



RESIDENTIAL ELECTRICAL LOAD CALCULATION WORKSHEET OPTION #1

Address: _____ Date: _____

APN: _____ Owner: _____

Prepared by: _____

OPTION #1 Standard Method 2017 NEC Art. 220-

General Lighting Load Sq Ft. _____ x 3 VA = _____ VA
 Small Appliance Circuits @ 1500 VA ea. (min. 2) = _____ VA
 Laundry Circuits @ 1500 VA ea (min 1) = _____ VA
Sub total = _____ VA

First 3,000 VA of Lighting, Small Appliance, Laundry load @ 100% NEC Tbl. 220.42 = **3000** VA
 From 3,001 to 120,000 VA @ 35% _____ x .35 = _____ VA
 Over 120,000 VA @ 25% _____ x .25 = _____ VA
 Dryer (5000VA) Use 5K or nameplate of dryer, whichever is greater. NEC 220.54 = _____ VA
 Elect water heater (4500VA) or nameplate rating, whichever is greater. NEC 220.53 = _____ VA
 Range/Oven (9600VA) Use 9.6K or nameplate, whichever is greater. NEC 220.55 = _____ VA
Sub Total (1) = _____ VA

Heating/AC- List Type and VA at 100% NEC 220.53

| | | | |
|---------------|--|----------------|--------------|
| (H) heat pump | (G) AC + FAU fan (1500VA/ton + 900VA) | (S) heat strip | (A) Cir fans |
| () _____ | () _____ | () _____ | () _____ |
| () _____ | () _____ | () _____ | () _____ |
| _____ | _____ | _____ | _____ |

Sub Total (2) = _____ VA

Fixed appliances- 1-3 appliances 100%, 4 or more 75% of nameplate rating. Use factors below or nameplate rating, whichever is greater. NEC 220.53

| | | | |
|-----------------------------|------------------|--------------------------|------------------|
| Microwave | 1400VA ea _____ | Hood | 400VA ea _____ |
| Dishwasher | 1400VA ea _____ | Disposal (1hp) | 800VA ea _____ |
| Refrigerator | 1200VA ea _____ | Freezer | 800VA ea _____ |
| Instant hot | 1200VA ea _____ | Trash Comp | 1800 VA ea _____ |
| Garage door opener ½ hp | 800 VA ea _____ | Central Vac | 1800 VA ea _____ |
| jacuzzi w/o heat | 1500 VA ea _____ | Jacuzzi w/heat nameplate | _____ |
| Pool equipment nameplate VA | _____ | Hot tub nameplate VA | _____ |
| Other | _____ | Other | _____ |

Appliance sub total = _____ x (100%) or (75%) **Sub total (3) = _____ VA**

Miscellaneous motor loads- Add 25% of largest motor, including AC compressor.
 Name motor _____ VA of largest motor _____ x .25= **Sub total (4) _____ VA**

Add sub totals 1, 2, 3, 4 for Grand total VA _____
Grand sub total divide by 240 Volts = _____ AMPS

MINIMUM SERVICE PANEL SIZE REQUIRED = _____



RESIDENTIAL ELECTRICAL LOAD CALCULATION WORKSHEET OPTION #2

Address: _____ Date: _____

APN: _____ Owner: _____

Prepared by: _____

OPTION #2 Optional method 2017 NEC Art. 220, Part IV

| | |
|---|------------|
| General Lighting Load Sq Ft. _____ x 3 VA | = _____ VA |
| Small Appliance Circuits @ 1500 VA ea. (min. 2) | = _____ VA |
| Laundry Circuits @ 1500 VA ea (min 1) | = _____ VA |
| Dryer (5000VA) Use 5K or nameplate of dryer, whichever is greater. NEC 220.54 | = _____ VA |
| Elect water heater (4500VA) or nameplate rating, whichever is greater. NEC 220.53 | = _____ VA |
| Range/Oven (9600VA) Use 9.6K or nameplate, whichever is greater. NEC 220.55 | = _____ VA |
| Microwave 1400VA ea | = _____ VA |
| Hood 400VA ea ----- | = _____ VA |
| Dishwasher 1400VA ea | = _____ VA |
| Disposal (1hp) 800VA ea ----- | = _____ VA |
| Refrigerator 1200VA ea | = _____ VA |
| Freezer 800VA ea ----- | = _____ VA |
| Instant hot 1200VA ea | = _____ VA |
| Trash Comp 1800 VA ea ----- | = _____ VA |
| Garage door opener ½ hp 800 VA ea | = _____ VA |
| Central Vac 1800 VA ea ----- | = _____ VA |
| Jacuzzi w/o heat 1500 VA ea | = _____ VA |
| Jacuzzi w/heat nameplate ----- | = _____ VA |
| Pool equipment nameplate VA | = _____ VA |
| Hot tub nameplate VA ----- | = _____ VA |
| Other _____ | VA |
| Other _____ | VA |

General load total = _____ = _____ VA

General load total = _____
 100% 1st 10,000 VA - _____ 10,000VA
 Remainder @ 40% = _____

Remainder + 10,000VA = **General Lighting and appliance loads** _____ **VA Sub total (1)**

Heating/AC- List Type and VA at 100% NEC 220.82 (C) reductions are allowed for elect. space heating (not heat pump). 65% 3 or less individually controlled units, 40% if 4 or more individually controlled units.

| | | | |
|---------------|--|----------------|--------------|
| (H) heat pump | (G) AC + FAU fan (1500VA/ton + 900VA) | (S) heat strip | (A) Cir fans |
| () _____ | () _____ | () _____ | () _____ |
| () _____ | () _____ | () _____ | () _____ |

Select the Largest of heating and AC loads only. _____ **VA**

Add sub total (1) + largest Heating/ AC load = _____ VA divide by 240 volts = _____ Amps

MINIMUM SERVICE PANEL SIZE REQUIRED = _____