



Washington State Building Code Council

Improving the built environment by promoting health, safety and welfare

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STATE BUILDING CODE OPINION NO. 20-02

CODE: 2015 International Residential Code
2015 Uniform Plumbing Code
2015 Washington State Energy Code

SECTION: IRC 1307.3
UPC 507.13
WSEC C404.5 ad R403.5.5

QUESTION 1: For an electric water heater which could be either an electric resistance or heat pump type, when installed within a residential garage or the parking garage of a mixed use (residential/ commercial) building, may the water heater be installed directly on the floor (not elevated) provided:

- (a) There are no electric relays, switches or other electric ignition sources located lower than 18-inches (457 mm) above the floor surface, and
- (b) When the floor surface is concrete or the garage is unheated the electric water heater is installed on an insulated mounting pad with a minimum R-10 value as required by 2015 WSEC.

ANSWER: **YES.** (Refer to 2015 IRC Section M1307, 2015 UPC [with WA State amendments] Section 507.13, 2015 WSEC Sections R403.5.5 and C404.5, and 2015 WSEC Section R202 definition of an ignition source.)

QUESTION 2: For a water heater that is fuel-fired and installed within a residential garage or the parking garage of a mixed use (residential/ commercial) building, may the water heater be installed directly on the floor (not elevated and not on an insulated mounting surface) provided the water heater is rated as flammable vapor ignition resistant (FVIR)?

ANSWER **YES.** (Refer to Exception in 2015 IRC Section M1307 and 2015 UPC Section 507.13 [with WA State amendments] regarding FVIR. Insulated surface requirements in 2015 WSEC Sections R403.5.5 and C404.5 do not apply to fuel-fired water heaters.)

QUESTION 3: For any water heater be it electric resistance, fuel-fired or heat pump, when installed within a residential garage or the parking garage of a mixed use (residential/ commercial) building, and if the water heater has an ignition source component located within 18-inches of the floor and the water heater is not FVIR rated (for fuel-fired only) and the water heater is installed on insulated mounting surface (for electric water heaters only), may the water heater be elevated by only the height necessary to raise the *ignition source* component (as defined by the IRC) to the required 18-inches?

ANSWER: **YES.** (Refer to 2015 IRC Section M1307, and 2015 UPC [with WA State amendments] Section 507.13. These sections require the ignition source component to be located a minimum of 18-inches (457 mm) above the finished floor. These sections do not require the overall unit to be elevated 18-inches, irrespective of the location of the ignition source(s).)

QUESTION 4: For an electric resistance or electric heat pump water heater installed within an unheated residential garage or parking garage of a mixed use (residential/commercial) building, does the insulated mounting surface requirement per the 2015 WSEC apply if the water heater is installed on an elevated stand?

ANSWER: **YES.** (Refer to insulated mounting surface requirements in 2015 WSEC Section R403.5.5 and C404.5.)

SUPERSEDES: None

REQUESTED BY: Clark County