

## GENERAL NOTES

- ELECTRICAL**
- ALL CONDUCTORS SHALL BE COPPER.
  - ALL WIRING DEVICES AND EQUIPMENT SHALL BE SPECIFICATION GRADE AND UL LISTED.
  - THE INSTALLATION OF ALL MATERIALS SHALL COMPLY WITH THE NATIONAL ELECTRIC CODE, 2014 EDITION OR LATEST.
  - ALL MATERIALS SHALL BE NEW.
  - OUTLETS AND JUNCTION BOXES SHALL BE ZINC-COATED OR CADMIUM PLATED SHEET STEEL. BOXES NOT LESS THAN FOUR INCHES SQUARE AND SUITABLE FOR THE TYPE OF SERVICE OUTLET. ALL OUTLET AND JUNCTION BOXES SHALL BE SECURELY SURFACE MOUNTED.
  - THE ENTIRE SYSTEM SHALL BE SOLIDLY GROUNDED USING COMPRESSION-TYPE CONDUIT FITTINGS ON CONDUITS AND PROPERLY BONDED GROUND CONDUCTORS. CRIMP-TYPE AND SET SCREW-TYPE CONDUIT FITTINGS ARE NOT ALLOWED. ALL RECEPTACLES AND EQUIPMENT CIRCUITS SHALL BE GROUNDED USING A FULL-SIZE EQUIPMENT GROUNDING CONDUCTOR RUN WITH THE CURRENT CONDUCTORS.
  - ALL WALL PENETRATIONS FOR TELCO, POWER, AND GROUNDING SHALL REQUIRE RIGID STEEL SLEEVES.
  - ALL SWITCHES SHALL BE 48 INCHES A.F.F.
  - ALL RECEPTACLES SHALL BE 18 INCHES A.F.F.
  - ALL T-STATS SHALL BE 60 INCHES A.F.F.
- CABLE TRAY**
- BOTTOM OF CABLE TRAY SHALL BE 7"-6" A.F.F.
  - CABLE TRAY ANCHORS SHALL BE MOUNTED TO STRUCTURAL CEILING.
  - AFTER FINAL LEVELING OF CABLE TRAY, CUT THREADED RODS 1/2" BELOW NUT AND CAP OFF.
- ALARM AND SIGNAL**
- ALL ALARM WIRES SHALL BE RUN FROM EACH OF THE COMPONENTS TERMINAL STRIP. LEAVE ADDITIONAL ALARM WIRE COILED WITH SUFFICIENT LENGTH TO REACH THE FLOOR.
  - ALL ALARM WIRES SHALL BE TAGGED AND LABELED WITH THE APPROPRIATE ALARM ITEM. ALL CONTRACTORS WILL BE NORMALLY CLOSED, DRY, AND ISOLATED FROM GROUND, U.O.N.
  - ALL ALARM WIRING SHALL BE 1/2"C., 2 #22, UNLESS OTHERWISE NOTED.
  - ELECTRICAL CONTRACTOR TO CARRY POWER FEED OF LESSEE'S MOD CELL EQUIPMENT.
  - ALL ENCLOSURES TO BE NEMA 3R.
  - INTEGRATED LOAD CENTER ASSEMBLY AND THE GENERATOR SUPPLIED BY LESSEE.

## ABBREVIATIONS

AGB	COPPER ANTENNA GROUND BAR
AWG	AMERICAN WIRE GAUGE
BCW	BARE COPPER WIRE
BTS	BASE TRANSMISSION SYSTEM
CIGBE	COAX INSULATED GROUND BAR EXTERNAL DRAWING
DWG	ELECTRICAL METALLIC TUBING
EMT	GENERATOR
GEN	GLOBAL POSITIONING SYSTEM
GPS	GROWTH
GR	INTERNAL GROUND RING (HALO)
IGR	LOWER ANTENNA COPPER GROUND BAR
LAGB	MAIN CIRCUIT BREAKER
MCB	MASTER ISOLATED GROUND BAR
MIGB	PERSONAL COMMUNICATION SYSTEM
PCS	POWER PROTECTION CABINET
PPC	PRIMARY RADIO CABINET
PRC	RIGID GALVANIZED STEEL
RGS	RACEWAY
RHW	TYPICAL
TYP	UPPER ANTENNA COPPER GROUND
UAGB	

## ELECTRICAL NOTES

- UTILITY SERVICES SHOWN ARE PROPOSED, THE ELECTRIC CONTRACTOR SHALL COORDINATE EXACT TELEPHONE AND ELECTRIC SERVICE CONNECTION POINTS, PULL BOXES, ROUTING AND ASSOCIATED REQUIREMENTS WITH OWNER AND LOCAL UTILITY CO.
- VISIT SITE AND EXAMINE CONDITIONS UNDER WHICH WORK MUST BE PERFORMED. REPORT ADVERSE CONDITIONS IN WRITING TO LICENSEE. COMMENCEMENT OF WORK SHALL BE CONSTRUED AS COMPLETE ACCEPTANCE OF EXISTING CONDITIONS INCLUDING PREPARATORY WORK DONE BY OTHERS.
- GIVE NOTICES, FILE PLANS, OBTAIN PERMITS AND LICENSES, PAY FEES AND BACK CHARGES, AND OBTAIN NECESSARY APPROVALS FROM AUTHORITIES THAT HAVE JURISDICTION.
- PERFORM WORK AS REQUIRED BY BOCA AND PER LOCAL LAWS.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE ALL CONDUIT ROUTING WITH OWNER AND FIELD CONSTRUCTION MANAGER.
- ALL EXTERIOR WALL PENETRATIONS SHALL BE SILICONE SEALED.
- MATERIAL AND EQUIPMENT SHALL BE UL, NEMA, ANSI, IEEE, ADA & CBM APPROVED FOR INTENDED SERVICE. INSTALLATION SHALL MEET REQUIREMENTS OF NATIONAL AND STATE ELECTRICAL CODE.
- ALL ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THEN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C..
- ALL NEW WIRING SHALL BE TYPE THWN RATED 75°C., 600 VOLT. WET OR DRY LOCATIONS. MINIMUM BRANCH CIRCUIT WIRING SHALL BE #12 AWG SOLID COPPER.
- ALL METALLIC CONDUITS SHALL BE PROVIDED WITH BONDING BUSHINGS.
- ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE LICENSEE PROJECT MANAGER AT JOB COMPLETION.
- PROVIDE THE OWNER WITH ONE SET OF COMPLETE ELECTRICAL "AS BUILT" DRAWINGS AT THE COMPLETION OF THE JOB.
- GUARANTEE WORK IN WRITING FOR ONE YEAR FROM DATE OF FINAL ACCEPTANCE. REPAIR OR REPLACE DEFECTIVE MATERIALS OR INSTALLATION AT NO COST TO OWNER. CORRECT DAMAGE CAUSED IN MAKING NECESSARY REPAIRS AND REPLACEMENTS UNDER GUARANTEE AT NO COST TO OWNER.
- CONTRACTOR SHALL CONTACT "DIG SAFE" (1-888-DIG-SAFE) PRIOR TO COMMENCEMENT OF WORK.

## GENERATOR SPECIFICATIONS

THE ENGINE GENERATOR SHALL BE OF THE SAME QUALITY AS THE POLAR POWER 10KW GENERATOR.

MODEL #: 8220K-972

GENERATOR SHALL BE 10KW/ STANDBY 24-500V ENCLOSED UNIT, SERVICE VOLTAGE SHALL MATCH THAT OF ENCLOSURE.

OVERALL SIZE: 24.5" x 18"W x 21"H

WEIGHT (WET): 302 LBS.±

### ACCESSORIES:

- ACOUSTICAL ENCLOSURE WITH CRITICAL EXHAUST SILENCER
- FLEXIBLE EXHAUST CONNECTOR STAINLESS STEEL
- BLOCK HEATER WITH THERMOSTAT
- TAIL PIPE AND RAIN CAP KIT
- BATTERY
- BATTERY RACK AND CABLES
- BATTERY CHARGER, EQUALIZE/FLOAT-TYPE
- OIL DRAIN KIT
- COMMON FAILURE RELAY KIT
- VIBRATION ISOLATION KIT 5

LOCAL FUEL GAS AND PLUMBING CODE APPLIES TO THE GENERATOR AND ITS COMPONENTS.

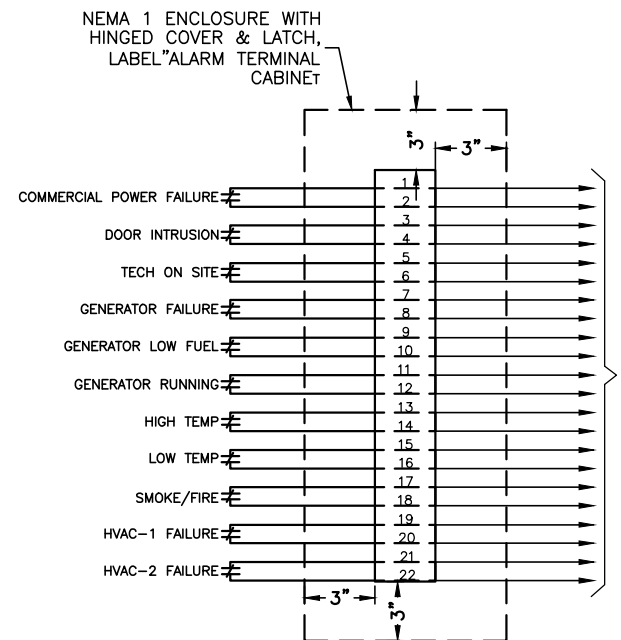
## DC CABLE TYPE AND SIZING (2% DROP)

	6KW	10KW	15KW
10 FT (3 M)	#4	#3	#1
20 FT (6 M)	#2	#1/0	#3/0
50 FT (15 M)	#3/0	#250 kCMIL	#400 kCMIL
100 FT (30 M)	#300 kCMIL	#500 kCMIL	#750 kCMIL
150 FT (45 M)	#500 kCMIL	#750 kCMIL	#1250 kCMIL
200 FT (60 M)	#600 kCMIL	#1000 kCMIL	#1500 kCMIL

## PANEL NAME: PROPOSED AC PANEL

1Ø, 3W 120/240V, 200A

CKT No.	BRKR AMPS	P	LOAD DESCRIPTION	KVA	BRANCH CKT	BRANCH CKT	KVA	LOAD DESCRIPTION	P	BRKR AMPS	CKT No.
1											2
3	40	2	RECTIFIER #1		2#8, 1#8G, 3/4"C	2#8, 1#8G, 3/4"C		RECTIFIER #3	2	40	4
5											6
7	40	2	RECTIFIER #2		2#8, 1#8G, 3/4"C	2#8, 1#8G, 3/4"C		RECTIFIER #4	2	40	8
9											10
11											12
13											14
15											16
17	20	1	LIGHTS		2#12, 1#12G, 3/4"C						18
19	20	1	RECEPTACLES		2#12, 1#12G, 3/4"C						20
21	20	1	GEN CHARGER		2#12, 1#12G, 3/4"C						22
23	20	1	GEN BLOCK HEAT		2#12, 1#12G, 3/4"C	2#12, 1#12G, 3/4"C		TELCO RECEPTACLE	1	20	24
25			SPARE					SPARE			26
27			SPARE					SPARE			28
29	1		SPARE					SPARE			30
31											32
33											34
35											36
37											38
39											40
41											42



NOTE:  
INSTALL ALARM TERMINAL INSIDE 16X16 HOFFMAN BOX TELCO BACKBOARD WITH (2) 1" KNOCK OUTS

### NOTES:

- TERMINATIONS:** TERMINATIONS TO THE ALARM STRIP WILL HAVE CRIMP ON BLOCK SPADE.
- LABELING:** ALL ALARMS WILL BE LABELED WITH WHITE LAMINATED TAPE LABELS AT THE ALARM BLOCK.
- ALL ALARMS WILL BE BROUGHT TO THE TELCO BOARD AND CONNECTED TO THE TERMINAL STRIP.
- TERMINAL STRIP WILL BE LOCATED INSIDE A HOFFMAN BOX MOUNTED TO THE TELCO BOARD.
- USE A MINIMUM 18AWG WIRE TO BRING ALARMS TO THE ALARM BOARD.
- ALARM CONTACTS ARE NORMALLY CLOSED. OPENING OF CONTACTS INDICATES AN ALARM CONDITION.

CIRCUIT TERMINALS	ALARM DESIGNATION	ALARM GENERATED BY:
1-2	COMMERCIAL POWER FAILURE	TRANSFER SWITCH
3-4	DOOR INTRUSION	EITHER DOOR
5-6	TECH ON SITE	SHELTER
7-8	GENERATOR FAILURE	GENERATOR
9-10	GENERATOR LOW FUEL	GENERATOR
11-12	GENERATOR RUNNING	GENERATOR
13-14	HIGH TEMP	CLIMATE CONTROL
15-16	LOW TEMP	CLIMATE CONTROL
17-18	SMOKE/FIRE	EITHER SMOKE DETECTOR
19-20	HVAC-1 FAILURE	HVAC
21-22	HVAC-2 FAILURE	HVAC

ALARM DETAIL  
22x34 SCALE: N.T.S

1  
E-1

FOR CONSTRUCTION

PREPARED FOR:



CHECKED BY: JX

APPROVED BY: DPH

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
1	02/09/16	FOR CONSTRUCTION	MR
0	07/31/15	FOR CONSTRUCTION	HH

SITE NAME:  
PORTLAND 3 ME

SITE ADDRESS:  
476 SUMMIT STREET  
PORTLAND, ME 04103

SHEET TITLE  
ELECTRICAL/  
GROUNDING PLAN  
& RISER DIAGRAM

SHEET NUMBER  
**E-1**