

VALUES

The goal is to improve the existing housing stock in Philadelphia by providing repairs that provide safe, healthy and accessible housing. The Program Specifications are intended to provide uniform guidance for the program to ensure all homes are repaired in a fair and consistent manner.

The values that flow from this mission are as follows:

1. Benefit low- moderate-income residents of Philadelphia;
2. Eliminate health and safety hazards in homes;
3. Promote accessibility, weatherization and energy efficiency; and
4. Improve neighborhoods' built environment and encourage long-term stability among residents.

APPLICABLE LAWS AND REGULATIONS

We intend to provide repair services in full compliance with the following statutory and regulatory requirements. The law/regulation in effect January 1, 2024 will override the standard if discrepancies exist.

- Building Code: International Building Code 2018 and Chapter 11 International Building Code 2021 Accessibility Requirements
- Zoning Code: The Local Zoning Code
- Federal Housing Code: Housing Quality Standards
- Life Safety Code: Life Safety Code
- Title X Lead Hazard Reduction Regulation 1012, 1013 (pre-1978)
- Energy Star II and LEED H for New Construction

HOME REPAIR PROJECTS SHALL SEEK GUIDANCE AND STRIVE TO CONFORM WORK TO THE FOLLOWING CODES WHEN FEASIBLE AND IF FINANCIAL RESOURCES ARE AVAILABLE FOR A SPECIFIC PROJECT:

- EPA Energy Star and WaterSense Rated Components
- Healthy Homes Guidelines

Exceptions: On a case-by-case basis deviations from the minimum requirements of these standards will be permitted with approval of the Built to Last program administrator.

Notes:

- The specifications described in this document are intended to guide how work is performed, but is not a description of ultimate home condition at the completion of the project.

- Minimum Life is the general expected life for a repair or replacement; design, material selection, and installation should support this target life-span.
- A warranty contractually obligates the installer to repair or replace their work if there is failure or defect within the warranty term.

BUILT TO LAST CONSTRUCTION STANDARDS

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I. SITE IMPROVEMENTS: OUTBUILDINGS/GARAGES

REPAIR STANDARD: 75% or more salvageable

Minimum Life: 5 Years

Unsafe, illegal or unapproved structures, including outbuildings, additions and patio covers will be removed if it is not financially feasible (up to \$10,000) to complete repairs required to make them structurally sound, leak free and building and zoning code legal. Follow local municipality restrictions on repair, replacement or removal.

REPLACEMENT STANDARD: Garage may be provided if funding is sufficient and garage poses a risk to the structural integrity of the home.

II. SITE IMPROVEMENTS: PAVING AND WALKS

REPAIR STANDARD:

Minimum Life: 15 Years

Badly deteriorated, essential paving, such as front sidewalks, will be replaced to match. Deteriorated paving may be removed or replaced.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

Essential walks and drives shall be replaced with 4" thick, 3000 PSI concrete with metal reinforcement.

III. SITE IMPROVEMENTS: LANDSCAPING

REPAIR STANDARD:

Site shall be graded to allow water to run away from foundation and towards onsite or municipal stormwater management infrastructure. Trees that are too close to the structure may be pruned or removed..

REPLACEMENT STANDARD:

Front yards may be landscaped with a \$1,000 maximum allowance only when it is necessary to complete other required repairs on the home, such as grading for water diversion.

IV. SITE IMPROVEMENTS: FENCING/GATES

REPAIR STANDARD:

Minimum Life: 5 Years

Masonry fencing shall be repaired to code, if feasible.

REPLACEMENT STANDARD:

Fencing will be repaired with similar materials when repairs are warranted.

When accommodation is required, additional wood, vinyl, masonry, chain link, or wrought iron fencing may be installed to create defensible space in conformance with neighborhood/homeownership association requirements.

V. SITE IMPROVEMENTS: SWIMMING POOLS/HOT TUBS

REPAIR STANDARD:

Minimum Life: 3 Years

Existing pools and hot tubs are beyond the scope of the program and will not be repaired.

REPLACEMENT STANDARD: N/A

Beyond scope of federal financing. Pools may be filled with soil to grade.

VI. EXTERIOR SURFACES: EXTERIOR

REPAIR STANDARD:

Minimum Life: 6 Years

Exterior finish and trim will be intact, weatherproof and free of deterioration. Replacement of damaged sections may include up to 25% of surfaces. Exterior wood shall be spot primed and top coated.

REPLACEMENT STANDARD:

Minimum Life: 10 Years

Shall be replaced with similar materials. If 25% or more needs repair, the entire wall shall receive replacement clapboard with 1" R-5 insulation board beneath.

VII. EXTERIOR SURFACES: EXTERIOR PORCHES/BALCONIES

REPAIR STANDARD:

Minimum Life: 10 Years

Unsafe porches and balconies will be repaired to generally conform with porches in the neighborhood. Porch repairs will be structurally sound, with smooth and even decking surfaces.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

Shall be replaced with similar materials. Deteriorated porches and balconies shall be replaced with preservative treated structural lumber and tongue and groove pine or synthetic deck material. Replace with concrete when economically possible.

VIII. EXTERIOR SURFACES: EXTERIOR RAILINGS

REPAIR STANDARD: None

REPLACEMENT STANDARD:

Minimum Life: 20 Years

Shall be replaced with similar materials. Railings that do not meet the current code shall be removed and replaced with wrought iron or treated wood.

IX. EXTERIOR SURFACES: EXTERIOR STEPS AND PATIOS

REPAIR STANDARD:

Minimum Life: 10 Years

Steps, stairs and decks shall be structurally upgraded to IRC 2018 code; free from all significant deterioration.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

Shall be replaced with similar materials. Any replacement patio, deck or steps shall be of a functional size, design and construction that meets all applicable codes.

X. FOUNDATIONS & STRUCTURE: FIREWALLS

REPAIR STANDARD:

Minimum Life: 15 Years

Party walls and garage ceilings shall be maintained without cracks and plaster deterioration and upgraded with 5/8" type X gypsum, glued and screwed to structure.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

Shall be replaced with similar materials. All party walls shall conform to the 2018 IRC new construction requirements for fire separation at both walls and roofs.

XI. FOUNDATIONS AND STRUCTURE: FOUNDATIONS

REPAIR STANDARD:

Minimum Life: 20 Years

Shall be brought up to current code. Foundations shall be repaired to be sound, seismically stable and water resistant, if financially feasible.

REPLACEMENT STANDARD:

Foundation replacements are beyond the scope of the program.

XII. FOUNDATIONS & STRUCTURE: STRUCTURAL WALLS

REPAIR STANDARD:

Minimum Life: 20 Years

All structural members shall be free from deterioration, rot and termite damage and be sized in conformance to 2018 IRC. Any member not in conformance with code shall be re-supported as determined by a structural engineer.

Brick and stone walls with deteriorated mortar will be spot pointed with type N mortar. In limited cases- areas with significant spalling and stone deterioration can be stuccoed after base repairs are complete.

REPLACEMENT STANDARD:

Minimum Life: 40 Years

Exterior Walls shall be sized by an Engineer and insulated to the full depth with, solid sheathing to match existing.

XIII. WINDOWS AND DOORS: INTERIOR DOORS

REPAIR STANDARD:

Minimum Life: 10 Years

All bedrooms, baths and closets shall have operating doors and passage locksets. Privacy lock sets on bath and all bedrooms. All other doors shall have passage locks. Reuse existing doors when possible.

REPLACEMENT STANDARD:

Minimum Life: 15 Years

Shall be replaced with similar, in stock materials. Doors should be a pre-hung unit.

XIV. WINDOWS AND DOORS: EXTERIOR DOORS

REPAIR STANDARD:

Minimum Life: 10 Years

Exterior doors shall be solid core, weather stripped, operate smoothly, including means of external visibility, a dead bolt, and an entrance lock set.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

All replacement doors at the front of the property will be neighborhood sensitive, Energy Star, R-6, steel or fiberglass solid core doors with means of external visibility and deadbolt. Screen doors or security doors at front entrances allowable. Garage/house doors shall be 20-minute fire rated with self-closing hinges. Energy Star, R-8 solid core doors with means of external visibility, dead bolt, and entrance locksets shall be installed at entrances not

visible from the front street. Garage doors shall be R-5, embossed metal with a lockable assembly. Door should be in stock at a local reputable supplier.

XV. WINDOWS AND DOORS: WINDOW PLACEMENT

REPAIR STANDARD: Bedrooms, kitchens, and baths (as applicable) shall have all operable windows with a screen and meet egress requirements per the Life Safety code.

XVI. WINDOWS AND DOORS: WINDOWS & SLIDING GLASS DOORS

REPAIR STANDARD:

Minimum Life: 10 Years

All windows and sliding glass doors shall be weather tight, include a locking device, and where required for egress, be fully functioning/operational.

REPLACEMENT STANDARD: Energy Star

Minimum Life: 20 Years

Double glazed, aluminum, PVC or fiberglass, a minimum U-value of 0.30, SHGC of 0.30 and DP of 45.

XVII. ROOFING: FLAT AND LOW SLOPE ROOFING

REPAIR STANDARD:

Minimum Life: 5 Years

Repair when cost is less than or equal to 30% of total replacement cost of the roof surface on the living area.

Built-up roofing, flashing and accessories shall be repaired wherever a 2-year leak free warranty is available from a certified roofing company.

REPLACEMENT STANDARD:

Minimum Life: 10 Years

The most cost-effective roof, either 3-ply hot built-up, modified bitumen, T.P.O., EPDM. Use of white and/or reflective roofing material is preferred when possible.

XVIII. ROOFING: PITCHED ROOFS

REPAIR STANDARD:

Minimum Life: 5 years with warranty

Repair when cost is less than or equal to 25% of total replacement cost of the roof surface on the living area.

Missing and leaking shingles and flashing shall be repaired on otherwise functional roofs. Concrete, metal and tile roofs shall be repaired when at all possible. Antennae and communication disks shall be permanently removed.

Built-up roofing, flashing and accessories shall be repaired wherever a 5-year leak free warranty is available from a certified roofing company.

REPLACEMENT STANDARD:

Moderate: Minimum Life: 30 Years

Architectural grade, 30-year fiberglass asphalt or architectural metal with a ventilated system designed for installation recommendations. Must replace all boots, flashings, ice and water barriers, drip edges.

High: Minimum Life: Varies

Roofing may be clay tile or architectural metal when required by historical or HOA requirements.

• XIX. ROOFING: REFLECTANCE

REPAIR STANDARD:

For flat and low-sloped roofs, if existing roof covering is in good condition with minimal cracking, apply cool roof coating with Cool Roof Rating Council rated product.

REPLACEMENT STANDARD:

Roof coverings on flat or low-sloped roofs shall have:

- A minimum initial solar reflectance of 0.7 in accordance with ASTM C 1549 or ASTM E 1918, and a minimum thermal emittance of 0.75 as determined in accordance with ASTM C 1371 or ASTM E 408; or
- A minimum SRI of 82 as determined in accordance with ASTM E 1980.

Roof coverings on pitched roofs shall have:

- A minimum initial solar reflectance of 0.25 in accordance with ASTM C 1549 or ASTM E 1918, and a minimum thermal emittance of 0.75 as determined in accordance with ASTM C 1371 or ASTM E 408; or
- A minimum SRI of 39 as determined in accordance with ASTM E 1980

• XX. INSULATION AND VENTILATION: ATTIC VENTILATION

REPAIR STANDARD:

Minimum Life: 5 Year

Any pre-installed ventilation shall be maintained or if powered and not functioning, replaced.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

Attics will be ventilated with a minimum of 1 square foot of free vent for each 300 square feet of roof area or be redesigned for integration with new insulation system.

XXI. INSULATION AND VENTILATION: BATH VENTILATION

REPAIR STANDARD: None

REPLACEMENT STANDARD:

Minimum Life: 3 Years

Energy Star, exterior ducted, 70 CFM, max 2 sones with separate switch timer or humidistat where accessible and available in full baths.

XXII. INSULATION AND VENTILATION: INFILTRATION

REPAIR STANDARD:

Minimum Life: 5 Years

Exterior doors and attic hatches shall be weather stripped with flexible gaskets. When budget and time allow, scope should aim to address whole-house thermal envelope by weatherstripping doors and windows and air-sealing all visible cracks and holes with the appropriate material.

XXIII. INSULATION AND VENTILATION: INSULATION

REPAIR STANDARD: Not Applicable

REPLACEMENT STANDARD:

Minimum Life: 15 Years

Attic insulation goal is R38, crawls spaces R21. New walls will be insulated to R21. Attic access panel or stairs must be insulated with at least R10 rigid foam and gasket when possible.

XXIV. INSULATION AND VENTILATION: KITCHEN VENTILATION

REPAIR STANDARD: N/A

REPLACEMENT STANDARD:

Minimum Life: 5 Years

Energy Star, exterior ducted range hoods or exhaust fans with less than 2 sones, minimum 120 CFM and capped with a functional back draft damper.

For gas ranges, ventilation that meets the above standards will be added if it is currently not there, where possible.

XXV. INTERIOR SURFACES: INTERIOR RAILINGS

REPAIR STANDARD:

Minimum Life: 10 Years

Handrails will be present on one side of all interior steps or stairways with more than two risers and around platforms over 30" above floor level with adequate structural attachment. Must be in compliance with the local code.

REPLACEMENT STANDARD:

Minimum Life: 15 Years

Hand and guardrails shall be replaced with universal design standard material and construction.

XXVI. INTERIOR STANDARDS: INTERIOR WALLS AND CEILINGS

REPAIR STANDARD:

Minimum Life: 5 Years

When walls pose a health, safety or energy efficiency risk, holes, cracks, and deteriorated surfaces shall be repaired. All visual surfaces shall be patched and sanded to create a smooth, paint-ready surface.

REPLACEMENT STANDARD:

Minimum Life: 10 Years

When installing a new wall, it shall be plumb, with a smooth finish on at least 1/2" gypsum with water resistant board in wet areas. 1/2" over 16" on center studs installed per the American Gypsum Association.

XXVII. INTERIOR STANDARDS: HAZMAT TESTING AND TREATMENT

All properties shall undergo a visual and property age evaluation during inspection. Particular focus should be given to homes built prior to 1978 or homes with children under 6. Appropriate testing and remediation should be completed for lead, asbestos, or other potentially hazardous materials.

REPAIR STANDARD / REPLACEMENT STANDARD:

- Conformance to 1012-1013 Lead Regulation for all pre-1978 homes.
- Removal of all visible mold using a detergent and surfactant to clean the surface and a fungicide to kill any remaining surface mold. The surface will be allowed to dry and another application of fungicide will be applied with the aim of destroying hyphae in the substrate.

XXVIII. INTERIOR STANDARDS: FLOORING

REPAIR STANDARD:

Minimum Life: 10 Years

If flooring poses a life, safety or environmental hazard, ceramic tile flooring may be repaired, and wood floors sanded and refinished. Salvageable carpet may be steam cleaned. Minimum life for carpet 5 years.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

Shall be replaced with similar, in stock materials. Vinyl flooring may be installed over reinforced cement underlayment in baths. Wood, laminate, or luxury vinyl plank flooring may be installed in living and dining rooms and halls. Vapor barrier underlayment should be installed under flooring. Tile to be capped at \$3.00/sq ft

XXIX. INTERIOR STANDARDS: APPLIANCES

Assessment of existing appliances shall be made to determine if replacement is necessary. Gas appliances shall be replaced with electric appliances where feasible.

REPLACEMENT STANDARD: New Energy Star and WaterSense. The following appliances are eligible to be installed when funding allows:

- Dishwasher: Energy Star rated
- Washing Machine: Energy Star rated (required) if supplied
- Dryer: Energy Star rated
- Refrigerator: Energy Star rated (required) if supplied

- Range – Gas or electric induction, 4 burners (gas switch to electric encouraged)
- Garbage disposal – 1/2 hp, with minimum 3-year warranty
- Microwave/Hood combination (if replacing)
- Built-in Oven (to match) Energy Star rated.

XXX. MINIMUM KITCHEN DESIGN

REPAIR OR REPLACEMENT STANDARD:

Fix broken hardware, paint fronts, make new shelves.

REPLACEMENT STANDARD:

Countertop: Shall be replaced with in stock post form Formica countertop.

Cabinets: Cabinets will be replaced only when they pose a risk to health, life or safety. Any replacements will be placed in the original cabinet blueprint and not altered. Cabinets will be replaced with standard grade plywood or particle board materials that are in stock.

XXXI. ELECTRIC: SPECIALIZED CIRCUITS

REPAIR STANDARD: Replace existing devices to comply with current code.

REPLACEMENT STANDARD:

Minimum Life: 15 Years

Kitchen receptacles within 6 feet of a sink, all bath receptacles and at least one exterior receptacle shall be protected by a GFCI. Arc fault receptacles shall be installed in all bedrooms. Follow local codes.

XXXII. ELECTRIC: KITCHEN ELECTRIC DISTRIBUTION

REPAIR STANDARD:

Minimum Life: 15 Years

Electric service may be supplied to trash compactors, microwave ovens, double ovens, range grills, and any appliance proposed for installation.

REPLACEMENT STANDARD:

Minimum Life: 15 Years

Permanently installed or proposed stoves, refrigerators, freezers, dishwashers and disposals, washer and dryers shall have separate circuits sized to N.E.C. Two separate 20 amp counter circuits are required with each kitchen area. Bring to local code compliance.

XXXIII. ELECTRIC: FIXTURES

REPAIR STANDARD: When replacing or repairing fixtures- replace light bulbs with LEDs of similar lighting density and temp on each unit.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

Shall be replaced with similar, in stock materials. All halls, rooms necessary to cross to other rooms and stairways must be well lighted and controlled by a 3-way switch using concealed wiring. Attics must have utility fixtures. All fixtures shall be Energy Star. Replace all incandescent and compact fluorescent bulbs with LED bulbs. Exterior door lighting shall provide 100 lumens at ground level (motion detectors allowed). Garage doors shall be equipped with electric openers with laser safety devices. Bedrooms and living areas may receive Energy Star ceiling fans.

XXXIV. ELECTRIC: ALARMS

REPAIR STANDARD:

Minimum Life: 5 Year

Existing fire and smoke, CO shall be repaired to operating condition. Security system may be repaired as needed. Exterior doors shall be alarmed when pools are present.

REPLACEMENT STANDARD:

Minimum Life: 15 Years

Smoke detectors are required on each dwelling floor. CO detectors are required with all fuel burning appliances and attached garage and should comply with local code.

XXXV. ELECTRIC: INTERIOR ELECTRIC DISTRIBUTION

REPAIR STANDARD: None

REPLACEMENT STANDARD:

Minimum Life: 20 Years

All rooms shall be rewired to the latest version of the national Electric Code using affordable fixture allowances and Energy Star fixtures. Minimum of one circuit per room that is to code.

XXXVI. ELECTRIC: SERVICE AND PANEL

REPAIR STANDARD:

Minimum Life: 15 Years

Distribution panels shall have a main disconnect, at least 10 circuit breaker protected circuits, a 100-amp minimum capacity and be adequate to safely supply existing and proposed devices. Electrical panel shall be replaced if not properly grounded, to local codes.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

Single Family: 200 amp service with a 24 circuit panel is allowed for homes of up to 1,800 SF. Homes larger than 1,800 SF or all electric require 200 amp service with a main disconnect panel containing at least 30 circuit breaker positions.

Note: Stabloc, Zinsco, Challenger, Pushmatic Bulldog, and Federal Pacific Electric panels must be replaced.

XXXVII. PLUMBING SYSTEM: DRAIN, WASTE, VENT LINES

REPLACEMENT STANDARD:

Minimum Life: 20 Years

PVC replacement lines shall be installed in accordance with the most recently approved version of the IBC.

XXXVIII. PLUMBING SYSTEM: PLUMBING FIXTURES

REPAIR STANDARD: EPA WaterSense

Minimum Life: 5 Years

Whole home WaterSense upgrades to all fixtures and faucets are recommended when time/budget allows. Faucet will be retrofitted with low flow aerators: kitchen faucets with a maximum flow rate of 2.2 gal/min; bath faucets with a maximum flow rate of 1.5 gal/min.

REPLACEMENT STANDARD: EPA WaterSense

Minimum Life: 20 Years

Shall be replaced with similar, in stock materials. Single lever, low flow, 2.2 gal/min kitchen and 1.5 gal/min bath, metal faucets and 2.0 gal/min maximum shower diverters with lifetime drip-free warranty. White ceramic, 1.28 GPF toilets, double bowl stainless steel or porcelain kitchen sinks, fiberglass tubs and surrounds and steel or porcelain enameled 5' tubs.

XXXIX. PLUMBING SYSTEM: PLUMBING MINIMUM EQUIPMENT

REPAIR STANDARD: None

REPLACEMENT STANDARD:

Minimum Life: 10 Years

Every dwelling shall have a double or single bowl kitchen sink and a 3-piece bath. Garbage disposals are permitted as a replacement for exiting.

XL. PLUMBING SYSTEM: FIRE SPRINKLERS

REPAIR STANDARD: Repair all.

REPLACEMENT STANDARD: Not Required.

XLI. PLUMBING SYSTEM: WATER HEATERS

REPAIR STANDARD:

Minimum Life: N/A

The minimum capacity for units with two bedrooms or less shall be 30 gallons, larger units shall have a minimum capacity of 40 gallons. Water heaters shall have pressure relief valves and expansion tank with drip legs that extend to within one foot of the floor, in copper pipe.

REPLACEMENT STANDARD:

Minimum Life: 12 Years

Energy Star, high efficiency, pilotless, gas fired or dual element electric (0.97) water heaters with at least R-7 insulation and a 12-year replacement warranty. Gas units must have fan assist or closed combustion venting; no atmospherically vented units. Install heat pump water heaters when feasible. 40 gallons electric for 1- and 2-bedroom units and 40 gallons gas or 52 gallons electric for 3- and 4-bedroom units.

XLII. PLUMBING SYSTEM: WATER SUPPLY

REPAIR STANDARD: 10 Years

Minimum Life:

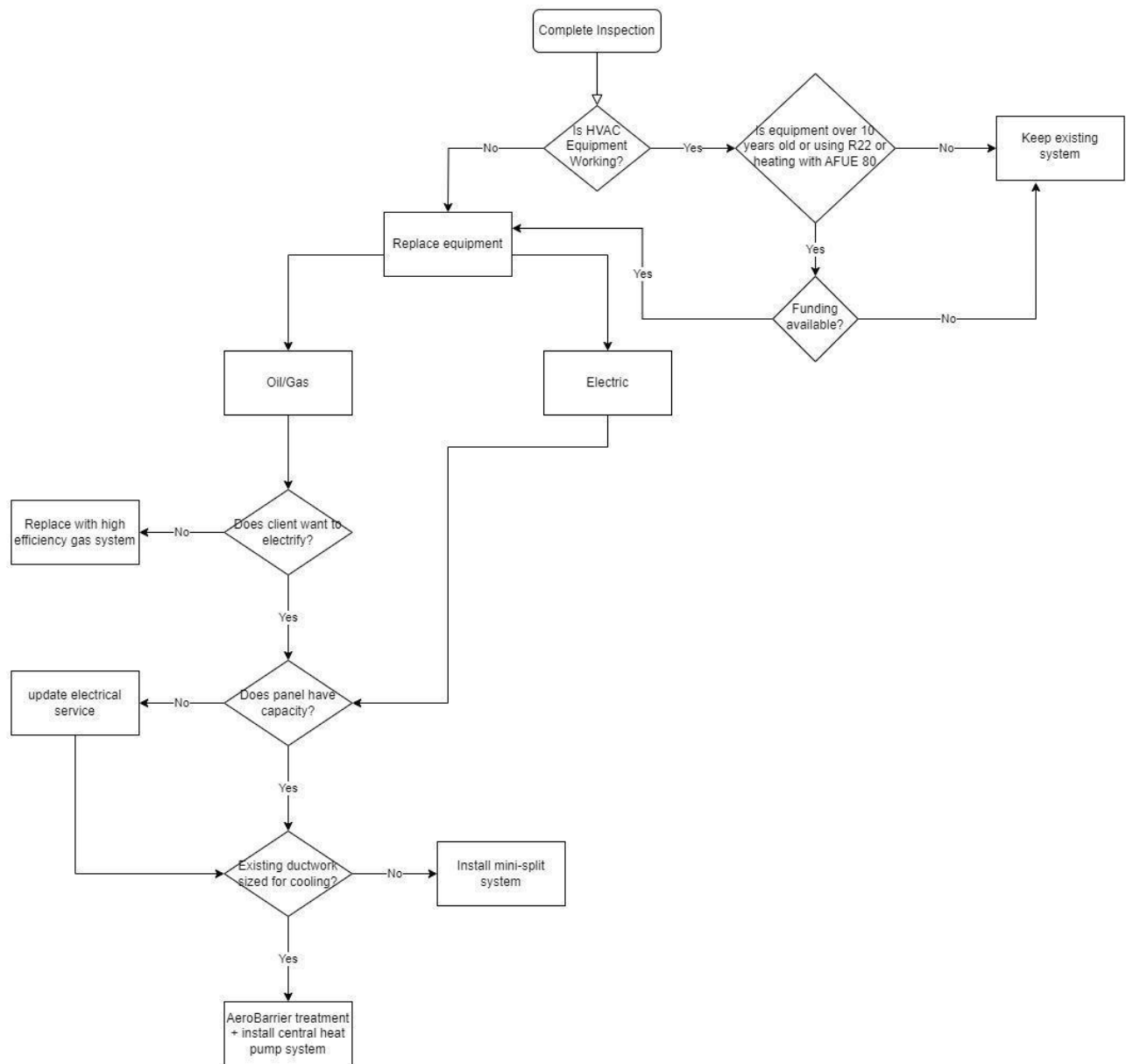
All homes shall be tested to identify and rectify any leaks. All fixtures must be supplied with 1.2 gallons per minute water flow and shut off valves must operate. Lead and galvanized pipe shall be replaced with copper, PVC or PEX, if local code allowed. All accessible hot water lines shall be insulated.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

All fixtures shall have brass shut off valves. One, freeze-protected exterior hose bib is required. Supply lines shall be replaced with steel braided materials.

XLIII. HVAC: AIR CONDITIONING



XLIV. HVAC: CHIMNEY/FIREPLACE REPAIR

REPAIR STANDARD:
Minimum Life: 20 Years

Unsound chimneys shall be repaired or removed. When chimneys must be used for combustion ventilation, they should be lined with an appropriately sized stainless steel liner.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

Replacement furnace flues when required shall be metal double or triple walled as recommended by the equipment manufacturer.

If the service life of the chimney is comparable to service life of heating plant, then no replacement is necessary. If the chimney needs replacing or a new liner, the chimney will be eliminated and replaced with a high efficiency, power vented unit.

XLV. HVAC: DISTRIBUTION/VENTILATION SYSTEM

REPAIR STANDARD:

Minimum Life: 5 Year

As scope and budget allow, Aero Barrier assessments are recommended for every home with duct work. Existing central air conditioning shall be inspected, serviced, and refurbished per diagnostic testing of unit and distribution system – per (BPI) technical standards for air conditioning and heat pump specialists.

Exhaust ventilation systems will be inspected and repaired if they are not working.

REPLACEMENT STANDARD:

Minimum Life: 20 Years

All ductwork should be sized by a qualified HVAC professional. Seams shall be sealed with mastic and run in conditioned space where possible within the building envelope.

Ductwork in unconditioned space shall be insulated to R8.

XLVI. HVAC: VENTILATION SYSTEM

REPAIR STANDARD:

Minimum Life: 5 Year

Exhaust ventilation systems will be inspected and replaced if they are not working.

REPLACEMENT STANDARD:

Minimum Life: 10 Years

Ventilation fans will be added where possible to increase air flow in the home.

XLVII. HVAC – CENTRAL EQUIPMENT

REPAIR STANDARD:

Minimum Life: 5 Years

Heating plants that are less than 5 years old and rated 80% efficiency or better shall be tested and tuned-up per BPI. Energy Star programmable thermostats are required.

REPLACEMENT STANDARD:

Minimum Life: 20 years

Condensing gas furnaces rated over 90 AFUE and heat pumps over 16 SEER with 10-year warranty on parts and 5 years labor. Air to air heat exchangers (Energy Recovery Ventilators) are eligible for this program. HVAC system shall be sized to maintain 72°F measured 36" off the floor at local maximum average temperatures, in all habitable and essential rooms. Interior design temperature used for heating and cooling load calculations per 2018 IECC. Dual heat pumps are allowed in larger, two-story homes.

XLVIII. SUSTAINABILITY APPENDIX

All rehabilitation shall meet current Energy Star standards.

Specifications for all products are listed in the chart below:

https://www.energystar.gov/products/heating_cooling/heat_pumps_air_source/key_product_criteria	
Air Source Heat Pumps	
Product Type	Specification
Heat Pump Equipment (HP)	≥ 7.8 HSPF2/ ≥15.2 SEER2/ ≥11.7 EER2 for split systems
	≥ 7.2 HSPF2 ≥15.2 SEER2/ ≥10.6 EER2 for single package equipment including gas/electric package units.
Central Air Conditioners (CAC)	≥15.2 SEER2/ ≥12.0 EER2 for split systems
	≥15.2 SEER2/ ≥11.5 EER2 for single package equipment including gas/electric package units.
Product Type	Specification
HP Split Systems	≥ 8.5 HSPF2/ ≥15.2 SEER2
(Non-Ducted)	
HP Split Systems	≥ 8.1 HSPF2/ ≥15.2 SEER2

(Ducted)	
HP Single Package	≥ 8.1 HSPF2/ ≥15.2 SEER2
Equipment	
https://www.energystar.gov/products/boilers	
Boilers	
ENERGY STAR certified gas boilers have annual fuel utilization efficiency (AFUE) ratings of 90%, approximately 8% more efficient than the federal standard.	
ENERGY STAR certified oil boilers have annual fuel utilization efficiency (AFUE) ratings of 87%, approximately 3% more efficient than the federal standard	
https://www.energystar.gov/products/heating_cooling/furnaces/key_product_criteria	
Furnaces	Specification
Gas Furnaces Key Product Criteria	Rating of 90% AFUE or greater for U.S. South gas furnaces
	Rating of 95% AFUE or greater for U.S. North gas furnaces
Oil Furnaces Key Product Criteria	Rating of 85% AFUE or greater
Gas and Oil Furnaces Key Product Criteria	Furnaces must be equipped with a high efficiency, electronically commutated fan motor.
	Less than or equal to 2.0% air leakage
https://www.energystar.gov/products/appliances/clothes_dryers/key_product_criteria	
Dryers	Combined Energy Factor (lbs/kWh)
Vented Gas	3.48
Ventless or Vented Electric, Standard (4.4 cu-ft or greater capacity)	3.93

Ventless or Vented Electric, Compact (120V) (less than 4.4 cu-ft capacity)	3.8
Vented Electric, Compact (240V) (less than 4.4 cu-ft capacity)	3.45
Ventless Electric, Compact (240V) (less than 4.4 cu-ft capacity)	2.68
Maximum Test Cycle Time	80 minutes
Cycle Time Requirement	
https://www.energystar.gov/products/appliances/clothes_washers/key_product_criteria	
Washers	
ENERGY STAR Residential Clothes Washers, Front-loading (> 2.5 cu-ft)	IMEF $\geq$ 2.76
	IWF $\leq$ 3.2
ENERGY STAR Residential Clothes Washers, Top-loading (> 2.5 cu-ft)	IMEF $\geq$ 2.06
	IWF $\leq$ 4.3
ENERGY STAR Residential Clothes Washers ($\leq$ 2.5 cu-ft)	IMEF $\geq$ 2.07
	IWF $\leq$ 4.2
ENERGY STAR Commercial Clothes Washers	MEFJ2 $\geq$ 2.20
	IWF $\leq$ 4.0
ENERGY STAR Combination All-in-One Washer-Dryer	Meets IMEF, IWF and the current ENERGY STAR requirements for clothes dryers (except the time requirements) for the closest product type
https://www.energystar.gov/products/appliances/refrigerators/key_product_criteria	
Fridges	
Refrigerators and Refrigerator-Freezers (7.75 cubic feet or larger)	Annual Energy Use (kWh/yr): 429
https://www.energystar.gov/products/water_heaters/residential_water_heaters_key_product_criteria	
Water Heaters	

Criteria for Certified Electric Storage Water Heaters	
Criteria	ENERGY STAR Requirements
Uniform Energy Factor	Integrated HPWH. UEF $\geq$ 3.30
Integrated HPWH, 120 Volt / 15 Amp Circuit	UEF $\geq$ 2.20
Split System HPWH	UEF $\geq$ 2.20
First Hour Rating	FHR $\geq$ 45 gallons per hour
Warranty	Warranty $\geq$ 6 years on sealed system
Safety	UL 174 and UL1995 or UL 60335-2-40
Lower Compressor Cut-Off Temperature (Reporting Requirement Only)	Report ambient temperature (°F) below which the compressor cuts off and electric resistance only operation begins
Upper Compressor Cut-Off Temperature (Optional Reporting Only)	Partners may report the ambient temperature above which the compressor cuts off and electric resistance only operation begins
Criteria for Certified Gas-fired Storage Water Heaters	
Tank Volume > 55 gallons	UEF $\geq$ 0.86
First Hour Rating	FHR $\geq$ 51 gallons per hour
Warranty	Warranty $\geq$ 6 years on system (including parts)
Safety	ANSI Z21.10.1/CSA 4.1