Kitchen Countertop and Work Surface Receptacle Outlets

Creative kitchen designs are requiring installers to use ingenuity in complying with the National Electrical Code requirements for countertop receptacles. Counters are no longer simple food preparation areas; multiple use and appearance are important factors in design that have led to a need for clarification on several issues. Building Safety’s position on these issues is noted following the National Electrical Code text.

210.52(C)(1) Wall Countertop and Work Surface. A receptacle outlet shall be installed at each wall countertop and work surface that is 12 inches (300 mm) or wider. Receptacle outlets shall be installed so that no point along the wall line is more than 24 inches (600 mm) measured horizontally from a receptacle outlet in that space.

Counters that are attached to “stub” or “pony walls” that extend above the countertop shall have the number receptacles installed as required by this section.

210.52(C)(2) Island Countertop Spaces. At least one receptacle outlet shall be installed at each island countertop with a long dimension of 24 inches (600 mm) or greater and a short dimension of 12 inches (300 mm) or greater. Where a range top or sink is installed in an island or peninsular counter and the width of a counter behind the range top or sink is less than 12 inches, the range top or sink is considered to divide the island into two separate spaces as defined in 210.52(C)(4).

An island counter is a counter fixed in place and supported only by cabinetry or posts below the counter surface which are not attached to a wall extending above the work surface.

210.52(C)(3) Peninsular Counter Spaces. At least one receptacle outlet shall be installed at each peninsular countertop long dimension space with a long dimension space of 24 inches (600 mm) or greater and a short dimension of 12 inches (300 mm) or greater. A peninsular countertop is measured from the connected perpendicular wall.

A peninsular counter is a counter supported only by cabinetry or posts which is connected to a wall at one end. The receptacle on the connecting wall of the peninsular space must be within the footprint of the peninsula.

210.52(C)(4) Separate Spaces. Countertop spaces separated by range tops, refrigerators, or sinks shall be considered as separate countertop spaces in applying the requirements of 210.52(C)(2) and (C)(3).

210.52(C)(5) Receptacle Outlet Location. Receptacle outlets shall be located above, but not more than 20 inches (500 mm above), the countertop or work surface. Receptacle outlet assemblies listed for use in countertops or work surfaces shall be permitted to be installed in countertops or work surfaces. Receptacle outlets rendered not readily accessible by appliances fastened in place, appliance garages, or appliances occupying dedicated space shall not be considered as these required outlets.

Exception to (5): To comply with the following conditions (1) and (2), receptacle outlets shall be permitted to be mounted not more than 12 inches (300 mm) below the countertop or work surface. Receptacles mounted below a countertop or work surface in accordance with this exception shall not be located where the countertop or work surface extends more than 6 inches (150 mm) beyond its support base.

(1) Construction for the physically impaired.
(2) On island and peninsular countertops where the countertops or work surface is flat across its entire surface (no backsplashes, dividers, etc.) and there are no means to mount a receptacle within 20 inches (500 mm) above the countertop or work surfaces, such as an overhead cabinet.

Receptacles can be located below the countertop level only when the conditions noted by the 210.52(C)(5) exceptions are met.

Receptacle outlets are required behind sinks and ranges if the countertop space behind the sink or range along a wall is greater than 12 inches wide or greater than 18 inches from the deepest part of the corner mounted sink or range. For more detail see figure 210.52(C)(2) of the National Electrical Code.

Countertop Desk Areas
Countertop desk areas in the kitchen and similar areas are part of the countertop and work surface area and shall be supplied by a countertop circuit and shall be AFCI/GFCI protected.

Bob Doehl, Building Official
Date: June 25, 2019
(ref. 04-03; 06-02; 08-05; 09-01)