

RESIDENTIAL LOAD CALCULATIONS		
CALCULATED LOADS NEC 120.84		
TOTAL SQ FOOTAGE (22,500 SQ FT X 2 VA) =	45,000 VA	
APPLIANCE CIRCUITS (30 X 1,500 VA) =	45,000 VA	
LAUNDRY CIRCUITS (15 X 1,500 VA) =	22,500 VA	
RANGES - NEC 120.84(C)(3)(B)		
RANGES (15 X 15 X 12,000 VA) =	180,000 VA	
DRYERS - NEC 120.84(C)(3)(C)		
DRYERS (15 X 5,000 VA) =	75,000 VA	
WATER HEATERS - NEC 120.84(C) (3)(D)		
WATER HEATERS (15 X 2,500 VA) =	37,500 VA	
HEATING OR COOLING LOADS - NEC 120.84(C) (3)(A)		
HEATING & COOLING (15 X 15 X 6,000 VA) =	90,000 VA	
EV CHARGERS - NEC 120.84(C)(3)(A)		
EV CHARGERS (15 X 7,200 VA) =	108,000 VA	
MISC LOADS	9,000 VA	
TOTAL CONNECTED LOAD	612,000 VA	
CONNECTED AMPS (612,000 VA ÷ 240 V) =2,550 A		
DEMAND FACTOR NEC TABLE 120.84 = 40%		
ADJUSTED AMPS (2,550 A X 0.40) =	1,020A	
NON-RESIDENTIAL LOAD	158A	
SUBTOTAL	1,178A	
FUTURE FACTOR (1,178 A X 0.00) =	0A	
SERVICE SIZE	1,178A	

PROJECT NAME	SAMPLE PROJECT
ADDRESS	123 MAIN ST
CITY/STATE/ZIP	SOMEWHERE, CA 95620
CODE TEAR	2026
PHASE	1
HIGH VOLTAGE	240
LOW VOLTAGE	120
MAIN BREAKER	YES
MINIMUM SERVICE SIZE	100
HOUSE PANEL	YES
VOLTAGE DROP CALCS	YES
FAULT CURRENT CALCS	YES
SHOW UFER GROUND	YES
DWELLING UNITS	15
COMMERCIAL PANELS	0
BACKUP POWER SOURCE	YES

KEY
A - Amps
V - Volts
VA - Volt Amps

NON RESIDENTIAL LOADS		
BASED ON THE 2026 NEC SECTION 120.84		
	L1	L2
CALCULATED LOAD	18,200 VA	15,750 VA
CALCULATED LOAD WITH DEMAND FACTORS		
GENERAL LOAD	0 VA	0 VA
RECEPTACLE LOAD - NEC TABLE 120.47		
1ST 10,000W	5,556 VA	4,444 VA
REMAINDER @ 50%	972 VA	778 VA
CONTINUOUS LOAD - NEC 215.4(A)(1)	9,000 VA	7,200 VA
PLUS 25%	2,250 VA	1,800 VA
MOTOR LOAD (NEC 430.24)	0 VA	0 VA
PLUS 25% OF LARGEST MOTOR	0 VA	0 VA
5 - KITCHEN LOADS - NEC 120.56		
L1 (1,700 VA X 0.7) =	1,190 VA	
L2 (2,550 VA X 0.7) =		1,785 VA
TOTAL BALANCED LOAD (1-PHASE)	16,007 VA	16,007 VA
TOTAL UNBALANCED LOAD (1-PHASE)	2,961 VA	0 VA
LINE AMPS BALANCED (1-PHASE)	0.0 A	0.0 A
LINE AMPS UNBALANCED (1-PHASE)	133.4 A	133.4 A
NON RESIDENTIAL LOAD	24.7 A	0.0 A
	158.1 A	133.4 A