



**CITY OF HENDERSON**  
**Department of Building & Fire Safety**  
**RESIDENTIAL ELECTRICAL LOAD CALCULATIONS**

Owner \_\_\_\_\_ Date    /    /   

Address \_\_\_\_\_ Prepared by \_\_\_\_\_

General Lighting Load Sq.Ft. \_\_\_\_\_ X 3 Volt Amps = \_\_\_\_\_ VA

Small Appliance Circuits at 1500 VA each x \_\_\_\_\_ (min. of two) = \_\_\_\_\_ VA

Laundry (Washing Machine) Circuit 1500 VA x \_\_\_\_\_ (min. of one) = \_\_\_\_\_ VA

**Sub-Total** = \_\_\_\_\_ **VA**

First 3,000 VA of Lighting, Small Appliance, Laundry Load at 100% =   3,000   VA

From 3,001 to 120,000 VA at 35% \_\_\_\_\_ X .35 = \_\_\_\_\_ VA

Over 120,000 VA use 25% \_\_\_\_\_ X .25 = \_\_\_\_\_ VA

Electrical Cooking Appliances, Use NEC Table 220-55

(Number of Appliances) \_\_\_\_\_ Demand \_\_\_\_\_ % x Total KW \_\_\_\_\_ (Column A) x 1,000 = \_\_\_\_\_ VA

(Number of Appliances) \_\_\_\_\_ Demand \_\_\_\_\_ % x Total KW \_\_\_\_\_ (Column B) x 1,000 = \_\_\_\_\_ VA

(Number of Appliances) \_\_\_\_\_ Demand \_\_\_\_\_ x Total KW \_\_\_\_\_ (Column C) x 1,000 = \_\_\_\_\_ VA

Dryer Load NEC Table 220-54 = \_\_\_\_\_ VA

**(1) Sub-Total** = \_\_\_\_\_ **VA**

Heating/Air Conditioning – List type and VA at 100%

|               |                |                |              |
|---------------|----------------|----------------|--------------|
| (H) Heat Pump | (G) Gas + Cool | (S) Heat Strip | (A) Cir Fans |
| ( ) _____     | ( ) _____      | ( ) _____      | ( ) _____    |
| ( ) _____     | ( ) _____      | ( ) _____      | ( ) _____    |
| ( ) _____     | ( ) _____      | ( ) _____      | ( ) _____    |
| ( ) _____     | ( ) _____      | ( ) _____      | ( ) _____    |

**(2) Sub-Total** = \_\_\_\_\_ **VA**

Fixed Appliances – If fewer than four units, use 100%. If four or more, use 75% of the nameplate rating.

|             |                 |             |                  |
|-------------|-----------------|-------------|------------------|
| Microwave   | 1500 VA x _____ | Food Center | 600 VA x _____   |
| Compactor   | 1200 VA x _____ | Hot Water   | 4500 VA x _____  |
| Dishwasher  | 1200 VA x _____ |             | _____ VA x _____ |
| Disposal    | 600 VA x _____  |             | _____ VA x _____ |
| Cent Vacuum | 1800 VA x _____ |             | _____ VA x _____ |

Appliance Subtotal \_\_\_\_\_ x **(100%) OR ( 75%)** **(3) Sub-Total** = \_\_\_\_\_ **VA**

Add 25% of the largest motor (typical AC compressor)

\_\_\_\_\_ X 25% LM \_\_\_\_\_ **(4) Sub-Total** = \_\_\_\_\_ **VA**

**5) Spare 20amps x 240 volts Sub-Total** =   4,800   **VA**

**GRAND TOTAL (Add Sub-Totals (1), (2), (3), (4), (5))** = \_\_\_\_\_ **VA**

Total Volt Amps \_\_\_\_\_ Divide by 240 Volts = \_\_\_\_\_ Amps

Service Size \_\_\_\_\_ Grounding Electrode Conductor \_\_\_\_\_