# COMPARISON OF BUILDING CODES FOR SINGLE FAMILY HOMES
# HUD CODE VS. 2006 IRC CODE

| DESIGN ELEMENT | HUD MANUFACTURED HOUSING STANDARDS | 2006 IRC - INTERNATIONAL RESIDENTIAL CODE |
|---|---|---|
| **FIRE SAFETY** | | |
| Exit doors | Two @ 28 in (min) width<br>Must be 20 ft apart (min)<br>3280.105 (a) & (b) | One @ 36 in width<br>R311.4.2 |
| Specific exit door location relationship to bedrooms | Yes<br>3280.105 | None |
| Window height in bedroom from floor to opening of window | 36 in (max)<br>3280.106(b) | 44 in (max)<br>R 310.1 |
| Bedroom emergency escape and rescue opening size | 24 in (min) high clear opening<br>20 in (min) width clear opening | 24 in (min) high clear opening<br>20 in (min) width clear opening<br>R 310.1.2 & 310.1.3 |
| Required window area | 5 sq ft (min) | All emergency escape and rescue openings min 5.7 sq ft<br>R310.1.1 |
| Hallways | 28 in wide (min)<br>3280.112 | 36 in wide (min)<br>R 311.3 |
| Smoke Alarms | Yes<br>3280.208(b) | Yes<br>R 313.1 |
| **FLAME SPREAD** | | |
| Walls | 200 flame spread rating<br>3280.203(1) | 200 flame spread rating<br>R315.1 |
| Ceilings | 75 flame spread rating<br>3280.203(2) | 200 flame spread rating<br>R315.1 |
| Furnace, water heater, & cooking area | Special protection with gypsum<br>25 flame spread<br>3280.203(3) | No flame spread restriction<br>Clearance to combustibles required |
| Flame spread of plastic bathtubs, shower units and tub or shower doors | 200 flame spread rating<br>3280.203(6) | Shall comply with ANSI<br>Z 124.1-95 & 124.2-95 |
| **ELECTRICAL** | | |
| Requirements based on National Electrical Code | Yes<br>3280.801 NEC NFPA 70 2005 | Yes<br>NEC NFPA 70 2005 |
| Required listed materials and devices | Yes<br>3280.801(d) | Yes<br>NEC 110.2 |
| Aluminum wire in branch circuits | Not permitted<br>3280.801(e) | Permitted<br>NEC 310.2(b) |

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| ELECTRICAL (cont.) | | |
| Receptacle location | Comparable<br>3280.806 | Comparable<br>NEC 210.52-210.63 |
| Load Circulations | Comparable<br>3280.806 | Comparable<br>NEC 210.23 |
| Separate neutral and ground circuits on branch circuit wiring and panel board(s) for range and dryer | Yes<br>3280.806 | Yes<br>NEC 220.52 (a & b) |
| Electrical disconnecting means required at panel board | Yes | No |
| Single disconnecting ameans required at sub-panel board | Yes | No |
| Tests required on all parts | Yes<br>3280.810 | No<br>NEC 550.17 |
| PLUMBING | | |
| Water supply piping | Plastic allowed (CPVC or PEX)<br>3280.604 | Plastic allowed (CPVC or PEX)<br>UPC 301.1.1 |
| Drainage system piping | Plastic allowed (PVC or ABS)<br>3280.610 | Plastic allowed<br>UPC 701.1 |
| Venting of plumbing fixtures | Wet venting and anti-siphon (mechanical vents) permitted in addition to required direct venting<br>3280.611(2&3) | Wet venting permitted only for fixtures located vertically above lower fixture<br>UPC 908.1 |
| Material | National accepted standards<br>3280.603 | National accepted standards and Building Official approvals<br>UPC 301.2 |
| Tests and Inspections | Water systems, drainage and fixtures are tested<br>3280.612 | Water systems, drainage and fixtures are tested<br>UPC 103.5.3 |
| STRUCTURAL DESIGN | | |
| Moisture in framing lumber | Dried lumber required 19% max. moisture content<br>3280.304 | Green lumber permitted<br>R 802.1.3.4 (Not over 28%) |
| Roof live load | 20 PSF (min) Depends on design zone<br>3280.305 (4) © | Greater than Table 301.6 or local snow load requirements |

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| STRUCTURAL DESIGN (cont.) | | |
| Wind load (horizontal) | 15 PSF (min) depends on design zone<br>3280.305 | 10-15 lbs. (90 mph) Depending on bldg. component<br>Table R 301.2 (2) |
| Wind load (vertical) | 9 PSF (min) Depends on design zone<br>3280.305 | 10-15 lbs. (90 mph) Depending on bldg. component<br>Table R 301.2 (2) |
| Floor live load | 40 PSF<br>3280.305 (g) | 40 PSF (min) Dwelling area, 30 PSF (min) for Sleeping area<br>Table R 301.5 |
| Horizontal load on interior walls | 5 PSF<br>3280.305 (f) (2) | Construct walls per Ch. 6 |
| Roof trusses | Engineered and tested | Engineered only<br>R 802.10.2 |
| LOAD DEFLECTION | | |
| Floors | L/240 Span (max)<br>3280.305 | L/360 Span (max)<br>Table R 502.3.1 (1 & 2) |
| Roof and ceiling | L/180 Span (max)<br>3280.305 | L/240 Span (max)<br>Table R 802.5.1(2) |
| Walls | L/180 Span (max)<br>3280.305 | Construct walls per Ch. 6 |
| Plans and specifications | Engineered<br>3280.303 (B) | Engineering not required if using conventional light framing method<br>R 106.1 (exception) |
| ARCHITECTURAL DESIGN<br>BUILDING PLANNING<br>Minimum Room Sizes | | |
| One living area | 150 square feet<br>3280.109 (a) | 120 square feet<br>R 304.1 |
| Double bedroom | 70 square feet<br>3280.109.2 | 70 square feet<br>R 304.2 |
| Single bedroom | 50 square feet<br>3280.109.2 | 70 square feet<br>R 304.2 |
| Room width | 5 ft (min)<br>3280.110 | 7 ft (min)<br>R 304.3 |
| Room height | 7 ft 0 in (min) (exceptions)<br>3280.104 | 7 ft (min)<br>R 305.1 |

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| ARCHITECTURAL DESIGN<br>BUILDING PLANNING<br>Minimum Room Sizes (cont.) | | |
| Hallway height | 6 ft 6 in (min)<br>3280.104 (b) | 7 ft (min)<br>R 305.1 |
| Closet depth | 22 in (min)<br>3280.109 (c) | Not specified |
| LIGHT AND VENTILATION | | |
| Glazed area | 8% (min) gross floor area of room<br>3280.103 (a) | 8% of habitable room floor area<br>R 303.1 |
| Ventilation area | 4% (min) gross floor area of room<br>3280.103 (b) | 4% (min) gross floor area of room<br>R303.1 |
| Mechanical | Habitable; .35 air changes per hour<br>3280.103 (b) | Mechanical ventilation (optional)<br>0.35 air changes per hour<br>R 303.1 |
| Ventilation | Bath 50 cfm<br>3280.103 © (3) | Bath 50 cfm<br>R Table 1507.3 |
| Ventilation to improve indoor air quality above minimum standard | Required | None specified |
| Formaldehyde emission control | Required | None specified |
| ATTIC VENTILATION | | |
| Fraction of floor area | 1/300 (min)<br>3280.504 (c) | 1/150 (min) reduction possible<br>R 806.2 |
| THERMAL/ENERGY CONSERVATION | | |
| Moisture control (vapor retarder) | Yes<br>3280.504 (all) | Yes<br>N 1102.5 |
| Walls | Yes<br>3280.504 (b) | Yes<br>N 1102.1 |
| Ceiling | Yes<br>3280.504 (a) | Variable<br>N 1102.2 (.1 & .2) |
| Floor | Specified<br>3280.504 | Yes<br>N 1102.2.5 |
| Air infiltration control | Specified<br>3280.505 | Yes<br>N 1102.4 |

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| | THERMAL/ENERGY CONSERVATION (cont.) | |
| Double glazing or storm windows | Specified | Minimum performance required<br>No prescriptive required<br>N1101.5 & 1102.1 |
| Design basis for heating (winter) | 70 F (max)<br>3280.506 & 3280.510 | By Climate Zone<br>N 1101.2 |
| Thermal insulations | Performance standard | Performance or prescriptive<br>N 1101.2 |

*** HIGHLIGHTED provisions indicate stricter code standards**