



DEPARTMENT OF ECONOMIC
AND COMMUNITY DEVELOPMENT
BUILDING DIVISION

AFCI vs. GFCI RECEPTACLES

The AFCI **should not** be confused with the GFCI.

The **AFCI** (Arc Fault Circuit Interrupter) protects against fires caused by arcing faults.

Arcing faults often occur in damaged or deteriorated wires and cords. Some causes of damaged and deteriorated wiring include puncturing of wire insulation from picture hanging or cable staples, poorly installed outlets or switches, cords caught in doors or under furniture, furniture pushed against plugs in an outlet, natural aging, and cord exposure to heat vents and sunlight.

Required Locations: Dwelling unit: Family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways or similar rooms and areas.

The **GFCI** (Ground Fault Circuit Interrupter) is designed to protect people from severe or fatal electric shocks.

A ground fault is an unintentional electric path diverting current to ground. Ground faults occur when current leaks from a circuit. If a person's body provides a path to ground for this leakage, the person could be injured, burned, severely shocked, or electrocuted.

Required Locations: "See below"

Note:

The GFCI also can protect against some electrical fires by detecting arcing and other faults to ground but cannot detect hazardous across-the-line arcing faults that can cause fires.

Dwelling Units.

- (1) Bathrooms
- (2) Garages, and also accessory buildings that have a floor located at or below grade level not intended as habitable rooms and limited to storage areas, work areas, and areas of similar use
- (3) Outdoors
- (4) Crawl spaces – at or below grade level
- (5) Unfinished basements
- (6) Kitchens – where the receptacles are installed to serve the countertop surfaces
- (7) Laundry, utility, and wet bar sinks – where the receptacles are installed within 1.8 m (6ft) of the outside edge of the sink
- (8) Boathouses

Other Than Dwelling Units.

- (1) Bathrooms
- (2) Commercial and institutional kitchens
- (3) Rooftops

- (4) Outdoors in public spaces
- (5) Outdoors
- (6) Indoor Wet Locations
- (7) Locker rooms with associated showering facilities
- (8) Garages, service bays, and similar areas where electrical diagnostic equipment, electrical hand tools, or portable lighting equipment are to be used