



# City of Rancho Palos Verdes

Community Development Department

## Residential Electrical Inspection Check List

This list includes most work inspected, but not all, to the standards of the National Electric Code (NEC). Consult the referenced code sections for exact standards, Ufer grounding is checked by the building inspector at the footer inspection.

### ROUGH INSPECTION

#### ●GENERAL ROUGH

- Identify all white wires used by switches at both ends. 200.7
- Bedroom outlets to be wired for arc fault protection (may require 2 wire home runs) 210.12 (b)
- Outlet spacing 210.52
- Outlet installed for hallways more than 10 feet 210.52
- Outside receptacles, front and back, are at ground level (6 ½ feet maximum height) 210.52
- Light location for stairway to illuminate all stairs 210.70
- Light Location in hallways, boxes grounded 210.70
- Lights & switches at all house exits, boxes grounded 210.70
- 3-way switches on stairways with 6 or more risers 210.70
- Switch for lighting outlet in all rooms (1/2 switch outlets acceptable) 210.70
- Number of circuits calculated to total square footage; Lights are calculated separately 220.12
- Grounds made up on ground bar in all light fixture boxes. 250.148
- Pigtailed grounds in all boxes 250.148
- Use 14-3 for smoke detectors 300.3
- Check to see if Romex is damaged 300.4
- Romex holes drilled 1 ¼ inch from face of stud 300.4
- Vertical Romex stapled 1 ¼ inch from face of stud 300.4
- Schedule 80 PVC to be used in all areas subject to physical damage and all services 300.5(d)(4)
- Neutral pigtailed on all 3-wire home runs 300.13
- Boxes or vertical wiring in return air plenum 300.22
- Bundling of Romex 310.15
- Box Fill 314.16
- Amount of Romex sheath in box 314.17
- Metal boxes to have connectors and ground screws if NMC wiring is used 314.17
- Connectors in all exhaust fans 314.17
- Approved fan boxes are used for fan outlets (3-wire romex to outlet location is an indicator for fan) 314.27
- Floor boxes are of approved type and locations 314.17
- Running boards installed for all wiring 6 feet of access to attic spaces, (all if ladder installed – to 7 feet high). 320.23,334.23
- Stapling is not properly spaced, too tight and/or stapled on edge (2-wire Romex) 334.30
- Location of fixtures in closets, boxes grounded 410.8
- Recessed fixtures are thermally protected and IC rated in insulated ceiling areas 410.65 & 66
- Temporary outlets are GFI protected 590.6
- Clearance between low voltage wire and line in common box (1/4 inch minimum) 725.54

#### ● GARAGE

- Outlet in garage 210.8, 210.52
- Light at personal door entry 210.70 (2)
- Back-to-back boxes in same stud space of garage fire wall. 300.21
- Panel is not allowed in garage fire wall 300.21
- First 18 inches from the garage floor is free of receptacles and panel 511.3

#### ● KITCHEN

- Microwave/vent hood on separate circuit 210.11, 220.10
- Size and type wire for ranges, ovens and cook tops 210.19
- Outlets spaced 2 feet, 4 feet maximum, and all 12-inch deep counter top spaces 210.52
- Two 20A circuits above counter top (minimum) 210.52
- Vent hood not on counter top circuit 210.52
- Outlets for islands and peninsulas 210.52
- Nook or dining area on 20 amp circuit 210.52
- Disposal and dishwasher on separate 20A circuit 220.14
- Range has 4-wire feed 250.140

#### ● BATHROOMS

- Separate 20A circuit (all bathroom outlets or each separate bathroom) 210.52 (a)(1)
- Outlets adjacent to basin (36 inches of sink) 210.52 (d)
- Jacuzzi tub on separate circuit and on GFI 680.71
- Jacuzzi tub receptacle and motor accessibility, bonding 680.72 & 73

#### ● BASEMENT

- ¾ inch stub or spare circuits roughed from panel to basement 90.1(d)
- Romex routing for future finish 110.3
- Proper wiring of bedrooms, (arc fault breakers may require two home runs) 210.12(b)
- Basement lights 210.70(a)(2)
- Outlet in each unfinished area 210.52
- Sump pump and outlet if needed 210.52
- Outlet in crawl space if mechanical equipment installed (within 25 feet of equipment) 210.63
- Stapling wire around beams and soffit 334.15
- Plastic bushing on conduit used for Romex protection 334.15
- Furnace on separate circuit 422.12

#### ● LAUNDRY

- Washer on 20 amp circuit that does not leave the laundry room area 210.11
- Dryer on 30 amp circuit with 4 conductors 220.54

**ELECTRICAL SERVICE INSPECTION**

● SERVICE CHECK LIST

- Count number of circuits in panel (2 spare circuits left in panel for future use) 90.1
- House dried in – felt on roof 110.3
- Meter secure to structure, rain cap, meter opening covered 110.13
- Lugs are tight on wiring in meter socket 110.14
- Screw tight on main and neutral wired, 1 wire per screw 110.14
- Panel location & clearances; main located near meter 110.26,230.70
- Sub panel locations (clearance), 4 wire feeds an insulated neutral and ground buss 110.26,250.24
- Neutral identified in meter and panel (white) 200.6
- Correct size and type wire installed for main breaker, and proper size of house 230.23,230.42
- If overhead, have weather head, mast or house knob 230.27 & 28
- Sheet metal screw are not acceptable for bonding or grounding 250.8
- Conductor size from ground bushings or other bonding connect to neutral or equipment ground 250.8, 250.92
- Grounding electrodes connected to neutral buss 250.24

**ELECTRICAL FINAL INSPECTION**

● KITCHEN

*Cabinets must be installed before the final electrical inspection.*

- GFI protection for all countertop outlets 210.8
- Two circuits above countertop 210.11, 210.52
- Spacing above countertops, on islands & peninsulas. 210.52
- Connectors on range hood and all appliances, wiring and grounding 300.15
- Connectors under counter lights 300.15
- Arc shields on all receptacles going through combustible material if required 314.20
- Flex protection on wiring under cabinets 334.15

● BATHROOMS

- Outlets adjacent to all basins (within 36 inches) and all outlets on GFI, not in tub area 210.52
- Approved fixtures for bath and shower, and properly located (3feet of edge, shower-type trims) 410.4
- Grounding of whirlpool tubs completed 680.74
- Access to whirlpool tubs and location of GFI outlet (hinged over if required) 680.73

● BASEMENT

- Single receptacle on laundry (basement) or GFI protected 210.8
- GFI protected outlets in unfinished basement areas. 210.8,210.52
- Bedroom outlets are ARC fault protected 210.12
- Outlet within 25' of the furnace and GFI protected 210.63
- Water meter ground and bond connection 250.30,250.52
- Gas and water pipe bonded 250.104
- Bond around plastic filters in water line if installed 250.53\*
- Wiring subject to damage protected by blocking 334.15
- Furnace flex secure and connectors on both ends, 1-inch spacing from flue 348.30\*

\* Compliance checked at Heating Rough inspection (HRR)

- Panel bonding screw or jumper installed 250.28
- All grounding electrodes (water pipe and ground rods, foundation steel, ground ring) if available 250.50
- Water pipe connected within 5' of building entrance 250.52
- Ground rod installed flush to ground, proper size wire and clamp installed (2required or 25 ohms or less) 250.53 & 56
- Proper size wire for grounding electrodes and service equipment boding (wire size) 250.66
- Stub down bonded to meter can or neutral 250.92
- Ground bushing installed on one side of nipple between the meter and panel if it is steel 250.92
- Gas piping bonded to water pipe 250.104(b)
- Seal nipple from meter to panel 300.7 (a)
- Overhead wires are sunlight resistant 310.8
- Main is secured to panel if it is back fed 408.16
- Wiring from house to load side of meter CSPU
- Stub down strapped, 18 inches deep in ground, bushing on end and painted CSPU
- Panel covers installed with 2 screws

● GENERAL AREAS

- Check polarity of receptacles, (at least one per room) 200.11
- Wet bar outlets on GFI (6 feet from sink) 210.8
- Outlets in garage to be GFI or single for appliance 210.8
- Outside outlets front and rear of home on GFI and at grade level (below 6 ½ feet) 210.8, 210.52(e)
- All new bedroom circuits to have arc fault protection 210.12
- Bedroom lighting outlets have a fixture installed or other methods for testing to ensure arc fault protection 210.12(b)
- Air conditioning unit has receptacle within 25 feet in areas where equipment maintenance is required 210.63
- Lights & receptacles in attic or crawlspace, if required 210.63, 210.70, 410.5 & 6
- Light or switch outlet in each room 210.70
- Attic and crawl spaces used for storage have protected switched lighting installed 210.70
- Well case/motor grounded correctly, proper fusing 240.4.250.112
- Stub downed strapped, ground rod wire connected and driven in flush with ground 250.52
- NMC is not allowed in furnace compartment 300.2
- Arc shields for outlets in paneling/combustible material 314.20 & 22
- Outside fixtures installed at each entry point, blank plates on unused openings 314.25
- Floor boxes are approved type and installed properly 314.27
- Exposed Romex run horizontally through studs in garage and basement is protected (blocked over top of wire) 334.15
- 3-way switches work properly 404.2
- Outside receptacles have covers hinged from top 406.8
- Panel labeled, panel blanks & breakers approved for panel 408.4
- Enclosed/protected light fixtures installed below 8 feet for storage areas 410.5 & 6
- Location of light fixtures in closets (clearances), enclosed if incandescent 410.8
- Grounding and proper mounting of bar light fixtures, Fluorescent and other types 410.14, 410.21