MISSISSIPPI HOME CORPORATION (MHC)
NATIONAL HOUSING TRUST FUND (HTF)
REHABILITATION STANDARDS

Mississippi Home Corporation's Housing Trust Fund (HTF) Rehabilitation Standards are designed to outline the requirements for building rehabilitation for all multifamily housing projects funded with HTF funds. All renovation activities performed on these projects must conform to these rehabilitation standards.

These rehabilitation standards address Health and Safety, Major Systems, Lead-Based Paint, Accessibility, Disaster Mitigation, State and Local Codes, Ordinances, and Zoning requirements, and the Uniform Physical Condition Standards (UPCS) requirements to ensure compliance pursuant to HTF Regulations at 24 CFR 93.301(b), at the time of project completion. These standards contain sufficient details demonstrating rehabilitation work requirements and the methods and materials subject to be used.

In addition, these standards are designed to ensure consistency throughout the State for all projects funded with HTF funds and not intended to reduce or exclude the requirements of any local or state building or housing codes, standards, or ordinances that may apply. In the event of any conflicting codes(s), the more restrictive code(s) will apply.

At the time of publication and adoption of the HTF Standards, the adopted codes referenced are those in force. Should the referenced adopted codes be modified or updated by the State of Mississippi, the newly adopted code standard will apply. For purposes of the HTF Standards, HTF-assisted projects must refer to and demonstrate compliance with MHC's Design Standards **(See Appendix B).**

The goal of the HTF program is to provide functional, safe, affordable, and durable housing that meets the needs of the tenants and communities in which the housing is located throughout its affordability period. Through use of the HTF Standards, all health and safety deficiencies must be addressed and corrected. If a project is out of compliance with the HTF Standards, the grantee will bring to the attention of MHC staff the specific portion of the project which does not comply, stating the reasons for non-compliance.

QUALITY OF WORK

Grantees and Developers- will ensure that all rehabilitation work is completed in a thorough and workmanlike manner in accordance with industry practice and contractually agreed upon plans and specifications, as well as subsequent mutually agreed upon change orders during the construction process. Grantees and developers will employ best practice industry standards relating to quality assurance to verify all work completed.

Project Design Professionals - The project developer will formally contract with licensed architectural and engineering design professionals to provide appropriate professional services for each project. It is the responsibility of each licensed professional to assure that the scope of

work is done in accordance with the generally accepted practices in their discipline, as well as designing the project to be in full conformance with all the applicable federal, state and local codes. In developing scopes of work, grantees and developers will work with MHC staff to ensure that all requirements under the HTF Standards are satisfied and that the proposed scope of work meets MHC's goal. MHC approval of all scopes of work is required.

By meeting the various code requirements as a minimum standard, together with the other standards herein or included in MHC policies, each building rehabilitation project is assured to be brought up to an acceptable level of rehabilitation. Warranties will be required per the standard construction contracts on all materials, equipment and workmanship. Architect or Engineer approved by MHC will provide contract specifications which stipulate quality standards, materials choices, installation methods and standards. Such specifications may reference other appropriate standards set by different trades associations and testing agencies such as ASTM, Underwriters Laboratory (U/L), Tile Council of America, Gypsum National Roofing Contractors Association (NRCA), Architectural Woodwork Institute (AWI), Sheet Metal and Air Conditioning Contractors' National Association (SMACNA), and AFME.

1.1.1. **HEALTH AND SAFETY CONCERNS/HAZARDS**

Identify life-threatening deficiencies, which must be addressed immediately, if the housing is occupied at the time of rehabilitation.

All areas and components of the housing must be free of health and safety hazards. These areas include but are not limited to, air quality (sewer odor detected)/(propane/natural gas/methane gas detected/mold and/or mildew observed), electrical hazards (exposed wires/open panels)/(water leaks on/near electrical equipment), natural hazards, fire hazards, elevator, emergency fire exits(blocked/unusable/missing exit signs), flammable materials/combustible materials (improperly stored), garbage and debris(indoors and outdoors), hazards (other e.g. outbuildings, sharp edges, tripping) infestation (insects, rats/mice/vermin, play equipment (broken or damaged).

Housing assisted with HTF funds must commission and complete a Capital Needs Assessment (CNA). The assessment will include a Phase I and/or a Phase II hazardous material inspection survey completed by a licensed and MDEQ certified inspector. The hazardous material survey shall define the presence of, or lack thereof, any environmental hazards such as asbestos, lead paint and mold or other contaminant on the site.

If the housing is occupied at the time of rehabilitation, any and all life-threatening deficiencies must be identified and addressed immediately. Hazards area and concerns which will be addressed immediately are noted on **Appendix A.** ***Highlighted items noted in orange or life-threatening and must be addressed immediately, if the housing is occupied.***

See Appendix A attached hereto for a list of Inspectable Items and Observable Deficiencies for the property site, building exterior, building systems, common areas, and units, including descriptions of the type and degree of deficiency for each item that any HTF-assisted project must address immediately.

1.1.2. **MAJOR SYSTEMS (**Requirements for Rental Housing):

Capital Needs Assessment (CNA)

Housing assisted with HTF funds and which involve rehabilitation or adaptive reuse of 26 units or more must commission and complete a Capital Needs Assessment (CNA). The assessment will include an opinion as to the proposed budget for recommended improvements and should identify critical building systems or components that have reached or exceeded their expected useful lives.

The assessment shall identify all existing elements that are in good condition and will serve the property, all elements that can be repaired or rehabilitated, all elements that require replacement and all new elements required for the property to meet all the requirement of the HTF assisted project. HTF recipients are required to ensure a replacement reserve is available to repair or replace the systems, as needed. The disclosure of replacement reserve will be required during the application process and MHC's required CNA timeline.

A competent, independent third party acceptable to MHC, such as a licensed architect or engineer, will complete the CNA. The CNA must additionally include interviews with available on-site property management and maintenance personnel to document past repairs and improvements, pending repairs, and existing or chronic physical deficiencies. The assessment will include a site visit and a physical inspection of the interior and exterior of all units and structures.

EXPECTED USEFUL LIFE / REHABILITATION SCOPE & CAPITAL PLANNING

i. In developing scopes of work on housing rehabilitation projects, MHC HTF grantees and developers will consider the remaining expected useful life of all building components with regard to building long-term sustainability and performance. Specifically, each building component with a remaining expected useful life of less than the applicable HTF period of affordability (30 years) will be considered for replacement, repair or otherwise updated. Additionally, new building components with an expected useful life of less than 30 years will be considered for future replacement.

ii. Project CNAs will be required. The industry standard period for CNAs is 20 years; however, project CNAs must be updated every five years during the life of the project to ensure projected capital needs through the 30 year HTF affordability period are anticipated and planned for. The initial CNA will cover years 1-20. The first five year update will be done in year 5 and cover years 6-25. The second 5-year update will be done in year 10 and will cover years 11-30.

iii. Once a scope of work has been developed by the grantee and their development team, the grantee must also develop a Capital Plan. Whether or not a particular building component has been replaced, repaired or otherwise updated as part of the rehabilitation scope of work,

all building components and major systems must demonstrate adequate funding to be viable for at least 20 years, the length of the capital plan, with subsequent updates every five years during the 30-year affordability period.

a. Example #1: Kitchen cabinets with a remaining useful life of eight years may be permitted to be left in place and not included in the rehabilitation scope. However, adequate funding must be demonstrated in the building capital plan to replace those cabinets in year 8 of the post-rehabilitation capital plan.

b. Example #2: If a building component such as a new roof is installed during the rehabilitation and this roof has an expected useful life of 25 years, it will not show up on the initial CNA as needing replacement during that 20-year period. However, since MHC requires updates of CNA's for HTF projects to be performed every 5 years, it will show up on the next 20-year CNA which will be performed in year 5 of the project and cover years 6 to 25. During these 5- year CNA updates, the project reserve contributions will be reviewed to ensure all future capital expenditures articulated in the CNA are adequately funded through the 30-year affordability period.

iv. Annual replacement reserves contributions of at least $250 per unit per year (pupy) for senior projects and $300 pupy for general occupancy projects are required through the 30-year affordability period. If the initial 20-year CNA and capital plan (and/or any subsequent five year updates) indicate that replacement costs for the period exceed the amount generated by the respective pupy contributions, a higher pupy contribution will be required.

v. Grantees and their development teams should ensure that all building components are analyzed as part of a comprehensive effort to balance rehabilitation scope and capital planning in a way which maximizes long-term building performance as much as possible within the parameters of both development and projected operational funding available.

Equipment

i. Existing equipment to be retained and continued to be used will be in serviceable condition with an expected useful life of 30 years, or covered by the 20-year capital plan and/or subsequent five year updates during the 30-year affordability period.

ii. Kitchen appliances:
   a. When replacing a range and space permits, provide a new, full-size (30," four burner) range.
   b. Existing appliances to be reused will be in good and serviceable condition.
   c. Provide other appliances (such as microwaves) as may be appropriate to the project.
   d. All appliances in accessible apartment units will be accessibility-compliant, and located in an arrangement providing required clear floor spaces.

iii. Sewer connections to municipal sewage systems and on-site sewage disposal:
   a. Existing sewer laterals that are to be reused must be evaluated to assure that they are serviceable and have a remaining useful life of 30 years, or are covered by the 20-year capital plan and/or subsequent five-year updates during the 30-year affordability period.
   b. New systems will be designed to conform to the state EPA requirements.

iv. Water service:

a. Existing municipal water supplies to buildings will be evaluated to assure that they are serviceable, of adequate capacity and have a remaining useful life of 30 years, or are covered by the 20-year capital plan and/or subsequent five-year updates during the 30- year

affordability period.

b. Required new systems will be designed to conform to the state EPA requirements.

Plumbing

i. Where existing components of a system are to be reused, they will be examined and determined to be in good condition, code-compliant and have a remaining useful life of a minimum of 30 years, or covered by the 20-year capital plan and/or subsequent five year updates during the 30-year affordability period. Substandard or critical non-code-compliant components must be replaced.

ii. Use water-saving shower heads and faucet aerators as required by the MHC Design Standards.

iii. All fixtures, piping fittings and equipment will be lead-free.

iv. Kitchen fixtures – When existing kitchen fixtures are not reused in accordance with a. above, new sink and faucets, and associated plumbing will be installed in each unit or SRO food prep area.

v. Bath fixtures – When existing bath fixtures are not reused in accordance with a. above, new water saving toilets, tubs and tub surrounds, lavatory sinks, and faucets will be installed in each unit or SRO bathroom facility.

vi. Laundry facilities will be provided in accordance with MHC Design Standards.

vii. Provision for other utility plumbing for janitor sinks, floor drains, outdoor faucets, drains for dehumidification systems, etc., may be made as desired or required.

Heating

System design:

i. Designed and constructed to conform to MHC Design Standards.

ii. Where existing components of a system are proposed to be reused, they will be examined and determined to be in good and serviceable condition, code-compliant and have a remaining useful life of a minimum of 30 years, or covered by the 20-year capital plan and/or subsequent 5-year updates during the 30-year affordability period.

iii. Temperature control - The temperature in each unit will be individually thermostatically controlled. A waiver may be granted for reuse of existing equipment in accordance with a.ii. above.

iv. Provide adequate heat in common spaces.

v. Install pipe insulation as per code and AHRAE requirements.

Building Structure and Envelope (Material and Methods Standards)

i. Structures of two or more stories must be a minimum of sixty percent (60%) brick.

ii. All brick veneer systems shall be installed in accordance with the Brick Institute of America recommendations including all underlayment, vapor barriers, ties, weeps and joint treatment.

iii. Single story structures and areas on two or more story structures where brick is not used, shall use cementitious lap siding over approved sheathing, and vapor barrier.

iv. Metal flashing shall be installed over all openings, and base of the walls extending 8 inches past each side of all openings. Weeps shall channel moisture from the cavity out of the wall

at all flashing.

v. No vinyl siding is allowed.

vi. A color variation throughout the development is encouraged. In general, consider materials and colors - for the façade (including foundation walls) and for the roof - that are compatible with those in similar, good quality buildings in the surrounding neighborhood or region.

vii. Consider using materials with high levels of recycled content or "Green" where possible.

viii. Trim and details can provide warmth and character to a building's appearance, particularly on street facades. In general, the complexity, depth and proportion of trim should relate to that used in good quality middle-income

ix. Carefully consider the design of porch and stair railings, fascia boards, corners, and areas where vertical and horizontal surfaces meet - for example where a wall meets the roof.

x. Generally put trim around windows. Consider adding simple pieces of trim to the top and bottom of porch columns. Vary the dimension from an eve (18' minimum) and a rake (4' minimum) detail.

Roofing

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. All valleys, eves and ridges shall be waterproofed, 18 inches in each direction from the center or lower edge with a peal and sick underlayment.

Fifteen-pound underlayment shall cover the entire roof prior to installation of shingles. Other products such as metal roofing may be considered. Flat roofs shall have minimum slopes, drains and overflow scuppers per the code requirements for the projects weather zone. Roof membranes may be multi-layer built up, modified bitumen or single play membrane of sufficient thickness and detail to ensure a 20-year warranty.

Existing Roofing

i. Examine existing roofing and flashing systems to determine suitability for continued use.

ii. Continued life expectancy of existing roofing should be a minimum of 30 years or covered by the 20-year capital plan and/or subsequent five year updates during the 30-year affordability period.

iii. Repair existing roofing as required.

New Roofing

i. New roofing will be installed where existing roofing does not meet requirements for continued use. New roofing system components will be compatible, and include the nail base, the underlayment layer, ice and water shield self-adhesive membrane flashings, metal flashings and roofing.

ii. Strip existing roofing and dispose of properly.

iii. Examine exposed existing substrate for structural soundness.

iv. Install new roofing system per code and per NCRA trade practices and manufacturer specifications.

v. Flashings – deteriorated flashings will be replaced and the weatherproof integrity of

the roof system will be assured.

Ventilation

Roof assemblies will be properly ventilated in accordance with applicable code requirements, and appropriate building science detailing.

Building Storm Drainage/Roof

All rainwater shall be conveyed and drained away from every roof so as not to cause wetness or dampness in the structure. No roof drainage systems shall be connected to a sanitary sewer, or directly to a storm sewer system. The ground around the dwelling shall be sloped away from foundation walls to divert water away from the structure. If feasible, the collection of roof water to utilize for site irrigation is encouraged.

Structure

i. A qualified professional will examine each building's load-bearing structure, and assess its existing condition to determine suitability of continued use.
ii. In general, structure evaluation and design will be in conformance **with IBC, Chapter 16**.
    a. In most residential rehab projects where there is no change in use, it is not expected that the structure will be brought up to new construction standards.
    b. Consideration will be given if there are any proposed changes in use which would impact the historical loading.
    c. Deficiencies identified will be addressed and repairs designed and specified as necessary to correct such conditions.
    d. Repairs will be made to any deteriorated load-bearing structural elements.
    e. Reinforce, install supplemental, or replace structural members determined to be inadequate for use.

Exterior Finishes

Cladding

i. Stucco-Examine existing stucco for soundness – will be free of major cracks, delamination and other deterioration which may compromise its useful life.
ii. Stucco will be free of gaps and holes and provide continuous weatherproof system.
iii. Repair or re-stucco as necessary to provide a weather-resistant enclosure.

Masonry

i. Masonry bearing walls and veneers will be restored as necessary.
ii. Refer to Section XI C – Masonry.
iii. Refer also to Section XI F.2.b for insulation requirements.
iv. Other existing cladding system types and materials will be repaired and/or restored in-kind with matching or similar materials to provide a durable weather-resistant enclosure.

Trim – Exterior trim and architectural woodwork

i. Existing wood trim:
    a. Existing trim to remain must be sound, free of defects and deterioration which compromise its use.
    b. Repair and restore trim to usable condition. Patch or replace in-kind any deteriorated wood trim components.
ii. New wood trim will be installed in a workmanlike manner. Reference may be made to AWI standards.
iii. Other trim materials (PVC, cementitious, etc.) which are suitable may be used as appropriate and will be installed per manufacturer's recommendations.
iv. Trim which is part of the weather-tight enclosure will be flashed or caulked with joint sealers as necessary to prevent water intrusion.

Paint-

i. In general, all existing exterior wood surfaces will receive new paint coatings, except as
    a. Appropriate due to the recent application of paint and/or the sound condition of existing coatings.
ii. Examine surfaces and apply paint only to sound acceptable materials/surfaces.
    a. Prepare surfaces properly, removing loose or peeling previous paint.
    b. Paint prep will be done in accordance with applicable lead safe standards. (See Section XI N.1.b)
iii. Before painting, assure that any moisture issues which may compromise the life expectancy of the paint system are remedied.
iv. Exterior paint systems will be compatible and installed in accordance with manufacturer's specifications.

Building Structure -Energy Conservation

i. All structures shall comply with the energy conservation measures cited in these requirements. These measures include, but are not necessarily limited to, the following:
ii. Exterior existing walls are to be provided with insulation and at the recommended resistance factor (R-value) or R- 11, or that which is allowed by the stud cavity space. In addition, an air infiltration vapor barrier, such as Tyvek or approved equal, shall be installed on all exterior walls. If new walls are being framed and insulated, the minimum R factor is R-19 or R-13 plus R-5 foam. The installation of fan-fold foam or foam sheathing may be added to increase household R-ratings.
iii. When new windows are to be installed, windows must be current Energy Star rated for southern climates. Where historic preservation requirements will restrict the installation of aluminum or vinyl windows, the specifications will be written to come as close as possible to achieving Energy Star requirements.
iv. All heat ducts and hot water heat distribution piping shall be insulated or otherwise protected from heat loss where such ducts or piping runs are located in unheated spaces. Similarly, distribution piping for general use hot water shall also be protected from heat loss where such piping is located in unheated spaces. All water distribution piping shall be protected from freezing.
v. Attic access passage ways (scuttle holes) shall be no less than 22" by 30" or the size of

original construction. If it is impossible to conform to this standard, the largest attic access hole possible will be installed.

vi. "Building in" energy and environmental efficiency - through better windows, insulation and equipment - reduces operating costs over the life of the building.

Masonry Components

i. Buildings with masonry bearing walls will be examined for their structural integrity. Existing masonry building components will be examined to assure sound condition, and repaired as necessary to provide the load-bearing capacity, resistance to water penetration and aesthetic quality to assure the assemblies will perform for the purpose intended.
   - Masonry will be plumb and structurally sound.

ii. Repair or replace deteriorated portions or missing units.
   - Brick veneer will be sound or repaired to be sound.

iii. Masonry mortar joints will be sound, and free of loose or deteriorated mortar, with no voids.

iv. Pointing of mortar joints will be specified as necessary to assure the continued integrity of the structural assembly, and prevent water intrusion.

v. Historic masonry designated to remain will be restored to sound serviceable condition, and in accordance with Section 106 of National Historic Preservation Act.

vi. Where masonry is considered historic, repairs will be carried out utilizing the Secretary of the Interior's "Standards of Rehabilitation" and related NPS Preservation Briefs for "Repointing Mortar Joints on Historic Masonry Buildings."

vii. Chimneys: Assure structural integrity, reconstruct and point as necessary. If used for fuel heating appliances – provide lining as may be required by code and as prescribed by the heating appliance manufacturer.

Energy Efficiency - In general, most buildings will be rehabbed with a goal of increasing the thermal shell efficiency. All MHC HTF funded projects are subject to the MHC Design Standards. Included in this standard are mandatory requirements to achieve a maximum HERS score of 85. Additionally, water reduction measures are included. In both the design and implementation of the project rehabilitation scope of work, particular emphasis should be made to maximize the effectiveness of the energy efficiency related work scopes.

i. Insulation
   - Insulation levels will conform to the 2009 International Energy Efficiency Code.
   - Masonry walls will be insulated utilizing current building science detailing to ensure ongoing integrity of masonry systems.

ii. Air sealing – comply with HERS requirements for thermal bypass air sealing, and duct sealing.
   - Attention must be paid to the air barrier of each building and should be well thought out, detailed and carefully executed.
   - Blower door testing will be performed to verify compliance and successful execution.

iii. Indoor air quality

- In general, all thermal upgrades to a building will take into consideration indoor air quality and moisture control/mitigation, and apply the current state of the art building science in this regard. Treatment of existing stone, concrete or masonry basement walls and of existing basement earthen floors or uninsulated basement slabs will be taken into consideration with regard to the need for moisture mitigation.

iv. Ventilation

- Venting of crawl spaces, attics and sloped ceilings will be per code.
- See Section XI E.1.c for roof assembly ventilation.

Windows, Exterior Doors and Basement Entries

i. Every window, exterior door, basement entry 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:

ii. All exterior doors and windows shall be equipped with security locks and deadbolts.

iii. Every window sash shall be fully equipped with glass windowpanes, which are without cracks or holes. Every window sash to be replaced shall use Energy Star rated windows. Stained or leaded glass found to be historically significant might be protected by a fixed low-E glass storm window. Every window sash 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.

iv. Storm doors, when installed, shall also be equipped with a self-closing device.

v. 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.

vi. Every exterior door shall be not less than thirty six inches (3'- 0") in width and not less than six foot-six inches (6'8") in height. Existing door sizes will be grandfathered, but 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.

Minimum Standards for Heating and Cooling Systems

i. All heating and cooling 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. A licensed mechanical engineer shall design all new system design. Non-working or improperly functioning central air conditioning systems may be replaced in part or entirely.

ii. If existing heating systems, including but not limited to, chimneys and flues, cut-off valves and switches, limit controls, heat exchangers, burners, combustion and ventilation air, relief valves, drip legs and air, hot water, or steam delivery components (ducts, piping, etc.) that are not being replaced, shall be inspected by a licensed

mechanical engineer to be certified safe and in proper functioning condition at the time of inspection.

iii. 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.

iv. No heating system source burning solid, liquid or gaseous fuels shall be located in any habitable room or bathroom, including any toilet room.

v. 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.

vi. Every 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.

vii. Every seal between any of the sections of the heating source(s) shall be airtight so that noxious gases and fumes will not escape into the dwelling.

viii. No space heater shall be of a portable type.

ix. 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 northern climates). A digital programmable thermostat must be installed. Condensate lines will drain to a floor drain or have a condensate pump installed and piped to discharge. All furnace ductwork shall be equipped with an air filter clean out location that has a tight fitting cover installed over it.

x. All boilers, when replaced, will have an "A" rating and be no less than 90% 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. Programmable thermostats will be installed.

xi. A/C units, if added or replaced, shall not be less than 14.5 SEER or the lowest SEER rating that is available at the time of installation but not less than 14.5 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. Homeowners who use window air conditioners will be encouraged to purchase Energy Star rated air conditioners.

xii. No window A/C units may be purchased with HTF funds.

xiii. 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.

xiv. Any development receiving HTF must have central air and heat by the placed in service date. A certified letter from the development's architect or engineer must verify that the central heat and air system has the capacity to properly accommodate all of the units.

Minimum Standards for Ventilation (Exhaust System)

Sufficient ventilation shall be present to ensure adequate air circulation in the dwelling. Bathrooms, including toilet rooms, shall be provided with an exhaust fan. If it is being installed or replaced, it shall be rated at a minimum of 60 CFM and 4 sones or less. Fans shall have insulated ducting vented to the exterior. A fan needs to be installed, if there is no window or a non-operable window is present. Misaligned flue or ventilation systems on water heaters & HVAC and detection of propane, natural, or methane gas are prohibited.

Minimum Standards for Plumbing Systems

i. All dwelling plumbing systems shall be capable of safely and adequately providing a water supply and wastewater disposal for all plumbing fixtures. Every dwelling plumbing system shall comply with the following requirements.
ii. All existing plumbing systems and plumbing system components shall be free of leaks. When repairing or adding to such systems, any type of pipe allowed by the State plumbing code shall be allowed.
iii. All plumbing system piping shall be of adequate size to deliver water to plumbing fixtures and to convey wastewater from plumbing fixtures (Including proper slope of wastewater piping) as designed by the fixture manufacturer).
iv. All plumbing fixtures shall be in good condition, free of cracks and defects, and capable of being used for the purpose in which they were intended.
v. The plumbing system shall be vented in a manner that allows the wastewater system to function at atmospheric pressure and prevents the siphoning of water from fixtures. Venting by mechanical vents is accepted as an alternative to exterior atmospheric venting.
vi. All fixtures that discharge wastewater shall contain, or be discharged through, a trap that prevents the entry of sewer gas into the dwelling.
vii. All plumbing system piping and fixtures shall be installed in a manner that prevents the system, or any component of the system, from freezing.
viii. All plumbing fixtures and water connections shall be installed in such a way as to prevent the backflow of water from the system into the plumbing system's water source.
ix. Valves shall be installed with the valve in the upright position. When replacing valves, the use of a full port ball valve shall be encouraged.

Elevators are required in developments that provide for senior housing and special needs. Elevators may be installed when appropriate and possible, when such elevator is part of the Project's program goals, or as required by code, as follows:

- Installed per code NFPA 101, Chapter 9.4
- ASME 17.1 Safety Code for Elevators 2013

Existing elevators and lifts may be retained if they are appropriate to the use of the building and in serviceable condition with an expected useful life of 30 years, or covered by the 20-year capital plan and/or subsequent 5-year updates during the 30-year affordability period, and approved by agencies having jurisdiction.

WINDOWS - Windows will be of legal egress size when required by code.

Existing windows to remain

i. Examine and determine suitability for reuse with a reasonable remaining life after restoration of 30 years without undue future maintenance, or covered by the 20-year capital plan and/or subsequent 5-year updates during the 30-year affordability period.
ii. Will be capable of providing adequate seal against air infiltration, weather elements, and be determined to be appropriately energy efficient in keeping with the overall energy efficiency strategy of the project.
iii. Install new weather-stripping to provide seal against weather elements and air infiltration.
iv. Air seal shim spaces and window weight pockets if possible.
v. Restore and modify as required to provide useful life.
vi. Will be tested and modified as necessary to operate smoothly and properly per code.
vii. Hardware will be intact and operational, or be replaced with new hardware as required.

New Windows

i. Where existing windows do not meet the standards for egress, condition and/or energy efficiency deemed appropriate to the project, they will be replaced by new windows.
ii. New windows will be code-compliant and conform to International Energy Code requirements.
iii. Additionally, new window units should be tested assemblies meeting ASTM standards for water penetration and air leakage.
iv. All windows will be installed per manufacturer's installation guidelines and specifications, and will incorporate appropriate detail, flashings, joint sealers, and air sealing techniques.

Ventilation

i. Code-compliant indoor air quality will be addressed by the installation of either exhaust only or balanced (heat recovery) ventilation systems as required by ASHRAE 62.2.
ii. Balanced mechanical ventilation systems are encouraged.
iii. Ventilation controls will be per applicable codes.

Electrical

i. Project electrical design should be done by a licensed electrical engineer, or other qualified professional.
ii. Project electrical must be installed by a licensed electrician.
iii. Energy efficiency:
iv. Electrical and lighting systems will be designed and constructed in accordance with the MHC Design Standards and achieve a maximum HERS score of 85.
v. Design will comply with local and state building code. In general, the electrical system should be new throughout a building:
vi. Where existing service entrances, disconnects, meters, distribution wiring, panels, and devices are proposed to remain, they will be examined and determined to be in good condition, code-compliant and have a remaining useful life of a minimum of 30 years, or covered by the 20-year capital plan and/or subsequent 5-year updates during the 30-

year affordability period. The designer, in concert with the state electrical inspector, will examine the system and equipment. Existing components of the electrical system may be reused as appropriate. Substandard or critical non-code-compliant components must be replaced.

vii. Utility connections will be installed per the rules and regulations of the electrical utility.
viii. Electrical service and metering:
ix. The service entrance size will be calculated to handle the proposed electrical loads.
x. Metering and disconnects will be per code and mounted at approved locations.
xi. Elevator wiring will conform to the ANSI 17.1.
xii. Electrical distribution system:
    a. Lighting and receptacle circuits will be designed per code.
    b. Locations and layout of devices and lighting to be logical and accessibility-compliant where required.
    c. Provision will be made for the wiring of dedicated equipment circuits and connections for heating, ventilation equipment/exhaust fans, pumps, appliances, etc.
xiii. Artificial lighting will be provided using IBC 1205.
xiv. Site lighting with shielded fixtures may be provided to illuminate parking and pedestrian walkways, and will conform to local zoning.
xv. Emergency and exit lighting/illuminated signage will be per the NFPA 101, Life Safety Code and IBC Chapter 10.

Fire detection and alarms

i. Will be installed as required by code: NFPA 101, Chapters 9.6, 30.3.4 and/or 31.3.4, and comply with NFPA 72, and NFPA 1.
ii. Smoke detectors will be installed per International Fire Code requirements.
iii. CO detectors will be installed per International Fire Code.
iv. Where required, system annunciation will be in accordance with International Fire Code.
    a. C.'Communication low-voltage wiring- provisions for TV, telephone, internet data, security and intercoms should be considered and installed as appropriate to the project's use and livability.
    b. PV Solar- an optional solar-powered photovoltaic panel system may be installed in accordance with the National Electrical code, sstate energy code, and the regulations of the governing utility.
    c.

Porches, decks and steps

i. Existing porches, decks, steps, and railings proposed to remain will be examined and repaired as necessary.
ii. Repair and reconstruction will be carried out to assure that they will have a continued useful life of 30 years, or covered by the 20-year capital plan and/or subsequent five year updates during the 30-year affordability period.
iii. Inspect structure for soundness and reconstruct any deteriorated members as required.
iv. Install new support piers as may be required.
v. Patch existing decking with matching materials, or install new durable decking.

Kitchen cabinetry and counters:

Existing cabinetry and/or countertops- proposed to remain will be in good condition with a remaining useful life of 30 years, or covered by the 20-year capital plan and/or subsequent five year updates during the 30-year affordability period.

New cabinetry:

i. Will be of good quality, meeting ANSI/KCMA A161.1-2012 "Performance & Construction Standards for Kitchen Cabinetry and Bath Vanities" standards. Other industry standards for cabinetry may be used as guidelines, such as the Kitchen Cabinet Manufacturer's Association (KCMA) "Severe Use Specification – 2014," or the AWI's Woodwork Standards and Cabinet Fabrication Handbook.
ii. New counters will be provided with a cleanable sanitary surface material impervious to water such as high pressure laminate (HPL).
iii. Shop fabricated as one-piece assembly where possible. Seal field joints.
iv. Installed level and securely fastened to cabinetry.
v. Bath cabinetry and counters – vanity lavatory tops, when used, should be one-piece integral bowl with integral backsplash.
vi. Pointing of mortar joints will be specified as necessary to assure the continued integrity of the structural assembly.
vii. New below-grade structures to conform to Chapter 18 of IBC as appropriate.
viii. Mechanical rooms - Provide sound concrete floors with raised housekeeping pads for equipment.
ix. Tenant accessed utility spaces (storage, laundry rooms, etc.) – provide sound concrete floors.
x. Moisture mitigation:
xi. Water and damp proofing – where possible and as may be required by existing conditions of groundwater and storm water intrusion into subsurface portions of buildings, provide waterproofing or damp proofing as appropriate.
xii. Provide vapor barriers covered with a wear layer of pea stone over earthen basement or crawl space floors to remain.

Ventilation of basements and crawl spaces per IBC, Chapter 1203.

1.1.3. LEAD-BASED PAINT REQUIREMENT

Standards require housing to meet applicable provisions of 24 CFR PARTS 35.

Hazardous Materials: Asbestos, Lead-based paint and Other Contaminants
Asbestos, lead paint, and other hazards, when identified, shall be addressed in conformance with applicable local, state, and federal laws. Rehabilitated properties shall be cleaned to pass a lead dust clearance test to the levels prescribed by HUD regulations.

Properties to be assisted with HTF must complete a Phase II (rehabilitated properties) hazardous material inspection survey completed by a licensed environmental engineer and MDEQ certified inspector. The hazardous material survey shall define the presence of, or lack thereof, any environmental hazards such as asbestos, lead paint and mold or other contaminant on the site. Any property to be rehabilitated shall meet the lead-based paint requirements at 24 CFR Part 35. The hazardous material inspections shall be included in the capital needs assessment and all rehabilitation plans shall include MDEQ approved abatement of all hazardous materials. A number of regulations apply when lead painted surfaces are disturbed in residential properties, primarily requiring the appropriate training of workers and the use of safe work practices.

Federal and state regulations related to lead-based paint apply to target housing, which is defined as any housing constructed prior to 1978, except housing for the elderly or persons with disabilities (unless a child of less than six years of age resides or is expected to reside in such housing for the elderly or persons with disabilities) or any zero-bedroom dwelling. Rehabilitation of target housing must be completed in a manner which ensures the health and safety of workers and residents, especially children. A number of regulations apply when lead painted surfaces are disturbed in residential properties, primarily requiring the appropriate training of workers and the use of safe work practices.
Lead –Containing Components-Deteriorated lead-based paint on walls, trim, doors, and cabinets must be stabilized using lead-safe work practices. The following regulations must be adhered to during all rehabilitation of target housing:

Federal Regulations
HUD Lead Safe Housing Rule (Title 24, Part 35) requires various levels of evaluation and treatment of lead paint hazards when federal money is used for rehabilitation of target housing. More information is available at:
http://portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/e enforcement/lshr
EPA Renovation Repair and Painting Rule (40 CFR Part 745) – Requires contractors conducting renovation, repair or maintenance that disturbs paint in target housing or child-occupied facilities to be licensed by EPA and use lead- safe work practices to complete the work. Developers must ensure contractors are properly trained and licensed. More information is available at: http://www2.epa.gov/lead
HUD/EPA Disclosure Regulations (Title 24, Part 35, Subpart A) – Requires owners
Of target housing to disclose all lead paint records and related information to potential buyers and/or tenants. More information is available at:
http://portal.hud.gov/hudportal/documents/huddoc?id=DOC_12347.pdf
OSHA Lead in Construction Rule (29 CFR Part 1926.62) - Proscribes personal protection measures to be taken when workers are exposed to any lead during construction projects. More information is available at:
https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10641

Asbestos
Project will be assessed for the existence of asbestos-containing building materials by qualified professionals:

- National Emission Standards for Hazardous Air Pollutants (NESHAP) apply.
- Removal of asbestos must be carried out per federal EPA and state regulations and rules.

1.1.4. ACCESSIBILITY

HTF housing must meet the accessibility requirements in 24 CFR part 8, which implements section 504 of the Rehabilitation Act of 1973 (29 U.S.C. 794), and Titles II and III of the Americans with Disabilities Act (42 U.S.C. 12131-12189) implemented at 28 CFR parts 35 and 36, as applicable. "Covered multifamily dwellings," as defined at 24 CFR 100.201, must also meet the design and construction requirements at 24 CFR 100.205, which implements the Fair Housing Act (42 U.S.C. 3601-3619).

MHC requires that all housing rehabilitated with HTF funds must meet all applicable federal, state, and local regulations regarding accessibility for persons with disabilities. The applicability of these rules is complex and therefore, it is recommended that developers seeking HTF funds consult with a qualified design professional.

Site and Neighborhood Standards for Fair Housing

Site and neighborhood standards do not apply to rehabilitation projects under HTF. However, if project-based vouchers are used in an HTF rehabilitation unit, the site and neighborhood standards for project-based vouchers will apply. In addition, the requirements of 24 CFR Part 8 (which implements section 504 of the Rehabilitation Act of 1973) applies to the HTF, and specifically address the site selection with respect to accessibility for persons with disabilities. The site development must be designed to:
Meet ADA and HUD standards for all applicable handicapped accessibility requirements.
Provide paved accessible paths to all primary entries of all ground floor units and all common and public facilities per ADA and the Fair Housing Act. **(See Section 9 of the QAP 2016)**
An overview of these requirements is provided below:

General Requirements

i. Projects must meet applicable federal, state, and local regulations and rules.
ii. Projects must provide not less than 5 percent of the total units as accessible Type A units, with at least one of the units providing a roll-in shower.
iii. Projects must comply with the Americans with Disabilities Act (ADA), Title II (for public entities) and Title III (for places of public accommodations) implemented at 24 CFR parts 35 and 36, and 2010 ADA Standard for Accessible Design and attendant Design Guide, as applicable.
iv. Projects, if applicable, must comply with the Fair Housing Act, which states in part that covered multifamily dwellings as defined by HUD's implementing regulations at 24 CFR 100.201 must meet the design requirements at 24 CFR 100.205.
v. Projects must comply with ANSI A117.1 as adopted by the State of Mississippi building codes.
vi. Projects must comply with other standards as may apply or be required by funding sources

vii. (i.e. USDA Rural Development, Uniform Federal Accessibility Standards, etc.).
viii. Projects, if applicable, must comply with Section 504 of the Rehabilitation Act of 1973 implemented at 24 CFR Part 8.
ix. For "substantial" rehabilitation (projects with 15 or more total units and the cost of rehabilitation is 75 percent or more of the replacement cost):
x. At least 5 percent of the units (1 minimum) must be made fully accessible for persons with mobility impairments as described by ANSI A117.1 Type A requirements.
xi. In addition, at least 2 percent of the units (one additional unit minimum) must be made accessible for persons with sensory impairments.
xii. Common spaces must be made accessible to the greatest extent feasible.
xiii. For projects with "less-than-substantial" rehabilitation (anything less than "substantial"), the project must be made accessible to the greatest extent feasible until 5 percent of the units are physically accessible and common spaces should be made accessible as much as possible.

1.1.5. DISASTER MITIGATION

Where relevant, the standards must require the housing to be improved to mitigate the potential impact of potential disasters (e.g., earthquakes, hurricanes, floods, and wildfires) in accordance with state or local codes, ordinances, and requirements, or such other requirements that HUD may establish.

To the extent applicable/relevant, the housing must be improved to mitigate the potential impact of potential disasters (e.g. earthquakes, floods, wildfires) in accordance with state or local codes, ordinances and requirements or such other requirements that HUD may establish.

i. Specifically regarding flood hazards:
a. Projects must meet FEMA federal regulation, and HUD's floodplain management requirements at 24 CFR 55, including the 8-Step Floodplain Management Process (when applicable) at 24 CFR 55.20.
b. Projects must meet fluvial erosion prevention requirements per local municipality regulations.

ii. Specifically regarding earthquakes:
a. Projects located in earthquake prone regions must be assessed by a registered structural engineer for compliance with Section 707 of the 2012 International Existing Building Code.
b. Projects located in earthquake-prone regions must further complete soils testing and grading of the soils by a registered soils engineer in accordance with the 2012 International Building Code Requirements. Such soils classifications will be used to determine if voluntary improvements of the seismic force-resisting system (Section 707.6 2012 IEBC) will be voluntary or compulsory.

iii. Specifically regarding wildfires:
a. Projects located in wildfire-prone areas or which are located next to large expanses of forest, brush, open fields, or within predominantly natural landscapes will make efforts to reduce exposure to wildfires.
b. Projects located in wildfire-prone areas will utilize best practices to protect the project including readily available information provided through the U.S. Forest Service and NFPA

Firewise Community Program. Such efforts toward preparation will include basics of defensible space and sound landscaping techniques.

1.1.6. STATE AND LOCAL CODES, ORDINANCES, AND ZONING REQUIREMENTS

All housing projects must meet all applicable State and local codes, ordinances, and zoning requirements that apply during rehabilitation and upon project completion...

HTF- assisted rehabilitated projects must meet State or local residential and building codes, as applicable or, in the absence of a State or local building code, the 2012, 2015 International Residential Code or 2012, 2015 International Building Code (as applicable to the type of housing) of the International Code Council. The State of Mississippi has adopted as a minimum editions of the International Building Code and any additional codes as adopted by the Mississippi Building Code Council. Jurisdictions currently adopted either the 2012 or the 2015 International Building Code and other codes as required by the Mississippi Building Code Council. The Council requires along with the Building Code the 2012, 2015 IRC, IFC, IFGC, IMC and the IPC. State Adoption Codes but not limited to:

- 2015 International Building Code
- 2015 International Existing Building Code
- 2012 International Fire Code
- 2015 International Fuel Gas Code
- 2012 International Mechanical Code
- 2015 International Plumbing Code
- 2015 International Residential Code

Additionally, the following apply:

- 2010 ADA Standards for Accessible Design
- Fair Housing Act
- Section 504 of the Rehabilitation Act of 1973

Building Occupancy & Construction Type

- Fire resistance rating separation requirements per code.
- Must comply with **IBC chapters 4, 5, and 6**.

Historic Buildings

i. Must comply with Mississippi existing building code.
ii. Must comply with IBC, chapter 3409.
iii. Historic buildings must be rehabilitated in a manner consistent with the requirements of Section 106 of the National Historic Preservation Act and the Secretary of Interior's

Standards for Rehabilitation and Guidelines for Rehabilitation of Historic Buildings.

Developers are responsible for meeting all accessibility requirements for their project:

i. All MHC HTF assisted projects must demonstrate compliance with all applicable federal, state and local codes, standards, and ordinances through an MHC-approved set of permit documents (plans and specifications) prepared by an architect, stamped and signed by the design professional, and approved by the appropriate building officials.
ii. A code review analysis will be provided by the project's design professionals itemizing the applicable codes for each area of discipline.
iii. All code, and legal requirements must be complete that are required for building permits or in the case where building permits are not required the architect must additionally certify the design meets all applicable building codes.

Energy Standards

All HTF assisted projects must meet the Energy Standards listed in the 2012 International Energy Conservation Code for Residential Buildings. The 2012 International Building Code conservation energy reduction requirement ensures housing will be "Green" substainable. New buildings shall be designed to utilize passive cooling, heating and natural light harvesting. Existing buildings attempt to reduce energy consumption but shall not add any additional total building energy consumption when complete. (Note: This requirement exceeds section 109 of the Cranston-Gonzalez NationalAffordable Housing Act (42 U.S.C. 12709.)
All rehabilitated residential building HTF –Assisted Development Units are required to adhere to the following:

i. Use of all Energy Star rated appliances.
ii. Use of low or zero V.O.C. (Volatile Organic Compounds) interior paints.
iii. Use of Formaldehyde-free insulation
iv. Use of at least of one (1) high efficiency toilet or dual flush per unit.
v. Use of double glazed, insulated energy efficient windows, with Low-E glazing and a minimum: U factor of .55, Heat Gain Coefficient of .29 and Visibility Transfer of .52
vi. Use of alternate, high efficient H.V.A.C. sources and delivery systems (14 SEER).
vii. Use of water efficient landscape plants
viii. Use of efficient, compact site design (when local codes allow).
ix. Use of Gutters and downspouts at eaves less than 12" on 1 story and less than 24" on 2nd level downspouts to underground drain system or concrete splash blocks or hard surface required.
x. Use of PEX plumbing systems for domestic water.
xi. Use of Day-lighting. Day-lighting includes strategies for increasing the percentage of illumination provided building orientation and room layout.

1.1.7. UNIFORM PHYSICAL CONDITION STANDARDS (UPCS)

MHC's HTF Standards are designed to exceed the Uniform Physical Condition Standards (UPCS) and ensure that upon completion, HTF-assisted project and units will be decent, safe, sanitary, and in good repair as described in 24 CFR 5.703. ***These standards will address***

the following inspectable items: Site, Building Exterior, Building Systems, Dwelling Units, Common areas, Health and Safety Concerns and Compliance with State and local codes.

See Attachment-Appendix A attached hereto for a list of Inspectable Items and Observable Deficiencies, including descriptions of the type and degree of deficiency for each item that any HTF-assisted project must address, at a minimum.

Highlighted items noted in orange or life-threatening and must be addressed immediately, if the housing is occupied.

****All HTF-Assisted Rehabilitation Projects must comply with the rehabilitation standards found in Appendix A.***

HTF-REHABILITATION STANDARDS

Inspectable-Site - Defined as the area surrounding the buildings of a property: Fencing and gates, retaining walls, grounds, mailboxes, project signs, parking lots, driveways, play areas and equipment, refuse disposal, storm drainage and walkways and steps are required to be free of health and safety hazards and be in good repair.

The site will not be subject to material adverse conditions, such as abandoned vehicles, dangerous walks or steps, poor drainage, septic tank backups, sewer hazards, excess accumulations of trash, vermin or rodent infestation or fire hazards.

(See Appendix A- UPCS for Multifamily Housing Rehabilitation Requirements for Site)

General: Assure that the site is safe, clean and usable and designed with details, assemblies and materials to provide ongoing durability without undue future maintenance.

i. Site design and engineering will be conducted by a licensed professional civil engineer or other qualified professional.
ii. Design and systems will conform to all applicable codes, rules and regulations:
iii. State, Local and Municipal zoning.
iv. Local fire Code 2012 International Fire Code.
v. Utility connections, yard lines and laterals in accordance with state utility ordinances. Underground or overhead utilities – as regulated by code and utility rules.
vi. **Fencing and Gates-**Missing exterior fence, security fence missing or damaged to the point it does not function as it should ; Any holes in fence or gate is larger than 6 inches by 6 inches must be addressed due to threaten safety or security.
vii. **Vehicular access to public way** – Site design will conform to local zoning and regulations, as well as be sensible in its layout to maximize vehicular and pedestrian safety.
viii. **Grounds**-Erosion/Rutting Areas- must be addressed where runoff has extensively displaced soils which has caused visible damage or potential failure to adjoining structures or threatens the safety of pedestrians or makes the grounds unusable

ix. **Landscaping** – Required at all properties maximizing existing natural features or otherwise enhancing open spaces. Address vegetation which has visibly damaged a component, area or system of the property.

x. **Storm water** shall be diverted off of paved surfaces and into a site drainage detention or retention areas and drainage system or away from buildings.

xi. **Drainage –** assure that the grading surrounding the building will slope away from the building and drain properly, without ponding or erosion.

xii. **Mailboxes** - Provision will be made for USPS-approved cluster mailbox units if required by the USPS. Each site and dwelling unit shall have an access to a mailbox installed per US Postal Service regulations at a building entrance or at the unit. Match lighting intensity and quality to the use for which it is intended.

xiii. **Solid waste collection & storage** – if necessary, provision will be made for the outdoor storage and collection of solid waste and recycling materials in receptacles (dumpsters, wheeled trash cans, totes). Enclosures may be provided and should be accessible as required by code. Garbage collection areas must be screened.

xiv. **Parking** will be adequate for project type, meet local codes and be designed to drain well, with a durable appropriate surface material. Handicapped parking will be provided as required. All multifamily developments must have a minimum of two (2) parking spaces per unit or 1.5 spaces per unit for elderly properties. MHC will allow a waiver of these parking requirements subject to the local jurisdiction's parking requirements and/or evidence of actual parking need. All existing parking and driveways shall be restored to a good condition: The parking area shall be one of the following Materials: Crushed #57 limestone gravel, 4" thick, and compacted; hot mix asphaltic concrete pavement or 4 inch reinforced concrete.

xv. **Pedestrian Access and Hardscape** -In general, paved walkways within the site will be designed to provide sensible pedestrian access from the public way into the site, from parking areas, and provide access to buildings. All walkways should generally conform to applicable codes for width and slopes, and fall protection. Existing walkways shall be in a good condition and free of cracks and joints with elevation changes greater than allowed by accessibility requirements. Defective conditions, such as excessive deterioration, shall be corrected by replacing the defective area.

    a. Designed to minimize conflicts between vehicles and pedestrians. Bicycle and pedestrian paths will be separate from vehicular traffic. Open spaces are linked so that they form an uninterrupted network of vehicle-free areas. Traffic calming strategies are required to slow down cars within the development.

xvi. **Site Amenities** may be provided which enhance the livability of the project including playground areas, seating, benches, patio areas, picnic tables, bike racks, grills and fencing, etc.

xvii. Site lighting with shielded fixtures may be provided to illuminate parking and pedestrian walkways, and will conform to local zoning.

xviii. Energy efficient lighting will be employed with emphasis on LED fixtures.

xix. Exterior lighting shall meet all minimum requirements for safe visibility per the activity area; i.e., parking walks, porches, entrances.

xx. Position exterior fixtures to avoid lighting, which shines directly into dwelling units or is overly intense and bright. Consider light fixtures, which minimize overall light "pollution.

xxi. All paving at trash dumpsters where heavy trucks will pick up trash shall be designed as heavy load paving. All new paving shall be on approved compacted structural fill per the recommendation of a licensed soils engineer.

xxii. **Project Sign**- Entry signage and building numbers shall be light for nighttime visibility.

xxiii. **Stairs-** will be safe and sound, constructed of durable materials, with proper rise and run, and with code-approved railings as required. Accessible routes into buildings will be provided as required by code. Where ramps are provided they shall be constructed in compliance with ADA. Where handrails and guardrails are required or included in the scope of work, they shall meet and shall be constructed in compliance with ADA.

- Identify all common area facilities on an accessible path (show walkways slope and landing dimensions at ramps, accessible parking spaces, van stall location, and trash enclosures).
- All private and public open spaces shall be large enough so that they can actually be used as intended. Examples of non-compliant spaces include but are not limited to, narrow balconies, decks and porches that cannot accommodate furniture and common circulation.
- All parking required by zoning codes and MHC parking requirements for housing will be enforced. Where garages or carports required or included, locate them on the side or rear of units. Fronts and street elevations shall have covered entries and porches.

Inspectable Item-Building Exterior

All housing assisted with the HTF must be structurally sound, secure, habitable, and in good repair. Fair housing issues, doors, fire escapes, foundations, lighting, roofs, walls, and windows, where applicable will be free of health and safety hazards, operable and in good repair.

(See Appendix A- UPCS for Multifamily Housing Rehabilitation Requirements for Building Exterior)

i. Building access – in general the access to a building will be safe, logical, readily identifiable, sheltered from the weather, and meeting the exit requirements to a public way. Pathways of circulation within a building will also be safe and logical.

ii. Means of egress components must be in conformance **with Chapter 10 of the IBC**, including complete layout of the exits, corridor and stair dimensional requirements and arrangement, doors sizes and swings, door hardware, panic exit devices, door self-closers, interior finishes, walking surfaces, fire separations, stair enclosures, guards and railings, ramps, occupant load calculations, illumination and signage.

iii. Design and rehabilitation of the property must be in conformance with MHC Design Standards and **ADA Requirements**.

iv. Building exteriors will be improved to increase curb appeal and provide greater longevity/durability to the existing building.

v. Existing outbuildings and utility structures which are being retained will be in sound and serviceable condition, and not create health, safety or undue maintenance issues for the project.

vi. Building **foundations**, framing, structure, floor and roof decks shall be stable, meet code requirements for vertical and lateral loading and materially in good condition. All cracking or settling of concrete foundations and masonry must be repaired. All crawlspaces must be investigated and assessed for the presence of mold, plumbing leaks, and deteriorating structures. All crawl spaces must meet minimum energy and fire code requirements. The underside of all conventional foundation floor decks shall be insulated and sealed from the crawl space with an impermeable vapor barrier.

vii. Site lighting with shielded fixtures may be provided to illuminate parking and pedestrian walkways, and will conform to local zoning.

viii. Energy efficient lighting will be employed with emphasis on LED fixtures.

ix. Exterior lighting shall meet all minimum requirements for safe visibility per the activity area; i.e., parking walks, porches, entrances.

x. Position exterior fixtures to avoid lighting, which shines directly into dwelling units or is overly intense and bright.

xi. Consider light fixtures, which minimize overall light "pollution.

Walls

i. Where existing finishes are proposed to remain, they will be determined to meet the standard of being sound, durable, lead-safe, and have a remaining useful life of no less than 30 years, or covered by the 20- year capital plan and/or subsequent five year updates during the 30-year affordability period.

ii. Where existing finishes are proposed to remain as part of a fire-rated assembly, the **state DPS** will assist in making a determination as to the suitability. Refer to codes as they pertain to archaic materials, and relevant NPS Preservation Briefs.

Exits

Every exit from every dwelling shall comply with the following requirements:

i. Every habitable room shall have two (2) independent and unobstructed means of egress.

ii. This is normally achieved through an entrance door and an egress window. All above grade egress windows from habitable rooms shall have a net clear opening of 5.7 square feet. The minimum net clear opening width dimension shall not be less than twenty inches (20”) wide, and the minimum net clear opening height dimension shall not be less than twenty-four inches (24”) wide.

iii. *Note that the combination of minimum window width and minimum window height opening size does not meet the 5.7 square feet requirements. Therefore, the window size will need to be greater than the minimum opening sizes in either width or height.

iv. Where windows are provided as a means of escape or rescue, they shall have a finished sill height of not more than forty-eight inches (48”) above the floor in basements. Egress windows with a finished sill height of more than forty-eight inches (48”) shall have a permanently installed step platform that is in compliance with stair construction standards.

v. All at-grade e egress windows from habitable rooms may be reduced in size to 5.0

square feet of operable window area, but the area must meet the minimum width and height requirements of all egress windows.

vi. When windows are being replaced within existing openings, the existing window size shall be determined to be of sufficient size even if current window sizes do not meet current egress standards. However, if the specification writer determines that changing the window size is beneficial; such egress window size modification will be allowed but not required. If new construction windows are being installed, these windows must meet all egress window requirements (for example, if adding on to existing building in a rehabilitation or adaptive reuse).

vii. Blocked or unusable emergency or **fire exits,** visibly missing components of fire escapes, security bars preventing exit through windows are prohibited and will be address/corrected.

Railings

i. Will be sound and adequately fastened to meet code requirements for structural loading. Repair or replace in-kind as appropriate.

ii. Will meet code requirements for height of protective guards, or have supplemental guards installed.

iii. Steps will be safe and sound and meet applicable codes, with railings as necessary.

iv. All porch elements will be able to withstand the weather elements to prevent premature deterioration.

v. Roof replacement shall be installed in accordance with the manufacturer's requirements.

Ventilation

Roof assemblies will be properly ventilated in accordance with applicable code requirements, and appropriate building science detailing.

Doors

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.
Every exterior door shall be not less than two foot-four inches (3'- 0") in width and not less than six foot-six inches (6'8") in height. Existing door sizes will be grandfathered, but 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.

i. Doors to meet code requirements **IBC Chapter 10.**

ii. Meet egress requirements for dimensions, swing and clearances, and be accessibility-compliant as required.

iii. Be sound and secure.

iv. New doors will be installed per manufacturer's recommendations and standard trade practice standards.

v. Flash properly, and have shim spaces insulated.

vi. Existing doors to remain should be examined and determined to be suitable for reuse

vii. with a remaining life after restoration of 30 years, or covered by the 20-year capital plan and/or subsequent five year updates during the 30-year affordability period.
viii. Restore as required to provide useful life.
ix. Will be tested and modified as necessary to operate properly.
x. Install new weather-stripping and sweeps to provide seal against weather elements and air infiltration.

Historic doors designated to remain will be restored to sound serviceable condition, and in accordance with the Secretary of the Interior's "Standards for Rehabilitation" project requirements.

Apartment doors

- Apartment unit entry doors will be fire-rated as required by code.
- Other doors – Access doors will meet code requirements for fire rating. Door hardware will operate properly, be secure and must meet accessibility standards and **NFPA 101, IBC Chapter 10.**

Windows

Every window, exterior door, basement entry 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:

All exterior doors and windows shall be equipped with security locks and deadbolts. Every window sash shall be fully equipped with glass windowpanes, which are without cracks or holes. Every window sash to be replaced shall use Energy Star rated windows. Stained or leaded glass found to be historically significant might be protected by a fixed low-E glass storm window. Every window sash 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.
Storm doors, when installed, shall also be equipped with a self-closing device.

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.
Every exterior door shall be not less than two foot-four inches (3'- 0") in width and not less than six foot-six inches (6'8") in height. Existing door sizes will be grandfathered, but 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.

INSPECTABLE ITEM-BUILDING SYSTEMS

All HTF-assisted building's domestic water, electrical system, elevators, emergency power, fire protection, HVAC, exhaust system, and sanitary system will be free of health and safety hazards, functionally adequate, operable, and in good repair.

(See Appendix A- UPCS for Multifamily Housing Rehabilitation Requirements for Building Systems)

Design and systems will conform to all applicable codes, rules and regulations:

- State, Local and Municipal zoning.
- Local fire Code 2012 International Fire Code.

HVAC-Heating, ventilating, and air conditioning systems must be replaced, if they do not meet requirements of applicable building codes or have sufficient life commensurate with the HTF affordability period. The duct system must also be replaced as required to meet applicable codes.

Electrical System

i. The existing **electrical service power** and data systems shall be upgraded to meet all applicable codes.
ii. Project electrical design should be done by a licensed electrical engineer, or other qualified professional.
iii. Project electrical must be installed by a licensed electrician.
iv. Design will comply with local and state building code. In general, the electrical system should be new throughout a building:
   - Where existing service entrances, disconnects, meters, distribution wiring, panels, and devices are proposed to remain, they will be examined and determined to be in good condition and code-compliant
   - The designer, in concert with the state electrical inspector, will examine the system and equipment. Existing components of the electrical system may be reused as appropriate. Substandard or critical non-code-compliant components must be replaced.
   - Utility connections will be installed per the rules and regulations of the electrical utility.
v. Electrical service and metering:
   - The service entrance size will be calculated to handle the proposed electrical loads.
   - Metering and disconnects will be per code and mounted at approved locations.

Fire protection

i. In general, all buildings assisted with HTF funds will have automatic fire suppression as required by applicable codes with approved sprinkler systems installed as required by NFPA 13 or 13R.
   - Automatic fire suppression systems will be designed by an engineer licensed in the State of Mississippi and installed by an approved licensed contractor.
   - Provide fire pumps, standpipes, and fire department connection as required per NFPA 13, 14 & 25.
ii. Where possible, piping for the sprinkler system will be concealed.

Fire detection and alarms:

i. Will be installed as required by code: **NFPA 101, Chapters 9.6, 30.3.4 and/or 31.3.4, and comply with NFPA 72, and NFPA 1.**
ii. Smoke detectors will be installed per International Fire Code requirements.
iii. CO detectors will be installed per International Fire Code.
iv. Where required, system annunciation will be in accordance with International Fire Code.

Blocked or unusable emergency or **fire exits,** visibly missing components of fire escapes, security bars preventing exit through windows are prohibited and will be address/corrected

Domestic Hot Water

Install pipe insulation per code.

Elevators are required in developments that provide for senior housing and special needs. Elevators may be installed when appropriate and possible, when such elevator is part of the Project's program goals, or as required by code, as follows:

- Installed per code NFPA 101, Chapter 9.4
- ASME 17.1 Safety Code for Elevators 2013
- Existing elevators and lifts may be retained if they are appropriate to the use of the building and in serviceable condition with an expected useful life of 30 years, or covered by the 20-year capital plan and/or subsequent 5-year updates during the 30-year affordability period, and approved by agencies having jurisdiction.

INSPECTABLE-DWELLING UNITS

Each HTF-Assisted units within a building will be structurally sound, habitable, and in good repair. Bathroom, ceiling, doors, electrical systems, floors, hot water heater, HVAC, kitchen, laundry area, lighting, outlets/switches, patio/porch/balcony, smoke detectors, stairs, walls, and windows must be free of health and safety hazards, functionally adequate, operable, and in good repair. The dwelling is required to have hot and cold running water, including an adequate source of potable water. In addition, the dwelling must include at least one battery-operated or hard-wired smoke detector, in proper working condition, on each level of the unit. Sanitary facilities include in the dwelling must be in proper operating condition, usable in privacy, and adequate for personal hygiene and the disposal of human waste.

(See Appendix A- UPCS for Multifamily Housing Rehabilitation Requirements for Units)

Apartment Layout:

i. Room sizes –minimum in accordance with **IBC 1208 and/or local codes**.
ii. Interior environment must comply with **Chapter 12 of the IBC**.
iii. Kitchens – in general, for apartment buildings – each unit will have a functional and code-compliant kitchen.
iv. SROs and other special housing types may be an exception.
v. Baths – in general, for apartment buildings – each unit will have a functional and code- compliant bath in accordance with **IBC 1210**

Lighting

i. Every habitable room and every bathroom (including toilet room), laundry room, furnace or utility room, and hallway shall have at least one (1) ceiling or wall-type electric light fixture, controlled by a remote wall switch. Habitable rooms (except kitchens or kitchenettes) may have a wall-type electrical outlet controlled by a remote wall switch in

lieu of a ceiling or wall-type light fixture. Energy efficient fixtures that meet energy star ratings and LED's and compact florescent bulb equivalent or better shall be installed in all new fixture installations.

ii. All stairwells shall have at least one light fixture controlled by a remote wall switch at the top and bottom of the stairs.

iii. All pendant type lighting fixtures that are supported only by the electrical supply wire shall be removed or replaced. If replaced, replace with Energy Star rated fixtures.

iv. Recommend lighting be provided from a variety of sources. Access to natural light in all bedrooms and the living room is essential and cross ventilation throughout the unit is encouraged.

v. Consider layouts that allow natural light to the kitchen and allow the natural ventilation and lighting of bathrooms.

Bathroom

i. Every dwelling shall contain a room, which is equipped with a flush toilet and a lavatory. The flush water closet shall be connected to the cold potable water supply, under pressure, and to the sanitary sewer system. The lavatory shall be connected to both a hot and cold potable water supply, under pressure, and connected to the sanitary sewer System. When replacing such components, water supply shut-off valves shall be installed.

ii. Every dwelling shall contain a bathtub and/or shower. The bathtub and/or shower unit(s) needs to 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. The unit shall be connected to both hot and cold potable water supply lines, under pressure, and shall be connected to the sanitary sewer system. Where feasible, shut off valves shall be installed on the water supply lines. All faucets, when replaced, shall be water balancing scald guard type faucets.

iii. Secondary baths must have at least one door that is 2'8". This allows for wheel chair access (Fair Housing Standard). (**Addendum B Minimum Quality Standards QAP)**

iv. Every toilet room and/or every bathroom (the room or rooms containing the bathtub and/or shower unit) shall be contained in a room or rooms that afford privacy to a person within said room or rooms. Every toilet room and/or bathroom shall have doors equipped with a privacy lock or latch in good working order.

v. Toilet accessories – each bath will have appropriate accessories such as towel bars, robe hooks, bath tissue holders, etc., installed and securely fastened in place. Accessories will be located per accessibility requirements where necessary. Medicine cabinets and mirrors – install in each unit bath as appropriate.

vi. Electric Outlets/Switches

vii. Missing electrical outlets and switches, broken cover plates for electrical outlets or switches, circuit breakers on electrical panels or boxes, covers for electrical panels or boxes, water leaks on or near electrical equipment are prohibited and will be addressed/corrected.

viii. Every dwelling unit, at a minimum, shall have a 100-ampere breaker controlled

electrical panel. All electrical work shall be in compliance with adopted State electrical code requirements. The panel, service mast, etc. shall also be installed to local utility company requirements.

ix. Every habitable room within the dwelling shall contain at least two (2) separate duplex, wall-type electrical outlets. Placement of such outlets shall be on separate walls. All newly installed receptacles shall be grounded duplex receptacles or GFCI protected.

x. All electrical outlets used in bathrooms and toilet rooms, all outlets within six foot (6'-0") of a water source (excluding designated simplex equipment circuits for clothes washing machines and sump pumps), outlets located on open porches or breezeways, exterior outlets, outlets located in garages and in non-habitable basements, except those electrical outlets that are dedicated appliance outlets. All kitchen receptacles serving the countertop area shall be ground fault circuit interrupter (GFCI) protected. A receptacle cover shall cover receptacles that when a cord is plugged in, the GFCI outlet will stay covered and protected.

xi. All accessible knob and tube, unsafe, and/or illegal wiring shall be removed and replaced with type NM cable (Romex) or as required by code.

xii. All broken, damaged or nonfunctioning switches or outlets shall be replaced. All fixtures and wiring shall be adequately installed to ensure safety from fire so far as visible components are observed.

xiii. All missing or broken switch and outlet covers (including junction boxes) shall be replaced. Each receptacle or switch located on an exterior wall shall have a foam seal placed under the cover.

Bedrooms

Bedrooms size should be a minimum of 100sq. ft. plus the required closet space. Ensure that bedrooms and living areas are adequately sized. No bedroom shall have a smaller minimum dimension than ten feet.

Kitchen

i. Every dwelling shall have a kitchen room or kitchenette equipped with the following: Kitchen Sink- The dwelling shall have a kitchen sink connected to both hot and cold potable water supply lines under pressure and to the sanitary sewer waste line. When replacing such components, water supply shut off valves shall be installed.

ii. Oven and Stove or Range- The dwelling shall contain an oven and a stove or range connected to the source of fuel or power, in good working order and capable of supplying the service for which it is intended.

iii. Refrigerator-The dwelling shall contain a refrigerator connected to the power supply, in good working order and capable of supplying the service for which it is intended.

iv. Counter Space Area-Every kitchen or kitchenette shall have an adequate storage area. Every kitchen or kitchenette shall have adequate counter space.

v. Kitchen cabinets and appliance space required at 16 lineal feet for 2 & 3 bedroom units with the addition of a pantry for larger units. Utilize 16" clear counter space on one side of each appliance and fixture and a minimum of 9" on the opposite side of a range.

Hot Water Supply

i. 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.
ii. No atmospheric water heaters shall be allowed in a confined space. No water heaters shall be allowed in the toilet rooms, bathrooms, bedrooms, or sleeping rooms. No gas water heaters shall be allowed in a clothes closet.
iii. All gas water heaters shall be vented in a safe manner to a flue leading to the exterior of the dwelling. These heaters are to be installed according to manufacturer's specifications.
iv. All water heaters shall be equipped with a pressure/temperature relief valve possessing a full-sized (non-reduced) approved discharge pipe to within six (6) inches of the floor. The discharge pipe shall not be threaded at the discharge end.
v. All water heaters must be installed to manufacturer's installation specifications.
vi. Replacement water heaters shall meet Energy Star requirements at the time of installation.
vii. 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. Gas supply lines and/or electrical capacity must be evaluated before installing tankless water heaters. Before installing, careful consideration should be made regarding supply and water temperature.

Interior Walls, Floors, Ceilings, Doors, and Windows

Minimum Ceilings Heights and Hall Widths

Hallways must be a minimum of 3'4" width (measured from face of stud to face of stud). This will accommodate a 2'8" door and allow for wheelchair access as well as moving furniture without damage to walls. Wider halls may be required to meet all clearance requirements of for ADA access. Ceiling heights requirement is 9'.

All interior walls, floors, ceilings, doors and windows shall be capable of being kept in a clean and sanitary condition by the owner. Every bathroom and/or toilet room, kitchen or kitchenette, and utility room floor surface shall be constructed such that they are impervious to water and can easily be kept in a clean and sanitary condition by the owner.
All interior doors shall be capable of affording the privacy for which they are intended.
No dwelling containing two or more bedrooms shall have a room arrangement that access to a bathroom, toilet room, or a bedroom can be achieved only by going through another bathroom, toilet room, or another bedroom.

i. Walls and ceilings

a. Where existing finishes are proposed to remain, they will be determined to meet the standard of being sound, durable, lead-safe, and have a remaining useful life of no less than 30 years, or covered by the 20- year capital plan and/or subsequent five year updates during the 30-year affordability period.
b. Where existing finishes are proposed to remain as part of a fire-rated assembly,

the **state DPS** will assist in making a determination as to the suitability. Refer to codes as they pertain to archaic materials, and relevant NPS Preservation Briefs.

c. Flooring

d. Existing wood flooring in good condition should be repaired, sanded and refinished.

e. All new flooring materials (resilient flooring, wood flooring, laminate flooring, carpet, and/or ceramic tile) will be installed over suitable substrates per manufacturer's specs and the trade association practices.

f. **Trim** - Wood trim and architectural woodwork

g. Existing trim will be repaired and restored to usable condition, free of deterioration which compromises its use.

h. New wood trim will be installed in a workmanlike manner. Reference may be made to AWI standards.

i. **Paint** - In general, all interior ceiling, wall, and trim surfaces will receive renewed coatings of paint (or other clear/stain) finishes. Painting will be done in a workmanlike manner and in accordance with the manufacturer's recommendations. All painting, including preparation of existing surfaces, will be done in a lead-safe manner.

j. It is encouraged that all paints, stains, varnishes, lacquers and other finishes used in the rehabilitated dwelling shall be low or no VOC paint finishes and installed as required In general, all interior finishes will be new and installed per manufacturer's recommendations and the standards of quality construction per trade practices and associations related to the particular product or trade.

HTF assisted projects shall refer to and demonstrate compliance with MHC QAP 2016 written material and methods standards. **(See Appendix B)**

ii. Mechanical

a. General:

b. All mechanical systems will be designed by a mechanical engineer or other qualified professional.

c. Energy efficiency:

d. All MHC HTF funded projects will conform to the MHC Design Standards. Additionally, such projects must also achieve a maximum HERS score of 85.

e. In both the design and implementation of project rehabilitation scopes of work, particular emphasis should be made to maximize the effectiveness of the energy efficiency related work scopes.

f. All mechanical systems will meet State of Mississippi Mechanical, Plumbing, and Electrical Codes.

g. All mechanical systems will meet the requirements of 2009 International Energy Conservation Code.

h. Plumbing fixtures will be accessibility compliant as required.

iii. Fire detection and alarms:

a. Will be installed as required by code: **NFPA 101, Chapters 9.6, 30.3.4 and/or 31.3.4, and comply with NFPA 72, and NFPA 1.**
b. Smoke detectors will be installed per International Fire Code requirements.
c. CO detectors will be installed per International Fire Code.
d. Where required, system annunciation will be in accordance with International Fire Code.
e. In general, all buildings assisted with HTF funds will have automatic fire suppression as required by applicable codes with approved sprinkler systems installed as required by NFPA 13 or 13R.
f. Automatic fire suppression systems will be designed by an engineer licensed in the State of Mississippi and installed by an approved licensed contractor.
g. Provide fire pumps, standpipes, and fire department connection as required per NFPA 13, 14 & 25.
h. Where possible, piping for the sprinkler system will be concealed.

iv. Porches, decks and steps

a. Existing porches, decks, steps, and railings proposed to remain will be examined and repaired as necessary.
b. Inspect structure for soundness and reconstruct any deteriorated members as required.
c. Install new support piers as may be required.
d. Patch existing decking with matching materials, or install new durable decking.

INSPECTABLE ITEM-COMMON AREAS

Refers to those interior and exterior rooms, spaces, or elements that are made available for the use of a restricted group of people (for example, residents of an apartment building, the occupants of an office building, or the guests of such residents or occupants). The common areas will be structurally sound, secure and functionally adequate for the purposes intended and free of health and safety hazards, operable, and in good repair.

(See Appendix A- UPCS for Multifamily Housing Rehabilitation Requirements for Common Area)/MHC Quality Design Standards

i. Interior finishes will be easily cleanable and durable.
ii. Kitchens, laundries, and storage areas will be improved for functionality, durability and accessibility.
iii. **Laundry-** –where adequate space is available and when appropriate to meet the project goals, washers and dryers will be provided in laundry rooms or in units. The common laundry room must provide 1 washer/dryer per 12 family units.
iv. All common halls and stairways between living space must be well lighted with a fixture controlled by witches at both ends of the hall or stairway.
v. Community spaces and offices will be provided at properties with more than 20 units.

vi. Recreational areas will be provided for all properties as required by the MHC Design Standards.

vii. All common area facilities on an accessible path (show walkways slope and landing dimensions at ramps, accessible parking spaces, van stall location, and trash enclosures will be free of health and safety hazards, operable and in good repair). Community/Recreation facility will be a minimum of 1,200 sq. ft. per unit for family, whichever is greater. The facility will include a community kitchen, sink, refrigerator and range or microwave. Management office will be no less than 100 sq. ft.

viii. Maintenance workshop and storage room that provides a workbench, sink and shelving area.

ix. Parking lot design required to minimize conflicts between vehicles and pedestrians. Bicycle and pedestrian paths will be separate from vehicular traffic. Open spaces are linked so that they form an uninterrupted network of vehicle-free areas. Traffic calming strategies are required to slow down cars within the development.

x. All private and public open spaces are required to be designed large enough so that they can actually be used as intended. Examples of non-compliant spaces include but are not limited to, narrow balconies, decks and porches that cannot accommodate furniture and common circulation.

xi. Provide all parking required by zoning codes and MHC parking requirements for housing. Where garages or carports required or included, locate them on the side or rear of units. Fronts and street elevations shall have covered entries and porches.

xii. Landscaping shall provide reinforcement to the boundaries of the property, provide usable shade for outdoor spaces, add visual quality to the appearance of the site and housing structure, help soften unwanted noise and add seasonal color and variety to the site.

xiii. One important functional component of livability is the ability of the space to accommodate the potential number of occupants and the basic pieces of common furniture necessary for daily activities.

xiv. Site amenities enhanced for the livability of the project including playground areas, seating, benches, patio areas, picnic tables, bike racks, grills and fencing, etc.

xv. **Playgrounds, Community Centers and Mail Kiosks** should have sufficient separation as to provide safety for the children and minimize traffic congestion for the various functions. Playground equipment provides safe, code-approved new playground equipment, if a playground is appropriate, pursuant MHC Design Standards. **(See Minimum Quality Standards QAP**)

xvi. Community facilities provided to facilitate social interaction such as picnic areas or community garden plots.

xvii. Outdoor common facilities will be designed to facilitate resident exercise such as walking paths or connection to public sidewalks or other opportunities to facilitate a healthy site.

xviii. Exterior lighting shall meet all minimum requirements for safe visibility per the activity area; i.e., parking walks, porches, entrances. Position exterior fixtures to avoid lighting, which shines directly into dwelling units or is overly intense and bright. Wherever possible use LED fixtures and lamps and consider light fixtures, which minimize overall light "pollution.

xix. **Entry signage and building numbers shall be light for nighttime visibility**

xx. **Elevators** are required in developments that provide for senior housing and special needs. Elevators may be installed when appropriate and possible, when such elevator is part of the Project's program goals, or as required by code, as follows:

- Installed per code NFPA 101, Chapter 9.4
- ASME 17.1 Safety Code for Elevators 2013

APPENDIX A

UNIFORM PHYSICAL CONDITION STANDARDS (UPCS)

HTF Rehab Standards Appendix A: Uniform Physical Condition Standards for Multi-family Housing Rehabilitation - October 2016

NOTE: Deficiencies highlighted in orange are life-threatening and must be addressed immediately, if the housing is occupied.

Requirements for Site		
Inspectable Item	***Observable Deficiency***	***Type and Degree of Deficiency that must be addressed***
Fencing and Gates	Damaged/Falling/Leaning	*Fence or gate is missing or damaged to the point it does not function as it should*
	Holes	*Hole in fence or gate is larger than 6 inches by 6 inches*
	Missing Sections	*An exterior fence, security fence or gate is missing a section which could threaten safety or security*
Grounds	Erosion/Rutting Areas	*Runoff has extensively displaced soils which has caused visible damage or potential failure to adjoining structures or threatens the safety of pedestrians or makes the grounds unusable*
	Overgrown/Penetrating Vegetation	*Vegetation has visibly damaged a component, area or system of the property or has made them unusable or unpassable*
	Ponding/Site Drainage	*There is an accumulation of more than 5 inches deep and/or a large section of the grounds-more than 20%- is unusable for its intended purpose due to poor drainage or ponding*
Health & Safety	Air Quality - Sewer Odor Detected	*Sewer odors that could pose a health risk if inhaled for prolonged periods*
	Air Quality - Propane/Natural Gas/Methane Gas Detected	*Strong propane, natural gas or methane odors that could pose a risk of explosion/ fire and/or pose a health risk if inhaled*
	Electrical Hazards - Exposed Wires/Open Panels	*Any exposed bare wires or openings in electrical panels (capped wires do not pose a risk)*
	Electrical Hazards - Water Leaks on/near Electrical Equipment	*Any water leaking, puddling or ponding on or immediately near any electrical apparatus that could pose a risk of fire, electrocution or explosion*
	Flammable Materials - Improperly Stored	*Flammable materials are improperly stored, causing the potential risk of fire or explosion*
	Garbage and Debris - Outdoors	*Too much garbage has gathered-more than the planned storage capacity, or garbage has gathered in an area not sanctioned for staging or storing garbage or debris*
	Hazards - Other	*Any general defects or hazards that pose risk of bodily injury*
	Hazards - Sharp Edges	*Any physical defect that could cause cutting or breaking of human skin or other bodily harm*
	Hazards - Tripping	*Any physical defect in walkways or other travelled area that poses a tripping risk*
	Infestation - Insects	*Evidence of infestation of insects-including roaches and ants-throughout a unit or room, food preparation or storage area or other area of building substantial enough to present a health and safety risk*
	Infestation - Rats/Mice/Vermin	*Evidence of rats or mice--sightings, rat or mouse holes, or droppings substantial enough to present a health and safety risk*
Mailboxes/Project Signs	Mailbox Missing/Damaged	*Mailbox cannot be locked or is missing*
	Signs Damaged	*The project sign is not legible or readable because of deterioration or damage*
Parking Lots/Driveways/Roads	Cracks	*Cracks that are large enough to affect traffic ability over more than 5% of the property's parking lots/driveways/roads or pose a safety hazard*
	Ponding	*3 inches or more of water has accumulated making 5% or more of a parking lot/driveway unusable or unsafe*
	Potholes/Loose Material	*Potholes or loose material that have made a parking lot/driveway unusable/unpassable for vehicles and/or pedestrians or could cause tripping or falling*
	Settlement/Heaving	*Settlement/heaving has made a parking lot/driveway unusable/unpassable or creates unsafe conditions for pedestrians and vehicles*
Play Areas and Equipment	Damaged/Broken Equipment	*More than 20% of the equipment is broken or does not operate as it should or any item that poses a safety risk*
	Deteriorated Play Area Surface	*More than 20% of the play surface area shows deterioration or the play surface area could cause tripping or falling and thus poses a safety risk*
Refuse Disposal	Broken/Damaged Enclosure-Inadequate Outside Storage Space	*A single wall or gate of the enclosure has collapsed or is leaning and in danger of falling or trash cannot be stored in the designated area because it is too small to store refuse until disposal*
Retaining Walls	Damaged/Falling/Leaning	*A retaining wall is damaged and does not function as it should or is a safety risk*
Storm Drainage	Damaged/Obstructed	*The sytem is partially or fully blocked by a large quantity of debris , causing backup into adjacent areas or runoffs into areas where runoff is not intended*

Inspectable Item	*Observable Deficiency*	*Type and Degree of Deficiency that must be addressed*
Walkways/Steps	Broken/Missing Hand Railing	*The hand rail is missing, damaged, loose or otherwise unusable*
	Cracks/Settlement/Heaving	*Cracks, hinging/tilting or missing sections that affect traffic ability over more than 5% of the property's walkways/steps or any defect that creates a tripping or falling hazard*
	Spalling/Exposed rebar	*More than 5% of walkways have large areas of spalling--larger than 4 inches by 4 inches--that affects traffic ability*
Requirements for Building Exterior		
Inspectable Item	*Observable Deficiency*	
Doors	Damaged Frames/Threshold/Lintels/Trim	*Any door that is not functioning or cannot be locked because of damage to the frame, threshold, lintel or trim*
	Damaged Hardware/Locks	*Any door that does not function as it should or cannot be locked because of damage to the door's hardware*
	Damaged Surface (Holes/Paint/Rusting/Glass)	*Any door that has a hole or holes greater than 1 inch in diameter, significant peeling/cracking/no paint or rust that affects the integrity of the door surface, or broken/missing glass*
	Damaged/Missing Screen/Storm/Security Door	*Any screen door or storm door that is damaged or is missing screens or glass--shown by an empty frame or frames or any security door that is not functioning or is missing*
	Deteriorated/Missing Caulking/Seals	*The seals/caulking is missing on any entry door, or they are so damaged that they do not function as they should*
	Missing Door	*Any exterior door that is missing*
Fire Escapes	Blocked Egress/Ladders	*Stored items or other barriers restrict or block people from exiting*
	Visibly Missing Components	*Any of the functional components that affect the function of the fire escape--one section of a ladder or railing, for example--are missing*
Foundations	Cracks/Gaps	*Large cracks in foundation more than 3/8 inches wide by 3/8 inches deep by 6 inches long that present a possible sign of a serious structural problem, or opportunity for water penetration or sections of wall or floor that are broken apart*
	Spalling/Exposed Rebar	*Significant spalled areas affecting more than 10% of any foundation wall or any exposed reinforcing material--rebar or other*
Health and Safety	Electrical Hazards - Exposed Wires/Open Panels	*Any exposed bare wires or openings in electrical panels (capped wires do not pose a risk)*
	Electrical Hazards - Water Leaks on/near Electrical Equipment	*Any water leaking, puddling or ponding on or immediately near any electrical apparatus that could pose a risk of fire, electrocution or explosion*
	Emergency Fire Exits - Emergency/Fire Exits Blocked/Unusable	*The exit cannot be used or exit is limited because a door or window is nailed shut, a lock is broken, panic hardware is chained, debris, storage, or other conditions block exit*
	Emergency Fire Exits - Missing Exit Signs	*Exit signs that clearly identify all emergency exits are missing or there is no illumination in the area of the sign*
	Flammable/Combustible Materials - Improperly Stored	*Flammable materials are improperly stored, causing the potential risk of fire or explosion*
	Garbage and Debris - Outdoors	*Too much garbage has gathered-more than the planned storage capacity or garbage has gathered in an area not sanctioned for staging or storing garbage or debris*
	Hazards - Other	*Any general defects or hazards that pose risk of bodily injury*
	Hazards - Sharp Edges	*Any physical defect that could cause cutting or breaking of human skin or other bodily harm*
	Hazards - Tripping	*Any physical defect in walkways or other travelled area that poses a tripping risk*
	Infestation - Insects	*Evidence of infestation of insects-including roaches and ants-throughout a unit or room, food preparation or storage area or other area of building substantial enough to present a health and safety risk*
	Infestation - Rats/Mice/Vermin	*Evidence of rats or mice--sightings, rat or mouse holes, or droppings substantial enough to present a health and safety risk*
Lighting	Broken Fixtures/Bulbs	*10% or more of the lighting fixtures and bulbs surveyed are broken or missing*

Roofs	Damaged Soffits/Fascia	*Soffits or fascia that should be there are missing or so damaged that water penetration is visibly possible*
	Damaged Vents	*Vents are missing or so visibly damaged that further roof damage is possible*

Inspectable Item	***Observable Deficiency***	***Type and Degree of Deficiency that must be addressed***
	Damaged/Clogged Drains	*The drain is damaged or partially clogged with debris or the drain no longer functions*
	Damaged/Torn Membrane/Missing Ballast	*Ballast has shifted and no longer functions as it should or there is damage to the roof membrane that may result in water penetration*
	Missing/Damaged Components from Downspout/Gutter	*Drainage system components are missing or damaged causing visible damage to the roof, structure, exterior wall surface, or interior*
	Missing/Damaged Shingles	*Roofing shingles are missing or damaged enough to create a risk of water penetration*
	Ponding	*Evidence of standing water on roof, causing potential or visible damage to roof surface or underlying materials*
Walls	Cracks/Gaps	*Any large crack or gap that is more than 3/8 inches wide or deep and 6 inches long that presents a possible sign of serious structural problem or opportunity for water penetration*
	Damaged Chimneys	*Part or all of the chimney has visibly separated from the adjacent wall or there are cracked or missing pieces large enough to present a sign of chimney failure or there is a risk of falling pieces that could create a safety hazard*
	Missing/Damaged Caulking/Mortar	*Any exterior wall caulking or mortar deterioration that presents a risk of water penetration or risk of structural damage*
	Missing Pieces/Holes/Spalling	*Any exterior wall deterioration or holes of any size that present a risk of water penetration or risk of structural damage*
	Stained/Peeling/Needs Paint	*More than 20% of the exterior paint is peeling or paint is missing and siding surface is exposed thereby exposing siding to water penetration and deterioration*
Windows	Broken/Missing/Cracked Panes	*Any missing panes of glass or cracked panes of glass where the crack is either greater than 4" and/or substantial enough to impact the structural integrity of the window pane*
	Damaged Sills/Frames/Lintels/Trim	*Sills, frames, lintels, or trim are missing or damaged, exposing the inside of the surrounding walls and compromising its weather tightness*
	Damaged/Missing Screens	*Missing screens or screens with holes greater than 1 inch by 1 inch or tears greater than 2 inches in length*
	Missing/Deteriorated Caulking/Seals/Glazing Compound	*There are missing or deteriorated caulk or seals--with evidence of leaks or damage to the window or surrounding structure*
	Peeling/Needs Paint	*More than 20% of the exterior window paint is peeling or paint is missing and window frame surface is exposed thereby exposing window frame to water penetration and deterioration*
	Security Bars Prevent Egress	*The ability to exit through egress window is limited by security bars that do not function properly and, therefore, pose safety risks*
Requirements for Building Systems		
Inspectable Item	***Observable Deficiency***	
Domestic Water	Leaking Central Water Supply	*Leaking water from water supply line is observed*
	Missing Pressure Relief Valve	*There is no pressure relief valve or pressure relief valve does not drain down to the floor*
	Rust/Corrosion on Heater Chimney	*The water heater chimney shows evidence of flaking, discoloration, pitting, or crevices that may create holes that could allow toxic gases to leak from the chimney*
	Water Supply Inoperable	*There is no running water in any area of the building where there should be*
Electrical System	Blocked Access/Improper Storage	*One or more fixed items or items of sufficient size and weight impede access to the building system's electrical panel during an emergency*
	Burnt Breakers	*Carbon residue, melted breakers or arcing scars are evident*

	Evidence of Leaks/Corrosion	*Any corrosion that affects the condition of the components that carry current or any stains or rust on the interior of electrical enclosures, or any evidence of water leaks in the enclosure or hardware*
	Frayed Wiring	*Any nicks, abrasion, or fraying of the insulation that exposes any conducting wire*
	Missing Breakers/Fuses	*Any open and/or exposed breaker port*
	Missing Outlet Covers	*A cover is missing, which results in exposed visible electrical connections*
Elevators	Not Operable	*The elevator does not function at all or the elevator doors open when the cab is not there*
Emergency Power	Auxiliary Lighting Inoperable (if applicable)	*Auxiliary lighting does not function*

Inspectable Item	***Observable Deficiency***	***Type and Degree of Deficiency that must be addressed***
Fire Protection	Missing Sprinkler Head	*Any sprinkler head is missing, visibly disabled, painted over, blocked, or capped*
	Missing/Damaged/Expired Extinguishers	*There is missing, damaged or expired fire extinguisher an any area of the building where a fire extinguisher is required*
Health & Safety	Air Quality - Mold and/or Mildew Observed	*Evidence of mold or mildew is observed that is substantial enough to pose a health risk*
	Air Quality - Propane/Natural Gas/Methane Gas Detected	*Strong propane, natural gas or methane odors that could pose a risk of explosion/ fire and/or pose a health risk if inhaled*
	Air Quality - Sewer Odor Detected	*Sewer odors that could pose a health risk if inhaled for prolonged periods*
	Electrical Hazards - Exposed Wires/Open Panels	*Any exposed bare wires or openings in electrical panels (capped wires do not pose a risk)*
	Electrical Hazards - Water Leaks on/near Electrical Equipment	*Any water leaking, puddling or ponding on or immediately near any electrical apparatus that could pose a risk of fire, electrocution or explosion*
	Elevator - Tripping	*An elevator is misaligned with the floor by more than 3/4 of an inch. The elevator does not level as it should, which causes a tripping hazard*
	Emergency Fire Exits - Emergency/Fire Exits Blocked/Unusable	*The exit cannot be used or exit is limited because a door or window is nailed shut, a lock is broken, panic hardware is chained, debris, storage, or other conditions block exit*
	Emergency Fire Exits - Missing Exit Signs	*Exit signs that clearly identify all emergency exits are missing or there is no illumination in the area of the sign*
	Flammable Materials - Improperly Stored	*Flammable materials are improperly stored, causing the potential risk of fire or explosion*
	Garbage and Debris - Indoors	*Too much garbage has gathered-more than the planned storage capacity or garbage has gathered in an area not sanctioned for staging or storing garbage or debris*
	Hazards - Other	*Any general defects or hazards that pose risk of bodily injury*
	Hazards - Sharp Edges	*Any physical defect that could cause cutting or breaking of human skin or other bodily harm*
	Hazards – Tripping Hazards	*Any physical defect in walkways or other travelled area that poses a tripping risk*
	Infestation - Insects	*Evidence of infestation of insects-including roaches and ants-throughout a unit or room, food preparation or storage area or other area of building substantial enough to present a health and safety risk*
	Infestation - Rats/Mice/Vermin	*Evidence of rats or mice--sightings, rat or mouse holes, or droppings substantial enough to present a health and safety risk*
HVAC	Boiler/Pump Leaks	*Evidence of water or steam leaking in piping or pump packing*
	Fuel Supply Leaks	*Evidence of any amount of fuel leaking from the supply tank or piping*
	General Rust/Corrosion	*Significant formations of metal oxides, significant flaking, discoloration, or the development of a noticeable pit or crevice*
	Misaligned Chimney/Ventilation System	*A misalignment of an exhaust system on a combustion fuel-fired unit (oil, natural gas, propane, wood pellets etc.) that causes improper or dangerous venting of gases*
Roof Exhaust System	Roof Exhaust Fan(s) Inoperable	*The roof exhaust fan unit does not function*
Sanitary System	Broken/Leaking/Clogged Pipes or Drains	*Evidence of active leaks in or around the system components or evidence of standing water, puddles or ponding--a sign of leaks or clogged drains*
	Missing Drain/Cleanout/Manhole Covers	*A protective cover is missing*

Requirements for Common Areas		
Inspectable Item	***Observable Deficiency***	
Basement/Garage/Carport	Baluster/Side Railings - Damaged	*Any damaged or missing balusters or side rails that limit the safe use of an area*
Closet/Utility/Mechanical	Cabinets - Missing/Damaged	*10% or more of cabinet, doors, or shelves are missing or the laminate is separating*
Community Room	Call for Aid - Inoperable	*The system does not function as it should*
Halls/Corridors/Stairs	Ceiling - Holes/Missing Tiles/Panels/Cracks	*Any holes in ceiling, missing tiles or large cracks wider than 1/4 of an inch and greater than 11 inches long*
Kitchen	Ceiling - Peeling/Needs Paint	*More than 10% of ceiling has peeling paint or is missing paint*
Laundry Room	Ceiling - Water Stains/Water Damage/Mold/Mildew	*Evidence of a leak, mold or mildew--such as a darkened area--over a ceiling area greater than 1 foot square*
Lobby	Countertops - Missing/Damaged	*10% or more of the countertop working surface is missing, deteriorated, or damaged below the laminate* --- not a sanitary surface to prepare food

Inspectable Item	***Observable Deficiency***	***Type and Degree of Deficiency that must be addressed***
Office	Dishwasher/Garbage Disposal - Inoperable	*The dishwasher or garbage disposal does not operate as it should*
Other Community Spaces	Doors - Damaged Frames/Threshold/Lintels/Trim	*Any door that is not functioning or cannot be locked because of damage to the frame, threshold, lintel or trim*
Patio/Porch/Balcony	Doors - Damaged Hardware/Locks	*Any door that does not function as it should or cannot be locked because of damage to the door's hardware*
Restrooms	Doors - Damaged Surface (Holes/Paint/Rust/Glass)	*Any door that has a hole or holes greater than 1 inch in diameter, significant peeling/cracking/no paint or rust that affects the integrity of the door surface, or broken/missing glass*
Storage	Doors - Damaged/Missing Screen/Storm/Security Door	*Any screen door or storm door that is damaged or is missing screens or glass--shown by an empty frame or frames or any security door that is not functioning or is missing*
	Doors - Deteriorated/Missing Seals (Entry Only)	*The seals/caulking is missing on any entry door, or they are so damaged that they do not function as they should*
	Doors - Missing Door	*Any door that is missing that is required for the functional use of the space*
	Dryer Vent -Missing/Damaged/Inoperable	*The dryer vent is missing or it is not functioning because it is blocked. Dryer exhaust is not effectively vented to the outside*
	Electrical - Blocked Access to Electrical Panel	*One or more fixed items or items of sufficient size and weight impede access to the building system's electrical panel during an emergency*
	Electrical - Burnt Breakers	*Carbon residue, melted breakers or arcing scars are evident*
	Electrical - Evidence of Leaks/Corrosion	*Any corrosion that affects the condition of the components that carry current or any stains or rust on the interior of electrical enclosures or any evidence of water leaks in the enclosure or hardware*
	Electrical - Frayed Wiring	*Any nicks, abrasion, or fraying of the insulation that exposes any conducting wire*
	Electrical - Missing Breakers	*Any open and/or exposed breaker port*
	Electrical - Missing Covers	*A cover is missing, which results in exposed visible electrical connections*
	Floors - Bulging/Buckling	*Any flooring that is bulging, buckling or sagging or a problem with alignment between flooring types*
	Floors - Floor Covering Damaged	*More than 10% of floor covering has stains, surface burns, shallow cuts, small holes, tears, loose areas or exposed seams.*
	Floors - Missing Floor/Tiles	*More than 5% of the flooring or tile flooring is missing*
	Floors - Peeling/Needs Paint	*Any painted flooring that has peeling or missing paint on more than 10% of the surface*
	Floors - Rot/Deteriorated Subfloor	*Any rotted or deteriorated subflooring greater than 6 inches by 6 inches*
	Floors - Water Stains/Water Damage/Mold/Mildew	*Evidence of a leak, mold or mildew--such as a darkened area--covering a flooring area greater than 1 foot square*
	GFI - Inoperable	*The GFI does not function*

	Graffiti	*Any graffiti on any exposed surface greater than 6 inches by 6 inches*
	HVAC - Convection/Radiant Heat System Covers Missing/Damaged	*Cover is missing or substantially damaged, allowing contact with heating/surface elements or associated fans*
	HVAC - General Rust/Corrosion	*Significant formations of metal oxides, flaking, or discoloration--or a pit or crevice*
	HVAC - Inoperable	*HVAC does not function. It does not provide the heating and cooling it should. The system does not respond when the controls are engaged*
	HVAC - Misaligned Chimney/Ventilation System	*Any misalignment that may cause improper or dangerous venting of gases*
	HVAC - Noisy/Vibrating/Leaking	*HVAC system shows signs of abnormal vibrations, other noise, or leaks when engaged*
	Lavatory Sink - Damaged/Missing	*Sink has extensive discoloration or cracks in over 50% of the basin or the sink or associated hardware have failed or are missing and the sink can't be used*
	Lighting - Missing/Damaged/Inoperable Fixture	*More than10% of the permanent lighting fixtures are missing or damaged so they do not function*
	Mailbox - Missing/Damaged	*The U.S Postal Service mailbox cannot be locked or is missing*
	Outlets/Switches/Cover Plates - Missing/Broken	*Outlet or switch is missing or a cover plate is missing or broken, resulting in exposed wiring*
	Pedestrian/Wheelchair Ramp	*A walkway or ramp is damaged and cannot be used by people on foot, in wheelchair, or using walkers*

Inspectable Item	***Observable Deficiency***	***Type and Degree of Deficiency that must be addressed***
	Plumbing - Clogged Drains	*Drain is substantially or completely clogged or has suffered extensive deterioration*
	Plumbing - Leaking Faucet/Pipes	*A steady leak that is adversely affecting the surrounding area*
	Range Hood /Exhaust Fans - Excessive Grease/Inoperable	*A substantial accumulation of dirt or grease that threatens the free passage of air*
	Range/Stove - Missing/Damaged/Inoperable	*One or more burners are not functioning or doors or drawers are impeded or on gas ranges pilot is out and/or flames are not distributed equally or oven not functioning*
	Refrigerator - Damaged/Inoperable	*The refrigerator has an extensive accumulation of ice or the seals around the doors are deteriorated or is damaged in any way which substantially impacts its performance*
	Restroom Cabinet - Damaged/Missing	*Damaged or missing shelves, vanity top, drawers, or doors that are not functioning as they should for storage or their intended purpose*
	Shower/Tub - Damaged/Missing	*Any cracks in tub or shower through which water can pass or extensive discoloration over more than 20% of tub or shower surface or tub or shower is missing*
	Sink - Missing/Damaged	*Any cracks in sink through which water can pass or extensive discoloration over more than 10% of the sink surface or sink is missing*
	Smoke Detector - Missing/Inoperable	*Smoke detector is missing or does not function as it should*
	Stairs - Broken/Damaged/Missing Steps	*A step is missing or broken*
	Stairs - Broken/Missing Hand Railing	*The hand rail is missing, damaged, loose or otherwise unusable*
	Ventilation/Exhaust System - Inoperable	*exhaust fan is not functioning or window designed for ventilation does not open*
	Walls - Bulging/Buckling	*Bulging, buckling or sagging walls or a lack of horizontal alignment*
	Walls - Damaged	*Any hole in wall greater than 2 inches by 2 inches*
	Walls - Damaged/Deteriorated Trim	*10% or more of the wall trim is damaged*
	Walls - Peeling/Needs Paint	*10% or more of interior wall paint is peeling or missing*
	Walls - Water Stains/Water Damage/Mold/Mildew	*Evidence of a leak, mold or mildew--such as a common area--covering a wall area greater than 1 foot square*
	Water Closet/Toilet - Damaged/Clogged/Missing	*Fixture elements--seat, flush handle, cover etc.--are missing or damaged or the toilet seat is cracked or has a broken hinge or toilet cannot be flushed*
	Windows - Cracked/Broken/Missing Panes	*Any missing panes of glass or cracked panes of glass where the crack is either greater than 4" and/or substantial enough to impact the structural integrity of the window pane*
	Windows - Damaged Window Sill	*The sill is damaged enough to expose the inside of the surrounding walls and compromise its weather tightness*
	Windows - Inoperable/Not Lockable	*Any window that is not functioning or cannot be secured because lock is broken*

	Windows - Missing/Deteriorated Caulking/Seals/Glazing Compound	*There are missing or deteriorated caulk or seals--with evidence of leaks or damage to the window or surrounding structure*
	Windows - Peeling/Needs Paint	*More than 10% of interior window paint is peeling or missing*
	Windows - Security Bars Prevent Egress	*The ability to exit through the window is limited by security bars that do not function properly and, therefore, pose safety risks*
Health & Safety	Air Quality - Mold and/or Mildew Observed	*Evidence of mold or mildew is observed that is substantial enough to pose a health risk*
	Air Quality - Propane/Natural Gas/Methane Gas Detected	*Strong propane, natural gas or methane odors that could pose a risk of explosion/ fire and/or pose a health risk if inhaled*
	Air Quality - Sewer Odor Detected	*Sewer odors that could pose a health risk if inhaled for prolonged periods*
	Electrical Hazards - Exposed Wires/Open Panels	*Any exposed bare wires or openings in electrical panels (capped wires do not pose a risk)*
	Electrical Hazards - Water Leaks on/near Electrical Equipment	*Any water leaking, puddling or ponding on or immediately near any electrical apparatus that could pose a risk of fire, electrocution or explosion*
	Emergency Fire Exits - Emergency/Fire Exits Blocked/Unusable	*The exit cannot be used or exit is limited because a door or window is nailed shut, a lock is broken, panic hardware is chained, debris, storage, or other conditions block exit*
	Emergency Fire Exits - Missing Exit Signs	*Exit signs that clearly identify all emergency exits are missing or there is no illumination in the area of the sign*
	Flammable/Combustible Materials - Improperly Stored	*Flammable or combustible materials are improperly stored, causing the potential risk of fire or explosion*
	Garbage and Debris - Indoors	*Too much garbage has gathered-more than the planned storage capacity or garbage has gathered in an area not sanctioned for staging or storing garbage or debris*

Inspectable Item	***Observable Deficiency***	***Type and Degree of Deficiency that must be addressed***
	Garbage and Debris - Outdoors	*Too much garbage has gathered-more than the planned storage capacity or garbage has gathered in an area not sanctioned for staging or storing garbage or debris*
	Hazards - Other	*Any general defects or hazards that pose risk of bodily injury*
	Hazards - Sharp Edges	*Any physical defect that could cause cutting or breaking of human skin or other bodily harm*
	Hazards - Tripping	*Any physical defect in walkways or other travelled area that poses a tripping risk*
	Infestation - Insects	*Evidence of infestation of insects-including roaches and ants-throughout a unit or room, food preparation or storage area or other area of building substantial enough to present a health and safety risk*
	Infestation - Rats/Mice/Vermin	*Evidence of rats or mice--sightings, rat or mouse holes, or droppings substantial enough to present a health and safety risk*
Pools and Related Structures	Fencing - Damaged/Not Intact	*Any damage that could compromise the integrity of the fence*
Trash Collection Areas	Chutes - Damaged/Missing Components	*Garbage has backed up into chutes, because the collection structure is missing or broken or compactors or components--chute, chute door, and other components--have failed*
Requirements for Unit		
Inspectable Item	***Observable Deficiency***	
Bathroom	Bathroom Cabinets - Damaged/Missing	*Damaged or missing shelves, vanity tops, drawers, or doors that are not functioning as they should for storage or their intended purpose*
	Lavatory Sink - Damaged/Missing	*Any cracks in sink through which water can pass or extensive discoloration over more than 10% of the sink surface or sink is missing*
	Plumbing - Clogged Drains, Faucets	*Drain or faucet is substantially or completely clogged or has suffered extensive deterioration*
	Plumbing - Leaking Faucet/Pipes	*A steady leak that is adversely affecting the surrounding area*
	Shower/Tub - Damaged/Missing	*Any cracks in tub or shower through which water can pass or extensive discoloration over more than 20% of tub or shower surface or tub or shower is missing*

	Ventilation/Exhaust System – Absent/Inoperable	*exhaust fan is not functioning or window designed for ventilation does not open*
	Water Closet/Toilet - Damaged/Clogged/Missing	*Fixture elements--seat, flush handle, cover etc.--are missing or damaged or the toilet seat is cracked or has a broken hinge or toilet cannot be flushed*
Call-for-Aid (if applicable)	Inoperable	*The system does not function as it should*
Ceiling	Bulging/Buckling/Leaking	*Bulging, buckling or sagging ceiling or problem with alignment*
	Holes/Missing Tiles/Panels/Cracks	*Any holes in ceiling, missing tiles or large cracks wider than 1/4 of an inch and greater than 6 inches long*
	Peeling/Needs Paint	*More than 10% of ceiling has peeling paint or is missing paint*
	Water Stains/Water Damage/Mold/Mildew	*Evidence of a leak, mold or mildew--such as a darkened area--over a ceiling area greater than 1 foot square*
Doors	Damaged Frames/Threshold/Lintels/Trim	*Any door that is not functioning or cannot be locked because of damage to the frame, threshold, lintel or trim*
	Damaged Hardware/Locks	*Any door that does not function as it should or cannot be locked because of damage to the door's hardware*
	Damaged/Missing Screen/Storm/Security Door	*Any screen door or storm door that is damaged or is missing screens or glass--shown by an empty frame or frames or any security door that is not functioning or is missing*
	Damaged Surface - Holes/Paint/Rusting/Glass/Rotting	*Any door that has a hole or holes greater than 1 inch in diameter, significant peeling/cracking/no paint or rust that affects the integrity of the door surface, or broken/missing glass*
	Deteriorated/Missing Seals (Entry Only)	*The seals/caulking is missing on any entry door, or they are so damaged that they do not function as they should*
	Missing Door	*Any door that is required for security (entry) or privacy (Bathroom) that is missing or any other unit door that is missing and is required for proper unit functionality*
Electrical System	Blocked Access to Electrical Panel	*One or more fixed items or items of sufficient size and weight impede access to the building system's electrical panel during an emergency*
	Burnt Breakers	*Carbon residue, melted breakers or arcing scars are evident*

Inspectable Item	***Observable Deficiency***	***Type and Degree of Deficiency that must be addressed***
	Evidence of Leaks/Corrosion	*Any corrosion that affects the condition of the components that carry current or any stains or rust on the interior of electrical enclosures or any evidence of water leaks in the enclosure or hardware*
	Frayed Wiring	*Any nicks, abrasion, or fraying of the insulation that exposes any conducting wire*
	GFI - Inoperable	*The GFI does not function*
	Missing Breakers/Fuses	*Any open and/or exposed breaker port*
	Missing Covers	*A cover is missing, which results in exposed visible electrical connections*
Floors	Bulging/Buckling	*Any flooring that is bulging, buckling or sagging or a problem with alignment between flooring types*
	Floor Covering Damage	*More than 10% of floor covering has stains, surface burns, shallow cuts, small holes, tears, loose areas or exposed seams.*
	Missing Flooring Tiles	*Any flooring or tile flooring that is missing*
	Peeling/Needs Paint	*Any painted flooring that has peeling or missing paint on more than 10% of the surface*
	Rot/Deteriorated Subfloor	*Any rotted or deteriorated subflooring greater than 6 inches by 6 inches*
	Water Stains/Water Damage/Mold/Mildew	*Evidence of a leak, mold or mildew--such as a darkened area--covering a flooring area greater than 1 foot square*
Health & Safety	Air Quality - Mold and/or Mildew Observed	*Evidence of mold or mildew is observed that is substantial enough to pose a health risk*
	Air Quality - Sewer Odor Detected	*Sewer odors that could pose a health risk if inhaled for prolonged periods*

	Air Quality - Propane/Natural Gas/Methane Gas Detected	*Strong propane, natural gas or methane odors that could pose a risk of explosion/ fire and/or pose a health risk if inhaled*
	Electrical Hazards - Exposed Wires/Open Panels	*Any exposed bare wires or openings in electrical panels (capped wires do not pose a risk)*
	Electrical Hazards - Water Leaks on/near Electrical Equipment	*Any water leaking, puddling or ponding on or immediately near any electrical apparatus that could pose a risk of fire, electrocution or explosion*
	Emergency Fire Exits - Emergency/Fire Exits Blocked/Unusable	*The exit cannot be used or exit is limited because a door or window is nailed shut, a lock is broken, panic hardware is chained, debris, storage, or other conditions block exit*
	Emergency Fire Exits - Missing Exit Signs	*Exit signs that clearly identify all emergency exits are missing or there is no illumination in the area of the sign*
	Flammable Materials - Improperly Stored	*Flammable materials are improperly stored, causing the potential risk of fire or explosion*
	Garbage and Debris - Indoors	*Too much garbage has gathered-more than the planned storage capacity or garbage has gathered in an area not sanctioned for staging or storing garbage or debris*
	Garbage and Debris - Outdoors	*Too much garbage has gathered-more than the planned storage capacity or garbage has gathered in an area not sanctioned for staging or storing garbage or debris*
	Hazards - Other	*Any general defects or hazards that pose risk of bodily injury*
	Hazards - Sharp Edges	*Any physical defect that could cause cutting or breaking of human skin or other bodily harm*
	Hazards - Tripping	*Any physical defect in walkways or other travelled area that poses a tripping risk*
	Infestation - Insects	*Evidence of infestation of insects-including roaches and ants-throughout a unit or room, food preparation or storage area or other area of building substantial enough to present a health and safety risk*
	Infestation - Rats/Mice/Vermin	*Evidence of rats or mice--sightings, rat or mouse holes, or droppings substantial enough to present a health and safety risk*
Hot Water Heater	Misaligned Chimney/Ventilation System	*Any misalignment that may cause improper or dangerous venting of gases*
	Inoperable Unit/Components	*Hot water from hot water taps is no warmer than room temperature indicating hot water heater is not functioning properly*
	Leaking Valves/Tanks/Pipes	*There is evidence of active water leaks from hot water heater or related components*
	Pressure Relief Valve Missing	*There is no pressure relief valve or pressure relief valve does not drain down to the floor*
	Rust/Corrosion	*Significant formations of metal oxides, flaking, or discoloration--or a pit or crevice*
HVAC System	Convection/Radiant Heat System Covers Missing/Damaged	*Cover is missing or substantially damaged, allowing contact with heating/surface elements or associated fans*
	Inoperable	*HVAC does not function. It does not provide the heating and cooling it should. The system does not respond when the controls are engaged*

Inspectable Item	***Observable Deficiency***	***Type and Degree of Deficiency that must be addressed***
	Misaligned Chimney/Ventilation System	*Any misalignment that may cause improper or dangerous venting of gases*
	Noisy/Vibrating/Leaking	*The HVAC system shows signs of abnormal vibrations, other noise, or leaks when engaged*
	Rust/Corrosion	*Deterioration from rust or corrosion on the HVAC system in the dwelling unit*
Kitchen	Cabinets - Missing/Damaged	*10% or more of cabinet, doors, or shelves are missing or the laminate is separating*
	Countertops - Missing/Damaged	*10% or more of the countertop working surface is missing, deteriorated, or damaged below the laminate* -- not a sanitary surface to prepare food
	Dishwasher/Garbage Disposal - Inoperable	*The dishwasher or garbage disposal does not operate as it should*
	Plumbing - Clogged Drains	*Drain is substantially or completely clogged or has suffered extensive deterioration*
	Plumbing - Leaking Faucet/Pipes	*A steady leak that is adversely affecting the surrounding area*
	Range Hood/Exhaust Fans - Excessive Grease/Inoperable	*A substantial accumulation of dirt or grease that threatens the free passage of air*
	Range/Stove - Missing/Damaged/Inoperable	*One or more burners are not functioning or doors or drawers are impeded or on gas ranges pilot is out and/or flames are not distributed equally or oven not functioning*

	Refrigerator-Missing/Damaged/Inoperable	*The refrigerator has an extensive accumulation of ice or the seals around the doors are deteriorated or is damaged in any way which substantially impacts its performance*
	Sink - Damaged/Missing	*Any cracks in sink through which water can pass or extensive discoloration over more than 10% of the sink surface or sink is missing*
Laundry Area (Room)	Dryer Vent - Missing/Damaged/Inoperable	*The dryer vent is missing or it is not functioning because it is blocked. Dryer exhaust is not effectively vented to the outside*
Lighting	Missing/Inoperable Fixture	*A permanent light fixture is missing or not functioning, and no other switched light source is functioning in the room*
Outlets/Switches	Missing	*An outlet or switch is missing*
	Missing/Broken Cover Plates	*An outlet or switch has a broken cover plate over a junction box or the cover plate is missing*
Patio/Porch/Balcony	Baluster/Side Railings Damaged	*Any damaged or missing balusters or side rails that limit the safe use of an area*
Smoke Detector	Missing/Inoperable	*Smoke detector is missing or does not function as it should*
Stairs	Broken/Damaged/Missing Steps	*A step is missing or broken*
	Broken/Missing Hand Railing	*The hand rail is missing, damaged, loose or otherwise unusable*
Walls	Bulging/Buckling	*Bulging, buckling or sagging walls or a lack of horizontal alignment*
	Damaged	*Any hole in wall greater than 2 inches by 2 inches*
	Damaged/Deteriorated Trim	*10% or more of the wall trim is damaged*
	Peeling/Needs Paint	*10% or more of interior wall paint is peeling or missing*
	Water Stains/Water Damage/Mold/Mildew	*Evidence of a leak, mold or mildew covering a wall area greater than 1 foot square*
Windows	Cracked/Broken/Missing Panes	*Any missing panes of glass or cracked panes of glass where the crack is either greater than 4" and/or substantial enough to impact the structural integrity of the window pane*
	Damaged Window Sill	*The sill is damaged enough to expose the inside of the surrounding walls and compromise its weather tightness*
	Missing/Deteriorated Caulking/Seals/Glazing Compound	*There are missing or deteriorated caulk or seals--with evidence of leaks or damage to the window or surrounding structure*
	Inoperable/Not Lockable	*Any window that is not functioning or cannot be secured because lock is broken*
	Peeling/Needs Paint	*More than 10% of interior window paint is peeling or missing*
	Security Bars Prevent Egress	*The ability to exit through the window is limited by security bars that do not function properly and, therefore, pose safety risks*

APPENDIX B

ADDENDUM B: MINIMUM DESIGN QUALITY STANDARDS

The purpose of the Mississippi Home Corp Architectural Review is to determine if a development meets the Agency's recommended architectural standards. When the final plans and specifications are submitted, the Architect shall include a statement that the development has met the minimum criteria. Plans must be submitted as ¼ scales. At the completion of construction, the Architect shall certify that the development has complied with all the minimum requirements. FAILURE TO COMPLY WITH THE MINIMUM STANDARDS WILL RESULT IN A LOSS OF CREDITS.

SINGLE FAMILY HOMES AND MULTIFAMILY APARTMENTS

The following is required for all new construction and rehabilitation developments:

NATIONAL GREEN BUILDING STANDARD (NGBS)
All developments are required to meet the minimum requirement of Bronze Level, ICC 700 NGBS.

UNIT LIVABILITY
The long-term marketability of apartment units is affected not only by their sizes but also by the livability of the units. One important functional component of livability is the ability of the space to accommodate the potential number of occupants and the basic pieces of common furniture necessary for daily activities. A well thought-out furniture plan may resolve conflicts in the unit layout, providing improved functionality and livability.

KITCHEN
Kitchen cabinets and appliance space required at 16 lineal feet for 2 & 3 bedroom units with the addition of a pantry for larger units (**). Utilize 16" clear counter space on one side of each appliance and fixture and a minimum of 9" on the opposite side of a range (**).

CLOSETS
Minimum of 12 lineal feet of closet rod in master bedroom and 5 lineal feet in other bedrooms.
Entry coat closet and linen closet in multiple bedroom units, if possible.

CEILINGS & HALLWAYS
Hallways must be a minimum of 3'4 in width (measured from face of stud to face of stud). This will accommodate a 2'8" door and allow for wheelchair access as well as moving furniture without damage to walls.
9' Ceiling heights.

BEDROOMS
Bedrooms size should be a minimum of 96 sq. ft. plus the required closet space (**).

BATHROOMS
Secondary baths must have at least one door that is 2'8" (**). This allows for wheel chair access (Fair Housing standard).

MINIMUM DESIGN QUALITY

SMOKE DETECTORS

Each unit must include at least two hard wired smoke detectors, in proper working condition, on each level of the unit.

CARBON MONOXIDE DETECTOR

Each unit must include at least one hard wired carbon monoxide detector, in proper working condition, on each
level near bedrooms in properties which contain a combustible appliance.

COMMON AREAS

Community/Recreation facility will be a minimum of 1,200 square feet or 20 sq. ft. per unit for family; whichever is greater (**). The facility will include a community kitchen, sink, refrigerator and range or microwave (**). Management office will be no less than 100 sq. ft. (**).
Maintenance workshop and storage room that provides a workbench, sink and shelving area (**).
Common area laundry room when washers/dryers are not provided in the units. The common laundry room must provide 1 washer/dryer per 12 family units (**).
Elevators are required in developments that provide for senior housing and special needs (**).
Exterior trash enclosures should have enclosure protection and a nearby hose bib; for Multi-Family developments or for those developments located in areas where services are not provided by local municipalities (**).
Playgrounds, Community Centers and Mail Kiosks should have sufficient separation as to provide safety for the children and minimize traffic congestion for the various functions (**).

EXTERIOR

Structures of two or more stories must be a minimum of sixty percent (60%) brick or cementitious product (**).
Where vinyl siding is used, if on the allowed 40% and for soffit and fascia, it must be certified through VSI's Program and be installed by a certified installer. Additional information can be obtained at http://www.vinylsiding.org/certifiedinstaller.
A color variation throughout the development is encouraged.
Housing components delivered to the site must meet MHC's "Site Delivered Housing Component Requirements" available on MHC's website www.mshomecorp.com.

(**) Includes requirement for Acquisition/Rehabilitation developments. Historic Developments may request a waiver.

PARKING

All multifamily developments must have a minimum of two (2) parking spaces per unit or 1.5 spaces per unit for elderly properties. MHC will allow a waiver of these parking requirements subject to the local jurisdiction's parking requirements.

CENTRAL AIR/HEAT

Any development receiving tax credits must have central air and heat by the placed in service date. A certified letter from the development's architect or engineer must verify that the central heat and air system has the capacity to properly accommodate all of the units.

ENERGY EFFICIENCY / GREEN (SUSTAINABLE) DESIGN
Use of all Energy Star rated appliances.
Use of low or zero V.O.C. (Volatile Organic Compounds) interior paints.
Use of Formaldehyde-free insulation
Use of at least of one (1) high efficiency toilet or dual flush per unit.
Use of double glazed, insulated energy efficient windows, with Low-E glazing and a minimum: U factor of
.55, Heat Gain Coefficient of .29 and Visibility Transfer of .52
Use of alternate, high efficient H.V.A.C. sources and delivery systems (14 SEER).
Use of water efficient landscape plants
Use of efficient, compact site design (when local codes allow).
Use of Gutters and downspouts at eaves less than 12" on 1 story and less than 24" on 2ND level.
Downspouts to underground drain system or concrete splash blocks or hard surface required.
Use of PEX plumbing systems for domestic water.
Use of Day-lighting. Day-lighting includes strategies for increasing the percentage of illumination provided by natural light by optimizing building orientation and room layout.

SITE ACCESSIBILITY
Accessible path to the primary entry of all ground floor units
Identify all common area facilities on an accessible path (show walkways slope and landing dimensions at ramps, accessible parking spaces. van stall location, and trash enclosures)

Note: The development must be designed to meet ADA and HUD standards for all applicable handicapped accessibility requirements. See Section 9 of the QAP.

Overall Impact
Avoid letting garages, driveways dominate the streetscape – more specifically in Traditional Neighborhoods or Compact Sites. Consider placing them at the rear or side of the site to allow a majority of dwelling units to "front on" the street. A mix of both front loaded and rear garages provides "character" in the development. Consider planting trees and shrubs to soften the overall impact and provide shade and noise reduction.

Vehicle/Pedestrian Interaction
Design to minimize conflicts between vehicles and pedestrians. Consider separating bicycle and pedestrian paths
from vehicular traffic. Consider linking open spaces so that they form an uninterrupted network of vehicle-free areas. Consider traffic calming strategies to slow down cars within the development.

Adequate Size
Ensure that private open space is large enough so that it can actually be used. Avoid spaces, particularly balconies, decks and porches that are too narrow to accommodate furniture.

ADDENDUM B

STANDARDS DEFINITIONS

Nighttime Lighting
Consider a lighting plan for shared open spaces that provides light from a variety of sources. Match lighting intensity and quality to the use for which it is intended; i.e. the lighting required for a pedestrian path is substantially different from that required to illuminate streets. Avoid lighting which shines directly into dwelling units or is overly intense and bright. Consider light fixtures which minimize overall light "pollution;" i.e. fixtures with shields which prevent lighting the nighttime sky. Consider energy efficient lighting whenever possible.

Landscaping is not a Secondary Consideration
Good landscaping is critical to the quality of any development. Consider how landscaping and planting will be handled from the very beginning of the design process. Avoid considering landscaping as an "extra" that can be added in at the end of the development or, worse, eliminated in the name of cost control.

Building Scale and Massing
Relate the size and bulk of the new structure to the prevalent scale in other buildings in the immediate neighborhood.

Building Form
Consider utilizing a variety of building forms and roof shapes rather than box-like forms with large, unvaried roofs.
Consider how the building can be efficiently manipulated to create clusters of units, including variations in height, setback and roof shape. Make sure various forms and shapes work together to create a coherent whole.

Image
Avoid creating a building that looks strange or out of place in its neighborhood. Consider a building image that fits in with the image of good quality market rate housing in the community where the development is located.

Visual Complexity
Consider providing as much visual and architectural complexity as possible to the building's appearance while maintaining a hierarchy of scale and a unified overall form. Consider breaking a large building into smaller units or clusters. Consider variations in height, color, setback, materials, texture, trim, and roof shape. Consider variations in the shape and placement of windows and other façade elements. Consider using landscape elements to add variety and differentiate homes from each other; more specifically in Traditional Neighborhoods.

Facade
Relate the character of the new building façade to the façades of similar, good quality homes in the surrounding
neighborhood or region. The minimum roof pitch will not be less than 6/12 (7/12 or greater is

preferred). Horizontal buildings can be made to relate to more vertical adjacent structures by breaking the façade into smaller components that individually appear more vertical.

Trim and Details

Trim and details can provide warmth and character to a building's appearance, particularly on street facades. In general, the complexity, depth and proportion of trim should relate to that used in good quality middle-income housing in surrounding neighborhoods. Carefully consider the design of porch and stair railings, fascia boards, corners, and areas where vertical and horizontal surfaces meet - for example where a wall meets the roof. Generally put trim around windows. Consider adding simple pieces of trim to the top and bottom of porch columns. Vary the dimension from an eve (18' minimum) and a rake (4' minimum) detail.

Materials and Color

Creative use of materials and color can add variety and visual interest to any façade. In general, consider materials
and colors - for the façade (including foundation walls) and for the roof - that are compatible with those in similar, good quality buildings in the surrounding neighborhood or region. Avoid introducing drastically different colors and materials than those of the surrounding area. Consider using materials and construction details that do not require repeated or expensive maintenance. Favor materials that residents can easily maintain themselves after the homes complete the compliance period. Consider using materials with high levels of recycled content or "Green" where possible.

Room Relationships

Unit layout and room organization will be partly determined by the homes, orientation and location on the site and user profile. Consider activities and behaviors in each space to allow adequate room and durable materials for these activities. Create a clear separation of the private sleeping areas from the less private living areas. Avoid excessive circulation space.

Room Design

Consider how individual rooms will be used. Test furniture arrangements, outlet, telephone, cable jack, and light
fixture locations to ensure that all rooms can be reasonably furnished. Consider partly enclosing kitchen to allow flexibility in dining/living room use. At a minimum, the master bedroom should have a private bath in homes with three or more bedrooms; other bedrooms will share bathrooms. Consider how rooms can be arranged to accommodate working at home.

Daylight and Ventilation

Access to natural light in all bedrooms and the living room is essential and cross ventilation throughout the unit is
encouraged. Consider layouts that allow natural light to the kitchen and allow the natural ventilation and lighting of bathrooms.

Storage Space
Provide as much interior storage space as possible (this includes access to attic storage as well). At a minimum provide an amount of bulk storage commensurate with the size of the home and the number and ages of residents it is expected to accommodate, including: coat closets in the entry area, large closets in the bedrooms, linen closets, pantry spaces in or near the kitchen, and exterior storage rooms (see #6 under Room Design). Assume two occupants per bedroom for storage purposes.

Materials
Avoid materials that require frequent maintenance, especially by specialists. Consider materials that residents can maintain themselves. Provide floor coverings appropriate to use in room - generally use resilient flooring in kitchens, bathroom, laundries, dining rooms and entries. Consider "healthy" building materials for interior finishes and materials, and when selecting carpet, resilient flooring, paint, glues, cabinets, etc... Evaluate selection of materials in terms of lifecycle and environmental cost.

Build it to Last
Inexpensive, low quality, materials can make any development look "cheap." Quality materials and finishes, on the other hand, contribute to the longevity of a development and to its ability to appreciate - not depreciate in value. They also make a development easier to maintain, potentially reducing operating costs.

"Building in" energy and environmental efficiency - through better windows, insulation and equipment - reduces operating costs over the life of the building.

While recommending doing everything possible to include high quality materials and finishes, we also recognize that affordable housing developments usually face severe cost constraints. Not every product or system can be top of the line. In these circumstances, consider favoring exterior materials and finishes over interior ones when making tradeoffs. Likewise, consider favoring products and systems which are permanent and hard to replace over those that the occupant can replace.

Ultimately, the over-riding goal is to construct the dwelling units with methods and materials in order to provide a minimum service life of 50, preferably 75 years.

Appendix C

Mississippi Home Corporation
Physical Condition Inspection Standards

The Corporation has the right to perform an on-site physical inspection of any tax credit housing development at least through the end of the development's compliance and extended use periods. This inspection provision exists in addition to any review of low-income certifications, supporting documents, and rent records. Generally, the inspection allows the Corporation to determine if a tax credit unit is suitable for occupancy. Inspection standards to be used are intended to ensure that the housing is decent, safe, sanitary, and in good repair. Irrespective of the physical inspection standards selected by the Corporation, a low-income housing development under Section 42 must continue to satisfy local health, safety and building codes.

The Corporation will consider a building exempt from the physical inspection requirement if the development is financed by RHS and RHS has entered into a Memorandum of Understanding (MOU) or other similar arrangement with the Corporation under which RHS agrees to notify the Corporation of the inspection results. [1] ***NOTE: THE CORPORATION RESERVES THE RIGHT TO CONDUCT PHYSICAL INSPECTIONS REGARDLESS OF ITS MOU WITH THE RHS.***

- **Physical Inspection Standards**

An owner of HTC development must maintain housing in accordance with HUD's Uniform Physical Condition Standards (UPCS) as set forth below:

Site:	The Site components such as fencing, retaining walls, grounds, lighting, mailboxes, development signs, parking lots, driveways, play areas and equipment, refuse disposal, roads, storm drainage and walkways must be free of health and safety hazards and be in good repair. The site must not be subject to material adverse conditions, such as abandoned vehicles, dangerous walkways or steps, poor drainage, septic tank back-ups, sewer hazards, excess accumulation of trash, vermin or rodent infestation or fire hazards.
Building Exterior:	Each building on the site must be structurally sound, secure, habitable and in good repair. Each building's doors, fire escapes, foundations, lighting, roofs, walls and windows, where applicable, must be free of health and safety hazards, operable and in good repair.

[1] Development is financed by RHS under the Section 515 program and RHS inspects the building/development in accordance with CFR, Part 1930 (c).

Building Systems:	Each building's domestic water, electrical system, elevators, emergency power, fire protection, HVAC, and sanitary system must be free of health and safety hazards, functionally adequate, operable and in good repair.
Dwelling Units:	Each dwelling unit within a building must be structurally sound, habitable and in good repair. All areas and aspects of the dwelling unit (for example, the unit's bathroom call-for-aid (if applicable), ceiling doors, electrical systems, floors, hot water heater, HVAC systems, kitchen, lighting outlets/switches, patios/porch/balcony, smoke detectors, stairs, walls and windows) must be free of health and safety hazards, functionally adequate, operable and in good repair. Where applicable, the dwelling unit must have hot and cold running water including an adequate source of potable water (for example, Single-Room Occupancy (SRO) units need not contain water facilities). If the dwelling unit includes its own sanitary facility, it must be in proper operating condition, usable in privacy and adequate for personal hygiene and the disposal of human waste. The dwelling unit must include, at a minimum, two hard wired smoke detectors with a battery backup in proper working condition on each level of the unit and/ or adjacent to all bedrooms and a multi-chemical, rechargeable fire extinguisher that must be inspected & tagged yearly by a certified individual or company.
Common Areas:	The common areas must be structurally sound, secure and functions adequately for the purpose intended. The basement/garage/carport, restrooms, closets utility/mechanical/community rooms, day care, halls/corridors, stairs, kitchens, laundry rooms, office, porch, patio, balcony and trash collection areas, if applicable, must be free of health and safety hazards, operable and in good repair. All common area ceilings, doors, floors, HVAC, lighting outlets, switches, smoke detectors, stairs, walls and windows to the extent applicable, must be free of health and safety hazards, operable and in good repair. These standards for common areas apply in particular to congregate housing, independent group homes, residences and single room occupancy units in which the individual dwelling units (sleeping areas) do not contain kitchen and/or bathroom facilities. Common areas such as the office or laundry room must include hard wired smoke detector(s) with a battery backup in proper working condition on each level of the structure and/ a multi-chemical, rechargeable fire extinguisher that must be inspected & tagged yearly by a certified individual or company. All emergency lights in hallways should function as intended. Exit signs should be visible and illuminated. These two items should be tested regularly.

Health and Safety:	All areas and components of the housing must be free of health and safety hazards. These areas include but are not limited to air quality, electrical hazards, elevators, emergency/fire exits, flammable materials, garbage and debris, handrail hazards, infestation and lead based paint. For example, the buildings must have fire exits that are not blocked and have handrails that are undamaged and have no other observable deficiencies. The housing must have no evidence of infestation by rats, mice, or other vermin or of garbage and debris. The housing must have no evidence of electrical hazards, natural hazards or fire hazards. The dwelling units and common areas must have proper ventilation and be free of mold and odor(s) (e.g. propane, natural gas, methane gas) or other observable deficiencies. The housing must comply with all requirements related to the evaluation and reduction of lead-based paint hazards and have available proper certification of such.
Compliance with State and Local Codes:	The physical condition standards in this section do not supersede or preempt State and local codes for building and maintenance with which housing tax credit developments must comply. Tax credit developments must continue to adhere to these codes.

Source: ***24 CFR 5.703.***

NOTE: MHC requires the use of a multipurpose fire extinguisher labeled ABC that is rechargeable and approved by an independent testing laboratory such as the Underwriters Laboratory (UL) and provides a tag for all fire extinguishers with the latest inspection date and year. The Class A label is a triangle symbol on the extinguisher. The Class B is a square symbol on the extinguisher. A Class C label is in a circle symbol on the extinguisher.

A minimum of two (2) hard-wired smoke detectors with battery back-up is required per unit.

Physical Inspection Procedures

The Corporation will notify an owner of a tax credit development in advance of an upcoming on-site physical inspection through official written correspondence. Along with this notification will be a *Building Physical Inspection Audit Acknowledgment Form* that must be returned to the Corporation confirming receipt of the inspection. Failure to return the *Building Inspection Audit Acknowledgment* form to the Corporation as required by the noted deadline date will result in an inspection of the development as outlined in the original correspondence.

All buildings and residential units within the development should be readily accessible. Additionally, an owner is required to notify all resident's in writing of the scheduled

inspection. Maintenance personnel and a management representative should be present during the inspection.

Critical Health & Safety Violations

All buildings and residential units within the development identified by the Corporation as having a critical health and/or safety violation must be corrected within 72 hours of the *Notice of Critical Health & Safety Violations* letter. Note: An owner is required to notify the Corporation upon completion of any critical and/or safety violation.