

NOTES:

- CONSULT ELECTRIC COMPANY FOR AVAILABLE FAULT CURRENT AT TRANSFORMER BEFORE PURCHASING EQUIPMENT. FUSES AND BREAKERS AIC RATING MUST BE GREATER THAN FAULT CURRENT RATINGS.
- A SYSTEM AIC RATING OF 65,000A WAS USED FOR CALCULATIONS UNTIL LOCAL ELECTRIC COMPANY CAN PROVIDE AVAILABLE FAULT CURRENT.
- POWER DISTRIBUTION PANEL B WILL REQUIRE FLOOR RACK MOUNTING.

FEEDER SCHEDULE

FEEDER AMPS	CONDUIT AND FEEDER	FEEDING THESE DEVICES
45	3/4" C, 2#8, #8N, #8G	XFMR
80	1" C, 2#4, #4N, #8G	B, DISC
250	2-1/2" C, 3#250kcmil, #250kcmil, #2G	ATS, ATS, CP, MAIN DISC

-sizing METHOD: COPPER, 60°C #12 THROUGH #1, 75°C 1/0 AND ABOVE

FAULT CURRENT SCHEDULE

LOCATION	AIC RATING	FAULT	FEEDER LENGTH	TRANSFORMER	
				KVA	Z %
ATS	65,000	47,322	12'		
B	14,000	1,618	11'		
CP	65,000	31,267	46'		
DISC	22,000	1,693	15'		
MAIN DISC	100,000	54,937	12'		
XFMR	22,000	1,802	41'	15	7.416

GENERATOR DATA:
 OPEN SET WITH SKID: 5,751 LBS.
 STEEL ENCLOSURE: 1,300 LBS.
 FUEL TANK: 4,190 LBS
 FUEL TANK DIMENSIONS: 228" L x 53" W x 35.5" H
 MAXIMUM TANK STORAGE CAPACITY: 1,210 GAL.
 72 HOUR CAPACITY.

RISER DIAGRAM
 SCALE: NO SCALE

B

ROOM	VOLTS	PHASES	AIC
BLOWER BUILDING	240/120V	2P 3W	14,000
MOUNTING SURFACE	BUS AMPS		MAIN BKR MLO
FED FROM XFMR	NEUTRAL	100%	LUGS STANDARD

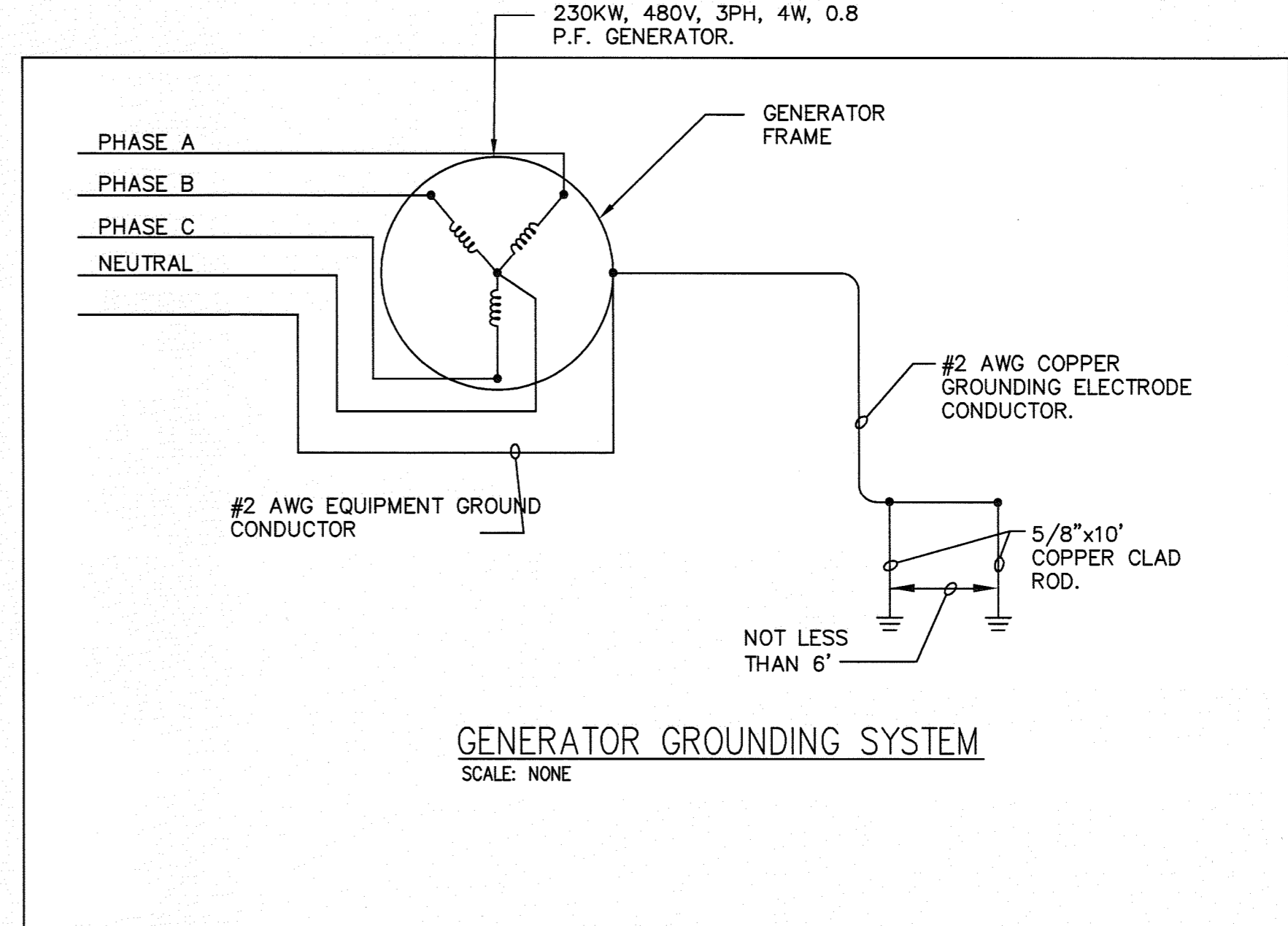
CKT #	CKT BKR	CIRCUIT DESCRIPTION	KVA LOAD		CIRCUIT DESCRIPTION	KVA LOAD	
			A	B		A	B
1	20/1	PANEL HEATER/LIGHTS	0.8		2	20/1	CONTROLS
3	20/1	BATTERY CHARGER	0.8	0.8	4	20/1	RECEPTACLE
5	20/1	BLOWER ROOM LIGHTING	1.8		6	20/2	SPARE
7	20/1	STORAGE RECEPTACLE		0.9	8		
9	20/1	STORAGE LIGHTING	0.637		10	20/1	WALL PACK LIGHTING
11	80/1	SPARE			12	20/1	SPACE
13	80/2	MAIN BREAKER	0		14	20/1	AIR DRYER
15			0		16	20/1	SPARE
TOTAL CONNECTED KVA BY PHASE			5.06		TOTAL CONNECTED KVA BY PHASE		
TOTAL CONNECTED AMPS BY PHASE			42.2		TOTAL CONNECTED AMPS BY PHASE		

	CONN. KVA	CALC. KVA		CONN. KVA	CALC. KVA
LIGHTING	3.51	4.39 (125%)	CONTINUOUS	1.2	1.5 (125%)
LARGEST MOTOR	0.35	0.438 (125%)	HEATING	0	0 (100%)
OTHER MOTORS	0	0 (100%)	NONCONTINUOUS	0	0 (100%)
RECEPTACLES	2.06	2.06 (50%>10)	KITCHEN EQUIP	0	0 (N/A)
			NONCOIN/DIVERSE	0	0 (N/A)
			TOTAL KVA	7.12	8.39

BALANCED PHASE AMPS 35

VOLTAGE DROP SCHEDULE

LOCATION	VOLTAGE DROP			
	FEEDER 1	FEEDER 2	MAX. BRANCH CIRCUIT	TOTAL
ATS	0.11%		---	0.11%
B	1.62%		0.98% (CKT 5)	2.6%
CP	0.39%		0.14% (TAP 1)	0.52%
GEN	0%		---	0%
M	0.32%		---	0.32%
MAIN DISC	0.06%		---	0.06%
XFMR	1.5%		---	1.5%



M

ROOM	VOLTS	PHASES	AIC
BLOWER BUILDING	480Y/277V	3P 4W	65,000
MOUNTING FLUSH	BUS AMPS	250	MAIN BKR 250
FED FROM ATS	NEUTRAL	100%	LUGS STANDARD

CKT #	CKT BKR	CIRCUIT DESCRIPTION	KVA LOAD			CIRCUIT DESCRIPTION	KVA LOAD				
			A	B	C		A	B	C		
1	20/3	COMPRESSOR	3.06			2	250/3	MCC CP	65.2		
3						4					
5						6					
7	20/1	SPACE	0		3.06	8	45/2	XFMR XFMR	5.06		65.2
9	20/1	SPACE	0		0	10				2.06	0
11	20/1	SPACE	0		0	12	20/1	SPACE			0
13	20/1	SPACE	0		0	14	20/1	SPACE			0
15	20/1	SPACE	0		0	16	20/1	SPACE			0
17	20/1	SPACE	0		0	18	20/1	SPACE			0
19	20/1	SPACE	0		0	20	20/1	SPACE			0
21	20/1	SPACE	0		0	22	20/1	SPACE			0
23	20/1	SPACE	0		0	24	20/1	SPACE			0
TOTAL CONNECTED KVA BY PHASE			73.3			TOTAL CONNECTED KVA BY PHASE			70.3		68.2
TOTAL CONNECTED AMPS BY PHASE			265			TOTAL CONNECTED AMPS BY PHASE			254		246

	CONN. KVA	CALC. KVA		CONN. KVA	CALC. KVA
LIGHTING	3.51	4.39 (125%)	CONTINUOUS	1.2	1.5 (125%)
LARGEST MOTOR	64.2	80.2 (125%)	HEATING	0	0 (100%)
OTHER MOTORS	76.7	76.7 (100%)	NONCONTINUOUS	0	0 (100%)
RECEPTACLES	2.06	2.06 (50%>10)	KITCHEN EQUIP	0	0 (N/A)
			NONCOIN/DIVERSE	64.2	0 (0%)
			TOTAL KVA	212	165

BALANCED THREE PHASE AMPS 199

CP

ROOM	VOLTS	PHASES	AIC
BLOWER BUILDING	480Y/277V	3P 4W	65,000
MOUNTING FLOOR	BUS AMPS	250	MAIN BKR 250
FED FROM M	NEUTRAL	100%	LUGS STANDARD

CKT #	CIRCUIT DESCRIPTION	KVA LOAD			BREAKER TRIP/POLES	COND.	FEEDER RACEWAY AND CONDUCTORS
		A	B	C			
1	MOTOR BLOWER #1	21.4	21.4	21.4	125/3	CU	1-1/4" C, 3#1, #6G
2	MOTOR BLOWER #2	21.4	21.4	21.4	125/3	CU	1-1/4" C, 3#1, #6G
3	MOTOR BLOWER #3	21.4	21.4	21.4	125/3	CU	1-1/4" C, 3#1, #6G
4	XFMR/RECPY/PANEL AC	1	1	1	20/3	CU	1/2" C, 3#12, #12N, #12G
5	SPACE	0	0	0	20/2	CU	
6	SPACE	0	0	0	20/3	CU	
7	SPACE	0	0	0	20/3	CU	
8	SPACE	0	0	0	20/3	CU	
9	SPACE	0	0	0	20/3	CU	
10	SPACE	0	0	0	20/3	CU	
TOTAL CONNECTED KVA BY PHASE		65.2	65.2	65.2			

	CONN. KVA	CALC. KVA		CONN. KVA	CALC. KVA
LIGHTING	0	0 (125%)	CONTINUOUS	0	0 (125%)
LARGEST MOTOR	64.2	80.2 (125%)	HEATING	0	0 (100%)
OTHER MOTORS	67.2	67.2 (100%)	NONCONTINUOUS	0	0 (100%)
RECEPTACLES	0	0 (50%>10)	KITCHEN EQUIP	0	0 (N/A)
			NONCOIN/DIVERSE	64.2	0 (0%)
			TOTAL KVA	196	147

BALANCED THREE PHASE AMPS 177

GENERATOR NOTES:

- ENGINE GENERATOR ASSEMBLY TO PROVIDE SOURCE OF POWER FOR LEVEL 1 & 2 APPLICATIONS IN ACCORDANCE WITH NFPA 110.
- CAPACITY: 230 KW, AT ELEVATION OF 500 FEET ABOVE SEA LEVEL, STANDBY RATING. INSULATION CLASS H RATED AT 150 DEGREES C RISE. ELECTRONIC GOVERNOR TO MAINTAIN ENGINE SPEED WITHIN 0.5 % STEADY STATE REGULATION. VOLTAGE REGULATION PLUS OR MINUS 1 % FROM NO LOAD TO FULL LOAD.
- ENGINE LIQUID-COOLED TURBOCHARGED, AFTERCOOLED TIER III COMPLIANT COMBUSTION ENGINE. FUEL SYSTEM: DIESEL. PROVIDE DIESEL STORAGE TANK CAPACITY FOR 72 HOURS OF CONTINUOUS OPERATION. PROVIDE ALL REQUIREMENT OF INSTALLATION BY CODES AND MANUFACTURER RECOMMENDATIONS FOR DIESEL GENERATOR.
- ENGINE SPEED: 1800 RPM. ENGINE SHUT DOWN ON HIGH WATER TEMPERATURE, LOW OIL PRESSURE, OVER SPEED, AND ENGINE OVERCRANK. LIMITS SELECTED BY MANUFACTURER.
- FOR DESIGN OF CONCRETE BASE SLAB. ALL FEDERAL, STATE AND LOCAL CODES SHOULD BE FOLLOWED. CONCRETE BASE SLAB SHALL EXCEED THE LENGTH AND WIDTH OF THE GENERATOR BY A MINIMUM OF 6 INCHES ON ALL SIDES.

P. AUTOMATIC TRANSFER SWITCH.

- AUTOMATIC TRANSFER SWITCH NEMA ICS 10, ELECTRICALLY OPERATED AND MECHANICALLY HELD. WITHSTAND CURRENT RATING 200,000 RMS SYMMETRICAL AMPERES, WHEN USED WITH CLASS J CURRENT LIMITING FUSE.
- INTERRUPTING CAPACITY: 100% OF CONTINUOUS RATING.

Q. DISCONNECT SWITCHES:

- DISCONNECT SWITCHES SHALL BE RATED 80 VOLTS AC, NEMA TYPE HD (HEAVY DUTY). QUICK-MAKE, QUICK-BREAK, HP RATED, NON-FUSIBLE OR FUSIBLE, IN NEMA CLASS TYPE 4 ENCLOSURE, LOCKABLE WITH NUMBER OF POLES AND AMPERAGE AS INDICATED ON THE DRAWINGS.

REV	DATE	DESCRIPTION
1	4/15/10	CMO REVISED FOR THE RECORD

RISER DIAGRAM
PANEL SCHEDULES

SOUTHEAST COUNTY LANDFILL
LANDFILL GAS COLLECTION
AND CONTROL SYSTEM

HILLSBOROUGH COUNTY
SOLID WASTE
MANAGEMENT DEPARTMENT
TAMPA, FLORIDA

CLIENT

SCS ENGINEERS
 STEARNS, CONRAD AND SCHMIDT
 CONSULTING ENGINEERS
 400 HIGHLAND AVENUE, TAMPA, FL 33610
 813.874.0800 FAX 813.874.9757
 FLORIDA CERTIFICATE OF AUTHORIZATION NO. 00004882

DATE: APR 16 2010
 SOUTHWEST DISTRICT
 TAMPA

CADD FILE:
 075500P&D

DATE:
 JULY 7, 2008

SCALE:
 AS SHOWN

DRAWING NO.:
E-2 of 30

RECORD DRAWING
 DATE: APRIL 15, 2010

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