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# Connecticut Housing Finance Authority

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Construction Guidelines:  
Project Planning &  
Technical Services  
Review

2014

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*[For all applications for construction funding through 2014 CHFA Multifamily Underwriting and Asset Management financing programs.]*

**These Guidelines are effective January 1, 2014**

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## **PROJECT PLANNING AND TECHNICAL SERVICES REVIEW PROCESS**

Building materials, components, fabrications, assemblies and equipment for all proposed development projects (rehabilitations and new construction), and all capital improvement repair, replacements and installations, must comply with all applicable Building Codes, State and Federal regulations and the current “Multifamily Design, Construction and Sustainability Standards – CHFA” (the Standards). All finance applications must comply with CHFA Procedures and the requirements of the CHFA/DOH Consolidated Application.

In conjunction with the Standards, Technical Services has created a series of “Construction Guidelines” (CHFA Guidelines) to further assist Development Teams through the application, planning, design and review process. Each of these Construction Guidelines focuses on specific subjects of major interest in this process, including; “Construction Guidelines: Construction Cost”, “Construction Guidelines: Environmental & Hazardous Materials Review”, “Construction Guidelines: Energy Conservation” and “Construction Guidelines – Project Planning and Technical Services Review” (Technical Review Process).

The Technical Review Process outlines the professional planning and design document review requirements for multifamily housing financed through the Authority. It is the intent of the Standards, and the Technical Review Process outlined herein, that multifamily housing financed through CHFA is designed to serve the needs of its residents with as much quality, durability, comfort, indoor air quality and environmental sustainability as the market and resources permit. It is acknowledged, however, that individual developments may face unique site, design, financing or market constraints, for which full compliance may be difficult or impossible. It is intended that such unique constraints be identified early in the design and underwriting review process, so that the Developer or Owner may request a Modification or Waiver of specific requirements that prove to be problematic. CHFA will consider such requests on a case-by-case basis, to determine whether such requirements should be modified or waived for reasons and purposes acceptable to the Authority.

For assistance in planning capital improvements, repairs, replacements and installations, Owners may consult the CHFA “Construction Guidelines: Technical Services/Asset Management (TSAM) Capital Improvements Guide (CIG)”. All capital improvements, repairs, replacements and installations require review acceptance by CHFA, and certain projects require review by Technical Services. For assistance in making that determination, Owners should consult the CHFA “Construction Guidelines: Technical Services/Asset Management (TSAM) Capital Improvement Project Review”.

### **I. CHFA TECHNICAL SERVICES DEPARTMENT**

The goal for Technical Services is to facilitate the development of quality, energy efficient affordable multifamily housing at the most reasonable cost, by implementing the Standards through Development Team, Design/Construction Document and Development Construction Cost Reviews, and Construction Field Observation. Multifamily housing units must be constructed to last the life of the mortgage (typically 40 years), plus any extended use terms.

#### **A. Review Considerations**

Technical Services’ staff review considerations include utility, convenience, health and safety, accessibility, resource conservation.

#### **B. CHFA Technical Services-related Documents**

CHFA Tech Services-related documents for use by Developers, Architects and Contractors for planning, application, design, construction and post-construction use may be obtained in electronic format through downloads from the Developer Document Library on the CHFA website.

## **II. INTEGRATED DEVELOPMENT TEAM/DESIGN APPROACH**

To best satisfy all of Technical Services' review considerations, Owner/Developers should assemble an Integrated Development Team – including a qualified Architect and other Professional Consultants, and a qualified General Contractor and Key Sub-Contractors – working with an Integrated Design Approach.

### **A. Development Team Selection Process**

CHFA encourages the Owner/Developer to follow an organized Development Team Selection Process:

1. The Owner/Developer issues a Request for Qualifications (“RFQ”) for architectural/engineering services
2. The Owner/Developer selects several candidates, from the Architectural/Engineering (“A/E”) firms, or teams, that respond to the RFQ, to be interviewed
3. The Owner/Developer conducts the interviews, selects an architectural firm or team, and negotiates a contract
4. Using the same RFQ/interview process, the Owner/Developer selects a General Contractor (“GC”), and negotiates a contract

### **B. Design Development Policies**

The Architect is the licensed design professional, who coordinates the Owner/Developer's goals, aesthetics, function, safety, economy, and future user needs in developing documents which enable the GC to build the project, and acts as the Owner/Developer's representative throughout the design and construction process, to ensure that the final product meets the Owner/Developer's expectations. Owner/Developers shall employ State of Connecticut-licensed Architects for design, supervision of the design team, bidding and construction services.

1. CHFA Architect Qualifications: The Architect shall be licensed by the State of Connecticut and must have a minimum of five (5) years of relevant, multifamily residential design and construction experience. Proof of such experience, in the form of three (3) reference letters (min.) from current and/or past clients, regarding the Architect's performance on multifamily residential projects of similar types and sizes, must be provided. The Architect's Professional Consultants shall submit similar documentation of relevant, multifamily residential design and construction experience in their specific disciplines.
2. Owner/Architect Agreement: The Owner/Developer/Architect Agreement shall include the following AIA Contract Documents:
  - a. AIA Document B101-2007 (formerly B141-1997 Part 1) – Standard Form of Agreement Between Owner and Architect with Standard Form of Architect's Services
  - b. AIA Document B201-2007 (formerly B141-1997 Part 2) – Standard Form of Architect's Services: Design and Construction Administration (C/A)
3. CHFA Owner/Architect Agreement Requirements:
  - a. Contracts shall be assignable to CHFA
  - b. The Construction Administration portion of the Architect's fee must be a minimum of 35% of the total fee, to be paid in equal monthly installments based upon the length of the agreed-upon construction schedule.
  - c. The scope of the Architect's Services shall include the preparation of agenda, scheduling and running weekly job-site meetings with the Owner/Developer, GC, and CHFA Field Observer, recording meeting minutes and distributing copies to all parties.
  - d. The Architect shall also prepare and distribute a final punch list to all parties, and verify that the work is completed by the GC.
4. Professional Consultants: The Architect shall contract with currently-licensed Professional Consultants as necessary to carry out the design. All Professional Consultants shall be licensed by the State of Connecticut and must have a minimum of five (5) years of relevant, multifamily residential design and construction experience.
5. Professional Liability Insurance: Design/Supervisory Architects, and their Professional Consultants, shall provide and maintain professional liability insurance in a form, amount and term satisfactory to CHFA, and shall furnish evidence of such insurance prior to the date of submission of drawings and outline specifications to the Authority for Preliminary Application. CHFA shall be a named certificate holder on

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all Professional Liability Insurance Certificates. All insurance policies must be in full force and effect as of the date of submission, and must be maintained for a period of seven (7) years after substantial completion of construction.

- a. The minimum amount of professional liability insurance coverage shall be \$1,000,000 per incident for projects with construction costs up to \$5,000,000, and \$2,000,000 per incident for projects with construction costs between \$5,000,000 and \$10,000,000. Professional liability insurance coverage for projects with construction costs exceeding \$10,000,000 will be a minimum of \$3,000,000 per incident, or as otherwise determined on a case-by-case basis.

### C. Architectural Design Responsibility

The Authority relies heavily on the professional competency of participating architectural firms and on the Authority's design process as documented in the Standards. The Design Architects should not submit proposals or certify drawings which they, as professionals, do not agree with or which were not prepared by, or under the direction of, the Design Architects' firms.

1. Owner/Consultant Contracts: All architectural, planning, engineering, landscaping and other services, which contribute to the drawings and specifications by which a housing development is built, shall be in the employ of, or under the direction of, the Design Architect. As a general rule, CHFA discourages multiple professional service contracts; however, consideration for such arrangements may be made, on a case-by-case basis, for reasons and purposes acceptable to the Authority. Exception may be made for Civil Engineering site work and Licensed Survey work contracted directly by the Developer; however, the architect will be required to coordinate the Civil Engineering with other design work.
2. Design/Build:
  - a. Design/Build Developers: CHFA prefers the traditional design/bid/build development process, in which the Owner, Architect, Professional Consultants and Contractor are separate, independent business interests. Typically, design/build development teams shall not be employed; however, consideration for such arrangements may be made, on a case-by-case basis, for reasons and purposes acceptable to the Authority. Exceptions may be made for experienced development teams with a minimum of five (5) years of affordable multifamily development experience and/or three (3) successfully-completed projects.
  - b. Design/Build Contractors/Subcontractors: Typically, construction trade or design/build contractors and subcontractors shall not be employed to carry out design work; however, consideration for such arrangements may be made, on a case-by-case basis, for reasons and purposes acceptable to the Authority. Where work such as fire suppression design, irrigation design, truss design, commercial kitchen design, and modular building design is proposed to be carried out by design-build contractors, such work shall be certified by a licensed Engineer, and the Design Architect shall be responsible for coordinating and accepting their work.

### D. General Contractor

Recognizing that field experience has given the GC unique and invaluable insights into cost-saving construction techniques, CHFA encourages constructive participation by the GC during the design process, and recommends the GC's regular input to help maintain cost control for the proposed housing development.

1. The GC is responsible for the construction or development of a property, pursuant to the terms of a primary contract with the Owner/Developer. The GC is responsible for all means and methods [materials, vehicles, tools and labor] used in the construction of the project, in accordance with the contract documents [construction contract, schedule, general conditions, material/systems specifications and drawings] prepared by the Architect. The GC manages the construction process, including planning, staffing, organizing, budgeting, scheduling and supervision.
2. GC Qualifications: The GC shall be licensed by the State of Connecticut and must have a minimum of five (5) years of relevant experience in the construction of residential facilities. The GC shall provide proof of such experience by submitting a minimum of three (3) reference letters from current and/or past clients, regarding the GC's performance on residential projects of similar type and size. The GC shall

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provide a minimum of three (3) reference letters from major material suppliers, regarding the GC's credit account payment history.

3. Owner/GC Agreement: The Owner/Contractor Agreement shall include the following AIA Contract Documents:
  - a. AIA Document A101-2007 (formerly A101 – 1997) Standard Form of Agreement Between Owner and Contractor where the basis of payment is a Stipulated Sum
  - b. The above-noted contract does not include Bonds or Permits as stipulated sum items; these costs are specific to, and defined by, the Construction Cost. CHFA will reimburse these expenditures up to the limit of funds expended by the Mortgagor or General Contractor.
    - i. If the Mortgagor's or General Contractor's Bond and/or Permit expenditure is less than the amount accepted at Initial Closing, a Credit Change Order shall be prepared, moving the unspent amounts of these line items onto the Construction Contingency.
    - ii. If the Bond and/or Permit expenditure is more than the amount accepted at Initial Closing, for fees previously unknown to the Mortgagor or General Contractor, a Change Order shall be prepared to fund these overages out of the Construction Contingency.
    - iii. Additional Bond and/or Permit Costs generated by the Change Order preparation and approval process during construction will be handled separately, through a final Change Order at the completion of construction.
  - c. AIA Document A201 – 2007 (formerly A201 – 1997) General Conditions of the Contract for Construction, with Instructions
  - d. AIA Document A312 –2010 Performance Bond, with Instructions
4. CHFA Owner/GC Agreement Requirements: Contracts must be assignable to CHFA, and shall include dates for commencement and completion of construction, and provisions for liquidated damages (if any), progress payments and reduction of retainage.
5. CHFA Insurance and Other Requirements for GCs:
  - a. CHFA Insurance Requirements can be found in the Multifamily Document Library on the CHFA website.
  - b. The GC must use his own employees to perform at least 15% of the construction work, but can utilize the services of specialty trade firms (Sub-Contractors) to perform particular tasks under the direction and coordination of the GC in a direct contractual relationship, to complete the project.
  - c. The GC will divide the total General Conditions cost into equal monthly payments based upon the length of the agreed-upon construction schedule, which will be included in the monthly payment requisitions during construction.
6. Letter of Credit: In lieu of Performance Bond and Payment Bonds, a Letter of Credit ("LOC") may be acceptable for some projects.
  - a. The LOC shall stay in place until the end of the Latent Defects Period (LDP), which will commence on the date of issuance of the final, complete, permanent Certificate of Occupancy, or substantial completion of the development, whichever is later, and will end fifteen months later.
  - b. After the LDP has passed, the GC shall submit a letter requesting release of the LOC. If there have been no construction-related issues during that time period, CHFA will issue a letter stating that the LOC can be released.
  - c. If there have been construction-related issues during the LDP, and they have not been corrected, CHFA will maintain the LOC until such time as those issues have been satisfactorily resolved, at which time the LOC will be released by CHFA.
  - d. The GC shall note that the release of the LOC in no way releases the GC from any warranty or guarantee responsibilities assumed under the original construction contract or any agreed upon change orders.
7. Construction Management: CHFA prefers the traditional Owner/Architect/General Contractor (GC) construction project delivery process, in which the General Contractor provides the material, labor, equipment (such as engineering vehicles and tools) and services necessary for the construction of the project for a guaranteed maximum price. The GC's responsibilities generally include applying for

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building permits, securing the property, providing temporary utilities on site, managing personnel on site, providing site surveying and engineering, disposing or recycling of construction waste, monitoring schedules and cash flows, maintaining accurate records and also hiring specialized subcontractors to portions of the construction work the GC's own employees cannot provide. Typically, the Construction Management project delivery method shall not be employed; however, consideration for such arrangements may be made, on a case-by-case basis, for reasons and purposes acceptable to the Authority. Exceptions may be made for experienced Construction Management firms with a proven record of minimum five (5) years of affordable multifamily development experience or three (3) successfully-completed affordable multifamily development projects, which enter into a Construction Manager at-Risk (CM@R) agreement with the Owner. CM@R is a global term referring to a business relationship of Owner, Architect and Construction Manager, which entails a commitment by the Construction Manager to deliver the project within a Guaranteed Maximum Price (GMP). The CM@R delivery method is an alternative procurement process similar to longstanding private sector construction contracting, wherein the Construction Manager acts as consultant to the Owner in the Design Development phase, but as the equivalent of a General Contractor during the Construction and Final Closing phases.

1. **Design Development:** During this phase, the CM@R shall work closely with the Owner/Developer and Architect on Design Review, Project Schedule Analysis, Constructability Review and Cost Control Management. The CM@R shall value engineer all building systems at each of the major milestones, with a lifecycle analysis for major building elements, such as site, building envelope, HVAC and lighting. In conjunction with the Architect, CM@R shall prepare a cost estimate and evaluate the cost estimate against the construction budget. CM@R shall recommend, if necessary, the appropriate action to correct and/or avoid potential cost over-runs. Project construction cost estimates in CHFA format shall be updated as a part of the CHFA 40% and 100% complete construction document submittals. Cost estimates shall reflect the best professional estimate of actual anticipated costs, while establishing internal estimating allowances consistent with good professional practices appropriate to each phase of development. Larger allowances held at early phases of development are assumed to gradually diminish to zero for the final cost estimate. The CM@R shall not include a construction cost contingency in its fee proposal; construction cost contingencies shall be included as a line item in the approved Mortgagor's development budget.
2. **Construction and Final Closing:** During these phases, the CM@R shall work closely with the Owner/Developer and Architect in accordance with all CHFA General Contractor requirements, procedures, and practices for Construction and Final Closing.

### III. FIELD ENGINEERING SUBMISSION REQUIREMENTS

#### A. Boundary and Topographic Site Survey

The purpose of these specifications is to designate and describe the minimum requirements for a boundary and topographic site survey for use in the design and construction of CHFA housing developments. In general, the surveyor shall perform all field work necessary to accurately determine the location of property lines and existing physical conditions of the site, set monument markers, establish bench marks and record on a Property and Topographic Survey, the information and data as required and hereinafter specified. The surveyor shall obtain such information and data from public and other records, including a review of underlying documents to current title work (within 120 days), as may be required to complete the work. All data and information required by these specifications shall be depicted and noted on a survey map in accordance with the pertinent portions of the current Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS, and Sections 20-300b-1 through 20-300b-20 of the Regulations of Connecticut State Agencies – Standards for Surveys and Maps in the State of Connecticut as adopted by the Connecticut Association of Land Surveyors, Inc. All surveys shall meet or exceed Horizontal Accuracy Class A-2 and Topographic Accuracy Class T-2, shall be signed and sealed by a Connecticut licensed professional land surveyor, and shall include the following:

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1. North Arrow with appropriate source reference (record map; CT Coordinate System; NAD27; NAD83; etc.)
2. Precise legal perimeter description (“metes and bounds” or “course and distances”) shall appear on the face of the survey map, preceded by identification of the appropriate street address, if available. Said description shall conform entirely to the survey. Any contiguous plot shall be described by a single perimeter description of the entire subject property. Division into parcels shall be avoided, unless such is requested so as to serve a special purpose. If the property is described as being on a filed map, the survey map shall specifically reference that filed map.
3. Two bench marks referenced to an established datum permanent objects adjacent to the site located and described
4. All boundary lines, labeled with bearings and distances
5. Mark all corners of the site and other boundary line intersections not previously marked by a monument. Where existing structures preclude setting monuments at the intersection of property lines, a brass pin should be set in the property line extended, tagged and so noted, along with the distance from the true corner. At least one corner of the property shall be designated by course and distance from, or by the coordinates of, a readily discernible reference marker. Depict and label position and description of each marker.
6. Designate the total area within boundary lines in both square feet and acreage. If the overall boundary is made up of individual parcels, include the area of each.
7. Easements, Encroachments, and Improvements
  - a. Indicate any and all servient and appurtenant easements by Book and Page, if any, the origin (e.g. Deed from A to B), if applicable, and nature. It is also desirable to describe an easement appurtenant to a fee parcel by using a separate parcel description.
  - b. Clearly indicate the location, dimensions and nature of (A) all encroachments upon the property; (B) all encroachments upon adjoining property, streets or alleys, by any buildings, structures or other improvements upon the property; and (C) all party walls between, with or adjoining the property and other property.
  - c. Indicate position, size and material of any and all improvements on the property, including buildings, retaining walls, decorative walls, areaways, driveways, paving, etc. Indicate the existence and location of off-site structures within 10 feet of the property lines. Indicate the location of any and all adjacent building lines. Note names of adjoining property owners.
8. Trees: Indicate location, species and size of trees over 6" in trunk diameter, measured at breast height (dbh).
9. Roads and Rights of Way: The following data shall be indicated on survey drawing for all streets, alleys, roads, highways and rights-of-way adjacent to the site:
  1. Dimensions and distances from property lines
  2. Type(s) and condition of material(s)
  3. Type(s) of curbs and gutters
  4. Elevations of sidewalks along edges nearest the site, at 20-foot intervals, at corners, and points of slope change
  5. Elevations of tops of curbs and flow-line of gutters, at 20-foot intervals, at corners, and points of slope change
10. Sanitary Service: Development of sites without access to sanitary service is discouraged, due to the costs associated with providing well-designed, efficient on-site wastewater treatment and disposal systems. Development of sites without access to public water and sanitary services will not be funded. The following data pertaining to utilities adjacent to the site shall be depicted and noted on the survey:
  - a. Location and type of available electric service, including lines, poles and manholes
  - b. Location of water mains, hydrants and manholes, indicating size of water mains
  - c. Location and size of gas mains, including type (low or high pressure)



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- d. Location, size, direction of flow, pipe slope, and type(s) of material of sanitary, storm or combined sewer mains. Indicate public or private, and if use is exclusively for sanitary waste or storm water drainage. Indicate elevations of flow-line, "in" and "out" inverts, and locations of manholes.
  - e. If a utility is not available at the site, it shall be noted whether or not, and where service is available in the community.
  - f. List the company or governmental body of jurisdiction for all utilities.
11. **Topography:** Elevations of the site shall be taken on a grid suitable to the topography and size of the site. Contour lines shall be at two-foot intervals. Elevations shall be marked on contour lines at regular intervals, and the reference datum shall be specifically stated.
  12. **Miscellaneous Information:**
    - a. Note other information pertaining to site conditions, e.g. abandoned foundations, ditches, culverts, mine shafts and tunnels (if visible or known), wells, sanitary drain fields, excavations, etc. Also indicate locations of any and all waterways, wetlands, and established floodplains and floodways.
    - b. In addition to other contractual services, the surveyor shall obtain and/or verify requisite information and data from public records, including names, locations, dimensions and elevations of streets, curbs, gutters, sidewalks, established building lines, easements, utilities, proposed improvements, condemnations, etc., necessary for, and incidental to, a completed site survey, preparation of the drawing thereof, and the certification by the surveyor that the data presented meets, at a minimum, the horizontal and topographic accuracy classifications specifies in the referenced standards to which the survey was prepared.
  13. **Coordination with Legal Survey:**
    - a. The survey shall meet the requirements of CHFA's Legal Department; including long-form certification language (**see section VIII.A.8.**).

### **B. Investigation of Structures to be Rehabilitated**

If rehabilitation work is involved, the Owner/Developer shall commission CT-licensed Architectural and/or Engineering professionals to conduct a physical assessment and evaluation of all building components to remain during and after the rehabilitation. The findings shall be compiled into a Capital Needs Assessment (CNA) Report, including a written description indicating the level of the rehabilitation and 20-year replacement schedule. In the case of a complete gutting of buildings, provide an Architectural Needs Assessment Report by an Architect, and a Structural Needs Assessment Report by a Structural Engineer, to identify and assess the age, appearance, condition, useful life expectancy, and structural capacity of all materials, assemblies, fabrications, equipment and systems that are to remain after the gut rehabilitation. The reports shall include the age, the material, the condition and life expectancy for such components.

### **C. Capital Needs Assessment (CNA) Report**

If rehabilitation work is involved, a physical assessment and evaluation of all building components that are not intended to be replaced during the renovation shall be conducted by licensed professionals, within 6 months of Finance Application. CNA requirements include the following:

1. CHFA requires the CNA consultant(s) to be, or to consult with, licensed and insured Professional Architects, Professional Engineers, and/or BPI-, RESNET HERS-, and/or ENERGY STAR-certified Assessors/Raters, or utility-authorized contractors in the preparation of the report.
2. The report must include the evaluator's observations and assessments, based upon physical observations of the building exterior and interior, including mechanical and accessible spaces; i.e., attics, roofs, crawl spaces, etc. Any spaces not accessed shall be noted in the report.
3. The report must include a narrative description of the development, including the evaluator's overall assessment of the property condition. The narrative shall include property location, age, physical attributes, number of units inspected and the physical condition of the units inspected. The assessment shall address the presence of, or suspected presence of environmental hazards, such as asbestos, lead paint or mold.
  - a. The number of living units required to be assessed shall be as follows:

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- i. Developments with 4 – 40 units  $\geq$  50%
- ii. Developments with 41 – 60 units  $\geq$  35%
- iii. Developments with 61 – 80 units  $\geq$  30%
- iv. Developments with 81 – 100 units  $\geq$  25%
- v. Developments over 100 units  $\geq$  20%

[If determining the number of units to be assessed results in a fraction, round up to the next number]

4. The report shall include photographs of building characteristics that accurately reflect the existing conditions present.
5. Physical Assessment: The report shall further examine and analyze:
  - a. The site, including general topography, ground water drainage, bituminous/concrete pavement, bituminous/concrete walks and curbs, site amenities, water, storm, sanitary sewer, gas and electric services
  - b. Structural systems, both for substructures and super structure, including exterior wall systems, doors and windows, roofing system and drainage
  - c. Common area and unit interiors, including existing finishes (carpet, vinyl wall covering, paint, VCT, ceramic tile, etc.), appliances, cabinets, toilet fixtures, exhaust fans, range hoods, etc.
  - d. Building thermal envelope components, including an evaluation of insulation and air-sealing measures
  - e. Building mechanical systems and controls, including HVAC systems, plumbing and domestic hot water, fire protection, electrical lighting and power, communication and security systems, etc.
  - e. Any components which are non-compliant with the ADA, Section 504 or Fair Housing Guidelines. The report shall include a copy of the Owner's certification that the specific development complies with all of the ADA and 504 regulations, along with compliance with Fair Housing Guidelines. If the Owner is unable to so certify, then the report shall state how the Owner plans to achieve compliance.
6. Energy Assessment: The report shall include a Level I – Walk-through Energy Assessment (minimum) to assess building energy efficiency, identify defects and simple, low-cost improvements, and create a list of energy conservation measures and retrofit opportunities, including implementation costs and energy savings. This inspection is based on visual verifications, study of installed equipment and operating data, analysis of historic energy use and cost, and a benchmarking comparison to the performance of similar buildings in the area. A Level II – Detailed/General Audit is preferred.
  - a. Coordinate with the utility companies and fuel vendors to analyze common area annual energy usage data. Living units to be assessed for energy efficiency shall be:
    - i. If Owners are responsible for residential utility costs, coordinate with the utility companies and fuel vendors to analyze energy usage data for all units.
    - ii. If tenants are responsible for utility costs, and annual energy usage is not currently tracked by the Owner, a sample of information from 10% of the residential units, including at least one of each unit type, shall be assessed.
  - b. For developments served by CL&P/Yankee Gas, UI/Southern Connecticut Gas or other municipal utilities, CEEF may be able to provide no-, or low-cost Level I Energy Audit and assessment services and on-site testing, and financial incentives for energy conservation measures and retrofit opportunities.
7. The report shall include an interview with on-site property management and maintenance personnel to gain knowledge of past repairs, pending repairs and chronic physical deficiencies. The consultant shall obtain and include a 5-year history of the Owner's capital repair expenditures for the development.
8. If the CNA is required by CHFA for Minor, Moderate or Substantial Rehabilitations, the report shall include a budget and an in-depth scope of work for the proposed rehabilitation work. This budget shall include expenditures and costs for all property improvements that may affect the project's future marketability. Improvements may include energy efficiency upgrades, adding central air to the development, community room additions, etc.
  - a. All proposed improvements (i.e., doors, windows, siding, roofing, paving, etc.) shall comply with the Standards

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- i. Individual building materials, components, fabrications, and equipment for all proposed repair, replacement and capital improvement projects shall comply with the applicable section(s) of the current Standards. However, when determining the scope of work for proposed repair, replacement and capital improvement projects, Owners and Property Managers are strongly encouraged to consider the interconnectedness of building materials, components, fabrications, and equipment that comprise a fully-functioning building. CHFA has developed “Construction Guidelines: Technical Services/Asset Management (TSAM) Capital Improvements Guide (CIG)” for various typical repair, replacement and capital improvement projects, which include “Questions to Consider” – suggested related issues and conditions to be examined when replacing or installing additional individual building materials, components, fabrications, and equipment – which can be found on the CHFA website in the Developer Document Library.
  - ii. For CHFA Replacement Criteria **see section III.D.** below.
9. The CNA report shall include a spreadsheet that outlines, by line item, the costs of proposed improvements expensed in year one, with a life-cycle replacement budget reflecting appropriate line item costs expensed over the proposed mortgage term, if applicable; otherwise a 20 year life-cycle is acceptable. The spreadsheet shall show all costs in today’s dollars, with an appropriate rate of inflation for costs expended over the life-cycle term.
  - a. Please refer to the “Comprehensive Capital Needs Assessment Schedule”, which can be found in the Multifamily Rental Housing Development section of the of the CHFA website.
10. If the CNA is required by CHFA for Moderate and Substantial Rehabilitations, the report shall include a statement of Guaranteed Maximum Price (GMP) based on the projected costs developed by the Contractor for each of the 16-divisions of the CSI MasterFormat 1995 standard filing system for architectural, design, engineering, and construction professionals. Please refer to the Project Cost Summary and Trade Payment Breakdown exhibits in the Consolidated Application. Note that this requirement may also apply to large scale capital improvement, repair and replacement projects subject to Technical Services’ review, which involve multiple divisions of the CSI MasterFormat 1995 (see **CHFA Construction Guidelines: Technical Services/Asset Management (TSAM) Capital Improvement, Repair, Replacement and Installation Project Review Process**).

### D. CHFA Replacement Criteria

Supervising Architects for CHFA-financed rehabilitation projects must follow certain minimum criteria in determining which existing interior building components are suitable for re-use, and which are acceptable to CHFA. Components not covered in this listing shall be evaluated using the listed criteria for similar components. Replacement building materials, components and finishes shall comply with the requirements of the Standards, and all work shall conform to applicable Codes.

#### 1. General:

- i. **Painting:** Lead based paint shall be abated in conformance with applicable law. Repaint all painted surfaces. Paint all repaired surfaces to match existing and/or adjacent painted surfaces.
- ii. **Wall Surfaces:** Provide clean, smooth, homogeneous wall surfaces, similar to new finished drywall.
- iii. **Floor Covering:** Replace all vinyl floor finishes unless the existing finish is as new. Replace carpeting if it is more than 3 years old, has un-removable stains or worn areas, or if rooms within units do not match. Replace ceramic tile and grout floors if tiles are scratched and/or cracked, or if grout has un-removable stains. Floors with unacceptable ceramic tile floors may be refinished with vinyl products.
- iv. **Closet Shelving:** Storage shelves must be smooth, tight fitting, and properly anchored.
- v. **Drapes and Hardware:** Replace drapes that are more than 3 years old, have un-removable stains or worn areas, or if rooms within units do not match. Drapery hardware must function properly, have clean appearance, and be properly anchored.
- vi. **Blinds:** Replace all window blinds, unless the existing are new. All blinds within units must match, and operating hardware must function properly, have clean appearance, and be properly anchored.

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- vii. Motors and Other Equipment: Life-cycle costing should be considered in the evaluation of motors and equipment; replace existing motors and equipment with a projected life of more than five years.
2. Kitchens:
- i. Appliances: Re-use appliances only if they function properly, and have a good overall appearance; i.e., no broken or missing interior/exterior components, dents, chips, major scratches, etc. Replace existing appliances with a projected life of more than five years.
  - ii. Countertops: Re-use countertops only if they are adequately anchored, and have a good overall appearance; i.e., no de-laminations, burns, dents, chips, major scratches, etc. Replace countertops where laminate color and finish on all countertops within individual kitchens do not match.
  - iii. Cabinets: Re-use cabinets only if doors and drawers function properly, visible exterior surfaces have a good overall appearance; i.e., no de-laminations, burns, dents, chips, major scratches, etc., and there are no broken pieces or parts. Cabinets within individual kitchens must match for color, finish, style and hardware. In developments for elderly residents, cabinets must have easily graspable pull handles.
  - iv. Sinks and Faucets: Re-use sinks only if adequately anchored to the countertop, and visible exterior surfaces have a good overall appearance; i.e., no cracks, chips or stains. Faucets and drains shall not leak or drip.
  - v. Garbage Disposal: Disposal must function properly and not leak. Wall switches shall be provided for operating disposal units; in developments for elderly residents, switches must be located within handicapped reach limits.
3. Bathrooms:
- i. Bath Vanities: Remove any wall-hung sink and replace with new vanity and counter top with integral sink. Existing vanities, sinks and tops must meet the same criteria as those for kitchen countertops, cabinets and sinks. The vanity area shall be equipped with a wall switch-controlled task light.
  - ii. Medicine Cabinets: Fully-functioning medicine cabinets may be re-used only if properly anchored, equipped with mirror doors and at least one adjustable storage shelf, and visible exterior and interior surfaces have a good overall appearance; i.e., no dents, scratches, chips or cracks.
  - iii. Bathtub, Shower Base, and Toilets: Clean, fully-functioning bathtubs, shower bases and toilets may be re-used only if properly anchored, and visible exterior and interior surfaces have a good overall appearance; i.e., no dents, scratches, chips or cracks.
  - iv. Ceramic Wall Tile/Fiberglass Wall Surrounds: Re-use ceramic wall tile and fiberglass surrounds only if properly anchored, visible exterior and interior surfaces have a good overall appearance; i.e., no dents, scratches, chips, cracks, un-removable stains, holes from removed accessories, and all tiles within individual bathrooms match.
4. Doors and Door Hardware:
- i. Unit Interior Doors: All unit interior doors shall match for style and type, function properly, and have a good overall appearance; i.e., no delaminations, dents, chips, major scratches, etc. Repairs should be attempted only on minor defects; otherwise, provide new doors. Finish/re-finish all doors and trim within units to match.
  - ii. Interior Door Hardware: All unit interior door hardware shall be properly anchored and function properly, and have a good overall appearance; i.e., no major scratches, missing fasteners etc. Hardware styles and finishes within units shall match.
  - iii. Unit Entry Doors and Hardware: Provide new unit entry doors and hardware in compliance with the Standards.
5. Windows:
- i. Sash, Glazing and Hardware: All window sash and locks shall function properly, have a good overall appearance; i.e., no dents, chips, cracks, major scratches, etc., be plumb and level within the openings, have insulating glazing and shall be properly sealed at the perimeter.
  - ii. Interior Trim: Finish/re-finish all window sash and trim within rooms to match.

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6. Plumbing:
  - i. All service distribution and return piping, controls, connectors, fixtures, fittings and accessories shall function properly with no leaks, have a good overall appearance; i.e., no dents, cracks, major scratches, etc. and shall be properly insulated.
7. Mechanical:
  - i. Heating, Air Conditioning Units and Covers: All equipment, distribution and return piping/ductwork, controls, connectors, fixtures, fittings, covers and accessories shall function properly with no leaks, have a good overall appearance; i.e., no dents, cracks, major scratches, etc. and shall be properly insulated. Finish/re-finish all supply/return covers/vents within rooms to match adjacent walls.
  - ii. Electrical
    - i. Electrical Wiring: Replace all aluminum wiring smaller than #4.
    - iii. Electrical Lighting, Controls, Exhaust Fans, etc.: All fixtures and controls shall function properly and have a good overall appearance; i.e., no dents, chips, cracks, major scratches, etc. Replace all cover plates and finish to match adjacent walls within each room.
    - iv. Smoke Detectors: Replace all smoke detectors; new hard-wired systems are preferred. At a minimum, provide new photoelectric/ionization-type with 10-year, sealed batteries.

### **E. Soil Boring Reports**

The soil survey is to be performed under the direction of a civil engineer registered in the State of Connecticut. The entire site is to be inspected to note variations in types of soils and ground water conditions. Locations for borings are to reflect varying site conditions. Special attention is to be given to boring locations in low or marshy areas, areas where there is a history or evidence of fill or where rock may be expected.

1. Soil borings are to be made with a drilling rig, taking samples as often as the character of the soil changes, and describing it in accordance with acceptable engineering standards. Samples are to be submitted to a soil specialist for analysis.
2. The engineer is to indicate the location of borings on a boundary survey and log the borings on the site plan or on a separate document. The logs are to use an exaggerated vertical scale to indicate, with acceptable key names and symbols, the nature of soil composition at each stratum to a depth of 15 to 20 feet.
3. For sites anticipating high-rise buildings, borings are to be concentrated in the area of the anticipated building location. At least one of these borings shall be drilled to a depth of 100 feet or to hardpan.
4. Borings are to be performed after buildings have been located on the site plan. There shall be a minimum of two borings per building for low-rise structures and at least two borings per wing for mid-rise structures with a minimum of three to four borings overall for this building type. Borings shall also be carried out in parking areas and roadways.
5. The engineer shall indicate bearing capacities of soils at various levels with a recommendation for the footing/foundation type for proposed structures and shall provide a recommendation for pavement design of roads and parking.
6. The engineer shall note ground water conditions such as high water tables, flood zones, etc. and make recommendations for remedies as needed.

### **F. Remediation/Re-use of Existing Brownfield Sites**

CHFA encourages the re-use and redevelopment of abandoned or underutilized commercial and industrial sites, where redevelopment and re-use has not occurred due to the presence or potential presence of pollution in the buildings, soil and/or groundwater, which requires remediation before, or in conjunction with, the restoration, redevelopment and re-use of the property.

## **IV. CRITERIA FOR EVALUATING DEVELOPMENT PROPOSALS**

In evaluating the suitability of a site or in selecting one proposal from several, CHFA considers a number of criteria, some of which may be at cross-purposes and must be balanced against each other. Because the relative importance of each criterion will differ among various developments and communities, many of these criteria

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cannot be stated in absolute terms. If federal funding is involved, such as HOME funds, particular care must be taken in selecting sites that are fully accessible. The following list will guide a prospective developer in general site selection and CHFA evaluation criteria:

### **A. Site Selection**

Ideally, development sites shall not be selected if the surroundings would detract excessively from the quality of development, or where the development would have an adverse effect upon its surroundings. By considering issues such as lot orientation, storm-water management, access to transit, and minimizing street widths early on, many environmental benefits can be accrued at later stages of the project. More specific considerations include, but are not necessarily limited to:

1. Location Considerations:
  - a. Contiguous/Adjacent Land Uses and Densities: Types and impact of adjoining and planned land uses
  - b. Open Space On- and Off-site
  - c. Physical/Social Characteristics
  - d. Adverse Influences; such as Abutting Public Streets with Speed Limits Exceeding 25 mph, Railroads, Highways, Floodplain, Heavy Industry, Brownfield, Endangered Species Habitat Areas, etc.
  - e. Preservation of Historic/Scenic Features
  - f. Proximity to:
    - i. Health Care Facilities
    - ii. Social Services
    - iii. Education
    - iv. Places of Worship
    - v. Public Transportation
    - vi. Shopping (Supermarkets, Pharmacies, Department Stores, Etc.)
    - vii. Commercial Services (Financial, Legal, Etc.)
2. Planning and Zoning Considerations:
  - a. Minimum Lot Size/Frontage
  - b. Use Restrictions
  - c. Easements, Encroachments, and Rights Of Way
  - d. Front, Rear and Side Yard Setbacks
  - e. Density and Bulk Restrictions
  - f. Maximum Lot Coverage by Buildings/Paving
  - g. Parking Requirements
  - h. Wetlands and Open Space Requirements
  - i. Zoning Approval/Variance Procedures
3. Land and Soil Considerations:
  - a. Topography and Landforms: unique ground formations and percent of slope
  - b. Special Features: Special land features, rock outcroppings, etc.; lakes and ponds; dramatic views
  - c. Vegetation: existing trees and ground cover
  - d. Drainage: Natural watershed, designated wetlands, floodplains and floodways
  - e. Climatology: Prevailing wind direction, sun angle/shading
  - f. Geo-technical Report (test pits/ borings)
  - g. Soil Type and Composition
  - h. Soil Bearing Capacity
  - i. Illegal Dumping
  - j. Hazardous Materials (HazMats)
  - k. Proximity to Large Agricultural Enterprise (odors/insects/pesticides)
4. Site Utilities Considerations:
  - a. Determine accessibility, condition, age and capacity of public utility feeds; i.e. water, sanitary/storm sewer, electric, gas, communications
  - b. Determine Green possibilities for placement of alternative energy systems to control utilities cost; i.e. solar heat/hot water, photovoltaic cells, geothermal

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5. Existing Structures Considerations:
  - a. Utility Services: (sizes, capacities, depths)
  - b. Previous building uses (gas stations, dry cleaners, factories, etc.)
  - c. Structural viability of building and appurtenant structures
  - d. HazMats
  - e. Feasibility/expense of bringing building(s) up to Code
6. Site Development Cost Considerations:
  - a. Site selection determines limits of site development costs
  - b. Administrative and Legal fees
  - c. Environmental Testing and Reports
  - d. Bring Site into Code compliance
  - e. Removal of HazMats/remediation

### **B. Development Costs**

Overall costs of development shall be considered in relation to the quality of the resulting development, and not only to the number of dwelling units constructed. Location, available services, ease of development, type of construction, quality of materials, size and number of units and amenities provided, all contribute to overall costs. The development budget shall be prepared and evaluated for what it provides, as well as overall and per dwelling costs. It must be supported by the rents generated by the marketplace. In particular, the following shall be considered:

1. Land costs shall be related to the location, amenities, and ease of development, as well as to the cost of land per dwelling unit
2. CHFA requires an independent appraisal of land costs by a real estate appraiser licensed in the State of Connecticut
3. Site improvement and building costs shall be consistent with the type and quality of the proposed development and reasonable in cost per dwelling. Costs shall be evaluated for their adequacy to provide construction which reduces the consumption of energy and the amount of maintenance required over the mortgage life of the development, and for the amenities planned in its design.
4. Reporting of costs shall be performed in accordance with the Procedures and schedules specified by CHFA.

### **C. Project Data for Construction Cost**

In order for CHFA to evaluate the construction costs for proposed developments, provide the following project data, which must be updated and re-submitted for each phase of the Technical Review Process:

1. Number of Buildings
2. Building Gross Area (Total Project Square Footage – all buildings)
3. Building Net Area
4. Total Number of Units and Breakdown of Unit Type (including number of bedrooms and accessibility types)
5. Unit Gross Area (Total Residential Area – each dwelling unit)
6. Unit Net Area (Net Residential Area – each dwelling unit)
8. Total Common Area (Net Common Area – all buildings)
9. Total Management Area (Net Management Area – all buildings)
10. Total Commercial Area (Net Commercial Area – mixed-use buildings)

### **D. Area and Use Definitions for Construction Cost**

1. Building Gross Area
  - a. Town houses, stacked flats, other configurations without common or shared space: All floor area, including construction and shaft spaces within the building, measured from the outside of the exterior walls; spaces only partially enclosed, such as balconies, entrance canopies, etc., are not included; basements in town houses are not included.

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- e. High-rise, mid-rise, garden apartments, other configurations that include common or shared space: All floor area, including construction and shaft spaces within the building, measured from the outside of the exterior walls shall be included; spaces only partially enclosed, such as balconies, entrance canopies, etc., are not included; floor areas of non-housing, such as commercial spaces, are not included; basements with common space that has a housing use are included.
2. **Building Net Area:** All of the floor area inside the finished surfaces of the exterior walls, excluding basement areas.
3. **Unit Gross Area**
  - a. Town houses, stacked flats, other configurations without common or shared space: The sum of residential floor areas, including portions of basements and attics used for living space, located within the outside faces of unit exterior walls and centerlines of common or shared walls and centerlines of corridor walls; otherwise, basement areas are excluded.
  - b. High-rise, mid-rise, garden apartments, other configurations which include common or shared space: Subtract the sum of the total Unit Net Areas from the Building Gross Area, divide the remainder by the number of units, and add the result to the Unit Net Area for each unit.
4. **Unit Net Area:** All of the floor area inside the finished surfaces of residential unit walls, including unit separation, common corridor and exterior walls.
5. **Residential Area:** Spaces to be included in Residential Area calculations include dwelling units (including the manager's unit), entry vestibules, lobby spaces deemed necessary for foot travel from the building entry to the elevator and from the elevator to the unit entry, corridors, elevator lobbies, elevators, receiving, mechanical/electrical/meter rooms, stairways, trash rooms and required tenant storage.
6. **Common Area:** Spaces to be included in Common Area calculations include community buildings, community rooms, common kitchens, offices, reception areas, maintenance areas, library areas, meeting rooms, common laundries, lounges, rest rooms, mail rooms, janitor closets, craft rooms, game rooms, conference rooms, mechanical/electrical rooms for common areas and common storage space. Note: the lobby space deemed necessary for foot travel from the building entry to the elevator, and from the elevator to the unit entry, is not considered common space.
7. **Management Area:** Spaces to be included in Management Area calculations include management offices, reception, conference rooms, janitor closets, maintenance work areas and storage, and mechanical rooms.
8. **Commercial Area:** Spaces to be included in Commercial Area calculations include all areas available for commercial lease in mixed use buildings.

### **E. CHFA/DOH Consolidated Application**

The submission of the CHFA/DOH Consolidated Application exhibits for Project Cost Summary and Trade Payment Breakdown is intended as a statement of Guaranteed Maximum Price (GMP) based on the projected costs developed by the Contractor for each of the 16-divisions of the MasterFormat 1995 standard filing system for architectural, design, engineering, and construction professionals, serves as the Contractor's Requisition Template and Cost Certification Template, and must accompany all subsequent Technical Review submissions, whether or not cost changes are proposed based upon additional detail and/or revisions to the construction documents.

### **F. Prevailing Wages/Davis-Bacon Wages**

Prevailing Wages and/or Davis Bacon Wage Rates may be required. It is the responsibility of the applicant to determine if such requirements apply to their project. Please contact the necessary authorities to determine the applicability of prevailing wages and/or Davis Bacon wage rates. When Prevailing Wage Rates are required by the Connecticut Department of Labor, and/or Davis Bacon Wage Rates are required by the U.S. Department of Labor, documentation and itemization of all current required wage rates shall be provided to CHFA immediately upon receipt from the Department of Labor, and must accompany all subsequent Technical Review progress submissions, whether or not cost changes are proposed based upon additional detail and/or revisions to the construction documents.



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### **G. CHFA Very Low-Income (VLI) Construction Employment Policy**

All multifamily projects funded by CHFA mortgages, with CHFA funding or other funds administered by CHFA, and which have \$1 million or more in new and/or rehabilitation “Hard Construction Costs”, are required to comply with the CHFA Very Low-Income (VLI) Construction Employment Policy (#CHFA-2010-3). The CHFA VLI Construction Employment Policy requires good faith efforts to hire and train very low-income residents in the area – families and individuals whose incomes do not exceed 50% of the Area Median Income of the location of the development. Documentation evidencing good faith efforts undertaken to comply with the VLI Construction Employment Policy, including, but not limited to advertisements, outreach to community organizations, job informational meetings, job counseling, education and related programs in association with local educational institutions, consultation with state and local agencies administering training programs, incorporating negotiated provisions for a specific number of VLI persons to be trained and/or employed, and subcontracting with Section 3 certified or public housing resident-owned business, must be provided. Suitable documentation includes, but is not necessarily limited to a completed CHFA Very Low-Income (VLI) Construction Employment Status Report form. If, as a result of good faith efforts undertaken, VLI residents were hired during the reporting period to perform work, Part I of the HUD form 60002 “Section 3 Summary Report – Economic Opportunities for Low- and Very Low-Income Persons” must be completed.

1. **Municipal Minority Employment Hiring and Training Policies:** Comply with all local municipality requirements to provide job opportunities through the hiring and training of low-income residents in their communities.

### **H. CHFA Cost Acceptance Limits**

1. **General Requirements:** 9% of Total Hard Cost (max.)
2. **Overhead & Profit:** 7% of Total Hard Cost (max.)
3. **Total for General Requirements + Overhead & Profit:** 16% of Total Hard Cost (max.)
4. **Percentage Stacking:** Percentages shall remain the same for all Change Orders; Percentage Stacking is not allowed

### **V. DESIGN REVIEW**

It is necessary that the programming, planning, design and construction of housing developments be based on a logical, step-by-step process that proceeds from the general to the specific, from the overall to the detailed. Such a process will also provide CHFA with a rational sequence for the review of applications for financial assistance.

#### **A. Pre-Design Meeting**

At the Developer’s request, an initial meeting may be arranged between the Development Team and CHFA staff from Underwriting, Technical Services, Asset Management, and other Authority departments as may be required, to present any conceptual sketch design drawings that may have been developed, discuss programmatic parameters and amenities for the proposed development project, review the Standards and Technical Review Process, and the anticipated development schedule. Note that the Standards may be more restrictive in some cases than local planning and zoning requirements; as such, the local municipality’s planning and zoning review/approval process should be concurrent with the CHFA application process.

#### **B. Design Review Process**

Projects will be evaluated by the CHFA Technical Services Department at two formal, interactive stages:

- Review Step I – Full Application: Design Development (40% Review)
- Review Step II – Initial Closing: Construction Documents/Commitment (100% Review)

The intent, content and requirements of each phase are outlined herein. Early communication with the Authority, and adherence to these requirements, will insure expeditious processing of applications and minimize the need for modifications. Each documents provided at each submission/re-submission must be coordinated and up-to-date

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### C. Technical Services-related LIHTC Application Submission Requirements

For 9% Tax Credit applications **only**, submit a complete CHFA/DOH Consolidated Application with all of the threshold Technical Services-related forms, exhibits, and attachments, etc., including, but not limited to:

1. Design and Construction Team Qualifications (see sections II.B. & D.):
  - a. Architect's qualifications
  - b. Professional Consultants' qualifications
  - c. Contractor's qualifications
2. Zoning Approval: Provide evidence of zoning and other required Municipal approval(s), including approval effective/expiration date information, and any conditions of such approval(s).
3. Physical and Energy Needs Assessments: Provide a Capital Needs Assessment (CNA) Report (if rehabilitation work is involved), or Architectural Needs Assessment and a Structural Needs Assessment Reports (if gut rehabilitation work is involved (**see sections III.B. & C.**)).
4. Environmental Assessment: Phase I (min.) Environmental Site Assessment Report; if the Phase I Report recommends additional Phase II or Phase III testing, analysis, remediation planning and/or budgeting, further-developed reports are available, they may also be provided (**see CHFA "Construction Guidelines – Environmental & Hazardous Materials Review"**)
5. Energy Conservation Plan: Provide an Energy Conservation Plan and information regarding the applicant's efforts to secure other energy efficiency-related funding partners, and/or government-/utility-sponsored incentives (**see CHFA "Construction Guidelines – Energy Conservation"**).
6. Availability of Utilities: Provide evidence of availability of utility services to the site; i.e. water, sanitary/storm sewers, electric, gas and cable TV/internet.
7. Preliminary Drawings: Provide  $\geq 10\%$  complete Construction Drawings, in accordance with requirements for financing consideration by the Authority's Board of Directors with dimensions on major common areas and typical units, basic layouts, types and sizes of mechanical and electrical equipment and systems, materials and operations, and typical building sections, wall sections and details. All drawings that are to be developed for use in the construction of the development shall be coordinated to allow printing on the same standard sized print pages, and all pages shall be bound together as a complete sets. All drawings must include sheet titles and numbers, graphic and lettered scales, a north arrow and a rectangular space 1¼" h. x 3½" w. in the upper right corner of all drawings and specification pages for the CHFA 5-party Initial Closing stamp.
  - a. Title Sheet: Provide development location, including location map, names and contact information for the Sponsor, Architect, Landscape Architect, Site Planner, Surveyor, Engineer and any other special consultants, revision dates, index of drawings, a development data summary (**see sections IV.C. and D.**), a list of the applicable Building Codes, use group, building classification, etc. to which the proposal has been designed and a large note on the title sheet clearly indicating that the drawings are intended as "10% Construction Drawings".
  - b. Boundary and Topographic Survey (**see section III.A.**)
  - c. Site Plan(s): Provide the following minimum information:
    - i. Rough grade information, locations, shapes, sizes, arrangements and groupings of structures
    - ii. Vehicular and pedestrian route layouts, and number/types of parking spaces
    - iii. Locations and types of exterior common spaces
  - d. Residential and Community Building Plans (1/8" = 1'-0" scale, minimum): Preliminary designs for residential buildings and dwelling units and community building(s) shall be provided. These designs shall be based on careful study of the conceptual development program. Provide building floor plans, sections and elevations, including door and window locations, door swings, furniture layouts, and use designation and sizes of major rooms and room and spaces.
  - e. Additional information as may be necessary to fully illustrate the proposed development/redevelopment, such as study models and/or perspective sketches, are encouraged.
8. Preliminary/Outline Specifications:  $\geq 10\%$  complete
9. Construction Cost Information: All initial and updated construction document submissions must be accompanied by a current, signed CHFA/DOH Consolidated Application Project Cost Summary

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(Construction Schedule of Values) and Exploded Trade Payment Breakdown forms, which reflect the current construction cost project data information (**section IV.C. and D**).

- a. Note: CHFA does not generally allow payment for stored materials, either on-site or off-site. CHFA's Multifamily Underwriting and Technical Services will consider payment for stored "long-lead" items on a case-by-case basis, upon request. Such items might include elevators, precast concrete, structural steel and large project-specific mechanical equipment. The GC shall be responsible for, and shall include storage and insurance costs total in the General Requirements. Requisition for payment for "long-lead" items shall be made after they are installed and accepted by the Owner and the CHFA Field Observer.
10. **Accessibility Plan:** For multifamily rental housing projects that are designed, built or altered with Federal funds, provide a plan for accessibility by individuals with mobility, hearing and vision impairments in accordance with Uniform Federal Accessibility Standards, including:
  - a. Accessible Entrance on an Accessible Route
  - b. Accessible Public and Common Use Areas
  - c. Useable Doors
  - d. Accessible Route Into and Through the Dwelling Unit
  - e. Accessible Light Switches, Electrical Outlets, Thermostats, and Environmental Controls
  - f. Reinforced Walls in Bathrooms
  - g. Usable Kitchens and Bathrooms
11. For 9% Tax Credit submissions demonstrating Financial Sustainability, 40% - 90% complete Building Plans and Specifications may be provided:
  - a. Building plans and specifications more than 40% complete, but and less than 90% complete may be provided (**see sections VI.A.8. – 10. for Design Development Drawing and Specification, and 40% Construction Drawing Checklist requirements**)
  - or –
  - b. Construction Documents 90% or more complete may be provided (**see sections VII.A.8. – 10. for 90% Construction Contract Drawing and Specification, and 100% Construction Drawing Checklist requirements**)
12. For 9% Tax Credit submissions demonstrating Financial Sustainability, Sustainable Design measures may be provided:
  - a. A proposed program for a high-performance building envelope may be provided:
    - i. If the application is for the minor, moderate or substantial rehabilitation of existing buildings, as defined in the CHFA Guidelines, provide an Energy Conservation Plan that provides for a projected reduction in energy consumption  $\geq 33\%$
    - or –
    - ii. If the application is for the gut rehabilitation of existing buildings, as defined in the CHFA Guidelines, or for new construction, provide an Energy Conservation Plan that provides for a projected HERS Index for the project  $\leq 52$ , based on the ENERGY STAR Qualified Home v 3.0 HERS Index Target Procedure.
    - or –
    - iii. If the application is for the gut rehabilitation of existing hi-rise buildings, as defined in the CHFA Guidelines, or for the construction of a new hi-rise building, and the building is eligible for the ENERGY STAR MFHR Program, as determined by the EPA ENERGY STAR Multifamily New Construction Program Decision Tree the Energy Conservation Plan must provide for energy cost savings  $\geq 23\%$  over ASHRAE 90.1-2007 Standards.
  - and/or –
  - b. A proposed program for a Renewable Energy System – roof-top, building-integrated or landscape-integrated Photovoltaic (PV) electrical generation system, with a minimum goal of providing  $\geq 33\%$  of site lighting energy requirements, or an ENERGY STAR-qualified central geothermal HVAC system may be provided
  - and/or –

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- c. A proposed program for Low Impact Design site development, with a minimum goal of retaining, infiltrating and/or treating the first ½" of rainfall in a 24-hour period may be provided.  
– and/or –
- d. A proposed program for new natural gas utility infrastructure for natural gas-fired space heat and hot water may be provided.

### **D. 10%/LIHTC Application Review**

For 9% Tax Credit applications only, Technical Services staff will review the submitted Technical Services-related documents for application threshold fulfillment purposes, and for compliance with the current Standards and CHFA Guidelines, and will provide written comments to the CHFA Underwriter.

## **VI. REVIEW STEP I - FULL APPLICATION: DESIGN DEVELOPMENT**

For all developments, including those receiving Low Income Housing Tax Credits and developments financed with Tax-exempt Bonds: The review of Design Development Documents is the first stage of the interactive Technical Review Process between the Development Team and CHFA Technical Services. Design Development Documents include 40% complete Construction Drawings, which reflect the refinement of Preliminary Design Documents, and define the scope, character, relationships, form, size and appearance of the Development, by means of plan, section, elevation, typical construction details and equipment layout drawings. The Design Development Documents must also include 40% complete Construction Specifications, which identify and generally establish the quality of proposed major materials, equipment and systems. Other documents required at this stage include: current cost estimates, recommendations for the phasing and schedule of the construction, site and landscape plans, structural, mechanical, electrical and fire protection plans and other information consist with 40% complete Construction Documents, or as may otherwise be required.

### **A. Technical Services-related 40% Construction Contract Document Submission Requirements**

Submit a complete CHFA/DOH Consolidated Application with all of the threshold Technical Services-related forms, exhibits, and attachments, etc., including, but not limited to:

1. Design and Construction Team Qualifications: (see section V.C.1.)
2. Zoning Approval: (see section V.C.2.)
3. Physical and Energy Needs Assessments: (see section V.C.3.)
4. Environmental Assessment: (see section V.C.4.)
5. Soils Report: Boring and test pit report by a licensed Geotechnical Engineer (see section III.E.)
6. Energy Conservation Plan: Provide an Energy Conservation Plan and a preliminary estimate of anticipated energy incentives from the utilities based on a CEEF Program Administrator review of the 40% CDs for qualifying measures (see section V.C.5.)
7. Availability of Utilities: (see section V.C.6.)
8. Design Development Drawings: Provide 40% complete Construction Drawings and Specifications, in accordance with requirements for financing consideration by the Authority's Board of Directors with dimensions on major common areas and typical units, basic layouts, types and sizes of mechanical and electrical equipment and systems, materials and operations, and typical building sections, wall sections and details. All drawings that are to be developed for use in the construction of the development shall be coordinated to allow printing on the same standard sized print pages, and all pages shall be bound together as a complete sets. All drawings must include sheet titles and numbers, graphic and lettered scales, a north arrow and a rectangular space 1¼" h. x 3½" w. in the upper right corner of all drawings and specification pages for the CHFA 5-party Initial Closing stamp.
  - a. Title Sheet: Provide development location, including location map, names and contact information for the Sponsor, Architect, Landscape Architect, Site Planner, Surveyor, Engineer and any other special consultants, revision dates, index of drawings, a development data summary (see sections IV.C. and D.), a graphic/tabular analysis of the applicable Building Codes to which the proposal has been designed and a large note on the title sheet clearly indicating that the drawings are intended as "40% Construction Drawings". Building Code requirements to be addressed in the analysis include,

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- but are not limited to: use and occupancy classification(s), building height(s) and area(s), type(s) of construction and fire-resistance rating(s), fire protection system(s), means of egress and accessibility.
- b. **Boundary and Topographic Survey (see section III.A.)**
  - c. **Site Plans:** The Design Development Site Plan shall indicate refined arrangements and functional groupings of units to scale, to create a meaningful sequence of usable spaces. Specific relationship of unit arrangement, of the structure to the site, site grading, circulation, lighting, paving, screening, setbacks, parking, play areas and recreation areas shall be presented, including:
    - i. Structures: Locations, shapes, sizes, arrangements and groupings of all structures
    - ii. Circulation and Parking: Vehicular and pedestrian route layouts and materials; parking/dwelling unit relationships, location, types and number of parking spaces
    - iii. Soils: Locations of soil borings; data and analysis of topsoil (may be a separate report)
    - iv. Utilities: General layouts of major utilities, easements and connections; irrigation water source and pressure (if proposed)
    - v. Recreation: Locations and types of facilities
    - vi. Grading and Landscaping: General character/major features of finished grading, existing and proposed contours at 2' (min.) intervals, berms and mounds, sections, etc.; storm water management/detention and retention areas; general character of plantings, screening concepts, relationship to units and open space, etc.; areas of no-disturbance/ tree and vegetation protection and areas acceptable for construction vehicles and material storage
    - vii. Lighting: Location and character of proposed fixtures (catalog illustrations), height, wattage and photometric information and a separate Site Lighting Photometric Plan indicating conformance with CHFA-required exterior illumination levels)
  - d. **Residential and Community Building Plans:** Definitive designs for typical dwelling units, residential buildings and community building(s) shall be developed and submitted to CHFA. These designs shall be based on careful study of the development program and concept plan.
    - i. Residential Buildings: Provide residential building floor plans, sections and elevations of typical residential buildings at 1/8"= 1'-0" scale (min.), indicating overall dimensions, gross area, basic construction technique and exterior materials and keyed to the Site Plan, and dwelling unit floor plans for each unit type (including door and window locations, door swings, and furniture layout), indicating designation, dimensions and area of each room and space, at 1/4"=1'-0" scale (min.)
    - ii. Community Buildings/Facilities: Provide community building floor plans, sections and elevations of community buildings at 1/4"= 1'-0" scale (min.), keyed to the Site Plan, and indicating overall basic dimensions, gross area, basic construction technique and exterior materials, door and window locations, door swings, and furniture layouts, and designation, dimensions and area of each room and space
    - iii. Non-residential Facilities: Provide community building floor plans, sections and elevations of commercial and other nonresidential facilities included in development at 1/4"= 1'-0" scale (min.), keyed to the Site Plan, and indicating overall basic dimensions, gross area, basic construction technique and exterior materials, door and window locations, door swings, and furniture layouts, and designation, dimensions and area of each room and space
    - iv. All Buildings: Provide residential and non-residential building structural, HVAC, fire suppression and electrical floor plans at 1/8"= 1'-0" scale (min.), indicating designation of each room and space, system layouts and fixture, equipment and control locations
    - v. Additional Information: Provide additional information as may be necessary to fully illustrate the proposed development/redevelopment (study models and/or perspective sketches are encouraged)
9. **Design Development Specifications:** Provide a Construction Contract Project Manual at a 40% (min.) level of completion, in accordance with requirements for financing consideration by the Authority's Board of Directors, which define all proposed major building components and systems in division 2 through 16, of the 5-digit-based CSI MasterFormat 1995, including Part 1 – General: Warranty information and Part 2 – Products: Manufacturer, Material/Component/Manufactured Unit and Performance information (min.). Provide a rectangular space 1¼" h. x 3½" w. in the upper right corner of

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all pages for the CHFA 5-party Initial Closing stamp, and a large note on the cover sheet clearly indicating that the specifications are intended as a “40% Project Manual”.

10. CHFA 40% Construction Drawing Checklist: Provide a fully-completed “CHFA 40% Construction Drawing Checklist” with the Design Development (40% complete) Construction Drawings and Specifications submission, indicating compliance/non-compliance with CHFA General Design Requirements, locations in the documents where an indication of compliance/non-compliance with CHFA General Design Requirements can be found, the cost necessary to bring non-compliant design elements into compliance, and any necessary comments regarding specific design elements. Technical services has developed this form to help individual developments identify unique site, design, financing or market constraints early in the design and underwriting review process, for which full compliance with the Standards may be difficult or impossible, so that the Developer or Owner may request a Modification or Waiver of specific problematic requirements. CHFA will consider such requests on a case-by-case basis, to determine whether such requirements should be modified or waived for reasons and purposes acceptable to the Authority.
11. Construction Cost Information: (see section V.C.9.)
12. Accessibility Plan: (see section V.C.10.)

### B. Design Development Review

1. 40% Construction Drawing Checklist Meeting: At the Developer’s request, a meeting may be arranged between the Development Team and CHFA Technical Services staff, Asset Management, to discuss the 40% Construction Drawing Checklist and 40% complete Drawings and Specifications. Conversely, CHFA Technical Services may request such a meeting, if it is not readily-apparent that Design Development Documents are 40% complete, if the 40% Construction Drawing Checklist does not appear to coordinate with the 40% complete Drawings and Specifications, or for other reasons and purposes necessary to the Authority.
2. 40% Review: Technical Services staff will review the submitted Technical Services-related documents for application threshold fulfillment purposes, and for compliance with the current Standards and CHFA Guidelines, and will provide written comments. The Developer’s Design Team shall then prepare and submit a written response to CHFA, including follow-up comments and desired Standards Modification/Waiver requests.
  - a. When requesting a Modification or Waiver, the Development Team must provide compelling reasons for CHFA to consider in granting a Modification or Waiver.
  - b. When submitting revised drawings, all changes shall be highlighted by architectural graphic standard “clouds”.

## VII. 90% CONSTRUCTION CONTRACT DOCUMENTS

For 9% Tax Credit applications demonstrating Financial Sustainability (see V.D.4.) and for other competitive funding applications demonstrating readiness (as may be provided in the rating and ranking criteria for particular funding programs) only,  $\geq 90\%$  complete Construction Documents may be submitted. This stage facilitates the final documents from which the development will be constructed: complete construction documents consistent with the needs of the anticipated future residents, the Design Development Documents, the Standards and CHFA Guidelines and the construction budget available to the development. Other documents required at this stage include: current cost estimates, recommendations for the phasing and schedule of the construction, site and landscape plans, structural, mechanical, electrical and fire protection plans and other information consistent with  $\geq 90\%$  complete Construction Bid Documents.

### A. Technical Services-related $\geq 90\%$ Construction Contract Document Submission Requirements

For 9% Tax Credit applications demonstrating Financial Sustainability (see V.C.11.) and for other competitive funding applications demonstrating readiness (as may be provided in the rating and ranking criteria for particular funding programs) only, submit a complete CHFA/DOH Consolidated Application with all of the threshold Technical Services-related forms, exhibits, and attachments, etc., including, but not limited to:

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1. Design and Construction Team Qualifications: (see section V.C.1.)
2. Zoning Approval: (see section V.C.2.)
3. Physical and Energy Needs Assessments: (see section V.C.3.)
4. Environmental Assessment: (see section V.C.4.)
5. Soils Report: (see section VI.A.5.)
6. Energy Conservation Plan: Provide an Energy Conservation Plan and a preliminary estimate of anticipated energy incentives from the utilities based on a CEEF Program Administrator review of the 90% CDs for qualifying measures (see VI.A.6.).
7. Availability of Utilities: (see section V.C.6.)
8. 90% Construction Contract Drawings: Provide  $\geq 90\%$  complete Construction Drawings, in accordance with CHFA requirements (see section VIII.A.9.). All drawings developed for use in the construction of the development shall be coordinated to allow printing on the same standard sized print pages, and all pages shall be bound together as a complete set. All drawings must include sheet titles and numbers, graphic and lettered scales, a north arrow and a rectangular space 1¼" h. x 3½" w. in the upper right corner of all drawing sheets for the CHFA 5-party Initial Closing stamp. Changes to previously-submitted drawings (revisions and additional notes/details, etc.) based on specific CHFA Step I – 40% Review comments shall be identified in accordance with architectural graphic standards by drawing a “cloud” (continuous series of circle segments) around portions of drawings that have been changed.
  - a. Title Sheet: Development location, including location map, names and contact information for the Sponsor, Architect, Landscape Architect, Site Planner, Surveyor, Engineer and any other special consultants, revision dates, index of drawings, a development data summary ( see sections IV.C. and D.), a graphic/tabular analysis of the applicable Building Codes to which the proposal has been designed and a large note on the title sheet clearly indicating that the drawings are intended as “90% Construction Drawings”. Building Code requirements to be addressed in the analysis include, but are not limited to: use and occupancy classification(s), building height(s) and area(s), type(s) of construction and fire-resistance rating(s), fire protection system(s), means of egress and accessibility
  - b. Boundary and Topographic Survey (see section III.A.)
  - c.  $\geq 90\%$  Construction Contract Drawings for Site Development and Residential and Community Buildings (see section VIII.A.9.c. and d.): Provide construction contract bid drawings as required, complete to a level of 90% pending final coordination among the Development Team and Sub-consultants, including site development plan, section and details, life-safety plans, demolitions plans and elevations, and building, dwelling unit, community and other non-residential facility, structural, HVAC, fire suppression and electrical floor plans, sections, elevations, details, interior elevations, and schedules.
9. 90% Construction Contract Specifications: Provide a construction contract bid Project Manual, complete to a level  $\geq 90\%$  pending final coordination among the Development Team and Sub-consultants, in conformance with the Uniform System for Construction Specifications, Data Filing and Cost Accounting (CSI), which defines all required bidding, contract and general requirements in division 1, of the 5-digit-based CSI MasterFormat 1995, and technical specifications for all building materials, components, assemblies, fabrications, equipment and systems in divisions 2 through 16, including Part 1 – General, Part 2 – Products and Part 3 – Execution. Unless otherwise permitted by CHFA, manufacturers’ instructions shall be followed for the installation of all materials, products and equipment. Provide a rectangular space 1¼" h. x 3½" w. in the upper right corner of all pages for the CHFA 5-party Initial Closing stamp, and a large note on the cover sheet clearly indicating that the submission is intended as a “90% Project Manual”.
10. CHFA 100% Construction Drawing Checklist: Provide a fully-completed “CHFA 100% Construction Drawing Checklist” with the 90% complete Construction Drawings and Specifications submission, indicating compliance/non-compliance with CHFA General Design Requirements, locations in the documents where an indication of compliance/non-compliance with CHFA General Design Requirements can be found, the cost necessary to bring non-compliant design elements into compliance, and any necessary comments regarding specific design elements. Technical services has

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developed this form to help individual developments identify unique site, design, financing or market constraints early in the design and underwriting review process, for which full compliance with the Standards may be difficult or impossible, so that the Developer or Owner may request a Modification or Waiver of specific problematic requirements. CHFA will consider such requests on a case-by-case basis, to determine whether such requirements should be modified or waived for reasons and purposes acceptable to the Authority.

11. Construction Cost Information: (see section V.C.9.)

12. Accessibility Plan: (see section V.C.10.)

### **B. 90%/LIHTC Application Review**

For 9% Tax Credit applications demonstrating Financial Sustainability (see V.C.11.) and for other competitive funding applications demonstrating readiness (as may be provided in the rating and ranking criteria for particular funding programs) only, Technical Services staff will review the submitted Technical Services-related documents for application threshold fulfillment purposes, and for compliance with the current Standards and CHFA Guidelines, and will provide written comments to the CHFA Underwriter.

## **VIII. REVIEW STEP II – COMMITMENT: INITIAL CLOSING**

The review of 100% complete Construction Documents is the second stage of the interactive CHFA Technical Review Process between the Development Team and CHFA Technical Services. This phase culminates with the final documents from which the development will be constructed: a complete Commitment Submission, in accordance with the Standards and Initial Closing Requirements: Construction Contract Documents.

### **A. Technical Services-related 100% Construction Contract Document Submission Requirements**

Submit a complete CHFA/DOH Consolidated Application with all of the threshold Technical Services-related forms, exhibits, and attachments, etc., including, but not limited to:

1. Design and Construction Team Qualifications: If not previously submitted, or if members of the Design and Construction Team have changed, submit updated documents (see section V.C.1.)
2. Zoning Approval : If not previously submitted, or if the previous Zoning Approval had to be changed, submit updated documents (see section V.C.2.)
3. Physical and Energy Needs Assessments: If not previously submitted, or if revisions to previously-submitted Capital Needs Assessment (CNA), Architectural Needs Assessment and/or Structural Needs Assessment Reports were required, submit updated documents (see section V.C.3.)
4. Environmental Assessment: If the Phase I Report recommended additional Phase II or Phase III testing, analysis, remediation planning and/or budgeting, provide Phase II and Phase III Environmental test reports, remediation specifications, abatement plan, specifications and cost estimate (see section V.C.4.)
5. Soils Report: If not previously submitted, or if revisions to previously-submitted boring and test pit report by a licensed Geotechnical Engineer, provide additional or updated documents (see section VI.A.5.).
6. Energy Conservation Plan: Provide a final estimate of anticipated energy incentives from the utilities based on a Letter of Agreement (LOA) with incentive amounts, energy savings details and verification requirements (see VI.A.6.).
7. Availability of Utilities: If not previously submitted, submit updated documents (see section V.C.6.)
8. Property and Topographic Survey and Legal Description: Submit two copies of the Property and Topographic Surveys (see section III.A.), including a certification statement to the Authority, its successors and assigns; the title insurance company/companies insuring the Mortgage; the Owner/Developer, DECD (if applicable) and/or other interested parties; with no statement of facts objectionable to the Authority. The survey certification language and attendant notes should include the following basic elements in a format acceptable to CHFA, and should be used for both the pre-construction and As-built surveys:
  - a. Survey Certification Statement:



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*To: Connecticut Housing Finance Authority, [State of Connecticut Department of Economic & Community Development/Other Lenders], [Title Insurance Company], [Owner/Developer] [Other Interested Parties]:*

*This is to certify that this map and the survey on which it is based were made in accordance with the 2011 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes items 1(existing), 2, 3, 4, 5, 6, 7(a), 8, 9, 10, 11b, 13, 14, 16, 17, 18, 19, 20(a) and 21 of Table A thereof. The fieldwork was completed on [Date].*

*Date: [Certification Date]*

*Signature: [Licensed Land Surveyor's Signature with Professional Seal Affixed]*

- b. Applicable Notes (including, but not necessarily limited to):
1. *This survey map has been prepared in accordance with Sections 20-300b-1 through 20-300b-20 of the Regulations of Connecticut State Agencies and the "Standards for Surveys and Maps in the State of Connecticut" as adopted by the Connecticut Association of Land Surveyors, Inc. as a Property and Topographic Survey, the Boundary Determination Category of which is a [Resurvey or First Survey] conforming to Horizontal Accuracy Class A-2 Topographic Accuracy Class T-2. This [survey/resurvey] is intended to be used for conveyance or financing purposes, and as a base for engineering site design.*
  2. *Reference is made to [List of Maps] of the [Municipality] Land Records.*
  3. *Reference is made to deeds of record found in [List of Books/Pages] of the [Municipality] Land Records.*
  4. *Reference is made to instruments of record as labeled hereon.*
  5. *Areas of the surveyed parcel(s):  
Total = [Sq. Ft. (Acres)]*
  6. *There are no wetlands on the subject property as indicated in [Wetlands/Watercourses and Soils Report], prepared by [Soils Science and Environmental Services Consultant], [Date].*
  7. *Property does not lie within a FEMA Flood Hazard Zone, as depicted on Flood Insurance Rate Map, Panel [Number], Map [Number], Effective Date: [Date].*
  8. *Reference is made to map titled [Title] dated [Date], prepared by [Surveyor].*
  9. *Elevations depicted hereon are based on the North Atlantic Vertical Datum of 1988 (NAVD88).*
  10. *Subsurface utility, structure and facility locations depicted hereon have been compiled, in part, from municipal records and field measurements. These locations must be considered as approximate, may not be complete, and other such structures may exist on site. The size, location and existence of all such features must be verified by the appropriate authorities prior to construction.*
9. **100% Construction Contract Drawings:** Provide 100% complete Construction Drawings, in accordance with CHFA requirements. All drawings developed for use in the construction of the development shall be coordinated to allow printing on the same standard sized print pages, and all pages shall be bound together as a complete set. All drawings must include sheet titles and numbers, graphic and lettered scales, a north arrow and a rectangular space 1¼" h. x 3½" w. in the upper right corner of all drawing sheets for the CHFA 5-party Initial Closing stamp. Changes to previously-submitted drawings (revisions and additional notes/details, etc.) based on specific CHFA Step I – 40% Review comments shall be identified in accordance with architectural graphic standards by drawing a "cloud" (continuous series of circle segments) around portions of drawings that have been changed. Upon acceptance by CHFA for 100% completion, all "clouds" must be removed from the drawings prior to printing for the final Initial Closing submission.
- a. Title Sheet: Development location, including location map, names and contact information for the Sponsor, Architect, Landscape Architect, Site Planner, Surveyor, Engineer and any other special consultants, revision dates, index of drawings, a development data summary ( **see sections IV.C. and D.**), a list of the applicable Building Codes, use group, building classification to which the proposal

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- has been designed and a large note on the title sheet clearly indicating that the drawings are intended as “90% Construction Drawings”.
- b. Boundary and Topographic Survey (see section III.A.)
  - c. Site Plans (list of typical site plan drawings):
    - i. Demolition Plan
    - ii. Road and Building Location Plan
    - iii. Site Layout Plan
    - iv. Grading Plan
    - v. Planting Plans
    - vi. Site Utility Plan
    - vii. Site Lighting and Photometric Plan
    - viii. Sewer Profiles
    - ix. Irrigation Plans
  - d. Residential and Community Building Plans (list of typical Residential and Community Building construction drawings):
    - i. Building Demolition Plans (scale not less than 1/8"=1'-0"):
    - ii. Building Foundation Plan (scale not less than 1/8"=1'-0"):
    - iii. Building Demolition Plans and Elevations (scale not less than 1/8"=1'-0"):
    - iv. Building Elevations (scale not less than 1/8"= 1'-0"):
    - v. Building Roof Plan (scale not less than 1/8"= 1'-0"):
    - vi. Interior Demolition Plans and Elevations (scale not less than 1/4"=1'-0"):
    - vii. Unit Floor Plans (scale not less than 1/4"= 1'-0"):
    - viii. Unit Interior Elevations (scale not less than 1/4"= 1'-0"):
    - ix. Building Sections (scale not less than 1/4"= 1'-0"):
    - x. Exterior Section Details (scale not less than 1"= 1'-0"):
    - xi. Interior Architectural Construction Details (scale not less than 1"= 1'-0"):
    - xii. Door, Window and Finish Schedules (gut rehab and new projects) and Scope of Work Matrix (less-than-gut rehab projects)
    - xiii. Structural Framing Plans (Composite floor/roof plans (scale not less than 1/8"= 1'-0") and unit floor plans and mechanical equipment room plans (scale not less than 1/4"= 1'-0"))
    - xiv. Mechanical Plans (Composite floor/roof plans (scale not less than 1/8"= 1'-0") and unit floor plans and mechanical equipment room plans (scale not less than 1/4"= 1'-0"))
    - xv. Plumbing Plans (Foundation and composite floor plans at 1/8"= 1'-0" and unit floor plans and plumbing equipment room plans at 1/4"= 1'-0")
    - xvi. Fire Protection Plans (composite floor plans at not less than 1/8" = 1'-0" and unit floor plans and mechanical equipment room plans at not less than 1/4"=1'-0")
    - xvii. Electrical Plans (composite floor plans at not less than 1/8"= 1'-0" and unit floor plans at not less than 1/4"= 1'-0")
10. 100% Construction Contract Specifications: The 100% Construction Contract Specifications constitute a complete construction Project Manual in conformance with the Uniform System for Construction Specifications, Data Filing and Cost Accounting (CSI), which defines all required bidding, contract and general requirements in division 1, of the 5-digit-based CSI MasterFormat 1995, and technical specifications for all building materials, components, assemblies, fabrications, equipment and systems in divisions 2 through 16, including Part 1 – General, Part 2 – Products and Part 3 – Execution. Unless otherwise permitted by CHFA, manufacturers’ instructions shall be followed for the installation of all materials, products and equipment. Provide a rectangular space 1¼" h. x 3½" w. in the upper right corner of all pages for the CHFA 5-party Initial Closing stamp, and a large note on the cover sheet clearly indicating that the submission is intended as a “100% Project Manual”.
11. CHFA 100% Construction Drawing Checklist: The Architect must provide include a completed “CHFA 100% Construction Drawing Checklist” with the 100% Construction Contract Document submission. Technical services has developed this form to help individual developments identify unique site, design,

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financing or market constraints for which full compliance with the Standards may be difficult or impossible, so that the Developer or Owner may request a Modification or Waiver of specific problematic requirements. CHFA will consider such requests on a case-by-case basis, to determine whether such requirements should be modified or waived for reasons and purposes acceptable to the Authority.

12. Construction Cost Information: (see section V.C.9.)
13. Other Contract Documents related to the Owner:
  - a. Owner's insurance coverage per applicable CHFA requirements for multi-family developments with permanent financing, which can be found in the Multifamily Rental Housing Development section of the CHFA website.
14. Other Contract Documents related to the Architect:
  - a. Standard AIA Owner/Architect Agreement (see section II.B.2.) and Amendments, if any [the fee distributed for construction administration (CA) shall be 25 - 35% of the architect's total fee as determined by CHFA based upon project cost and schedule]
  - b. Certificate of Liability Insurance naming CHFA as certificate holder
  - c. Certification that the documents adhere to all applicable codes and CHFA requirements
  - d. ADA/ Uniform Federal Accessibility Standards Compliance Certification
15. Other Contract Documents related to the GC:
  - a. Contractor's Qualifications
  - b. Standard AIA Owner/Contractor Agreement (see section II.D.3.), including contract time, contract sum, list of addenda, list of drawings and specs, and liquidated damages
  - c. Riders and Exhibits
  - d. Contractor's General Liability, Automobile, Umbrella, Worker's Compensation and Latent Defects insurance coverage per applicable CHFA requirements for multi-family developments under construction and/or with permanent financing, which can be found in the Multifamily Rental Housing Development Document Library section of the CHFA website
  - e. Schedule of Values
  - f. Construction Schedule: CHFA prefers Critical Path Method (CPM) construction schedules, such as those created with Primavera, Suretrack, Microsoft Project or other project scheduling and control software, in order to develop, analyze, update, monitor and report the progression of construction projects such that the Owner/Developer is informed quickly and accurately of project events, potential problems, and corrective actions. If Microsoft Excel-type bar charts are used, the all construction operations shall be consolidated onto one page, or a series of pages, to continuously show all concurrent work. If the project is to be divided into major sub-projects for multiple buildings, color coding the bars can keep the sub-project work together.
  - g. Performance & Payment Bonds
  - h. List of Sub-contractors
  - i. Building Permit

### **B. Contract Documents/Commitment Review**

1. 100% Construction Drawing Checklist Meeting: At the Developer's request, a meeting may be arranged between the Development Team and CHFA Technical Services staff, Asset Management, to discuss the 100% Construction Drawing Checklists and 100% complete Drawings and Specifications. Conversely, CHFA Technical Services may request such a meeting, if it is not readily-apparent that Design Development Documents are 100% complete, if the 100% Construction Drawing Checklists does not appear to coordinate with the 100% complete Drawings and Specifications, or for other reasons and purposes necessary to the Authority.
2. 100% Review: Technical Services staff will review the submitted documents and issue written comments based on the current Standards and CHFA Guidelines. The Developer's Design Team shall then prepare and submit final revised documents acceptable to CHFA as required:
  - a. Contract Documents [All Developments with CHFA Financing]: Upon review and acceptance by CHFA Technical Services, two (2) sets of Contract Documents, signed and sealed by the Architect

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and/or other Professional Consultants on the Design Team (each for their own work), shall be submitted. Drawings shall include all applicable code-related information. Project Manuals shall be assembled into bound volumes. Each sheet/page of one (1) copy of those documents will be five-party stamped, which will require initialing by the Owner, the Architect, the G.C., the Bonding Agent and the CHFA Manager Architectural and Construction Services. Both copies of these documents are for CHFA's use throughout the construction period.

- b. Contract Documents [All developments receiving 9% Tax Credits only]: One (1) set of Contract Documents, signed and sealed by the Architect and his (her) team members, and signed by the Owner, shall be submitted. Drawings shall include all applicable code-related information. Project manuals shall be assembled in three-ring binders. These documents are for CHFA's use throughout the construction period.

### C. Prior Start of Construction

Although timing issues in the development of a project may create circumstances which would seem to make starting construction prior to CHFA Initial Closing advantageous, CHFA strongly discourages Owner/Developers from such a course of action, which would be entirely at their own risk. If the Owner/Developer finds that there is no other viable alternative, and chooses to assume total liability for all construction costs and fees (including those for a CHFA Field Observer) incurred prior to CHFA Initial Closing and the recordation of a mortgage, and all liens and encumbrances resulting possibly therefrom, a "Notification of Intent to Commence Construction" form (see **CHFA website**) may be executed and submitted to CHFA. Additional information and documentation are also required, such as proof of ownership of the project site/buildings/appurtenances, building permits, commencement date and construction schedule, professional service and construction contracts and insurance policies, environmental assessment and implementation plans, construction drawings and specifications, and CHFA cost breakdown forms. In addition, a Pre-construction Meeting with the Owner/Developer, Architect, General Contractor, Bonding Company representative, and CHFA Field Observer and Technical Services staff, must be held at CHFA.

1. All support documentation submitted with the Notification of Intent to Commence Construction form must meet all the Standards, and the Owner/Developer will be responsible for revisions and resubmission as required by CHFA.
2. The Owner/Developer must understand that CHFA will not be responsible for any liens or any other objection to title, which might result from the fact that construction of a project commenced prior to the CHFA Initial Closing and the recordation of a mortgage. In addition, it must be understood that CHFA acceptance of a prior start of construction for a development will not in any respect be deemed to obligate CHFA in any way.

## **IX. CONSTRUCTION OBSERVATION**

### **A. CHFA Construction Observation Requirements**

1. All developments receiving 9% Tax Credits only: For developments funded through tax credit equity only, the CHFA may periodically visit the development site to conduct on-site observations of the construction process. Observations may occur at any time within the duration of the construction process, up to the Placed-in-Service Date, or up to the execution of the IRS Form 8609. The observations will confirm compliance with the Standards. In addition, As-Built Drawings and Specifications reflecting compliance with the Standards, prepared by the GC, and verified/approved by the Architect, shall be submitted prior to the execution of the IRS Form 8609.
2. All Developments with CHFA funding, or other funds administered by CHFA: After Initial Closing, a Pre-construction Meeting will be held at CHFA. Those attending the meeting representing the Development Team shall include the Owner, the Architect, the Contractor, Energy Consultant and any other project management/administrative personnel deemed necessary by the Owner. Attending the meeting for CHFA will include the CHFA Field Observer and other Underwriting and Technical Service staff as required. The purpose of the meeting is to review project management and administrative

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procedures, responsibilities and expectations before construction mobilization. The Pre-Construction Meeting Agenda template can be found in the Developer Document Library on the CHFA website.

### **B. Pre-Construction Meeting**

After Initial Closing, a Pre-construction Meeting will be held at CHFA. Those attending the meeting representing the Development Team should include the Owner, the Architect, the Contractor and any other project management/administrative personnel deemed necessary by the Owner. Attendance by the Energy Consultant is strongly recommended. CHFA representatives will include staff from Underwriting and Technical Services Departments and the CHFA Field Observer assigned to the project. The purpose of the meeting is to review CHFA-required project management and administrative procedures, responsibilities and expectations during, and immediately after, the construction phase. The typical agenda for a CHFA Pre-construction Meeting is outlined in the CHFA document “Pre-construction Meeting”, which can be found on the CHFA website. Subjects reviewed during the Pre-construction Meeting include CHFA Field Observation accommodations, requisition and lien waiver processes and submission requirements, job meeting agendas/meeting minutes, forms/documentation/record-keeping requirements, change order processes and submission requirements, project sign requirements, special testing documentation/submission requirements, stored material policy/process and submission requirements, construction schedule maintenance, photo records/submission requirements, Permission to Occupy (PTO)/first reduction of retainage process and submission requirements and final closing/reduction of retainage process and submission requirements.

### **C. Initial Job Meeting**

Discussion and coordination of the following construction-phase logistical issues and process recommendations by the Development Team and the CHFA Field Observer at the first job meeting is recommended:

1. Introductions/exchange of business cards
2. Schedule of Values
3. List of Subcontractors
4. Change Orders
5. As-built Drawings
6. Building Permits
7. Additional Sets of Drawings
8. Project Site Cleaning
9. Deliveries and Site Access
10. Color Schedule
11. Start/Completion Dates
12. Construction Schedule
13. Coordination of Work
14. Daily Reports
15. Roles of Architects and Engineers
16. Testing Requirements
17. Examination of Site
18. Dimensions
19. Enclosures and Barricades
20. Field Office
21. Utility Connections and Charges
22. Fire Extinguishers
23. Emergency Phones
24. Insurance
25. Warranties and Guarantees
26. Applications for Payment
27. Protection and Safety
28. Project Sign
29. Sanitary Facilities
30. Shop Drawings
31. Soil Erosion and Sedimentation Control
32. Soils Information
33. Substitutions
34. Lien Waivers
35. Surveyor
36. Minority Work Requirements
37. Labor Rates
38. RFI Log
39. PCO Log
40. Allowance Log