

Project: Lake County Cultivation

Date: 4/12/2021

HIGHLAND SITE

COMMERCIAL ELECTRIC SERVICE CALCULATION

Building Area Summary				sqft	
Processing Building	12,000		(100'x60' 2-story)		
Nursery	22,000				
Mixed Light Canopy	84,560				
Total:				118,560	sqft
Processing Building					LOADS VA
<u>General Interior Lighting</u>					
12,000	sq. ft. at	1	VA per sq. ft.		12,000
<u>HVAC / Air Conditioning</u>					
12,000	sq. ft. at	4.5	VA per sq. ft.		54,000
<u>Receptacles</u>					
12,000	sq. ft. at	1	VA per sq. ft. (220.12.I)		12,000
Total Demand Receptacle Loads (220.44):					11,000
<u>Other:</u>					
Trimmers	5	at	500 VA ea.		2,500
Break Room Microwave	4	at	1,800 VA ea.		7,200
Break Room Ice Machine	1	at	600 VA ea.		600
Break Room Refrigerator	1	at	900 VA ea.		900
Break Room Freezer	1	at	1,200 VA ea.		1,200
Break Room Dishwasher	1	at	1,200 VA ea.		1,200
Site Lighting	1	at	3,000 VA ea.		3,000
EV Chargers	2	at	9,600 VA ea.		19,200
Tel/Data, Security, Fire Alarm	1	at	3,000 VA ea.		3,000
Total Demand VA:					115,800
Amps at 208V, 3PH:					321
Amps at 480V, 3PH:					139
Nursery					
<u>General Interior Lighting</u>					
22,000	sq. ft. at	0.75	VA per sq. ft.		16,500
<u>Grow Lighting</u>					
20,000	sq. ft. at	23	VA per sq. ft.		460,000
<u>HVAC / Air Conditioning</u>					
22,000	sq. ft. at	4.5	VA per sq. ft.		99,000
<u>Receptacles</u>					
22,000	sq. ft. at	1	VA per sq. ft. (220.12.I)		22,000
Total Demand Receptacle Loads (220.44):					16,000
<u>Other:</u>					
Site Lighting	1	at	500 VA ea.		500
Tel/Data, Security, Fire Alarm	1	at	1,000 VA ea.		1,000
Total Demand VA:					593,000
Amps at 208V, 3PH:					1,646
Amps at 480V, 3PH:					713
Mixed Light Canopy					
<u>General Interior Lighting</u>					
84,560	sq. ft. at	0.4	VA per sq. ft.		33,824
<u>Grow Lighting</u>					
80,000	sq. ft. at	23	VA per sq. ft.		1,840,000
<u>HVAC / Air Conditioning</u>					
84,560	sq. ft. at	4.5	VA per sq. ft.		380,520
<u>Receptacles</u>					
84,560	sq. ft. at	0.25	VA per sq. ft. (220.12.I)		21,140
Total Demand Receptacle Loads (220.44):					15,570
<u>Other:</u>					
Site Lighting	1	at	500 VA ea.		500
Tel/Data, Security, Fire Alarm	1	at	1,000 VA ea.		1,000
Total Demand VA:					2,271,414
Amps at 208V, 3PH:					6,305
Amps at 480V, 3PH:					2,732
Miscellaneous Loads					
Well Pump (10 HP)	1	at	11,000 VA ea.		11,000
Site Lighting	1	at	5,000 VA ea.		5,000
Misc. Irrigation Pumps (1 HP ea.)	4	at	1,700 VA ea.		6,800
Total Demand VA:					22,800
Amps at 208V, 3PH:					63
Amps at 480V, 3PH:					27

TOTAL DEMAND LOAD FOR THE SITE: 3,003 kVA

TOTAL DEMAND LOAD - AMPERES AT 208/120V, 3PH: 8,336 AMPS

TOTAL DEMAND LOAD - AMPERES AT 480/277V, 3PH: 3,612 AMPS