

## 2015 I-Codes: Summary of Changes to Flood Provisions

The following summarize the changes to the 2012 I-Codes that appear in the 2015 edition.

### International Building Code

1. 104.2.1. Added specific section for determination of Substantial Improvement and Substantial Damage.
2. Coastal A Zone. Added definition that describes the wave conditions and specifies that the inland limit is either the LiMWA if delineated on a FIRM, or as designated by the authority having jurisdiction. Added “Coastal A Zone” where “Coastal High Hazard Area” is used, to parallel ASCE 24 where both areas are treated equally. See sections 1403.7; 1603.1.7; 1612.4; 1614.5; 1804.5; G103.7; G301.2; G401.2; G801.7.
3. Coastal High Hazard Area. Renamed and modified the definition of “flood hazard areas subject to high velocity wave action” and replaced it throughout. See sections 1403.7; 1603.1.7; 1612.4; 1614.5; 1804.4; G103.7; G301.2; G401.2; G601.1; G801.7 (new).
4. Existing Structure. Combined text from “Existing Construction” into this definition.
5. Dry Floodproofing. Modified to match “attendant utilities and equipment” which is used in ASCE 24.
6. Limit of Moderate Wave Action. Added definition to refer to the inland limit of 1.5-foot waves shown on FIRMs.
7. 1403.6. Deleted sentence about pressure preservative treatment of wood.
8. 1603.1.7. Requires assignment of Flood Design Class according to ASCE 24.
9. 1612.5(1.1 and 2.1). Added reference to the final inspection required in Section 110.3.10.1.
10. 2702.1.2. Added requirement for compliance with ASCE 24 in Group I-2 occupancies where new or replacements essential electrical systems and generators are installed.
11. Note: Chapter 34 Existing Structures is replaced with reference to the International Existing Building Code.
12. G102.1. Added terms to match provisions added, and reformatted as a list.
13. G103.1. Reformatted for clarity.
14. Where engineering analyses are required, specified such analyses are required to be prepared by registered design professionals. See G103.4; G103.5; G103.6.1; G103.7; G401.1.
15. G103.8 (new). Added requirement to inspect development for which permit under Appendix G is required.
16. G104.2. Added new item to include base flood elevation data in subdivision and other development proposals where such data are not shown on adopted flood hazard maps.
17. G501.2. Modified requirement for manufactured home foundations to comply with the R322 instead of IBC Section 1612.

18. G501.4 (new). Added provision that enclosures below elevated manufactured homes meet the requirements of R322.
19. G501.5 (new). Added requirements for mechanical equipment and outside appliances for manufactured homes.
20. G701.1. Replaced detailed requirements for tanks with reference to ASCE 24.
21. G801.1. Replaced detailed requirements for garages and accessory structures with reference to ASCE 24.
22. G801.5. Replaced detailed requirements for swimming pools with reference to ASCE 24.
23. G801.6 (new). Added requirement that decks, porches, and patios comply with ASCE 24.
24. G801.7 (new). Added requirement that non-structural concrete slabs beneath or adjacent to buildings in Coastal High Hazard Areas and coastal A Zones comply with ASCE 24.
25. G801.8 (new). Added requirement that roads and watercourse crossings in regulated floodways meet the encroachment requirements in G103.5.
26. G901.1. Clarified that flood openings in temporary structures comply with ASCE 24.
27. G1001.4. Added requirement that enclosed areas below utility and miscellaneous group U structures comply with ASCE 24.
28. Appendix J101.2 Grading; revised phasing for clarity.

### **International Residential Code**

1. R104.10.1. Provisions for modifications (equivalent to variances) removed from Board of Appeals and moved to duties and powers of the building official.
2. R105.3.1.1. Provisions for determining whether work is Substantial Improvement or repair of Substantial Damage removed from Board of Appeals and moved to actions on permits by the building official.
3. R301.2.4 and R322.1. Modified to clearly apply to Substantial Improvement and repair of Substantial Damage and to specify that dwellings located in more than one zone shall comply with the more restrictive provisions.
4. R301.2.4.1 and R322.1.1. Modified to permit use of ASCE 24 in all flood hazard areas.
5. R322.1.8. Modified to refer to FEMA Technical Bulletin 2 (flood damage-resistant materials).
6. R322.1.9. Manufactured homes; clarified the bottom of the frame is the reference point and foundations are to conform to the IRC requirements as applicable to the flood hazard area.
7. R322.2. Modified to specify Coastal A Zones (CAZ) are where moderate waves are delineated (e.g., delineated LiMWA on FIRM) or as designated by the authority having jurisdiction; added “Coastal A Zone” where “Coastal High Hazard Area” is used and requires dwellings in Coastal A Zones to comply with R322.3 (Zone V). Also see sections R106.1.4; R322.3

8. R322.2.1. Adds one foot of freeboard (Zone A).
9. R322.2.2. Clarifies that installation requirements apply to nonengineered and engineered openings and specifies that the presence of louvers, blades, screens and faceplates shall be accounted for in the determination of net open area of flood openings.
10. R322.2.4. Adds requirements for underground and above-ground tanks to be anchored or elevated.
11. R322.3. Requires dwellings in Coastal A Zone to comply with requirements for Coastal High Hazard areas, with the exception of stemwalls in CAZ that are designed to account for wave action, debris impact, erosion and scour.
12. R322.3.2. Adds one foot of freeboard (Zone V and CAZ) and eliminated elevation as a function of orientation of the lowest horizontal structural member relative to wave approach.
13. R322.3.4. Requires breakaway walls to have flood openings.
14. R322.3.5.1. Requires an exterior door at the top of stairs that provide access to the building and that are enclosed by breakaway walls.
15. R322.3.7. Adds requirements for underground tanks and elevated tanks, which must be on cantilevered or knee-braced platforms.

#### **International Existing Building Code**

1. Throughout, where determinations are that proposed alterations, additions, and repairs constitute substantial improvement or repair of substantial damage, modify requirement to comply to refer to the IBC or IRC, as applicable. See 402.2; 403.2; 404.5; 408.2; 601.3; 701.3; 1103.5; 1201.4; 1302.6; 1401.3.3.
2. 1103.5. Added new item (5) to require new foundations and replacement foundations to comply (and removed new and replacement foundations from item (4)).

#### **International Mechanical, Plumbing, Fuel Gas Codes, Private Sewage Development**

1. Design Flood Elevation. In definition in each code, added Zone AO language.
2. M301.6.16.1. Modified terminology to match IBC (Coastal High Hazard Area and Coastal A Zone).
3. P308.3. Modified terminology to match IBC (Coastal High Hazard Area and Coastal A Zone).