

SINGLE-FAMILY DWELLING SERVICE-ENTRANCE CALCULATIONS

1. General Lighting Load (220.12).

$$\underline{\hspace{2cm}} \text{ ft}^2 @ 3 \text{ VA per ft}^2 = \underline{\hspace{2cm}} \text{ VA}$$

Note: Included in this floor area calculation are all lighting outlets and general-use receptacles. Do not include open porches, garages, or unused or unfinished spaces not adaptable for future use. See *NEC 220.12, Table 220.12, and 220.14(J)*.

2. Minimum Number of 15-ampere Lighting Branch Circuits.

$$\frac{\text{Line 1}}{120} = \frac{\underline{\hspace{2cm}}}{120} = \underline{\hspace{2cm}} \text{ amperes}$$

$$\text{then, } \frac{\text{amperes}}{15} = \frac{\underline{\hspace{2cm}}}{15} = \underline{\hspace{2cm}} \text{ 15-ampere branch circuits}$$

3. Small-Appliance Load [210.11(C)(1), 220.52(A), and 210.52(B)].

(Minimum of two 20-ampere branch circuits)

$$\underline{\hspace{2cm}} \text{ branch circuits @ 1500 VA each} = \underline{\hspace{2cm}} \text{ VA}$$

4. Laundry Branch Circuit [210.11(C)(2), 220.52(B), and 210.52(F)].

(Minimum of one 20-ampere branch circuit)

$$\underline{\hspace{2cm}} \text{ branch circuit(s) @ 1500 VA each} = \underline{\hspace{2cm}} \text{ VA}$$

5. Total General Lighting, Small-Appliance, and Laundry Load.

$$\text{Lines 1} + 3 + 4 = \underline{\hspace{2cm}} \text{ VA}$$

6. Net Calculated General Lighting, Small-Appliance, and Laundry Loads (less ranges, ovens, and “fastened-in-place” appliances). Apply demand factors from *Table 220.42*.

$$\text{a. First 3000 VA @ 100\%} = \underline{3000} \text{ VA}$$

$$\text{b. Line 5 } \underline{\hspace{2cm}} - 3000 = \underline{\hspace{2cm}} @ 35\% = \underline{\hspace{2cm}} \text{ VA}$$

$$\text{Total a} + \text{b} = \underline{\hspace{2cm}} \text{ VA}$$

7. Electric Range, Wall-Mounted Ovens, Counter-Mounted Cooking Units (*Table 220.55*).

$$= \underline{\hspace{2cm}} \text{ VA}$$

8. Electric Clothes Dryer (*Table 220.51*).

$$= \underline{\hspace{2cm}} \text{ VA}$$

9. Electric Furnace (220.54).

Air Conditioner, Heat Pump (*Article 440*).

$$(\text{Enter largest value, 220.60}) = \underline{\hspace{2cm}} \text{ VA}$$

10. Net Calculated General Lighting, Small-Appliance, Laundry, Ranges, Ovens, Cooktop Units, HVAC.

$$\text{Lines 6} + 7 + 8 + 9 = \underline{\hspace{2cm}} \text{ VA}$$