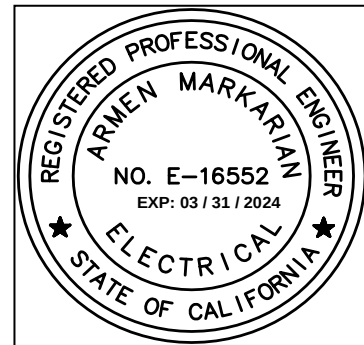




Electrical Engineering Design + Consulting
1737 Camulos Ave
Glendale, Ca 91208-2558
Phone : (818) 324 3177
armen@4aproinc.com

Project Information

Mixed use project
Three Commercial & Two Residential
500 Bohemian Highway
Sebastopol, Ca



Signature	
Date:	December 06, 2023

Standard Load CalculationFirst Floor Store Load CalculationGeneral Lighting Loads

1240	sq. ft.	x	3	VA	x	125%	4650	VA
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Sign

1200	VA	x	1	units	1200	VA
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Outside Lighting Loads

100	VA	x	3	units	300	VA
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Show Window

10	VA	x	200	VA/Linear Foot	2000	VA
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Total							6150	VA
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Receptacle Loads

20	units	x	180	VA	3600	VA
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Applying demand factors

First 10,000 VA @ 100%					3600	VA
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Remaining VA at 50%	0	VA			0	VA
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Total							3600	VA
-------	--	--	--	--	--	--	------	----

Special Loads

Ref	1500	VA	x	2	units	3000	VA
-----	------	----	---	---	-------	------	----

Computers	1500	VA	x	1	units	1500	VA
-----------	------	----	---	---	-------	------	----

Coffee Maker	1500	VA	x	1	units	1500	VA
--------------	------	----	---	---	-------	------	----

Microwave	1500	VA	x	1	units	1500	VA
-----------	------	----	---	---	-------	------	----

Water Cooler	1500	VA	x	1	units	1500	VA
--------------	------	----	---	---	-------	------	----

Printers	750	VA	x	1	units	750	VA
----------	-----	----	---	---	-------	-----	----

Walk In Closet	2000	VA	x	1	units	2000	VA
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Total							11750	VA
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Heating or A/C load

A/C units	7000	VA	x	2	units	x	100%	14000	VA
-----------	------	----	---	---	-------	---	------	-------	----

Total								14000	VA
-------	--	--	--	--	--	--	--	-------	----

Largest Motor Load

AC unit	7000	VA	x	25%	1750	VA
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Total

Total Connected Volt Amp load							37250	VA
-------------------------------	--	--	--	--	--	--	-------	----

Total Connected Amp Load: 120 / 240 Volts 1Ph 3 Wire							155	Amps
--	--	--	--	--	--	--	-----	------

Standard Load CalculationFirst Floor Store and RetailGeneral Lighting Loads

2260	sq. ft.	x	3	VA	x	125%	8475	VA
------	---------	---	---	----	---	------	------	----

Sign

1200	VA	x	2	untis	2400	VA
------	----	---	---	-------	------	----

Outside Lighting Loads

100	VA	x	5	untis	500	VA
-----	----	---	---	-------	-----	----

Show Window

22	VA	x	200	VA/Linear Foot	4400	VA
----	----	---	-----	----------------	------	----

Total

11375	VA
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Receptacle Loads

30	units	x	180	VA	5400	VA
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Applying dmenad factors

First 10,000 VA @ 100%	5400	VA
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Remaining VA at 50%	0	VA	0	VA
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Total

5400	VA
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Special Loads

Ref	1500	VA	x	3	units	4500	VA
-----	------	----	---	---	-------	------	----

Computers	1500	VA	x	2	units	3000	VA
-----------	------	----	---	---	-------	------	----

Coffee Maker	1500	VA	x	2	units	3000	VA
--------------	------	----	---	---	-------	------	----

Microwave	1500	VA	x	2	units	3000	VA
-----------	------	----	---	---	-------	------	----

Water Cooler	1500	VA	x	3	units	4500	VA
--------------	------	----	---	---	-------	------	----

Printers	750	VA	x	2	units	1500	VA
----------	-----	----	---	---	-------	------	----

Walk In Closet	2000	VA	x	1	units	2000	VA
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Washer Dryer	1500	VA	x	2	units	3000	VA
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Total

24500	VA
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Heating or A/C load

A/C units	7000	VA	x	2	units	x	100%	14000	VA
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A/C units	5000	VA	x	1	units	x	100%	5000	VA
-----------	------	----	---	---	-------	---	------	------	----

Total

19000	VA
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Largest Motor Load

AC unit	7000	VA	x	25%	1750	VA
---------	------	----	---	-----	------	----

TotalTotal Connected Volt Amp load

62025	VA
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Total Connected Amp Lo: 120	/	240	Volts	1Ph	3 Wire
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258	Amps
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Standard Load CalculationFirst Floor Retail Load CalculationGeneral Lighting Loads

1020	sq. ft.	x	3	VA	x	125%	3825	VA
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Sign

1200	VA	x	1	units	1200	VA
------	----	---	---	-------	------	----

Outside Lighting Loads

100	VA	x	2	units	200	VA
-----	----	---	---	-------	-----	----

Show Window

12	VA	x	200	VA/Linear Foot	2400	VA
----	----	---	-----	----------------	------	----

Total

5225	VA
------	----

Receptacle Loads

10	units	x	180	VA	1800	VA
----	-------	---	-----	----	------	----

Applying demand factorsFirst 10,000 VA @ 100%

1800	VA
------	----

Remaining VA at 50%	0	VA
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0	VA
---	----

Total

1800	VA
------	----

Special Loads

Ref	750	VA	x	1	units	750	VA
-----	-----	----	---	---	-------	-----	----

Computers	1500	VA	x	1	units	1500	VA
-----------	------	----	---	---	-------	------	----

Coffee Maker	1500	VA	x	1	units	1500	VA
--------------	------	----	---	---	-------	------	----

Water Cooler	1500	VA	x	1	units	1500	VA
--------------	------	----	---	---	-------	------	----

Printers	750	VA	x	1	units	750	VA
----------	-----	----	---	---	-------	-----	----

Washer Dryer	1500	VA	x	2	units	3000	VA
--------------	------	----	---	---	-------	------	----

Total

9000	VA
------	----

Heating or A/C load

A/C units	5000	VA	x	1	units	x	100%	5000	VA
-----------	------	----	---	---	-------	---	------	------	----

Total

5000	VA
------	----

Largest Motor Load

AC unit	5000	VA	x	25%	1250	VA
---------	------	----	---	-----	------	----

TotalTotal Connected Volt Amp load

22275	VA
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Total Connected Amp Load	120	/	240	Volts	1Ph 3 Wire
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93	Amps
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Standard Load CalculationFirst Floor ApartmentGeneral Lighting Loads

985	sq. ft.	x	3	VA	2955	VA
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Small Appliance Loads

1500	x	2	circuits	3000	VA
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Laundry Load

1500	x	2	circuits	3000	VA
------	---	---	----------	------	----

Subtotal	8955	VA
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Applying Demand Factors

First 3000 VA @ 100%	3000	VA
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5955 VA @ 35%	2084.25	VA
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Total	5084.25	VA
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Fixed Appliance Loads

Dish Washer	1200	VA
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Disposal	900	VA
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Refrigerator	1500	VA
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Hood / Microwave	1500	VA
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Microwave	1500	VA
-----------	------	----

Exhaust Fan	70	VA
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Subtotal	6670	VA x 75% =	5002.5	VA
----------	------	------------	--------	----

Heating or A/C load:

CU	4432.5	VA
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FC	1250	VA
----	------	----

Total	5682.5	VA
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Largest Motor load (CU)

4432.5	VA x @ 25%	1108.125	VA
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Subtotal	1108.125	VA
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Total Connected Volt Amp Load	16877.38	VA
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Total Connected Amp Load	70	Amps
--------------------------	----	------

System :	120	/	240	1 Ph, 3 W
----------	-----	---	-----	-----------

Standard Load CalculationFirst and Second Floor ApartmentGeneral Lighting Loads

2339	sq. ft.	x	3	VA	7017	VA
------	---------	---	---	----	------	----

Small Appliance Loads

1500	x	4	circuits	6000	VA
------	---	---	----------	------	----

Laundry Load

1500	x	4	circuits	6000	VA
------	---	---	----------	------	----

Subtotal	19017	VA
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Applying Demand Factors

First 3000	VA @ 100%	3000	VA
------------	-----------	------	----

16017	VA @ 35%	5605.95	VA
-------	----------	---------	----

Total	8605.95	VA
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Fixed Appliance Loads

Dish Washer x2	2400	VA
----------------	------	----

Disposal x2	1800	VA
-------------	------	----

Refrigerator x2	3000	VA
-----------------	------	----

Hood / Microwave x2	3000	VA
---------------------	------	----

Microwave x2	3000	VA
--------------	------	----

Exhaust Fan x2	140	VA
----------------	-----	----

Subtotal	13340	VA x 75% =	10005	VA
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Heating or A/C load:

CU x 2	10525.5	VA
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FC x 1	2500	VA
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Total	13025.5	VA
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Largest Motor load (CU)

6093	VA x @ 25%	1523.25	VA
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Subtotal	1523.25	VA
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Total Connected Volt Amp Load	33159.7	VA
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Total Connected Amp Load	138	Amps
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System :	120	/	240	1 Ph, 3 W
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Standard Load CalculationSecond Floor ApartmentGeneral Lighting Loads

1354	sq. ft.	x	3	VA	4062	VA
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Small Appliance Loads

1500	x	2	circuits	3000	VA
------	---	---	----------	------	----

Laundry Load

1500	x	2	circuits	3000	VA
------	---	---	----------	------	----

Subtotal	10062	VA
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Applying Demand Factors

First 3000	VA @ 100%	3000	VA
------------	-----------	------	----

7062	VA @ 35%	2471.7	VA
------	----------	--------	----

Total	5471.7	VA
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Fixed Appliance Loads

Dish Washer	1200	VA
-------------	------	----

Disposal	900	VA
----------	-----	----

Refrigerator	1500	VA
--------------	------	----

Hood / Microwave	1500	VA
------------------	------	----

Microwave	1500	VA
-----------	------	----

Exhaust Fan	70	VA
-------------	----	----

Subtotal	6670	VA x 75% =	5002.5	VA
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Heating or A/C load:

CU	6093	VA
----	------	----

FC	1250	VA
----	------	----

Total	7343	VA
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Largest Motor load (CU)

6093	VA x @ 25%	1523.25	VA
------	------------	---------	----

Subtotal	1523.25	VA
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Total Connected Volt Amp Load	19340.45	VA
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Total Connected Amp Load	81	Amps
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System :	120	/	240	1 Ph, 3 W
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House Load

General Lighting	500	VA
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General Power	1500	VA
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Misc Load	2000	VA
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Total VA Load	4000	VA
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Total Amp Load at 120/240V, 1PH, 3W	17	VA
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600A, 120/240V, IPH, 3W BUSSED AT 65,000A

U
G
P
S

600A
2P
42KAIC



100A
2P
42KAIC



200A
2P
42KAIC



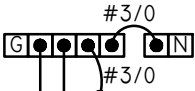
100A
2P
42KAIC



100A
2P
42KAIC



100A
2P
42KAIC



#3/0 GND TO COLD
WATER METAL PIPE
WITHIN 5' FROM THE
MAIN ENTRANCE INTO
THE BUILDING AND TWO
GROUND RODS AT 5/8"
X 10', AT MINIMUM 6'
APART OR UFER

2"C-3#2 THWN CU +1#8 GND

3"C-3#3/0 THWN CU +1#6 GND

2"C-3#2 THWN CU +1#8 GND

2"C-3#2 THWN CU +1#8 GND

2"C-3#2 THWN CU +1#8 GND

1ST FLOOR
RETAIL
100A
120/240V
IPH, 3W
QP

1ST FLOOR
STORE
200A
120/240V
IPH, 3W
QP

FIRST FLOOR
APARTMENT
100A
120/240V
IPH, 3W
QP

2ND FLOOR
APARTMENTS
100A
120/240V
IPH, 3W
QP

HOUSE PANEL
100A
120/240V
IPH, 3W
QP