

Code Upgrade Overview

This document is provided for informational purposes only and does not constitute legal advice. It identifies potential code upgrade items that may be eligible for coverage under your Ordinance or Law endorsement. The applicability and extent of any required upgrades must be determined by your licensed architect, engineer, or contractor based on the specific project and applicable building codes. All costs shown are illustrative estimates and placeholder amounts only.

1. Seismic and Lateral Force-Resisting System Upgrades Current CBC seismic provisions for Seismic Design Category

D/E require the following upgrades that were not present in older construction:

- Engineered shear walls with tighter OSB nailing.
- Prefabricated shear panels (e.g., Simpson Strong-Wall, Hardy Frame).
- Steel special moment frames for large openings and open floor plan layouts.
- Drag struts and collectors for diaphragm force transfer (CMST12, DSC...)
- Hold-downs, anchor bolts, and steel plate washers (SSTB, PAB, HDI9...)

2. Foundation and Geotechnical Requirements

Modern Malibu hillside and coastal requirements should include:

- Caisson and grade beam foundation systems. (Rebar cage for pile, crane rental for cage lift...)
- Shoring where required with steel I beams and 6x lagging.
- Tie-backs for slope stability
- Over-excavation and recompaction of soils
- Mat foundations for creep and settlement (8 inch slab on grade...)

3. Deck Structural Requirements

Malibu requires the following structural fire-resistant upgrades:

- Ember-resistant attic and foundation vents.
- Noncombustible or heavy-timber deck systems. (4X Lumber for Joists)

5. Roof and Structural Framing Requirements

- Engineered truss with uplift hardware.

6. Retaining Wall and Site Structure Requirements

- 6' + Engineered Shotcrete retaining walls with full drainage systems.
- Keyed footings and tie-backs where needed.

Code Upgrade Costs

Description	Rate	Qty	Line Total
Seismic and Lateral Force-Resisting System Upgrades (CBC	\$86,000.00	1	\$86,000.00

1613,2306, ASCE 7-22 Chapter 11-14,

AISC 341)

not present in older construction:

- Engineered shear walls with tighter OSB nailing.
- Prefabricated shear panels (e.g., Simpson Strong-Wall, Hardy Frame).
- Steel special moment frames for large openings and open floor plan layouts.
- Drag struts and collectors for diaphragm force transfer (CMST12, DSC...)
- Hold-downs, anchor bolts, and steel plate washers (SSTB, PAB, HD19...)

Foundation and Geotechnical Requirements (CBC 1808-	\$240,000.00	1	\$240,000.00
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1810; ASCE 7-22 Chapter 20, LA County

Hillside Ordinances, ACI 318-19)

Modem Malibu hillside and coastal requirements should include:

- Caisson and grade beam foundation systems. (Rebar cage for pile, crane rental for cage lift...)
- Shoring where required with steel I beams and 6x lagging.
- Tie-backs for slope stability
- Over-excavation and recompaction of soils
- Mat foundations for creep and settlement (8 inch slab on grade...)

	\$125,000.00	1	\$125,000.00
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Deck Structural Requirements (CBC 1607.8, IBC 2406, CBC

2304, ASCE 7-22,

CBC 706 & 707 CRC R302)

Malibu requires the following structural fire-resistant upgrades:

- Ember-resistant attic and foundation vents.
- Noncombustible or heavy-timber deck systems. (4X Lumber for Joists)

Roof and Structural Framing Requirements (CBC 2304 &	\$67,000.00	1	\$67,000.00
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2305, ASCE 7-22 Chapter 12)

Engineered truss with uplift hardware.

Retaining Wall and Site Structure Requirements (ACI 318,	\$185,000.00	1	\$185,000.00
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ASCE 7-22)

6'+ Engineered Shotcrete retaining walls with full drainage systems.

- Keyed footings and tie-backs where needed.

Code Upgrades - Additional Items

Description	Rate	Qty	Line Total
Erosion Control per City of Malibu	\$25,000.00	1	\$25,000.00
	+Disc. CF, Project Insurance		
Permit Fees	\$26,000.00	1	\$26,000.00
	+Disc. CF, Project Insurance		

Advanced Structural engineering	\$50,000.00 +Disc. CF, Project Insurance	1	\$50,000.00
Advanced Onsite Wastewater Treatment System - Tertiary	\$300,000.00 +Disc. CF, Project Insurance	1	\$300,000.00
Landscape Design Plan per City of Malibu with Environmentally Sensitive Habitat Requirements met	\$40,000.00 +Disc. CF, Project Insurance	1	\$40,000.00
Materials for the Protection of New Construction	\$15,000.00 +Disc. CF, Project Insurance	1	\$15,000.00
Solar Energy Consultant	\$12,000.00 +Disc. CF, Project Insurance	1	\$12,000.00
Photovoltaic System	\$150,000.00 +Disc. CF, Project Insurance	1	\$150,000.00
Fire Sprinkler Design and Plans	\$12,500.00 +Disc. CF, Project Insurance	1	\$12,500.00
Fire Sprinkler Installation	\$45,000.00 +Disc. CF, Project Insurance	1	\$45,000.00
Poly Storage Tank per fire code	\$12,000.00 +Disc. CF, Project Insurance	1	\$12,000.00
High Efficiency Plumbing Rough-Ins	\$44,000.00 +Disc. CF, Project Insurance	1	\$44,000.00
Water Filtration System	\$20,000.00 +Disc. CF, Project Insurance	1	\$20,000.00
FAU, Thermostats and Install	\$39,500.00 +Disc. CF, Project Insurance	1	\$39,500.00
EV Charging Station with Battery Backup	\$38,000.00 +Disc. CF, Project Insurance	1	\$38,000.00
Fireplace Unit Element w/ Energy Efficient Rating	\$9,500.00 +Disc. CF, Project Insurance	1	\$9,500.00
Zip System Sheathing - R2	\$40,000.00 +Disc. CF, Project Insurance	1	\$40,000.00
Geo Tech Report	\$13,500.00 +Disc. CF, Project Insurance	1	\$13,500.00
Cal Green	\$2,500.00 +Disc. CF, Project Insurance	1	\$2,500.00
Special Inspection	\$3,500.00 +Disc. CF, Project Insurance	1	\$3,500.00

Perimeter stem walls/footings	\$33,250.00 +Disc. CF, Project Insurance	1	\$33,250.00
Interior stem walls/footings	\$17,250.00 +Disc. CF, Project Insurance	1	\$17,250.00
Piers	\$172.00 +Disc. CF, Project Insurance	30	\$5,160.00
Fireplace Pad	\$3,575.00 +Disc. CF, Project Insurance	1	\$3,575.00
Rat Slab	\$8,440.00 +Disc. CF, Project Insurance	1	\$8,440.00
Structural Embedments	\$14,000.00 +Disc. CF, Project Insurance	1	\$14,000.00
Plumbing Rough Ins	\$29,752.50 +Disc. CF, Project Insurance	1	\$29,752.50
Water Heater	\$2,790.00 +Disc. CF, Project Insurance	1	\$2,790.00
Lavatory	\$4,911.83 +Disc. CF, Project Insurance	1	\$4,911.83
Toto Toilet - Electric	\$7,822.00 +Disc. CF, Project Insurance	1	\$7,822.00
Kitchen Sink - Galley	\$1,670.00 +Disc. CF, Project Insurance	1	\$1,670.00
Shower Head/Valves	\$1,700.00 +Disc. CF, Project Insurance	1	\$1,700.00
Faucets - Phylrich	\$5,900.00 +Disc. CF, Project Insurance	1	\$5,900.00
Soaking Tub - Master	\$3,100.00 +Disc. CF, Project Insurance	1	\$3,100.00
Tub Filler and Valves	\$2,665.00 +Disc. CF, Project Insurance	1	\$2,665.00
Hose Bibs	\$600.00 +Disc. CF, Project Insurance	1	\$600.00
Water Filtration System	\$4,749.00 +Disc. CF, Project Insurance	1	\$4,749.00
FAU Package	\$7,675.00 +Disc. CF, Project Insurance	1	\$7,675.00
FAU Install	\$2,575.00 +Disc. CF, Project Insurance	1	\$2,575.00

FAU Ductwork	\$5,400.00 +Disc. CF, Project Insurance	1	\$5,400.00
T stats and Air Purifier	\$2,550.00 +Disc. CF, Project Insurance	1	\$2,550.00
Coastal Protection Permit	\$450.00 +Disc. CF, Project Insurance	1	\$450.00
Exhaust Fan	\$2,000.00 +Disc. CF, Project Insurance	1	\$2,000.00