

# RESIDENTIAL ELECTRICAL LOAD WORKSHEET

OWNER: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

## LIGHTING LOAD

Article 220-3(a)

Total square footage of habitable living area: \_\_\_\_\_ @ 3 watts per sq. foot = \_\_\_\_\_ watts

Article 220-16(a)

Two small appliance branch circuits @ 1500 watts each: 2 @ 1500 watts each = 3000 watts

Article 220-16(a)

Additional small appliance circuits each: \_\_\_\_\_ @ 1500 watts each = \_\_\_\_\_ watts

Article 220 -16(b)

Laundry circuit @ 1500 watts each: \_\_\_\_\_ @ 1500 watts each = \_\_\_\_\_ watts

Lighting Load Subtotal = \_\_\_\_\_ watts

Table 220-11

First 3000 watts of lighting load: \_\_\_\_\_ @ 100% = 3000 watts

Remainder from 3001watts to 120,000 watts: \_\_\_\_\_ @ 35% = \_\_\_\_\_ watts

Remainder over 120,000 watts: \_\_\_\_\_ @ 25% = \_\_\_\_\_ watts

**Lighting Load Total = \_\_\_\_\_ watts**

## APPLIANCE LOAD

Article 220-17

Garbage disposal @ 600 watts each: \_\_\_\_\_ @ 600 watts each = \_\_\_\_\_ watts

Microwave @ 1500 watts each: \_\_\_\_\_ @ 1500 watts each = \_\_\_\_\_ watts

Trash compactor @ 1200 watts each: \_\_\_\_\_ @ 1200 watts each = \_\_\_\_\_ watts

Dishwasher @ 1200 watts each: \_\_\_\_\_ @ 1200 watts each = \_\_\_\_\_ watts

Refrigerator @ 600 watts each: \_\_\_\_\_ @ 600 watts each = \_\_\_\_\_ watts

Name Plate Rating of Miscellaneous Appliances:

\_\_\_\_\_ @ \_\_\_\_\_ watts each = \_\_\_\_\_ watts

\_\_\_\_\_ @ \_\_\_\_\_ watts each = \_\_\_\_\_ watts

**Appliance Subtotal = \_\_\_\_\_ watts**

**Appliance subtotal: \_\_\_\_\_ watts x \_\_\_\_\_ = \_\_\_\_\_ watts**

**(Less than 4 appliances @ 100%; 4 or more appliances @ 75%)**

## **ELECTRIC CLOTHES DRYER**

Article 220-18 5000 watts or name plate rating: (Whichever is Larger) **Dryer Total = \_\_\_\_\_ watts**

## **WATER HEATER (If Electric)**

Article 220-3(b) @ Nameplate Rating: **Water Heater Load = \_\_\_\_\_ watts**

## **HOUSEHOLD COOKING EQUIPMENT**

Table 220-19 Cooking Units-Includes ranges, wall mounted ovens, countertop units, and other household cooking units.

Number of Units- ONE unit use= 8000 watts  
TWO unit use = 11,000 watts  
THREE unit use = 14,000 watts  
FOUR unit use = 17,000 watts  
FIVE unit use = 20,000 watts

**COOKING TOTAL= \_\_\_\_\_ watts**

## **SPACE HEATING/AIR CONDITIONING**

Article 220-4(a) Air conditioner nameplate rating @ 125%: \_\_\_\_\_ watts x 125% = \_\_\_\_\_ watts

OR

Article 220-15 Electric Heat nameplate rating @ 100%: \_\_\_\_\_ watts x 100% = \_\_\_\_\_ watts

(Whichever is Larger)

## **HEAT PUMP**

Article 220-4(a) Largest condensing unit nameplate @ 125%: \_\_\_\_\_ watts @ 125% = \_\_\_\_\_ watts

Article 440-33

**AND**

Article 220-15 Supplementary heat (resistance) @ 100%: \_\_\_\_\_ watts @ 100% = \_\_\_\_\_ watts

**ADDITIONAL HVAC EQUIPMENT**

Article 440-33 Condensing units or A/C @ 100%: \_\_\_\_\_ watts @ 100% = \_\_\_\_\_ watts

**SPACE HEATING/AIR CONDITIONING TOTAL= \_\_\_\_\_ watts**

**OPTIONAL EQUIPMENT**

Article 220-3(b) Swimming Pool and/ or

Spa and Article 430-24 Largest motor nameplate: \_\_\_\_\_ watts @ 125% = \_\_\_\_\_ watts

Remaining motor(s) nameplate(s): \_\_\_\_\_ watts @ 100% = \_\_\_\_\_ watts

Lights and other miscellaneous equipment: \_\_\_\_\_ watts @ 100% = \_\_\_\_\_ watts

**POOL/SPA TOTAL = \_\_\_\_\_ watts**

Article 220-3(b) Welders, Kilns, Etc.

Name or description of equipment @ rated nameplate: \_\_\_\_\_ watts x 100% = \_\_\_\_\_ watts

Name or description of equipment @ rated nameplate: \_\_\_\_\_ watts x 100% = \_\_\_\_\_ watts

Name or description of equipment @ rated nameplate: \_\_\_\_\_ watts x 100% = \_\_\_\_\_ watts

**MISCELLANEOUS EQUIPMENT TOTAL = \_\_\_\_\_ watts**

**TOTAL DEMAND ON SYSTEM**

Article 220-10 Sum of all totals:

LIGHTING LOAD TOTAL = \_\_\_\_\_ WATTS

APPLIANCE TOTAL = \_\_\_\_\_ WATTS

DRYER TOTAL = \_\_\_\_\_ WATTS

WATER HEATER TOTAL = \_\_\_\_\_ WATTS

COOKING TOTAL = \_\_\_\_\_ WATTS

SPACE HEATING/AIR CONDITIONING TOTAL = \_\_\_\_\_ WATTS

POOL/SPA TOTAL = \_\_\_\_\_ WATTS

MISCELLANEOUS EQUIPMENT TOTAL = \_\_\_\_\_ WATTS

**TOTAL LOAD FOR DWELLING = \_\_\_\_\_ WATTS**

## **MAIN SERVICE SIZING**

Article 220-2

Total load \_\_\_\_\_ divided by \_\_\_\_\_ volts = \_\_\_\_\_ amps  
(NOTE: For 120/240 volt systems divide by 240volts; for 120/208 volts use 208 volts)

Article 220-10                      **MINIMUM SERVICE SIZE**                      \_\_\_\_\_ **AMPS**

Table 310-16

**SERVICE ENTRANCE CONDUCTOR SIZE**                      \_\_\_\_\_ **AWG,Cu,** \_\_\_\_\_ **AWG,Al**

Table 250-94   **GROUNDING ELECTRODE CONDUCTOR SIZE**                      \_\_\_\_\_ **AWG, Copper**

## **OPTIONAL CALCULATION METHOD FOR DWELLING UNITS**

Table 220-30

100% of the nameplate rating(s) of the air conditioning = \_\_\_\_\_ watts

100% of the first 10kVA of all other loads = \_\_\_\_\_ watts

40% of the remainder of all other loads = \_\_\_\_\_ watts

**TOTAL OPTIONAL LOAD** \_\_\_\_\_ **watts**

Article 220-2

**TOTAL OPTIONAL LOAD** \_\_\_\_\_ **DIVIDED BY** \_\_\_\_\_ **VOLTS =** \_\_\_\_\_ **AMPS**  
(NOTE: For 120/240 volt systems divide by 240; for 120/208 volt systems divide by 208)

Article 220-10 MINIMUM SERVICE SIZE = \_\_\_\_\_AMPS

Table 310-16 SERVICE ENTRANCE CONDUCTOR SIZE = \_\_\_\_\_AWG,Cu \_\_\_\_\_AWG,Al

Table 250-94 GROUNDING ELECTRODE CONDUCTOR SIZE = \_\_\_\_\_AWG Copper