

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. (220.12.1)	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. (220.12.1)	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. (220.12.1)	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