STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF AIR POLLUTION CONTROL

NOT TO BE USED FOR TITLE V APPLICATIONS

9th Floor, L & C Annex
401 Church Street
Nashville, TN 37243-1531
Telephone: ( 615 ) 532-0554
FAX: ( 615 ) 532-0614

2014 APR 16 PM 1: 38

# PERMIT APPLICATION

APC 20

PLEASE TYPE OR PRINT AND SUBMIT IN DUPLICATE FOR EACH EMISSION SOURCE. ATTACH APPROPRIATE SOURCE DESCRIPTION FORMS.

| | | | |
|---|---|---|---|
| 1. **ORGANIZATION'S LEGAL NAME** American Towers - Milan TN # 308958 | | /// FOR | APC COMPANY--POINT NO. 27-0244 |
| 2. **MAILING ADDRESS** (ST/RD/P.O. BOX) P.O. Box 63604 | | /// APC | APC LOG/PERMIT NO. 968600 |
| CITY Phoenix | STATE Arizona | ZIP CODE 85082 | PHONE WITH AREA CODE 602-284-0280 |
| 3. **PRINCIPAL TECHNICAL CONTACT** Scot Sandefur | | | PHONE WITH AREA CODE 602-284-0280 |
| 4. **SITE ADDRESS** (ST/RD/HWY) 10162 R Stinson Street | | | COUNTY NAME Gibson |
| CITY OR DISTANCE TO NEAREST TOWN Milan | | ZIP CODE 38358 | PHONE WITH AREA CODE 602-284-0280 |
| 5. **EMISSION SOURCE NO.** (NUMBER WHICH UNIQUELY IDENTIFIES THIS SOURCE) E1 | | PERMIT RENEWAL YES ( ) NO (X) | |

6. **BRIEF DESCRIPTION OF EMISSION SOURCE**

Emergency Backup Power - Industrial Generator set; 131 hp, 80 kW with 300 gallon diesel fuel belly tank.

7. **TYPE OF PERMIT REQUESTED**

| | | | | |
|---|---|---|---|---|
| CONSTRUCTION (X) | STARTING DATE 6/16/14 | COMPLETION DATE 6/27/14 | LAST PERMIT NUMBER | EMISSION SOURCE REFERENCE NUMBER |
| OPERATING ( ) | DATE CONSTRUCTION STARTED | DATE COMPLETED | LAST PERMIT NUMBER | EMISSION SOURCE REFERENCE NUMBER |
| LOCATION TRANSFER ( ) | TRANSFER DATE | | LAST PERMIT NUMBER | EMISSION SOURCE REFERENCE NUMBER |

ADDRESS OF LAST LOCATION

8. **DESCRIBE CHANGES THAT HAVE BEEN MADE TO THIS EQUIPMENT OR OPERATION SINCE THE LAST CONSTRUCTION OR OPERATING PERMIT APPLICATION.**

| | | |
|---|---|---|
| 9. **SIGNATURE** (APPLICATION MUST BE SIGNED BEFORE IT WILL BE PROCESSED) | | **DATE** 04/02/14 |
| 10. **SIGNER'S NAME** (TYPE OR PRINT) Scot Sandefur | **TITLE** Director EH&S | **PHONE WITH AREA CODE** 602-284-0280 |

(OVER)

CN-0730

RDA 1298

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# PROCESS OR FUEL BURNING SOURCE DESCRIPTION

APC21(& 24)

PLEASE TYPE OR PRINT, SUBMIT IN DUPLICATE AND ATTACH TO THE PERMIT APPLICATION.

| | | | |
|---|---|---|---|
| **1. ORGANIZATION NAME** American Towers - Milan # 308958 | | / / / FOR | APC COMPANY-POINT NO. |
| **2. EMISSION SOURCE NO.** ( AS ON PERMIT APPLICATION ) E1 | SIC CODE | / / / APC | APC PERMIT/LOG NO. |

**3. DESCRIPTION OF PROCESS OR FUEL BURNING UNIT**

Emergency Backup Generator - Industrial diesel generator 131 hp, 80 kw with 300 gallon diesel belly tank

| | | | | |
|---|---|---|---|---|
| **4. NORMAL OPERATION:** → Emergency | HOURS/DAY Varies | DAYS/WEEK Varies | WEEKS/YEAR Varies | DAYS/YEAR Varies |
| **5. PERCENT ANNUAL THROUGHPUT:** → | DEC.-FEB. 25% | MARCH-MAY 25% | JUNE-AUG. 25% | SEPT.-NOV. 25% |

| | |
|---|---|
| **6. TYPE OF PERMIT APPLICATION** | ( CHECK BELOW ONE ONLY ) |
| PROCESS SOURCE: APPLY FOR A SEPARATE PERMIT FOR EACH SOURCE. ( CHECK AT RIGHT, AND COMPLETE LINES 7, 8, 13, AND 14 ). | ( X ) |
| PROCESS SOURCE WITH IN-PROCESS FUEL: PRODUCTS OF COMBUSTION CONTACT MATERIALS HEATED. APPLY FOR A SEPARATE PERMIT FOR EACH SOURCE. ( CHECK AT RIGHT, AND COMPLETE LINES 7, 8, AND 10 THROUGH 14 ) | ( ) |
| NON-PROCESS FUEL BURNING SOURCE: PRODUCTS OF COMBUSTION DO NOT CONTACT MATERIALS HEATED. COMPLETE THIS FORM FOR EACH BOILER OR FUEL BURNER AND COMPLETE AN EMISSION POINT DESCRIPTION FORM ( APC 22 ) FOR EACH STACK. ( CHECK AT RIGHT, AND COMPLETE LINES 9 TO 14 ) | ( ) |

| | | | |
|---|---|---|---|
| **7. TYPE OF OPERATION:** CONTINUOUS, ( ) | BATCH ( ) | NORMAL BATCH TIME | NORMAL BATCHES/DAY |

| **8. PROCESS MATERIAL INPUTS AND IN-PROCESS SOLID FUELS** | DIAGRAM* REFERENCE | INPUT RATES (POUNDS/HOUR) DESIGN | ACTUAL | / / | (FOR APC USE ONLY) SCC CODE |
|---|---|---|---|---|---|
| A. | | | | / / | |
| B. | | | | / / | |
| C. | | | | / / | |
| D. | | | | / / | |
| E. | | | | / / | |
| F. | | | | / / | |
| G. | | | | / / | |
| | TOTALS | | | / / | |

* A SIMPLE PROCESS FLOW DIAGRAM MUST BE ATTACHED.

( OVER )

APC 21 (& 24)

**9. BOILER OR BURNER DATA:** ( COMPLETE LINES 9 TO 14 USING A SEPARATE FORM FOR EACH BOILER )

| BOILER NUMBER | STACK NUMBER** | TYPE OF FIRING*** | RATED BOILER HORSEPOWER | RATED INPUT CAPACITY ($10^6$ BTU/HR) | OTHER BOILER RATING (SPECIFY CAPACITY AND UNITS) |
|---|---|---|---|---|---|
| NA | NA | NA | NA | NA | NA |

| BOILER SERIAL NO. | DATE CONSTRUCTED | DATE OF LAST MODIFICATION (EXPLAIN IN COMMENTS BELOW). |
|---|---|---|
| NA | NA | NA |

** BOILERS WITH A COMMON STACK WILL HAVE THE SAME STACK NUMBER.
*** CYCLONE, SPREADER ( WITH OR WITHOUT REINJECTION ), PULVERIZED ( WET OR DRY BOTTOM, WITH OR WITHOUT REINJECTION ), OTHER STOKER ( SPECIFY TYPE ), HAND FIRED, AUTOMATIC, OR OTHER TYPE ( DESCRIBE BELOW IN COMMENTS ).

**10. FUEL DATA:** ( COMPLETE FOR A PROCESS SOURCE WITH IN-PROCESS FUEL OR A NON-PROCESS FUEL BURNING SOURCE )

PRIMARY FUEL TYPE ( SPECIFY ) | STANDBY FUEL TYPE( S ) ( SPECIFY )

| FUELS USED | ANNUAL USAGE | HOURLY USAGE DESIGN | HOURLY USAGE AVERAGE | % SULFUR | % ASH | BTU VALUE OF FUEL | | (FOR APC ONLY) SCC CODE |
|---|---|---|---|---|---|---|---|---|
| NATURAL GAS: | $10^6$ CUFT | CUFT | CUFT | / / / / / / / / | / / / / / / | 1,000 | | |
| #2 FUEL OIL: Diesel #2 | $10^3$ GAL | GAL | GAL 0.0015% 15ppm | | / / / / / / | | | |
| #5 FUEL OIL: | $10^3$ GAL | GAL | GAL | | / / / / / / | | | |
| #6 FUEL OIL: | $10^3$ GAL | GAL | GAL | | / / / / / / | | | |
| COAL: | TONS | LBS | LBS | | | | | |
| WOOD: | TONS | LBS | LBS | / / / / / / / / | / / / / / / | | | |
| LIQUID PROPANE: | $10^3$ GAL | GAL | GAL | / / / / / / / / | / / / / / / | 85,000 | | |
| OTHER (.SPECIFY TYPE & UNITS.): | | | | | | | | |

**11. IF WOOD IS USED AS A FUEL, SPECIFY TYPES AND ESTIMATE PERCENT BY WEIGHT OF BARK**

NA

**12. IF WOOD IS USED WITH OTHER FUELS, SPECIFY PERCENT BY WEIGHT OF WOOD CHARGED TO THE BURNER.**

NA

**13. COMMENTS**

**14. SIGNATURE** | **DATE** 04/02/14

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# EMISSION POINT DESCRIPTION

APC 22

PLEASE TYPE OR PRINT AND SUBMIT IN DUPLICATE FOR EACH STACK OR EMISSION POINT.
ATTACH TO THE PERMIT APPLICATION.

| | | | | |
|---|---|---|---|---|
| 1. **ORGANIZATION NAME** American Towers – Milan #308958 | | | / / / FOR | APC COMPANY POINT NO. |
| 2. **EMISSION SOURCE NO.** (FROM APPLICATION) E1 | FLOW DIAGRAM POINT NUMBER | | / / / APC | APC SEQUENCE NO. |
| 3. **LOCATION:** 10162 R Stinson St Milan TN 38358 | LATITUDE 35.88862 | LONGITUDE -88.7626 | UTM VERTICAL 340910.1 | UTM HORIZONTAL 3973029.7 |
| 4. **BRIEF EMISSION POINT DESCRIPTION** (ATTACH A SKETCH IF APPROPRIATE): | | | | DISTANCE TO NEAREST PROPERTY LINE (FT) 4'11" |

COMPLETE LINES 5 AND 6 IF DIFFERENT FROM THAT ON THE PROCESS OR FUEL BURNING SOURCE DESCRIPTION (APC 21)

| | | | | |
|---|---|---|---|---|
| 5. **NORMAL OPERATION:** Emergency | HOURS/DAY Varies | DAYS/WEEK Varies | WEEK/YEAR Varies | DAYS/YEAR Varies |
| 6. **PERCENT ANNUAL THROUGHPUT:** | DEC.-FEB. 25% | MARCH-MAY 25% | JUNE-AUG. 25% | SEPT.-NOV. 25% |

| | | | | | |
|---|---|---|---|---|---|
| 7. **STACK OR EMISSION POINT DATA:** | HEIGHT ABOVE GRADE ( FT ) 4' | DIAMETER (FT) 3" | TEMPERATURE (°F) 887 | % OF TIME OVER 125°F | DIRECTION OF EXIT (UP, DOWN OR HORIZONTAL) UP |
| DATA AT EXIT CONDITIONS: | FLOW (ACTUAL $FT^3$/MIN. ) | VELOCITY (FT/SEC) | MOISTURE (GRAINS/$FT^3$) | | MOISTURE (PERCENT) |
| DATA AT STANDARD CONDITIONS: | FLOW (DRY STD. $FT^3$/MIN) | VELOCITY (FT/SEC) | MOISTURE (GRAINS/$FT^3$) | | MOISTURE (PERCENT) |

| 8. **AIR CONTAMINANTS** | ACTUAL EMISSIONS | | | | | | |
|---|---|---|---|---|---|---|---|
| | EMISSIONS (LBS/HR) | | CONCENTRATION | AVG. EMISSIONS (TONS/YR) | EMISSIONS* EST. METHOD | CONTROL DEVICES* | CONTROL EFFICIENCY% |
| | AVERAGE | MAXIMUM | | | | | |
| PARTICULATES | 0.0346 | | ** | 0.0346 | | | |
| SULFUR DIOXIDE | 0.5 | | *** | 0.13 | | | |
| CARBON MONOXIDE | 0.202 | | PPM | | | | |
| ORGANIC COMPOUNDS | | | PPM 0.0505 | | | | |
| NITROGEN OXIDES | 0.807 | | PPM | 0.202 | | | |
| FLUORIDES | | | | | | | |
| OTHER( SPECIFY ) | 0.75 | | | 0.19 | | | |
| OTHER( SPECIFY ) | | | | | | | |

( OVER )

**9. CHECK TYPES OF MONITORING AND RECORDING INSTRUMENTS THAT ARE ATTACHED:**
OPACITY MONITOR ( ), SO2 MONITOR ( ), NOX MONITOR ( ), OTHER (SPECIFY IN COMMENTS) ( )

**10. COMMENTS**

| **11. SIGNATURE** | **DATE** |
|---|---|
| | 04/02/14 |

* REFER TO THE BACK OF THE PERMIT APPLICATION FORM FOR ESTIMATION METHOD AND CONTROL DEVICE CODES.

** EXIT GAS PARTICULATE CONCENTRATION UNITS: PROCESS — GRAINS/DRY STANDARD FT3 ( 70°F ); WOOD FIRED BOILERS — GRAINS/DRY STANDARD FT3 ( 70°F ); ALL OTHER BOILERS — LBS/MILLION BTU HEAT INPUT.

*** EXIT GAS SULFUR DIOXIDE CONCENTRATIONS UNITS: PROCESS — PPM BY VOLUME, DRY BASES; BOILERS — LBS/MILLION BTU HEAT INPUT.

# STATEMENT OF EXHAUST EMISSIONS
# 2012 IVECO DIESEL FUELED GENERATOR

The measured emission values provided here are proprietary to Generac and its' authorized dealers. This information may only be disseminated upon request, to regulatory governmental bodies for emissions permitting purposes or to specifying organizations as submittal data when expressly required by project specifications, and shall remain confidential and not open to public viewing. This information is not intended for compilation or sales purposes and may not be used as such, nor may it be reproduced without the expressed written permission of Generac Power Systems, Inc. The data provided shall not be meant to include information made public by Generac.

| | | | |
|---|---|---|---|
| Generator Model: | **SD080** | Aspiration: | **Turbocharged/Aftercooled** |
| $kW_e$ Rating: | **80** | Rated RPM: | **1800 RPM** |
| Engine Family: | **CFPXL06.7DGB** | EPA Certificate #: | **CFPXL06.7DGB-015** |
| Engine Model: | **F4GE9485A*J** | CARB Certificate #: | **Not Applicable** |
| Rated Engine Power (BHP)*: | **131** | SCAQMD CEP#: | **511714** |
| Fuel Consumption (gal/hr)*: | **6.84** | Emission Std. Category: | **Tier 3** |

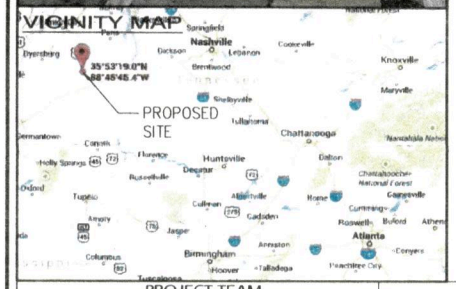
*Engine Power and Fuel Consumption are declared by the Engine Manufacturer of Record and the U.S. EPA.

**Emissions based on declared Rated BHP of specific Engine Models.**
**(These values are Actual Exhaust Emissions during a 5-Mode test based on declared Rated BHP.)**

| CO | NOx + NMHC | PM | |
|---|---|---|---|
| **0.9** | **3.8** | **0.16** | Grams/kW-hr |
| **0.7** | **2.8** | **0.12** | Grams/bhp-hr |

- The stated values are actual exhaust emission test measurements obtained from an engine representative of the type described above.
- Values based on 5-mode testing are official data of record as submitted to regulatory agencies for certification purposes. Testing was conducted in accordance with prevailing EPA & CARB protocols, which are typically accepted by SCAQMD and other regional authorities.
- No emission values provided above are to be construed as guarantees of emission levels for any given Generac generator unit.
- Generac Power Systems reserves the right to revise this information without prior notice.
- Consult state and local regulatory agencies for specific permitting requirements.
- The emission performance data supplied by the equipment manufacturer is only one element required toward completion of the permitting and installation process. State and local regulations may vary on a case-by-case basis and must be consulted by the permit applicant/equipment owner prior to equipment purchase or installation. The data supplied herein by Generac Power Systems cannot be construed as a guarantee of installability of the generating set.

***INDUSTRIAL SALES***
***P.O. BOX 8 WAUKESHA, WI 53187 262-544-4800 FAX 262-544-4854***




# BACKUP POWER PROJECT

## ATC SITE IDENTIFICATION:

SITE NUMBER: 308958
SITE NAME: MILAN

SITE ADDRESS: 10162 R STINSON STREET
MILAN, TN. 38358

THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.

811 Know what's below. Call before you dig.

## PROJECT DESCRIPTION:

THE PROPOSED PROJECT INCLUDES PLACING A 80 KW SHARED GENERATOR IN AN EXISTING CELLULAR TOWER COMPOUND.

## PROJECT TEAM

ARCHITECT:
TOWERSOURCE, INC
1875 OLD ALABAMA ROAD, SUITE 1008
ROSWELL, GA, 30076
678-990-2338
ELIZABETH B. USHER

LANDLORD:
AMERICAN TOWERS, LLC.
10 PRESIDENTIAL WAY
WOBURN, MA 01801
TEL: 781-926-4500
FAX: 781-926-4555

UTILITIES:
POWER COMPANY:
SOUTHWEST TENNESSEE ELECTRIC COMPANY

TELEPHONE COMPANY:
AT&T/BELLSOUTH

## PROJECT SUMMARY

GEOGRAPHIC COORDINATES:
LATITUDE: 35° 53' 19.0" N
LONGITUDE: 88° 45' 45.4" W

COUNTY:
ZONING: N/A
JURISDICTION: GIBSON COUNTY

CODE BLOCK:
2006 INTERNATIONAL BUILDING CODE
2011 NATIONAL ELECTRIC CODE

ATC FIELD OPS TECH:
Jarrad Mallard
901-482-6814

AT&T OPS FOR POWER CUT OVER:
NEED 24 HOUR NOTICE
(OPS CONTACT NAME)
TEL:
EMAIL:

## PROJECT NOTES

1. THE FACILITY IS UNMANNED.
2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE.
3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE.
4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED.
5. HANDICAP ACCESS IS NOT REQUIRED.

## PROJECT LOCATION DIRECTIONS

FROM ATLANTA:

Take I-75 North. (106 mi) Take exit 2 on the left to merge onto I-24 W toward Chattanooga/Nashville. (6.2 mi) Keep left to stay on I-24 W, follow signs for Interstate 24 W/Interstate 59/Nashville/Birmingham. (106 mi) Take exit 74A for Tennessee 840 W toward Franklin. (0.7 mi) Merge onto TN-840 W. (52.8 mi) Take exit 1A to merge onto I-40 W toward Memphis. (82.9 mi) Take exit 93 for Tennessee 152/Law Road. (0.2 mi) Turn right onto TN-152 W/Law Rd. (1.2 mi) Turn left onto TN-152 W/Spring Creek Law Rd. (3.8 mi) Turn left onto TN-1 W/US-70 W. (62 ft) Turn right onto TN-152 W. (4.7 mi) Turn right onto Sweedie Parrish Rd. (0.6 mi) Take the 1st left onto Hope Hill Cemetery Rd. (1.2 mi) Turn right to stay on Hope Hill Cemetery Rd. (0.7 mi) Turn right onto TN-43 N/US-45E N/Milan Hwy. (3.9 mi) Turn left onto Graball Dr. (0.9 mi) Turn right onto I Windsor Rd. (0.4 mi) Take the 1st right onto Stinson St. (0.4 mi) Turn right and the site will be on the left. (482 ft)

## SHEET INDEX

| SHT NO: | DESCRIPTION: |
|---|---|
| T-1 | TITLE SHEET & PROJECT INFORMATION |
| A-1 | DETAILED SITE PLAN |
| A-2 | CONCRETE PAD DETAILS |
| E-1 | WIRING DIAGRAM & H-FRAME LAYOUT |
| E-2 | ELECTRICAL DETAILS |
| G-1 | COMPOUND GROUNDING |
| | GENERATOR ASSEMBLY AND INSTALLATION SUPPLEMENT |

PREPARED FOR

AMERICAN TOWER®
10 PRESIDENTIAL WAY
WOBURN, MA 01801
TEL 781-926-4500/FAX 781-926-4555

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED.

REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| A | 3/25/14 | ISSUED FOR REVIEW |
| 0 | 3/27/14 | ISSUED FOR CONSTRUCTION |

ATC SITE #:
308958

ATC SITE NAME:
MILAN TN

DESIGN TYPE:
NEW MULTI TENANT GENERATOR AND TRANSFER SWITCH INSTALLATION

PREPARED BY
TOWERSOURCE
1875 OLD ALABAMA ROAD, SUITE 1008
ROSWELL, GA 30076
TEL 678-990-2338/FAX 678-990-2342
DRAWN BY: BAA CHECKED BY: EBU

SHEET TITLE:
TITLE SHEET & PROJECT INFORMATION

SHEET NO. T-1
REVISION: 0

CORRECTLY SCALED ON 11X17 PAPER W/ 3/8" BOARDER

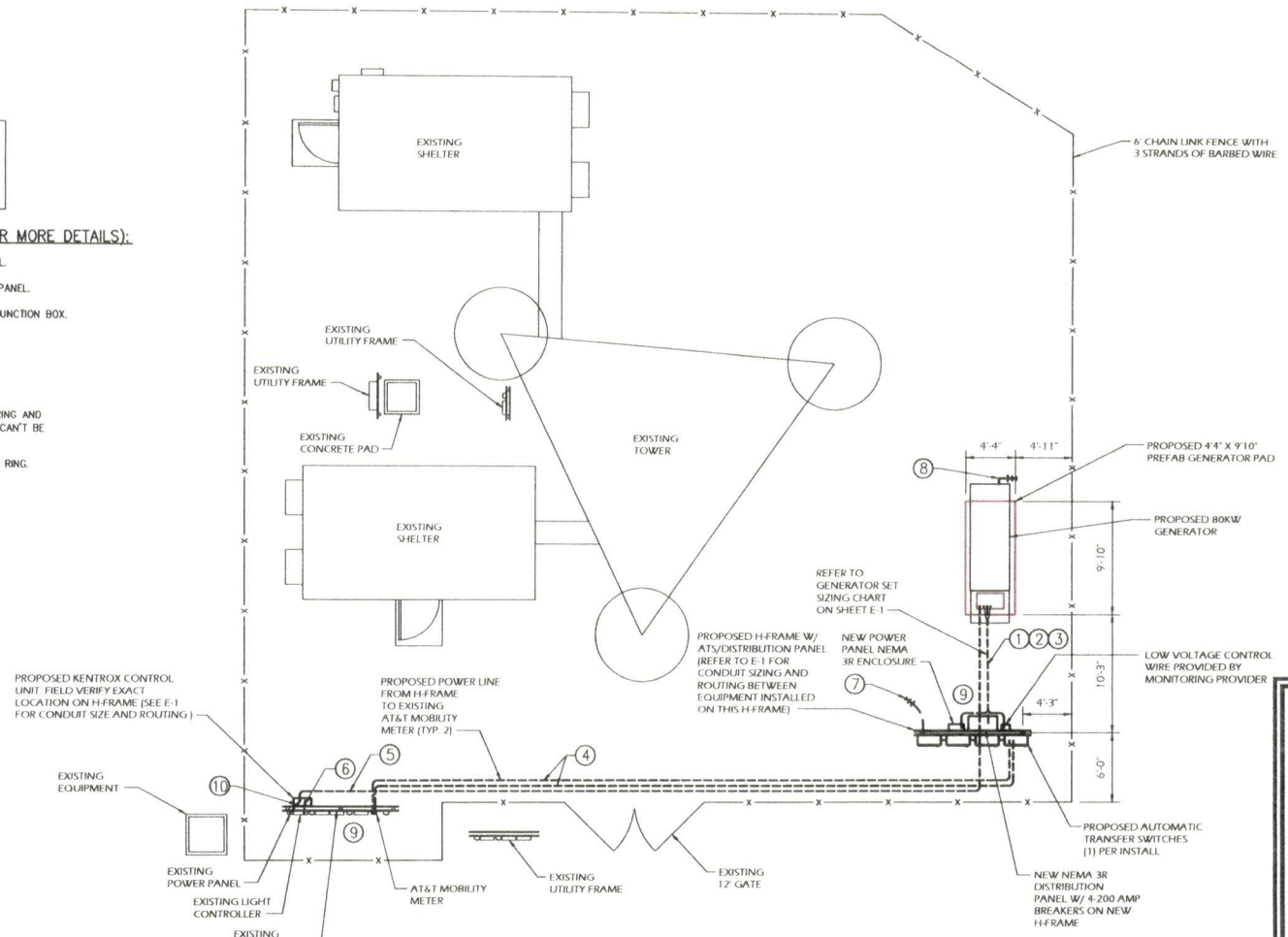
ELECTRICAL CONTRACTOR SHALL MAINTAIN FACTORY RECOMMENDED CLEARANCES FOR GENERATOR, OR 48" CLEAR ON EACH SIDE OF GENERATOR AND 36" CLEAR ON EACH SIDE OF H-FRAME. CLEARANCES MAY OVERLAP.

NOTE:
SEE G-1 FOR GROUNDING DETAILS.

CONDUIT ROUTES AS SHOWN ARE APPROXIMATE AND ARE SLIGHTLY EXAGGERATED FOR ILLUSTRATION PURPOSES. CONDUIT SHOULD BE INSTALLED IN SINGLE DITCH (WHEN POSSIBLE) UTILIZING A DIRECT ROUTE WITH LESS THAN (4) 90 DEGREE BEND WHEN POSSIBLE (IF MORE THAN 4 PULL BOXES MUST BE INSTALLED). CONDUIT TO BE INSTALLED PER NEC.

## CODED DRAWING NOTES (REFER TO E-1 FOR MORE DETAILS):

1. (1) 1/2"C FOR BLOCK HEATER FROM GEN TO POWER PANEL.
2. (2) 3"C FOR BACKUP POWER FROM GEN TO DISTRIBUTION PANEL.
3. (1) 1/2"C FOR LOW VOLTAGE CONTROLLER FROM GEN TO JUNCTION BOX.
4. (2) 2"C FOR POWER FROM ATS TO METER.
5. (1) 3"C FROM GEN TO KENTROX BOX.
6. (1) 3/4"C FROM LIGHT CONTROLLER TO KENTROX BOX.
7. GROUND NEW H-FRAME TO EXISTING COMPOUND GROUND RING AND H-FRAME OR INSTALL NEW GROUND ROD IF GROUND RING CAN'T BE FOUND.
8. GROUND NEW GENERATOR TO EXISTING COMPOUND GROUND RING.
9. MAINTAIN ALL NEC CLEARANCES.
10. (1) 1/2"C FROM KENTROX TO EXISTING POWER PANEL.




1 SITE PLAN DETAILS

GRAPHIC SCALE

10 0 10

SCALE: 1" = 10'-0"

PREPARED FOR:

AMERICAN TOWER®

10 PRESIDENTIAL WAY
WOBURN, MA 01801
TEL 678-926-4500/FAX 781-926-4555

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REVISIONS

| NO. | DATE | DESCRIPTION |
|---|---|---|
| A | 3/25/14 | ISSUED FOR REVIEW |
| 0 | 3/27/14 | ISSUED FOR CONSTRUCTION |

ATC SITE #: 308958

ATC SITE NAME: MILAN TN

DESIGN TYPE: NEW MULTI TENANT GENERATOR AND TRANSFER SWITCH INSTALLATION

PREPARED BY:

POWERSOURCE INC
1875 OLD ALABAMA ROAD, SUITE 1008
ROSWELL, GA 30076
TEL 678-990-2333/FAX 678-990-2342

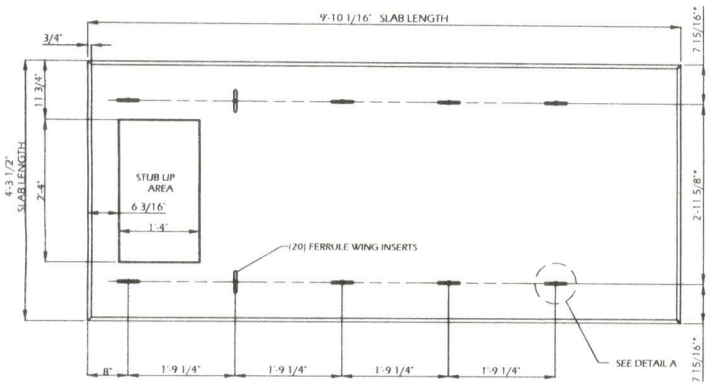
DRAWN BY: BAA CHECKED BY: EBU

SHEET TITLE: SITE PLAN DETAILS

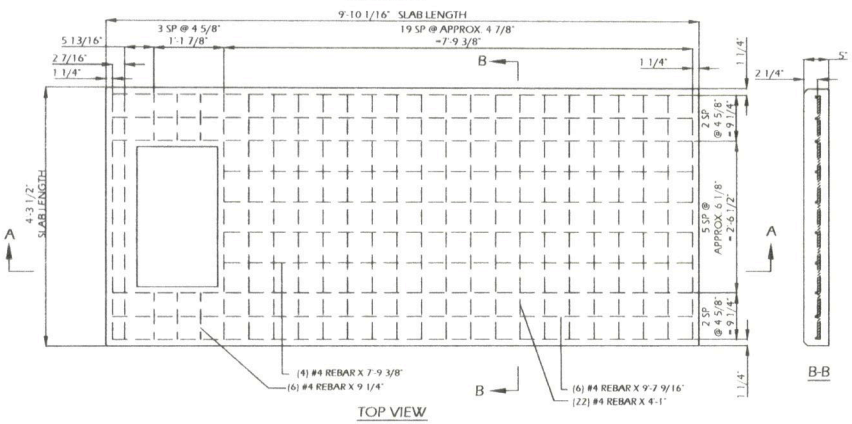
SHEET NO. A-1

REVISION: 0

CORRECTLY SCALED ON 11X17 PAPER W/ 3/8" BOARDER

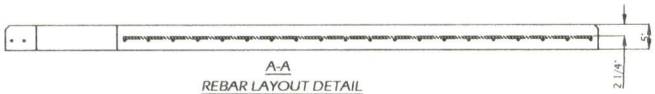



PLAN VIEW




TOP VIEW

B-B

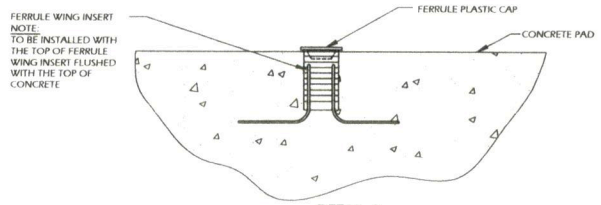



A-A

REBAR LAYOUT DETAIL

| MATERIALS LIST (FOR ONE CONCRETE PAD) | | | | | | |
|---|---|---|---|---|---|---|
| QTY REQ'D. | SIZE | TOTAL LENGTH | TOTAL WEIGHT (LBS) | TYPE | BENDING DIAGRAM | |
| | | | | | DIMENSION | |
| 10 | 1/2" | 0'-5" | – | FERRULE WING | | |
| 10 | 1/2" | FERRULE PLASTIC CAP | – | | | |
| 6 | #4 | 9'-7 9/16" | 39 | STRAIGHT | A= 9'-7 9/16" | A |
| 22 | #4 | 4'-1" | 60 | | A= 4'-1" | |
| 4 | #4 | 7'-9 3/8" | 21 | | A= 7'-9 3/8" | |
| 6 | #4 | 9 1/4" | 3 | | A= 9 1/4" | |

| STANDARD REBAR SIZES & WEIGHTS | | | |
|---|---|---|---|
| BAR NO | LBS PER FT. | DIA. INCHES | GRADE |
| 4 | .6676 | .500 | 60 |




DETAIL A

## CONCRETE PAD CONSTRUCTION NOTES

1. ALL REBAR (HORIZONTAL & VERTICAL) SHALL BE SECURELY WIRE TIED TO PREVENT DISPLACEMENT DURING POURING OF CONCRETE.
2. CONCRETE TO HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
3. REINFORCED CONCRETE CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH ACI STANDARDS 318.
4. MINIMUM CONCRETE COVER OVER REBAR IS 1 1/4".
5. REINFORCING MATERIAL SHALL BE IN ACCORDANCE WITH ASTM SPECIFICATION A615-85.

## CONCRETE PAD AND EMBEDMENT TOLERANCES

1. EMBEDMENTS: PLUS OR MINUS 1/16".
2. CONCRETE DIMENSIONS: PLUS OR MINUS 1/4".
3. REINFORCING STEEL PLACEMENT: PLUS OR MINUS 1/4" INCLUDING CONCRETE COVER.

## NOTES

1. FOUNDATION WAS DESIGNED BY ASSUMING ALLOWABLE SOIL BEARING CAPACITY OF 1000 PSI. THE SOIL BEARING CAPACITY FOR EACH SITE MUST BE VERIFIED USING THE SITE SPECIFIC GEOTECH REPORT. IF SHALLOW GROUNDWATER ( ≤3 FT.) WAS REPORTED, A FURTHER REVIEW OF THE DESIGN OR SPECIAL DESIGN MAY BE REQUIRED.
2. THE SOIL UNDERNEATH THE CONCRETE PAD MUST BE FREE OF ORGANIC MATTER OR OTHER DELETERIOUS SUBSTANCES, AND SHOULD BE COMPACTED AND LEVELED BEFORE PLACING THE FOUNDATION. PAD SHALL BE INSTALLED LEVEL TO WITHIN +/- 1/8".
3. CONCRETE SLUMPS: 1"- 2"
4. CONCRETE VOLUME: 0.78 CUBIC YARDS.

**DESIGN**

**1. MAXIMUM DESIGN BASIC WIND SPEED (3-SECOND GUST): 90 MPH FOR GENERATOR MODELS SD050 AND SD080**

**PRE-CAST GENERATOR PAD**

PREPARED FOR:

AMERICAN TOWER®

10 PRESIDENTIAL WAY
WOBURN, MA 01801
TEL 781-926-4500/FAX 781-926-6555

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO THE CLIENT IS STRICTLY PROHIBITED.

| REVISIONS | | |
|---|---|---|
| NO. | DATE | DESCRIPTION |
| A | 3/25/14 | ISSUED FOR REVIEW |
| 0 | 3/27/14 | ISSUED FOR CONSTRUCTION |

ATC SITE #:
308958

ATC SITE NAME:
MILAN TN

DESIGN TYPE:
NEW MULTI TENANT GENERATOR AND TRANSFER SWITCH INSTALLATION

PREPARED BY:

POWERSOURCE

1075 OLD ALABAMA ROAD, SUITE 100B
ROSWELL, GA 30076
TEL 678-990-2350/FAX 678-990-2582

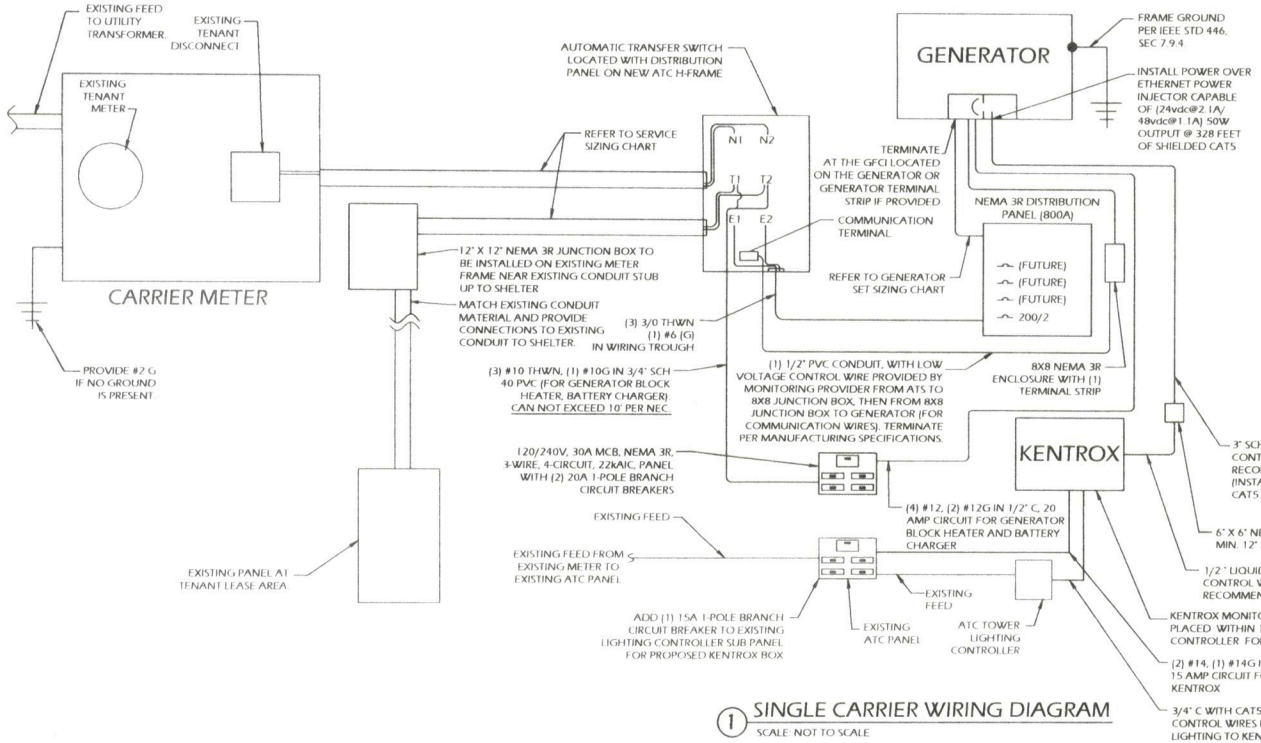
DRAWN BY: BAA CHECKED BY: EBU

SHEET TITLE:
**CONCRETE PAD DETAILS**

SHEET NO.: **A-2**

REVISION: **0**

CORRECTLY SCALED ON 11X17 PAPER W/ 3/8" BOARDER




## 1 SINGLE CARRIER WIRING DIAGRAM

SCALE: NOT TO SCALE

NOTES:

1. ALL UNDERGROUND CABLE TO BE BURIED AT 36" MIN. SHIELD TAPED AT 12" AND STUBBED OUT OF GROUND IN SCH 40 PVC CONDUIT.
2. LOW VOLTAGE CONTROL WIRE PROVIDED BY MONITORING PROVIDER IN SEPARATE 1/2" CONDUIT FROM ATS TO GENERATOR.
3. BTS SITES: THE TENANT CONTRACTOR TO COMPLETE CUSTOMER ELECTRICAL CONDUIT TO CUSTOMER METER PER STANDARD COLLOCATION INSTALL.
4. TENANT CONTRACTOR HAS NOTHING TO INSTALL OR COMPLETE FOR ATC SHARED GEN DURING CUSTOMER COLLOCATION ON ATC TOWER.
5. ATC SHARED GEN INSTALL IS COMPLETED AFTER CUSTOMER TOWER COLLOCATION IS COMPLETE WITH LOAD ON CUSTOMER METER.
6. ALL CONDUCTORS ARE SIZED FOR COPPER, BUT ALUMINUM CONDUCTORS ARE ALLOWED FOR FEEDERS PROVIDED THEY ARE UPSIZED PER NEC TABLE 310.16.
7. ALL ELECTRICAL WORK SHALL BE PER THE NATIONAL ELECTRICAL CODE (NFPA 70) AND ALL APPLICABLE LOCAL CODES.
8. MAINTAIN 36" CLEAR WORKSPACE IN FRONT OF METER, TRANSFER SWITCH, GENERATOR, PANELS, ETC.
9. 800A NEMA 3RPANEL HAS A COMMON NEUTRAL BUS. NEUTRALS BACK TO EACH CARRIER METER ARE SIZED ACCORDING TO THE DISTRIBUTION PANEL BRANCH BREAKER RATING. NEUTRAL IS BONDED AT THE PRIMARY SERVICE MAIN BONDING JUMPER ONLY.
10. GENERATOR CONTROLS AND SENSORS SHALL HAVE GFCI SENSING CAPABILITY PER NEC 700-6(D).

PLEASE SEE LATEST AMERICAN TOWER KENTROX MOP FOR SITE SPECIFIC CONFIGURATION AND INSTALLATION INSTRUCTIONS

### FEEDER SIZING CHART FOR UTILITY SERVICE

| UTILITY SERVICE | FEEDER SIZES FROM UTILITY TO ATS |
|---|---|
| 200A 1-PH | 3#3/0, 1#6G, IN 2"C |

NOTE:
DISCONNECT POWER FEED FROM EXISTING METER TO EXISTING SHELTER. ROUTE NEW FEEDERS (AS SIZED ON E1, DETAIL 1) FROM METER TO NEW TRANSFER SWITCH AND BACK. RECONNECT NEW RETURN FEED FROM TRANSFER SWITCH TO SUPPLY POWER (UTILITY AND BACK-UP POWER) TO EXISTING SHELTER THROUGH EXISTING CONDUIT AND FEEDERS.

### FEEDER SIZING CHART FOR GENERATOR

| GEN SET SIZE | VOLTS - PHASE | PRIME RATING KW - AMPS | SIZE OF INLINE BREAKER (AT GENERATOR) | MAIN BREAKER SIZE SERVING ANCHOR TENANT | FEEDER SIZES FROM GEN SET BREAKER TO DISTRIBUTION PANEL / ATS. |
|---|---|---|---|---|---|
| 80KW | 120/240V - 1-PH | 72KW - 300A | 400A | 200A 2-P C/B INTEGRAL TO 800A, 1-PH MLO DISTRIBUTION PANEL | 2 SETS OF 3#3/0, 1#1/0G, IN (2) 3"C |

NOTES:

1. SERVICE VOLTAGE FOR EACH CARRIER IS 120/240 1-PHASE, AND SERVICE SIZES ARE TYPICAL 200A PER CARRIER.
2. DISTRIBUTION PANEL IS NEMA 3R 800A, 120/240V 1-PHASE, WITH 200A C/B FOR THE LISTED CARRIER OUTPUT. PANEL HAS (3) 200A BREAKER SPACES FOR FUTURE CARRIERS.
3. AUTOMATIC TRANSFER SWITCH (ATS) ARE 200A 2-POLES, 120/240V 1-PHASE WITH SOLID NEUTRAL PER CARRIER.
4. ALL ELECTRICAL EQUIPMENT IS NEMA 3R RATED.
5. THE GENERATOR ELECTRICAL LOADS ARE ADEQUATE FOR THE CONNECTED LOADS.
6. ALL EQUIPMENT FURNISHED SHALL BE PROVIDED WITH EQUIPMENT RATED TO WITHSTAND FAULT CURRENT AVAILABLE AT PROJECT SITE.
7. ALL WIRE AND PANEL BUSSING SHALL BE COPPER UNLESS ALLOWED ELSEWHERE IN THIS DOCUMENT SET. WIRE SIZES ARE BASED ON COPPER.
8. A NEW SET OF PLANS WILL BE PROVIDED AND SUBMITTED FOR ADDITIONAL CARRIERS.
9. ALL WORK SHALL CONFORM WITH THE CURRENT VERSION OF THE NEC AND ALL OTHER APPLICABLE CODES.
10. FIRST OVER-CURRENT PROTECTION DEVICE IS INTEGRAL TO GENERATOR. FEEDER SIZES INDICATED IN TABLE ABOVE ARE DOWNSTREAM OF THE FIRST OVER-CURRENT PROTECTION DEVICE.
11. INLINE BREAKER AT GENERATOR IS FACTORY INSTALLED, AND IS THE MANUFACTURER'S RECOMMENDED SIZE.

## 2 GENERATOR SET SIZING CHARTS

PREPARED FOR:

AMERICAN TOWER®

10 PRESIDENTIAL WAY
WOBURN, MA 01801
TEL 781-926-4500/FAX 781-926-4555

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REVISIONS

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| 0 | 3/27/14 | ISSUED FOR CONSTRUCTION |

ATC SITE #: 308958

ATC SITE NAME: MILAN TN

DESIGN TYPE: NEW MULTI TENANT GENERATOR AND TRANSFER SWITCH INSTALLATION

PREPARED BY:

POWERSOURCE

1875 OLD ALABAMA ROAD, SUITE 100A
ROSWELL, GA 30076
TEL 678-990-2300/FAX 678-990-2782

DRAWN BY: BAA CHECKED BY: EBU

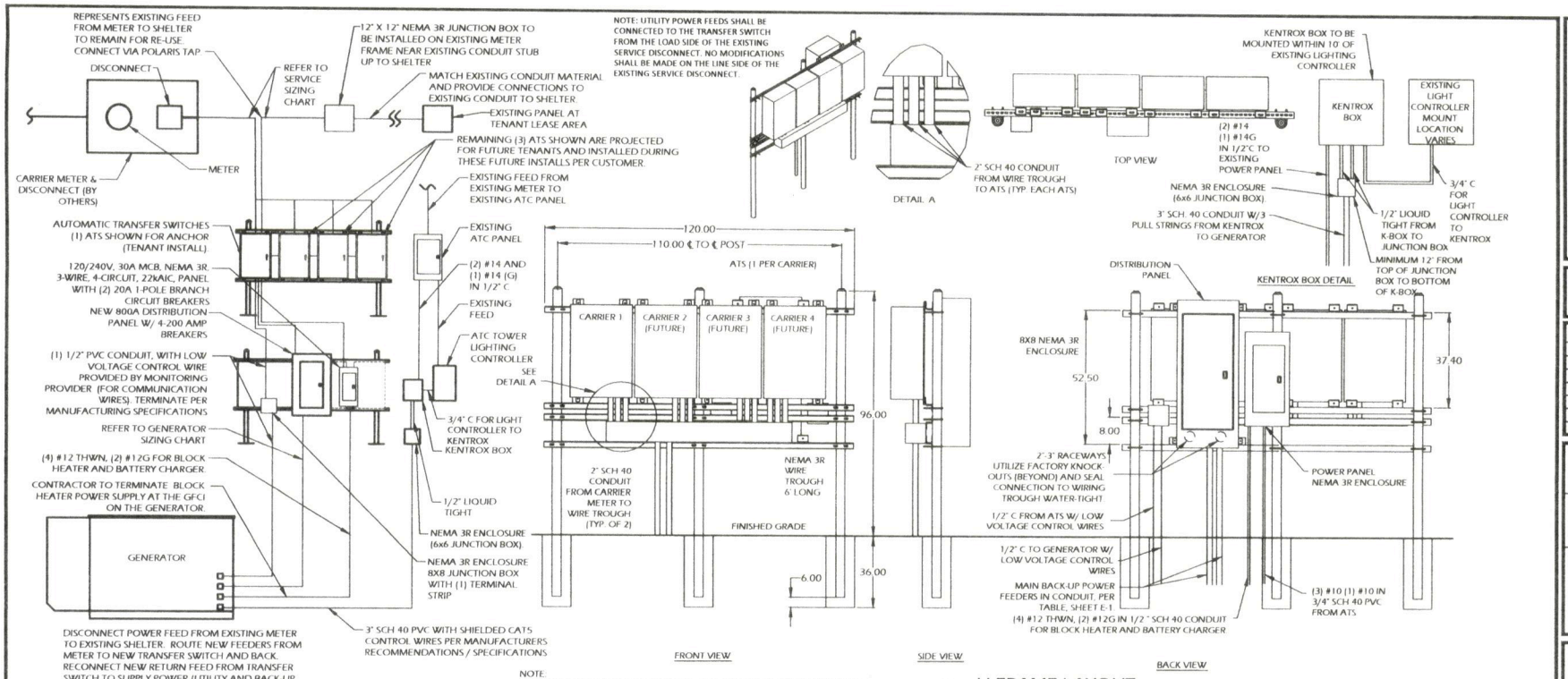
WILLIAM F. BEU REGISTERED ENGINEER STATE OF TENNESSEE

SHEET TITLE: WIRING DIAGRAM & H-FRAME LAYOUT

SHEET NO. E-1

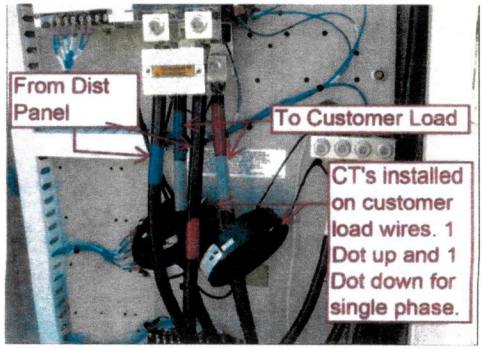
REVISION: 0

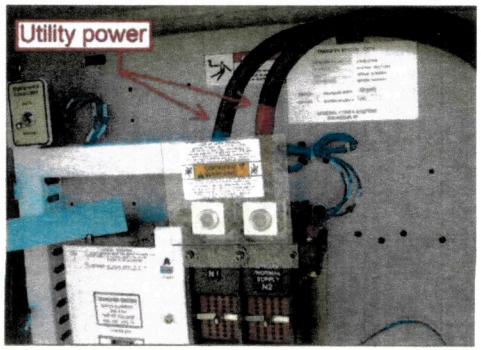
CORRECTLY SCALED ON 11X17 PAPER W/ 3/8" BOARDER




NOTE:
THE FOUNDATION DESIGNS ARE BASED ON NORMAL SOILS WITH THE DESIGN PARAMETERS
(SOIL UNIT WEIGHT 100 LB/CU.FT. AND COHESION C=2000 PSF.)

② H-FRAME LAYOUT
SCALE: NOT TO SCALE




③ PHOTO REFERENCES FOR WIRE CONNECTIONS

PREPARED FOR:

AMERICAN TOWER®

10 PRESIDENTIAL WAY
WOBURN, MA 01801
TEL: 678-996-4500 FAX: 781-926-6555

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| 0 | 3/27/14 | ISSUED FOR CONSTRUCTION |
| | | |
| | | |
| | | |

ATC SITE #:
308958

ATC SITE NAME:
MILAN TN

DESIGN TYPE:
NEW MULTI TENANT GENERATOR AND TRANSFER SWITCH INSTALLATION

PREPARED BY:

POWERSOURCE INC
1895 OLD ALABAMA ROAD, SUITE 1004
ROSWELL, GA 30076
TEL 678-990-2300 FAX 678-990-2392

DRAWN BY: BAA CHECKED BY: EBU

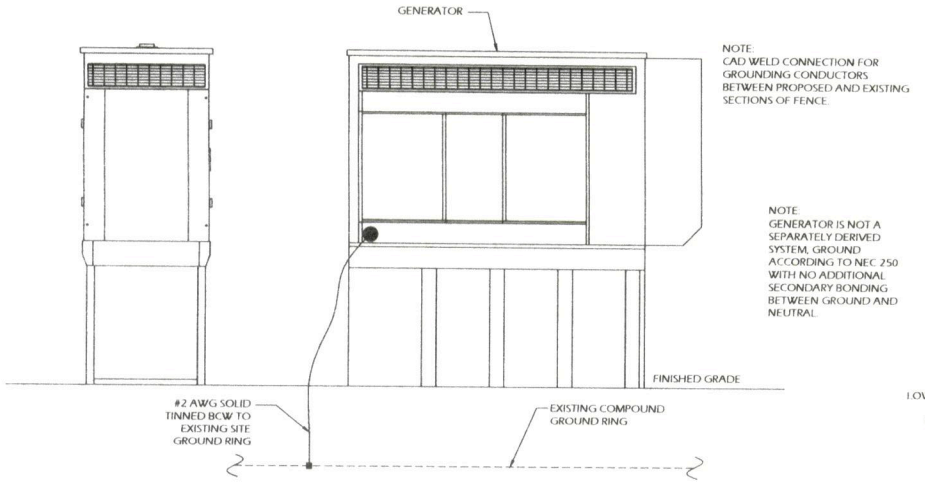
WILLIAM F. BELL
REGISTERED ENGINEER
STATE OF TENNESSEE

SHEET TITLE:
ELECTRICAL DETAILS

SHEET NO.
E-2

REVISION:
0

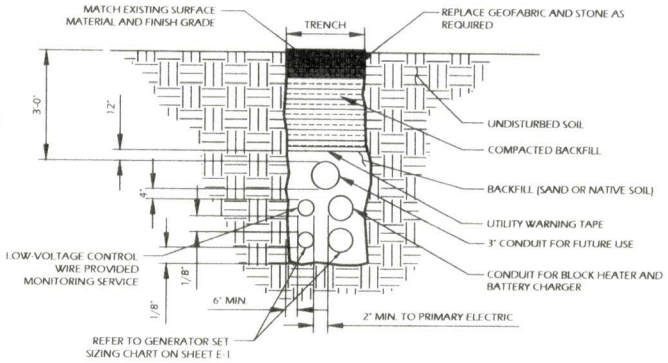
CORRECTLY SCALED ON 11X17 PAPER W/ 3/8" BOARDER




1 GENERATOR ELEVATION

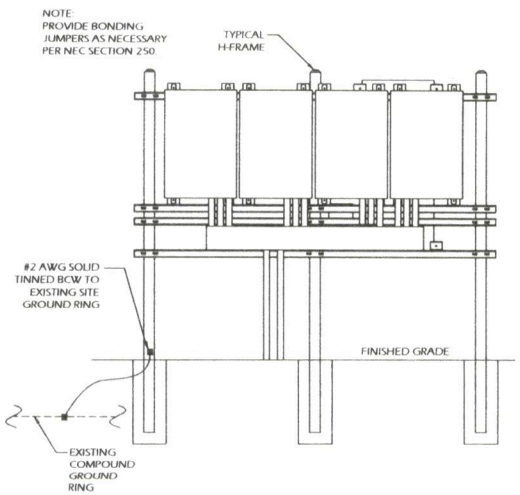
NOTES:

1. CONTRACTOR TO HAND DIG ALL NEW TRENCHES INSIDE COMPOUND.
2. SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS.




2 TRENCH DETAIL

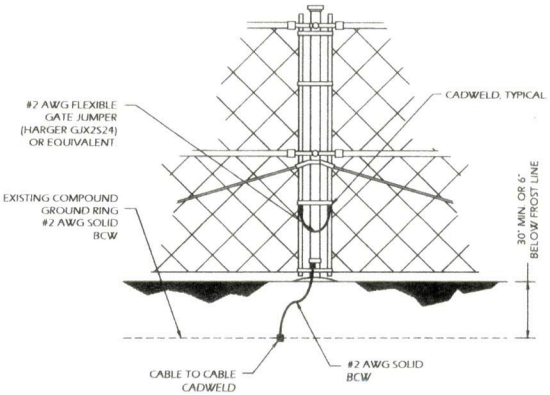
SCALE: NOT TO SCALE




NOTES:

1. ELECTRICIAN SHALL VERIFY THAT GENERATOR IS INSTALLED SO THAT ELECTRICAL BACK-FEEDS ARE NOT POSSIBLE.
2. ELECTRICIAN SHALL VERIFY THAT GROUNDING IS INSTALLED SO THAT NO CIRCULATING CURRENTS ARE POSSIBLE AND IS CONNECTED TO EXISTING TOWER GROUND FIELD.
3. ALL GROUNDING CONDUCTORS SHALL BE FREE OF KINKS AND SHALL HAVE LONG RADIUS BENDS (MINIMUM 8").
4. ALL GROUNDING SHOULD BE INSTALLED PER CURRENT NEC, SECTION 250.
5. USE #2 AWG SOLID TINNED COPPER WIRE TO EXISTING (2) FENCE POSTS AND CADWELD FROM GENERATOR GROUND RING

3 H-FRAME ELEVATION




4 VERTICAL POST CONNECTED TO RING

PREPARED FOR:

AMERICAN TOWER®

10 PRESIDENTIAL WAY
WOBURN, MA 01801
TEL 781-926-8500/FAX 781-926-6555

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ATC SITE #:
308958

ATC SITE NAME:
MILAN TN

DESIGN TYPE:
NEW MULTI TENANT GENERATOR AND TRANSFER SWITCH INSTALLATION

PREPARED BY

POWERSOURCE

1875 OLD ALABAMA ROAD, SUITE 1004
ROSWELL, GA 30076
TEL 678-990-2330/FAX 678-990-2316

DRAWN BY: BAA CHECKED BY: EBU

SHEET TITLE:
COMPOUND GROUNDING

SHEET NO.
G-1

REVISION:
0

CORRECTLY SCALED ON 11X17 PAPER W/ 3/8" BOARDER

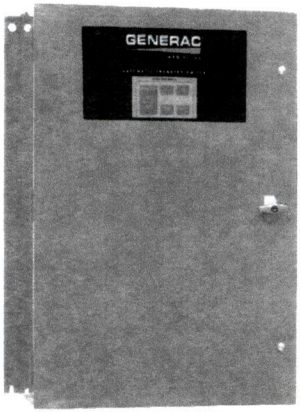
# GENERAC 80KW

## GENERAL ASSEMBLY AND INSTALLATION SUPPLEMENT

GENERAC | INDUSTRIAL

# 100 - 400 Amps, 600 VAC HTS

## Automatic Transfer Switches




200 Amp HTS NEMA 1

### Description

- **The Generac HTS Transfer Switch is a "State of the Art" Smart Switch designed to operate in conjunction with the Generac H100 Series generator controller.**
- **The HTS Transfer Switch has a 2 wire RS485 communication link to the generator controller.**
- **The utility voltage is monitored by the HTS along with signal before transfer timing, time delay neutral and inphase transfer.**
- **Switch operation is instigated by the generator controller.**
- **All timers and voltage setpoints are programmable through GenLink® Communications Software.**
- **Time delay neutral and inphase monitor are included.**

### Standard Features

- Single coil design, electrically operated and mechanically held
- Programmable exercise time
- SPDT aux contacts
- Main contacts are silver alloy
- Conformal coating protects the printed circuit board
- UL1008 Listed
- Indicating LED's for switch position, standby operating, utility available
- 3 position test switch: Fast Test, Auto, Normal Test
- Arc shutes on main contacts
- Signal before transfer contacts
- Rated to all classes of loads
- Remote start, stop and transfer through GenLink® Communications Software
- Up to four transfer switches per generator
- 50/60 hertz operation

### Optional Accessories

- NEMA 12 enclosure (100-400 Amps)
- NEMA 3R enclosure (All)
- NEMA 4 and 4x enclosure
- 4 pole for separately derived systems



GENERAC | INDUSTRIAL

## Interconnections

HTS 100-400 Amp

Switches and Indicators:

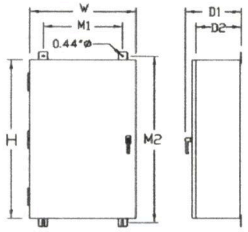
- System Ready LED
- Switch Position LED's
- Test Switch
- Return to Normal Switch
- Standby Operating LED
- Utility Available LED
- Fast Test Switch
- Safety Disconnect Switch

| | |
|---|---|
| Standby Accept Voltage | 85-95% |
| Standby Accept Frequency | 85-95% |
| Nominal Voltage | 1 Volt Increments |
| Allowable Deviation of Utility | 1-100% |
| Line Interruption Delay | 1-10 Seconds |
| Engine Warmup Time | 1-300 Seconds |
| Minimum Run Time | 5-60 Minutes |
| Return to Utility Timer | 1-30 Minutes |
| Engine Cooldown Timer | 1-30 Minutes |
| Signal Before Transfer Timer | 1-30 Seconds |
| Transfer Type | Inphase Time Delay Neutral |
| Phase Difference for Inphase Transfer | -7 +0 Degrees |

## Withstand Current - 600 Volt HTS Series

| HTS RATED AMPS | 100 | 150 | 200 | 300 | 400 |
|---|---|---|---|---|---|
| FUSE PROTECTED | | | | | |
| Maximum RMS Symmetrical Faul Current – Amps | 200,000 | 200,000 | 200,000 | 200,000 | 200,000 |
| Maximum Fuse Size – Amps | 200 | 400 | 400 | 600 | 600 |
| Fuse Class | J,T | J,T | J,T | J,T | J,T |
| CIRCUIT BREAKER PROTECTED | | | | | |
| Maximum RMS Symmetrical Fault Current – Amps | 14,000 | 25,000 | 25,000 | 35,000 | 35,000 |
| Protective Device Continuous Rating (Max.) – Amps | 150 | 300 | 300 | 600 | 600 |

- Tested in accordance with the withstand and closing requirements of UL 1008 and CSA Standards.
- Current ratings are listed @ 480 VAC.



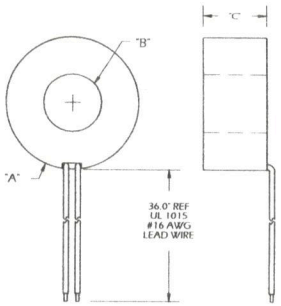

## Unit Dimensions

| HTS RATED AMPS | VOLTAGE | ENCLOSURE HEIGHT H | ENCLOSURE WIDTH W | WALL MOUNT BOLT PATTERN M1 | WALL MOUNT BOLT PATTERN M2 | ENCLOSURE DEPTH D1 | ENCLOSURE DEPTH D2 | WEIGHT (lbs.) |
|---|---|---|---|---|---|---|---|---|
| 100 | ALL | 36 | 24 | 18 | 37.5 | 12.7 | 10 | 180 |
| 150-200 | 120/240 | 36 | 24 | 18 | 37.5 | 12.7 | 10 | 185 |
| 150-200 | 120/208 | 36 | 24 | 18 | 37.5 | 12.7 | 10 | 185 |
| 150-200 | 277/480 | 48* | 30* | 24 | 49.5 | 14.8 | 12 | 265 |
| 300-400 | 120/240 | 36 | 24 | 18 | 37.5 | 12.7 | 10 | 245 |
| 300-400 | 120/208 | 36 | 24 | 18 | 37.5 | 12.7 | 10 | 245 |
| 300-400 | 277/480 | 48* | 30* | 24 | 49.5 | 14.8 | 12 | 325 |

## Terminal Lug Wire Ranges

| HTS RATED AMPS | CONTACTOR TERMINALS (1 LUG PER POLE) LUG WIRE RANGE | NEUTRAL BAR* # LUGS | NEUTRAL BAR* LUG WIRE RANGE | GROUND LUG (1 PROVIDED) LUG WIRE RANGE |
|---|---|---|---|---|
| 100 | 2/0 – 14 AWG | 4 | 2/0 – 14 AWG | 2/0 – 14 AWG |
| 150 | 400MCM – 4 AWG | 4 | 350MCM – 6 AWG | 350MCM – 6 AWG |
| 200 | 400MCM – 4 AWG | 4 | 350MCM – 6 AWG | 350MCM – 6 AWG |
| 300 | 600MCM – 4 AWG or 2 – [250MCM – 1/0 AWG] | 4 | 600MCM – 4 AWG [250MCM – 1/0 AWG]** | 350MCM – 6 AWG 350MCM – 6 AWG |
| 400 | 600MCM – 4 AWG or 2 – [250MCM – 1/0 AWG] | 4 | 600MCM – 4 AWG [250MCM – 1/0 AWG]** | 350MCM – 6 AWG |

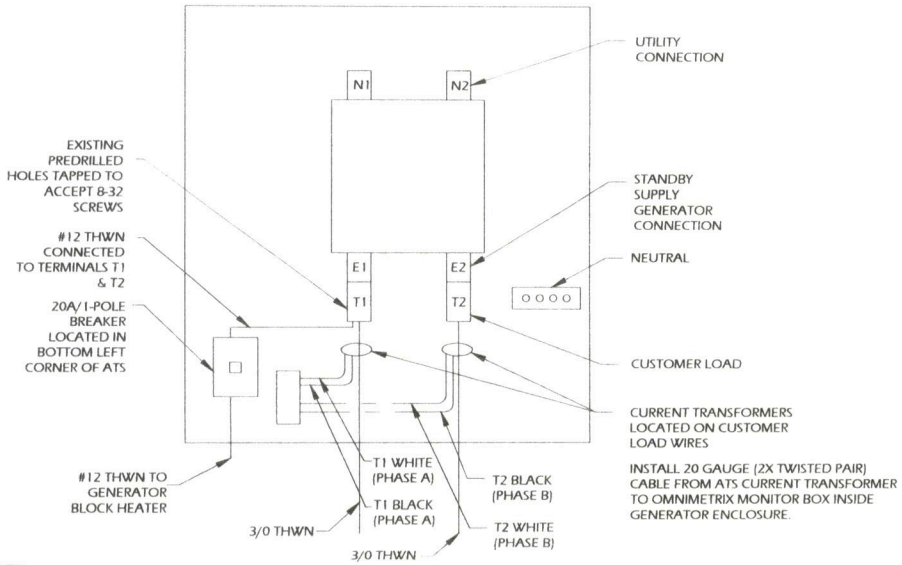
* Not included in HTS with switched neutral. ** Allowable wire range in brackets is for 2 wires per lug.




| PART NO. | RATIO | MODEL NO. | ±% | VA | OHMS | "A" | "B" | "C" |
|---|---|---|---|---|---|---|---|---|
| 0F7784A | 100:1A | 635-100-01-L36 | 1 | 1 | .31 | 65 | 28 | 30.5 |
| 0F7784B | 200:1A | 635-200-01-L36 | 1 | 5 | .95 | 65 | 28 | 30.5 |
| 0F7784C | 300:1A | A-300-01-L36 | 1 | 4.5 | .06 | 112 | 57.1 | 27.4 |
| 0F7784D | 400:1A | A-400-01-L36 | 1 | 4 | .11 | 112 | 57.1 | 27.4 |
| 0F7784E | 500:1A | A-500-01-L36 | 1 | 6.5 | .13 | 112 | 57.1 | 27.4 |
| 0F7784F | 600:1A | A-600-01-L36 | 1 | 7.5 | .15 | 112 | 57.1 | 27.4 |
| 0F7784G | 800:1A | MW-800-01-L36 | 1 | 10 | .20 | 143.5 | 89 | 29.2 |
| 0F7784H | 1000:1A | MW-1000-01-L36 | 1 | 12 | .22 | 143.5 | 89 | 29.2 |
| 0F7784J | 1500:1A | MW-1500-01-L36 | 1 | 15 | .50 | 143.5 | 89 | 29.2 |
| 0F7784K | 2000:1A | MW-2000-01-L36 | 1 | 12 | .67 | 143.5 | 89 | 29.2 |
| 0F7784L | 3000:1A | MW-3000-01-L36 | 1 | 25 | 1.0 | 143.5 | 89 | 29.2 |

NOTE:
1. ORIGINAL CURRENT TRANSDUCERS.

## CURRENT FLOW METER IN ATS




NOTES:
1. CONNECT TO TENANT BREAKER AT METER.
2. CONNECT TO DISTRIBUTION CENTER BRANCH BREAKER

## ATS

*SINGLE PHASE

GENERAC POWER SYSTEMS INC
Highway 59 & Hillside Rd.
Waukesha, WI. 53188
Phone#262-544-4811

Ref: All Generac Power Systems fuel tank bases supplied from the factory are manufactured and labeled per U.L.142 and are warranted through Generac Power Systems.

UL registration number: MH18459

## U.L. 142 DOUBLE WALL FUEL TANK BASE SPECIFICATION

### Fuel tank base construction:

- Be constructed in accordance with Underwriters Laboratories Standard UL-142. Be constructed in accordance with Flammable and Combustible Liquids Code, NFPA 30; The Standard for Installation and use of Stationary Combustible Engine and Gas Turbines, NFPA 37; and The Standard for Emergency and Standby Power Systems, NFPA 110. Include reinforced steel box channel for generator support, with load rating of 5,000 lbs. per gen-set mounting hole location. Full height gussets shall be provided at gen-set mounting holes. Be shipped with a certificate of Structural/Mechanical Integrity, certifying that it has met standards through rigorous testing and has demonstrated specified capabilities.

### Sub Base Tank Testing:

Primary tank and secondary containment basin sections shall be pressurized at 3-5 psi and leak-checked to ensure integrity of sub base weld seams per UL-142 standards

### Sub Base Tank Fittings:

The sub base tank shall include the following fittings:

- Appropriately sized NPT
- Fuel supply Fuel return fitting
- NPT for normal vent, sized as appropriate NPT for emergency vent, sized as appropriate
- 2" NPT for manual fill
- NPT for level gauge, sized as appropriate.
- 2" NPT for electronic fuel level; includes Low fuel alarm. High fuel level alarm
- NPT fitting for leak detection alarm

### Fuel Level Gauge

The sub base tank shall include a direct-reading fuel level gauge.

### Low Fuel Level

Factory Pre-set at 40% remaining for Alarm
Factory Pre-set at 20% remaining for Shut-down

### High Fuel Level

Factory Pre-set at 90% full for Alarm

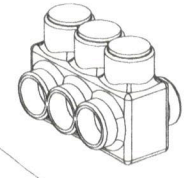
### Fuel Containment Basin

Sub base tank shall include a welded steel containment basin, sized at a minimum of 110% of the tank capacity to prevent escape of fuel into the environment in the event of a tank rupture. A fuel containment basin leak detector switch shall be provided.

### Sub Base Tank Venting

**Normal and Emergency Venting:**

Normal and Emergency venting shall be sized per U.L. 142 specifications for wetted surface area of tank.



NOTE: POLARIS TAP MUST BE SECURELY WRAPPED WITH COMMERCIAL GRADE NYLON ELECTRICAL TAPE AFTER INSTALLATION IS COMPLETE

NOTE: BONDING JUMPER/ GROUNDING ELECTRODE CONDUCTOR SHALL BE #4 CU FOR 200A, PER NEC TABLE 250.66.

PER NEC 312.8(3), PROVIDE WARNING LABEL (PHENOLIC PLATE) ON ENCLOSURE CONTAINING POLARIS TAP SPECIFYING LOCATION OF MEANS OF DISCONNECT FOR FEEDERS BEING SPLICED.

METERING/ DISCONNECT ENCLOSURE

3/0 THWN

N1

N2

POLARIS TAP

3/0 THWN

T1

T2

2/0 THWN NEUTRAL TO EXISTING BUS IF AVAILABLE

NOTE: SEE ALTERNATE NEUTRAL CONNECTION DRAWING IF NEUTRAL IS NOT AVAILABLE

EXISTING CUSTOMER WIRES (REMOVED FROM TENANT BREAKER)

PROVIDE OPTIONAL PULL/ JUNCTION BOX TO HOUSE POLARIS TAPS WHERE ENCLOSURE IS NOT LISTED TO HOUSE TAPS, OR WHERE REQUIRED BY AHJ. NEC 2011 ALLOWS POLARIS TYPE TAPS, PER 312.8, PROVIDED ENCLOSURE HAS SUFFICIENT SPACE, PER REQUIREMENTS OF NEC 312.8(1) AND (2).

EQUIPMENT GROUND #6 WIRE

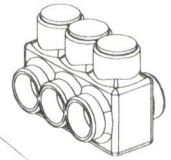
TWO (2) NEW 2" CONDUITS TO ATC H-FRAME AND BACK

EXISTING CONDUIT TO CUSTOMER

*SINGLE PHASE, 200A

1 MULTI TENANT METER OPTION

SCALE: NOT TO SCALE



NOTE: POLARIS TAP MUST BE SECURELY WRAPPED WITH COMMERCIAL GRADE NYLON ELECTRICAL TAPE AFTER INSTALLATION IS COMPLETE

METERING/ DISCONNECT ENCLOSURE

THE ALTERNATE NEUTRAL CONNECTION DETAIL IS INTENDED TO SHOW NEUTRAL CONNECTIONS ONLY. ALL OTHER (NON-NEUTRAL) CONNECTIONS SHOWN ON THE MULTI TENANT METER DETAIL TO THE LEFT ARE OMITTED FOR CLARITY.

POLARIS TAP

2/0 THWN

NEUTRAL LUG

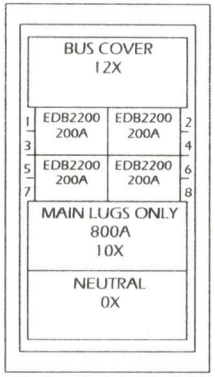
EXISTING

EXISTING CONDUIT TO CUSTOMER

NEW 2" CONDUITS TO ATC H-FRAME

2 ALTERNATE NEUTRAL CONNECTION FOR MULTI-TENANT METER OPTION

SCALE: NOT TO SCALE




DEVICE MODIFICATIONS
REF # DESCRIPTION

BELL TEST _____

HI-POT _____

S/T _____

GENERAL INFORMATION (SECTION 1 OF 1)

| | | |
|---|---|---|
| SERVICE VOLTAGE: | 120/240V 1PH 3W | ENCLOSURE: TYPE 3R |
| BUS RATING & TYPE: | 800A ALUMINUM | NEUTRAL RATING: 800A |
| GROUND BAR: | SLD. BOLTED ALUMINUM, Al OR Cu CABLE | |
| S.C. RATING: | 22K A.I.C. FULLY RATED | |

| | |
|---|---|
| MAIN DEVICE TYPE: | MAIN LUGS ONLY - BOTTOM CABLE ENTRY |
| MAIN TERMINALS: | MECHANICAL - (3) #2-500 kcmil (Cu/Al) |
| NEUTRAL TERMINALS: | MECHANICAL - (3) #2-500 kcmil (Cu/Al) |
| BOOK CATALOG NO: | RPG2457 |
| TRIM: | COMPLETE ENCLOSURE (INCLUDES TRIM) |
| | SURFACE MOUNTED |
| BOX DIMENSIONS: | 57" (1447.8mm)H X 24" (609.6mm)W X 12.65" (326.4mm)D |
| MIN. GUTTER SIZE: | TOP=10.625" (269.9mm) BOTTOM=10.625" (269.9mm) LEFT=5" (127.0mm) RIGHT=5" (127.0mm) |

FINAL ID NAMEPLATE: (1) 800A
TYPE: PLASTIC ADHESIVE-BACKED (2) 120/240V 1PH 3W
COLOR: WHITE WITH BLACK LETTERS (3)

UL
SERVICE ENTRANCE LABEL

TRIM LOOK T-HANDLE LOCK ASSEMBLY
CIRCUIT DIRECTORY PLASTIC SLEEVE WITH CARD
PAINTED BOX ANSI 61

PLANT INFORMATION

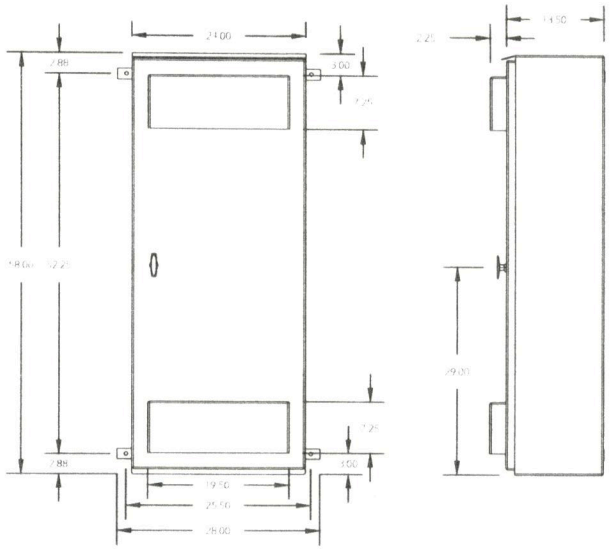
| | PART NUMBER | QTY | PART NUMBER | QTY |
|---|---|---|---|---|
| UL LABEL: | 7494A06H01 | 1 | EOB2200 | 4 |
| BUS CUTTING: | 6563C06H01 | 2 | | |
| NEUTRAL: | 6672C66G03 | 1 | | |
| GROUND BAR, AL/CU: | 6572C78G03 | 1 | | |
| CHASSIS ASSEMBLY: | 6572C25G06 | 1 | | |
| LUG ASSEMBLY: | 6572C52G06 | 1 | | |
| BREAKER ASSY: | 6572C87G04 | 2 | | |
| DEAD FRONT COVER: | 5554C11801 | 2 | | |
| COVER PACKAGING: | 4177B06G02 | 1 | | |
| DEAD FRONT COVER ASSEMBLY: | 6574C74G02 | 1 | | |
| PACKAGING: | 50C5330G01 | 1 | | |

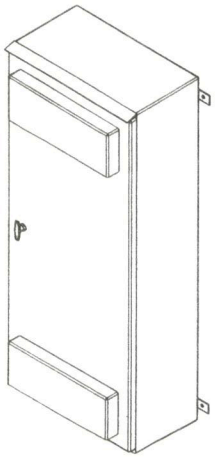
Spot _____ Final Inspection _____

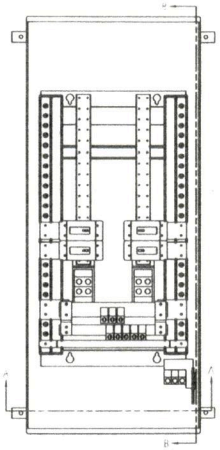
Notes:

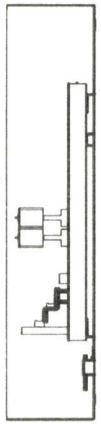
NOTE:
PANEL SHOWN IS FOR SINGLE PHASE. FOR 3-PHASE SITES, USE CORRESPONDING 3-POLE VERSION OF THIS PANEL.

## DISTRIBUTION PANEL
SCALE: NOT TO SCALE

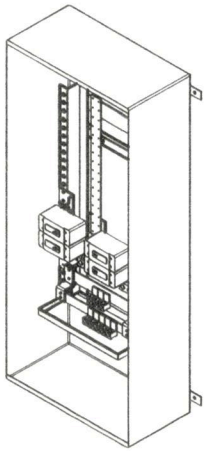


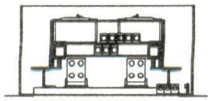







SECTION B-B





SECTION A-A

## DISTRIBUTION PANEL DETAILS
SCALE: NOT TO SCALE

# SD080

GENERAC | INDUSTRIAL

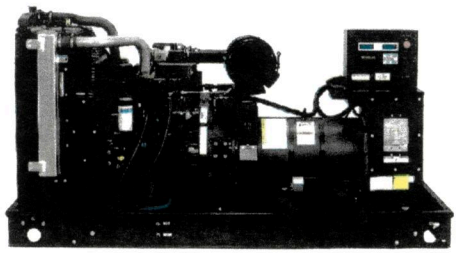
80 kW Diesel

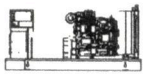
## Industrial Diesel Generator Set

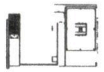
EPA Emissions Certification: Tier III

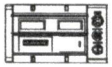
Standby Power Rating
100 kVA 80 kW 60 Hz

Prime Power Rating
90 kVA 72 kW 60 Hz









| features | benefits |
|---|---|
| **Generator Set** | |
| • PROTOTYPE & TORSIONALLY TESTED | ▶ PROVIDES A PROVEN UNIT |
| • UL2200 TESTED | ▶ ENSURES A QUALITY PRODUCT |
| • RHINOCOAT PAINT SYSTEM | ▶ IMPROVES RESISTANCE TO ELEMENTS |
| • WIDE RANGE OF ENCLOSURES AND TANKS | ▶ PROVIDES A SINGLE SOURCE SOLUTION |
| **Engine** | |
| • EPA TIER COMPLIANT | ▶ ENVIRONMENTALLY FRIENDLY |
| • INDUSTRIAL TESTED; GENERAC APPROVED | ▶ ENSURES INDUSTRIAL STANDARDS |
| • POWER-MATCHED OUTPUT | ▶ ENGINEERED FOR PERFORMANCE |
| • INDUSTRIAL GRADE | ▶ IMPROVES LONGEVITY AND RELIABILITY |
| **Alternator** | |
| • TWO-THIRDS PITCH | ▶ ELIMINATES HARMFUL 3RD HARMONIC |
| • LAYER WOUND ROTOR & STATOR | ▶ IMPROVES COOLING |
| • CLASS H MATERIALS | ▶ HEAT TOLERANT DESIGN |
| • DIGITAL 3-PHASE VOLTAGE CONTROL | ▶ FAST AND ACCURATE RESPONSE |
| **Controls** | |
| • ENCAPSULATED BOARD W/ SEALED HARNESS | ▶ EASY, AFFORDABLE REPLACEMENT |
| • 4-20mA VOLTAGE-TO-CURRENT SENSORS | ▶ NOISE RESISTANT 24/7 MONITORING |
| • SURFACE-MOUNT TECHNOLOGY | ▶ PROVIDES VIBRATION RESISTANCE |
| • ADVANCED DIAGNOSTICS & COMMUNICATIONS | ▶ HARDENED RELIABILITY |

primary codes and standards

GENERAC | INDUSTRIAL

80 kW Diesel

SD080

application and engineering data

### ENGINE SPECIFICATIONS

**General**

| | |
|---|---|
| Make | Iveco / FPT |
| EPA Emissions Compliance | Tier III |
| EPA Emissions Reference | See Emissions Data Sheet |
| Cylinder # | 4 |
| Type | Diesel |
| Displacement - L (cu. in.) | 4.5 (274) |
| Bore - mm (in.) | 105 (4.1) |
| Stroke - mm (in.) | 132 (5.2) |
| Compression Ratio | 17.5:1 |
| Intake Air Method | Turbocharged |
| Cylinder Head Type | 2 Valve |
| Piston Type | Aluminum |
| Crankshaft Type | Forged Steel |
| Engine Block Type | Cast Iron / Wet Sleeve |

**Engine Governing**

| | |
|---|---|
| Governor | Electronic |
| Frequency Regulation (Steady State) | +/-0.25% |

**Lubrication System**

| | |
|---|---|
| Oil Pump Type | Gear |
| Oil Filter Type | Full Flow |
| Crankcase Capacity - L (gal)(qts) | 13.6 (3.6) (14.4) |

**Cooling System**

| | |
|---|---|
| Cooling System Type | Closed |
| Water Pump | Belt Driven Centrifugal |
| Fan Type | Pusher |
| Fan Blade Number | 2538 (10) |
| Fan Diameter (in.) | 26 |
| Coolant Heater Wattage | 1500 |
| Coolant Heater Standard Voltage | 120 |

**Fuel System**

| | |
|---|---|
| Fuel Type* | Ultra Low Sulfur Diesel Fuel |
| Fuel Specifications | ASTM |
| Fuel Filtering (microns) | 5 |
| Fuel Inject Pump Make | Standyne |
| Fuel Pump Type | Engine Driven Gear |
| Injector Type | Mechanical |
| Engine Type | Direct Injection |
| Fuel Supply Line - mm (in.) | 1/4 inch Npt |
| Fuel Return Line - mm (in.) | 1/4 inch Npt |

**Engine Electrical System**

| | |
|---|---|
| System Voltage | 12VDC |
| Battery Charging Alternator | 90 Amp |
| Battery Size (at 0 oC) | 995 CCA |
| Battery Group | 31 |
| Battery Voltage | 12 Volt DC |
| Ground Polarity | Negative |

### ALTERNATOR SPECIFICATIONS

| | |
|---|---|
| Model | 390 mm Generac |
| Poles | 4 |
| Field Type | Revolving |
| Insulation Class - Rotor | H |
| Insulation Class - Stator | H |
| Total Harmonic Distortion | <5% |
| Telephone Interference Factor (TIF) | <50 |
| Alternator Type | Synchronous Brushless, Opt PMG |
| Bearings | One - Pre Lubed & Sealed |
| Coupling | Direct, Flexible Disc |
| Load Capacity - Standby | 80 |
| Load Capacity - Prime | 72 |
| Prototype Short Circuit Test | Y |

| | |
|---|---|
| Voltage Regulator Type | Digital |
| Number of Sensed Phases | 3 |
| Regulation Accuracy (Steady State) | +/-0.25% |

### CODES AND STANDARDS COMPLIANCE (WHERE APPLICABLE)

NFPA 99
NFPA 110
ISO 8528-5
ISO 1708A-5
ISO 3046
BS5514
SAEJ1349
DIN6271
IEEE C62.41 TESTING
NEMA ICS 1

Rating Definitions:
Standby - Applicable for a varying emergency load for the duration of a utility power outage with no overload capability. (Max. load factor = 70%)
Prime - Applicable for supplying power to a varying load in lieu of utility for an unlimited amount of running time. (Max. load factor = 80%) A 10% overload capacity is available for 1 out of every
12 hours

GENERAC | INDUSTRIAL

80 kW Diesel

## SD080 operating data (60Hz)

### POWER RATINGS (kW)

| | STANDBY | | | PRIME | | |
|---|---|---|---|---|---|---|
| Single-Phase 120/240VAC @1.0pf | 80 | Amps: | 333 | 72 | Amps: | 300 |
| Three-Phase 120/208VAC @0.8pf | 80 | Amps: | 278 | 72 | Amps: | 250 |
| Three-Phase 120/240VAC @0.8pf | 80 | Amps: | 241 | 72 | Amps: | 217 |
| Three-Phase 277/480VAC @0.8pf | 80 | Amps: | 120 | 72 | Amps: | 108 |
| Three-Phase 346/600VAC @0.8pf | 80 | Amps: | 96 | 72 | Amps: | 87 |

### STARTING CAPABILITIES (sKVA)

sKVA v. Voltage Dip

| | | 480VAC | | | | | | 208/240VAC | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alternator | kW | 10% | 15% | 20% | 25% | 30% | 35% | 10% | 15% | 20% | 25% | 30% | 35% |
| Standard* | 80 | 59 | 88 | 117 | 147 | 176 | 205 | 44 | 59 | 88 | 110 | 132 | 154 |
| Upsize 1 | 100 | 79 | 118 | 157 | 197 | 236 | 275 | 59 | 79 | 118 | 148 | 177 | 206 |
| Upsize 2 | 125 | 116 | 174 | 232 | 290 | 348 | 406 | 87 | 116 | 174 | 218 | 261 | 305 |

*All Generac industrial alternators utilize Class H materials. Standard alternator provides less than or equal to Class F temperature rise. Upsize 1 provides less than or equal to Class A temperature rise.

### Fuel

Fuel Pump Lift - in (m): 36(.9)

Total Fuel Pump Flow (Combustion + Return): 13.6 gph

Fuel Consumption Rates**

| STANDBY | | | PRIME | | |
|---|---|---|---|---|---|
| Percent Load | gph | lph | Percent Load | gph | lph |
| 25% | 2.1 | 7.9 | 25% | 1.9 | 7.2 |
| 50% | 3.7 | 14.0 | 50% | 3.4 | 12.9 |
| 75% | 5.2 | 19.7 | 75% | 4.7 | 17.8 |
| 100% | 6.3 | 23.8 | 100% | 5.8 | 22.0 |

**Refer to "Emissions Data Sheets" for maximum fuel flow for EPA and SCAQMD permitting purposes.

### COOLING

Coolant System Capacity - Gal (L): 4.5 (17.44)

Maximum Radiator Backpressure: 1.5" $H_2O$ Column

| | | STANDBY | PRIME |
|---|---|---|---|
| Coolant Flow per Minute | gpm (lpm) | 32.7(123.8) | 32.7(123.8) |
| Heat rejection to Coolant | BTU/hr | 137,140 | 137,140 |
| Inlet Air | cfm (m3/min) | 6360(180.0) | 6360(180.0) |
| Max. Operating Radiator Air Temp | F° (C°) | 122(50) | 122(50) |
| Max. Operating Ambient Temperature | F° (C°) | 122(50) | 122(50) |

### COMBUSTION AIR REQUIREMENTS

| | | STANDBY | | PRIME | |
|---|---|---|---|---|---|
| Intake Flow at Rated Power | cfm (m3/min) | 306 | (8.67) | 275 | (7.80) |

### EXHAUST

Exhaust Outlet Size (Open Set): 3.0"

Maximum Backpressure (Post-Silencer): 1.5"

| | | STANDBY | PRIME |
|---|---|---|---|
| Exhaust Flow (Rated Output) | cfm (m3/hr) | 790(134.4) | 790(134.4) |
| Maximum Backpressure | inHg (Kpa) | 1.5(5.1) | 1.5(5.1) |
| Exhaust Temp (Rated Output) | F° (C°) | 887(475) | 887(475) |

### ENGINE

| | | STANDBY | PRIME |
|---|---|---|---|
| Rated Engine Speed | rpm | 1,800 | 1800 |
| Horsepower at Rated kW*** | hp | 131 | 127 |
| Piston Speed | ft/min (m/min) | 1559(44.1) | 1559(44.1) |
| BMEP | psi | 210 | 194 |

***Refer to "Emissions Data Sheets" for maximum bHP for EPA and SCAQMD permitting purposes.

Deration - Operational characteristics consider maximum ambient conditions. Derte factors may apply under atypical site conditions. Please consult a Generac Power Systems Industrial Dealer for additional details. All performing ratings in accordance with ISO3046, BS5514, ISO8528 and DIN6271 standards.

GENERAC | INDUSTRIAL

80 kW Diesel

## SD080 standard features and options

### GENERATOR SET

- ● Genset Vibration Isolation — Std
- ○ IBC Seismic Certified/Seismic Rated Vibration Isolators — Opt
- ○ Extended warranty — Opt
- ○ Export boxing — Opt
- ○ Gen-Link Communications Software — Opt
- ○ Steel Enclosure — Opt
- ○ Aluminum Enclosure — Opt

### ENGINE SYSTEM

General

- ● Oil Drain Extension — Std
- ○ Oil Make-Up System — Opt
- ○ Oil Heater — Opt

Fuel System

- ● Fuel lockoff solecnoid — Std
- ● Secondary fuel filter — Std
- ● Stainless steel flexible exhaust connection — Std
- ● Industrial Exhaust Silencer — Std
- ○ Critical Exhaust Silencer — Opt
- ○ Flexible fuel lines — Opt
- ○ Primary fuel filter — Opt
- ○ Single Wall Tank (Export Only) —
- ○ UL 142 Fuel Tank — Opt

Cooling System

- ○ 120VAC Coolant Heater — Opt
- ○ 208VAC Coolant Heater — Opt
- ○ 240VAC Coolant Heater — Opt
- ○ Other Coolant Heater_____ —
- ● Closed Coolant Recovery System — Std
- ● UV/Ozone resistant hoses — Std
- ● Factory-Installed Radiator — Std
- ● Radiator Drain Extension — Std

Engine Electrical System

- ● Battery charging alternator — Std
- ● Battery cables — Std
- ● Battery tray — Std
- ○ Battery box — Opt
- ○ Battery heater — Opt
- ● Solenoid activated starter motor — Std
- ● Air cleaner — Std
- ● Fan guard — Std
- ● Radiator duct adapter — Std
- ○ 2A battery charger — Opt
- ○ 10A UL float/equalize battery charger — Opt
- ● Rubber-booted engine electrical connections — Std

### ALTERNATOR SYSTEM

- ● UL2200 GENprotect — Std
- ○ Main Line Circuit Breaker — Opt
- ○ 2nd Circuit Breaker — Opt
- ○ 3rd Circuit Breaker —
- ○ Alternator Upsizing — Opt
- ○ Anti-Condensation Heater — Opt
- ○ Tropical coating — Opt
- ○ Permanent Magnet Excitation — Opt

### CONTROL SYSTEM

General

- ● Digital H Control Panel - Dual 4x20 Display — Std
- ○ Digital G-100 Control Panel - Touchscreen — na
- ○ Digital G-200 Paralleling Control Panel - Touchscreen — na
- ● Programmable Crank Limiter — Std
- ○ 21-Light Remote Annunciator — Opt
- ○ Remote relay Panel (8 or 16) — Opt
- ● 7-Day Programmable Exerciser —
- ● Special Applications Prolrammable PLC —
- ● RS-232 —
- ● RS-485 —
- ● All-Phase Sensing DVR —
- ● Full System Status —
- ● Utility Monitoring (Req: H-Transfer Switch) —
- ● 2-Wire Start Compatible —
- ● Power Output (kW) —
- ● Power Factor —
- ● Reactive Power —
- ● All phase AC Voltage —
- ● All phase Currents —
- ● Oil Pressure —
- ● Coolant Temperature —
- ● Coolant Level —
- ○ Oil Temperature —
- ● Fuel Pressure —
- ● Engine Speed —
- ● Battery Voltage —
- ● Frequency —
- ● Date/Time Fault History (Event Log) —
- ● UL2200 GENprotect —
- ○ Low-Speed Exercise —
- ● Isochronous Governor Control —
- ● -40deg C - 70deg C Operation —
- ● Waterproof Plug-in Connectors —
- ● Audible Alarms and Shutdowns —
- ● Not in Auto (Flashing Light) —
- ● On/Off/Manual Switch —
- ● E-Stop (Red Mushroom-Type) —
- ○ Remote E-Stop (Break Glass-Type, Surface Mount) —
- ○ Remote E-Stop (Red Mushroom-Type, Surface Mount) —
- ○ Remote E-Stop (Red Mushroom-Type, Flush Mount) —
- ● NFPA 110 Level I and II (Programmable) —
- ● Remote Communication - RS232 —
- ○ Remote Communication - Modem —
- ○ Remote Communication - Ethernet —
- ○ 10A Run Relay —

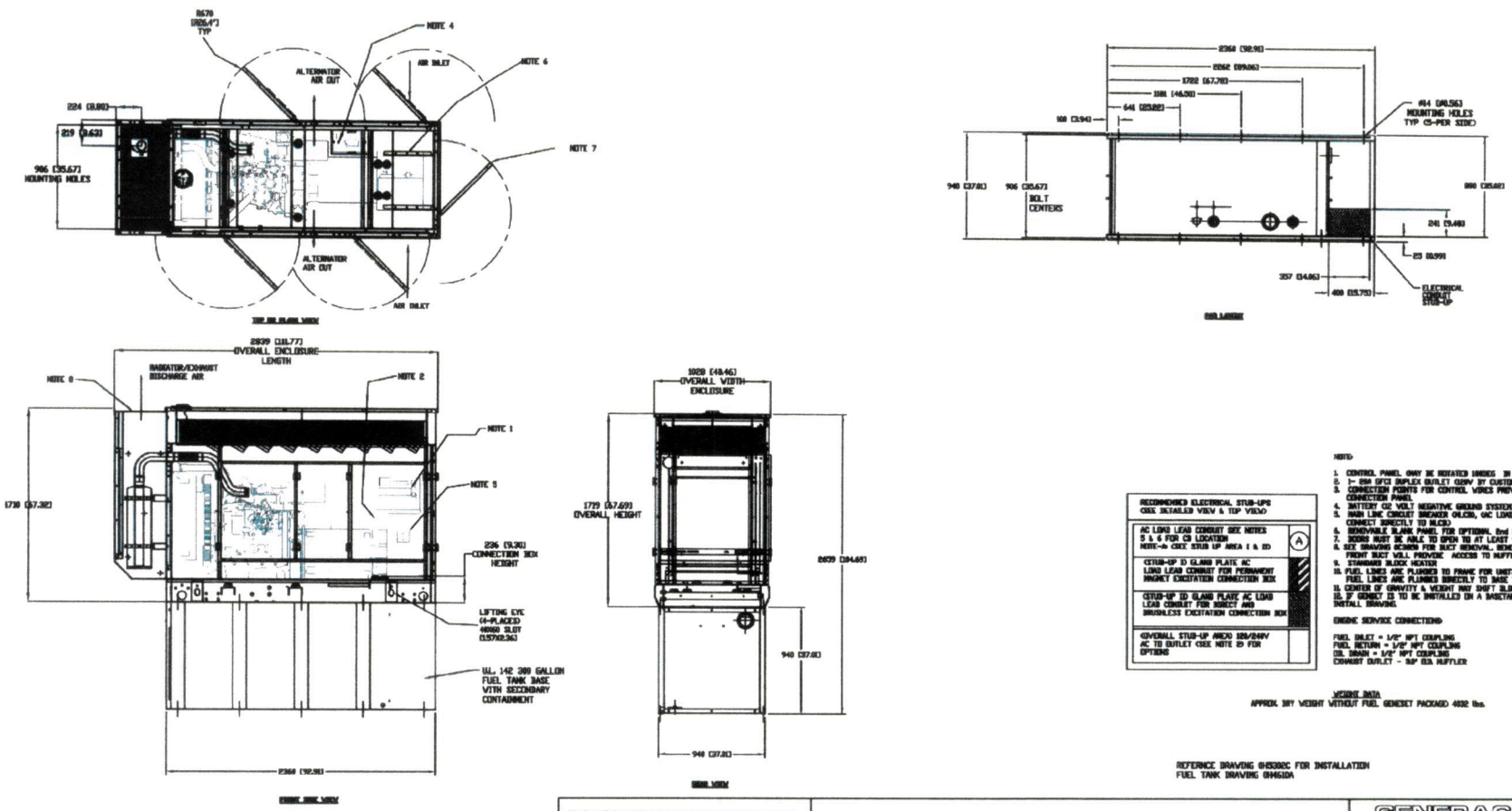
Alarms (Programmable Tolerances, Pre-Alarms and Shutdowns)

- ○ Low Fuel —
- ● Oil Pressure (Pre-programmed Low Pressure Shutdown) —
- ● Coolant Temperature (Pre-programmed High Temp Shutdown) —
- ● Coolant Level (Pre-programmed Low Level Shutdown) —
- ● Alternator Overload —
- ● Fuel Pressure —
- ● Engine Speed (Pre-programmed Overspeed Shutdown) —
- ● Voltage (Pre-programmed Overvoltage Shutdown) —
- ● Battery Voltage —

Other Options

- ○ _____
- ○ _____
- ○ _____

0H5302C-ATC




| RECOMMENDED ELECTRICAL STUB-UPS (SEE DETAILED VIEW & TOP VIEW) | |
|---|---|
| AC LOAD LEAD CONDUIT SEE NOTES 5 & 6 FOR CB LOCATION NOTE-A (SEE STUB UP AREA I & II) | A |
| (STUB-UP I) GLAND PLATE AC LOAD LEAD CONDUIT FOR PERMANENT MAGNET EXCITATION CONNECTION BOX | |
| (STUB-UP II) GLAND PLATE AC LOAD LEAD CONDUIT FOR DIRECT AND BRUSHLESS EXCITATION CONNECTION BOX | |
| (OVERALL STUB-UP AREA) 120/240V AC TO OUTLET (SEE NOTE 2) FOR OPTIONS | |

NOTE:

1. CONTROL PANEL (MAY BE ROTATED 180DEG IN EITHER DIRECTION)
2. 1- 20A GFCI DUPLEX OUTLET (120V BY CUSTOMER)
3. CONNECTION POINTS FOR CONTROL WIRES PROVIDED IN AC CONNECTION PANEL
4. BATTERY (12 VOLT NEGATIVE GROUND SYSTEM)
5. MAIN LINE CIRCUIT BREAKER (MLCB), (AC LOAD LEADS CONNECT DIRECTLY TO MLCB)
6. REMOVABLE BLANK PANEL FOR OPTIONAL 2nd MAIN LINE CIRCUIT BREAKER.
7. DOORS MUST BE ABLE TO OPEN TO AT LEAST 90DEG TO BE REMOVED
8. SEE DRAWING 0C3050 FOR DUCT REMOVAL. REMOVAL OF FRONT DUCT WILL PROVIDE ACCESS TO MUFFLER FOR SERVICING.
9. STANDARD BLOCK HEATER
10. FUEL LINES ARE PLUMBED TO FRAME FOR UNITS WITH NO BASE TANK. FUEL LINES ARE PLUMBED DIRECTLY TO BASE TANK WHEN SO EQUIPPED
11. CENTER OF GRAVITY & WEIGHT MAY SHIFT SLIGHTLY DUE TO UNIT OPTIONS
12. IF GENSET IS TO BE INSTALLED ON A BASETANK REFER TO BASETANK INSTALL DRAWING.

ENGINE SERVICE CONNECTIONS

FUEL INLET = 1/2" NPT COUPLING
FUEL RETURN = 1/2" NPT COUPLING
OIL DRAIN = 1/2" NPT COUPLING
EXHAUST OUTLET - 3.0" O.D. MUFFLER

WEIGHT DATA
APPROX. DRY WEIGHT WITHOUT FUEL GENESET PACKAGE 4032 lbs.

REFERNCE DRAWING 0H5302C FOR INSTALLATION
FUEL TANK DRAWING 0H4610A

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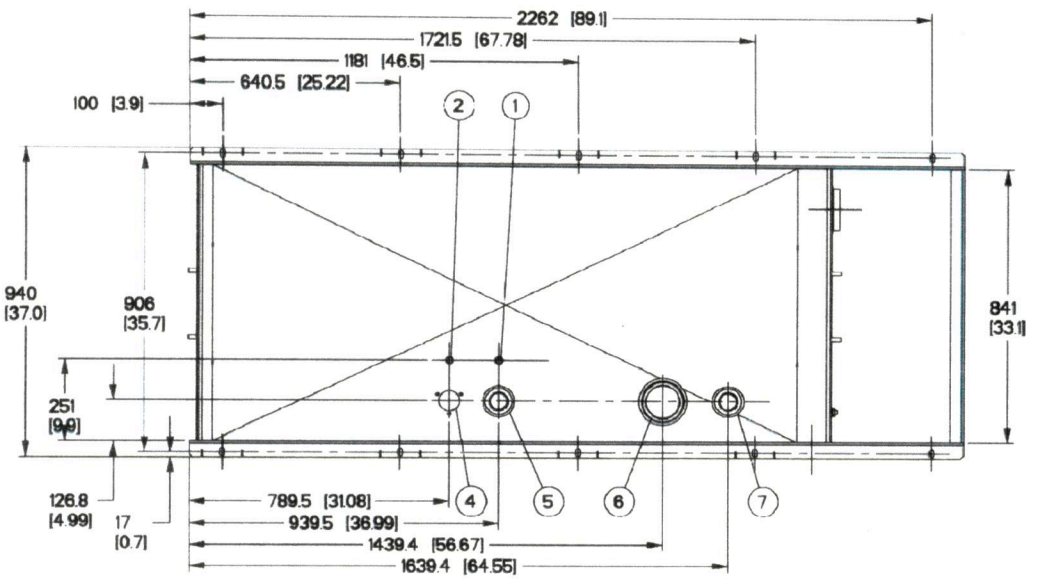
# INSTALLATION DRAWING

SD80
DIESEL 4.5L IVECO
TURBOCHARGED & AFTERCOOLED
SOUND ATTENUATED ENSL., LVL 2
W/ 300 GALLON FTB

GENERAC POWER SYSTEMS
Waukesha
P.O. BOX 8
WAUKESHA, WIS. 53187

| | | | |
|---|---|---|---|
| FILE NAME | 0H5302C-B ATC.DWG | SIZE | B |
| SCALE | N/A | FIRST USE | D4.5L IVECO |
| DWG NO. | 0H5302C-ATC | REV | B |

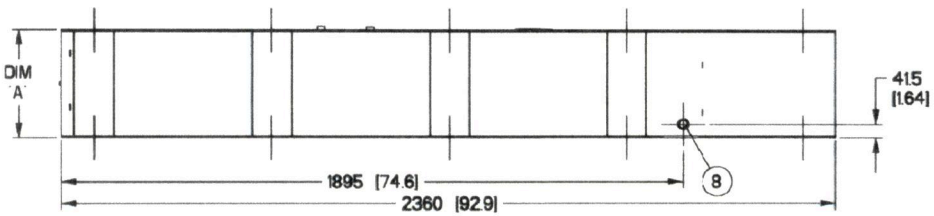


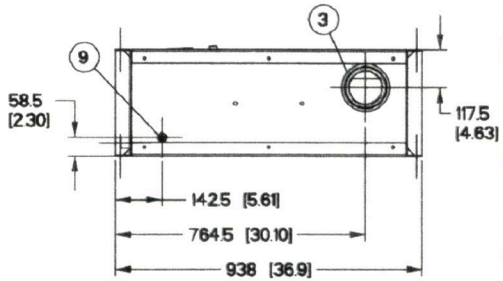

| ITEM # | TANK FITTING | FUNCTION |
|---|---|---|
| 1 | 3/8" NPT COUPLING | FUEL SUPPLY |
| 2 | 3/8" NPT COUPLING | FUEL RETURN |
| 3 | 4" NPT WELD FLANGE | EMERGENCY VENT (OUTER) |
| 4 | | FUEL LEVEL |
| 5 | 2" NPT WELD FLANGE | FUEL FILL |
| 6 | 4" NPT WELD FLANGE | EMERGENCY VENT (INNER) |
| 7 | 2" NPT WELD FLANGE | VENT |
| 8 | 3/4" NPT COUPLING | DRAIN |
| 9 | ∅22 HOLE | LEAK DETECTOR |

| TANK P/N | 0H48080ST03 | 0H48090ST03 | 0H48100ST03 |
|---|---|---|---|
| DIM "A" | 330 [13] | 635 [25] | 940 [37] |
| TOTAL TANK CAPACITY | 318 [84] | 734 [194] | 1154 [305] |
| USABLE TANK CAPACITY | 299 [79] | 716 [189] | 1134 [300] |
| DRY WEIGHT (EST) | 237 [522] | 344 [758] | 445 [982] |

NOTES:
1) ALL DIMENSIONS ARE:
LENGTH: mm [inch]
WEIGHT: kg [lbs]
CAPACITY: L [gal]

2) UL #142 LISTED




DRAWING CREATED FROM PRO/ENGINEER 3D FILE. ECO MODIFICATION TO BE APPLIED TO SOLID MODEL ONLY.

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GENERAC®

TITLE
B-GROUP, DW TYPE 2 TANKS

# INSTALLATION DRAWING

| ISSUE DATE: | 10/02/09 | | |
|---|---|---|---|
| SIZE B | CAGE NO | DWG NO 0H4610A | REV D |
| SCALE 0.075 | WT-KG -- | SHEET 1 of 1 | |

FedEx

ess

RT 315 6 A
2419
04.14
04.11

FZ

Extremely Urgent



From: (602) 275-1413
Charmayne Eriacho
American Tower Corp
4686 East Van Buren St
Ste 175
Phoenix, AZ 85008

Origin ID: ZSYA

FedEx Express

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J14101402070326

Ship Date: 09APR14
ActWgt: 1.0 LB
CAD: 7767482/INET3490

Delivery Address Bar Code

Ref # App Const: 308963 308958
Invoice #
PO #
Dept # Nat Compliance +196

SHIP TO: (602) 275-1413 BILL SENDER

**Div. of Air Pollution Control**
**State of Tennessee Dept. of Enviro**
**9th Floor L&C Annex**
**401 Church Street**
**NASHVILLE, TN 37243**

MON - 14 APR AA
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