, homeowner's may choose not to have utilities elevated.
 - b. Steam systems will not be elevated.
 - c. Air Conditioning compressors will not be elevated.
 - d. Homes having utilities replaced by Rapid Repair or having installed new equipment subsequent to Hurricane Sandy will be eligible if the equipment can be elevated and reused. If the equipment is in good working order and cannot be elevated, it will remain in its current location.
 - e. Electrical panels should be elevated whenever possible.
4. The BIB program will not replace washers and/or dryers, however, in substantially damaged homes, a location will be provided, where possible, for side by side or a stacked washer/dryer with appropriate electrical outlet(s), gas connection, drain and venting.

B. Kitchens

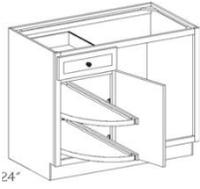
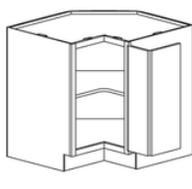
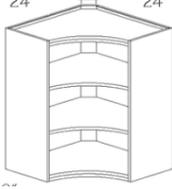
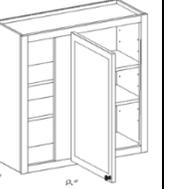
1. Requirement(s)
2. Program Policies
 - a) One kitchen per dwelling unit. Second kitchens in basements, cellars or elsewhere in a home not in a second legal unit will not be replaced. Kitchens in legal apartments in basements or elsewhere will be replaced.
 - b) Every dwelling unit shall have one kitchen room or kitchenette equipped with a sink, range, refrigerator, and flooring.
3. Design Standards – to be adhered to as closely as possible given actual site conditions.
 - a) Each cabinet installed gets one unit price for installation and length. Corner cabinets **DO NOT** get a length on each side. A corner base cabinet that is 36" on each side, gets only 36" (3'), NOT 6'.
 - b) Places where there are not cabinets, like a refrigerator, drop-in range or dishwasher, do not get scoped for a cabinet or a countertop and program will not pay for cabinets in such spaces. Design Consultants should **NOT** take the total perimeter of a kitchen and scope it for cabinets!!!
 - c) Cabinet size must exist. Cabinets come in 3" increments. The program is not supplying custom cabinetry.
 - d) Note as below: the standard is 84" to the top of the cabinets. This is a 36" lower cabinet and 30" upper cabinet.

Equipment	Standards
General	<ul style="list-style-type: none"> • 84" to top of cabinets.

	<ul style="list-style-type: none"> • Allowances for tables: The NKBA (National Kitchen & Bath Assoc.) recommends a minimum of 32 inches if no traffic needs to pass. 36 inches will let someone squeeze by, and 44 inches will let a person walk by. If a wheelchair needs to pass, allow 60 inches. • Work Triangle: The work triangle represents the three major work stations of the kitchen: the cooking area, the refrigerator and the sink. Measuring from the center of each, the maximum total length of the triangle should not be greater than 26 feet with the maximum leg no greater than 9 feet and the minimum not less than 4 feet.
Counter Space Area	<ul style="list-style-type: none"> • LF of countertop dependent on available space. Minimum 10 LF wherever possible. • Ranges should not be placed immediately adjacent to wall or pantry cabinet without working surface area whenever possible. • Work Surfaces: Preferably should be one continuous section of uninterrupted countertop 30" – 36" long near primary work area (sink) if at all possible. Minimum 15" section of countertop required on handle side of refrigerator and on either side of drop-in range.
Cabinets	<ul style="list-style-type: none"> • If base cabinets must be replaced, upper cabinets will also be replaced to match. • 18" between countertop and upper cabinets, therefore upper cabinets will be 30" high standard. • One full height, 24" deep, pantry or utility cabinet is permissible – maximum 24" wide (see pictures below). Pantries should be placed adjacent to walls. • Islands will not be replaced. All kitchens will have a minimum of 1 (one) 3 or 4-drawer cabinet (homeowner's choice) of 18" wide or greater for every 3 base cabinets (excluding sink base). • Base blind corners must have swing out lazy-susans if straight into corner or fully opening door (see pictures). NO CORNERS are to be left empty. Please see pictures below for options for corner cabinets. • Upper blind corners should be open shelving or fully opening doors. (see pictures). Unreachable blind upper only upon homeowner's request. • No roll-out drawers behind doors will be permitted – shelves only • Shelf Space: The NKBA (National Kitchen and Bath Association)⁸ recommends a total shelf/drawer frontage of 1,400 inches for a small kitchen (less than 150sf). Each drawer or each individual shelf should be counted towards the total. If you have a 24" wide upper cabinet, 30" high with 3 shelves, you will have 6' of shelving. A 24" base cabinet with 4 drawers is another 8', so this one 24" area of your kitchen has 14' of shelving. The storage should be designed to the following specs: as closely as possible to the following: <ul style="list-style-type: none"> • Wall 300" • Base 520" • Drawer 360" • Pantry 180" • Misc. 40"
Ventilation	<ul style="list-style-type: none"> • Microwaves over ranges or ventilation fans are to be vented to exterior whenever possible.

⁸ [National Kitchen & Bath Association Kitchen Design Guidelines](#)

	<ul style="list-style-type: none"> • Microwave Over Range: Must meet manufacturer's recommendations for height above cooktop. Cabinet will be installed over microwave OR • Ventilation Hood: 6" high – minimum 66" to bottom of upper cabinet as per installation instructions. Cabinet above to be 30" wide x 12" deep x 18" high. Vent as above.
Sink	<ul style="list-style-type: none"> • Place sink under operable windows whenever possible. Cooking apparatus is not to be placed under operable windows. A 24" sink requires a minimum 27" base cabinet. Sink must fit in cabinet. Design Consultants are expected to know minimum kitchen design standards. Please note that the single sink in our specifications requires a minimum 27" sink base, and the double sink requires a 36" minimum base cabinet.
Dishwasher	<ul style="list-style-type: none"> • A dishwasher requires 24" of clear space. It will have 2LF of countertop, but no base cabinet.
Islands	<ul style="list-style-type: none"> • Existing cabinetry, dishwashers or sinks in existing islands will be replaced with program standard items or repaired for minor damage. No cooktops or other appliances will be installed on islands. No new islands will be created.
Appliances	<p>For new kitchen layouts, no entry door should interfere with the safe operation of appliances, nor should appliance doors interfere with one another.</p> <ul style="list-style-type: none"> • In substantially damaged homes refrigerators and dishwashers being replaced will be replaced with Energy Star qualified appliances.
Lighting	<ul style="list-style-type: none"> • When lighting is being replaced, it must meet Minimum Program Standards. Decorative lighting, recessed lighting, below cabinet lighting, or other specialty items should not be included in the job scope.

					
Base Blind Corner 1	Base Blind Corner 2	Wall Blind Corner 1	Wall Blind Corner 2	Wall Blind Corner 3	Standard Wall Cabinet

4. Ineligible Items

The following items are not eligible for repair, replacement or installation:

- Wall ovens
- Peninsula or island cabinets – unless limited replacement
- Specialty cabinets, other than basic blind corners or pantries
- Specialty countertops, flooring or lighting, other than program offerings
- Lazy susans in corner cabinets

5. Homeowner Choice of Items from Program Offerings

- a) Floor
- b) Cabinet Style & Color
- c) Light Fixture
- d) Sink
- e) Refrigerator, Range, Dishwasher
- f) Ventilation over range

C. Bathrooms/Toilet Rooms/Powder Rooms

1. Requirements

- a) Every dwelling unit shall contain at least one room which is equipped with a flushing toilet and a lavatory.
- b) Every substantially damaged dwelling unit shall contain at least one bathtub and/or shower. The bathtub and/or shower unit(s) need not be located in the same room as the flush water closet and lavatory. The bathtub and/or shower unit may be located in a separate room.
- c) In all homes, all storm damaged non-compliant toilets and/or faucets will be replaced with WaterSense certified, water conserving, program approved, fixtures.
- d) In all substantially damaged homes, all non-compliant toilets and/or faucets will be replaced with WaterSense certified, water conserving, program approved, fixtures as is required by the Green Building Standards.
- e) Please see Green Building Standards for specific requirements.

2. Program Policies

- a) Every affected bathroom shall have doors equipped with a privacy lock or latch in good working order.
- b) Grab bars or reinforcement for grab bars with walls may be installed when requested by Homeowner if area is being repaired.
- c) Bathrooms in cellars or basements will not be repaired or replaced.
 - a. Exception: Legally documented living unit shown on Certificate of Occupancy
- d) Every floor with a legal bedroom should have one full bath (tub or shower).
- e) The program will supply one full bathroom for a two bedroom home plus a powder room (no tub or shower).
- f) Two bathrooms may be provided for a 3 bedroom or larger home plus a powder room (no tub or shower).

- g) Maximum of 3 full bathrooms per home
 - h) Absolutely no bathrooms or powder rooms of any kind will be provided below the DFE.
 - i)
3. Ineligible Items
- a) Whirlpool tubs
 - b) Fixtures and/or faucets, cabinetry, flooring or lighting in styles or colors other than offered by program unless in the Choose Your Own Contractor (CYOC) program.
 - c) Any cabinetry beyond vanity, if selected.
4. Homeowner Choice of Items from Program Offerings
- a) Toilet – Comfort height or Dual flush low flow
 - b) Sink – pedestal or vanity. Note: vanity includes top with molded sink.
 - c) Floor – Ceramic Tile or Sheet Vinyl
 - d) Lighting - program specified fixture over mirror/medicine cabinet or (space permitting only) program specified wall sconce on either side of mirror/medicine cabinet.
 - e) Mirror or medicine cabinet (recessed when possible).

D. Living Rooms

1. Requirement(s)

Habitable rooms, other than bedrooms, will be rehabilitated as per the Program’s “Guiding Principles” contained in this document.

2. Homeowner Choice of Items

- a) Flooring – Wood look vinyl plank flooring, sheet vinyl or carpet
- b) Lighting – Ceiling Fan or Standard Light Fixture

E. Dining Rooms

1. Requirement(s)

A maximum of one dining room may be rehabilitated per legal dwelling unit. Dining rooms will be rehabilitated as per the Program’s “Guiding Principles” contained in this document.

2. Homeowner Choice of Items

- a) Flooring – Wood look vinyl plank flooring, sheet vinyl or carpet
- b) Lighting – Choice from ceiling mounted or hanging pendant

F. Bedrooms

1. Requirement(s)

Bedrooms will be rehabilitated as per the Program's "Guiding Principles" contained in this document.

2. Program Policies:

- a) When the structure requires the redesign of interior partitions, a closet shall be provided, space permitting, with a minimum depth of 2' and shall contain a rod and shelf.
- b) When a fully above grade bedroom requires reconstruction or for all substantially damaged homes, the room shall be made code compliant in regard to the egress, size, opening requirements and energy requirements of windows.
- c) Sleeping areas in basements will be rehabilitated only if they are included in a legally documented basement unit through a C of O. Windows and window wells will not be resized if not code compliant
- d) For non-substantially homes, when an above grade exterior wall is being repaired, windows shall meet egress and ventilation requirements.

3. Homeowner Choice of Items

- a) Flooring - Wood look vinyl plank flooring or carpet
- b) Light Fixtures – Ceiling Fan or Standard Ceiling Fixture

G. Basements & Cellars⁹

BASEMENT. A story partly below the grade plane and having less than one-half its clear height (measured from finished floor to finished ceiling) below the grade plane.¹⁰

CELLAR. That portion of a building that is partly or wholly underground, and having one-half or more of its clear height (measured from finished floor to finished ceiling) below the grade plane. Cellars shall not be counted as stories in measuring the height of the buildings.

GRADE PLANE. A reference plane representing the level of the curb as established by the city engineer in the Borough President's office, measured at the center of the front of a building. Where a building faces on more than one street, the grade plane shall be the average of the levels of the curbs at the center of each front.

Exception: The grade plane shall not be referenced to the level of the curb, but shall be considered the average elevation of the final grade adjoining all exterior walls of a building, calculated from final grade elevations taken at intervals of 10 feet (3048 mm) around the perimeter of the building where:

⁹ <http://www.nyc.gov/html/hpd/downloads/pdf/housing-info.pdf>

¹⁰ <http://www.mzarchitects.com/wp-content/uploads/2012/04/DOBTechForumNewCodechapter356.pdf>

No curb elevation has been legally established on the city map; or
Every part of the building is set back more than 25 feet (7620 mm) from a street
line.

Cellars in private dwellings can **NEVER** be lawfully rented or occupied
Basements in private dwellings can **NEVER** be lawfully rented or occupied unless the conditions
meet the minimum requirements for light, air, sanitation and egress, and have received
approval by the Department of Buildings.

1. Requirement(s) for “Habitable Space”

a) Complies with the requirements of the New York City Housing Maintenance Code - [New York City Administrative Code – Article 5 – Occupancy of Cellars and Basements¹¹](#) and [New York City Building Code – Chapter 12 – Interior Environments¹²](#)

a. Including, but not limited to:

1. *Minimum ceiling height 7'*
2. [Lighting & Ventilation¹³](#)

1. The total area of all windows in each habitable room shall be at least one-tenth the floor area of such room, or twelve square feet, whichever is greater.
2. Maximum window sill height 44” above floor

3. *Temperature and Humidity Control*
4. *Meets standards above for % above grade*

b) [§ 27-2087 Occupancy of cellars and basements in one- and two-family dwellings^{14 15}](#)

2. Program Policies

a) The BIB policy is not to lose **legal** dwelling units, number as documented in the Department of Buildings records. Should there be a discrepancy between the records of the Department of Finance and the Department of Buildings, documentation from the Department of Building, especially the most recent Certificate of Occupancy, will always take precedence. The Department of Finance is not the determining agency for the legal number of units. Homeowner’s statements regarding assumptions of legality are not acceptable methods for determining program scopes.

a. For substantially damaged homes:

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<http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=@SLADC0T27C2SC3A5+&LIST=LAW+&BROWSER=BROWSER+&TOKEN=05661412+&TARGET=VIEW>

¹² http://www.nyc.gov/html/dob/downloads/pdf/cc_chapter12.pdf

¹³ [http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=\\$\\$ADC27-2062\\$\\$@TXADC027-2062+&LIST=LAW+&BROWSER=BROWSER+&TOKEN=05661412+&TARGET=VIEW](http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=$$ADC27-2062$$@TXADC027-2062+&LIST=LAW+&BROWSER=BROWSER+&TOKEN=05661412+&TARGET=VIEW)

¹⁴ [http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=\\$\\$ADC27-2087\\$\\$@TXADC027-2087+&LIST=LAW+&BROWSER=BROWSER+&TOKEN=05661412+&TARGET=VIEW](http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=$$ADC27-2087$$@TXADC027-2087+&LIST=LAW+&BROWSER=BROWSER+&TOKEN=05661412+&TARGET=VIEW)

¹⁵

<http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=@SLADC0T27C2SC3A1+&LIST=LAW+&BROWSER=BROWSER+&TOKEN=05661412+&TARGET=VIEW>

1. *If all legal units can be elevated, no matter how classified (basement or not) the program will elevate all units.*
 2. *If all units cannot be elevated the program architects/engineers will determine whether there is a cost efficient way to rebuild the lost unit(s).*
 3. *If there is not, the house will be analyzed to determine whether the costs of construction or the inability to add the required space should flip the home to reconstruction.*
- b) For non-substantially damaged homes with Legal Documented Basement Apartment - Where a dwelling had a legal, documented basement apartment prior to Hurricane Sandy, such apartment will be rehabilitated, in line with the program standards.
- a. Remove damaged materials, clean and remediate, if required
 - b. Bathroom(s) and/or kitchen will be rehabilitated in line with program standards.
 - c. Emergency egress & rescue windows will be made code compliant if wall containing window is being repaired.
- c) Basements with Habitable Rooms - For non-substantially damaged homes, where a dwelling had habitable (meeting requirements for window/light/ventilation, ceiling height standards, and all other codes) rooms and studs remain, resheetrock, replace doors, include basic electrical, light fixtures, basic flooring,
- a. No carpet, no ceiling fans, pendants, chandeliers, no ceramic tile,
 - b. Remove damaged materials, clean and remediate, if required
 - c. Replace damaged walls, doors, windows, light fixtures as per program standards
 - d. No kitchens or bathrooms will be repaired or replaced in basements or cellars unless legal documented dwelling unit.
- d) Other Basement Space - will be rehabilitated only to the extent necessary to meet any minimal applicable codes.
- a. Remove damaged materials, clean and remediate, if required
 - b. Rehabilitated only to the extent necessary to meet any applicable codes.
 - c. Secondary kitchens or baths will not be replaced
 - d. If space is left from elevated utilities, space to be left with basic finishes.
- e) Cellars - Electrical systems to meet current codes if being addressed.
- a. Remove damaged materials, clean and remediate, if required
 - b. Rehabilitated only to the extent necessary to meet any applicable codes.
 - c. No cellar living space will be rehabilitated
 - d. Electrical wiring not required for code compliance will be removed if exposed or permanently disconnected.
- f) For elevated homes, the BIB program will not replace any lost basement or cellar space except for legal documented dwelling units.
3. Homeowner Choice of Items – Legal Basement Apartment
- a) Flooring

- a. Ceramic Tile in Kitchen or Bath only
 - b. Resilient Vinyl Tile or faux wood flooring in other parts of basement
 - c. No carpeting
- b) No Ceiling Fans, Chandeliers or Pendants in Basements. Light Fixtures will be standard fixtures only.
 - c) Kitchen – see standard kitchen choices
 - d) Bath – see standard bathroom choices

H. Egress

1. Requirement(s)

Substantially damaged homes will be made compliant with all applicable egress code requirements. Basements or cellars will be filled in as required by FEMA. Areas below design flood elevation may be used for storage, access and/or parking only.

For non-substantially damaged homes, any room other than the basement, which is being repaired, will be made compliant with egress requirements if the work includes major repair of an exterior wall containing a window required for egress, provided that it was a legally habitable room at the time of construction (ie: bedroom window sizes may be made compliant with egress requirements, but windows will not be added to non-compliant rooms).

Basements that contained legally documented apartments or legally habitable space will be repaired.

I. Smoke Detectors

1. Requirement(s)

All homes will be made compliant with the New York City Fire Protection Code:¹⁶

[2008 NYC Building Code – Chapter 9 – Fire Protection](#) including but not limited to the following:

907.2.10.1.1 Smoke alarms in Groups R-2, R-3, and I-1. Single-or multiple-station smoke alarms shall be installed and maintained in Groups R-2, R-3, and I-1, regardless of occupant load at all of the following locations within a dwelling unit:

- a) On the ceiling or wall outside of each room used for sleeping purposes within 15 feet (4572 mm) from the door to such room.
- b) In each room used for sleeping purposes.
- c) In each story within a dwelling unit, including below-grade stories and penthouses of any area, but not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.

¹⁶ http://www.nyc.gov/html/dob/downloads/pdf/cc_chapter9.pdf

2. Local Law [112 of 2013](#) includes replacement of smoke alarms required in dwelling units by the New York City Building Code when the alarms have met manufacturers' suggested useful life, as well as end-of-life notification and power source requirements. All smoke alarms installed after the effective date of the ordinance must comply with UL 217; feature a non-removable, non-replaceable battery that powers the alarm for a minimum of 10 years; and shall emit an audible end-of-life signal notifying consumers at the expiration of the useful life of the alarm. Alarms installed to replace existing battery-operated alarms must be 10-year sealed alarms meeting other specifications of this code.¹⁷

3. Policy
 - a) Smoke and Carbon Monoxide detectors should be combined when possible. Existing operating hardwired smoke alarms should not be removed. Battery operated CO detectors should be additionally installed in those cases.

 - b) Substantially damaged homes -
 - a. Required smoke alarms shall receive their primary power from a dedicated branch circuit or the unswitched portion of a branch circuit also used for power and lighting, and shall be equipped with a battery backup. Smoke alarms shall emit a signal when the batteries are low. Wiring shall be permanent and without a disconnecting switch other than as required for over-current protection.

 - c) Non-substantially damaged homes
 - a. dwelling units in existing buildings may, in the alternative, be equipped with battery-operated smoke detecting devices except where such buildings are substantially improved or altered on or after January 1, 1982.¹⁸

J. Carbon Monoxide Detectors¹⁹

1. Requirement(s)

All homes will be made compliant with the New York City Fire Protection Code: [2008 NYC Building Code – Chapter 9 – Fire Protection](#) Section - including but not limited to the following:

Groups I-1, R-2 and R-3. Carbon monoxide alarms shall be installed in affected dwelling units as per Section 908.7.1.1.

908.7.1.1 Affected dwelling units. Carbon monoxide alarms or detectors shall be required within the following dwelling units:

¹⁷ <http://www.nyc.gov/html/dob/downloads/pdf/l112of2013.pdf>

¹⁸ http://www.nyc.gov/html/dob/downloads/rules/1_RCNY_28-01.pdf

¹⁹ [RCNY 28-02 Carbon Monoxide Detecting Devices and Systems](#)

1. Units on the same story where carbon monoxide producing equipment or enclosed parking is located.
2. Units on the stories above and below the floor where carbon monoxide producing equipment or enclosed parking is located.
3. Units in a building containing a carbon monoxide producing furnace, boiler, or water heater as part of a central system.
4. Units in a building served by a carbon monoxide producing furnace, boiler, or water heater as part of a central system that is located in an adjoining or attached building.

908.7.1.1.1 Required locations within dwelling units. Carbon monoxide alarms or detectors shall be located within dwelling units as follows:

1. Outside of any room used for sleeping purposes, within 15 feet (4572 mm) of the entrance to such room.
2. In any room used for sleeping purposes.
3. On any story within a dwelling unit, including below-grade stories and penthouses of any area, but not including crawl spaces and uninhabitable attics.

2. Policy

a) Substantially damaged homes

- a. Carbon monoxide alarms or detectors shall comply with the power source, interconnection, and acceptance testing requirements as required for smoke alarms in accordance with Sections 907.2.10.2 through 907.2.10.4.

b) Non-substantially damaged homes

- a. Buildings in existence on November 1, 2004, and buildings with work permits issued prior to November 1, 2004, may, in the alternative, be equipped with battery operated CO alarms compliant with RS 17-14 § 5.2.3 or plug-in type CO alarms with a back-up battery compliant with RS 17-14 § 5.2.4, except where such buildings are substantially improved or altered on or after November 1, 2004.

K. Sprinklers

1. Requirement(s)

Please see NYC Building Code and [NYC FDNY](http://www.nyc.gov/html/fdny/html/firecode/faq.shtml)²⁰ codes requirements regarding requirements for sprinklers. The Build It Back program will install sprinklers in substantially damaged homes when required by NYC DOB or FDNY.

2. Test & Plan Submission Requirements for all homes requiring sprinklers

- a) [Hydrant Flow Tests](http://www.nyc.gov/html/dep/pdf/water_sewer/38.pdf)²¹ to be performed by the New York City Department of Environmental Protection are required to determine the adequacy of water pressure

²⁰ <http://www.nyc.gov/html/fdny/html/firecode/faq.shtml>

²¹ http://www.nyc.gov/html/dep/pdf/water_sewer/38.pdf

from domestic water lines for all sprinkler installations. [See NYC ADC Law 27-963 for pressure requirements.](#)²²

- a) Where sufficient water supply for a sprinkler system is not available from the City's water supply, the NFPA 13R or 13D allows an as-of-right allowance for an on-site water supply tank.
- b) Backflow prevention plans or the "Form for Backflow Prevention Device Exemption for a Facility with One Domestic Service Only" letter must be prepared by a Professional Engineer or Registered Architect and submitted to the NYC Dept. of Environmental Protection for approval. A copy of your approved plans will be returned to the submitting entity.²³²⁴²⁵
- c) Sprinkler layouts and location of backflow prevention devices and valves must be shown on plans submitted to the Department of Buildings with elevation submission when required.

L. Attached Garages

1. Requirement(s)
 - a) See Green Building Standards for any garages remaining under elevated homes.
2. Program Policies
 - a) In non-substantially damaged homes only areas being repaired should comply with applicable NYC Codes.

M. Attics

1. Program Policies
 - a) Attic space will be counted where:
 - a. Accessible by permanent staircase
 - b. Has finished floors, walls, ceiling
 - c. Has operable windows meeting light/ventilation/egress requirements
 - d. Ceiling height is equal to or exceeds 8 feet.

N. Mechanical/Laundry Rooms/Elevating Mechanical Equipment (DG12 - 11.30.16)

1. Program Policies for all homes
 - a) No laundry tubs
2. Homes with Program Required Flips Down To Moderate Rehabilitation

²² <http://codes.lp.findlaw.com/nycode/ADC/27/1/17/4/27-963>

²³ http://www.nyc.gov/html/dep/pdf/water_sewer/backflow.pdf

²⁴ http://www.nyc.gov/html/dep/pdf/water_sewer/6_cross_connection_risk_assessment.pdf

²⁵ http://www.nyc.gov/html/dep/pdf/water_sewer/42_doh_supplement.pdf

- a) Any home that was originally an elevation and has been required by the program to flip to a moderate rehab will be offered the elevation of feasible utilities regardless of whether there is remaining storm damage or not. Only those eligible utilities for which space can be found will be elevated.
 - b) Elevation of selected components, such as electrical panels only, may be selected by the applicant.
 - c) If a home that was originally an elevation and has flipped to moderate rehab has no remaining storm damage and no reimbursement and declines the elevation of utilities, they will not be eligible for any additional program benefits.
 - d) Homes that received or will receive reimbursement must have any required lead hazards addressed, even if no remaining storm damage.
3. Homes with Voluntary Flips Down to Moderate Rehabilitation
- a) Homes that chose not to be elevated that have remaining storm damage will be treated as program standard moderate rehabilitations and will be offered the elevation of utilities.
 - b) Homes that chose not to be elevated with no remaining storm damage and no reimbursement and no required lead hazard mitigation are not eligible for the elevation of utilities.
 - c) Homes that received or will receive reimbursement must have lead hazards addressed whether or not they have remaining storm damage.
 - d) 4. If a voluntary flip down to moderate rehab is eligible for and selects the elevation of eligible utilities and space cannot be found in the home, only those elements for which space can be found will be elevated.
4. Non-Substantially Damaged Homes
- a) The Any home originally on the Moderate Rehabilitation pathway with remaining storm damage will be offered the elevation of utilities. Homeowners are never required to accept the elevation of utilities and may opt for a partial elevation, such as the elevation of the electrical panel. As per the program Minimum Program Standards (MPS), not all types of utilities are eligible for elevation. No additions or “bumpouts” are permitted. Only those eligible utilities for which space can be found will be elevated.
 - b) program will not offer to elevate any type of utility that cannot reasonably be elevated, as per current MPS guidance. Steam systems and oil-fired boilers will not be offered elevation. The program will not build a new mechanical system throughout a home due to the inability to elevate the existing system. The program encourages the elevation of the electrical panel wherever possible.
 - c) It is understood that elevating certain utilities where a Certificate of Occupancy exists which specifically mentions the utilities that are going to be elevated may, at the present

time, require applications for permits not normally associated with rehabilitations and may require work beyond the normal rehabilitation scope. Elevation of utilities under these circumstances should be carefully considered to be sure they are providing the optimal benefit to the applicant and program in the most efficient method.

- d) In interior utility elevations, it is desirable to place utilities above the DFE, however, the program understands that this may not always be possible due to actual conditions. Utilities should always be elevated above the high water mark of Superstorm Sandy.
- e) The program will not add “bumpouts” or additions for mechanical equipment on moderate rehabilitation homes. All elevated mechanical equipment should be located within the existing walls of a home or in an existing attic. Any home with a “bumpout” already approved by the Department of Buildings should continue on its current pathway. Any home where design is not complete should have any “bumpouts” removed.

5. Elevated Homes

- a) No 3rd stairs for access to mechanical equipment or meters unless absolutely necessary or stairs provide a major cost savings.
- b) If, in an elevation, mechanical equipment installed by Rapid Repair in a basement or cellar needs to be replaced for efficiency/space/convenience on an upper floor, it can be replaced.
- c) New mechanical rooms for elevated homes may be constructed as permitted obstructions in open yards or compliant yards when it presents the best solution for the home. No separate stairway will be created for such an addition. If a “bumpout” is being made for mechanical equipment and there is enough space in the yard for code compliance, space may be added within the room for a side-by-side or stacked washer/dryer. If the yard does not accommodate anything beyond a permitted obstruction for mechanical, no space for a washer/dryer may be added.
- d) If mechanical equipment installed by Rapid Repair after the storm in a basement or cellar needs to be replaced for efficiency/space/convenience on an upper floor, it can be replaced.

O. Substantial Damage & Substantial Improvement (from DG8 – 5.16.16)

- 1. **SUBSTANTIAL DAMAGE (SD).** Damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. From [FEMA Title 44](#)
 - a) If a home is determined to be Substantially Damaged (SD) it must be brought into compliance with Appendix G of the NYC Building Code (usually elevation). This is not an option, this is a federal mandate.

- b) Substantial Damage is calculated by taking the value of the work required to repair the home to the pre-storm condition whether or not that work will be performed and dividing it by value of the home (not land) before the storm.
 - c) The Build it Back program calculates the value of the home before the storm by taking the NYC Department of Finance (DOF) value for the property from the 2012 tax year before the storm and deducting from it the DOF value of the land. Alternatively, the BIB program can perform an independent appraisal to determine the pre-storm value
2. **SUBSTANTIAL IMPROVEMENT (SI):** Substantial improvement means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage”, regardless of the actual repair work performed.
- a) Substantial Improvement is used to determine whether or not a home needs to be made compliant with Appendix G. It does NOT include the cost of elevation, new foundation or any related costs. It is solely the completed & remaining repairs and improvements.
 - b) Final SI is calculated by
 - a. adding the Sum of the Completed Repairs (with multiplier) from the Feasibility Report
 - b. to the Awarded Amount or final scope with multiplier for the remaining repairs,
 - c. removing any permitted exclusions (see Substantial Improvement Includes & Excludes)
 - d. Divide by the value of the home (either DOF, Appraisal or ACV)
 - e. Confirm that SD & Final SI are below 50%.
3. Determining Pathway
- a) If SD is over 50%, the homeowner must be made compliant with Appendix G. Compliance does not always require elevation. If both SD and preliminary SI are both under 50%, the homeowner is eligible for moderate repair.
 - b) If SD is below 50%, but Preliminary SI from Feasibility is over 50%, the Feasibility report is written as an Elevation, but homeowner is given a choice whether to elevate or not. This is known as **SD/SI Choice**.
 - c) If the homeowner chooses not to elevate at his Options Selection meeting, the FINAL SI, after the scoping visit, must be confirmed to be under 50% or they must elevate.
 - d) Please note that under certain conditions where the first floor above grade is above the Design Flood Elevation (DFE), the lowest level of a home may be abandoned and made compliant and physical elevation of a floor is not required.

- e) The denominator for SD or SI calculations is always the pre-storm value of the home, whether from DOF or a subsequent appraisal.
 - f) Final Substantial Improvement is the total of the “Sum of Completed Repairs” from the Feasibility Report (including the multiplier) plus the cost of the remaining repairs from the post bid scope with any attendant multipliers.
4. Reconstruction Comparison
- a) On the other hand, the Reconstruction Comparison is based on the total dollar cost of the remaining repairs and all costs of elevation (without including any completed repairs) being paid to the contractor compared to the total dollar cost of reconstruction.

Don't confuse the Final SI with the Reconstruction Comparison. A Final SD or SI of over 100% does not mean an automatic reconstruction.

P. Substantial Improvement Includes & Excludes (DG9 - 6.24.16)

Objective

This document is intended to clarify those items which the program has determined do and do not need to be included in the Substantial Improvement calculation. It does not supersede any FEMA or other federal, state or local requirements. (See FEMA P-758 for full details). It provides the Build It Back policies based on FEMA guidance.

Includes:

1. **Costs directly related to the actual cost of improving or repairing a building** including, but not limited to, the following items:
 - a. Site preparation related to the improvement or repair (e.g., foundation excavation or filling in basements)
 - b. Demolition and construction debris disposal
 - c. Labor and other costs associated with demolishing, moving, or altering building components to accommodate improvements, additions, and making repairs
 - d. Costs associated with complying with any other regulation or code requirement triggered by the work
 - e. Costs associated with elevating a structure when the proposed elevation is lower than the BFE
 - f. Construction management and supervision
 - g. Contractor's overhead and profit
 - h. Sales taxes on materials
2. **Structural elements and exterior finishes**, including:
 - a. Foundations
 - b. Monolithic or other types of concrete slabs
 - c. Bearing walls, tie beams, trusses, joists, beams, subflooring, framing, ceilings
 - d. Interior non-bearing walls
 - e. Exterior finishes (brick, stucco, siding)
 - f. Windows and exterior doors and all hardware
 - g. Roofing, gutters, and downspouts
 - h. Attached decks and porches

3. **Interior finish elements**, including:
 - a. Floor finishes
 - b. Bathroom tiling and fixtures
 - c. Wall finishes
 - d. Built-in cabinets and interior finish carpentry
 - e. Interior doors and all hardware
 - f. Insulation

4. **Utility and service equipment**, including:
 - a. Heating, ventilation, and air conditioning (HVAC) equipment
 - b. Plumbing fixtures and piping
 - c. Electrical service panel, wiring, outlets, and switches
 - d. Light fixtures and ceiling fans
 - e. Built-in appliances
 - f. Water filtration, conditioning, and recirculation systems
 - g. Central vacuum systems
 - h. Security systems

Permitted Exclusions – Not related to the actual cost of improving or repairing a building.

- a. **Correct Existing Violations** - Any project for improvement of a structure to correct existing violations of State or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official, who must have identified the condition, and must have verified or determined that the condition constitutes a violation, normally by issuing a citation or other official notice. The condition considered in violation must pre-date the application for a permit (or the date of a damage event) and have been identified as a violation. (See FEMA P-758, Substantial Improvement/Substantial Damage Desk Reference for full details)
- b. **Clean-up and Trash Removal** - Clean-up costs include such work as draining a basement; removing dirt and mud; and cleaning, disinfecting, and drying out buildings. Clean-up and trash removal are distinguished from demolition and construction debris removal. Trash removal includes disposing of trash piled in the interior of the building or accumulated on the lot and related costs (e.g., dumpster, hauling, and tipping fees), as well as removal of abandoned contents and debris related to general clean-up of the structure before the improvement or repairs can be performed. Removal of debris caused by demolition required to proceed with construction is not excluded.
- c. The BIB program considers the cleanup of a mold condition to fall under this category.
- d. Labor, storage and content manipulation fees relating to the relocation of or removal and storage of homeowner's belongings during construction, whether within the home or to an outside storage location.
- e. **Permit and inspection fees** – fees to test and inspect the condition of a home for the purpose of scoping the repairs including the cost of Engineering Reports or any "Test & Inspect"

- f. The BIB program is also including any testing, monitoring, camera surveys or clearance letters which are intended, like inspections, to document that the work has been performed to meet the required specifications or to determine the scope of work.
- g. Scaffolding for the inspection of the exterior of the home will not be included in the SI calculation.
- h. **Plug-in appliances** such as washing machines, dryers and stoves. (FEMA)
- i. The BIB program is also including refrigerators and dishwashers, since they require similar hookups and venting to the FEMA specified examples above. Built-in microwaves which are being vented through ductwork to the outside are not included in the exclusions. (Note: the program does NOT provide washers and/or dryers)
- j. **Outside improvements**, including landscaping, irrigation, sidewalks, driveways, fences, yard lights, swimming pools, pool enclosures, and detached accessory structures (e.g., garages, sheds, and gazebos)
- i. This exclusion includes the repair or replacement of septic systems.
- k. Costs to obtain or prepare plans & specifications
- l. Land surveying costs
- m. Costs to temporarily stabilize a building so that it is safe to enter to evaluate and identify required repairs

NEW:

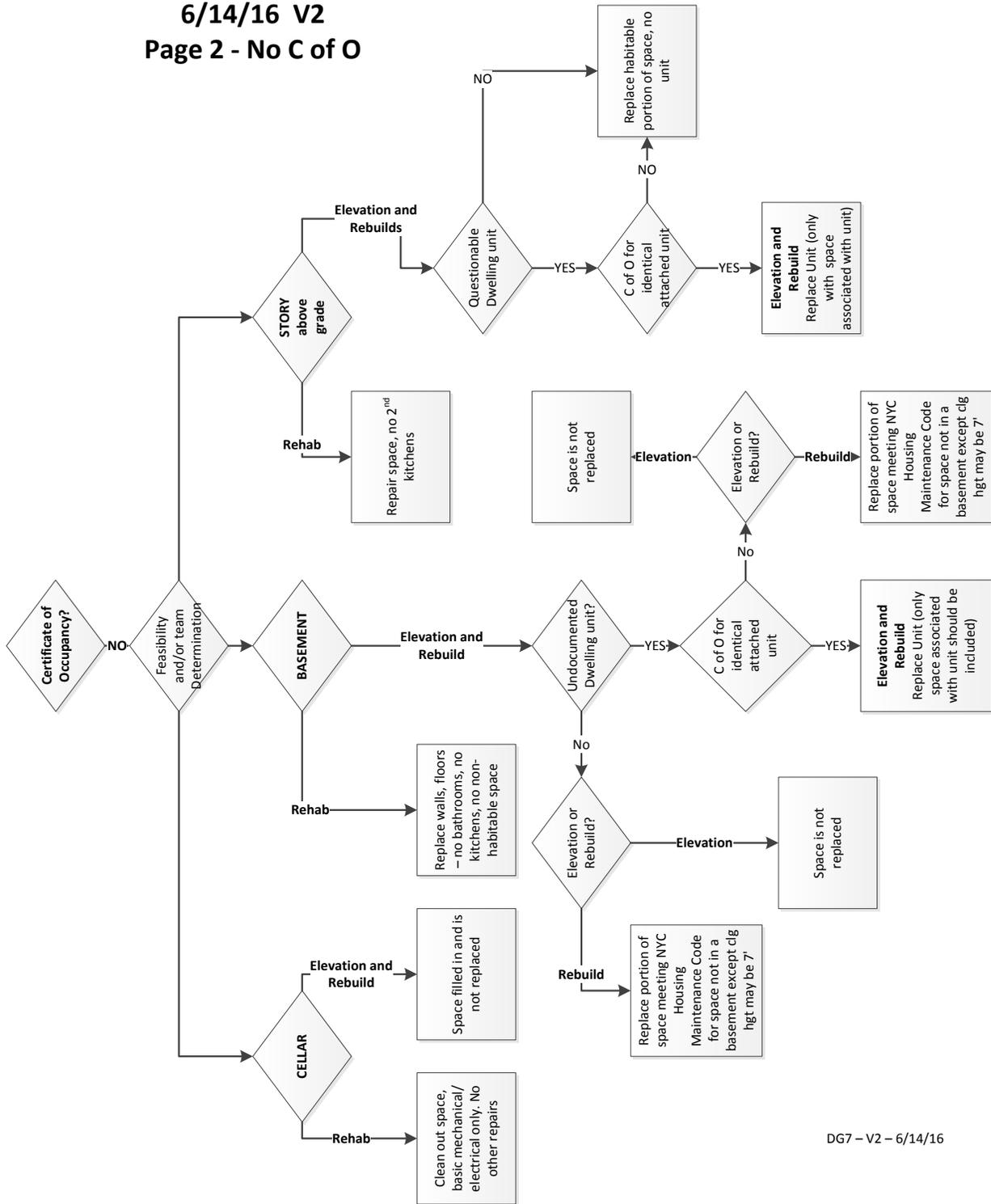
PER THE NYC DEPARTMENT OF BUILDINGS

1. For homes with all Sandy storm damage related repairs completed and all associated permits signed off, lead abatement can be considered unrelated work and the completed repairs need NOT be included in the Substantial Improvement calculation.
2. The same would apply for any resiliency only measures being taken after all Sandy storm damage repairs are complete and all associated permits signed off.

Q. Eligible Square Footage Determination (DG7 – 6.14.16)

The following two pages outline the process to determine eligible square footage to be returned. The first page is for homes with Certificates of Occupancy. The following page is for homes without a Certificate of Occupancy. By following the path from the beginning, it will be clear what space an applicant is eligible for.

**DESIGN GUIDANCE 7:
MPS ELIGIBLE SPACE REPLACEMENT GUIDE
6/14/16 V2
Page 2 - No C of O**



DG7 – V2 – 6/14/16

III GREEN BUILDING STANDARDS

A. Substantially Damaged Homes – [Enterprise Green Communities](#)²⁶

The Build It Back Program is not requiring Enterprise Green Communities Certification; however, all substantially damaged homes must meet the mandatory criteria outlined in the Enterprise Green Communities program to the extent possible for the type of rehabilitation being performed.

The Build It Back program anticipates that most substantially damaged homes will fall under the “Moderate Rehab” requirements of Enterprise Green Communities and only Mandatory items for Moderate Rehab will be required, except where specifically noted.

Definitions of Construction Type – to be applied as is appropriate

A Substantial Rehab (or Gut Rehab) is defined as a project that includes the replacement and /or improvement of all the major systems of the building, including its envelope. The building envelope is defined as the air barrier and thermal barrier separating exterior from interior space.

For Substantial Rehab projects, this could include either removing materials down to the studs or structural masonry on one side of the exterior walls and subsequently improving the building envelope to meet the whole-building energy performance levels for the project type, or creating a new thermal and air barrier around the building that allows the project to achieve Enterprise Green Communities Criteria whole-building energy performance levels for the project type.

A Moderate Rehab is defined as a project that does not include major systems or building envelope work as described for a Substantial Rehab. Moderate Rehab projects must meet the mandatory measures applicable to this construction type.

ENTERPRISE GREEN COMMUNITIES - REQUIREMENTS:

1. Environmental Remediation

Conduct an environmental site assessment to determine whether any hazardous materials are present on site. – Being performed at intake

2. Landscaping

Provide new plants (including trees, shrubs, and ground cover) such that at least 50% of area available for landscaping is planted with native or adaptive species, all new plants are appropriate to the site’s soil and microclimate, and none of the new plants is an invasive species.

3. Efficient Irrigation and Water Reuse –

If irrigation is utilized, install an efficient irrigation or water reuse system.

NOTE: The Build It Back Program will not install or repair irrigation systems.

4. Water-Conserving Fixtures

²⁶ <http://www.enterprisecommunity.com/servlet/servlet.FileDownload?file=00Pa000000FwxvNEAR>

Install or retrofit water-conserving fixtures in all units and any common facilities with the following specifications: Toilets — 1.28 gpf; Urinals — 0.5 gpf; Showerheads — 2.0 gpm; Kitchen faucets — 2.0 gpm; Bathroom faucets — 1.5 gpm

5. 5.1c Building Performance Standard: Single Family and Multifamily (three stories or fewer) (Substantial and Moderate Rehab only)

Demonstrate that the final energy performance of the building is equivalent to a Home Energy Rating System (HERS) Index of 85.

As per “[Building Performance Standard 5.1c: Guidelines for Moderate and Substantial Rehab Projects Addendum](#)”, certain building construction types undergoing a moderate or substantial rehabilitation as defined by the 2011 Enterprise Green Communities Criteria are unable to achieve a Home Energy Rating System (HERS) Index of 85₁ as required by Enterprise Green Communities mandatory criterion 5.1c without undertaking drastic renovations to the building envelope that may not be feasible under the project scope and budget.²⁷ These building types either do not have insulation, and/or their construction type (e.g., double- or triple-brick masonry construction) does not allow for them to install insulation. In response, Enterprise has developed the following alternative compliance pathway.

Alternative Compliance Pathway Building Performance Standard 5.1c –

Single Family and Low-Rise Multifamily (3 stories or fewer) Single family and low-rise multifamily (3 stories or fewer) moderate rehab projects built pre-1980, OR single family and low-rise multifamily (3 stories or fewer) substantial rehab projects built pre-1980 that have walls made of only brick / masonry walls are eligible to use the addendum. Substantial rehab projects that were built after 1980 and/or used other construction methods besides brick / masonry, such as wood frame construction, cannot use the addendum.

Eligible projects must meet the following requirements.

1. Achieve a HERS Index of 100 or less,
2. Projects must follow the guidance under the “recommendations” section of the Criterion 5.1c of the 2011 Enterprise Green Communities Criteria,
3. Replace the cooling, heating and domestic hot water equipment with the minimum efficiencies indicated in the table below_{2,3}.

Climate	Cooling Systems	Heating Systems	Domestic Hot Water
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²⁷ <http://www.enterprisecommunity.com/servlet/servlet.FileDownload?file=00P3000000E2IPOEA3>

4,5	≥ 13 SEER A/C; OR ≥ 14.5 SEER/ 12 EER/ 8.5 HSPF ENERGY STAR qualified heat pump	≥ 90 AFUE gas furnace; OR ≥ 14.5 SEER/ 12 EER/ 8.5 HSPF ENERGY STAR qualified heat pump; OR ≥ 85 AFUE boiler; OR ≥ 85 AFUE oil furnace	Gas (EF): 40 Gal = 0.61 60 Gal = 0.57 80 Gal = 0.53 Electric (EF): 40 Gal = 0.93 50 Gal = 0.92 80 Gal = 0.89 Oil or Gas: Integrated with space heating boiler
Attached Homes (Climate Zones 4,5,6,7)	≥ 14 SEER/ 11.5 EER ENERGY STAR qualified A/C; OR ≥ 14 SEER/ 11.5 EER ENERGY STAR qualified heat pump	≥ 90% AFUE ENERGY STAR qualified gas furnace; OR ≥ 8.5 HSPF ENERGY STAR qualified heat pump; OR ≥ 85% AFUE ENERGY STAR qualified boiler or furnace	Gas (EF): 40 Gal = 0.61 60 Gal = 0.57 80 Gal = 0.53 Electric (EF): 40 Gal = 0.93 50 Gal = 0.92 80 Gal = 0.89
<p>1. Buildings rehabilitated to a Home Energy Rating System (HERS) Index of 85 will achieve approximately 2009 IECC energy performance levels.</p> <p>2. Mechanical equipment efficiencies in the table are taken from the ENERGY STAR Version 2 Builder Option Packages</p> <p>3. In addition to the ENERGY STAR requirements, Enterprise requires that all combustion equipment or appliances be power-vented or closed-combustion per Criterion measure 7.8.</p> <p>4. All systems must be “right-sized” according to the ENERGY STAR Version 2 requirements</p>			

6. Sizing of Heating and Cooling Equipment and Ducts

Size heating and cooling equipment in accordance with the Air Conditioning Contractors of America (ACCA) Manuals, Parts J, S, and D, or ASHRAE handbooks."

7. ENERGY STAR Appliances

If providing appliances, install ENERGY STAR–labeled clothes washers, dishwashers, refrigerators and other applicable appliances.

NOTE: The Build It Back Program will not install or repair clothes washers or dryers

8. Efficient Lighting: Interior Units

Install efficient interior lighting, appropriate for project type, either ENERGY STAR Advanced Lighting Package (ALP) or lighting specified in EPA’s MFHR program.

9. Efficient Lighting: Common Areas and Emergency Lighting

Follow the guidance appropriate for the project type: use ENERGY STAR–labeled fixtures or any equivalent high-performance lighting fixtures and bulbs in all common areas; ~~or~~ if replacing, new common space and emergency lighting fixtures must meet or exceed ENERGY STAR efficiency levels. For emergency lighting, if installing new or replacing, all exit signs shall meet or exceed LED efficiency levels and conform to local building codes.

10. Efficient Lighting: Exterior

Install efficient exterior lighting, appropriate for project type: either ENERGY STAR compact fluorescents or LEDs, or lighting specified in EPA’s MFHR program.

11. Electricity Meter (New Construction, Substantial Rehab and Moderate Rehab) –
Install individual or sub-metered electric meters in all dwelling units. (not mandatory for Moderate Rehab)
12. Low / No VOC Paints and Primers
All interior paints and primers must be less than or equal to the following VOC levels: Flats — 50 g/L; Non-flats — 50 g/L; Floor — 100 g/L
13. Low / No VOC Adhesives and Sealants
All adhesives must comply with Rule 1168 of the South Coast Air Quality Management District. All caulks and sealants must comply with regulation 8, rule 51, of the Bay Area Air Quality Management District.
14. Construction Waste Management
Commit to following a waste management plan that reduces non-hazardous construction and demolition waste by at least 25% by weight through recycling, salvaging, or diversion strategies.
15. Reduced Heat-Island Effect: Roofing
When replacing applicable type of roof, use Energy Star-compliant roofing or install a “green” (vegetated) roof for at least 50% of the roof area.
16. Composite Wood Products that Emit Low / No Formaldehyde
All composite wood products must be certified compliant with California 93120. If using a composite wood product that does not comply with California 93120, all exposed edges and sides must be sealed with low-VOC sealants.
17. Environmentally Preferable Flooring
Do not install carpets in entryways, laundry rooms, bathrooms, kitchens / kitchenettes, utility rooms, and all rooms of ground-connected floors. Any carpet products used must meet the Carpet and Rug Institute’s Green Label or Green Label Plus certification for carpet, pad, and carpet adhesives. Any hard surface flooring products used must be either ceramic tile, unfinished hardwood floors, OR in compliance with the Scientific Certification System’s FloorScore program criteria.
18. Exhaust Fans: Bathroom (Required for New Construction and Substantial Rehab only - Optional for Moderate)
Install Energy Star-labeled bathroom fans that exhaust to the outdoors, are connected to a light switch, and are equipped with a humidistat sensor, timer, or other control (e.g., occupancy sensor, delay off switch, ventilation controller).
19. Exhaust Fans: Kitchen (Required for New Construction and Substantial Rehab only - Optional for Moderate)

Install power-vented fans or range hoods that exhaust to the exterior at the appropriate cfm rate, per ASHRAE 62.2, or install a central ventilation system with rooftop fans that meet efficiency criteria.

NOTE: All kitchens will have over the range exhaust systems that must be vented to the exterior whenever possible. The program will not install a central ventilation system as specified above for Moderate damage and only for Substantial damage if the kitchen exhaust cannot be vented to the exterior.

20. Ventilation (Required for New Construction and Substantial Rehab only - Optional for Moderate)

Install a ventilation system for the dwelling unit capable of providing adequate fresh air per ASHRAE requirements for the building type.

21. Clothes Dryer Exhaust - Clothes dryers must be exhausted directly to the outdoors using rigid-type duct work.

22. Combustion Equipment - Specify power-vented or closed-combustion equipment when installing new space and water-heating equipment in New Construction and any Substantial and Moderate Rehab projects.

23. Mold Prevention: Water Heaters

Provide adequate drainage for water heaters that includes drains or catch pans with drains piped to the exterior of the dwelling.

24. Mold Prevention: Surfaces

In bathrooms, kitchens, and laundry rooms, use materials that have durable, cleanable surfaces.

25. Mold Prevention: Tub and Shower Enclosures

Use non-paper-faced backing materials such as cement board, fiber cement board, or equivalent in bathrooms.

26. Vapor Barrier Strategies (New Construction and Rehab Projects with foundation work only)

Install vapor barriers that meet specified criteria appropriate for the foundation type.

27. Water Drainage

Provide drainage of water away from windows, walls, and foundations by implementing list of techniques.

28. Garage Isolation

Follow list of criteria for projects with garages, including: provide a continuous air barrier between the conditioned (living) space and any garage space to prevent the migration of any contaminants into the living space, and install a CO alarm inside the house in the room with a door to the garage and outside all sleeping areas.

29. Integrated Pest Management

Seal all wall, floor, and joint penetrations with low-VOC caulking or other appropriate sealing methods to prevent pest entry.²⁸

30. Lead-Safe Work Practices

For properties built before 1978, use lead-safe work practices consistent with the EPA's Renovation, Repair, and Painting Regulation and applicable HUD requirements.

31. Building Maintenance Manual (all Multifamily Projects)

Provide a building maintenance manual that addresses maintenance schedules and other specific instructions related to the building's green features.

32. Resident Manual

Provide a guide for homeowners and renters that explains the intent, benefits, use and maintenance of green building features.

33. Resident and Property Manager Orientation

Provide a comprehensive walk-through and orientation for residents and property managers using the appropriate building maintenance or resident's manual.

B. Non-substantially Damaged Homes – Green Building Retrofit Checklist

1. Water Conservation

When replacing, install or retrofit water conserving fixtures in any unit and common facility, whether or not they are being repaired, use the following specifications: Toilets-- 1.28 gpf; Urinals-- 0.5 gpf; Showerheads-- 2.0 gpm; Kitchen faucets-- 2.0 gpm; and Bathroom faucets-- 1.5gpm. [gpf = gallons per flush; gpm = gallons per minute]

2. ENERGY STAR Appliances

When replacing, install ENERGY STAR-labeled dishwashers, refrigerators, and any other applicable appliance(s), if these appliance categories are provided in units or common areas.

3. Air Sealing: Building Envelope – SEE PROGRAM POLICIES FOR COMPLETE REQUIREMENTS²⁹

For areas being repaired, seal all accessible gaps and penetrations in the building envelope. If applicable, use low VOC caulk or foam.

4. Insulation: Attic (if applicable to building type)

²⁸ <http://www.nyc.gov/html/doh/downloads/pdf/pest/pest-bro-healthy-home.pdf>

²⁹

http://apps1.eere.energy.gov/buildings/publications/pdfs/building_america/measure_guide_wall_airsealing.pdf%20

For areas being repaired, for attics with closed floor cavities directly above the conditioned space, blow in insulation per manufacturer's specifications to a minimum density of 3.5 Lbs. per cubic foot (CF). For attics with open floor cavities directly above the conditioned space, install insulation to meet or exceed IECC levels.

5. Insulation: Flooring (if applicable to building type)

For areas being repaired, install \geq R-19 insulation in contact with the subfloor in buildings with floor systems over vented crawl spaces. Install a 6-mil vapor barrier in contact with 100% of the floor of the crawl space (the ground), overlapping seams and piers at least 6 inches.

6. Duct Sealing (if applicable to building type)

To the extent the recovery rehabilitation work being undertaken is related to the unit's HVAC system, grantees must apply the 'Duct Sealing' Green Checklist item to ducts in unconditioned space serving individual residential housing units.

In buildings with ducted forced-air heating and cooling systems, seal all penetrations of the air distribution system to reduce leakage in order to meet or exceed ENERGY STAR for Homes' duct leakage standard.

7. Air Barrier System – SEE PROGRAM POLICIES FOR COMPLETE REQUIREMENTS

For areas being repaired, ensure continuous unbroken air barrier surrounding all conditioned space and dwelling units. Align insulation completely and continuously with the air barrier.

8. Radiant Barriers: Roofing

When completely replacing roof, use radiant barrier sheathing or other radiant barrier material; if economically feasible, also use cool roofing materials.

9. Windows

When replacing windows, install geographically appropriate ENERGY STAR rated windows.

10. Sizing of Heating and Cooling Equipment

When replacing, size heating and cooling equipment in accordance with the Air Conditioning Contractors of America (ACCA) Manuals, Parts J and S, or 2012 ASHRAE Handbook--HVAC Systems and Equipment or most recent edition.

11. Domestic Hot Water Systems

When replacing domestic water heating system(s), ensure the system(s) meet or exceed the efficiency requirements of ENERGY STAR for Homes' Reference Design. Insulate pipes by at least R-4.

12. Efficient Lighting: Interior

When replacing, follow the guidance appropriate for the project type: install the ENERGY STAR Advanced Lighting Package (ALP); **OR** follow the ENERGY STAR MFHR program guidelines, which require that 80% of installed lighting fixtures within units must be ENERGY STAR-qualified or have ENERGY STAR-qualified lamps installed; **OR** when replacing, new fixtures and ceiling fans must meet or exceed ENERGY STAR efficiency levels.

13. Efficient Lighting: Exterior

When replacing, follow the guidance appropriate for the project type: install ENERGY STAR-qualified fixtures or LEDs with a minimum efficacy of 45 lumens/watt; **OR** follow the ENERGY STAR MFHR program guidelines, which require that 80% of outdoor lighting fixtures must be ENERGY STAR-qualified or have ENERGY STAR-qualified lamps installed; **OR** when replacing, install ENERGY STAR compact fluorescents or LEDs with a minimum efficacy of 45 lumens/watt.

14. Air Ventilation: Single Family and Multifamily (three stories or fewer) – SEE PROGRAM POLICIES FOR COMPLETE REQUIREMENTS

When replacing, install an in-unit ventilation system capable of providing adequate fresh air per ASHRAE 62.2 requirements.

15. Composite Wood Products that Emit Low/No Formaldehyde

Composite wood products must be certified compliant with California 93120. If using a composite wood product that does not comply with California 93120, all exposed edges and sides must be sealed with low-VOC sealants.

16. Environmentally Preferable Flooring

When replacing flooring, use environmentally preferable flooring, including the FloorScore certification. Any carpet products used must meet the Carpet and Rug Institute's Green Label or Green Label Plus certification for carpet, pad, and carpet adhesives.

17. Low/No VOC Paints and Primers

All interior paints and primers must be less than or equal to the following VOC levels: Flats-- 50 g/L; Non-flats--50 g/L; Floor--100 g/L. [g/L = grams per liter; levels are based on a combination of the Master Painters Institute (MPI) and GreenSeal standards.]

18. Low/No VOC Adhesives and Sealants

All adhesives must comply with Rule 1168 of the South Coast Air Quality Management District. All caulks and sealants must comply with regulation 8, rule 51, of the Bay Area Air Quality Management District.

19. Clothes Dryer Exhaust

When replacing, vent clothes dryers directly to the outdoors using rigid-type duct work.

20. Mold Inspection and Remediation

Inspect the interior and exterior of the building for evidence of moisture problems in storm damaged areas only. Document the extent and location of the problems, and implement the proposed repairs according to the Moisture section of the EPA Healthy Indoor Environment Protocols for Home Energy Upgrades.

21. Combustion Equipment

When installing new space and water-heating equipment, specify power-vented or direct vent combustion equipment.

22. Mold Prevention: Hot Water Heaters

When replacing, provide adequate drainage for water heaters that includes drains or catch pans with drains piped to the exterior of the dwelling.

23. Mold Prevention: Surfaces

When replacing or repairing bathrooms, kitchens, and laundry rooms, use materials that have durable, cleanable surfaces.

24. Mold Prevention: Tub and Shower Enclosures

When replacing or repairing tub and/or shower enclosures, use non-paper-faced backing materials such as cement board, fiber cement board, or equivalent in bathrooms.

25. Integrated Pest Management – SEE PROGRAM POLICIES FOR COMPLETE REQUIREMENTS

In areas being repaired, seal all wall, floor, and joint penetrations with low-VOC caulking or other appropriate sealing methods to prevent pest entry.

26. Lead-Safe Work Practices

For properties built before 1978, if the project will involve disturbing painted surfaces or cleaning up lead contaminated dust or soil, use certified renovation or lead abatement contractors and workers using lead-safe work practices and clearance examinations consistent with the more stringent of EPA's Renovation, Repair, and Painting Rule and HUD's Lead Safe Housing Rule.

C. Energy Conservation

1. Requirement(s)

All substantially damaged homes will require Energy Code Analysis as required by the NYC Energy Code. [See 2011 NYC Energy Conservation Code](#)³⁰

D. Reconstructions – [Energy Star Certified](#)³¹

1. Requirement(s)

³⁰ http://www.nyc.gov/html/dob/downloads/pdf/2.1.12-Residential_Module.pdf

³¹ http://www.energystar.gov/index.cfm?c=bldrs_lenders_raters.nh_v3_guidelines

All reconstructions will meet the requirements for an Energy Star Certified home.

IV PROGRAM STANDARDS FOR UTILITIES

A. Hot Water Supply

1. Requirement(s)
 - a) Every dwelling shall have supplied water-heating equipment (water heater and hot water supply lines) that is free of leaks, connected to the source of fuel or power, and is capable of heating water to be drawn for general usage.
 - b) Please see General Program Standards for information about elevating utilities in non-substantially damaged homes.
 - c) Please see Green Building Standards for Green Requirements.
2. Program Policies
 - d) No water heaters (except point-of-use water heaters) shall be allowed in the toilet rooms or bathrooms, bedrooms, or sleeping rooms.
 - a) No gas water heaters shall be allowed in a clothes closet(s).
 - b) All gas water heaters shall be vented in a safe manner to a chimney or flue leading to the exterior of the dwelling. Unlined brick chimneys must have a metal B-vent liner installed to meet manufacturer's venting requirements. If metal chimney venting cannot be added, a power vented water heater may be installed. Size of the B-vent is critical for proper venting. Install according to manufacturer's recommendations.
 - c) All water heaters shall be equipped with a pressure/temperature relief valve possessing a full-sized (non-reduced) rigid copper or steel discharge pipe to within six (6) inches of the floor. The steel discharge pipe shall not be threaded at the discharge end.
 - d) All water heaters must be installed to manufacturer's installation specifications.
 - e) All new water heaters shall have internal foam insulation that is a minimum of R-10.
 - f) Gas water heaters shall have an EF rating of .62 or higher and a recovery efficiency of .75 or better and/or meet Energy Star requirements at the time of installation.
 - g) Electric water heaters shall be Energy Star rated.
 - h) Where feasible, tankless water heaters may be installed in accordance with manufacturer's guidelines and sized to provide adequate hot water supply to all fixtures.
 - i) Gas supply lines and or electrical capacity must be evaluated before installing tankless water heaters.

B. Potable Water Supply

1. Requirement

- a) Every dwelling shall be connected to an approved (by the jurisdiction having authority) potable water source.

C. Plumbing Systems

1. Requirement

- a) All dwelling plumbing systems shall be capable of safely and adequately providing a water supply and wastewater disposal for all plumbing fixtures.
- b) Property owner owns the tap at the main and the entire connection into the property. The Dept. of Environmental Protection owns the meter in the premises. Damage on Homeowner's property will be repaired.

2. Policy

- a) New sump pumps will not be added. Damaged sump pumps will be repaired or replaced.

D. Connection to Sanitary Sewer

1. Requirement

- a) Every dwelling shall be connected to an approved (by the jurisdiction having authority) sanitary sewer system or properly operating septic system.

Property owner owns from the spur on the city sewer to the building premise, the city owns the mainline sewer or water main and the private concern owns any connection. Storm damage on homeowner's property will be repaired.

- b) As per [Local Law 83 of 2013](#)³² backflow prevention devices may be required even if a sprinkler system is not being installed in a home. Please see the referenced law for full details.

E. Septic Systems³³

1. Requirement(s)

- a) As per the Department of Buildings, all existing septic systems shall undergo an inspection performed by registered design professional ("RDP"). This inspection must include: Verification of Existing System

Where the owner of a tax lot intends to alter or expand a residential building already connected to an individual private on-site sewage disposal system the following

³² http://www1.nyc.gov/assets/buildings/local_laws/ll83of2013.pdf

³³ From NYC Housing Recovery Training Module II – DOB Overview

procedures shall be followed to verify that the existing system is in sound working condition and adequately sized for the anticipated sewage load.

a. Evaluation of existing system. A registered design professional (“RDP”) must perform an inspection of the on-site private sewage disposal system to demonstrate that the existing system is functioning properly. A report of the inspection must be submitted to the department. The inspection shall include:

1. *Inspection of the premises to verify that there is no evidence of surfacing of sewage, which constitutes failure of the existing system;*
2. *Inspection of all piping leading from the residence to the wastewater disposal system. If any of the piping is damaged it must be replaced prior to required infiltration testing;*
3. *Inspection of the interior of the system (pit or tank) to verify that the system is free of structural damage and debris;*
4. *Inspection of any additional parts of the system (D-Box, seepage pit/sand column, etc.).*

b) Cesspools

Where an inspection determines that a cesspool is present, an application shall be filed with the Septic Compliance Unit to replace such cesspool with a septic tank and a seepage pit.

c) Cleaning and Pumping of existing on-site private sewage disposal systems

Prior to the required infiltration testing, a Licensed Sewage Hauler with a valid permit from the New York State Department of Environmental Conservation must pump the contents of the septic tank out and remove the contents from the site. All sludge and debris must be removed from the holding (septic) tank.

d) Infiltration testing of existing on-site private sewage disposal systems

A test of the system must be performed by dosing a volume of water equal to twice the estimated daily design volume of the system, but not less than 2000 gallons (more may be required if the septic tank is larger than 2000 gallons). During this initial charge of water, an acceptable dye (Uranine/Fluorescein) shall be added and the system observed for a period of not less than four hours. The RDP shall observe the test and verify that the system is functioning, continuously accepting water without a back-up, and that no dyed water is observed above ground surface. Dyed wastewater observed breaking the ground surface shall be considered a failed test. Where the ground water table is tidally influenced infiltration tests must be performed during the high portion of the tide cycle.

e) Damaged or Malfunctioning on-site private sewage disposal systems.

Where testing and inspection indicate that a system has been damaged or has failed the infiltration test, a permit application must be filed with the Septic Compliance Unit in Staten Island of the Department of Buildings for the repair or replacement of the system.

f) Certification of existing on-site private sewage disposal systems.

Where a RDP has determined by testing and inspection that an existing system that was damaged or malfunctioning is now adequate to be placed in service, the RDP shall submit a certification to the Department of Buildings stating the following:

“I, Name, License #, have inspected and tested the on-site private sewage disposal system located at, address, block, lot. This system, which was damaged and/or malfunctioning, has been repaired, and has achieved the minimum rate required to the placed back into service.”

- g) Use of existing on-site private sewage disposal systems.

Where an alterations of a residence will increase the number of bedrooms and/or plumbing fixtures, but no increase in the occupancy and/or waste water generation the applicant must demonstrate to the Department that the proposal will not result in any increase in the occupancy and/or wastewater generation going into the existing on-site private sewage disposal system. The Department shall require that applicants execute an affidavit attesting to the fact that the proposed project will not result in an increase in occupancy and/or wastewater generation.

- h) New or Altered System Required

A proposed alteration that will result in an increase in the volume of wastewater generated shall require the applicant to install a new or upgraded on-site private sewage disposal system in accordance with the requirements of the NYC Department of Environmental Protection Interim Procedure for Individual On-Site Wastewater Disposal Systems, revised April 9, 1992. A septic tank and seepage area must be installed to replace an existing cesspool.

2. Program Policies

- a) If a home is on septic which needs to be repaired and sewer is available in the street, the home will be connected to the sewer system wherever possible.

F. Electrical Service

1. Requirement(s)

- a) All electrical work performed in any home shall fully comply with the NYC Electrical Code.

2. Unsafe, hazardous components must be repaired or replaced.

- b) All electrical work shall be in compliance with the adopted electrical code requirements in accordance with any and all city or state requirements having jurisdiction.
- c) The department of buildings shall not issue a permit or, if applicable, an electrical sign-off pursuant to an application that involves the energizing of a meter in a one-, two-, three-, or four-family residence, if the department finds that such action will cause the total number of meters for the building to exceed the number of dwelling units specified for such building in the certificate of occupancy, or if there is no certificate of occupancy, as determined by the department, except as permitted herein...³⁴
- d) The panel, service mast, etc. shall also be installed to local utility company requirements.

³⁴ http://www.nyc.gov/html/dob/downloads/bldgs_code/electrical_code_local_law_39of2011.pdf

- a. Con Edison - <http://www.coned.com/>
- b. PSE & G - <https://www.psegliny.com/>
- c. National Grid - http://www2.nationalgridus.com/index_ny.jsp

3. Program Policies

- a) When rewiring a home and replacing the electrical panel, all dwelling units shall have a minimum, 150 ampere breaker controlled electrical panel. If the home has a code compliant 100 amp electrical panel which needs replacement without extensive rewiring of the rest of the home, replace in kind, do not upgrade.
- b) Basement wiring that was submerged and has not been replaced, should be replaced in accordance with program standards for basements.
- c) For all substantially damaged homes and for non-substantially damaged homes with elevated electrical panels, a disconnect should be provided at the panel box for all electrical circuits having terminations below the DFE (design flood elevation).

4. Guidance Provided by the Department of Buildings.

- a) The Department of Buildings Electrical Inspection unit will only inspect work filed on the application. The application contains fields for detailing work and contractor comments. **Information in the comment field** regarding what work is being performed and what work is not (such as “existing cloth wiring on upper floors to remain” or “Replace AC condenser, Carrier CA16NA060, 5 ton, 208/230 V to left of rear porch”), **will limit the scope of inspections and the liability of the contractor to the work being performed**. If work is clearly outlined as being in the basement, the inspectors will not go to the second floor. If a light fixture is being replaced on the second floor, the inspectors will not go into the bathroom to examine the outlets. If there are no comments, the area of inspection is pretty much wide open. Please include extensive comments on the application.
- b) Cloth wiring is not deemed a reason to rewire the entire home. When panel boxes are replaced, breakers should be properly sized for cloth wiring.
- c) The Department on Buildings is not requiring BIB to improve any circuits, outlets, switches with GFCI, tamper proof outlets or upgraded wiring in areas not being repaired. Example: they are not requiring the upgrading of circuits for window AC units or appliances if work is not being performed in the area.
- d) Arc fault breakers are only required when completely rewiring a circuit from an outlet or switch to the panel box or creating a new circuit. Splices to relocated panels do not require arc fault breakers. Junction boxes should be accessible for inspection.
- e) If an area was flooded and circuits are being rewired to the panel box, the room should be made code compliant both in the wiring quality and number of outlets. Example: if a first floor bedroom was flooded and the outlets must be rewired, there must be a code compliant number of outlets with required spacing.

- f) Habitable basements with floors and sheetrocked walls must be code compliant if being rewired as to the number of outlets. Rewiring mechanical equipment only or replacing the panel box does not trigger compliance with number of outlets in rooms.
- g) Non-habitable, unfinished, basements or cellars, with bare concrete or stone walls and floors, require only one GFCI outlet and one light.
- h) Submerged wiring and outlets should be replaced.
- i) Type NM cable (Romex) is permitted for both exposed and concealed work in normally dry locations. It is permitted to be run exposed in unfinished basements, but NEC article 334.15(C) does specify how it must be installed. Cables shall be run either through bored holes in joists or on running boards. NM cable installed on the wall of an unfinished basement shall be permitted to be installed in a listed conduit or tubing or protected by running the cable through the wall studs. Sheetrock is not required.
- j) Type AC cable (BX) and MC cable are both permitted to be installed in exposed or concealed locations. Sheetrock is not required.

In non-substantially damaged homes the program will only be replacing electrical outlets if the electrical system is being repaired or replaced or if a particular outlet is damaged.

G. Convenience Outlets

- 1. Requirement
 - a) All electrical work performed in any home shall fully comply with the NYC Electrical Code.
- 2. Reference

[Administrative Code of the City of New York - Title 27 Construction & Maintenance - Chapter 3 Electrical Code](#)

H. Lighting

- 1. Requirement(s)
 - a) All electrical work performed in any home shall fully comply with the NYC Electrical Code.
 - b) Please see Green Building Standards for specific requirements

V PROGRAM STANDARDS FOR HEATING & COOLING

A. Heating Systems

- 1. Requirement(s)
 - a) All heating systems (and central air-conditioning systems where they exist) shall be capable of safely and adequately heating (or cooling as applicable) for all living space

and must meet the requirements of the NYC Building Code, Fuel Gas Code and Mechanical Code is applicable

- b) Please see Green Building Standards for specific requirements

2. Program Policies

- a) Every heating system burning solid, liquid or gaseous fuels shall be vented in a safe manner to a chimney or flue leading to the exterior of the dwelling. The heating system chimney and/or flue shall be of such design to assure proper draft and shall be adequately supported.
- b) No heating system source burning solid, liquid or gaseous fuels shall be located in any habitable room or bathroom, including any toilet room.
- c) Every fuel burning appliance (solid, liquid or gaseous fuels) shall have adequate combustion air and ventilation air. All new furnaces will have sealed combustion with combustion air brought in from the exterior of the house and installed in accordance with manufacturer's guidelines.
- d) Every new heat duct, steam pipe and hot water pipe shall be free of leaks and shall function such that an adequate amount of heat is delivered where intended. All accessible duct joints must be sealed with mastic or any other acceptable product. Newly installed ductwork must also be sealed. All accessible steam piping and hot water piping must be installed with an approved material.
- e) Every seal between any of the sections of the heating source(s) shall be air-tight so that noxious gases and fumes will not escape into the dwelling.
- f) No space heater shall be of a portable type.
- g) Minimum requirements for forced air furnaces, when installed, will be no less than a 92% AFUE, or the minimum AFUE, if greater than 92%, to obtain a local utility rebate (Energy Star rated for Central-Northern climates). Also install a digital programmable thermostat. Condensate lines will drain to a floor drain or have a condensate pump installed and piped to discharge. All furnace duct work shall be equipped with an air filter clean out location that has a tight fitting cover installed over it.
- h) All boilers, when replaced, will have an "A" rating and be no less than 87% AFUE rating. All combustion air will be from the exterior of the house. The addition of zone valves may be useful to reduce energy cost. Heat lines shall be insulated with approved material. Simple programmable thermostats will be installed.
- i) All wood, pellet, corn, switch grass, hydrogen, or other biomass fuel stoves must be installed to manufacturer's guidelines. Where such guidelines are not available, the heating unit will be removed. Venting and combustion air must be installed in accordance with manufacturer's requirements.
- j) Unless we are replacing combustible equipment and it is required by either the manufacturer or the NYC Building Code, the BIB program will not be creating any fire-

rated enclosures or ceilings. Existing mechanical rooms where equipment is not being replaced should not be rebuilt, nor should mechanical rooms be built around existing equipment unless required by manufacturer of replacement equipment or the NYC DOB.

- k) As per HUD guidance as to the applicability of the CPD Green Building Checklist to non-substantially damaged units, in situations where physical space constraints make it impractical or impossible to install certain mandatory replacements from both the Checklist and NYC Building Code, HRO will install the outlined mandatory requirements in the Checklist to the extent feasible. In cases where in order to comply with the Green Retrofit Checklist extensive construction and related permits will delay work, increase costs, and become obstacles for both applicants and the overall progress of the Program, the Build It Back program will replace components of existing systems with equipment that matches the existing system and will not rebuild entire systems to comply with the Checklist. All such replacements which are not in conformance with the Green Retrofit Checklist must be documented and approved by the Program prior to scoping.

B. Cooling Systems

1. Requirement(s)
 - a) Please see Green Building Standards
2. Program Policies
 - a) Nonworking or improperly functioning central air conditioning systems may be replaced as part of the rehabilitation work.
 - b) The installation of a central air conditioning system, where it currently does not exist, is permissible only when it is documented to be medically necessary.
 - c) Window A/C units will not be replaced. Existing window units will be removed from homes to be elevated.
 - d) A/C units, if replaced, shall not be less than 14 SEER or the lowest SEER rating that is available at the time of installation but not less than 14 SEER. All units shall be installed, when possible, on either the north or east side of the dwelling or in an area that will provide shade for the unit. The correct coil will be installed that is compatible with both the furnace and A/C unit.
 - a. Exception: If only one component of a system needs to be replaced and replacing to meet above would entail increased costs, delays in completion and extensive reconstruction not related to storm damage, the component should be replaced to match the existing system.
 - e) In rooms being repaired, non-functioning, non-repairable air conditioners will be removed and drained of all CFCs.

- f) When in areas of storm damage, existing central air conditioning will be inspected, serviced and refurbished to operate safely.
3. Ineligible Items
- a) New central air conditioning systems will not be installed where none existed prior to Hurricane Sandy.

VI PROGRAM STANDARDS FOR THE INTERIORS OF STRUCTURES

A. Stairs

- 1. Requirement(s)
 - a) If replacing existing stairs due to storm damage, stairs will need to conform as close as possible to new construction and egress standards, but replacement stairs do not need to be in compliance with new codes. Any newly added and constructed stairs (interior and exterior stairways where no stair previously existed) shall comply with the requirements of the [New York City Building Code – Chapter 10 – Means of Egress](#) and any other applicable regulations³⁵ Stairs that have not been storm damaged will not be replaced unless they are an imminent threat to life safety. If possible, stairs should be repaired prior to scoping a complete replacement.

B. Interior Walls, Floors, Ceilings, Doors & Windows

- 1. Requirement(s)
 - a) For substantially damaged homes and areas being repaired in non-substantially damaged homes, all interior spaces shall comply with all requirements of [NYC Building Code Chapter 12 – Interior Environments](#).³⁶ The provisions of Chapter 12 shall govern ventilation, temperature control, lighting, yards and courts, sound transmission, room dimensions, surrounding materials and rodent proofing associated with the interior spaces of buildings as well as any and all other applicable codes and regulations.
 - b) Please see Green Building Standards
- 2. Program Policies
 - a) In substantially damaged homes and in areas being repaired in non-substantially damaged homes, all operable windows shall be capable of being easily opened and held in an open position by window hardware.

³⁵ http://www.nyc.gov/html/dob/downloads/pdf/cc_chapter10.pdf

³⁶ http://www.nyc.gov/html/dob/downloads/pdf/cc_chapter12.pdf

- b) In addition, any windows required to be operable in all homes shall be operable in areas being repaired.
- c) In substantially damaged homes and in areas being repaired in non-substantially damaged homes, all operable exterior windows being replaced shall be provided with screens. Half screens on windows are allowable. All windows will operate, remain in an open position when placed there, lock when closed and the open section will be covered with a screen. Screens will only be provided when windows are being replaced for the new windows. The program will not provide screens for existing windows.
- d) In substantially damaged homes and in areas being repaired in non-substantially damaged homes, unit windows located on the first floor, at the basement level, on a fire escape, porch, or other outside space that can be reached from the ground and that are designed to be opened must have a locking device. (Windows with sills less than six feet off the ground are considered accessible.)
- e) Ornamental security grills on windows or doors will be removed and put aside for the homeowner. Since the program is unable to verify that the grills provide the release mechanisms required for safe egress, the program will not replace ornamental security grills.

VII PROGRAM STANDARDS FOR EXTERIOR OF STRUCTURES

A. Site

1. Requirement(s)
 - a) When the site surrounding a building has been disturbed, all grading adjacent to the building and for a distance of at least 10 feet away from the building, or to property line, will slope away from the structure at a pitch of at least 1 inch per foot.
 - b) If the soil is workable, all bare earth will be reseeded. All areas disturbed during the course of construction or as indicated in the Job Order or drawings shall be seeded or reseeded with New York State recommended, drought-resistant varieties including blends such as fine fescue cultivars.³⁷
 - c) Essential paving on primary path(s) of egress, such as front walks with minor defects will be repaired to match. Tripping hazards greater than ¼" must be addressed. Un-repairable essential walks will be replaced with cost effective paving. Driveways with minor repairable damage will be repaired. Un-repairable driveways will be removed and replaced with gravel.
 - d) Trees that are hazardous to the existing home or proposed construction will be removed. Removal will include cutting close to the ground, grinding of the stump to 12 inches below the finished grade, installation of topsoil and re-seeding.
 - e) Please see Green Building Standards for Substantially damaged homes.

³⁷ <http://ecommons.library.cornell.edu/bitstream/1813/3574/2/Lawn%20Care%20without%20Pesticides.pdf>

2. Ineligible Items

- a) Fences will not be repaired or replaced. Decorative fences that are salvageable may be carefully removed and set aside for the homeowner to reinstall at a later date. No guarantee of the ability to reuse is given by the program.
- b) Landscaping other than basic seeding will not be replaced unless required by code.
- c) Patios which are removed or damaged during construction will not be replaced. The area will be replaced with seeded lawn, sod or gravel.
- d) Walkways - Concrete walkways will be provided from the front stair, and a 3' maximum width concrete walkway may be provided from the rear stairs to the nearest street at the request of the homeowner.
- e) Driveways, other than the repair of minor damage, will be replaced, when required, with permeable gravel surfaces.
- f) Public sidewalks will not be rebuilt unless damaged by construction activities. Shared driveways will not be rebuilt. The program may repair or replace the walk to the NYC street or sidewalk. Site work to reconfigure drainage conditions is not a program eligible activity.
- g) The program will not excavate and/or waterproof around the exterior of an undamaged foundation to address post-storm water table issues.
- h) Undamaged sites, driveways or walkways will not be regraded to address water issues.

3. Landscaping

When required by Enterprise Green Communities or as a zoning mitigation, plants used should be those deemed as a “[Salt Tolerant Species](#)”³⁸ as defined by the NYC Department of Parks & Recreation (DPR) or a species from [the Native Species Planting Guide for New York City and Vicinity](#), issued by the Natural Resources Group of DPR³⁹.

B. Detached Structures

1. Requirement(s)
2. Program Policies
 - a) Improvements must be physically attached to the house (under common roof) and be permanent in nature (e.g., sheds or garages located separately from the house are ineligible).
 - b) Unsafe, hazardous accessory structures in danger of collapse, including detached garages, or fencing will be removed. Deteriorated structures or fencing that do not present Life Safety hazards will not be addressed.

³⁸ http://www.nycgovparks.org/sub_about/parks_divisions/gnpc/pdf/salt_tolerant_species_list.pdf

³⁹ http://www.nycgovparks.org/sub_about/parks_divisions/nrg/documents/Native_Species_Planting_Guide.pdf

3. Ineligible Items
 - a) Sheds or garages located separately from the house
 - b) Accessory structures such as sheds or garages will not be rehabilitated or elevated.
 - c) Patios or ground level decks will not be repaired.

C. Foundations, Exterior Walls, Soffits and Fascia

1. Requirement(s)
2. Program Policies
 - a) Every exterior wall, soffit and fascia shall be made weather resistant. Every storm damaged foundation shall be made structurally sound. Products for exterior walls, roofs, soffits, and fascia shall be installed in accordance with the manufacturer's guidelines. There may be instances where changes to the water table or adjoining site circumstances make it infeasible to prevent water infiltration into basements or cellars. The program will attempt to address all above grade discoverable sources of intrusion and address them.
 - b) Roof replacement shall be installed in accordance with the manufacturer's requirements. When installing asphalt or fiberglass shingles, a minimum of a 30 year shingle shall be used. When replacing or making a substantial repair to the roof, use radiant barrier sheathing or other radiant barrier material; if economically feasible, also use cool roofing materials.
 - c) Damaged retaining walls necessary for the support of the primary structure will be repaired when reasonable and feasible.
 - d) Storm damaged foundations will be repaired or replaced to be sound, reasonably level, and free from movement. Structural framing and masonry will be free from visible deterioration, rot, or serious termite damage. Prior to rehab, all sagging floor joists or rafters will be visually inspected, and significant structural damage and its cause will be corrected.
 - e) New structural walls will be minimum 2" x 4", 16" OC. All exterior walls that are part of the building envelope (the air barrier and thermal barrier separating the conditioned space from the non-conditioned space) will be insulated with a minimum R-13 insulation and sheathed to code.

D. Drainage

1. Requirement(s)
2. Program Policies – When Site is disturbed during construction

- a) When disturbed during the course of construction, the ground around the dwelling shall be sloped away from foundation walls to divert water away from the structure.
- b) When necessitated by storm damage, repaired gutters and downspouts must be in good repair, leak free and collect storm water from all lower roof edges.
- c) Concrete splash blocks will be installed to move water away from the foundation.
- d) The system must move all storm water away from the building and prevent water from entering the structure.

E. Windows/Ventilation/Natural Lighting

1. Requirement(s)

- a) In areas being repaired in non-substantially damaged homes, or for all substantially damaged one & two family homes: required windows must meet⁴⁰ [§ 27-2062 Lighting and ventilation in one- and two-family dwellings](#) and/or [Chapter 12 - Interior Environments](#)⁴¹ as applicable.

2. Program Policies

- a) Program policy is that the standard window will be a vinyl double hung window with any energy efficient glass (when necessary only) required to meet the energy code:

Not Permitted:

- a) The program does not replace or include bay or bow windows in reconstructions. Nor should reconstruction designs include small 3 sided spaces to replicate the feel. Any damaged bay or bow windows will be replaced with windows aligned flush with the façade.
- b) The program does not replace or repair skylights. They will be removed and the roof patched.
- c) The program does not install transoms or sidelights.
- d) Windows far in excess of code requirements for light and ventilation will be removed from the scope.

Exceptions:

- a) Replace in kind (not applicable to bays or bows) – casement windows may be replaced with similar
- b) To match existing home

⁴⁰ [http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA= \\$\\$ADC27-2062 \\$\\$@TXADC027-2062+&LIST=LAW+&BROWSER=BROWSER+&TOKEN=05661412+&TARGET=VIEW](http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA= $$ADC27-2062 $$@TXADC027-2062+&LIST=LAW+&BROWSER=BROWSER+&TOKEN=05661412+&TARGET=VIEW)

⁴¹ http://www.nyc.gov/html/dob/downloads/pdf/cc_chapter12.pdf

- c) Required by context (starting on June 27, 2016, requests for deviation from program standards should be submitted in writing to [program design directors](#) and written approval must be received)
 - d) Emergency Escape And Rescue (it will be hard to achieve the required opening with a double hung window)
http://www1.nyc.gov/assets/buildings/apps/pdf_viewer/viewer.html?file=2014CC_BC_Chapte_10_Means_of_Egress.pdf§ion=conscod_2014
3. Chapter 10 Means of Egress – NYC Building Code
- 1029.2 Minimum size. Emergency escape and rescue openings shall have a minimum net clear opening of 6 square feet (0.56 m²).
- Exception: The minimum net clear opening for emergency escape and rescue grade-floor openings shall be 5 square feet (0.46 m²) unless such opening is required for natural ventilation in accordance with Chapter 12.
 - 1029.2.1 Minimum dimensions. The net clear opening height dimension shall not be less than 30 inches (762 mm). The net clear opening width dimension shall not be less than 24 inches (610 mm). The final dimensions shall result in a net clear opening area as required above. The net clear opening dimensions shall be the result of normal operation of the opening.
4. Design:
- a) Window area should be limited to that required for light and ventilation. The installation of windows in small areas of wall requiring expensive, complicated details is not permissible. Excessive windows will be removed from the scope.
 - b) Rooms should be designed so that furniture, dressers, TVs, etc. can be placed along walls without interference from windows.

F. Exterior Doors and Basement Entries (Including Cellar Hatchways)

1. Requirement(s)
2. Program Policies for Substantially Damaged Homes, or areas being repaired only on Non-Substantially damaged homes.
 - a) When being replaced, every window, exterior door, basement entry and cellar hatchway shall be tight fitting within their frames, be rodent-proof, insect-proof and be weatherproof such that water and surface drainage is prevented from entering the dwelling. In addition, the following requirements shall also be met:
 - b) When replacing, all exterior doors and windows shall be equipped with security locks. Deadbolts are not required.

- c) Every window sash shall be fully equipped with glass window panes which are without cracks or holes. Every window sash to be replaced shall use Energy Star rated for North Central climate zone windows unless the existing windows have insulated glass. Stained or leaded glass found to be historically significant may be protected by a fixed low-E glass storm window. Every window sash being replaced shall fit tightly within its frame, and be secured in a manner consistent with the window design. All window jambs will be sealed. All rope weight openings shall be insulated before installing the new window. Energy Star rated for North-Central climate zone.
- d) Storm doors, when installed, shall also be equipped with a self-closing device.
- e) When replacing, every exterior door, when closed, shall fit properly within its frame and shall have door hinges and security locks or latches. All exterior doors will be no less than metal clad insulated (foam filled) doors. All jambs and thresholds will be sealed.
- f) Every new exterior door shall be not less than two foot-eight inches (2'-8") in width and not less than six foot-eight inches (6'-8") in height. Existing door sizes will be grandfathered, but, when replacing, an attempt shall be made to have at least one exterior door that is not less than 36 inches wide and no less than 6'-8" high.
- g) All houses will have 4" house numbers clearly displayed near the front door, and a standard size mailbox, wall-hung at the entrance where possible.

G. Porches, Landings and Decks

- 1. Requirement(s)
- 2. Program Policies
 - a) Steps, stairways, and porch decks on the primary egress route will be structurally sound, reasonably level, with smooth and even surfaces. Repairs will match existing materials.
 - b) The repair of porches and/or decks other than those used for primary access to a home is not covered by the Build It Back program unless such porch or deck is part of the legal egress path from the home.
 - a. Storm damaged deteriorated concrete porches falling within the parameters above will be repaired when possible. Unsafe wood porch components will be repaired with readily available materials to conform closely to porches in the neighborhood. Porch repairs will be structurally sound, with smooth and even decking surfaces. Deteriorated wood structural components will be replaced with preservative-treated wood.
 - b. For non-substantially damaged homes, access to rear porches deemed structurally unsound will be replaced with a stairway and minimal landing only. Non-essential doors will be replaced with windows.
 - c. Basic repair – pressure treated wood, railings rebuilt to meet code if non-compliant. Spindles to match existing or to be nominal 2x2 square.

- d. Attached decks on non-historic porches will be replaced with 5/4" preservative-treated decking when being repaired.

3. Decks

- a) The program will not build or rebuild decks in the rear or side of homes unless required to meet NYC Building Code. Rear decks will not be elevated. Doors not required for egress will be converted to windows or a "juliette" type balcony railing up against the home. A single rear stairway and minimal landing may replace a rear deck when code requirements permit.

4. Landings

- 5. The BIB program is not rebuilding decks. However, if, along a single wall where we are already placing a stair, there is more than one door, for example two patio doors within relatively close proximity, designers can extend a 4' deep landing the length of the doors and not close up one of the doors where feasible. This would not go around any corners or be any deeper than 4', but would allow access out from existing doors. If the home is narrow, the landing may extend the width of home. Where possible, landing foundations should not impede the ability of the homeowner to extend the landing at a future date to create a larger deck or porch.

6. Porches & Sunrooms

- a) Existing front porches that are architecturally integrated into the home may be lifted and the floor replaced if needed. If a porch has to be demolished or cannot be lifted, it will NOT be rebuilt. A smaller porch no more than 5' deep may be provided in some circumstances.
- b) Sunrooms that are part of the home, conditioned space, with year round windows and solid walls will be elevated or rebuilt as part of the Build It Back program.

H. Stairs

a) Program Policy

- a. Even if there was no rear stair pre-storm, a second rear stair may be added to an elevated home if the situation warrants. No third stairs may be added except in cases where it is absolutely imperative for access to mechanical equipment.. Sliding doors leading to landings will be replaced in kind.

I. Railings

1. Requirement(s)

2. Program Policies

- a) Existing handrails on egress routes will be structurally sound.

- b) Handrails will be present on one side of all egress interior and exterior steps or stairways with more than two risers on primary paths of egress. On historic structures railing repairs or new railings will be historically sensitive.
 - c) Replaced railings will meet NYC Building Code. Replaced wood structural components will be preservative-treated to match existing. Minor repairs should match existing whenever possible.
3. Ineligible Items
- a) Deteriorated railings in non-storm damaged areas will not be repaired or replaced unless they are on the primary path of egress only.

J. Chimneys

- 1. Requirement(s)
- 2. Program Policies
 - a) Masonry chimneys serving fireplaces will be repaired for minor damage on non-elevated houses
 - b) Sound chimneys serving fireplaces will not be lined.
 - c) Structurally unsound chimneys presenting Life Safety Hazards will be removed unless required for combustion ventilation. When chimneys must be used for combustion ventilation, they will be relined when required.
 - d) Masonry/stone chimneys with major damage will be removed.
 - e) Masonry/stone chimneys will not be elevated. They will be removed. If associated with a masonry fireplace, the fireplace will be removed also.

K. Siding

- 1. Requirement(s)
- 2. Program Policies
 - a) In storm damaged areas of the home, siding and trim will be intact and weatherproof. Buildings designated as historic will have existing wood siding repaired in kind. New exterior wood will blend with existing and will be spot-primed and top-coated in a lead-safe manner. All siding will be replaced or installed with fiber cement or vinyl lap siding. No brick, stone, stucco or other materials will be permitted except for minor patching. Patching of existing material, if more cost effective, is permitted.
 - b) Buildings not designated as historic by the Housing Recovery Office environmental review may have siding replaced with Fiber Cement Siding or vinyl siding to match the existing configuration. New wood components will be FSC certified.

- c) Removal of ACM in quantities meeting the definition of a Minor Project (less than 25 linear or 10 square feet of ACM) allows for the filing of an ACP-5, rather than an ACP-7. As a general rule, the Program seeks to minimize the disturbance of ACM to the extent that is reasonably practicable to achieve Minimum Program Standards. If vinyl siding can be repaired without disturbing the underlying ACM then that is the preferred method. HRO also does not preclude the encapsulation or enclosure of ACM so long as it's performed in compliance with DEP rules.
 - d) If siding contains asbestos and repairs exceed Minor Project level, replace all siding . If asbestos siding is covered with non-asbestos siding and the non-asbestos siding must be patched, asbestos siding may not be required to be removed provided it is not being disturbed. If over 50% of non-masonry (not brick or stucco) siding is damaged on one wall and repairs cannot be made to match remaining siding or if extensive repairs are required on 3 walls, all siding will be replaced.
 - e) Stucco siding will be patched where damaged. Material may be tinted or painted to match as closely as possible.
 - f) Brick siding will be patched with brick matched as closely as possible to existing.
 - g) Standard replacement of siding will be Fiber Cement siding or approved equal.
 - h) If repair covers more than 20% of one wall and paint cannot be found to closely match existing, entire house will be repainted.
 - i) When elevating a home with a brick or stone veneer façade, if the veneer can be maintained with minor repair, that is acceptable. If the area is large and the brick or other siding has to be removed, a program standard siding will be installed.
 - j) Requests for exceptions due to context should be documented by drawings or photographs indicating the need. Requests should be submitted to DDC or HRO design director with costs. Written approval must be received prior to any deviations. Only proof of extreme need will lead to approval of deviations.
 - k)
3. Homeowner Choice of Items
- a) Homeowner will have a choice of vinyl siding colors or fiber cement siding with a program approved paint color if completely replaced or program selected exterior paint colors. Partial repairs of masonry walls should attempt to match existing siding color.

L. Roofing

- 1. Requirement(s)
- 2. Program Policies

- a) If over 30% of roof is damaged and roofing materials cannot be found to match existing, roof to be replaced. When possible, replacement roofs should meet requirements of Green Retrofit Checklist or Enterprise Green Communities.
- b) Missing and leaking shingles and flashing will be repaired on otherwise functional storm damaged roofs. Slate, metal and tile roofs will be repaired when possible. Antennae will be removed if non-functioning and hazardous.
- c) New York City is within the Hurricane Prone region. It is not in the Wind-Borne Debris Region. Elevated homes should contain required connections between roof, walls, floors and foundations. NYC Building Code Sec. 1609.3 specifies a basic wind speed of 98mph.⁴² While this does not reach the 100 MPH speed required to trigger NYC Building Code Sec 2308.2.1, an applicant can elect to comply with the Wood Frame Construction Manual for One-and Two-Family Dwellings provided the applicant meets the criteria set forth in the code.
- d) Attic ventilation , attic insulation and radiant energy barriers must meet the requirements of the Green Retrofit Checklist or Enterprise Green Communities when applicable.

VIII PROGRAM STANDARDS FOR HAZARDOUS MATERIALS

A. Asbestos

1. Requirement(s)

- a) Remediation of asbestos will be required as outlined in the report provided to BIB JOC contractors. Asbestos will be remediated only where disturbed by the scope of work.
- b) The disturbance of any asbestos containing materials (ACM), regardless of quantity, requires control to prevent the release of fibers. DEP defines “disturb” as “any action taken which may alter, change, or stir, such as but not limited to the removal, encapsulation, enclosure or repair of asbestos-containing material.” Removal of ACM in quantities meeting the definition of a Minor Project (less than 25 linear or 10 square feet of ACM) allows for the filing of an ACP-5, rather than an ACP-7. As a general rule, HRO seeks to minimize the disturbance of ACM to the extent that is reasonably practicable to achieve Minimum Program Standards. If vinyl siding can be repaired without disturbing the underlying ACM then that is the preferred method. HRO also does not preclude the encapsulation or enclosure of ACM so long as it’s performed in compliance with DEP rules. HRO’s asbestos policy is to comply with Federal, State and City rules while considering the reduction of health hazards and cost reasonableness to determine the best method for preventing fiber release.

B. Lead

⁴²

http://www.nyc.gov/html/dob/apps/pdf_viewer/viewer.html?file=2014CC_BC_Chapter_16_Structural_Design.pdf§ion=conscode_2014

1. Requirement(s)

- a) EPA's Lead Renovation, Repair and Painting Rule (RRP Rule) requires that firms performing renovation, repair, and painting projects that disturb lead-based paint in homes, child care facilities and pre-schools built before 1978 have their firm certified by EPA (or an EPA authorized state), use certified renovators who are trained by EPA-approved training providers and follow lead-safe work practices.⁴³
- b) For properties built before 1978, if the project will involve disturbing painted surfaces or cleaning up lead contaminated dust or soil, use certified renovation or lead abatement contractors and workers using lead-safe work practices and clearance examinations consistent with the more stringent of EPA's Renovation, Repair, and Painting Rule and HUD's Lead Safe Housing Rule. See HUD's "[Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing \(2012 Edition\)](#)"⁴⁴

2. Prohibited Methods

- a) Do not use prohibited paint removal methods:
 - a. Open flame burning or torching.
 - b. Heat guns operating above 1,100 °F.
 - c. Machine sanding or grinding without a HEPA vacuum exhaust tool.
 - d. Uncontained hydroblasting or high-pressure wash.
 - e. Abrasive blasting or sandblasting without a HEPA vacuum exhaust tool.
- b) Avoid using the following methods:
 - a. Methylene chloride chemical paint removers.
 - b. Dry scraping (except for limited areas).

C. Mold

1. Requirement(s)

- a) Mold Inspection and Remediation
- b) Inspect the interior and exterior of the building for evidence of moisture problems in storm damaged areas. Document the extent and location of the problems, and implement the proposed repairs according to the Moisture section of the EPA Healthy Indoor Environment Protocols for Home Energy Upgrades.

2. Program Policy

- a) When a mold infestation is determined to be present, the BIB program will determine and correct the causes of mold, whether storm damaged or not. In cases of deferred

⁴³ <http://www2.epa.gov/lead/renovation-repair-and-painting-program>

⁴⁴ http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/lbp/hudguidelines

maintenance, the BIB program will do the minimum required to prevent a reoccurrence of mold.

IX PROGRAM STANDARDS FOR ENVIRONMENTAL COMPLIANCE

A. Wetlands Requirements

1. Please see applicable permit(s) for requirements
2. Tidal Wetland Land Use Regulations (6NYCRR Part 661.5)⁴⁵
3. Buildings Bulletin 2009-012⁴⁶

This document establishes construction document submittal procedures for work in Tidal Wetlands, Freshwater Wetlands, and Coastal Erosion Hazard Areas
4. General Permit 2-12-002 is effective in New York City, only. This permit expires October 31, 2014. This General Permits covers:
 1. *Repairing or rebuilding existing fences, or installing new temporary fences, in the regulated adjacent areas of freshwater wetlands and tidal wetlands.*
 2. *Removal of debris from waterways and tidal wetlands.*
 3. *Removal of debris from certain freshwater wetlands and adjacent areas on Staten Island.*
 4. *In-kind/in-place repair or reconstruction of docks, catwalks and floats that were functional before Hurricane Sandy.*
5. General Permit for Hurricane Sandy to Reconstruct Residential Structures in New York City (DEC Region 2), GP-2-13-002. General Permit GP-2-13-002, issued on July 16, 2013 replaces General Permit GP-2-13-001 and extends the permit's expiration date until October 31, 2016.⁴⁷

General Permit GP-2-13-002⁴⁸ authorizes the reconstruction of houses on properties regulated by DEC under the Tidal Wetlands Act (ECL Article 25) and/or the Freshwater Wetlands Act (ECL Article 24) destroyed by Hurricane Sandy and Red-tagged or Yellow-tagged by the New York City Department of Buildings for "Demolition" while waiving the procedural requirements of the Uniform Procedures Act (ECL Article 70).

General Permit GP-2-14-002 was issued to NYC Dept of Housing Preservation and Development (HPD) effective 5/15/14 through 4/30/19. Under certain conditions this permit permits the following activities in regulated Freshwater Wetlands Adjacent Areas and/or Tidal Wetlands Adjacent Areas (not in the wetlands themselves) for properties damaged or destroyed by Hurricane Sandy. Please see the actual permit for complete details.

1. Elevate and reconstruct, in-kind and in-place, lawfully existing and functional (as of October 27, 2012) residential structures and appurtenant structures. Work at these

⁴⁵ <http://www.dec.ny.gov/permits/6347.html>

⁴⁶ http://www.nyc.gov/html/dob/downloads/bldgs_bulletins/bb_2009-012.pdf

⁴⁷ <http://www.dec.ny.gov/permits/89343.html>

⁴⁸ http://www.dec.ny.gov/docs/permits_ej_operations_pdf/gp213002prmt.pdf

properties may include geotechnical borings to provide information for the design of foundation supports.

2. Demolish existing residential structures, appurtenant structures and utilities.
 3. Establish or re-establish connections to a municipal sanitary sewer system. (NOTE: Homes that propose to be serviced by an on-site septic system are not eligible for coverage under this General Permit.)
- a) At the current time, a home covered by the General Permit requires a “[Joint Application Form](#)” to be submitted to DEC⁴⁹

B. Bulkheads

1. Program Policies

- a) The Build It Back Program will not repair or replace any damaged bulkheads. Work will be strictly limited to the homes and attachments to homes, as well as an immediately surrounding property only as required by code or other local or federal agencies.

C. Sinkholes

1. Unless affecting the structural stability of a home, the Build It Back Program will not repair or address any sinkholes. Work will be strictly limited to the homes and attachments to homes, as well as an immediately surrounding property only as required by code or other local or federal agencies.

X PROGRAM STANDARDS FOR ACCESSIBILITY

A. Requirement(s)

B. Program Policies

1. Available in all homes in areas being repaired or replaced
 - a. Lever handles at all doors
 - b. ADA-compliant appliances (where produced)
 - c. ADA-compliant handles for all plumbing fixtures
 - d. Choice of comfort height or standard height toilet
 - e. Installation of grab bars or wall reinforcement.
2. Available by documented need at intake – ONLY APPLICABLE TO AREAS BEING REPAIRED
 - f. Modified kitchen cabinets
 - g. Modified height electrical outlets
 - h. Redesign existing space to accommodate special needs
 - i. Widened doorways
 - j. Roll-in showers – no modification of floor joists permitted.
 - k. Low threshold construction

⁴⁹ http://www.dec.ny.gov/docs/permits_ej_operations_pdf/gp213002intapp.pdf

- l. Ramp or lift (lifts only available when ramp not possible)(elevated homes only)
- m. Hearing impaired aids – Signal lights for doorbells & alarms
- n. Visual impairment aids – Tactile warnings & Edge Cuing for walking surfaces

3. REQUESTS FOR REASONABLE ACCOMMODATION (RARs) FOR ACCESSIBILITY

- a) The BIB program can perform handicapped and special needs accessibility related work in areas where the Program is not repairing storm damage subject to certain limitations. This work can only be performed if the applicant has submitted and the Program has approved a Reasonable Accommodation Request (RAR).
- b) Acceptable work includes alterations that are needed to make a home or an area of a home accessible to a homeowner. An example would be:
 - (1) Installing a ramp to the entrance of a home that is currently accessible only by stairs so that the homeowner or a member of the homeowner’s household can access the home. This can be done even if the stairs were not damaged.
- b) Process for *de minimus* non-storm damage accessibility scope items costing less than \$1,000.
 - a. An applicant must submit an RAR to the Program that requests accommodations.
 - b. The RAR must be approved by the Program.
 - c. The architect or designer may develop a scope of work that includes the installation of small items such as grab bars, toilet seats and other items that total less than \$1,000 without seeking approval of the expenditure from the Technical Review Committee.
- c) Process for non-storm damage accessibility scope items costing more than \$1,000
 - d. An applicant must submit an RAR to the Program that requests accommodations.
 - e. The RAR must be approved by the Program.
 - f. The architect or designer is to identify any major accessibility scope items that would not normally be eligible for funding because it involves work in a non-storm damaged area of the home.
 - g. A written request is to be prepared for the Technical Review Committee that includes:
 - 1. *A description of the proposed scope of work;*
 - 2. *A maximum estimated cost (including all multipliers, real or estimated); and*
 - 3. *A justification for the expenditure.*
 - h. The Technical Review Committee will then review the proposal and will either approve or disapprove the proposal.
 - i. Approved items may be included in the final scope of work.
- 4. Refer to Americans with Disabilities Act guidelines and recommendations published by the American National Standards Institute for universal design criteria as well as the [Fair Housing Act Design Manual](#).

XI PROGRAM STANDARDS FOR HOME ELEVATIONS

A. Requirement(s)

1. All homes in a Special Hazard Flood Area (SFHA) with a Substantial Damage or Substantial Improvement calculation over 50% must be elevated.
2. As of December 31, 2014, Appendix G of the NYC Building Code will be applicable as follows. Appendix G, in conjunction with the *New York City Construction Codes*, provides minimum requirements for development located, in whole or in part, in areas of special flood hazard and shaded X-Zones within the jurisdiction of New York City. These areas each have different requirements. All design professionals are responsible for complying with all applicable codes. The Build It Back program will immediately implement compliance with all requirements for each of the zones listed below.
 - a) **A-ZONE.** An area of special flood hazard without high velocity wave action. When not shown on the FIRMs, the water surface elevation may be determined from available data by the registered design professional of record in accordance with Section G103.3. See also "Area of special flood hazard."
 - b) **COASTAL A-ZONE:** An area within a special flood hazard area, shown on FEMA FIRMs 360497 as an area bounded by a "Limit of Moderate Wave Action," landward of a V-Zone or landward of an open coast without mapped V-Zones. In a Coastal A-Zone, the principal source of flooding must be astronomical tides, storm surges, seiches, or tsunamis, and not riverine flooding. During the base flood conditions, the potential for breaking wave heights must be greater than or equal to 1 foot, 6 inches (457 mm). In no case shall an area of special flood hazard be deemed a coastal A-Zone unless and until it has been identified as such on the adopted FEMA FIRMs 360497.
 - c) **SHADED X-ZONE.** The land in the floodplain delineated as subject to a 0.2-percent or greater chance of flooding, but less than one percent of flooding, in any given year. Such areas are designated on the Flood Insurance Rate Map (FIRM) as shaded X-Zones.
 - d) **V-ZONE.** An area of special flood hazard subject to high-velocity wave action.
3. Elevate to most restrictive FEMA Base Flood Elevation (BFE) plus freeboard.
4. All basements must be filled in. Architect/Engineer to detail methods of demolition and fill.
5. All elevations will be considered Partial Demolitions by the Dept of Buildings.

6. A number of Special Inspections are required by the Dept of Buildings for many steps and materials used in home elevations. Please see Building Bulletin 2013-13 for information.⁵⁰
7. Space under the elevated first floor is to be used for parking, storage or access only. Space will not be conditioned, except if required to protect access of utilities to homes.
8. Space under the elevated first floor must be wet-floodproofed.
9. Only flood-damage-resistant materials and finishes as outlined in [FEMA Flood Damage-Resistant Materials Requirements, TB2](#)⁵¹, shall be utilized below the Design Flood Elevation for substantially damaged homes. As of October 1, 2014 gypsum board or cement board using in an assembly in certain areas, including interior faces of exterior walls of basements, cellars, and other below grade rooms, must have a mold resistant rating of 10 in accordance with ASTM D3273. Please confirm requirements with applicable codes⁵². Other than those and any other applicable codes, flood damage resistant materials are not required in non-substantially damaged homes.
10. The NFIP requires that the fuel system for a new or substantially improved structure located in a Special Flood Hazard Area (SFHA) be designed so that floodwaters cannot infiltrate or accumulate within any component of the system. All utilities must be elevated above Design Flood Elevation (DFE). If relocation is not possible within a floor or attic of the home, elevated platforms or attachments for utilities may be used provided they meet all applicable codes and regulations.⁵³
11. Gas, Electric, Water meter locations must meet all requirements of the appropriate utility company.
12. Utilities to be suitably protected against freeze-thaw and exposure to damage
13. Sprinklers to be installed whenever required by NYC Fire or Building Code.
14. One frost free hose-bibb should be provided at the ground level.
15. NYC Building Code Chapter 33 – Safeguards During Construction or Demolition⁵⁴ must be followed in its entirety for all construction.

B. Program Policies

1. New foundations to be most cost effective method to meet NYC Building & Zoning code requirements – depends on site conditions. In the A zone, homeowners may elect to have a closed foundation. This option is not available in the Coastal A or V zones. Closed foundations will not have windows or doors or any conditioned space. A door opening will be provided and the required flood vents.

⁵⁰ http://www.nyc.gov/html/dob/downloads/bldgs_bulletins/bb_2013-013.pdf

⁵¹ http://www.fema.gov/media-library-data/20130726-1502-20490-4764/fema_tb_2_rev1.pdf

⁵² <http://www.nyc.gov/html/dob/downloads/pdf/ll13of2014.pdf>

⁵³ http://www.fema.gov/media-library-data/20130726-1514-20490-7165/p_348.pdf

⁵⁴ http://www.nyc.gov/html/dob/downloads/pdf/cc_chapter33.pdf

2. If on-site parking existed pre-storm, and parking cannot be recreated by the alternate methods permitted under the Zoning Text Amendment and the height required for the elevation permits parking or fits into the category permitting additional elevation to permit parking, parking will be created with necessary details provided on elevation drawings for curb cuts, gravel driveway, sidewalk repair/replacement.
3. When not required and height of elevation and foundation type permit opportunities for parking, design of elevation should accommodate future parking when possible at no additional cost. No garage doors will be installed on detached or semi-detached homes; no curb cuts or parking surfaces will be provided. For row houses (more than 3) with enclosed foundations, a standard, one car garage door may be provided for security purposes.
4. Oil Tanks must be anchored as per NYC & FEMA requirements.
5. The reuse of existing foundations may be encouraged if the engineers determine that the condition of the existing foundation is suitable.
6. Shallow foundations shall be completely removed.
7. For deep foundations, at the discretion of the engineer, the basement slab is to be removed and the existing walls to contain openings to allow for the equalization of hydrostatic pressure. The walls may remain.
8. Convert Oil to gas if possible in homes being elevated. Oil to gas will only be converted in non-substantially damaged homes if the equipment is being replaced and gas is already in the home to service other appliances or pieces of mechanical equipment.
9. Site to be seeded and graded to direct water away from home.
10. Laundry Facilities - Electrical outlets, gas connection (if previously existing), hot and cold water lines, drains and vents are to be provided on elevated floor for laundry facilities when possible. No washers or dryers will be replaced as part of this program.
11. Ineligible Items
 - a) No garage doors for detached or semi-detached homes. For row homes with more than 3 units, a standard one car garage door may be provided for security purposes where applicable.
 - b) No entry doors will be installed below elevated first floor unless required for primary access to home.
 - c) No conditioned space below elevated first floor (unless required for protection of utilities)
 - d) Rear decks or porches will not be elevated, unless legally required for egress. A single stairway and landing may replace a legal deck if code permits. Other doors of all kinds to such spaces will be replaced with windows or "Juliette type balconies" with a code compliant railing against the building.

12. [Zoning Text Amendment](#)⁵⁵

All requirements of the Zoning Text Amendment are in force for the Build It Back Program. A few relevant items are outlined below. Please see Article VI for complete requirements.

[Article VI: Special Regulations Applicable To Certain Areas Chapter 4 - Special Regulations Applying in Flood Hazard Areas](#)

- a) Mitigation Options – Order of preference depending on height of elevation
 - a. Stair Direction Change (1 credit)
 - b. Trees or shrubs at least three feet high (1 credit)
 - c. Open Porch (1 credit)
 - d. Roofed or Trellised Porch (2)
 - e. Raised Front Yard – Not offered by Build It Back Program
 - f. Additional landscaping options now offered

b) Lifts

For single- and two-family residences, lifts for persons with disabilities shall be permitted obstructions in any open space required on the zoning lot and in courts, yards and rear yard equivalents, provided that in front yards, such lifts are unenclosed.

c) Parking

- a. Alternative height measurement for single- and two-family residences
R1 R2 R3 R4 R5
- b. For Residential Buildings with Below-Grade Parking
R1 R2 R3 R4 R5
- c. For Elevated Buildings
R1 R2 R3 R4 R5

C. Discretionary or Optional Elevation (DG1 – 11.11.15)

The Build It Back Program may offer optional elevation to homeowners who meet certain criteria which both dictates that elevation would provide a more sustainable result in light of a review of existing conditions and where elevation is a feasible option. The program’s intention is not to move non-substantially damaged homes into reconstruction, or for the program to incur unreasonable expenses, therefore certain additional conditions must be met, which are detailed below. We have created the “Elevation and Reconstruction Pathway Change Worksheet” to request these changes. All requests must be documented with detailed descriptions and photographs where applicable. The option may be available where:

1. Substantial Damage or Preliminary or Final Substantial Improvement is between 40% and 50%.

⁵⁵ <http://www.nyc.gov/html/dcp/pdf/zone/art06c04.pdf>

2. A home will likely be Substantially Improved during construction. This would mean that the Final SI is close to 50% and there are known unknown or anticipated conditions.
3. The Preliminary SI is above 45% and lead or asbestos is present which has not yet been accounted for.
4. This form may be used for attached homes only for semi-detached homes where the home in question is in the program, through ETE, and attached to a program approved elevation.
5. A home has experienced significant and ongoing flooding since Hurricane Sandy or has a history of repetitive loss from previous storms.
6. The high water mark is above the first floor in homes with basements or cellars and demonstrates significant risk of danger to occupants (as stated in the Damage Assessment or Design Scoping documents).
7. Site or other conditions appear to justify elevation as the most reasonable alternative.

Certain conditions must be met or must not be present for a home to be eligible for discretionary elevation:

1. The minimum elevation required for the first floor must be equal to or greater than 3' (meaning the current first floor must be at least 3' below the required Design Flood Elevation). Therefore, the first home shown in the table (#1) does not qualify, while the second home (#2) would.

DISCRETIONARY /OPTIONAL ELEVATION ANALYSIS EXAMPLE	1	2
APP#	APP-001715	APP-009444
ZONE	AE	AE
BASE FLOOD ELEVATION DETERMINED BY FEMA (BFE)	10	12
FREEBOARD	<u>2</u>	<u>2</u>
DESIGN FLOOD ELEVATION (DFE) REQUIRED BY NYC BUILDING CODE	12	14
DEWBERRY OR SURVEY LOWEST ADJACENT GRADE (LAG)	6.62	6.59
DEWBERRY OR SURVEY BOTTOM OF FIRST FLOOR ABOVE GRADE (FFAG)	3.08	1.50
ADD FLOOR DEPTH TO DEWBERRY REPORT FOR TOP OF FIRST FLOOR	<u>0.75</u>	<u>0.75</u>
CURRENT TOTAL TO TOP OF FIRST FLOOR	10.45	8.84
FIRST FLOOR ELEVATION HEIGHT REQUIRED - IN FEET	1.55	5.16

2. It must be feasible to elevate a home. Should a home be determined to meet all preliminary criteria, an architect, engineer or BIB design professional will review the home before final program approval to determine that the home can physically and reasonably be elevated. Certain conditions may prohibit the optional elevation of a home. The home proposed **should not** include any of the conditions below:
 - a. Attached home (attached homes that are part of DDC CM groups will be assessed as part of the DDC CM program)
 - b. Home built on slab on grade, home whose first floor is masonry or a home that is completely built of masonry

- c. Home with a basement or slab on grade apartment included in their Certificate of Occupancy
 - d. Home whose construction type, footprint, or condition makes elevation not feasible.
 - e. Home that is already at the FEMA/NYC required elevation
 - f. Home is not on a mapped street or extends into street widening line
 - g. Home has major open permits or violations
 - h. Previously refused elevation when offered a choice
3. Homes will be elevated to comply with program policies and NYC Building Code requirements and limitations. Certain homes using waivers granted by NYC to repair or rebuild storm damaged homes may only be elevated to the Design Flood Elevation, not higher. The actual site conditions will determine elevation limitations, if any.
4. For applicants meeting the preliminary criteria above, an “Elevation and Reconstruction Worksheet” should be submitted for further review by the program.

D. Over Elevation (DG2 - 6.30.16)

Conditions:

Section 64-334 of Article VI, Chapter 4 – Special Regulations Applying in Flood Hazard Areas permits elevation to a reference plane of a maximum of 9 feet above curb only for homes meeting the following conditions and utilizing those waivers:

- 1. in Zoning Districts R1 through R5
- 2. for detached one and two family homes
- 3. Where the required Flood Resistant Construction Elevation (FRCE) or Design Flood Elevation (DFE) is between 6 and 9 feet above the curb level.

Elevation Policy:

The BIB program will elevate homes to allow 8 feet of clear headroom where feasible in light of the above and any additional considerations. The program will not create driveways or curb cuts where none existed before the storm.

The same provisions limit homes requiring elevation of less than 6’ from top of curb to DFE to a maximum elevation in which the bottom of the lowest horizontal member is at the Flood Resistant Construction Elevation (FRCE) or Design Flood Elevation (DFE). Homes meeting this criterion will only be elevated to the permissible height.

Foundations of elevated homes may be open or closed as per previous guidance.

Elevation By Abandonment:

In homes where we are abandoning the first floor and there is no physical elevation or lift required, the home will not be eligible for additional or over elevation. The program will not lift homes where the DFE is already below the existing first floor, unless the foundation needs to be replaced and there is no alternative. In cases where the DFE is below the first floor above grade and only the floor system is below the DFE and the existing foundation is to remain, flood damage resistant materials may be sistered to existing floor systems to comply with DOB requirements.

Rebuild/Reconstruction Policy:

Where feasible and desirable to create neighborhood consistency, all new homes not being elevated to provide 8' of clear headroom beneath the structure may be elevated to allow a maximum 8 feet of clear headroom where code and zoning permit. The BIB program will provide curb cuts and driveways where foundation plans and access stairs permit.

Foundations of rebuild homes will be open or lattice only, except in limited cases, such as attached homes, where site or structural conditions make an open foundation infeasible, inefficient or create an undesirable result. An enclosed 10' x 10' (maximum) wet-flood proofed storage area may be provided where code permits. Coastal A and V zones require open lattice breakaway walls only.

In neighborhoods undergoing street raisings, the ability to over elevate should be determined from the current top of existing curb (or as otherwise defined by zoning if no curb is present) to the DFE. If over elevation is permitted as a result of that analysis or any other zoning analysis for rebuilds, the home may be elevated or rebuilt to permit the maximum of 9', so that there will be as much remaining height as possible after the street elevation. The program is not raising the grade under each home to the new street grade; however, homeowners may take whatever action they deem advisable once BIB has completed its work. (Zoning Code links provided below for complete information)

<http://www1.nyc.gov/assets/planning/download/pdf/zoning/zoning-text/art06c04.pdf?r=032216>

64-334 (10/9/13)

Alternative height measurement for single- and two-family residences

R1 R2 R3 R4 R5

In the districts indicated, as an alternative to Section 64-131 (Measurement of height), for #single-# and #two-family residences# where #flood-resistant construction elevation# is between six and nine feet above #curb level#, #building# height may be measured from a reference plane nine feet above #curb level#, provided that at least two mitigating elements are provided from the list in Section 64-61 (Design Requirements for Single- and Two-Family Residences).

<http://www1.nyc.gov/assets/planning/download/pdf/zoning/zoning-text/art01c02.pdf?r=032216>

Flood-resistant construction elevation

The "flood-resistant construction elevation" is the greater of:

- (a) The "design flood elevation" (DFE) determined pursuant to Appendix G of the NYC Building Code for a building's structural occupancy; or
- (b) The base flood elevation indicated on the flood maps, plus the additional elevation required above base flood elevation for the applicable occupancy category when determining the Design Flood Elevation pursuant to Appendix G of the Building Code.

Base plane (3/22/16) (See Zoning Code Section 12-10 for complete definition)

The "base plane" is a plane from which the height of a #building or other structure# is measured as specified in certain Sections. For #buildings#, portions of #buildings# with #street walls# at least 15 feet in width, or #building segments# within 100 feet of a #street line#, the level of the #base plane# is any level between #curb level# and #street wall line#.

In the #flood zone#, either the #base flood elevation# may be the level of the #base plane# or #building# height may be measured from the #flood-resistant construction elevation#, as provided

in Article VI, Chapter 4.

Curb Level (10/25/93) *(See Zoning Code Section 12-10 for complete definition)*

For the purposes of determining a #base plane#, "curb level" is the mean level at that portion of the curb adjoining a #zoning lot# from which, when viewed directly from above, lines perpendicular to the curb may be drawn to a #street wall#. On #corner lots#, #curb level# is the average of the mean levels of such portions of the curbs on intersecting #streets#. On #through lots#, #curb level# is determined separately for each #street# frontage to a distance midway between such #streets#.

Street wall (12/15/61) *(See Zoning Code Section 12-10 for complete definition)*

A "street wall" is a wall or portion of a wall of a #building# facing a #street#.

E. Foundation Enclosure and Elevation Options (DG4 – 9.2.15)

1. Objective

- a) This document is intended to clarify the foundation and elevation options available to homeowners whose homes are being elevated or rebuilt under the Build It Back Program.
- b) The determination of the code requirements applicable to each home will be determined by the program architects or engineers, depending on the year the home was built, the location of the home in or out of the fire district, underlying zoning, the conditions of the street on which the home is located, the original height and number of stories and the elevated height and number of stories of the home and any additional requirements.
- c) All options below are dependent on the ability to meet compliance requirements of all applicable codes, rules & regulations as of right. No variances will be sought to permit the options below.

2. Elevation or Rebuild Pathway

- a) The option to enclose the foundations will be available to any homeowner in the Rebuild or Elevation pathway where FEMA zones, zoning restrictions and building code permit, at the option of the homeowner and discretion of the designer. Enclosure will be available for homes located in Zone A, but not available for homes in the Coastal A or V Zones, which are not currently, or will not be permitted under the 2014 NYC Building Code, to be enclosed, except with open lattice, breakaway walls.
- b) Wet floodproofed storage space with a concrete slab floor, maximum 10' x 10' may be provided for open or lattice enclosures only. A doorway, but no door, will be provided. No interior partitions will be provided for enclosed foundations. The cost for enclosure and sprinklers (if required) for homes in the Elevation or Rebuild program are to be included in cost funded through HUD CDBG-DR for enclosures up to the Flood Resistant Construction Elevation (FRCE) or program determined minimum elevation.
- c) Homeowners may choose solid or breakaway lattice enclosure or open foundation. Foundation enclosure must be selected prior to the start of home design.

3. The enclosed foundation option for the Elevation Pathway will meet the following criteria:
 - a) Floor will always be compacted gravel, no concrete slabs or paving of any kind, unless required by NYC Building Code.
 - b) No window openings will be added, flood vents only.
 - c) One door opening will be provided in an appropriate location. The size and location of the opening will be relative to the location of stairway and availability of access. Typical opening will be sized to accommodate a 3' door. When ceiling height is 7' clear or more, opening may accommodate size of 8' garage door (door not included), if access stairway location, site width and column spacing permit. Foundations will not be redesigned to accommodate parking under a building. The homeowner may provide an entry or garage door at a later date for either opening. Program will not provide or install any doors.
 - d) No curb cuts, sidewalks or driveways will be provided. Permitting and installation of such will be at owner's risk and expense after BIB program completion.
 - e) No electrical outlets or space conditioning of any kind will be provided.
 - f) No interior partitions will be built.
 - g) Foundations will not be redesigned. The program is designing the foundations to be as efficient and to provide as much open space as possible, however, there are likely to be at least one, if not multiple rows of columns.
 - h) Drawings must include notes stating that in compliance with federal, state and city regulations the space below the FRCE may only be used for parking, access and storage in perpetuity. Homeowners signing the PW1 acknowledge that they may be liable for violations and fines should they be create non-compliant spaces below the FRCE.

4. The enclosed foundation option for the Rebuild Pathway will meet the following criteria.
 - a) The Rebuild Pathway will comply with zoning requirements and provide parking underneath the building where required by zoning, where code and zoning accommodations permit sufficient elevation, and where there is insufficient space on the lot for parking elsewhere. The parking will be on a gravel pad, unless NYC Building Code or design best practices dictates an alternative solution, and the driveway will be compacted gravel.
 - b) Where parking is required, the Rebuild pathway will allow for the cost of additional elevation to accommodate parking underneath the building up to a clear headroom of 8'.

- c) Program will provide curb cut and gravel driveway if parking did not exist prior to the storm and is being provided.
- d) All criteria outlined above for elevations will apply, except that curb cuts and driveways will be provided for homes in the Rebuild program where zoning districts require parking as stated above.

Additional Notes:

- Foundation must be designed, constructed and adequately anchored to prevent flotation, collapse, and lateral movement resulting from hydrodynamic and hydrostatic loads, including the effect of buoyancy as per code and regulatory requirements.

5. Elevation Height Options

- a) Homeowners may request elevation above the Design Flood Elevation (or Flood Resistant Construction Elevation – same thing) to permit parking, access or storage below the home.
- b) If a home is not being elevated to provide 8’ clear headroom under the home, the home may be elevated to provide 8’ clear headroom in cases where zoning and building code permit. Please note that the ability to elevate a non-complying home may be limited by Article VI: Special Regulations Applicable to Certain Areas (Chapter 4 – Special Regulations Applying to Flood Hazard Areas). Not all homes will be able to be elevated above the Flood Resistant Construction Elevation.
- c) Any costs incurred by the additional elevation will be covered by the program.
- d) As outlined above, the program will not provide curb cuts or driveways for elevated homes where parking did not exist prior to the storm.

This option should only be offered to homeowner when the designer has informed themselves of the ability to comply with all applicable rules, codes and regulations.

F. Foundation Openings & Finishes Policies – Elevations & Reconstructions

1. Closed Foundations:

- a. One opening only, either a standard door sized or single car garage door sized

Exception:

- a. Homes where the program is unable to provide a back stair and there is no other access to a rear yard from any level of the building may have a second opening to the rear yard.

- b. No doors are provided:

Exceptions:

- a. Crawl spaces 5’ and under should have an access door. The intention is to provide safety from the infestation of animals to tight enclosed spaces.
- b. In Row Homes of more than two attached buildings where a second opening to the rear is provided as outlined in the exception above, a

security risk may be created by allowing access to an inner yard, a front garage door may be provided. Door should be an uninsulated steel door meeting any flood zone requirements, unless the installation of a fire-rated door results in significant cost savings due to a reduced rating requirement for garage ceiling.

2. All Foundations:
 - a. No painting or stuccoing concrete or CMU foundation walls, piers or columns.
 - b. Gravel floors unless code requires otherwise

XII PROGRAM STANDARDS FOR RECONSTRUCTIONS

A. Program Standards for Reconstructions (DG3 - V4 - 11.30.16)

1. ELIGIBLE UNIT COUNT

Dewberry has indicated that the number of units from the Feasibility Report indicates the number of separate living units identified by the damage assessor when the property was inspected. The number does not necessarily indicate living units in compliance with the NYC Building Code or property records. For reconstructions, the eligible number of units to be rebuilt will be aligned with the field observed number of units provided that the number of units is not in contradiction to Certificate of Occupancy or zoning requirements and no violations exist for the creation of illegal units. None of the undocumented units may be in a basement or cellar, and whatever is classified as a unit must meet the requirements of the NYC Housing Maintenance Code. Units in a basement or cellar must be documented by a Certificate of Occupancy indicating that the unit exists and that its location is in a basement or cellar.

a) Conditions and Restrictions:

1. Must be permissible by zoning district.
2. 4 unit maximum reconstruction.
3. No violations on the DOB website that indicate an attempt to create units beyond the DOB records.
4. Submitted applications (approved or not) on the DOB website that indicate the creation of additional units will be taken as an indication of a change to a currently permitted number of units. The currently permitted number will be the eligible number for reconstruction.
5. Open permits for the creation of additional units will not be honored if not completed.
6. Units in basements or cellars without a Certificate of Occupancy (CofO) or a CofO from an identical dwelling unit if attached or on the same block or, will not be replaced.
7. No additional units will be created which require BSA approval.
8. Homes with Certificates of Occupancy that have created "rearranged" living areas will be rebuilt to match the Certificate of Occupancy, and eligible square footage will be as per the CofO.
9. Sites with multiple units where all units cannot be recreated due to number or zoning restrictions, should use the eligible square footage from the Feasibility Report divided by the number of units to be built, subject to the limitations below.

2. ELIGIBLE SQUARE FOOTAGE

Dewberry Feasibility Eligible Square Footage or field documented, legally habitable, existing above grade square footage **up to a maximum of 2,000sf for a single family, one unit dwelling unit.** The

Build It Back program will limit the square footage of all rebuilds to a maximum of 2,000sf for a one unit home and a maximum of 1,200sf per unit for homes with more than one unit. This limit may be reduced by other factors including limitations imposed by the BIB program or City, State or Federal regulation including zoning, cost caps, environmental or other.

The portion of a basement meeting habitable space requirements as documented on a Certificate of Occupancy through indication as usable living space or by meeting the requirements of Subchapter 3 Physical and Occupancy Standards for Dwelling Units of the NYC Housing Maintenance Code⁵⁶ may be incorporated into the home. Space illegally converted from garages, storage or mechanical to habitable space is not eligible for replacement.

3. REBUILD HOME SIZE ALLOWANCE

1. Most applicable prototype (only if prototypes have been developed and are being used) for sf & unit count <200 greater than original when using developed prototypes.
2. Recreate eligible square footage of existing home within 100sf except for condition below or limitation above.
3. Minimum home size - if <760sf will be 2 bedroom (860sf) 1-1/2 bath **where feasible**. Homes above 760sf should be rebuilt to within 100sf of their pre-storm eligible square footage.

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4. SCOPE REDUCTION

Reduce home size - smaller prototype

5. RECONSTRUCTION DESIGN GUIDELINES – SEE MPS FOR ADDITIONAL REQUIREMENTS & GUIDANCE

EXTERIOR:

1. Homes should be as close to a rectangle as possible.
2. No jogs less than 6'. (All deviations from a rectangle must be justified by design need in all cases and approved by the DDC Design Project Managers prior to submission to DOB). Do not add pointless, expensive construction details including jogs, trim, roofs, etc.
3. Siding in one direction, not multiple directions or multiple types of siding.
4. One light under the home on the ceiling with a switch above the DFE.

ROOF:

1. Roofs should slope in 1 or 2 directions only unless the zoning envelop requires otherwise. Any deviation must be approved by DDC prior to submission to DOB.
2. No decorative roof sections or excessive trim should be added.
3. No additional height should be added to roofs at homeowner's requests.

WINDOWS:

1. Standard program window is a vinyl double hung window. Different window sizes should not be mixed in a room for "effect".
2. Egress windows are required in bedrooms in all cases where there is no sprinkler system or where the sprinkler system is NFPA 13D. No egress size windows should be added unless required by code. In order to meet opening requirements (30" clear height through normal operation), it is recommended that required egress windows be of the casement type. See Chapter 10 – MEANS OF EGRESS Section BC 1029 of the NYC Building Code.
3. No picture windows, no bows, no bay windows, casements should be avoided unless required for

⁵⁶ <https://www1.nyc.gov/assets/buildings/pdf/HousingMaintenanceCode.pdf>

egress openings. It is recommended for design purposes that egress casements be placed on side walls where possible. Use of additional casements MUST be approved by the DDC Design Project Managers in writing prior to submission to the Department of Buildings (DOB).

4. The program does not install transoms or sidelights.
5. Reconstruction designs should not include 3 sided spaces intended to replicate a bay or bow window.
6. The program does not add skylights.
7. Windows far in excess of code requirements for light and ventilation will be removed from the scope.
8. One sliding door limited to 5' may be provided in place of a rear door and window combination. No additional deck or landing will be built. 4' landing depth maximum.

KITCHENS:

1. No corner sinks
2. Sinks should be along window walls with a window when possible.
3. Dishwasher should be located to the right or left of the sink along the same wall.
4. The pantry will be a pantry cabinet, not a built closet.
5. No breakfast bars, no islands.
6. Kitchens should be designed primarily to be an "L" or a "galley" kitchen, not a "U".
7. Should additional countertop surface or storage cabinets be required to meet minimum livability, a "U" kitchen may be created with a high or low wall at the side. The wall should extend no more than 4" above the countertop and will be finished sheetrock only. This will allow homeowners to create "breakfast bars" once BIB has completed its work. No sinks or ranges should be placed on the peninsula. Depth limited to standard cabinet depth.

BEDROOMS & OTHER ROOMS:

1. All bedrooms should have a wall for a bed and a dresser, NOT in front of a window.
2. Rooms should be designed so that furniture, dressers, sofas, TVs, etc. can be placed along walls without interference from windows.
3. Laundry rooms/closets should NOT show washers and dryers. The program does not provide them and they should not be shown on the plans. Label closet only.

STAIRWAYS:

1. A front and a rear stairway may be provided for a reconstructed home.
2. No third stair will be provided except in the case of a two (or more) family stacked home. Mechanical rooms and meter locations must be accessible from one of those stairs.
3. No second means of egress will be provided from a 2nd or 3rd dwelling unit, unless required by code.

CASE STUDY: EXAMPLES OF UNACCEPTABLE WORK:

ILLUSTRATION 1:

ROOFS WITH MULTIPLE UNNECESSARY SLOPES

EXPENSIVE, USELESS JOGS

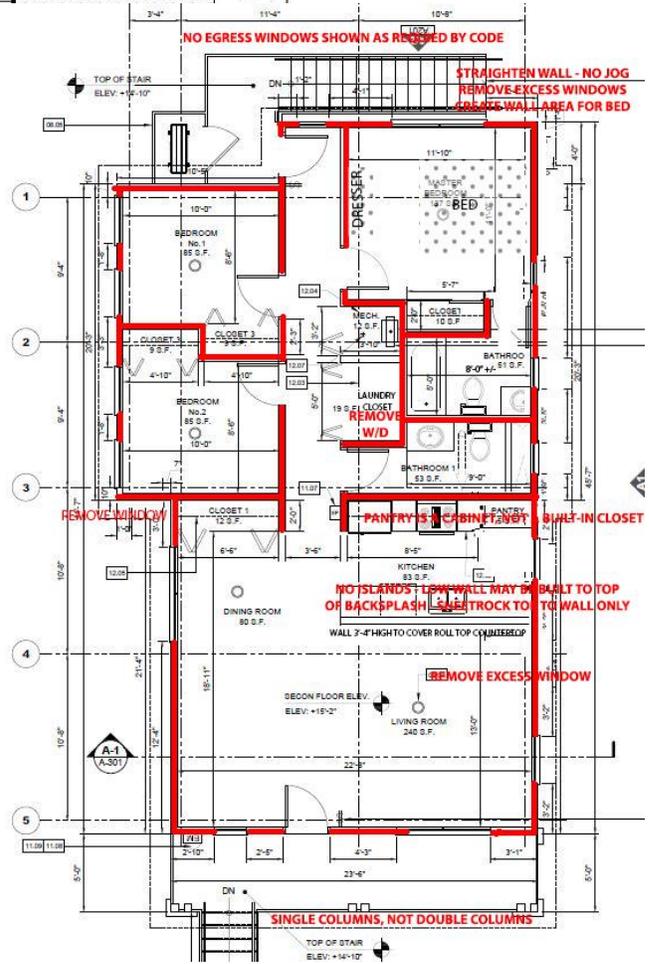
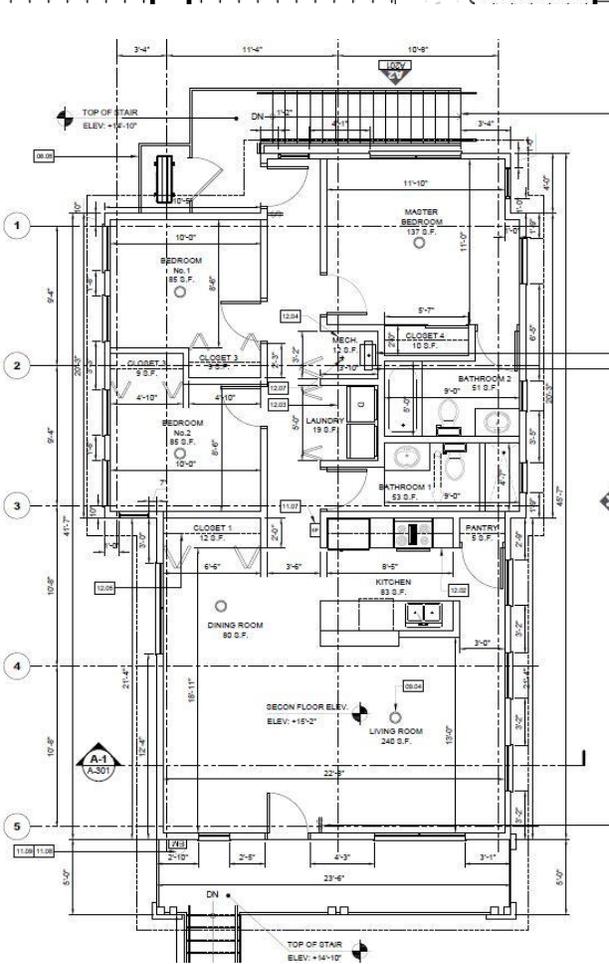
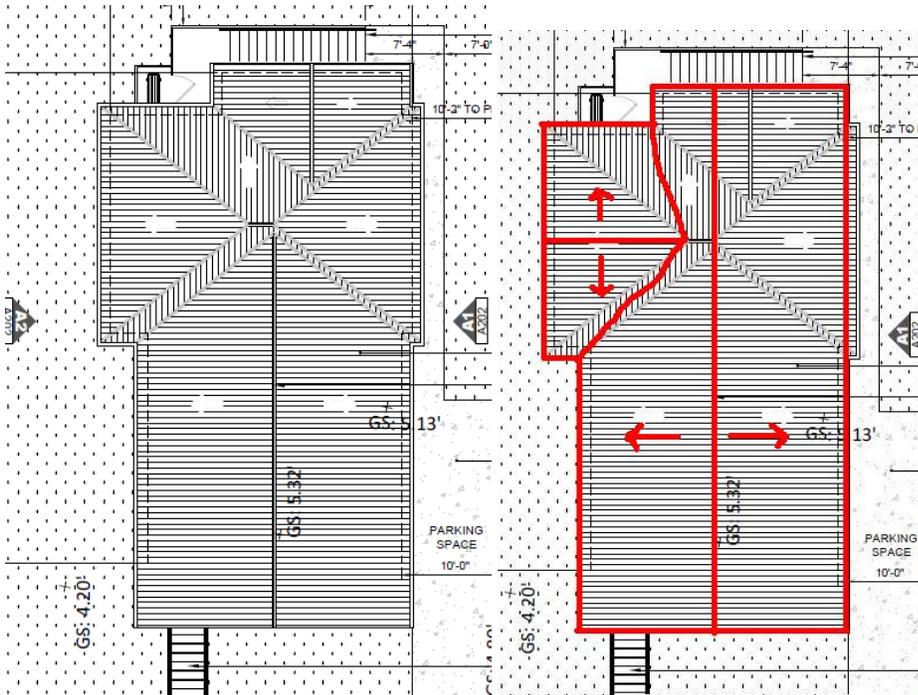
ILLUSTRATION 2:

EATING BARS

EXCESSIVE WINDOWS

PANTRIES BUILT AS CLOSETS, NOT CABINETS.

FOUNDATION (NOT SHOWN) – 5 LIGHTS – ONE PERMITTED



WASHERS & DRYERS

Hook up for W/D provided w/ vent, gas (if applicable) & drain. No appliances provided.

6. ELEVATION HEIGHT

Elevate to provide parking or storage where zoning and site/design conditions allow - elevation to provide maximum 8' clear headroom if required DFE would be lower. Where parking is feasible under building, given foundation columns and access stair locations, provide gravel driveway and curb cut. In areas where the streets are being raised, over elevation may be to the maximum permitted by code. Dedicated parking pad to meet requirements of the NYC Department of Buildings.

7. GREEN BUILDING REQUIREMENTS

Energy Star Homes – All homes to meet specifications allowing them to be Energy Star certified if requested - homes not required to be individually certified unless requested.

8. MULTIPLE BUILDINGS ON SITE

Rebuild number of units up to 4 that existed prior to storm as determined by Feasibility, provided that the number of units does not contradict a Certificate of Occupancy, no violations for number of units, and where zoning permits (no BSA). Maximum 4 units may be elevated or rebuilt. All units to be constructed in a single new building.

9. EXCLUSIONS FROM REBUILD SCOPE

No decks, fences, patios, pools, site paving except for 3' walkway from front and rear/side stair to nearest street or sidewalk, no non-residential structures, no landscaping beyond code, no bulkheads, seawalls or piers. No shutters.

Small front porches, covered or open, may be designed as part of mitigation requirements or as necessary for access to utilities.

10. REBUILD FUNDING CAP

As determined by funding agencies.

11. REASONABLE ACCOMMODATIONS

Must submit RAR (Reasonable Accommodation Request) & be approved by HRO prior to the start of construction.

12. COST REASONABLENESS REVIEW

HPD Building & Land Develop Services (BLDS) establishes base recon budget-size, units, stories based on 2014 RS MEANS construction cost data - DDC consultants will use Xactimate, RS Means to Design Standards below, utilize bid results or any other method dictated by DDC.

13. COST REASONABLENESS BUDGET ALLOWANCE

Wood frame construction with fiber-cement siding. (Hardie plank or equal)
Continuous reinforced concrete footings or piles as is determined to be most beneficial system.
Helical Piles if required
Concrete slab on grade where required
Gravel floors
30 year warranty asphalt shingles

Painted gypsum board interior walls
Laminate - simulated wood flooring (such as Pergo) - FloorScore certified - 15/32" thick
Allowance for economy grade kitchen w/ plastic laminate countertops
Appliances including refrigerator, range w/oven, dishwasher, range hood vented to the exterior.
At least one bath - more for larger homes - tile on floor only
Forced hot air w/ central air conditioning - where feasible (Central air may only be provided with forced hot air system). Only one heating/cooling system will be provided per building.
Stairs at main entrance and one additional in a location to be decided by designers if feasible. Material as dictated by building code, wood is preferred.
Basic landscaping (topsoil with grass) with additional requirements as dictated by NYC building code.
Sprinklers where required by code
Generator hook-up and transfer switch
Backflow prevention on sanitary discharge system where required
Septic pool or septic tank where required
Storm water containment system or waiver as required per DEP/DOB

14. HOME DESIGN STANDARDS AND GUIDELINES

KITCHEN

Appliance choice of color – black or white
25" X 22" top mount sink with 8" bowl
Allow double sink where space permits
30" gas or electric range with single self-cleaning oven
Dishwasher
Frost-free refrigerator – ice maker ready, no hookup for ice dispenser 18 cu ft max
Post formed plastic laminate countertop with backsplash
See current HRO requirements & color choices for cabinets
One full height pantry where space allows - no roll out drawers
Ceramic tile floor

BATHROOM FIXTURES

Bathtub 30" x 60", integral apron, 3 piece tub surround. Standard is 4 piece Kohler Sterling Accord or equal
Two towel bars & two robe hooks
Shower curtain rod – no glass doors will be provided.
Toilet paper holder
Medicine cabinet with mirror door – recessed where possible
Vanity cabinet with molded top & sink or pedestal sink
Ceramic tile floor
Wood blocking behind walls for future grab bars
Switched light fixture in ceiling or above vanity (add exhaust fan if no window in bathroom or where required)

LIVING, DINING ROOMS & BEDROOMS

Overhead light in every room
Choice of light or ceiling fan in LR & BR, pendant type light in DR (see current HRO program offerings)

BATHROOMS

- a. Every floor with a legal bedroom should have one full bath (tub or shower).
- b. The program will supply one full bathroom for a two bedroom home plus a powder room (powder room permissible in a 2 story home with no bedrooms on the lower level (no tub or shower)).

- c. Two bathrooms may be provided for a 3 bedroom or larger home plus a powder room (powder room permissible in a 2 story home with no bedrooms on the lower level (no tub or shower)).
- d. Maximum of 3 full bathrooms per home
- e. Absolutely no bathrooms or powder rooms of any kind will be provided below the DFE.
- **Exceptions:**
 - a. For homes with bedrooms on multiple floors, a full bath may take the place of a powder room.

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BEDROOMS

At least one closet

FLOORS

Laminate - simulated wood flooring (such as Pergo) - FloorScore certified - 15/32" thick

Ceramic Tile - kitchens, baths, laundry & mechanical

Carpeting over plywood only – no carpeting over finished floor

LAUNDRY AREA

Hookup for washer & gas dryer (if gas available) & vent to exterior

Floor drain

Ceramic tile floor

Shelf for cleaning supplies where feasible.

PORCHES

Roof, canopy or other architecturally compatible weather-protection element may cover front porches.

No rear or side decks or patios. Landing and stair for all side/rear exits, maximum 6' x 6' landing.

EGRESS

All elevated homes shall have two means of egress where feasible (only one required)

Front stair to appropriate porch or landing depending on site/neighborhood

Homes with multiple dwelling units will only have one means of egress beyond the first unit.

INTERIOR WALLS

Code compliant sheetrock at all interior walls in bathrooms

EXTERIOR WALLS

Exterior walls - fiber-cement siding (preferred siding), vinyl siding, or to match attached homes

INSULATION

Roof, exterior walls and underside of home shall meet required R values of Energy Star certified home or 2011 NYCECC, whichever is more restrictive.

ROOFING

Recommended roof slopes 4/12 to 6/12. Roof to meet best practices for site conditions (attached, semi-attached, detached)

WINDOWS

Energy-star rated double glazed, geographically appropriate windows. Windows & doors must meet energy requirements of NYC energy code and Energy Star.

15. GROUND FLOOR SPACE ENCLOSURE

Ground floor space on detached homes shall be open or enclosed by lattice. No permanent enclosure of ground floor space except for wet- floodproofed storage space, maximum 10' x 10' where code permits. Coastal A and V Zones must have open lattice breakaway walls below the DFE. Semi-attached homes shall comply with above when feasible Attached homes - depends on site conditions

16. STORAGE SPACE

Maximum 100sf, wet-flood proofed or as limited by code.

17. GROUND TREATMENT

Standard gravel under homes and enclosed storage space
Topsoil & grass unless additional required for mitigation, wetlands or EGC

18. PARKING

If onsite parking and curb cut existed on site prior to storm
If onsite parking and curb did not exist on site prior to storm, but parking is required by the zoning district. Program will provide curb cut and gravel driveway and parking pad as required by the NYC DOB.

19. PLUMBING – SUBJECT TO FREEZING

Provide Self Regulating electric heat trace and pipe insulation on combined water service and all plumbing traps located within unconditioned spaces subject to freezing.

Provide one freeze proof hose bibb. Bibbs and associated piping located below structure subject to freezing must be provided with Self Regulating electric heat trace and pipe insulation.

20. MECHANICAL

Due to lack of utility services in certain areas several scenarios are acceptable. Designer/engineer to determine best available system meeting requirements of Energy Star and NYC code.

Gas-fired forced hot air with split system DX cooling coil complete with supply and return ductwork. Gas-fired wall mounted tank-less or floor mounted direct-fired tank-type domestic hot water heater.

Gas-fired wall mounted tank-less heater or floor mounted boiler zoned for both space heating via baseboard and domestic hot water production.

Electric forced hot air with split system DX cooling coil complete with supply and return ductwork. Electric wall mounted tank-less or floor mounted direct-fired domestic hot water heater.

Gas direct-fired floor mounted tank-type domestic water heater zoned for both space heating via baseboard and domestic hot water production.

Ductless split heat pump system capable of heating and cooling is acceptable

NOTE: Only one heating/cooling system may be installed per home. Central air conditioning **will only be provided with a hot air/ducted system.** Central air conditioning may be provided to any rebuild home, regardless of whether it existed in the home prior to the storm.

21. ELECTRICAL

Provide switch controlled ceiling mounted lighting fixtures or ceiling fans. (Ceiling fan option for bedrooms &

living room)

Provide 3-way switched wiring at top and bottom of interior stairs, and at locations as required

All hallways shall be provided with ceiling fixture(s) with 3-way switches.

All exterior light fixtures shall be switch controlled.

Provide Self Regulating heat trace on all piping subject to freezing.

Provide cable wiring to living room and bedrooms.

Where the project proposes installation of a generator hook-up to provide emergency power, provide manual indoor 6-circuit generator transfer switch with remote power inlet box, remote inlet box to be located below structure.

Provide door bells at front entry door

Provide exterior GFI receptacles at front and rear of structure

22. FIRE SUPPRESSION SYSTEMS

When sprinklers are required, all piping must be concealed and protected from freezing. Concealed or sidewall heads must be used within living spaces, exposed heads are acceptable for utility and storage areas. Provide for coordination with architectural drawings regarding chases and soffits.

23. REASONABLE ACCOMMODATIONS REQUEST

When a wheelchair lift is requested as part of a Reasonable Accommodation Request, all access from an approved parking space (if provided), sidewalk, and/or any paved walk, to and over the threshold of the main entrance, including the main entrance door, shall comply with the accessibility requirements outlined in FHA, ICC/ANSI, and NYC Building Code where feasible. Provide paved walk to all lifts from sidewalk.

When an approved wheelchair lift is included in the design, all interior spaces shall be compliant with the adaptability/accessibility requirements outlined in FHA, ICC/ANSI, and NYC Building Code if requested by the Applicant where feasible or required by applicable code or regulation.

24. RESILIENCY FEATURES

Emergency Generator Hookup and Transfer Switches

B. Discretionary Reconstruction (DG5 – 9.11.15)

The Build It Back Program may offer discretionary reconstruction to homeowners where a review of existing conditions dictates that reconstruction would provide the most viable long term solution or where reconstruction is the only feasible alternative. We have created the “Elevation and Reconstruction Pathway Change Worksheet” to request these changes. All requests must be documented with detailed descriptions, photographs, and/or sealed engineering reports where applicable. In the cases of structural instability or excessive cost, a design professional must provide thorough documentation. The worksheet must be submitted to the program for review and approval by a program design professional or committee. The option may be available where:

1. A home is unsafe and cannot be inspected.
2. Where a home exhibits such severe deterioration of structural components that a lift is not feasible.

3. Where the type of structure makes a lift infeasible. (Examples: some masonry single family homes, attached homes or homes with multiple additions with inadequate structural support)
4. Where elevation may pose a risk to neighboring homes.
5. Where the age or condition does not justify repair (cost is likely to exceed cost of reconstruction).
6. Where the structure has been uninhabitable or abandoned since the storm, or is a deteriorated shell only.
7. Where the cost to elevate exceeds the cost to reconstruct (as determined by a design professional who is part of the BIB program). This includes costs accrued when a home will need an addition to replace a CofO documented basement or first floor independent dwelling unit or to replace a legal story which is not a basement or cellar, which cannot be elevated.
8. Where there is a high risk of significant additional costs due to unknown conditions.
9. Where the site or other conditions justify the construction. (Examples: Homes which may be impacted by work being performed by other NYC agencies and cannot be relocated on their lots or homes located over water that can be rebuilt onto other areas of the property.)

XIII MULTIFAMILY 3 - 4 UNIT HOMES

A. Best Practice for Multifamily Homes:

1. Because of the complexity of the laws governing housing standards, and their variability according to building type, it is essential to refer to the actual laws, local and state housing codes, and such other codes as building and sanitary codes in order to ascertain which standards apply to a given building. In addition, relevant information can be found in state and local regulations.

B. Definitions from New York State Multiple Dwelling Law as [revised 2010](#)

1. A "multiple dwelling" is a dwelling which is either rented, leased, let or hired out, to be occupied, or is occupied as the residence or home of three or more families living independently of each other.
2. A "class A" multiple dwelling is a multiple dwelling which is occupied for permanent residence purposes. This class shall include tenements, flat houses, maisonette apartments, apartment houses, apartment hotels, bachelor apartments, studio apartments, duplex apartments, kitchenette apartments, garden-type maisonette dwelling projects, and all other multiple dwellings except class B multiple dwellings.

C. From the [Metropolitan Council on Housing – The Laws Governing Housing Standards in New York City](#)⁵⁷:

1. The [Multiple Dwelling Law](#), the [Multiple Residence Law](#), and the [New York City Housing Maintenance Code](#) delineate minimum standards for light and air, fire protection and safety, and sanitation and health in various classes of dwellings, including Class "A" and Class "B" multiple dwellings. The [Multiple Dwelling Law](#) applies to cities with a population of 325,000 or more (i.e., New York City), while the [Multiple Residence Law](#) applies to cities with less than 325,000 and to all towns and villages. Note that municipalities may by local law adopt housing standards that are as strict as the Multiple Dwelling Law or stricter.
 - a) A "Class 'A'" multiple dwelling is a multiple dwelling which is generally occupied for permanent residence purposes. Class "A" multiple dwellings include apartment buildings and "apartment hotels," and most other types of apartments. [Multiple Dwelling Law § 4 \(8\) \(a\)](#).
 - b) A "Class 'B'" multiple dwelling is a multiple dwelling which is generally occupied transiently, as the temporary abode of individuals or families who are lodged with or without meals. Class "B" multiple dwellings include hotels, rooming houses, club houses, college and school dormitories, and dwellings designed as private dwellings but occupied by one or two families with five or more transient boarders, roomers, or lodgers in one household. [Multiple Dwelling Law § 4 \(9\)](#).
2. In addition to setting the minimum standards for Class "A" and Class "B" dwellings, the [Multiple Dwelling Law](#), the [Multiple Residence Law](#), and the [Housing Maintenance Code](#) set forth the owner's and the tenant's responsibilities concerning compliance, registration requirements for owners, and enforcement mechanisms that range from the imposition of civil penalties for the failure to correct violations to the destruction of buildings constituting nuisances.

D. More Information

1. [PW-1: Multiple Dwelling Classifications](#)⁵⁸

XIV DEFINITIONS

A. Definitions - Resources

1. **Reference:** [New York City Administrative Code Title 27 – Chapter 2 – Housing Maintenance Code](#)⁵⁹

⁵⁷ [http://metcouncilonhousing.org/help and answers/new york city and state housing standards](http://metcouncilonhousing.org/help_and_answers/new_york_city_and_state_housing_standards)

⁵⁸ http://www.nyc.gov/html/dob/downloads/pdf/pw1_code.pdf

2. [Reference: New York City AC – Title 27 – Chapter 1 - Construction and Maintenance § 27-232: Definitions](#)⁶⁰
3. Reference: [NYC Dept of Buildings – Appendix G – Flood Resistant Construction](#)⁶¹
4. Reference: [Zoning Text Amendment – Chapter 4 – Special Regulations Applying in Flood Hazard Areas](#)⁶²
5. [HUD Green Retrofit Checklist](#).
6. [Reference: Chapter 12: Interior Environment of the NYC AC § 28-701.2](#).⁶³
7. [Reference: National Flood Insurance Program Definitions](#)⁶⁴

XV REFERENCES

A. FEMA

1. [FEMA Retrofitting References](#)⁶⁵
2. [FEMA Technical Bulletin 2 – Flood Damage-Resistant Materials Requirements](#)⁶⁶
3. P-259 Engineering Principles and Practices of Retrofitting Floodprone Residential Structures, Third Edition
4. P-312 Homeowner's Guide to Retrofitting - Six Ways to Protect Your Home From Flooding
5. P-347 Above the Flood: Elevating Your Floodprone House
6. P-348 Protecting Utilities From Flood Damage
7. P-499 Home Builder's Guide to Coastal Construction
8. P-55 Coastal Construction Manual: Principles and Practices of Planning, Siting, Designing, Constructing, and Maintaining Residential Buildings in Coastal Areas (4th ed.)
9. P-550 Recommended Residential Construction for Coastal Areas: Building on Strong and Safe Foundations
10. P-804 Wind Retrofit Guide for Residential Buildings
11. [Hurricane Sandy Recovery Advisories - FEMA](#)⁶⁷

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<http://public.leginfo.state.ny.us/LAWSSEAF.cgi?QUERYTYPE=LAWS+&QUERYDATA=@PLADCOT27C2+&LIST=LAW+&BROWSER=BROWSER+&TOKEN=05661412+&TARGET=VIEW>

⁶⁰ http://www.nyc.gov/html/dob/downloads/bldgs_code/bc27s2.pdf

⁶¹ http://www.nyc.gov/html/dob/downloads/pdf/cc_appendix_g.pdf

⁶² <http://www.nyc.gov/html/dcp/pdf/zone/art06c04.pdf>

⁶³ http://www.nyc.gov/html/dob/downloads/pdf/cc_chapter12.pdf

⁶⁴ <http://www.fema.gov/national-flood-insurance-program/definitions>

⁶⁵ <http://usasearch.fema.gov/search?query=residential+retrofitting&op=Search&affiliate=fema>

⁶⁶ http://www.fema.gov/media-library-data/20130726-1502-20490-4764/fema_tb_2_rev1.pdf

12. [Hurricane Ike Recovery Advisories - FEMA](#)⁶⁸

B. NYC Department of Building

1. [NYC Building Code Appendix G – Flood-Resistant Construction](#)⁶⁹
2. [After Hurricane Sandy: Construction in Flood Zones and Procedures for Rebuilding](#)⁷⁰
3. [Rebuilding NYC After Hurricane Sandy](#)⁷¹
4. [Buildings Bulletin 2013-13 – To Clarify Special Inspection Requirements related to raising, lifting, elevating or moving buildings](#)⁷²
5. [Residential Energy Efficiency](#)⁷³
6. [Buildings Bulletin 2013-001 Habitable Space Multifamily Dwellings](#)

C. NYC Planning Department

1. [Zoning Text Amendment](#)⁷⁴

D. HUD - Housing and Urban Development

1. [Disaster Recovery Homeowner Rehabilitation Program Design and Implementation Toolkit – Tool 2: Housing Program Guidelines](#) – Referenced in HUD Notice of 3/15/13⁷⁵
2. [Sample Single-Family Housing Rehabilitation Standard \(HUD Referenced in Notice of 2/19/13\)](#)⁷⁶

E. Lead

1. [Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing \(2012 Edition\)](#)⁷⁷
2. [EPA Lead Homepage](#)⁷⁸

F. US Department of Energy

⁶⁷ <http://www.fema.gov/media-library/assets/documents/30966>

⁶⁸ http://www.fema.gov/media-library-data/20130726-1644-20490-3272/hurricane_ike_ras_09rev.pdf

⁶⁹ http://www.nyc.gov/html/dob/downloads/pdf/cc_appendix_g.pdf

⁷⁰ http://www.nyc.gov/html/dob/downloads/pdf/after_hurricane_sandy_AIA_presentation.pdf

⁷¹ http://www.nyc.gov/html/dob/downloads/pdf/rebuilding_after_hurricane_sandy.pdf

⁷² http://www.nyc.gov/html/dob/downloads/bldgs_bulletins/bb_2013-013.pdf

⁷³ http://www.nyc.gov/html/dob/downloads/pdf/2.1.12-Residential_Module.pdf

⁷⁴ http://www.nyc.gov/html/dcp/pdf/flood_resiliency/final_text.pdf

⁷⁵

[https://www.onecpd.info/resources/documents/Disaster Recovery Homeowner Rehab Housing Program Guidelines.docx](https://www.onecpd.info/resources/documents/Disaster_Recovery_Homeowner_Rehab_Housing_Program_Guidelines.docx)

⁷⁶ <https://www.onecpd.info/resources/documents/SingleFamilyHousingRehabilitationStandard.doc>

⁷⁷ http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/lbp/hudguidelines

⁷⁸ <http://www2.epa.gov/lead>

1. [Wall Air Sealing and Insulation Methods in Existing Homes](#)

G. New York City Fire Department

1. [New York City Fire Code 2014](#)⁷⁹

[New York City Fire Code 2008](#)⁸⁰

⁷⁹ http://www.nyc.gov/html/fdny/html/firecode/table_of_contents_2014.shtml

⁸⁰

http://www.nyc.gov/html/fdny/pdf/firecode/2009/fire_code_1126_2008_amended_1137_41_64_2009_final_complete.pdf