Reviewed for Code Compliance
Approved with Comments
Approved as Noted
Date: 05/24/16

COMMODORE HOMES
ELECTRICAL LOAD CALCULATIONS

26 FT. x 69.269 FT. x 3 W / SQ.FT.= 5.4 KVA
5.4 KVA / 120 VOLTS = 45 AMPS
45 AMPS / 15 AMPS = 3.00 CIRCUITS

MINIMUM NUMBER OF CIRCUITS REQUIRED:
3 - GENERAL PURPOSE @ 15 AMPS
3 - SMALL APPLIANCE @ 20 AMPS
1 - LAUNDRY @ 20 AMPS
1 - BATH @ 20 AMPS

COMPUTE MINIMUM SERVICE:

GENERAL LIGHTING	5.4 KVA
SMALL APPLIANCE	4.5 KVA
LAUNDRY	1.5 KVA
BATH	1.5 KVA
RANGE	9.7 KVA
WATER HEATER	4.5 KVA
DRYER	5.3 KVA
FURNACE (GAS OR OIL)	1.5 KVA
VENT FANS(4 TL.)	0.3 KVA
MICROWAVE OVEN	1.5 KVA
DISHWASHER	1.1 KVA
GARBAGE DISPOSAL	0.6 KVA
TOTAL	37.4 KVA

10 KVA @ 100% = 10 KVA
37.4 KVA - 10 KVA = 27.4 KVA @ 40% = 10.96 KVA
10 KVA + 10.96 KVA = 20.96 KVA / 240 VOLTS = 87.33 AMPS
MINIMUM ENTRANCE TO BE: 100 AMPERE SERVICE

ELECTRIC SPACE HEATING IN PLACE OF GAS/OIL.....
(AIR CONDITIONER LOAD LESS THAN SPACE HEATING)
23 KVA ELECTRIC FURNACE @ 65%= 14.95 KVA
20.36 KVA + 14.95 KVA = 35.31 KVA / 240 VOLTS = 147.125 AMPS
MINIMUM ENTRANCE TO BE: 200 AMPERE SERVICE

COMPUTE NEUTRAL LOAD
GENERAL LIGHTING + SMALL APPLIANCE = 11.4 KVA
FIRST 3.0 KVA @ 100% = 3 KVA
11.4 KVA - 3.0 KVA = 8.4 KVA x 35% = 2.94 KVA
NET TOTAL = 3.0 KVA + 2.94 KVA = 5.94 KVA

RANGE (8 KVA @ 70%	5.6 KVA
DRYER (5 KVA @ 70%)	3.71 KVA
DISHWASHER	1.1 KVA
FURNACE	1.5 KVA
MICROWAVE OVEN	1.5 KVA
FANS	0.3 KVA
GARBAGE DISPOSAL	0.6 KVA

TOTAL = 20.25 KVA / 240 VOLTS= 84.38 AMPS

200 AMP SERVICE PANEL INSTALLED

LEGEND

=15 AMP RECPT; =15 AMP FLOOR RECPT; =STD LIGHT; =RECESSED LIGHT
=SWITCHED RECPT; =WIRE; =STANDARD VENT; =SWITCH
=20 AMP RECPT; =20 AMP FLOOR RECPT; =DOORBELL; =CHIMES
=220 VOLT RECPT; =3-WAY DIMMER SWITCH; =DIMMER SWITCH
=24" STRIPLIGHT; =3-WAY SWITCH; =SMOKE/CO DETECTOR
=THERMOSTAT; =STANDARD FAN; =STANDARD FAN w/LIGHT
=SMOKE DETECTOR
=PHONE JACK; =DATA JACK; =TV JACK; =JUNCTION BOX; =HOSE BIBB
GFI =GROUND FAULT CIRCUIT INTERRUPTER; =BULLET; =PANEL BOX
WP =WEATHERPROOF; =SPEAKER; =AV JACK; =MEDIA RECEPT
FLOURESCENT =18"; =48"; =UNDER CABINET LIGHT
=UNDER CABINET STEREO; =VENTILATION FAN

CIRCUIT ID NO.	LOAD	AMPS	POLES REQ'D	WIRE SIZE	MAX CONNECTED LOAD (KW)
1-12	General Lighting	15	1	NM14-2/WG	1.44
13-16	Small Appliance	20	1	NM12-2/WG	1.50
17-18	Bath (GFCI)	20	1	NM12-2/WG	1.50
19	Smoke Alarms	15	1	NM14-2/WG	1.44
20	Laundry	20	1	NM12-2/WG	1.50
21	Electric Dryer	30	2	NM10-3/WG	5.76
22	Electric Range	50	2	NM6-3/WG	13.10
23	Electric Cooktop	40	2	NM8-3/WG	7.6
24	Electric Wall Oven	20	2	NM12-2/WG	3.4
25	Electric W/H	20	2	NM12-2/WG	1.92
	Electric W/H	25	2	NM10-2/WG	5.76
26	Gas Furnace	15	1	NM14-2/WG	1.44
27	Electric Furnace	60/30	4	NM4-2/WG	20.40
	Electric Furnace	60/60	4	NM4-2/WG	
28-37	Electric BB Heat	20	2	NM12-2/WG	1.92
38	A/C	50	2	NM6-2/WG	10.56
39	Freezer	20	1	NM12-2/WG	1.92
40	Dishwasher	15	1	NM14-2/WG	1.44
41	Disposal	15	1	NM14-2/WG	1.44
42	Whirlpool Tub (GFCI)	20	1	NM12-2/WG	1.92
43	Microwave Oven	20	1	NM12-2/WG	1.92

Doors Exterior

Door Type	Size	Width	Height	RO SF	Light	Vent	Design Load	Air Infil	Max U-Factor
9 Lite	3475	2'-10"	6'-4"	17.94	-	-	50	0.27	0.35
6 Panel Fire Rated	3680	3'-1"	6'-9 1/8"	20.85	-	-	50	0.04	0.35
2 Lite	3682	3'-2"	6'-10"	21.64	0.51	20	50	0.27	0.35
Oval	3682	3'-2"	6'-10"	21.64	5.73	20	50	0.27	0.35
9 Lite	3682	3'-2"	6'-10"	21.64	4.378	20	50	0.27	0.35
Sunburst	3682	3'-2"	6'-10"	21.64	0.683	20	50	0.27	0.35
15 Lite	3682	3'-2"	6'-10"	21.64	7.073	20	50	0.27	0.35
Slider	7280	6'-0"	6'-8"	40.00	32.13	15.2	50	0.13	0.45
Exterior Door	3482	2'-10"	6'-10"	20.00	-	-	50	0.27	0.35
Atrium	7582	6'-3"	6'-8"	42.70	14.69	19.45	50	0.11	0.45
Atrium	7275	6'-3 1/2"	6'-4 1/4"	39.98	18.5	17.72	50	0.30	0.45
French	7282	6'-3 5/8"	6'-10 1/4"	43.15	18.4	38.4	18	0.10	0.45
Side Light	1782	1'-4 1/2"	6'-10"	10.25	1.85	-	50	0.10	0.35
Half Lite	3682	3'-2"	6'-10 1/4"	21.70	9.25	19.13	0	0.00	0.35
Atrium	7280	6'-3 1/8"	6'-10"	42.78	18.4	19.2	35	0.04	0.45
1-Lite	3682	3'-2"	6'-10 1/4"	21.70	5.45	19.125	50	0.27	0.35

Doors Interior

Door Type	Size	Width	Height
Int. Passage	24	2'-2 1/8"	6'-10 1/2"
Int. Passage	28	2'-6 1/8"	6'-10 1/2"
Int. Passage	30	2'-8 1/8"	6'-10 1/2"
Int. Passage	32	2'-10 1/8"	6'-10 1/2"
Int. Passage	36	3'-2 1/8"	6'-10 1/2"
Int. Passage	48	4'-1"	6'-10"

FLOOR PLAN NOTES
ALL EXTERIOR OPTIONS SUCH AS DORMERS, BOX BAYS, ETC. MAY VARY PER HOME. SEE SYSTEMS MANUAL FOR CONSTRUCTION SPECS.
BOOTS, REGISTERS, AND/OR R.A.G.'S MAY BE INSTALLED IN FLOOR, WALL, AND/OR DOOR FOR FIELD INSTALLED HVAC SYSTEMS BY OTHERS-PER HVAC MFG'S INSTALLATION INSTRUCTIONS.
TOE KICK REGISTERS MAY BE USED WHERE VENT SLOT IS 1" MIN. FROM EDGE TO FINISHED FLOOR.
EXTERIOR AND MARRIAGE WALL SPANS: REFER TO SYSTEMS MANUAL. SEE COLUMN CHARTS FOR REQUIREMENTS.
HVAC SYSTEMS AND GAS LINE SYSTEMS MAY BE SUPPLIED, INSTALLED, AND INSPECTED ON SITE BY OTHERS.
ANY FURNACE INSTALLED MUST HAVE A MINIMUM AFUE OF 90.0.
SERVICE PANEL MAY BE LOCATED IN GARAGE.
DOOR AT THE BOTTOM OF ATTIC STORAGE STAIRS MUST BE REMOVED (WHEN APPLICABLE) FOR PROPER LANDING WHEN STORAGE SPACE IS CONVERTED TO HABITABLE SPACE. SEE CROSS SECTION FOR ADDITIONAL REQUIREMENTS.
A = 22 1/2"x30 1/2" ATTIC ACCESS REQUIRED WHEN CLEAR HEIGHT OF ATTIC IS 30" OR GREATER (5/12 ROOF OR GREATER).
AP = 22 1/2"x54" PULL DOWN ATTIC ACCESS.
FIREPLACE BY MANUFACTURER, FLUE BY OUTSIDE CONTRACTOR
: COLUMN SUPPORT LOCATION

ELECTRICAL PLAN NOTES:
1. ALL KITCHEN AND BATHROOM COUNTER RECEPTS TO BE GFCI PROTECTED.
2. ALL CLOSET LIGHTS TO BE ENCLOSED SURFACE MOUNT FIXTURES, 12" MIN. FROM STORAGE SPACE.
3. ALL RECEPTS TO BE GROUNDINGTYPE, PER 210-7/NEC.
4. SPECS, WIRING, INSTALLATIONS, ETC. TO COMPLY WITH NEC REGULATIONS.
5. SERVICE PANEL MAY BE LOCATED IN GARAGE.
6. ALTERNATE GAS APPLIANCES MAY BE USED.
7. ALL SMOKE DETECTORS TO HAVE BATTERY BACK-UP AND TO BE INTERCONNECTED WITH A 14 GA. MIN. INTERCONNECTION WIRE OR EQUIVALENT PER MFG.S RECOMMENDATIONS.
8. EXTERIOR LIGHT AT GARAGE SIDE MAY BE REPLACED.
9. ALL BRANCH CIRCUITS SUPPLYING 15A AND 20A OUTLETS IN BEDROOMS ARE PROTECTED BY AN ARC-FAULT CIRCUIT INTERRUPTER IN ACCORDANCE WITH SECTION 210.12, OF THE NEC.
10. GAS APPLIANCES MAY BE SUBSTITUTED FOR ELECTRIC APPLIANCES WHERE APPLICABLE. WHEN GAS APPLIANCES ARE INSTALLED, ALL GAS PIPING, CONNECTIONS, HOOK-UPS, ETC. TO BE INSTALLED ON SITE BY OTHERS. PANEL SIZE INSTALLED: 200A
11. A CIRCUIT BREAKER LOCKING DEVICE SHALL BE PROVIDED TO LOCK THE APPLICABLE BREAKERS IN THEIR "OFF" POSITION. THIS APPLIES TO CIRCUIT BREAKERS WHICH SERVE AS THE DISCONNECT FOR ELECTRIC WATER HEATERS, ELECTRIC BASEBOARD HEATERS, AND ANY APPLIANCE RATED OVER 300 WATTS OR 1/8 HORSEPOWER, WHICH ARE NOT LOCATED WITHIN CLEAR SIGHT OF THEIR DISCONNECT.
10. IF THE PERIMETERS OF THE AREAS OF THE ON-SITE INSTALLED STOOPS, PORCHES OR DECKS ARE NOT UNDER THE EXTERIOR ELECTRICAL RECEPTACLES SHOWN IN THE ELECTRICAL FLOOR PLAN, THEN ADDITIONAL RECEPTACLES SHALL BE SITE INSTALLED WITHIN THESE AREAS BY THE CONTRACTOR.

WINDOW SCHEDULE - MOD SINGLE HUNG

S SUFFIX DENOTES SAFETY GLAZING

Mfg	Label	Width R/O	Height R/O	R/O SF	Light	Vent	Room SF	U Value	Egress No	Egress Yes	Design Load	SHGC w/o Grids	SHGC w/ Grids	Air Infil
PLY GEM	6010TN	72	12	6.00	3.10	0.00	0.00	0.29	●		50	0.28	0.25	0.01
PLY GEM	24210M	30.38	37.63	7.94	5.10	2.53	63.25	0.29	●		50	0.28	0.25	0.18
PLY GEM	24210MS	30.38	37.63	7.94	5.10	2.53	63.25	0.29	●		50	0.28	0.25	0.18
PLY GEM	3046M	38.38	57.63	15.36	11.30	5.70	141.25	0.29		●	50	0.28	0.25	0.18
PLY GEM	3046MS	38.38	57.63	15.36	11.30	5.70	141.25	0.29		●	50	0.28	0.25	0.18
PLY GEM	24210M-2	60.75	37.63	15.87	10.20	5.06	126.50	0.29	●		50	0.28	0.25	0.18
PLY GEM	3046M-2	76.75	57.63	30.71	22.60	11.40	282.50	0.29		●	50	0.28	0.25	0.18

Builder: Pennwest Homes
Title: Schedules and General Notes
Callout: 2634
Revisions: Date / Number
Scale: N.T.S.
Date: 03/03/2014
Drawn By: RM
Reference: NONE
Cust: Stock
Dlr: Schiavi Home Builders
S/N:
Model/Eng. No.: HZ106-A1
Pg: NG