

Chapter 4

Architectural Analysis and
Cost Processing

9

4.1

General

10 A. Qualifications of Lender's Third-Party Representatives

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- 12 1. Architectural Third-Party Reviewer — See Lender's Architectural Reviewer and Cost
13 Analyst's Statement of Work — New Construction, Substantial Rehabilitation, and
14 241(a), Section I.A (available on the Section 232 Program website).
- 15
- 16 2. Cost Analyst Third-Party Reviewer - See Lender's Architectural Reviewer and Cost
17 Analyst's Statement of Work — New Construction, Substantial rehabilitation, and
18 241(a), Section I.B (available on the Section 232 Program website).
- 19
- 20 3. Needs Assessor Third-Party Reviewer - See Project Capital Needs Assessment
21 (PCNA) Statement of Work — 223(f), Section I, and PCNA Statement of Work —
22 223(a)(7), Section I (both are available on the Section 232 Program website).

23

24 B. Required Architectural Services for Design and Supervision - See Lender's Architectural
25 Reviewer and Cost Analyst's Statement of Work — New Construction, Substantial
26 Rehabilitation, and 241(a), Exhibit C.

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28 C. Architectural Standards and Other Criteria

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- 30 1. HUD's Minimum Property Standards, Handbook 4910.1
- 31
- 32 2. Accessibility Standards (See Section 4.1 D below)
- 33
- 34 3. Seismic Resistance Requirements. ~~Seismic Resistance for Substantial Rehabilitation~~
35 ~~and Existing Projects pursuant to Section 223(f). Structures in seismic zones 3 and 4~~
36 ~~must meet three fourths (3/4) of the seismic force level resistance contained in~~
37 ~~FEMA 310, Handbook for the Seismic Evaluation of Buildings— A Pre-standard,~~
38 ~~FEMA 356, Pre-standard and Commentary for the Seismic Rehabilitation of~~
39 ~~Buildings, and FEMA 274, NEHRP Commentary on the Guidelines for Seismic~~
40 ~~Rehabilitation of Buildings. Please reference ORCF's PCNA Statement of Work for~~

41 clarification on Seismic Resistance Requirements. To improve seismic safety in older
42 buildings and to preserve existing residential care facilities, project applications for
43 substantial rehabilitation and refinance/acquisition must comply with the relevant
44 standards published by the American Society of Civil Engineers (ASCE) and its
45 affiliate, the Structural Engineering Institute (SEI). The relevant standard is ASCE
46 41-13 Seismic Evaluation and Retrofit of Existing Buildings. A registered structural
47 engineer familiar with lateral force design is required for the seismic analysis.
48

49 a. A seismic hazard and building performance analysis of the
50 building (report (Seismic Report) must be made by a registered
51 engineer familiar submitted with lateral force design, where
52 applicable code requirements at the loan application unless the time of
53 construction did not equal or exceed property is exempt as described
54 in paragraph c below. The Seismic Report shall include the referenced
55 seismic standards following:

56 i. The evaluation Seismic Report must include an examination of the
57 structure for continuity, ductility, and resistance to lateral forces.

58 ~~b. Structural elements and connections between elements must be~~
59 ~~strengthened and new elements installed as required, if the existing~~
60 ~~structure does not provide three fourths (3/4) of the seismic force level~~
61 ~~resistance required by paragraph A above.~~

62
63 ii. The analysis shall assume a building performance objective of “life
64 safety” as defined by ASCE 41-13. For soil classification refer to
65 the International Building Codes.

66 iii. Mitigation must be provided to meet minimum life safety
67 requirements. In general, this means that for a design
68 earthquake (i.e., a measure of the anticipated event), the
69 building may be expected to avoid partial or total structural
70 collapse, or damage to non-structural components which
71 damage would be life threatening, e.g., damage leading to fire,
72 blocked egress, release of hazardous materials, etc.

73
74 b. Section 223(a)(7) applications. A new Seismic Report is not required if such
75 study was done as part of the original insurance application. A new report
76 must be submitted with the application if the property site’s Design
77 Earthquake Spectral Response Acceleration Parameters exceeds the threshold
78 for exempt buildings as defined below in paragraph c and no Report was
79 completed previously.

80
81 c. Exempt Properties.

82 i. Benchmark Buildings. A “benchmark building” is an existing
83 building originally built to or later retrofitted to an identified
84 design code that equals or exceeds the standards defined by ASCE
85 41-13. A licensed design professional experienced with lateral
86 force design must determine whether a building is a “benchmark

87 building.” The design professional must review the plans (if
88 available) and must perform a site visit to confirm that the
89 building does, in fact, meet the benchmark building code. If a
90 determination cannot be made by this means, a Seismic Report
91 must be completed.

92 ii. Exempt Buildings. Many buildings are exempt from the seismic
93 performance analysis required by ASCE 41-13. A property composed
94 of exempt buildings as defined below will not require a Seismic
95 Report:

- 96 1. Any single story, wood, or steel frame building with total
97 building area equal to or less than 3,000 square feet.
- 98 2. Any single-story accessory building (i.e., no dwellings in
99 structure).
- 100 3. Any detached or semi-detached structure where the Design
101 Earthquake Spectral Response Acceleration Parameter S_{xs},
102 BSE-1E is less than .400 g; and
- 103 4. Any building on site with both Design Earthquake Spectral
104 Response Acceleration Parameters of:
 - 105 a. S_{xs}, BSE-1E is less than .330 g; and
 - 106 b. S_{x1}, BSE-1E is less than .133 g.

107
108 Note: New construction seismic standards are dictated by local code using the most
109 recent ASCE/SEI Standards.

- 110
111 4. Energy Efficiency Requirements. For New Construction or Substantial
112 Rehabilitation, the project design must meet or exceed the requirements of the
113 ~~2006~~2009 International Energy Conservation Code (IECC) (or later versions adopted
114 by the Secretary of HUD), or in the case of a high-rise care facility ~~high-rises~~ (defined
115 as structures of 4 or more stories), the requirements of the American Society of
116 Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1—
117 ~~(1989 for substantial rehabilitation and 2004, 2007 edition~~ (or later versions as
118 adopted by the Secretary of HUD) ~~for new construction), and shall be cost-effective~~
119 ~~with respect to construction and operating costs on a life-cycle cost basis.).~~ HUD, in
120 cooperation with the Environmental Protection Agency and the Department of
121 Energy, has adopted a wide-ranging energy action plan for improving energy
122 efficiency in all housing programs, which includes encouraging program participants
123 to use Energy Star products. When state or local requirement exceeds the HUD
124 minimum standards, the HUD minimum standards will not over-ride or replace
125 existing state or local requirements.
- 126
127 5. Department of Health & Human Services, Centers for Medicare & Medicaid
128 Services, final rule entitled, “Medicare and Medicaid Programs; Fire Safety
129 Requirements for Long Term Care Facilities, Automatic Sprinkler Systems.”
- 130
131 6. Subsurface Exploration (Soil Investigation). Before foundation design and
132 application for Firm commitment, reliable information about subsurface conditions

133 and foundation recommendations must be made available to the Lender's analyst by
134 the ~~borrower~~Borrower.

- 135 a. The Architect must advise the Borrower of the scope and type of soils
136 information and/or subsurface investigation required for structural design.
- 137 b. The Borrower must provide the services of a registered design professional for
138 determining subsurface conditions. These services shall be provided in
139 accordance with the AIA B108 Owner-Architect Agreement and B108 HUD
140 Amendment.
- 141 c. The Lender's architectural analyst will assure that the architect has
142 comprehensive, well documented soils information and that project
143 foundation design follows the report recommendations. When necessary, the
144 Lender's architectural analyst may request engineering help in reviewing soil
145 reports and related designs.
- 146 d. Soils investigation shall be in accordance with Chapter 18 of the International
147 Building Code, except that an investigation and report is required for every
148 project involving new construction; (or any new foundations), whether or not
149 required by the building official.

150
151 See PCNA Statement of Work -- 223(f); Lender's Architectural Reviewer and Cost
152 Analyst's Statement of Work -- New Construction, Substantial Rehabilitation, and
153 241(a); and PCNA Statement of Work -- 223(a)(7), for a full list and details of
154 requirements and standards.

155 156 D. Accessibility for Persons with Disabilities

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158 1. See Accessibility Matrix for Section 232 (available on the Section 232 Program
159 website. ~~Direct link:~~
160 <http://portal.hud.gov/hudportal/documents/huddoc?id=AccessMatrixSec232.docx>);
161 for guidance on the applicability of the Fair Housing Act (FHA), Section 504 of the
162 Rehabilitation Act of 1973, and the Americans with Disabilities Act (ADA), as they
163 relate to Purchase/Refinance, New Construction, and Substantial Rehabilitation
164 loans), and
- 165
166 2. See Lender's Architectural Reviewer and Cost Analyst's Statement of Work -- New
167 Construction, Substantial Rehabilitation, and 241(a), Section IV.A.1.c., for more
168 details, including accessibility for the vision or hearing impaired, and residential
169 accommodation kitchens. ~~Please see direct link here:~~
170 <http://portal.hud.gov/hudportal/documents/huddoc?id=LenArCsReSOW.docx>.
171 (available on the Section 232 Program website).

172 173 E. HUD Labor Standards and Enforcement Protocol

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175 Applicable when Davis-Bacon wage rates apply as indicated in Production Chapter 2. See
176 Appendix 4.1, HUD Labor Standards and Enforcement Protocol, for procedures during:

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178 1. Firm Commitment Processing,

- 179 2. Initial Closing Clearance,
180 3. Construction Phase, and
181 4. Final Closing Clearance.

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4.2

Section 232 New Construction, Substantial Rehabilitation and 241(a) Supplemental Loans

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185 A. Lender Processing Review

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187 1. Architectural Reviewer ~~—~~ See Lender’s Architectural Reviewer and Cost Analyst’s
188 Statement of Work ~~—~~ New Construction, Substantial Rehabilitation, and 241(a),
189 Sections I, III.A, and IV.A and B, IV, V, VI. and required exhibits (A-F).

190

191 2. Cost Analyst - See Lender’s Architectural Reviewer and Cost Analyst’s Statement of
192 Work ~~—~~ New Construction, Substantial Rehabilitation, and 241(a), Sections I.B, II,
193 III.B, and IV.C and D and required exhibits.

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195 B. ORCF Underwriter Review

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197 The following areas shall be reviewed:

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199 1. ~~check~~Check for complete Plans ~~and~~, Specifications; and Contractor’s and/or
200 Mortgagor’s Cost Breakdown (From HUD-92328-ORCF);

201

202 2. Check for compliance with the Fair Housing ~~Acessibility Act~~Act’s design and
203 construction provisions, Section 504 of the Rehabilitation Act of 1973 (also known as
204 Section 504), and Title II of the ADA (if applicable), as well as the applicable
205 accessibility standards as shown on the Accessibility Matrix for Section 232;

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207 3. ~~if~~Ensure the project is in compliance with regulatory requirements regarding number
208 of full bathrooms per resident (if the project is an ALF or BC);

209

210 4. Review the Reserve for Replacement (R4R) Funding Schedule;

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212 5. Review the existing R4R Account (for 241(a) Supplemental Loans);

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214 6. Check that the General Contractor’s Overhead; does not exceed 2% of the sum of
215 Total Land Improvements (Total Structures and General Requirements); and

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217 7. Review the AIA Owner-Architect Agreement; and HUD Amendment to B108 (Form
218 HUD-92408-ORCF) to confirm ~~it is~~they are complete and correct.

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4.3

Section 232 Substantial Rehabilitation

A. Definition – Substantial Rehabilitation

A project qualifies as a substantial rehabilitation project when:

The hard costs of repairs, replacements, and improvements (not including major movable equipment) ~~exceeds~~ is equal to or exceeds 15% of the project's as complete value after completion of all repairs, replacements, and improvements. Additions are permitted in substantial rehabilitation projects, but the costs of the addition are not included in the eligibility test; ~~OR~~

- ~~1. Two or more major building components are being substantially replaced. The component must be significant to the building and its use, normally expected to last the useful life of the structure, and not minor or cosmetic. Substantially replaced means that at least 50% of the component must be replaced. Examples of major building components are: roof structures, wall or floor structures, foundations, plumbing systems, central heating systems, air conditioning systems and electrical systems. Examples related to a roof replacement include major building components such as roof sheathing, rafters, framing members; and examples of minor building components include shingles or built up roofing.~~

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~~ Borrower's and contractor's other fees and design architect and supervisory architect. However, when determining the *eligibility* of Section 232/223(f) projects, include only the repair costs; do not add general requirements and fees.

B. Joint Inspection. See Lender's Architectural Reviewer and Cost Analyst's Statement of Work -- New Construction, Substantial Rehabilitation, and 241(a), Exhibit F for details.

4.4

Section 232/223(f) Refinance

A. Lender Processing Review

- Review the Needs ~~Assessor~~ Assessor's PCNA Report for sufficiency - See PCNA Statement of Work -- 223(f).
- Timing:** The effective date of the PCNA ~~should~~ will be the date the Needs Assessor inspected the subject property. For 223(f) refinances the PCNA is to be submitted to ORCF by the Lender within 180 days of the PCNA's effective date. Expired reports must either be updated or granted a waiver through consultation with the ORCF.

263 B. ORCF Underwriter Review

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265 The following areas shall be reviewed:

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267 1. PCNA: Check for changes to repair conclusions. Has the Lender suggested a lower
268 dollar amount or fewer repairs than the Needs Assessor's repair conclusions? Owner-
269 Elected Repairs must be reviewed by the Needs Assessor for reasonableness, costs,
270 and included in the PCNA.

271

272 2. Check for repair inspectability. Are the repairs clearly described in terms of
273 inspectability (location and what the need is)?

274

275 3. Verify compliance with the Fair Housing Act, Section 504, and Title II of the ADA
276 (if applicable), as well as applicable accessibility standards as shown on the
277 Accessibility Matrix for Section 232.

278

279 4. Review R4R Funding Schedule. Has the Lender supplied an acceptable R4R Funding
280 Schedule showing a positive account balance through year 15? and proposed Initial
281 and Annual Deposits? Does the funding schedule appear to be based on the Needs
282 Assessors R4R schedule? If not, has the Lender's Underwriter justified adequate
283 deviations from the Third-Party PCNA?

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4.5

Section 232/223(a)(7) Refinance

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287 A. Lender Processing Review

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289 1. Review the Needs Assessor—Assessor's PCNA Report for sufficiency - See PCNA
290 Statement of Work — 223(a)(7).

291

292 2. **Timing:** The effective date of the PCNA shouldwill be the date the Needs Assessor
293 inspected the subject property. For 223(f) refinances the PCNA is to be submitted to
294 ORCF by the Lender within 180 days of the PCNA's effective date. Expired reports
295 must either be updated or granted a waiver through consultation with the ORCF.

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297 B. ORCF Account Executive / Asset Manager Review

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299 The following areas shall be reviewed, if a PCNA is required and submitted:

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301 1. PCNA: Check for changes to repair conclusions. Did the Lender address the status of
302 all deficiencies from last REAC Inspection?

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2. Check for repair inspectability. Are the repairs clearly described in terms of inspectability (location ~~and what the need is~~, building and unit number, type of repair needed)?
 3. Verify compliance with the Fair Housing Act, Section 504 and Title II of the ADA (if applicable), as well as applicable accessibility standards.
 4. ~~Has the Lender supplied a R4R Funding Schedule (showing all funding needs, and a proposed Initial and Annual Deposit) that shows a positive Reserve balance in years 1 – 15?~~
 - 5.4. Has Does the funding schedule appear to be based on the Needs Assessors R4R schedule? If not, has the Lender’s Underwriter justified ~~any~~adequate deviations from the ~~third~~Third-Party PCNA, and have they certified to any new costs not reviewed by the Needs Assessor?

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