

Connecticut Housing Finance Authority

CHFA Developer Training Seminars

Approval/Initial Closing

prepared by the

Technical Services Department





Welcome to CHFA

- This seminar is the fourth presentation for a series of five seminars defining the Technical Services procedures for multifamily developments.
- This series will highlight each phase of the Technical Services review process in succession:
 1. Phase I - Pre-Application (Pre-Design/Site Analysis) – 4/24/07
 2. Phase II - Pre-Application Review Process (Feasibility/Concept) – 6/19/07.
 3. Phase III – Full Application (Design Development/Construction Development) – 8/14/07.
 4. **Phase IV - CHFA Approval/Initial Closing – 11/13/07**
 5. Phase V - Final Closing – 1/15/08.
- This seminar outlines Technical Services' expectations and requirements for the Approval/Initial Closing Review Process.



CHFA Technical Services



- CHFA Technical Services Staff:
 - Mark Hirsch – Manager, Architectural & Construction Development (Technical Services)
 - August Sarno – Senior Architect/Environmental Reviewer
 - Charles Emerson – Architect
 - Orrie Vardar – Field Observer
 - Robert Ottiano – Development Cost Analyst
- The goal for Technical Services is to facilitate the development of quality affordable multifamily housing at the most reasonable cost.
- Housing units must be constructed to last the life of the mortgage (typically 40 years) – plus any extended use terms (up to 15 years).





What Technical Services Does

- Implements the CHFA Standards of Design and Construction through:
 - Development Team Review
 - Design/Construction Documents Review
 - Development/Construction Cost Review
 - Construction Observation
- Review Considerations
 - Utility
 - Convenience
 - Health and Safety
 - Accessibility
 - Comfort
 - Indoor Air Quality
 - Quality Materials
 - Durable Details
 - Energy Efficiency
 - Sustainability/Resource Conservation





Seminar Outline

- Design Standards History
 - State Code vs. CHFA Design Standards
 - Building Costs

- Approval
 - Process

- Initial Closing
 - Process
 - Pre-construction meeting



DESIGN STANDARDS HISTORY





Design Standards History

Background

- In 2006, comprehensive design standards were introduced after a public comment period, including (2) public discussions at CHFA offices.
- CHFA Standards of Design and Construction incorporate all phases of the development and construction process and totals 117 pages.
- Of the 117 pages, 61 pages cover the table of contents, general CHFA processes, procedures, closing requirements and appendixes.
- The remaining 56 pages cover 300 technical items defining construction quality standards. (To be discussed in detail later).





Design Standards History

Green Design Elements

- Included within the Standards of Design and Construction are 47 pages of “Green” Design and Construction Standards. These “Green” items detail 193 resource-conserving, energy-efficient, health promoting materials and construction means and methods.
- The CHFA “Green” Standards are also published as a stand-alone document.
- As a result of the 2007 stand-alone “Green” document, the Enterprise Corporation has ranked Connecticut as one of the top “Green” States in the country.





Design Standards History

Current Practice

- Since 2006, the Standards of Design and Construction have been reviewed, amended, and opened for public comments on a yearly basis.
- Standards of Design and Construction are now directly linked to the Qualified Allocation Plan and provides additional LIHTC application points for Rating and Ranking.





Design Standards History State Code vs. CHFA Design Standards

Resources

- The following listed resources were used to develop the 2007 CHFA Design Standards of Design and Construction:
 - CHFA Finance, Legal, Underwriting and Asset Management Requirements
 - Other State HFA Standards of Design and Construction
 - Industry Standard Contracts, General Requirements and Specification
 - HUD Minimum Property Standards (MPS)
 - Federal Housing and Equal Opportunity Laws
 - Federal Environmental Protection Agency Energy Star Program
 - Asthma Regional Council of New England Building Guidelines
 - Regional and National Green Homebuilding Programs
 - Regional and National Universal Design Programs





Design Standards History

State Code vs. CHFA Design Standards

State Requirements

- Multi-family housing financed by CHFA must comply with the most recent State Building Code. For 2007, this consists of:
 - 2003 International Building Code (IBC) (626 pages)
 - 2003 International Residential Code (IRC) (558 pages)
 - 2003 International Existing Building Code (IEBC) (290 pages)
 - 2003 International Mechanical Code (IMC) (118 pages)
 - 2003 International Plumbing Code (IPC) (144 pages)
 - 2003 International Energy Conservation Code (IEC) (216 pages)
 - 2003 International Fire Code (IFC) (418 pages)
 - 2003 NFPA 101 Life Safety Code (396 pages)
 - 2005 NFPA 70 National Electrical Code (NEC) (772 pages)
 - 2005 Connecticut State Fire Safety Code (115 pages)
 - ICC/ANSI A117.1-2003 Accessible and Usable Buildings and Facilities (104 pages)





Design Standards History State Code vs. CHFA Design Standards

Federal Requirements

- Multi-family housing financed by CHFA must comply with the Federal Requirements. For 2007, this consists of:
 - Federal Housing and Equal Opportunity Laws
 - Fair Housing Act [FHA]
 - Title VI of the Civil Rights Act of 1964
 - Section 109 of the Housing and Community Development Act of 1974
 - Section 504 of the Rehabilitation Act of 1973
 - Title II of the Americans with Disabilities Act of 1990 [ADA]
 - Age Discrimination Act of 1975
 - Title IX of the Education Amendments Act of 1972
 - Architectural Barriers Act of 1968 [ABA]





Design Standards History State Code vs. CHFA Design Standards

- 56 pages of the 2007 CHFA Standards of Design and Construction were examined against the 3,757 pages included in the most recent State Building Code.
- Significant items were noted on 21 design standard items. The items focused on:
 - *Health (i.e., increased kitchen/bath ventilation);*
 - *Safety (i.e., increased lighting);*
 - *Durability (i.e., longer life for roofing/flooring materials);*
 - *Lower Operating Cost (i.e., thicker ceiling/attic insulation)*
- **There is a minimal price differential in construction materials.**



Design Standards History State Code vs. CHFA Design Standards



- Analyzed One (1) Development

SNAPSHOT

- Typical New Construction
- 2-Story Wood Frame Building
- 110 Units
- 18 Dwelling Units Per Building
- 16,872 Square Feet – Total Living Area/Building
- 895 Square Feet – Average Unit Size
- \$16,028,947 – Total Development Cost
- \$145,718 – Total Development Cost Per Unit
- \$155.46 – Total Development Cost Per Sq. Ft.



Building Costs - 2007

BUILDING CODE	COST*	CHFA DESIGN AND CONSTRUCTION STANDARDS	COST*	RATIONALE
Concrete Slabs: 3 ½" thick (min)	\$17,646	Concrete Slabs: 4" thick (min)	\$20,147	Durability
Concrete basement walls: 3000 psi (min)	\$25,675	All concrete: 3500 psi (min)	\$26,260	Durability
Wall framing: 24" o.c. (max)	\$ 3,444	Wall framing: 16" o.c. (max.)	\$ 4,863	Durability
Floor insulation: R-21 (min)	\$ 5,641	Floor insulation: R-30 or R-38 as allowed by floor framing depth (min)	\$ 6,120	Lower Operating Cost
Ceiling/Attic insulation in climate zone requiring: R30	\$ 6,120	Ceiling/Attic insulation: R-38	\$ 7,530	Lower Operating Cost/ Durability
Asphalt shingles: at 25 year Warranty	\$ 5,441	Asphalt shingles: 30-year warranty (min)	\$6,180	Lower Operating Cost/ Durability

*Cost columns represent actual construction numbers



Building Costs - 2007

BUILDING CODE	COST*	CHFA DESIGN AND CONSTRUCTION STANDARDS	COST*	RATIONALE
Aluminum gutter/leader material: 0.027" thick (min)	\$ 1,330	Aluminum gutter/leader material: 0.032" thick (min)	\$ 1,682	Durability
Windows/glass doors: no minimum R-value (clear)	0	Windows/glass doors: R-3.5 (min) Low E U.36	1,660	Lower Operating Cost
Steel Exterior door/frame: no minimum R-value	**	Steel exterior doors/frames: R-3.5 (min)	**	Lower Operating Cost
½" ceiling panels <u>perpendicular</u> to framing 24" o.c. OK	\$13,571	5/8" ceiling panels on all framing 24" on center	\$15,378	Durability
3/8" ceiling and wall panels on framing 16" o.c. OK	**	½" ceiling and wall panels on framing 16" on center	**	Durability

*Cost columns represent actual construction numbers

**Negligible cost differential



Building Costs - 2007

BUILDING CODE	COST*	CHFA DESIGN AND CONSTRUCTION STANDARDS	COST*	RATIONALE
Mold-resistant gypsum board OK for showers/tubs	\$ 549	Cement backer board required for showers/tubs	\$ 1,308	Durability
No appliance requirements	0	Energy Star appliances required	\$ 800	Lower Operating Cost
Kitchen vent: 100 cfm intermittent or 25 cfm cont.	\$ 4,500***	100 cf per foot of range (200-300 cfm)	\$ 5,760***	Public Health
Bathroom vent: 50 cfm intermittent or 20 dfm cont.	\$ 2,520	1 cfm per sf of floor area or 150 cfm, whichever is greater	\$ 3,726	Public Health
Laundry hook-ups not required	0	Laundry hook-ups required	\$ 1,500	Public Health

*Cost columns represent actual construction numbers

***Estimated



Building Costs - 2007

BUILDING CODE	COST*	CHFA DESIGN AND CONSTRUCTION STANDARDS	COST*	RATIONALE
Lighting level for habitable spaces: 10fc	\$ 2,250	Kitchen (counter top, sink and range surfaces): 30fc Bathrooms: 15fc (Elderly: 30fc@vanities)	\$ 4,050	Public Safety
Lighting level for stairs: 1 fc	\$ 1,800	Stairs: 15 fc	\$ 4,050	Public Safety
Lighting level for means of egress: 1 fc	\$ 1,800	Corridors, Lobby: 15 fc	\$ 4,050	Public Safety
Exit lights with various lamps	\$ 630	LED exit lights required	\$ 1,530	Lower Operating Cost
Exterior light with various lamps	\$ 450	High-pressure sodium or metal halide exterior lighting with shielded lamps required	\$ 4,000	Lower Operating Cost

*Cost columns represent actual construction numbers





Design Standards History State Code vs. CHFA Design Standards

Snapshot Conclusion

- Increase per unit costs **\$3,390.00**
- Increase project cost **\$372,939.00**
- Hard Construction Percentage Cost increase-
3.64%
- Total Project Cost (incl. soft costs) percentage
increase-**2.33%**
- Minimal cost increase that provides additional health, safety, durability and lower operating costs.



APPROVAL





Approval Process

- The 40% drawings completed and Board Approval received. 90% drawings reviewed and comments issued.
- The review and approval of 100% complete Construction Documents is the next stage of the Design Review Process.
- This phase culminates with:
 - the final Construction Documents from which the development will be constructed.
 - a complete Commitment Submission, in accordance with the Authority's Standards and Initial Closing Requirements.
 - the construction budget available to the development.





Approval Process

Drawings and Specifications at a 100% completion level:

- Changes to drawings (revisions and additional notes/details) based on specific CHFA Phase III 90% review comments.
- Identified in accordance with architectural graphic standards by drawing a “cloud” around what was changed.
- Upon acceptance by CHFA for 100% completion, all “clouds” shall be removed from the drawings prior to printing for final Initial Closing submission.





Approval Process

Provide final project data, updated as required for “value engineering” or other changes in project scope:

- Number of Buildings
- Total Project Square Footage (all buildings)
- Total Living Area (all dwelling units)
- Total Retail Area (all commercial spaces)
- Total Number of Units
- Total Common Area
- Total Management Area



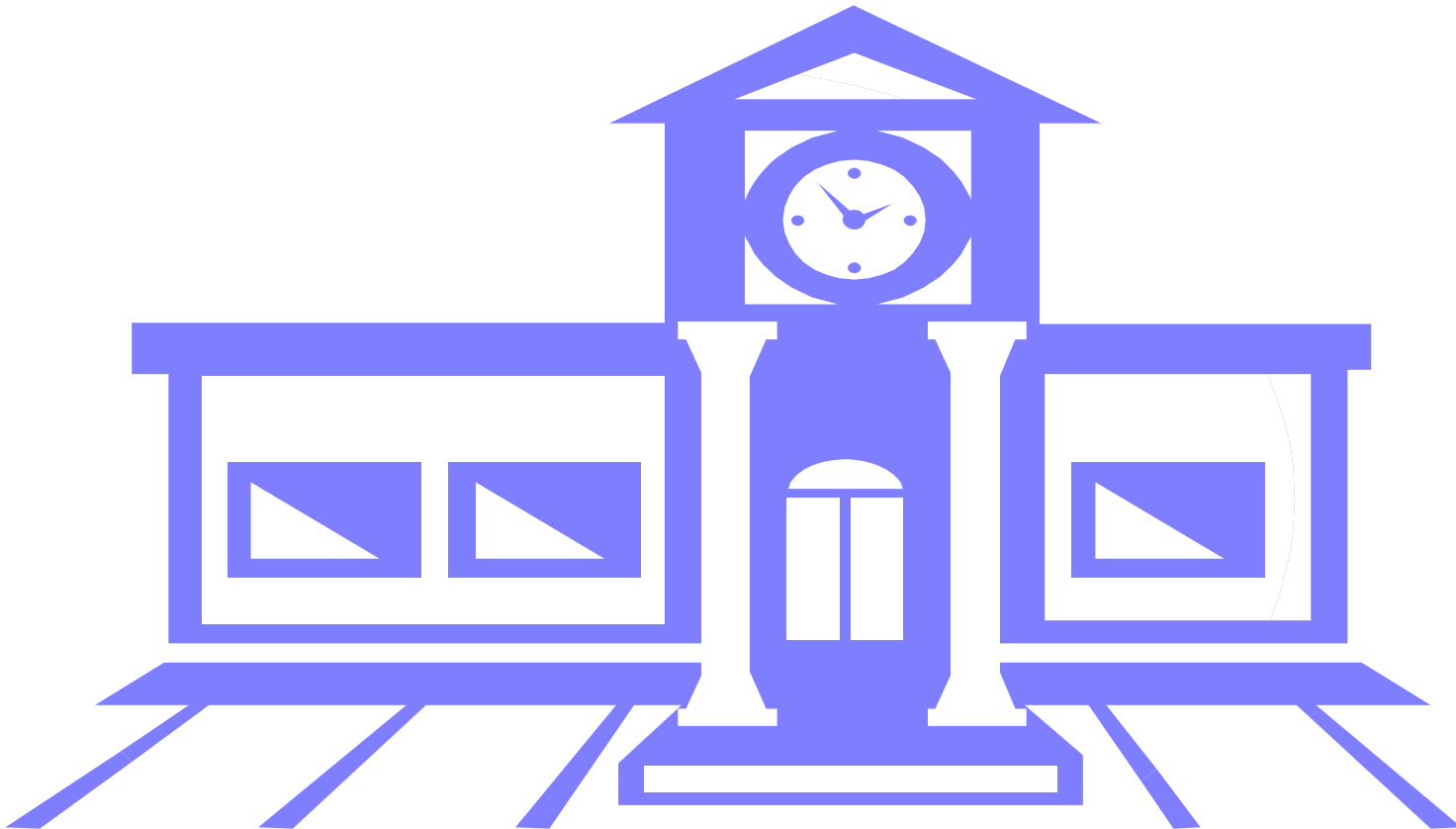


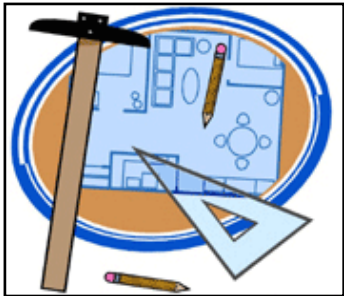
Approval Process

- Two sets of plans signed and sealed by the Architect and his/her team members shall be submitted.
- Project manuals shall be assembled in three-ring binders.
- Each sheet of the Construction Documents (plans and specifications) will have a five-party stamp which will need the initials of the Owner, the Architect, the General Contractor, the Bonding Agent and the Architectural and Construction Manager of CHFA.
- Construction Documents are for CHFA's use throughout the construction.
- Final signed Form 2328 & Exploded Trade Payment Breakdown.



INITIAL CLOSING - PROCESS





Initial Closing Process

Documents related to the Architect:

- Standard AIA Owner/Architect Agreement and Amendments, if any.
- Certificate of Liability Insurance naming CHFA as additional insured.
- Certification that the documents adhere to all applicable codes and CHFA requirements.





Initial Closing Process

Documents related to the General Contractor:

- Contractor's Qualifications
- Standard AIA Owner/Contractor Agreement, including contract time, contract sum, list of addenda, list of drawings and specs, liquidated damages and cost certification language.
- Riders and Exhibits
- Schedule of Values
- Construction Schedule
- Performance and Payment Bonds
- List of Subcontractors





Initial Closing Process

Documents related to Environmental Issues:

- Environmental test reports, remediation specifications, and abatement plan and specifications.
- Environmental Cost Estimates broken down by type (lead paint, asbestos, etc.).
- Soil boring or test pit reports.





Initial Closing Process

- A-2 Survey and Legal Description
 - Two copies of A-2 Survey map shall be submitted. This map shall have a live signature and seal of the surveyor who must hold a current Connecticut license.
 - In addition to the information on metes and bounds, the survey map shall include the information on all existing utilities on site, including the sizes of the services, catch basins, telephone poles and their numbers. Dimensions and location of the existing structures, roadways, curb cuts, shall also be included.





Initial Closing Process

- A-2 Survey and Legal Description
 - Any easement on the project site, such as utility or access, shall have a separate Legal Description attached and, if presented in a separate document, shall conform to the same requirements described above.





Initial Closing Process

- Building Permit
- ADA Compliance Certification
- Capital Needs Assessment (C.N.A.) (renovation projects only)



INITIAL CLOSING – PRE-CONSTRUCTION MEETING





Initial Closing Pre-Construction Meeting

- Prior to the commencement of construction, 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, and any other project management/administrative personnel deemed necessary by the Owner.
- The purpose of the meeting is to review project management and administrative procedures, responsibilities and expectations.

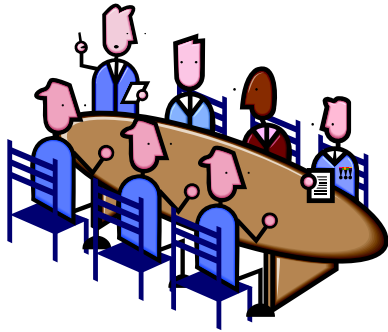




Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - The length of the construction period, as agreed in the contract.
 - Field office shall be provided by the General Contractor (Contractor) for CHFA Field Observer's use.





Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - Job meetings shall be held weekly, or more frequently as determined by the CHFA Field Observer.
 - Said meeting shall be conducted and recorded, and minutes distributed by the Architect.
 - Meetings shall be attended by the Project Manager, Job Superintendent, Developer, and CHFA Field Observer.





Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - The Architect and the Contractor shall adhere strictly to the plans and specifications: federal, state, and municipal codes and regulations.





Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - The Contractor’s Job Superintendent shall maintain daily logs in the Field Office, which must be available to the CHFA Field Observer during working hours.
 - Copies of all communications concerning project construction shall be given to the CHFA Field Observer.





Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - CHFA will consider proposed change orders for changes to the Contract Documents.
 - All proposed Change Orders regarding changes in construction design or substitution of specified materials shall be accompanied by sketches and appropriate back-up information to include quantities, sizes, unit prices, subcontractor and/or material suppliers' quotes.





Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - The percentage for Overhead & Profit shall be at or below the amount accepted in the original contract.
 - Change Orders will be prepared on CHFA Form 2437 entitled “Request for Construction Change”.
 - A copy of the approved Change Order will be forwarded to the Owner upon approval by CHFA.
 - **No work related to a proposed change order will be funded unless a fully-executed Change Order is obtained by the General Contractor before the work commences.**





Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - The Contractor shall purchase and post a sign as required by CHFA prior to or upon the start of construction.
 - Testing of materials used in construction shall be conducted by an approved testing laboratory.

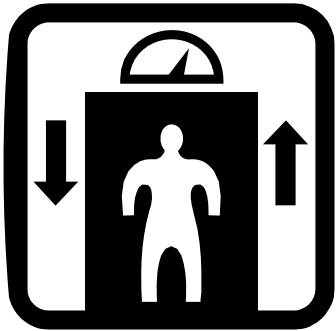




Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - The Contractor shall comply with Safety Regulations and Housekeeping Requirements as set forth in General Conditions and according to industry standards.
 - The Contractor shall provide a complete list of subcontractors, prior to start of construction.

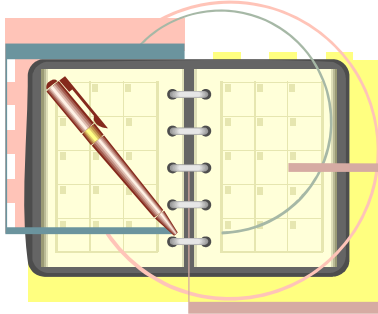




Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - Stored materials will be funded only if the materials are long-lead and site-specific items, such as elevators and special equipment.
 - Upon demonstrating that the request for such funding meets these conditions, the Contractor shall provide evidence of those materials being insured, secured and paid for.





Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - The Contractor shall maintain a realistic and workable Construction Progress Schedule or Chart posted in the Construction Field Office. Up-to-date schedule shall be required as part of the requisition package.





Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - Requisitions shall consist of three original copies, signed by the Architect, General Contractor and Owner.
 - Requisition for approved change orders may be submitted after the related work has been completed.





Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - Original lien waivers shall be submitted with the monthly requisition in a form acceptable to CHFA.
 - Progress photographs shall be submitted to CHFA each month, with the monthly requisition.

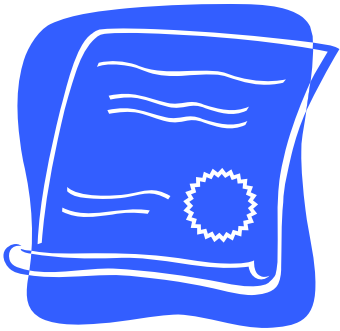




Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - In order to request a reduction of retainage from 7.5% to 5%, the following documents have to be executed, among others:
 - Certificate of Substantial Completion issued by the Project Architect
 - Bonding Company's written consent
 - Current list of the contractor's payables
 - Contractor's written statement that he/she will share the released funds to all subcontractors and suppliers.





Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - When the project is ready for occupancy, the Architect shall assist the Owner in preparing and executing a CHFA “Permission to Occupy” (PTO) request form. The following items need to be obtained before the request will be considered.
 - Certificate of Occupancy by the governing Building Department
 - Certificate of Substantial Completion issued by the Project Architect
 - Original property and liability insurance policies
 - An architect’s and engineers’ punch list
 - Warranty certificates for all building components specified





Initial Closing Pre-Construction Meeting

- Subjects for Review at the Pre-Construction Conference include:
 - The PTO Inspection will be conducted by the assigned CHFA Field Observer after items on the architect's punch-list have been amended and units cleaned.
 - The CHFA Field Observer can/may inspect items including but not limited to the attached handout.
 - The CHFA Asset Manager will inspect the units only after the Field Observer considers the unit satisfactory.







Next Seminar – January 15, 2008

Final Closing

- As-Built Drawings & Specification
- As-Built Survey
- Warranties
- Environmental Compliance
- CHFA Cost Certification
- Final Payment

