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# MAP A/E Cost Training

## Project Capital Needs Assessment & 221(d)4 Application Reviews

### *Midwest Lenders Conference*

**Chicago – June 17, 2013**

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**Panelists:**

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# A/E Cost Session Overview

## ■ PCNA

- ❑ Basic Requirements
- ❑ Major Changes
- ❑ Intrusive Tests
- ❑ Accessibility Compliance
- ❑ Immediate Repairs
- ❑ Reserve Analysis
- ❑ Lender's Review
- ❑ Insurable Value

## ■ Best Practices

## ■ Questions/Discussion

## ■ Common Issues

- ❑ Life Safety
- ❑ Accessibility
- ❑ Site Conditions
- ❑ Building Envelope
- ❑ Environmental

## ■ 221(d)4 Application

- ❑ Overview
- ❑ LIHTC Processing
- ❑ 223(f) vs. 221(d)4

## ■ Questions/Discussion

# PCNA - The Basics

- **Purpose:** Define the immediate and long term needs of the property and provide a plan for financing the capital needs.
- **Users:** Owner, Lender, and HUD (Development & Asset Management)
- **Required for:**
  - 223f & 223a7 applications for FHA mortgage insurance
  - 10-year update for existing FHA insured properties
  - Other Multifamily Housing functions, such as:
    - Transfer of Physical Assets (TPA)
    - Partial Payment of Claim (PPC)

# PCNA - The Basics

## ■ Shelf Life<sup>2</sup>

- ❑ **6 months** from Effective Date
- ❑ Effective Date = Day of Physical Inspection<sup>1B</sup>
- ❑ To update an expired PCNA the preparer must re-inspect the property, update the report, and sign a new 3<sup>rd</sup> Party Certification. <sup>1B</sup>
- ❑ Section 223a7, an existing PCNA may be accepted if:
  - Effective date less than 2 years ago.
  - HUD approval received.
  - PCNA meets HN 2012-27/ML 2012-25 requirements.
  - Update PCNA is required 10 years after the date of the accepted PCNA.

# PCNA - The Basics

## ■ Assessor Qualifications

- No IOI w/ Mortgagor<sup>1F</sup>
- Meet ASTM E 2018-08 Appendix X1.1<sup>2</sup>
  - Varies depending on project type and scope, user needs and risks.<sup>4</sup>
  - PCNA Reviewer is generally licensed architect/engineer or has relevant certifications and education.<sup>4</sup>

## ■ Format

- Cover Sheet<sup>1F</sup>
  - Property Info
  - Preparer Info
- ASTM E 2018-08<sup>2</sup>
- Table of Contents<sup>2</sup>
  - See Appendix 6 of HN2012-27/ML2012-25
  - “substantial, but not exact conformance is acceptable”<sup>3</sup>

# Format - Table of Contents

1. Executive Summary
  - 1.1. General Description
  - 1.2. General Physical Condition
  - 1.3. Opinions of Probable Costs
  - 1.4. Deviations from the Standard Guide-ASTM E 2018-08
  - 1.5. Recommendations
2. Purpose and Scope
3. System Description and Observations
  - 3.1. Overall General Description
  - 3.2. Site
    - 3.2.1. Topography
    - 3.2.2. Storm Water Drainage
    - 3.2.3. Access and Egress
    - 3.2.4. Paving, Curbing and Parking
    - 3.2.5. Flatwork
    - 3.2.6. Landscaping and Appurtenances
    - 3.2.7. Recreational Facilities
    - 3.2.8. Utilities
      - 3.2.8.1. Water
      - 3.2.8.2. Electricity
      - 3.2.8.3. Natural Gas
      - 3.2.8.4. Sanitary Sewer
      - 3.2.8.5. Storm Sewer
      - 3.2.8.6. Special Utility Systems
        - 3.2.8.6.1. Site Lighting
        - 3.2.8.6.2. Site Security Systems
        - 3.2.8.6.3. Other
  - 3.3. Structural Frame and Building Envelope
    - 3.3.1. Foundation
    - 3.3.2. Building Frame
      - 3.3.2.1. Floor Frame System
      - 3.3.2.2. Crawl Spaces and Penetrations
      - 3.3.2.3. Roof Frame & Sheathing System, Including Truss Connectors
      - 3.3.2.4. Flashing & Moisture Protection
      - 3.3.2.5. Attic Spaces, Draft Stops, Roof Vents & Penetrations
      - 3.3.2.6. Insulation
      - 3.3.2.7. Exterior Stairs, Railings, and Balconies, including Connection to Structure



# Format - Table of Contents

- 3.3.2.8. Exterior Doors and Entry Systems
- 3.3.3. Facades or Curtain wall
  - 3.3.3.1. Sidewall System
  - 3.3.3.2. Fenestration (Window) System
  - 3.3.3.3. Parapets
- 3.3.4. Roofing and Roof Drainage
- 3.4. Mechanical and Electrical System
  - 3.4.1. Plumbing
    - 3.4.1.1. Supply and Waste Piping
    - 3.4.1.2. Domestic Hot Water Production
    - 3.4.1.3. Fixtures
  - 3.4.2. Heating
    - 3.4.2.1. Heat Generating Equipment
    - 3.4.2.2. Distribution System
  - 3.4.3. Air Conditioning and Ventilation
    - 3.4.3.1. Equipment
      - 3.4.3.1.1. Air Filtration and Air Quality Control Devices
      - 3.4.3.1.2. Exhaust Systems
      - 3.4.3.1.3. Compressors, Heat Exchangers and Air Handlers
    - 3.4.3.2. Distribution
    - 3.4.3.3. Control Systems
  - 3.4.4. Electrical
    - 3.4.4.1. Service, Metering, Distribution Panels
    - 3.4.4.2. Distribution
    - 3.4.4.3. Lighting- Building Common Area
    - 3.4.4.4. Lighting- Units
    - 3.4.4.5. Telecommunication Systems
    - 3.4.4.6. Inspection/Recommendations for Aluminum Wiring
- 3.5. Vertical Transit-Elevators
- 3.6. Life Safety/Fire Protection
  - 3.6.1. Sprinklers and Standpipes
  - 3.6.2. Alarm Systems
    - 3.6.2.1. In Common Areas
    - 3.6.2.2. In Tenant Spaces
  - 3.6.3. Other Systems





# Format - Table of Contents

- 3.7. Interior Elements
  - 3.7.1. Common Areas
    - 3.7.1.1. Offices
    - 3.7.1.2. Access ways, Corridors, Vestibules, Meeting Places
    - 3.7.1.3. Laundry Facilities and Equipment
    - 3.7.1.4. Indoor Recreation & Equipment
    - 3.7.1.5. Maintenance and Storage
  - 3.7.2. Tenant Spaces
    - 3.7.2.1. Finishes, Walls, Floors
    - 3.7.2.2. Appliances
    - 3.7.2.3. Bath Fixtures and Specialties
    - 3.7.2.4. Kitchen Fixtures and Specialties
    - 3.7.2.5. Millwork, Casework, Cabinets and Countertops
    - 3.7.2.6. Closet Systems
    - 3.7.2.7. Window Treatments
- 4. Additional Considerations
- 5. Document Review and Interviews
- 6. Opinions of Probable Costs to Remedy Physical Deficiencies
- 7. Out of Scope Considerations
  - 7.1. Accessibility for Persons With Disabilities
    - 7.1.1. Deficiencies per UFAS in Federally Assisted Housing
    - 7.1.2. Deficiencies per the Fair Housing Act Design and Construction Requirements
    - 7.1.3. Deficiencies in Public Facilities Per Americans with Disabilities Act (ADA)
  - 7.2. Recommended Intrusive Examinations of Particular Components/Systems
  - 7.3. Owner Proposed Improvements and Upgrades
- 8. Qualifications
- 9. Limiting Conditions
- 10. Exhibits
  - 10.1. Description and Estimated Cost of Critical Repairs (excluding Accessibility)
  - 10.2. Description and Estimated Cost of Non-Critical Repairs
  - 10.3. 20 Year Table of Quantities and Annual Estimated Costs
  - 10.4. Corrective Action Plan (for Accessibility Deficiencies, if/when available, may be prepared by others)
  - 10.5. Reports of intrusive examinations or tests (if/when available, may be prepared by others.)





# PCNA - The Basics

## ■ Required Content<sup>1B & 1F</sup>

### □ PIR (Physical Inspection Report)

- Property Condition
- Immediate Repair Needs, critical & non-critical (including owner proposed repairs/improvements)
- Replacement & Major Maintenance Needs, including total inflated cost estimate for all items
- Accessibility Compliance

### □ Statement of Resources & Needs

- Lender adjustments to PIR, if any
- Recommended repair cost and reserve deposits

# PCNA – Major Changes

## ■ PIR Requirements<sup>2</sup>

- Conform to ASTM E 2018-08
- Outside ASTM E 2018-08 scope
  - Clarification of Accessibility Requirements
  - Proposed Improvements & Upgrades (Owner-elected non-critical repairs), *not actually a new thing*
  - Intrusive Tests & Examinations, ***when necessary***

## ■ Statement of Resources & Needs

- Capital Items vs. Operational Expenses<sup>2</sup>
- Reserve for Replacement Analysis<sup>2</sup>
  - Shorter Estimate Period
  - Minimum Year-End Balance

# PCNA – Intrusive Tests

## ■ When?

- ❑ Older structures and building components (envelope, mechanical systems, etc.)<sup>2</sup>
- ❑ Structure and/or components are 30+ years old (**guideline**)<sup>2</sup>
  - Not replaced/renovated
- ❑ Not well maintained<sup>3</sup>
- ❑ Not uniquely durable<sup>3</sup>

## ■ Why?

- ❑ Visual/non-invasive exam is not sufficient to determine a building component's condition and Remaining Useful Life (RUL)<sup>2</sup>

# PCNA – Intrusive Tests

## ■ Who?

- Needs Assessor with that specific expertise<sup>3</sup>
- Qualified expert<sup>3</sup>
- Mortgagor's contractor<sup>3</sup>
  - Under written obligation to, compensated by, and responsible to the Needs Assessor (or Lender)
  - No IOI with Mortgagor, sponsor, or managing agent.<sup>1F</sup>

## ■ What?

- Examination beyond the walk-through inspection<sup>3</sup>
- Written report attached to PCNA<sup>2</sup>
  - Examiner's qualifications
  - Component description
  - Methodology used
  - Condition Assessment
  - Recommended Repairs
  - Estimated RUL

# PCNA – Accessibility Compliance

## Applicable Requirements<sup>2</sup>

Project Type	Market Rate	Affordable (LIHTC)	Federally Assisted
1 <sup>st</sup> Occupancy after 3/13/1991	FHA	FHA	FHA, 504, UFAS
Built between 7/11/1988 - 3/13/1991	None	None	504, UFAS
Sub Rehab of projects built after 7/11/1988	None	None	504, UFAS (load bearing wall exception)
Refinance of project built before 7/11/1988	None	None	504, UFAS (load bearing wall & financial burden exceptions)
Area of Public Accommodation	ADA	ADA	ADA, 504, UFAS

# PCNA – Accessibility Compliance

## ■ Correction of Accessibility Deficiencies<sup>2</sup>

- All must be included in Corrective Action Plan.
  - *In no case may the Department insure such a project without a modification/ retrofit plan. The extent and cost of the modifications/retrofits will determine whether the project is feasible as a 223(f) or whether to resubmit it as substantial rehabilitation.<sup>1D</sup>*
- Should be considered Critical Repairs
  - May complete after Endorsement on new insured projects, see requirements on next slide.
  - Deficiencies which are exigent health & safety conditions **cannot** be deferred.

**LEGAL NOTICE:** Corrective Action Plan does not constitute a safe harbor for compliance with FHA, Section 504, or ADA and does not preclude complaints.

# PCNA – Accessibility Compliance

- **Corrective Action Plan<sup>2</sup>**(Modification/Retrofit Plan<sup>1D</sup>)
  - Addresses all accessibility deficiencies & demonstrates appropriateness of remedies selected.
  - Provides detailed scope of work, cost estimate, & completion schedule for all remedies.
  - If completion is scheduled after Endorsement:
    - Hub Director must approve the plan.
    - Applicable escrow requirements must be met.
    - Remedies must be completed within 12 months, except for unusual circumstances which require HQ approval.
  - Correction of public and common areas must commence within 30 days of Endorsement<sup>1D</sup>
  - Unit modifications must commence within 60 days<sup>1D</sup>



# PCNA – Immediate Repairs

## ■ Critical Repairs

- ❑ Health & Safety<sup>1C</sup>
- ❑ Ingress/Egress Issues<sup>1B</sup>
- ❑ Prevent Sustaining Occupancy<sup>1B</sup>
- ❑ Accessibility (for projects built after 3/13/1991)<sup>1C</sup>
- ❑ Deferred Maintenance Items, on refinance transactions<sup>1F</sup>

## ■ Non-Critical Repairs

- ❑ Non-Health & Safety<sup>1B</sup>
- ❑ Owner-elected Repairs & Improvements<sup>1F</sup>
- ❑ Deferred Maintenance Items, on purchase transactions<sup>1F</sup>
- ❑ Corrective Action Plan Items, with HUD Director approval<sup>2</sup>

# PCNA – Immediate Repairs

## ■ Non-Critical Repairs<sup>2</sup>

- ❑ On currently uninsured projects should include all needs within the first **24 months** (excluding unit turn over items).
- ❑ On currently insured properties should supplement, accelerate, or revise the existing schedule of repairs and replacements.



# PCNA – Immediate Repairs

## Completion of Repairs<sup>2</sup>

- Critical Repairs
  - Must be completed prior to Endorsement, except approved accessibility deficiency items.
    - Owner's Certification and evidence provided at Endorsement
  - On 10-year updates, must be completed at the most expeditious possible schedule.
- Non-critical Repairs
  - May be deferred until after Endorsement, but must be completed within 12 months.
    - Work write-up including schedules for completion and bids on items greater than \$25,000 must be submitted. <sup>1F</sup>
  - On 10-year updates, must be completed at the most expeditious possible schedule.

# PCNA – Reserve Analysis

## Capital Item vs. Operational Expense<sup>2</sup>

- Some components may be treated as an operations expense or as a capital items to be paid out of reserves. HUD does not specify a standard list of capital items.
- Owner's discretion should be expressly defined and consistently applied from year to year.
- It is the Lender's responsibility to confirm the **Owner's policy:**
  - is identified in the PCNA regarding which repairs and replacements will be treated as operating expenses.
  - is reasonable and that the PCNA R4R schedule and underwritten operating expenses are consistent with that policy.

# PCNA – Reserve Analysis

## Allowable Disbursements<sup>2</sup>

(See Chapter 4 of Handbook 4350.1 Rev-2.)

- All disbursement requests shall be compared to the Reserve for Replacement items listed in the PCNA.
- Disbursements will be permitted for emergency and unforeseen needs.
- Disbursements for items or categories of items not listed in the PCNA as future repairs and replacements will require Hub Director approval.



# PCNA – Reserve Analysis

## Estimate Period

- Reserve for Replacement Schedules must be the lesser of 20 years OR the remaining **mortgage term plus 2 years**.<sup>2</sup>
  - Estimate Period will never be more than 20 years.<sup>3</sup>
- Not separated into “near term,” “long term,” or “remainder” periods.<sup>2</sup>



# PCNA – Reserve Analysis

## Minimum Balance

- Total deposits to the R4R should not be less than 105% (or higher percentage for some properties, particularly those older than 30 years) of the total estimated needs for the Estimate Period.

**(Total R4R Deposits > 105% x Total Inflated Needs)<sup>2</sup>**

- Year end balance of the R4R for each year of the Estimate Period must be at least 5% of the total un-inflated needs for the Estimate Period adjusted for inflation of the given year.

**(End Balance, Year 1 > 5% x Total Un-inflated Needs)<sup>3</sup>**

- Un-inflated Needs = \$1,000,000
- ★ □ Year 1: Minimum Balance = \$1,000,000 x .05 = 50,000
- Year 2: Min = 50,000 x 1.02 = 51,000, assuming 2% inflation
- Year 3: Min = 51,000 x 1.02 = 52,020... and so on.



# PCNA – Reserve Analysis

## Minimum Balance Exceptions<sup>2</sup>

- Must maintain throughout the Estimate Period except:
  - On 223a7 applications or PCNAs not associated with an application (10 year updates, TPAs, or PPAs) where the best interest of the project may suggest deferring compliance until a later year.
  - On applications for currently uninsured properties where the physical condition and the immediate repairs support a conclusion that no significant withdrawals from the R4R will be necessary in the first 2 years after Endorsement. In this case, the requirement would be deferred until the end of the 2<sup>nd</sup> year of the loan. (Likely to be the case for Mod Rehabs under 223f.)

# PCNA – Reserve Analysis

## Annual Deposit to Reserve for Replacements ADRR<sup>1</sup>

SOA	Minimum ADRR (PUPA)
223a7	Greater of PCNA recommended or \$250
223f	Greater of PCNA recommended or \$250
221d4	Greater of Formula Method* or \$250

\* NC = .006 x Total Structures Cost, or SR = .004 x Mortgage Amount

- Waiver of the formula may be requested if formula produces an amount greater than \$500 PUPA. **Waiver must be supported by Lender's third party analysis submitted with the firm application.**



# PCNA – Reserve Analysis

## Graduated Annual Contributions<sup>2</sup>

- **Fixed annual deposits are preferred.**
- **% ↑ ADRR < Compounded Expense ↑.** Percent increase in the deposit for a given year may not exceed the projected percent increases applied to the operating expenses through the years prior to and including that year.
- Lender must provide analysis showing property will have revenue adequate to meet the proposed increases.



<b>3% Expense Trend*</b>	<b>Compounded Over X Years</b>
X = 1	3% Increase
X = 5	<b>12.55% Increase</b>
X = 10	<b>30.48% Increase</b>

\*% underwritten by Lender should be used in analysis.

# PCNA – Reserve Analysis

## Project:

###-#####

Units = 150

123 Apartments

IDRR = \$600,000

ADRR = \$60,000

Escalation = 0.0%

PUPA= \$400

Inflation Factor = 1.50%

Interest = 2.50%

YEARS 1 - 10	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	TOTAL
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Un-inflated Needs	\$0	\$0	\$31,300	\$31,300	\$90,750	\$38,800	\$38,800	\$42,300	\$37,800	\$256,750	\$567,800
Inflated Needs	\$0	\$0	\$32,246	\$32,730	\$96,319	\$41,799	\$42,426	\$46,946	\$42,581	\$293,565	\$628,612
Beginning Balance	\$600,000	\$676,500	\$754,913	\$802,233	\$850,241	\$834,270	\$873,783	\$913,640	\$949,862	\$991,463	
Annual Deposit	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	
Year-End Balance	\$660,000	\$736,500	\$782,667	\$829,503	\$813,922	\$852,471	\$891,357	\$926,694	\$967,281	\$757,898	
Balance + Interest	\$676,500	\$754,913	\$802,233	\$850,241	\$834,270	\$873,783	\$913,640	\$949,862	\$991,463	\$776,845	
/Unit Balance	\$4,510	\$5,033	\$5,348	\$5,668	\$5,562	\$5,825	\$6,091	\$6,332	\$6,610	\$5,179	
Minimum Balance	\$109,665	\$111,310	\$112,980	\$114,674	\$116,394	\$118,140	\$119,912	\$121,711	\$123,537	\$125,390	

**MATCH**  
2% – 2.5%

too high ↑

YEARS 11 - 20	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL	Years 1-20 Total
	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20		
Un-inflated Needs	\$57,900	\$57,900	\$81,500	\$135,500	\$510,000	\$157,250	\$157,250	\$157,250	\$181,000	\$129,950	\$1,625,500	\$2,193,300
Inflated Needs	\$67,195	\$68,203	\$97,443	\$164,436	\$628,195	\$196,599	\$199,548	\$202,541	\$236,629	\$172,437	\$2,033,226	\$2,661,838
Beginning Balance	\$776,845	\$958,017	\$1,142,684	\$1,301,997	\$1,396,625	\$1,018,266	\$1,072,833	\$1,125,742	\$1,176,907	\$1,194,409		
Annual Deposit	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000	\$225,000		
Year-End Balance	\$934,650	\$1,114,814	\$1,270,241	\$1,362,561	\$993,430	\$1,046,667	\$1,098,285	\$1,148,201	\$1,165,278	\$1,246,972		
Balance + Interest	\$958,017	\$1,142,684	\$1,301,997	\$1,396,625	\$1,018,266	\$1,072,833	\$1,125,742	\$1,176,907	\$1,194,409	\$1,278,147		
/Unit Balance	\$6,387	\$7,618	\$8,680	\$9,311	\$6,788	\$7,152	\$7,505	\$7,846	\$7,963	\$8,521		
Minimum Balance	\$127,271	\$129,180	\$131,117	\$133,084	\$135,080	\$137,107	\$139,163	\$141,251	\$143,370	\$145,520		

ADRR = \$225,000

Escalation = 0.0%

PUPA= \$1,500

Increase= 275.0%

# PCNA – Reserve Analysis

## Project:

###-#####  
123 Apartments

Units = 150

IDRR = \$600,000  
ADRR = \$60,000  
Escalation = 0.0%  
PUPA= \$400  
Inflation Factor = 1.50%  
Interest = 2.50%

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	TOTAL
YEARS 1 - 10	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	
Un-inflated Needs	\$0	\$0	\$31,300	\$31,300	\$90,750	\$38,800	\$38,800	\$42,300	\$37,800	\$256,750	\$567,800
Inflated Needs	\$0	\$0	\$32,246	\$32,730	\$96,319	\$41,799	\$42,426	\$46,946	\$42,581	\$293,565	\$628,612
Beginning Balance	\$600,000	\$676,500	\$754,913	\$802,233	\$850,241	\$834,270	\$873,783	\$913,640	\$949,862	\$991,463	
Annual Deposit	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	\$60,000	
Year-End Balance	\$660,000	\$736,500	\$782,667	\$829,503	\$813,922	\$852,471	\$891,357	\$926,694	\$967,281	\$757,898	
Balance + Interest	\$676,500	\$754,913	\$802,233	\$850,241	\$834,270	\$873,783	\$913,640	\$949,862	\$991,463	\$776,845	
/Unit Balance	\$4,510	\$5,033	\$5,348	\$5,668	\$5,562	\$5,825	\$6,091	\$6,332	\$6,610	\$5,179	
Minimum Balance	\$109,665	\$111,310	\$112,980	\$114,674	\$116,394	\$118,140	\$119,912	\$121,711	\$123,537	\$125,390	

**CORRECT!**

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	TOTAL	Years 1-20 Total
YEARS 11 - 20	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20		
Un-inflated Needs	\$57,900	\$57,900	\$81,500	\$135,500	\$510,000	\$157,250	\$157,250	\$157,250	\$181,000	\$129,950	\$1,625,500	\$2,193,300
Inflated Needs	\$67,195	\$68,203	\$97,443	\$164,436	\$628,195	\$196,599	\$199,548	\$202,541	\$236,629	\$172,437	\$2,033,226	\$2,661,838
Beginning Balance	\$776,845	\$807,342	\$839,966	\$845,905	\$785,869	\$251,600	\$149,060	\$43,714	-\$64,469	-\$207,347		
Annual Deposit	\$78,000	\$80,340	\$82,750	\$85,233	\$87,790	\$90,423	\$93,136	\$95,930	\$98,808	\$101,772		
Year-End Balance	\$787,650	\$819,479	\$825,273	\$766,701	\$245,463	\$145,424	\$42,648	-\$62,897	-\$202,290	-\$278,012		
Balance + Interest	\$807,342	\$839,966	\$845,905	\$785,869	\$251,600	\$149,060	\$43,714	-\$64,469	-\$207,347	-\$284,962		
/Unit Balance	\$5,382	\$5,600	\$5,639	\$5,239	\$1,677	\$994	\$291	-\$430	-\$1,382	-\$1,900		
Minimum Balance	\$127,271	\$129,180	\$131,117	\$133,084	\$135,080	\$137,107	\$139,163	\$141,251	\$143,370	\$145,520		

ADRR = \$78,000  
Escalation = 3.0%  
PUPA= \$520  
Increase= 30.0%

**↓ Minimum Balance**

# PCNA – Reserve Analysis

## Remaining Useful Life (RUL)<sup>2</sup>

- Identify of the estimated remaining life and use to estimate RUL of components and primary systems of the building(s).

## Long Life Components<sup>2</sup>

- Identify components with a remaining life beyond the Estimate Period, describe, and estimate RUL.
- Lender should address these when recommending an amortization period and when discussing the property's RUL and potential obsolescence.

# PCNA – Lender's Review

## Property Obsolescence<sup>2</sup>

- Mortgage Term < 75% x remaining economic life
  - Lender must review and confirm appropriateness of estimated economic life assessed.
- Lender must reconcile the PCNA and Appraisal to assure that deficient or obsolete components are:
  - Addressed in the Critical or Non-critical Repairs;
  - Properly mitigated by adjustments to rents; and/or
  - Reflected in a shorter mortgage term.
- Appraisal's value must reflect obsolescence not addressed by repair scope of PCNA.
- If correction is not economically feasible within repair scope a 221d4 Sub Rehab should be pursued.



# PCNA – Lender's Review

## Review of PIR<sup>1F</sup>

- Verify:
  - Adequate sampling was conducted
  - All repair, replacement, and major maintenance needs over the mortgage term are addressed
  - All cost estimates are reasonable and adequate
- Adjust as necessary:
  - Any repairs that are included in property's operations budget
    - Only if clear evidence is provided and costs are nominal
- Completion of Repairs
  - Lender is expected to exercise independent judgment when recommending completion time of repairs.

# PCNA – 100% Insurable Value

## Calculating Insurable Value for 223(f) & 223(a)7, HUD-92329<sup>3</sup>

- Insurable Value = “replacement cost as new”
  - Market Value is not material to casualty risk insurance
  - See Handbook 4350.1 Chapter 21
- Replacement Cost calculated per building
  - Size the potential claim for each structure
  - Provide 100% coverage of a partial claim from single event
- Overall Policy > Mortgage Amount



# Best Practices

## Preparation for Site Visit

- *Lender* - Identify if project loan is currently in HUD portfolio or not
  - RR balances
  - Recent REAC Inspections
- *Borrower* – Address any property management/maintenance concerns, rough immediate repair ideas, owner electives.
- *Physical Repair/Maintenance History* – obtain costs and time of recent capital replacements (Appliances, Cabinets, Carpets, etc.)
- *Site information* – Property location, building type(s), unusual characteristics

# Best Practices

## Sampling Method

- Property Inspection Method must be explained in the report
- Lender prepares **Dwelling Unit Breakdown** including unit count and unit areas for each structure
  - Needs Assessor should confirm unit breakdown during inspection for accuracy
- Lender submits estimate of the Gross Floor Area for each structure based on the best estimate of the Needs Assessor

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# Best Practices

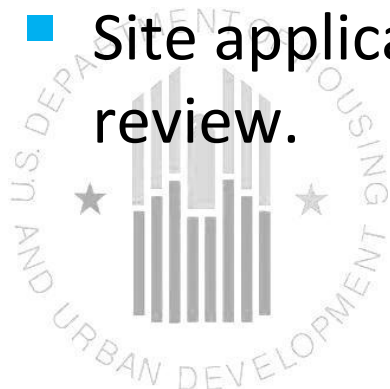
## Sampling Method – Inspect:

- At least one unit in every building
- At least one unit from each floor
- At least one unit of each unit type and size
  - Efficiency/Studio
  - One-bedroom
  - Two-bedrooms
- All common areas in buildings
- All accessory buildings
- All exteriors of buildings and site

# Best Practices

## Content

- Provide Comprehensive Physical Description of Property.
  - **Site information** – Property location, building type(s), site and utility characteristics.
  - **Building elements** - Include comprehensive summary description of all building systems and elements.
- Immediate Repairs
  - Provide detailed Critical and Non-Critical Repair Scopes
- Site applicable Federal State, and Local Codes used in review.



# Best Practices

## Format

- **Be Clear** - Provide Organization and Clarity in each PCNA Report
  - *Sections* – Provide chapter separators between report content and supporting appendix information
  - *Text font* – Use 10 point or greater, where appropriate
  - *Margins* – Use less than 1.5” left and right sides
  - *Paper Sizing* - Consider 11.5 x 17” paper for RR Analysis layout
  - **Submit electronic file** along with ONE Hardcopy to HUD
  - PRINT DOUBLED SIDED WHEN POSSIBLE
    - Chicago Hub’s Request, check with other HUD offices



# Best Practices – Examples

## Property Condition Summary

- Breakdowns component conditions at a glance

Property Name:		Property Type:							
Address:		Property Age:							
City and State:		No. of units or tenants:							
Site Survey Date:		Square feet:							
Report Date:		Loan Term:							
Project #:		Analysis Term:							
Section #	Section Name	Condition					Action Required	Critical Repairs	Non-Critical Repairs
		Excellent	Good	Fair	Poor	NA			
<b>SITE CONDITIONS</b>									
3.1	Topography and Drainage		●						
3.2	Pavement and Parking			●					\$10,400
3.3	Site Amenities & Landscaping			●			●	\$150	\$145
3.4	Utilities		●						
3.5	Natural Hazards			●			●	\$1,500	
<b>BUILDING CONDITIONS</b>									
4.1	Substructure		●						
4.2	Superstructure		●						
4.3	Facades (Exterior Walls)			●					\$7,000
4.4	Windows & Doors		●						
4.5	Roofing		●						
4.6	Basement/Attics		●						
4.7	ADA Compliance			●			●	\$27,165	
<b>INT. FINISHES &amp; COMPONENTS</b>									
4.8	Int. Elements			●					\$7,679
4.9	Suspect Mold			●					\$1,500
<b>BUILDING SYSTEMS</b>									
5.1	Plumbing		●						
5.2	HVAC		●						
5.3	Electrical		●						
5.4	Fire/Life Safety			●			●	\$11,600	\$23,000
5.5	Elevators			●					
<b>MATERIAL CODE VIOLATIONS</b>									
6.0	Codes								
<b>OTHER STRUCTURES, AMENITIES, SPECIAL INTEREST ITEMS</b>									
None									
<b>TOTALS:</b>								\$40,415	\$49,724



# Best Practices – Examples

## Critical Repair Summary Table

*Repair Items*

*Cost Estimate/ Qty.*

*Detailed Notes*

Project NAME

ADDRESS

LOCATION

Project #

SECTION NUMBER	SECTION NAME	RECOMMENDED WORK	QUANTITY	UNIT COST	UNIT DESCRIPTION	ESTIMATED COST	REPAIR STATUS	DESCRIPTION AND LOCATION
<b>BUILDING SYSTEMS</b>								
5.1	Plumbing	None						
5.2	HVAC	None						
5.3	Electric	None						
5.4	F/L Safety	Install MAP-compliant smoke detectors in bedrooms	102	\$ 35.00	each	\$ 3,570.00	Incomplete	Smoke detectors in each bedroom are
5.5	Elevator	None						
5.6	Pest Control	None						
6.0	Compliance	None						
<b>TOTAL</b>						<b>\$ 3,570.00</b>		
<b>PROPERTY AND LOAN INFORMATION</b>			Building Area: 94,563		No. of Floors: 5		Building A	
			Units: 102		No. of Buildings: 1		Property 1	

# Best Practices – Examples

## Non-Critical Repair Summary Table

*Repair Items*

*Cost Estimate/ Qty.*

*Detailed Notes*

Project NAME  
ADDRESS  
LOCATION  
Project #

SECTION NUMBER	SECTION NAME	RECOMMENDED WORK	QUANTITY	UNIT COST	UNIT DESCRIPTION	ESTIMATED COST	REPAIR STATUS	DESCRIPTION AND LOCATION
5.2	HVAC	HVAC replacement and upgrades*	1	\$ 100,000.00	estimate	\$ 100,000.00	Incomplete	Replace main building A/C including air handler and new fan shutters for fire intake fan. V Includes: replacement of existing 40-ton condensing unit, large Trane AHU, installation of condensing unit, new ductwork and other necessary components.
5.3	Electric	Install new generator*	1	\$ 110,000.00	estimate	\$ 110,000.00		The owner has elected to install a new emergency generator.
5.3	Electric	Install new atrium lighting*	1	\$ 23,501.00	estimate	\$ 23,501.00		The owner has elected to install new lighting in the atrium.
5.4	F/L Safety	None						
5.5	Elevator	None						
5.6	Pest Control	None						
6.0	Compliance	None						
<b>TOTAL</b>						<b>\$ 897,441.74</b>		
<b>PROPERTY AND LOAN INFORMATION</b>			Building Area:	94,563	No. of Floors:	5	Building Age:	30 yrs Survey
			Units:	102	No. of Buildings:	1	Property Type:	Age-Restricted Apartments Report



# Best Practices – Examples

## Corrective Action Plan (CAP)

### Accessibility Repairs

Property Name: HOME Apts.	Number of Units: 210
Location:	Number Buildings: 13
Date of Site Visit: 2013	Reserve Term /Ye: 20 years
Project Number: #	Building Age /Years: 28 years

Sec	Component or System	Type	Comments	Quantity	Unit	Unit Cost	Critical Repairs Total \$
7.1.3	Accessibility, Parking	Specific	Provide ADA signage or repair existing signage at all accessible parking spaces and access aisle adjacent to spaces (5' wide min.). (Photos 90-94)	5	EA	\$125.00	\$625
7.1.3	Accessibility, Common area	Specific	Provide audible pad at end of all ramps leading into drive lanes (Photo 90)	4	EA	\$250.00	\$1,000
7.1.3	Accessibility, Common area	Specific	Provide wheelchair knee clearance and wrap pipes at common area kitchen. This will be accomplished as part of planned renovations discussed in Section 7.4. This item will be completed as a Non-Critical Repair	1	LS	\$0.00	\$0
7.1.3	Accessibility, Common area	Specific	Provide rear grab bar in womens common area bathroom (Photo 41)	1	EA	\$250.00	\$250
7.1.3	Accessibility, Common area	Specific	Provide shower hose in common area bathrooms (Photo 43)	2	EA	\$50.00	\$100
7.1.3	Accessibility, Common area	Specific	Provide properly placed compliant signage at common area bathrooms (Photo 76)	2	EA	\$25.00	\$50
7.1.3	Accessibility, Common area	Specific	Repair automatic door at womens bathroom. Not operational at this time of this assessment	1	EA	\$0.00	\$0
7.1.3	Accessibility, Common area	Specific	Provide lever hardware at all interior ground floor common area doors in tenant buildings (Photo 89)	13	EA	\$150.00	\$1,950
7.1.3	Accessibility, Resident Units	Specific	Wrap all pipes (including disposal) at kitchen and bathroom sinks- accessible resident units. (Photos 85 & 86)	4	EA	\$35.00	\$140
7.1.3	Accessibility, Resident Units	Specific	Provide rear grab bar in bathrooms (Photo 87)	2	EA	\$150.00	\$300
7.1.3	Accessibility, Resident Units	Specific	Lower mirror into reach range (less than 40") (Photo 88)	2	LS	\$0.00	\$0

Total Accessibility Repairs Cost	\$4,415
Cost per Unit	\$21

Conditions noted in the Accessibility Repairs are representative of the overall conditions of the property. There may be more detail on specific assessment components in the report text, therefore the Critical Repairs should not be used as a stand alone document.



# Best Practices – Examples

## Repair Description

- Very important to have complete detailed descriptions, and address any underlying causes

Repair/replace rusted exterior metal stairs/stringers

Need more details!  
Where?  
How many?

Install ADA door lever hardware to the mobility impaired resident units  
- 305, 307, 205, 207, 105, 107 to include the exterior entry and interior doors

Gives specifics on where and what needs to be done



# Best Practices – Examples

## Repair Description

- Apparent leak causing the damage needs to be addressed, not just the drywall repair.
  - *Conduct intrusive test as necessary*



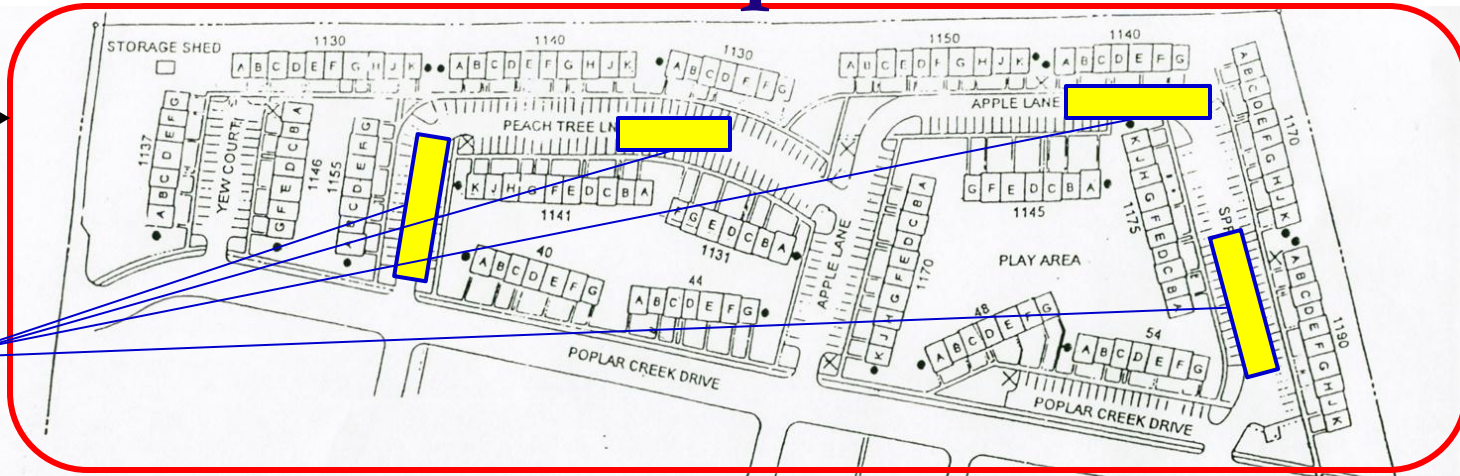


# Best Practices – Examples

Provide Site Plan layout for reference

Areas of site repairs

Building-unit designations



Building Reference Key Code:

Bldg. #	Bldg. Address	Bldg. #	Bldg. Address
10	1137	21	
11	1130	22	
12	1140	23	
13	1130	24	
14	1150	25	
15	1140	26	
16	1170	27	
17	1190	28	
18	1242	29	
19	1243	30	
20	1227	31	



LEGEND

- ✕ = FIRE HYDRANT
- = WATER SHUTOFF
- = MAIN WATER SHUTOFFS ARE ALL LOCATED ON THE CRESTWOOD PROPERTY

Unit Size	With W/D	Without W/D
1 Bedroom	885.00	850.00
2 Bedroom	1,020.00	985.00
3 Bedroom	1,205.00	1,170.00
4 Bedroom	1,355.00	1,320.00

# Best Practices – Examples

**TABLE 3a - SUMMARY FUNDING SCHEDULE FOR 37-YEAR REPLACEMENT RESERVES**

Project NAME	Property Type:	Age-Restricted Apartments											
ADDRESS	No. of units:	102											
LOCATION	Square feet:	94,563											
Project #	Analysis Term:	37											
Initial Deposit Realty:	\$ 350,000	\$ 3,431	/Unit										
Annual Deposit Realty:	\$ 27,132	\$ 266	/Unit										
		2014	2015	2016	2017	2018	2019	2020	2021	2022	2023		
	Near Term (NT)	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	10 Year Total	
	Realty RR Dollars		\$ 77,871	\$ 60,436	\$ 56,862	\$ 36,887	\$ 23,963	\$ 6,940	\$ 95,712	\$ 85,856	\$ 140,782	\$ 585,310	
Annual Deposit Increase (5-10)		Realty Annual Deposit: \$ 27,132	\$ 27,132	\$ 27,132	\$ 27,132	\$ 27,132	\$ 27,132	\$ 27,132	\$ 27,132	\$ 27,132	\$ 27,132		
	Residual Balance with 2.5 % Interest	\$ 377,132	\$ 334,553	\$ 308,779	\$ 286,025	\$ 283,177	\$ 293,504	\$ 321,539	\$ 259,283	\$ 205,573	\$ 94,221		
		2024	2025	2026	2027	2028	2029	2030	2031	2032	2033		
	Long Term (LT)	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20	11-20 Year Total	
Adjusted Annual Deposit	\$ 56,100	Realty RR Dollars	\$ 133,819	\$ 153,749	\$ 72,354	\$ 53,952	\$ 80,402	\$ 22,055	\$ 24,640	\$ 37,667	\$ 33,598	\$ 197,776	\$ 810,011
Annual Deposit Increase (11-20)		Realty Annual Deposit: \$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100		
	Residual Balance with 2.5 % Interest	\$ 16,915	\$ (82,752)	\$ (101,482)	\$ (101,817)	\$ (129,272)	\$ (97,608)	\$ (67,801)	\$ (50,602)	\$ (28,803)	\$ (174,741)		
		2034	2035	2036	2037	2038	2039	2040	2041	2042	2043		
	Remainder Term (RT)	Year 21	Year 22	Year 23	Year 24	Year 25	Year 26	Year 27	Year 28	Year 29	Year 30	21-30 Year Total	
Adjusted Annual Deposit		Realty RR Dollars	\$ 215,456	\$ 70,388	\$ 90,121	\$ 125,743	\$ 228,425	\$ 98,749	\$ 158,464	\$ 276,533	\$ 212,276	\$ 234,135	\$ 1,710,290
Annual Deposit Increase (21-30)		Realty Annual Deposit: \$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100		
	Residual Balance with 2.5 % Interest	\$ (342,449)	\$ (365,655)	\$ (409,668)	\$ (491,294)	\$ (680,210)	\$ (740,930)	\$ (864,376)	\$ (1,111,929)	\$ (1,299,807)	\$ (1,514,789)		
		2044	2045	2046	2047	2048	2049	2050					
	Remainder Term (RT)	Year 31	Year 32	Year 33	Year 34	Year 35	Year 36	Year 37	31-37 Year Total	1-37 Year Total			
Adjusted Annual Deposit		Realty RR Dollars	\$ 79,892	\$ 132,470	\$ 57,759	\$ 68,753	\$ 94,940	\$ 86,464	\$ 87,267	\$ 607,544	\$ 3,713,155		
Annual Deposit Increase (31-37)		Realty Annual Deposit: \$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100	\$ 56,100					
	Residual Balance with 2.5 % Interest	\$ (1,577,046)	\$ (1,694,751)	\$ (1,738,820)	\$ (1,795,260)	\$ (1,879,952)	\$ (1,958,074)	\$ (2,038,972)					





# Best Practices

## REPLACEMENT RESERVE TABLE

Property Name: HOME Apartments  
 Property Address:  
 City, State: LOCATION  
 Reserve Term:  
 Building Age: 41  
 # of Apt. Buildings: 14  
 # of Units: 322  
 Net Rentable Area (SF): 238,070

RESERVE SUMMARY	Total Uninflated	Total Inflated
Initial Deposit	\$466,900	-
Annual Deposit, Years 1-10	\$146,510	-
Annual Deposit, Years 11-20	\$185,150	-
Annual Deposit, Years 21-37	\$223,790	-
Near Term (Years 1-10)	\$1,465,295	\$1,607,562
Long Term (Years 11-20)	\$1,625,140	\$2,159,035
Remainder Term (Years 21-37)	\$3,327,100	\$5,878,170
<b>Total Reserves:</b>	<b>\$6,417,535</b>	<b>\$9,644,768</b>

ITEM	EUL	EFF AGE	RUL	QTY.	UNIT COST	UNIT	NEAR TERM REPAIRS / REPLACEMENTS										
							YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10	
<b>SITE IMPROVEMENTS</b>																	
**Asphalt maintenance/seal/stripe	3	0	3	240,000	\$0.11	SF								\$26,400			
**Asphalt repair allowance	3	1	4	3	\$18,000	LS				\$18,000						\$18,000	
**Asphalt replacement	25	10	15	240,000	\$1.00	SF											
**Concrete repair allowance	3	0	3	8,400	\$6.00	SF						\$3,600					\$3,600
**Tennis/basketball court	15	7	8	4	\$15,000	LS								\$30,000			
**Playground	20	7	13	2	\$20,000	LS											
<b>FAÇADE</b>																	
**Masonry repair allowance	15	5-10	5-10	14	\$1,300	BLDG					\$3,000	\$3,000	\$3,000	\$3,000	\$3,000	\$4,300	\$4,300
**Repaint/re-caulk/repair allowance (facades and balconies)	3	3	2	322	\$120	UNIT		\$19,320	\$19,320					\$19,320	\$19,320		
**Vinyl siding	30	0-1	29-30	92,000	\$4	SF											
**Windows	30	6	24	736	\$350	EA											
Sliding glass doors	30	6	24	214	\$400	EA											
Exterior double doors	25	6	19	42	\$500	ENTRY											
<b>ROOFING</b>																	
**Roofing/gutters (clubhouse)	20	10	10	3,900	\$2.50	SF											
**Roofing/gutters (apartments)	20	0	20	25,200	\$2.50	SF											
**Roofing/gutters (apartments)	20	10	10	94,500	\$2.50	SF											
<b>MECHANICAL, ELECTRICAL &amp; PLUMBING</b>																	
HVAC – Furnace (electric)	20	15-18+	2-5	322	\$550	UNIT		\$44,000	\$44,550	\$44,000	\$44,550						
HVAC - Condensing units (1.5-2 tons)	15	0-13	2-15	322	\$600	UNIT		\$11,400	\$11,400	\$11,400	\$11,400	\$11,400	\$11,400	\$11,400	\$11,400	\$11,400	\$11,400
**Galvanized steel piping replacement allowance	25-45+	40	2-20	322	\$650	UNIT		\$10,400	\$10,400	\$10,400	\$10,400	\$10,400	\$10,400	\$10,400	\$10,400	\$10,400	\$10,400
**Fire alarm panel/components	20	10	10	15	\$2,000	BLDG											\$6,000
Gas-fired water heaters (199-MBH)	15	9-13	2-6	15	\$3,000	EA		\$18,000	\$6,000		\$6,000	\$15,000					
<b>INTERIOR ELEMENTS</b>																	
**Common Areas - Carpet	7	2-5	2-5	34,000	\$1.75	SF		\$23,625	\$23,625	\$23,625	\$23,625						\$23,625
Common Area Laundry Equip	15	2	13	42	\$1,100	SET											
**Common area laundry vinyl tile	15	10	5	14	\$450	ROOM					\$6,300						
*Unit - Kitchen cabinets/counters	20	0-18	2-20	322	\$1,150	UNIT		\$35,630	\$35,630	\$35,630	\$35,630	\$35,630	\$35,630	\$35,630	\$35,630	\$35,630	\$36,800
Unit - Bathroom fixtures/vanities	20	0-18	2-20	406	\$250	BATHS		\$3,750	\$3,750	\$3,750	\$3,750	\$3,750	\$3,750	\$3,750	\$3,750	\$3,750	\$3,750
**Unit - Carpet	7	0-5	2-7	322	\$650	UNIT		\$22,750	\$22,750	\$22,750	\$22,750	\$22,750	\$22,750	\$22,750	\$22,750	\$22,750	\$22,750
**Unit - Ceramic tile flooring	30+	5-11	19-25+	234	\$1,000	UNIT											
Unit - Ranges (electric)	15	0-13	2-15	322	\$350	UNIT		\$5,600	\$5,950	\$5,600	\$5,950	\$5,600	\$5,950	\$5,600	\$5,950	\$5,600	
Unit - Refrigerators	15	0-13	2-15	322	\$450	UNIT		\$7,200	\$7,650	\$7,200	\$7,650	\$7,200	\$7,650	\$7,200	\$7,650	\$7,200	
Unit - Dishwashers	15	0-13	2-15	322	\$230	UNIT		\$4,370	\$4,370	\$4,370	\$4,370	\$4,370	\$4,370	\$4,370	\$4,370	\$4,370	\$4,370
EUL: Expected Useful Life	TOTAL UNINFLATED						\$0	\$206,065	\$195,415	\$186,745	\$189,225	\$145,520	\$104,920	\$153,440	\$143,970	\$139,995	
EFF AGE: Effective age	CUMULATIVE TOTAL UNINFLATED						\$0	\$206,065	\$401,480	\$588,225	\$777,450	\$922,970	\$1,027,890	\$1,181,330	\$1,325,300	\$1,465,295	
RUL: Remaining Useful Life	Inflation Factor @ 2.0%						100.00%	102.00%	104.04%	106.12%	108.24%	110.41%	112.61%	114.87%	117.17%	119.51%	
Quantity: Total Quantity Onsite or to be Replaced	TOTAL INFLATED						\$0	\$210,186	\$203,310	\$198,175	\$204,823	\$160,666	\$118,157	\$176,254	\$168,684	\$167,307	
*Cost Provided by Management	CUMULATIVE TOTAL INFLATED						\$0	\$210,186	\$413,496	\$611,671	\$816,495	\$977,160	\$1,095,317	\$1,271,572	\$1,440,256	\$1,607,562	
** Identified Unit Cost includes 3rd-party labor	ANNUAL DEPOSIT (No annual escalation)						\$146,510	\$146,510	\$146,510	\$146,510	\$146,510	\$146,510	\$146,510	\$146,510	\$146,510	\$146,510	
BALANCE						\$613,410	\$549,734	\$492,934	\$441,269	\$382,955	\$368,800	\$397,153	\$367,408	\$345,234	\$324,438		

# Discussion Questions

1. Does the scope of intrusive tests include forensic testing?
  - ❑ **Not necessarily.** As stated in the FAQ for ML2012-25, intrusive tests will not typically involve removal of part for lab tests or forensic examination. “Intrusive” is used to emphasize the distinction between a walk-through inspection unaided by tools, lights, ladders, or instruments as described in ASTM E 2018-08 and the expected use of these kinds of aids by experienced inspectors or tradesmen retained for their knowledge about specific systems or components.

# Discussion Questions

2. What is the difference between Remaining Useful Life (RUL) and Remaining Economic Life (REL)? Why is an appraisal term being addressed by the PCNA?
  - ❑ RUL is determined by the Needs Assessor based of age, replacements, and maintenance of various building systems. Needs Assessor should explain their RUL conclusion for the property. Refer to the Appraisal for an overall REL of the property. **The RUL and REL do NOT have to match.**

# Discussion Questions

3. On a 223f refinance built prior to March 13, 1991, is there ever a time when Section 504/UFAS compliance is required?

- ❑ **Yes, but only for projects receiving Federal Assistance (LIHTC not included).** Market rate and affordable LIHTC projects built prior to March 13, 1991 do not have to comply with FHA or Section 504/UFAS requirements. All projects, regardless of assistance received, must comply with ADA design standards in relation to areas of public accommodation, such as a leasing office.

***\*See chart on Slide 13.***

# Discussion Questions

4. If all FHA deficiencies are corrected prior to endorsement is a Corrective Action Plan (CAP) required?
- ❑ **Yes**, according to Appendix 6 of ML 2012-25 the PCNA must include a Corrective Action Plan. The Critical Repairs excludes any accessibility issues. A CAP is provided in lieu of including these corrections in the Critical Repair Scope. If only minor deficiencies exist, the CAP simply provides a description and estimated cost to correct those minor items. **Only if no FHA or accessibility deficiencies exist is the CAP not required.**

# Discussion Questions

5. With the minimum balance to the reserve for replacement requirements set forth in the ML2012-25, will it not be likely that properties will need to fund substantial initial deposits to cover the costs of larger repairs in the later years of the Estimate Period?
- ❑ **Perhaps, but not necessarily.** It is important for the PCNA provider and the Lender to work together to formulate reserve deposits that are achievable by the owner and fund the needs assessed over the Estimate Period.

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# Questions?



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# BREAK





# Common Issues – Life Safety

## Smoke Detectors

- Required in each bedroom/sleeping area in addition to within vicinity (15') of bedrooms
- HUD Compliant models
  - Hard wired, or
  - Tamper-resistant, 10-year lithium battery
- Carbon Monoxide, where applicable
  - Within vicinity of bedrooms



# Common Issues – Life Safety

## Trip Hazards

- Greater than  $\frac{1}{2}$ " -  $\frac{3}{4}$ " surface level change
- Greater than  $\frac{3}{4}$ " gap in surface



# Common Issues – Life Safety



**GFCI outlet needed at washer/dryers**

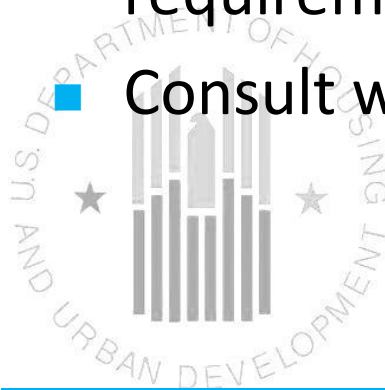
**Also required at all kitchen & bathroom outlets**



# Common Issues – Life Safety

## Emergency Call System (Housing for the Elderly)

- Refer to Minimum Property Standards, HUD Handbook 4910.1 ch.1 100-3
  - Located in bathroom and one bedroom
  - Registers a call at central supervised location, OR all to 24/7 switchboard, OR sounds an alarm in immediate corridor
- Pendant systems are appropriate if system meets above requirements.
- Consult with Management/Operations



# Common Issues – Accessibility

- Parking Requirements (per ADA)
  - Minimum number of spaces to be provided per table
  - At least one “Van Accessible” space included

Table 208.2 Parking Spaces

Total Number of Parking Spaces Provided in Parking Facility	Minimum Number of Required Accessible Parking Spaces
1 to 25	1
26 to 50	2
51 to 75	3
76 to 100	4
101 to 150	5
151 to 200	6
201 to 300	7
301 to 400	8
401 to 500	9
501 to 1000	2 percent of total
1001 and over	20, plus 1 for each 100, or fraction thereof, over 1000

Strictly for Areas of →  
Public Accommodations

\*See FHA design guide for further guidance regarding residential parking.



<http://www.ada.gov/regs2010/2010ADASTadards/2010ADAStandards.pdf>



# Common Issues – Accessibility

- Parking space dimensions
  - Standard Accessible = 96" (with 60" Access Aisle)
  - "Van Accessible" = 96" (with 96" Access Aisle), or 132" (with 60" Access Aisle)

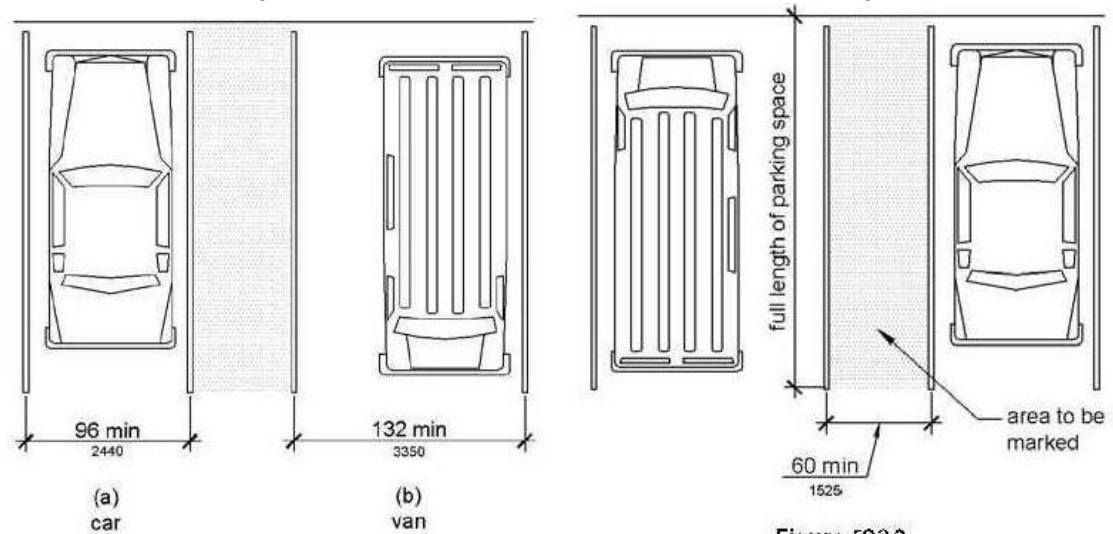


Figure 502.2  
Vehicle Parking Spaces

Figure 502.3  
Parking Space Access Aisle

<http://www.ada.gov/regs2010/2010ADASTadards/2010ADASTandards.pdf>

# Common Issues – Accessibility

## ■ Access Aisle

- Connects parking spaces to accessible route leading to accessible entrance
  - Curb ramps used to connect pavement and sidewalk levels
- Where accessible route must cross vehicle traffic, marked crossings used to enhance pedestrian safety
  - Preferably the accessible route does not cross vehicle traffic



# Common Issues – Accessibility

## ■ Curb Ramps

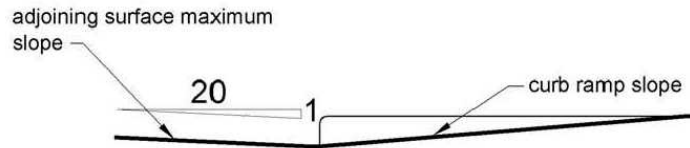


Figure 406.2  
Counter Slope of Surfaces Adjacent to Curb Ramps

406.3 Sides of Curb Ramps. Where provided, *curb ramp* flares shall not be steeper than 1:10.

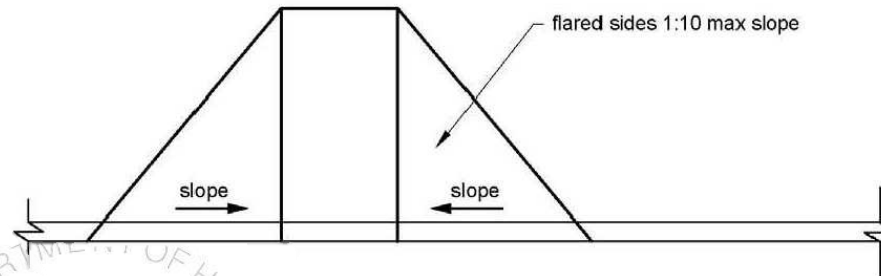


Figure 406.3  
Sides of Curb Ramps

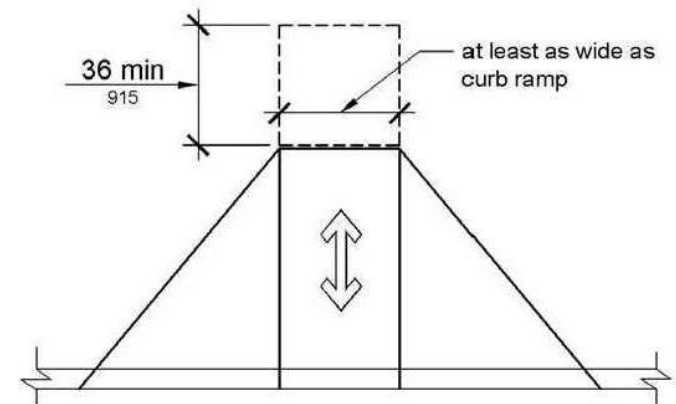


Figure 406.4  
Landings at the Top of Curb Ramps



<http://www.ada.gov/regs2010/2010ADASTadards/2010ADAStandards.pdf>



# Common Issues – Accessibility

- Ramps



Non-compliant ramp needs re-built per accessibility codes.  
*Hire professional to design as necessary.*



# Common Issues – Site Conditions

- Erosion



Repair/replace retaining wall.





# Common Issues – Site Conditions

## ■ Erosion/Drainage



Redesign and excavate for better drainage away from structures – revise downspout design layout.  
*Hire professional to design as necessary.*

# Common Issues – Site Conditions

## ■ Drainage



Where does the water go?



Electricity & Water  
DON'T MIX



# Common Issues – Site Conditions

## ■ Pavement



Patch repairs, full replacement, seal coat...  
*Silicate bids from a professional as necessary.*

# Common Issues – Building Envelope

## ■ Roofing



Clean and redesign roof drainage including drains and gutters. Consider better insulation, reflective EPDM system, equipment, flashing and other roof details.

*Solicit bids from a professional as necessary.*

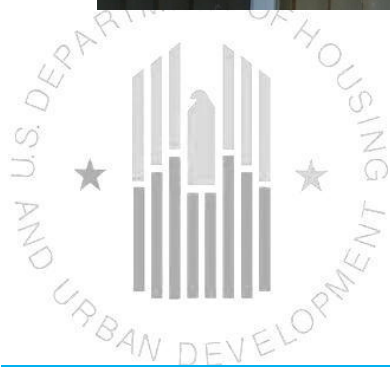


# Common Issues – Building Envelope

## ■ Roofing



Replace roofing, clean/replace gutters.  
*Silicate bids from a professional as necessary.*



# Common Issues – Building Envelope

## ■ Masonry



**Life Safety Concern**



Tuck pointing and concrete repair needed.



# Common Issues – Building Envelope

## ■ Masonry



Tuck pointing: Before & After

# Common Issues – Building Envelope

## ■ Masonry



Rusted lintel needing replacement.  
*Hire professional & silicate bids as necessary.*



New lintel in place





# Common Issues – Building Envelope

## ■ Siding



Repaint, repair, reseal, or replace  
Check for moisture infiltration and ***conduct intrusive tests as necessary***

# Common Issues – Building Envelope

- Fenestrations (Windows/Doors/Openings)



Remove and replace caulk, replace window as necessary.  
Check for moisture infiltration and  
***conduct intrusive tests as necessary***



# Common Issues – Environmental

- **Asbestos** - On any building with suspect materials, prior to HUD issuance of a Firm Commitment, a qualified asbestos inspector must perform a comprehensive building asbestos baseline survey to identify potential asbestos throughout any structures, pursuant to the requirements of *ASTM E 2356-10*
- **Lead** - Critical Repair Scope needs to include removal of hazards identified in Environmental reports. Provide O&M Plan for items to be managed in place
- **Radon Standards** - Refer to Notice H 2013-2.7 to conform with ASTM Standards, E212-09. Also refer to Mortgagee Letter 2.7.2013, MAP Guide, Chapter 9 – Environmental Review
- **Soil Contamination** – Remediation requirements outlined in MAP Guide, Chapter 9.3



# Common Issues – Environmental

- Asbestos
  - Old existing pipe insulation needs to be remediated and removed



# Common Issues – Environmental

- Lead Based Paint (LBP)
  - Repair scope should include remediation and abatement of existing LBP



# 221(d)4 Application – Overview

- New Construction and Substantial Rehabilitation Multifamily Housing Projects
  - Development Team Members
  - A/E-Cost Processing Requirements
  - HUD Construction Analyst Review
  - LIHTC Streamline Processing
  - 221(d)4 Substantial Rehab  
vs. 223(f) Refinance with Repairs





# 221(d)4 Application – Overview

- Development Team Members
  - **MAP Lender/Mortgagee** - Acts as the coordinator of the Project Team, communicates with the government agency (U.S. Dept. HUD) and underwrites the firm financing application.
  - **Sponsor/Mortgagor** - Owner and/or management of subject property. Lender's client.
  - **Architects/Engineers** - Licensed design professional involved in project from early schematics to occupancy. Must be reliable in developing site and building design, code compliance, and cost efficiency. Owner's clients

# 221(d)4 Application – Overview

## ■ Development Team Members

- **General Contractor** - Construction coordinator. Needs to get involved as early as possible in order to establish appropriate bidding/construction costs and logistics once project design develops. Owner's client.
- **3<sup>rd</sup> Party Reviewer** - Prepares 3<sup>rd</sup> Party Reports for A/E Cost reviews per MAP guidelines. Functions as a continuous liaison between mortgagor and the architect. Lender's Client.
- **HUD Construction Analyst** – Reviews Architectural and Cost exhibits including 3<sup>rd</sup> Party Reports. Verifies compliance with Federal Guidelines and HUD Regulations.

# 221(d)4 Application – Overview

- Mortgagor's Architect
  - Must be a licensed Architect in the state where project is located
  - ***Concept Meeting/Pre-Application Phase***
    - Visit project site.
    - Evaluate mortgagor and user's needs.
    - Know applicable codes, restrictions and requirements.
    - Begin design of the project.
    - ***Sub-Rehab*** - "As is" sketch plans
    - ***Sub-Rehab*** - Basic work write-up
    - ***Sub-Rehab*** - Asbestos & LBP test reports (if applicable)

# 221(d)4 Application – Overview

- Mortgagor's Architect

- ***Concept Meeting/Pre-Application Deliverables***

- Complete architectural portions of HUD-92013, with lender assistance.
    - Location Map
    - Sketch plan of site
    - Sketch plans of main buildings, w/ dimensions.
    - MORE???



# 221(d)4 Application – Overview

- Mortgagor's Architect

- ***Firm Application Phase***

- Prepare Final Set of Construction Documents (Plan and Specifications ready for Permit Review)
    - Submit completed exhibits to mortgagor.
    - ***Sub-Rehab*** - Attend joint inspection with Lender's architectural staff.
    - ***Sub-Rehab*** - Create detailed work write-up, based off joint inspection observations for submission with firm application.



# 221(d)4 Application – Overview

## ■ Mortgagor's Architect

### □ ***Firm Application Deliverables***

- HUD-92013 (prepared by MAP Lender)
- Owner-Architect Agreement, AIA B108, for ALL Architects & Engineers
- ALTA Survey & HUD-92457M, Surveyor's Report
- Engineering and specialty reports
- Municipal and utility company letters of confirmation
- Architects Certification regarding foundation design/soil limits and accessibility compliance
- Identity of Interest (IOI) Disclosure
- Final set of Construction Documents
- Description of any offsite construction

# 221(d)4 Application – Overview

## ■ Lender's 3<sup>rd</sup> Party Reviewer

### □ ***Firm Application Stage***

- Review all Architectural exhibits for compliance:
  - Federal, state, & local codes
  - Federal accessibility requirements
- Monitor design development and construction documentation progress, review revisions as necessary
- Verify evidence of necessary utilities and parking/site analysis of the project.
  - Review survey, utility access, easements, etc...
- Visit site and observe on-site and off-site features
- ***Sub-Rehab*** - Attend joint inspection with lender's and architect's staff

# 221(d)4 Application – Overview

## ■ Lender's 3<sup>rd</sup> Party Reviewer

### □ ***Firm Application Stage***

- Guide the mortgagor's architect during the design process
- Verify that the architect is licensed to practice within the State; execution of the B-108, with the HUD amendment
- Prepare detailed cost estimate. Provide assistance to project team members on cost matters.
- Review HUD-2328, Contractor's Costs Breakdown
- Review General Contractor's experience and qualifications
- Prepare written architectural report.
- Prepare written cost analysis report including HUD-92326.
- ***Reviewer must sign reports.***



# 221(d)4 Application – Overview

- Lender's 3<sup>rd</sup> Party Reviewer
  - ***Firm Application Deliverables***
    - HUD-92326, Detailed Cost Estimate
    - HUD-92264, (architectural & cost portions)
    - HUD-92329, Property Insurance Schedule
    - HUD-92328, Contractor's Cost Breakdown
    - Review and approve/disapprove request for prior approval of identity of interest subcontractors
    - Assure with Lender that the project costs will fall within the established budget including applicable Davis-Bacon prevailing wage rates



# 221(d)4 Application – Overview

- Lender's 3<sup>rd</sup> Party Reviewer
  - ***Firm Application Deliverables***
    - ***Sub-Rehab*** - Inspection Report of existing physical conditions
    - ***Sub-Rehab*** - Include Unit Matrix when organizing existing building characteristics and new work scope items.
    - ***Sub-Rehab (or NC with formula waiver)*** - Replacement Reserve analysis & estimate, appropriate deposit amounts.



# 221(d)4 Application – Overview

## ■ Cost Estimation

- **Purpose:** The replacement cost estimate is one of the criteria used to determine the mortgage amount to be insured. It consists of estimates of the new construction and/or substantial rehabilitation costs of all proposed improvements to the property.

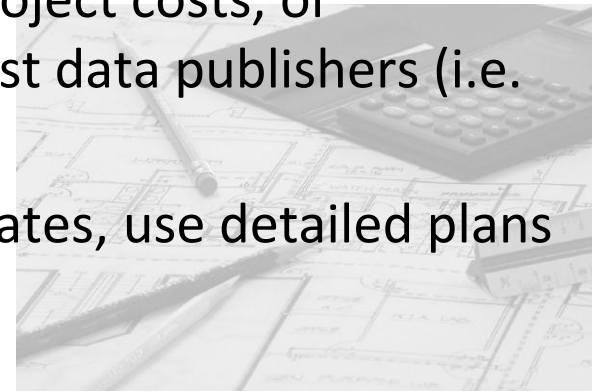


# 221(d)4 Application – Overview

## ■ Cost Estimation

### □ ***Method of Cost Estimation***

- Similar to that used by the general contractor
- Organized by trade division
- May be prepared using a quantity surveyed, a square-foot, or per-unit cost approach.
- Data source must be documented - Comparable completed projects, benchmarks from actual project costs, or published data from construction cost data publishers (i.e. RS-Means, etc...)
- For HUD-92326, Detailed Cost Estimates, use detailed plans and specifications

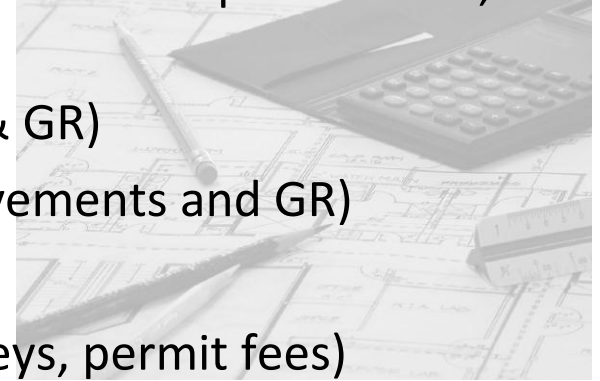


# 221(d)4 Application – Overview

## ■ Cost Estimation

### □ ***Method of Cost Estimation***

- Costs reflected on HUD-92328 are reported in Sections G, M, and O of the HUD-92264
- Costs include:
  - Total Structures and Land Improvements
  - Accessory Buildings
  - General Requirements (4-6% of Total for All Improvements, or slightly higher for special cases)
  - Overhead (2% of All Improvements & GR)
  - Builder's Profit (4-6% of Total improvements and GR)
  - Bond Premium
  - Other 'Soft' Costs (engineering, surveys, permit fees)



# 221(d)4 Application – Overview

- HUD Construction Analyst
  - ***Concept Meeting/Pre-Application Stage***
    - Review Architectural and Cost exhibits
    - Check for conformance to Federal and HUD standards
    - Compare estimated construction costs including fees with figures on HUD-92013
    - Prepare MAP Pre-Application review reports and indicate any conditions of Firm Invitation



# 221(d)4 Application – Overview

## ■ HUD Construction Analyst

### □ ***Firm Application Stage***

- Review Architectural and Cost exhibits including 3<sup>rd</sup> Party Reports
- Check all exhibits for accuracy and consistency
- Examine identify of interests for subcontractors, if any
- Compare HUD-92328 with 3<sup>rd</sup> Party estimate and HUD cost data.
- Compare confirmed construction costs from HUD-2328 and fees with figures on HUD-92013
- Review Annual Deposit to Reserve for Replacement & R4R analysis, if applicable (***Sub-Rehab*** or ***NC with formula waiver***)

# 221(d)4 Application – Overview

## ■ HUD Construction Analyst

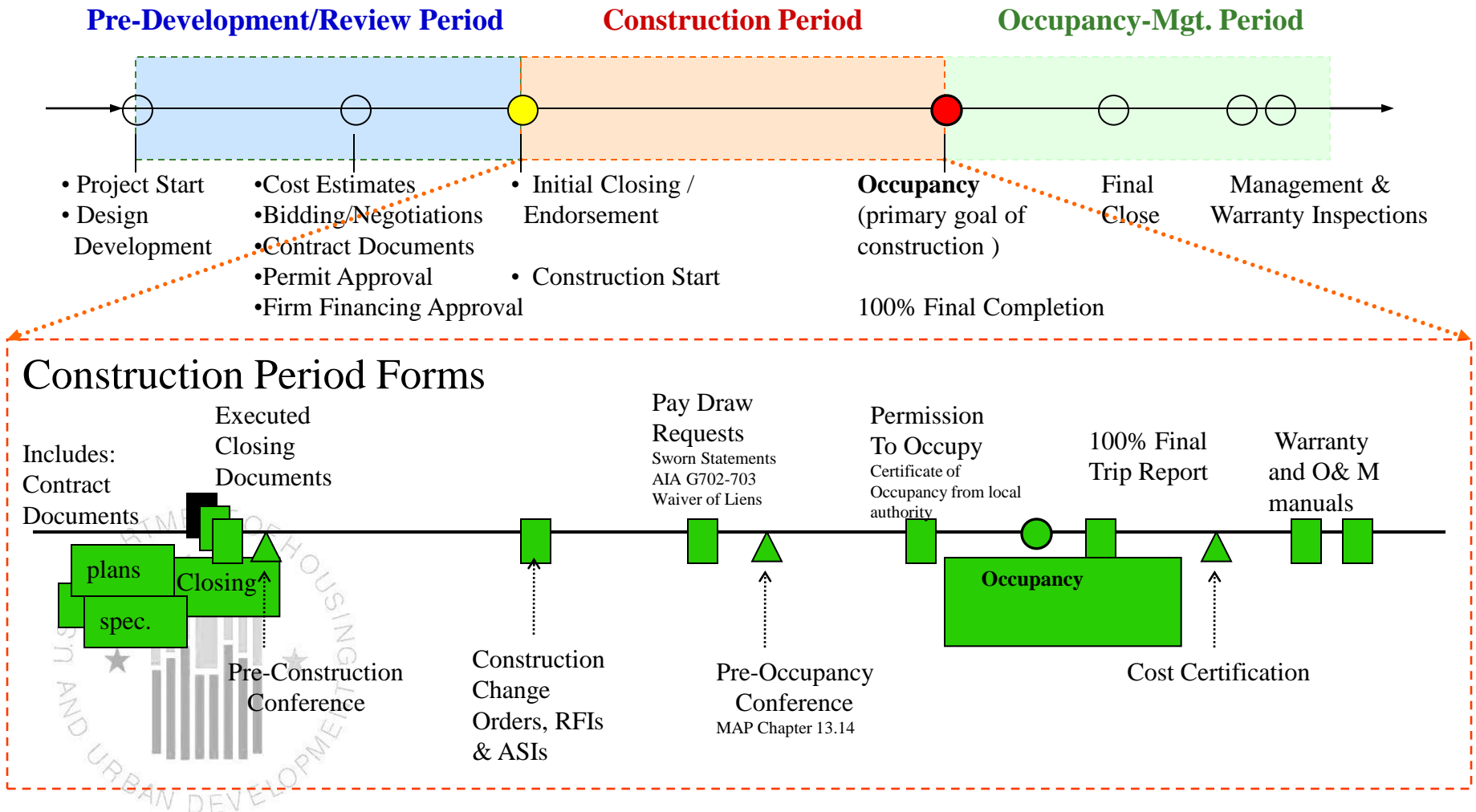
### □ ***Firm Application Stage***

- ***Sub-Rehab*** - Review Detailed Work Write-up
- ***Sub-Rehab*** – Compare estimated cost of rehabilitation work with Lender’s estimates, and resolve major differences with lender
- Prepare MAP review reports and indicate any conditions of Firm Commitment
- Complete Architectural and Cost sections on HUD-92264 to be attached to the Firm Commitment





# 221(d)4 Application – Overview



# 221(d)4 Application - LIHTC

- Streamline Processing for LIHTC Applications
  - Revisions to Architectural Processing, *MAP 5.28*
    - Schematic Drawings may be submitted at Firm Application
      - Static footprint of building(s) on surveyed site plan
      - Gross building & net residential square footage
      - Unit layouts for each major unit type
      - Sufficient detail to determine:
        - Davis-Bacon Wage rate classification
        - Compliance with accessibility requirements
    - Development team members must have adequate HUD experience
    - Initial Endorsement must be achieved within 60 days of Firm Commitment pending submission of final plans.

# 221(d)4 Application – vs. 223(f)

## ■ MAP Guide Programs

- Sections 221(d)(3), 221(d)(4), 220, and 232, either new construction or substantial rehabilitation. It may be used under Section 223(f) for refinancing or purchase.
  - 221d3 – Applies to Non-Profit Sponsors/Mortgagors.
- 5 or more residential units with complete kitchens and baths.
  - If there is a conflict between the MAP Guide and HUD's Handbooks, the MAP Guide will take precedence.

# 221(d)4 Application – vs. 223(f)

- Substantial Rehabilitation, *MAP 5.12 -Substantial Rehab*
  1. The replacement of two or more major building components, or  
**Major Building Component** refers to the importance of the component and the extent of replacement.
    - a) The component must be significant to the building and its use and normally be expected to last the useful life of the structure, and not be minor or cosmetic. Examples of major components: roof sheathing, rafters, framing members. Examples of minor components: shingles, built-up-roofing.
    - b) Total replacement of major components is not required, but at least 50% of the component must be replaced.

# 221(d)4 Application – vs. 223(f)

- Substantial Rehabilitation, *MAP 5.12 -Substantial Rehab*
  2. Costs which exceed the greater of:
    - a) 15% (exclusive of any soft costs) of the property's replacement cost (fair market value) after completion of all required repairs, replacements, and improvements,
    - b) \$6,500 per dwelling unit (adjusted by HUD's authorized high cost percentage), or
    - c) 20% of the mortgage proceeds applied to rehabilitation expenses.

*NOTE: Estimates for determining the cost for substantial rehabilitation must include general requirements and fees for contractor's general overhead and profit, bond premium, borrower's and contractor's other fees and design architect and supervisory architect. However, when determining the eligibility of Section 223(f) projects, include only the direct repair costs and do not add general requirements and fees.*

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# Questions?





# Sources & References

## 1. MAP Guide

- A. Section 3.9
- B. Section 5.26
- C. Section 5.27
- D. Appendix 5C
- E. Appendix 5D
- F. Appendix 5G

## 2. HN 2012-27/ML 2012-25

## 3. FAQ for HN 2012-27/ML 2012-25 (2/5/2013)

## 4. **ASTM E 2018-08**, Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process

# PCNA – Accessibility Compliance

## Accessibility Guidelines

- Fair Housing Act (FHA)
  - <http://www.huduser.org/publications/pdf/fairhousing/fairintro.pdf>
- Section 504 of the Rehabilitation Act of 1973 (504)
  - <http://www.hud.gov/offices/fheo/disabilities/sect504.cfm>
- Uniform Federal Accessibility Standards (UFAS)
  - <http://www.access-board.gov/ufas/ufas-html/ufas.htm>
  - <http://www.hud.gov/offices/fheo/library/UFASAccessibilityChecklistforPHAs-5-7-08.pdf>
- Americans with Disabilities Act of 1990 (ADA)
  - <http://www.ada.gov/pubs/ada.htm>
  - <http://www.access-board.gov/adaag/html/adaag.htm>

