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AT&T SITE ID: SE LAKE CITY

FA#: 10091918

SE LAKE CITY

**603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025**

GENERATOR PROJECT

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

- 2023 FLORIDA BUILDING CODE, 8TH EDITION
- ANSI/TIA-222-H, ASCE 7-16
- 2023 IBC
- 2023 IFC
- 2023 IPC
- 2023 IMC
- 2020 NEC
- 2023 ICC A117.1 ACCESSIBILITY CODE
- 2023 IECC

IN THE EVENT OF CONFLICT, THE MOST RESTRICTIVE CODE SHALL PREVAIL

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS REQUIREMENTS ARE NOT REQUIRED IN ACCORDANCE WITH THE CURRENT APPLICABLE BUILDING CODES. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

SITE INFORMATION

APPLICANT: AT&T TOWER ASSET GROUP
575 MOROSGO DR.
ATLANTA, GA 30324-3300

TOWER OWNER: CROWN CASTLE
6420 CONGRESS AVE. #2000
BOCA RATON, FL 33457

LATITUDE: 30° 06' 46.50" N (30.112917)

LONGITUDE: 082° 37' 05.19" W (-82.618111)

LAT/LONG TYPE: NAD-83

EXISTING ZONING: N/A

PROPOSED PROJECT AREA: INCREASE IN 99.0278 S.F.

TYPE OF CONSTRUCTION: TYPE V-B

OCCUPANCY GROUP: U

JURISDICTION: COLUMBIA COUNTY

PROJECT TEAM

CLIENT REPRESENTATIVE (NATIONAL): MASTEC NETWORK SOLUTIONS
800 S. DOUGLAS ROAD
10TH FLOOR
CORAL GABLES, FL 33134
CONTACT: JOHN ABSHIRE
EMAIL: JOHN.ABSHIRE@MASTEC.COM

CONSTRUCTION: MASTEC NETWORK SOLUTIONS
1025 GREENWOOD BLVD., STE. 470
LAKE MARY, FL 32746
CONTACT: GREG HOLSEN
EMAIL: GREG.HOLSEN@MASTEC.COM

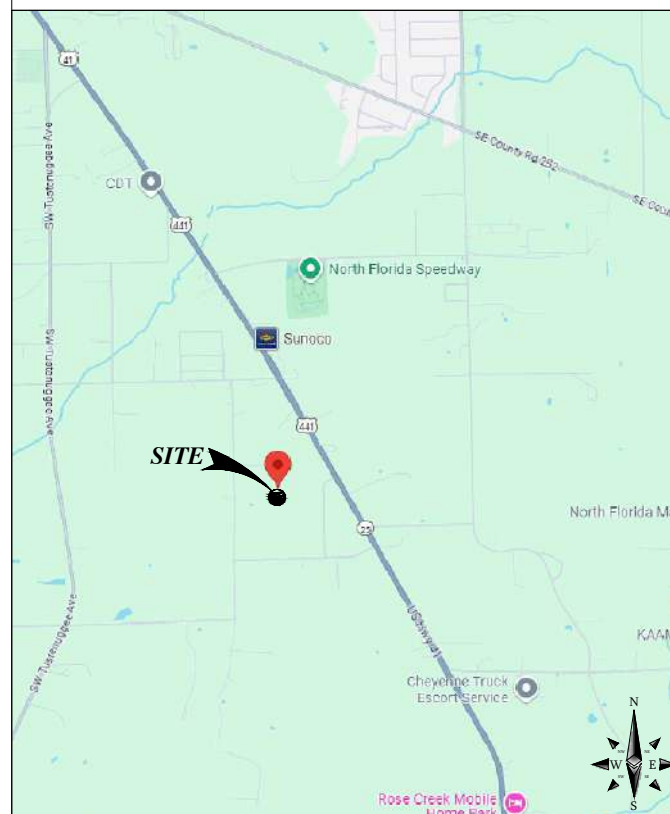
ENGINEERING (NATIONAL): MASTEC NETWORK SOLUTIONS
1151 SE CARY PARKWAY, STE. 101
CARY, NC 27518
CONTACT: RAPHAEL MOHAMED
PH: (919) 674-5895
EMAIL: RAPHAEL.MOHAMED@MASTEC.COM

SITE ACQUISITION (NATIONAL): MASTEC NETWORK SOLUTIONS
800 S. DOUGLAS ROAD
10TH FLOOR
CORAL GABLES, FL 33134
CONTACT: JOHN ABSHIRE
EMAIL: JOHN.ABSHIRE@MASTEC.COM

SCOPING ENGINEER (NATIONAL): MASTEC NETWORK SOLUTIONS
2189 PARKWAY LAKE DR.
HOOVER, AL 35244
CONTACT: DAVID ROGERS
EMAIL: DAVID.ROGERS@MASTEC.COM

LOCATION MAP

VICINITY MAP



LOCAL MAP



PROJECT DESCRIPTION

AT&T MOBILITY PROPOSES TO MODIFY AN EXISTING UNMANNED WIRELESS COMMUNICATIONS FACILITY. THIS MODIFICATION WILL CONSIST OF THE FOLLOWING:

TOWER SCOPE OF WORK

- NO TOWER WORK

GROUND SCOPE OF WORK

- REMOVE (E) ATS/CAM LOC
- INSTALL (1) 30kW GENERAC STANDBY DIESEL GENERATOR (GENERAC SD030) INSTALLED ON TOP OF A BASE FUEL TANK ON A CONCRETE PAD
- INSTALL (1) 200A ATS/CAM LOC (#G0063113)
- INSTALL ATS ALARM RELAY
- (E) GENERATOR TO BE REMOVED & (E) CONCRETE PAD TO REMAIN

DRAWING INDEX

SHEET NO: SHEET TITLE

T-1	TITLE SHEET
GN-1	GENERAL NOTES
A-0	EQUIPMENT LAYOUT
E-1	ELECTRICAL PLAN
E-2	EQUIPMENT & CONDUIT DETAILS
E-3	LOAD CALCULATIONS & ONE LINE DIAGRAM
E-4	ALARM DETAILS
G-1	GROUNDING DETAILS

APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT & MAY IMPOSE CHANGES OR MODIFICATIONS.

AT&T _____ DATE: _____

SITE ACQUISITION _____ DATE: _____

CONSTRUCTION MANAGER _____ DATE: _____

SCALE

THE DRAWING SCALES SHOWN IN THIS SET REPRESENT THE CORRECT SCALE ONLY WHEN THESE DRAWINGS ARE PRINTED IN A 11"x17" OR 24"x36" FORMAT.



CALL FLORIDA ONE CALL
(800) 432-4770
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BEFORE YOU DIG!



1/14/2025

SUBMITTALS

DATE	DESCRIPTION	REV	ISSUED BY
1/14/2025	CONSTRUCTION	0	RM

DRAWN BY: AR

CHECKED BY: KL

APPROVED BY: RM

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PREPARED FOR:



PREPARED BY:



FA NUMBER:

10091918

SITE NAME:

SE LAKE CITY

SITE ADDRESS:

**603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025**

TOWER OWNER ID:

N/A

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

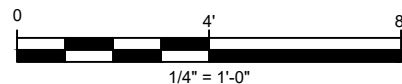
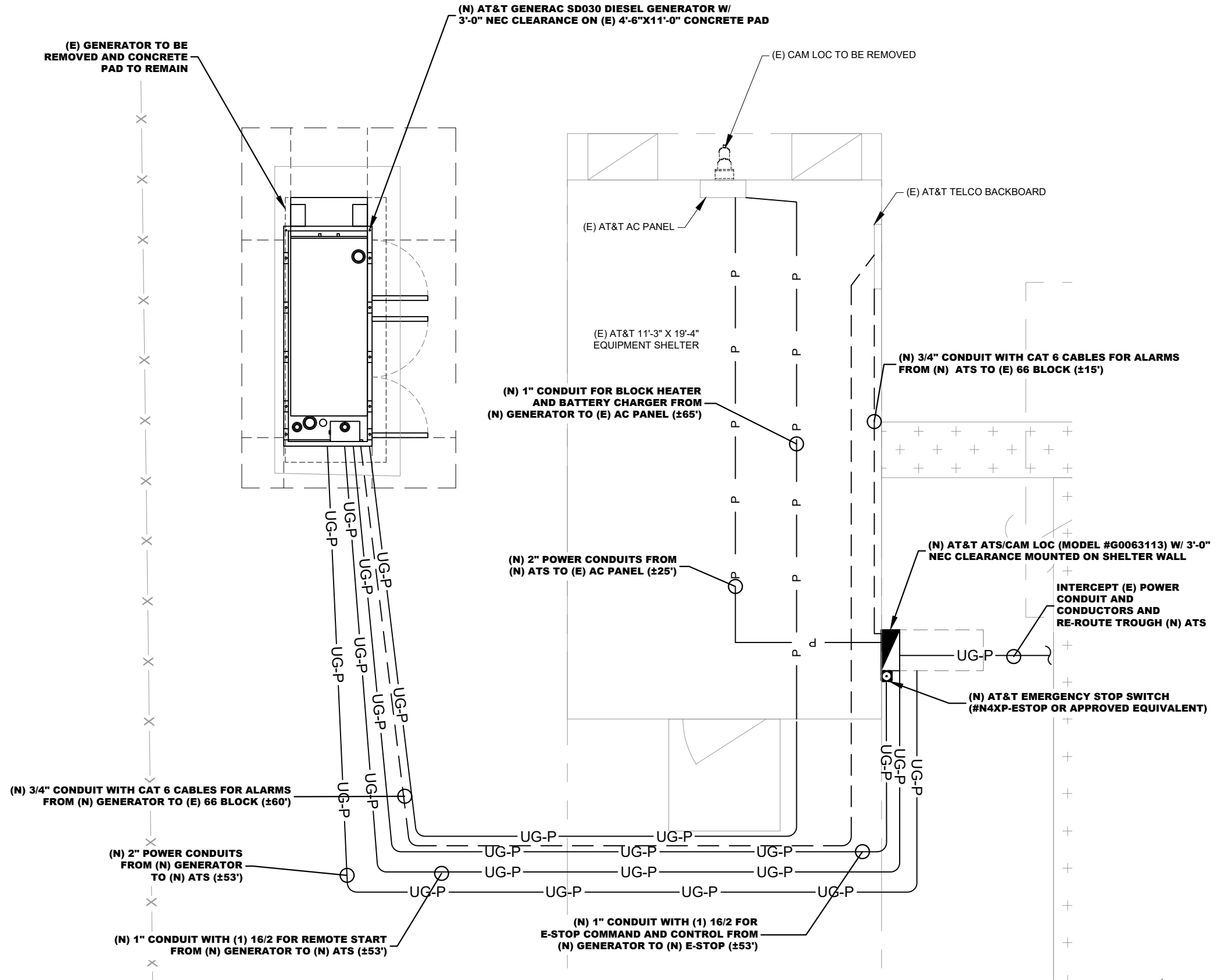
NOTES AND SPECIFICATIONS

- ALL ELECTRICAL WORK SHALL COMPLY WITH NEC, STATE, AND LOCAL CODES.
- CONTRACTOR SHALL OBTAIN OWNER/TENANT SPECIFICATIONS AND REVIEW FOR ADDITIONAL DETAILS AND REQUIREMENTS THAT MAY NOT BE SHOWN IN THESE DRAWINGS. CONTRACTOR SHALL COMPLY WITH ANY ADDITIONAL OWNER/TENANT SPECIFICATIONS AND REQUIREMENTS.
- CONTRACTOR SHALL COORDINATE WITH THE ELECTRIC UTILITY FOR THE EXACT TRANSFORMER LOCATION, METERING REQUIREMENTS, AND SERVICE ROUTING. CONTRACTOR SHALL COORDINATE WITH THE TELEPHONE UTILITY FOR THE EXACT TELEPHONE REQUIREMENTS AND SERVICE ROUTING.
- PRIOR TO PURCHASING EQUIPMENT, THE CONTRACTOR SHALL CONTACT THE ELECTRIC COMPANY AND OBTAIN IN WRITING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE UTILITY SERVICE POINT. THE CONTRACTOR SHALL ENSURE ALL ELECTRICAL EQUIPMENT, CIRCUIT BREAKERS, DISCONNECTS, FUSES, AND PANELBOARDS HAVE A FAULT CURRENT INTERRUPTING RATING GREATER THAN THE AVAILABLE FAULT CURRENT. IN NO CASE SHALL THE FAULT CURRENT INTERRUPTING RATING BE LESS THAN 10,000 AMPS.
- CONTRACTOR TO PROVIDE 2-200 LB TEST POLYETHYLENE PULL CORDS SECURELY FASTENED AT EACH END OF POWER AND TELCO CONDUIT. PROVIDE CAPS ON END OF UNUSED CONDUIT.
- CONTRACTOR TO PROVIDE A REBAR MARKER WITH AT LEAST 2 FEET EXPOSED ABOVE GRADE AND PAINTED BRIGHT ORANGE TO INDICATE LOCATION OF CONDUIT CAPPED BELOW GRADE.
- PRIOR TO TRENCHING CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL REPAIR AT CONTRACTOR'S EXPENSE ANY DAMAGE TO EXISTING UTILITIES.
- CONTRACTOR TO VERIFY EXACT ROUTING OF POWER AND TELCO CONDUIT WITH LOCAL UTILITIES AND OWNER/TENANT. ENSURE ALL CONDUIT STUB-UPS ACCOMMODATE EQUIPMENT REQUIREMENTS.
- UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC UNLESS NOTED OTHERWISE. USE SCHEDULE 80 PVC UNDER ROADS.
- CONDUIT RUNS SHALL HAVE A CONTINUOUS SLOPE DOWNWARDS AND AWAY FROM THE EQUIPMENT TO ALLOW WATER TO FLOW AWAY FROM THE EQUIPMENT AND SHELTER. EXCAVATE TRENCHES ALONG STRAIGHT LINES PRIOR TO INSTALLING CONDUIT TO ACCOMMODATE ADJUSTING THE ELEVATION, AS NEEDED.
- CONDUIT ENTERING EQUIPMENT SHALL BE SEALED WITH A SEALANT THAT IS IDENTIFIED FOR USE WITH THE CABLE/CONDUCTOR INSULATION, SHIELDING, ETC.
- THE OWNER SHALL FURNISH AND THE CONTRACTOR SHALL INSTALL ADDITIONAL SIGNAGE TO BE LOCATED AT THE COMPOUND FENCE. CONTRACTOR SHALL COORDINATE WITH OWNER/TENANT CONSTRUCTION MANAGER FOR PLACEMENT OF SIGNAGE.
- UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO THE LANDSCAPING AREA.
- CONTRACTOR TO ENSURE A MIN. 3' CLEARANCE IN FRONT OF ELECTRICAL PANELS PER NEC.
- ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES AND EQUIPMENT SHALL BE LABEL TESTED BY AN APPROVED THIRD PARTY TESTING AGENCY.

CONDUCTOR COLOR CODE		
SYSTEM	CONDUCTOR	COLOR
120/240v, 1ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
	GROUND	GREEN
120/208v, 3ø	A PHASE	BLACK
	B PHASE	RED
	C PHASE	BLUE
	NEUTRAL	WHITE
277/480v, 3ø	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
DC VOLTAGE	POS (+)	RED**
	NEG (-)	BLACK**

* SEE NEC 210.5(C)(1) AND (2)
** POLARITY MARKED AT TERMINATION

NOTE:
CONTRACTOR TO RE-USE EXISTING CONDUITS AND PATHWAYS



ELECTRICAL PLAN

11"x17" SCALE: 1/4" = 1'-0"
24"x36" SCALE: 1" = 2'-0"



1/14/2025

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1/14/2025	CONSTRUCTION	0	RM

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APPROVED BY: RM

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PREPARED BY:



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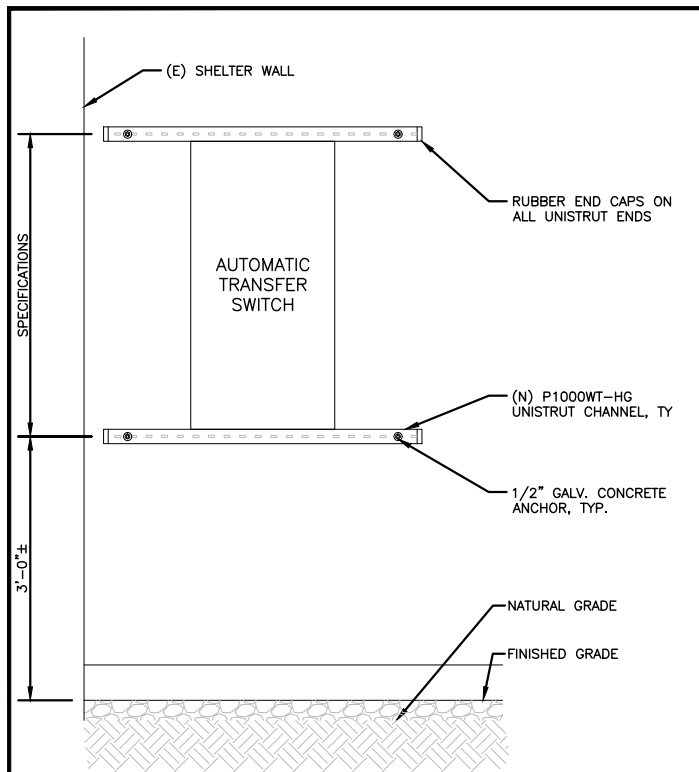
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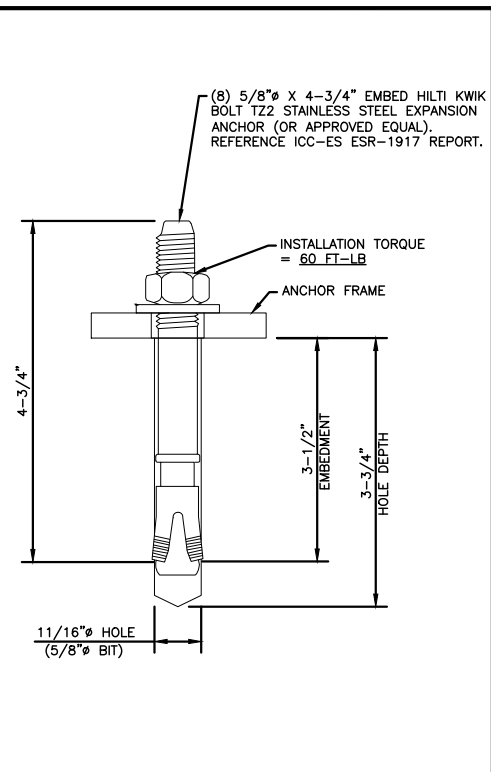
TOWER OWNER ID:
N/A

SHEET TITLE
ELECTRICAL PLAN

SHEET NUMBER
E-1



WALL MOUNT ELEVATION SCALE: NONE 8



TYPICAL ANCHOR DETAIL SCALE: NONE 6

Decal 6.5x3

AT&T IDENTIFICATION SIGN
6.5"x3" SCALE: NTS

FUEL TANK CAPACITY GALS.

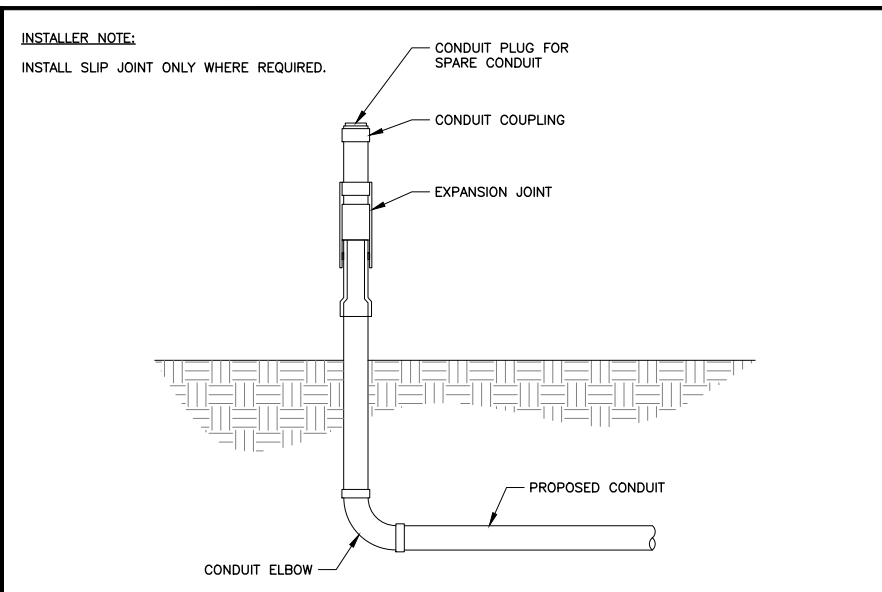
FUEL TANK SIGN
12"x15" SCALE: NTS

HAZARD DIAMOND SIGN
15"x15" WITH 6" LETTERS SCALE: NTS

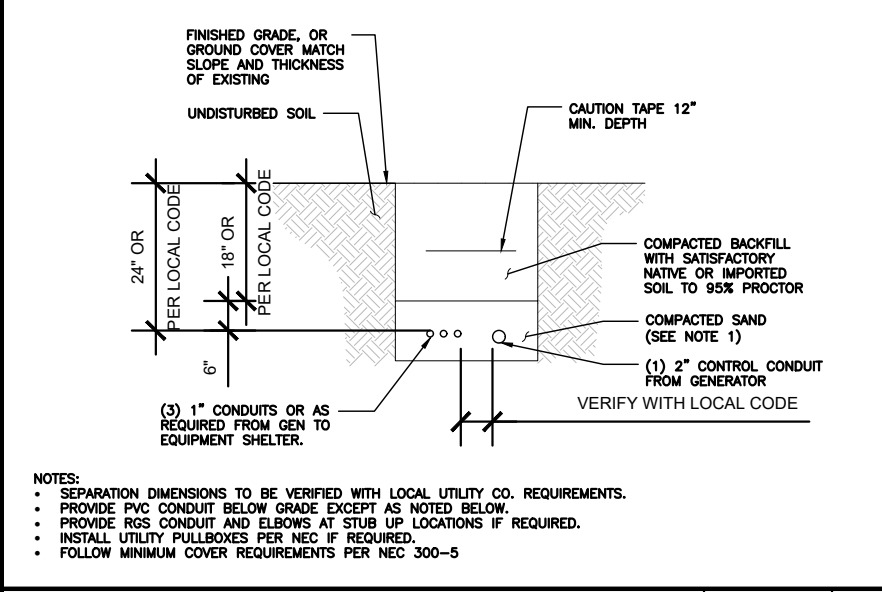
FOR FUEL & OTHER ENVIRONMENTAL EMERGENCIES CALL EH&S 1-800-566-9347 (1-800-KNOW-EHS)

YELLOW EH&S SIGN
SCALE: NTS

GENERATOR SIGN DETAIL SCALE: NONE 5



SLIP JOINT DETAIL SCALE: NONE 3



TRENCH DETAIL SCALE: NONE 2

U.L. SYSTEM NO. C-AJ-1150
CONDUIT THROUGH BEARING WALL SIMILAR TO U.L. DESIGN NO. U902
F RATING = 3 HR
T RATING = 0 HR

A. FLOOR OR WALL ASSEMBLY : MINIMUM 4-1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAMETER OF OPENING IS 4". (SEE CONCRETE BLOCKS CAT2) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

B. THROUGH PENETRATIONS : ONE METALLIC PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MINIMUM 0". (POINT CONTACT) TO MAXIMUM 1-3/8". THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR CONDUITS MAY BE USED:
a. STEEL PIPE-NOMINAL 6" DIAMETER (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE
b. IRON PIPE-NOMINAL 6" DIAMETER (OR SMALLER) CAST OR DUCTILE IRON PIPE.
c. CONDUIT - NOMINAL 4" DIAMETER (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING OR NOMINAL 3-1/2" DIAMETER (OR SMALLER) STEEL CONDUIT.

C. PACKING MATERIAL: MINIMUM 6" THICKNESS OF MIN 4.0 PCF MINERAL WOOL BATTING INSULATION FIRMLY PACKED INTO OPENING AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF FILL MATERIAL.

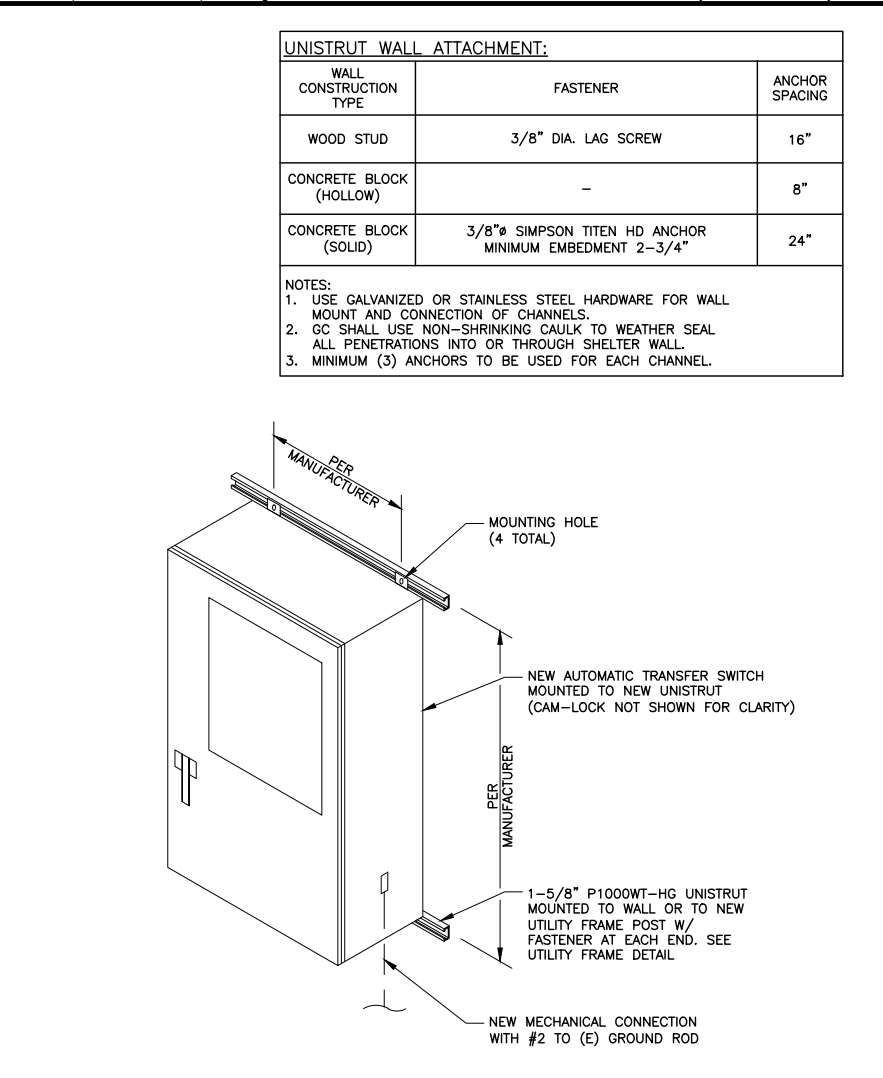
D. FILL VOID, OR CAVITY MATERIAL*: SEALANT: MINIMUM 1/4" THICKNESS OF FILL MATERIAL APPLIED WITHIN THE ANNULUS, FLUSH WITH TOP SURFACE OF FLOOR AND WITH BOTH SURFACES OF WALL. AT THE POINT CONTACT LOCATION BETWEEN PIPE AND CONCRETE, A MINIMUM 1/2" DIAMETER BEAD OF FILL MATERIAL SHALL BE APPLIED AT THE CONCRETE/PIPE INTERFACE ON THE TOP SURFACE OF FLOOR AND ON BOTH SURFACES OF WALL. W-RATING APPLIES ONLY WHEN CP601S OR CP604 SEALANT IS USED.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC. : CP601S, CP604, CP606, OR FS-ONE SEALANT.

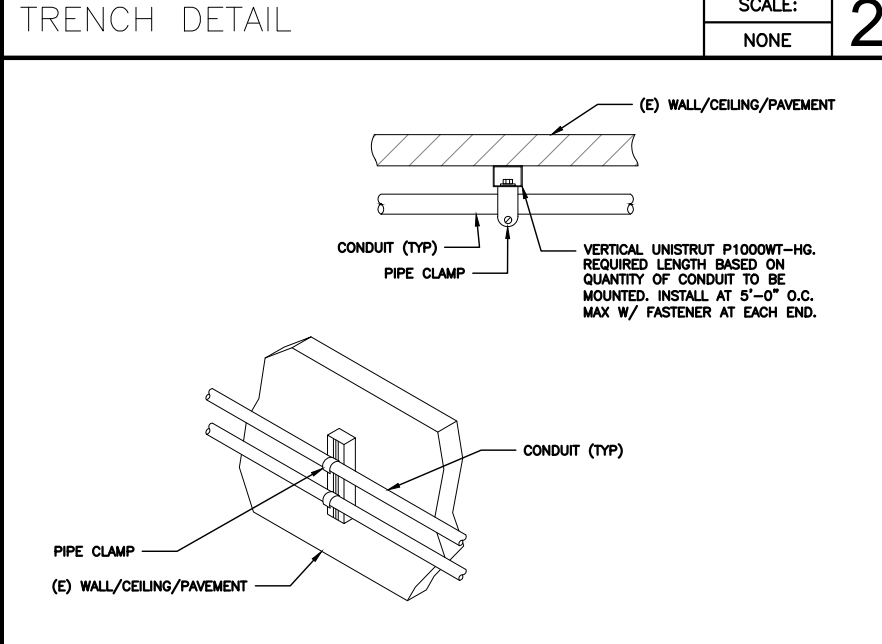
* BEARING THE UL CLASSIFICATION MARK

INSTALLER NOTES:
1. IF EXISTING CONSTRUCTION VARIES FROM THIS DETAIL, AN EQUAL 3-HR U.L. PENETRATION APPROPRIATE FOR THE EXISTING WALL TYPE SHALL BE CONSTRUCTED
2. GC SHALL USE NON-SHRINKING CAULK TO WEATHERSEAL ALL PENETRATIONS INTO OR THRU SHELTER WALL.

OUTER WALL PENETRATION DETAIL SCALE: NONE 7



ATS MOUNTING DETAIL SCALE: NONE 4



CONDUIT WALL MOUNT DETAIL SCALE: NONE 1

1/14/2025

SUBMITTALS

DATE	DESCRIPTION	REV	ISSUED BY
1/14/2025	CONSTRUCTION	0	RM

DRAWN BY: AR
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APPROVED BY: RM

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SITE ADDRESS:
603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025

TOWER OWNER ID:
N/A

SHEET TITLE
EQUIPMENT & CONDUIT DETAILS

SHEET NUMBER
E-2

48V PRIMARY VOLTAGE DC PLANT SPECIFIED			
+24VDC EQUIPMENT LOAD:	0 WATTS	=	0 AMPS at +24V
-48VDC EQUIPMENT LOAD:	19701 WATTS	=	199 AMPS at -48V
-54VDC EQUIPMENT LOAD:	0 WATTS	=	0 AMPS at -54V
NO SECONDARY 24V LOADS - DC CONVERTER SYSTEM NOT REQUIRED			
TOTAL PRIMARY 48V LOAD:	19701 WATTS	=	199 AMPS at -48V

DC PLANT CONFIGURATION CAN BE REVIEWED ON DC PLANT WORKSHEET			
DC PLANT: VEHIC 510 - 48VDC NISense 7103 Panel 1000A			
48V RECTIFIERS REQUIRED (N=1):	7		
48V RECTIFIER SLOTS:	24		
CURV. TYPE: UNIVERSAL SLOTS - POSHI 3 RECT SLOTS SHALL CAN BE USED FOR CURV			
+24V CONVERTERS REQUIRED:	0	(NO DC CONVERTERS REQUIRED)	
+24V SLOTS:	0	(NO DC CONVERTERS REQUIRED)	
ESTIMATED BATTERY RESERVE TIME			
3.170 AH 48V STORAGE - 5.77 HOURS	(ON-SITE GENERATOR - 2 HOUR MINIMUM)		

ESTIMATED CAPACITY REQUIRED:	30 KW
ON-SITE AC GENERATOR CAPACITY:	30 KW
ESTIMATE GENSET CAPACITY SUFFICIENT	
RECOMMENDED EXHAUST SYSTEM:	2-TONS COOLING
SPECIFIED ENVIRONMENTAL SYSTEM:	ELTOM8
ESTIMATE SUFFICIENT HVAC CAPACITY	

LOAD CALCULATIONS

SCALE: NONE **1**

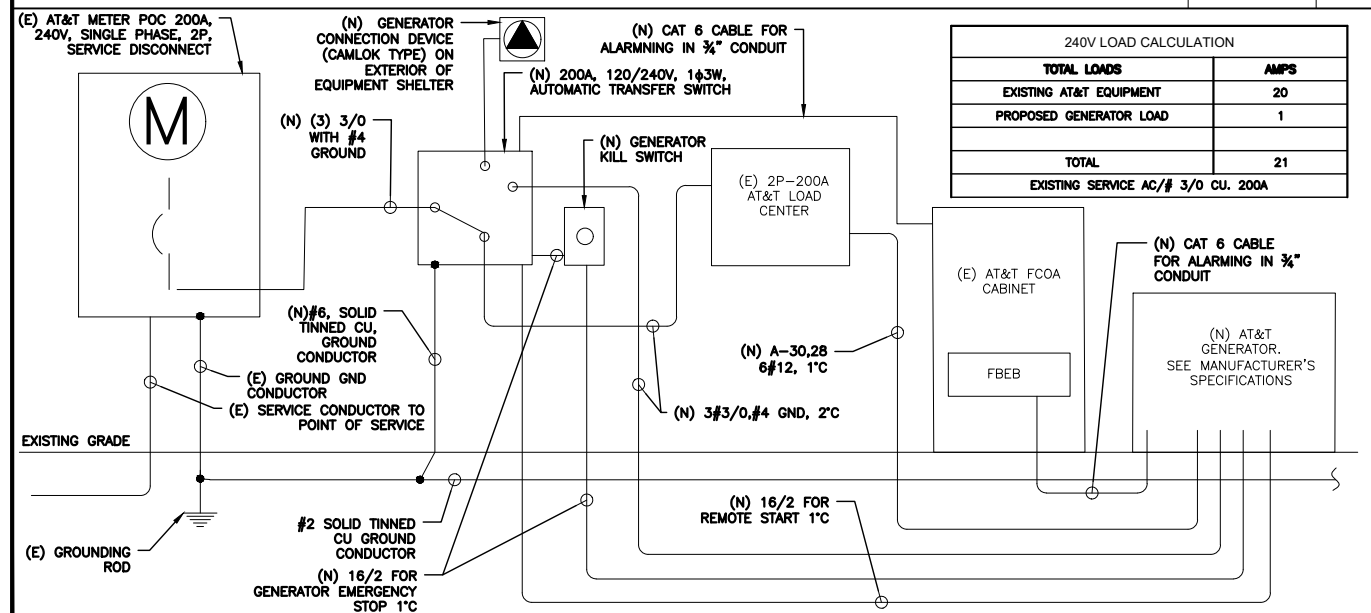


PANELBOARD DIRECTORY - 120/240 V - 200 AMP			
1	HAVC	2	SPARE
3	HAVC	4	SPARE
5	RECEPTACLES GFCI	6	LIGHTS
7	BLANK	8	TOWER LITE CONT.
9	RECT 1	10	RECEPTACLES
11	RECT 1	12	RECT #2
13	BATTERY CHARGER	14	RECT #2
15	RECT 5	16	RECT #4
17	RECT 5	18	RECT #3
19	RECT 7	20	RECT #3
21	RECT 7	22	RECT 8
23	RECT 6	24	RECT 8
25	RECT 6	26	SPARE
27	BLANK	28	NEW BREAKER
29	BLANK	30	NEW BREAKER

PROPOSED (2) 1P-20A BREAKERS IN POSITIONS 30 AND 28

EXISTING PANELBOARD

SCALE: NONE **3**



240V LOAD CALCULATION	
TOTAL LOADS	AMPS
EXISTING AT&T EQUIPMENT	20
PROPOSED GENERATOR LOAD	1
TOTAL	21
EXISTING SERVICE AC/# 3/0 CU, 200A	

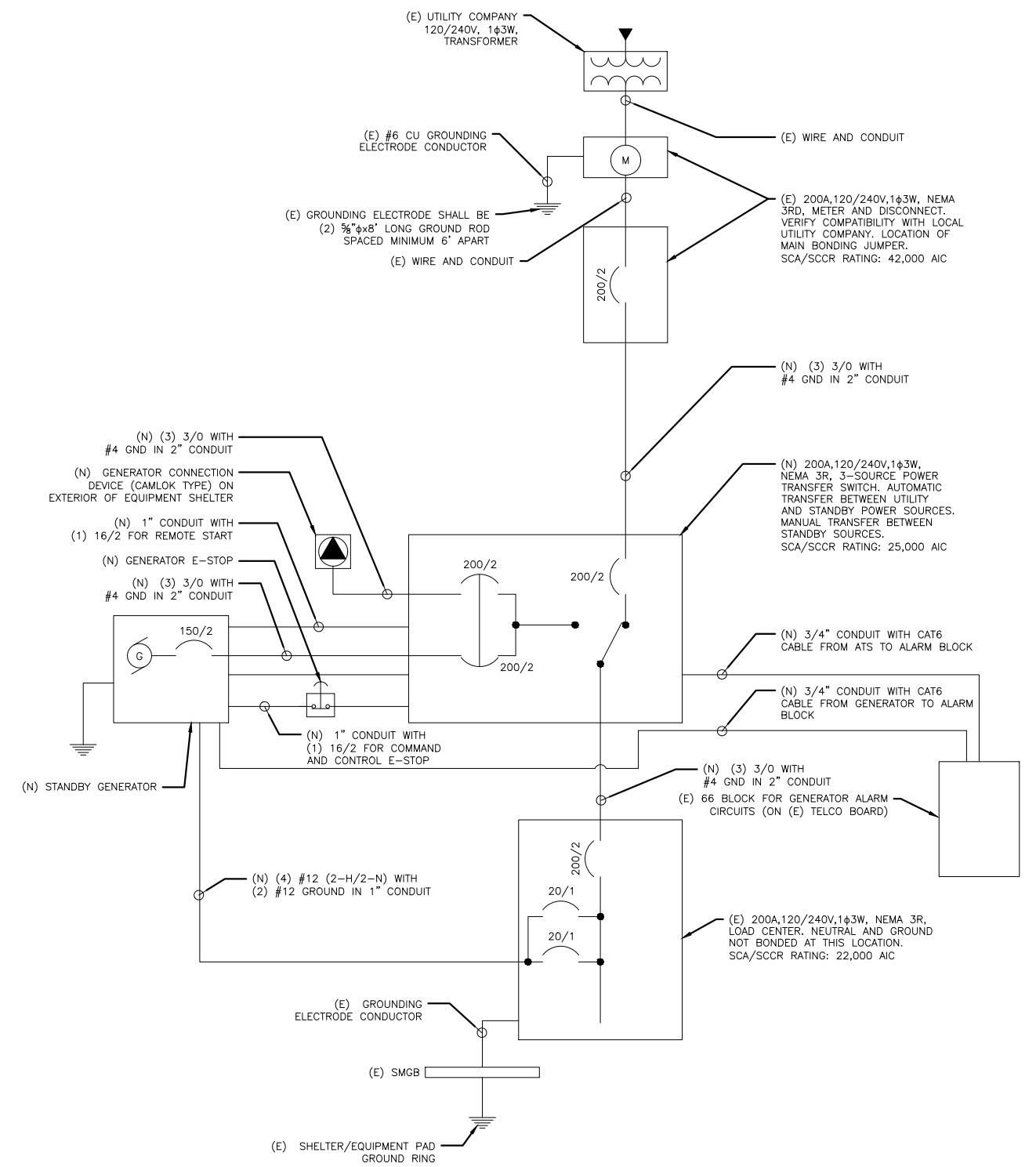
ELECTRICAL RISER DIAGRAM

SCALE: NONE **4**

- NOTES:
- ALL NEW CONDUCTORS TO BE INSTALLED SHALL BE COPPER. ALL CONDUCTORS SHALL BE THHW, THWN, THWN-2, XHHW, OR XHHW-2 UNLESS NOTED OTHERWISE.
 - CONTRACTOR IS TO FIELD VERIFY ALL EXISTING ITEMS SHOWN ON THE ELECTRICAL ONE-LINE DIAGRAM AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
 - ALL GROUND AND BONDING PER THE NEC.
 - INSTALL ATS ALARM RELAY.

INSTALLER NOTE:
CONTRACTOR TO VERIFY EXISTING LOAD PANEL AND INSTALL NEW 20A BREAKER FOR BLOCK HEATER AND NEW 20A BREAKER FOR BATTERY CHARGER (IF REQUIRED).

- INSTALLER NOTE:
- THE GENERATOR SIZE HAS BEEN DETERMINED BY AT&T BASED ON AN INTERNAL LOAD ANALYSIS OF THEIR EQUIPMENT. THE GENERATOR SIZE WAS PROVIDED AS PART OF THE SCOPING ANALYSIS. AT&T SHALL BE RESPONSIBLE FOR ENSURING THAT THEIR SYSTEM CONFIGURATION DOES NOT EXCEED THE MANUFACTURER POWER RATING OF THE SPECIFIED GENERATOR.
 - CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING A SPOT READING OF THE PANEL AT PEAK OPERATING HOURS TO VERIFY THE AT&T PANEL SCHEDULE CALCULATIONS ARE NOT EXCEEDED IN THE EVENT THE READING EXCEEDS THE CALCULATED PANEL SCHEDULE LOADS, RECORD THE READING AND CONSULT AT&T ENGINEERING MANAGER PRIOR TO PROCEEDING WITH GENERATOR INSTALLATION.



ONE LINE DIAGRAM

SCALE: NONE **5**



1/14/2025

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LAKE CITY, FL 32025**

TOWER OWNER ID:
N/A

SHEET TITLE
**LOAD CALCULATIONS &
ONE LINE DIAGRAM**

SHEET NUMBER
E-3

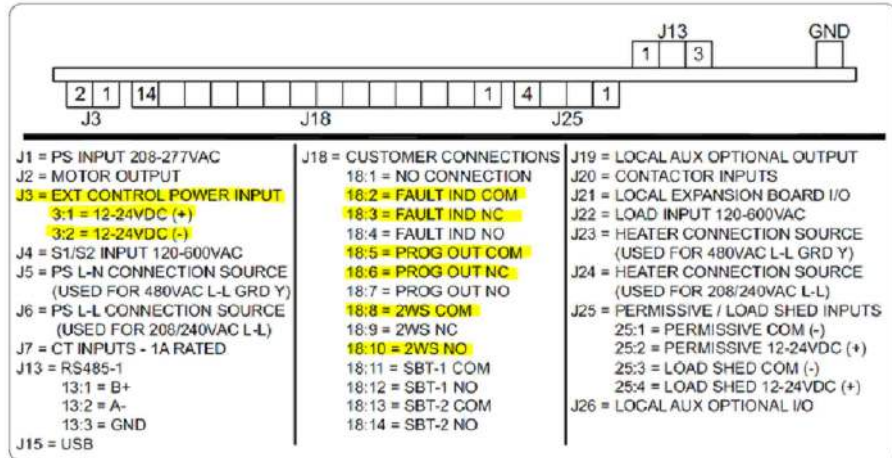
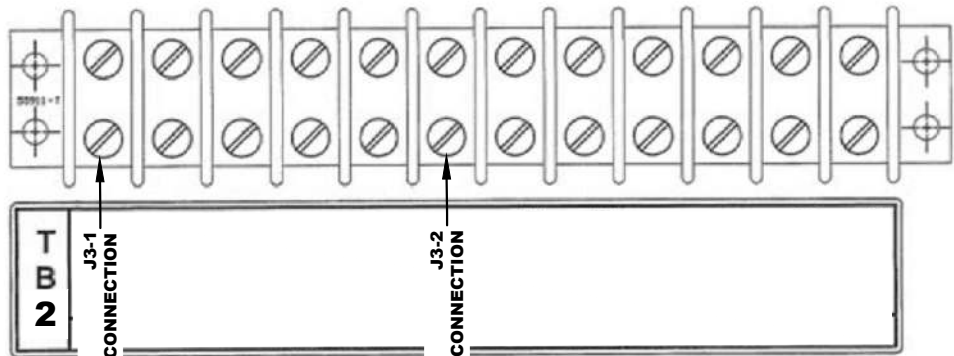
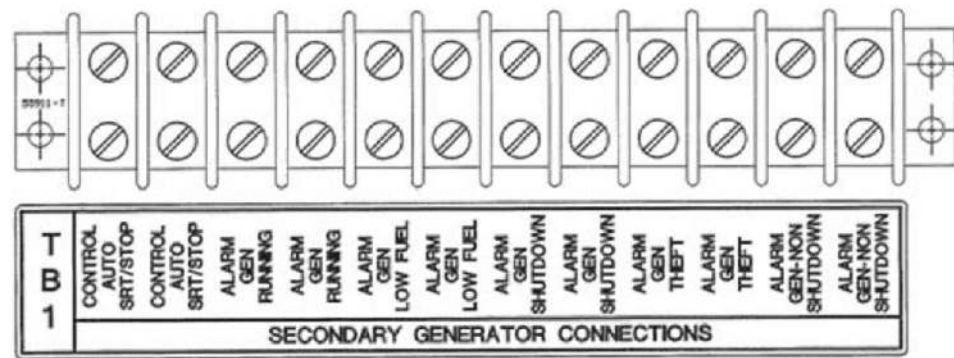


Figure 4-8. Customer Connections Diagram



NAME	DESCRIPTION
CF	CRITICAL FAILURE
FL	FUEL LEAK OVERFILL
GR	GENERATOR RUNNING
FL	LOW FUEL
MAF	MAJOR FAULT
MF	MINOR FAULT
FL	GEN FUEL LEAK TANK WHT/SLATE

NOTE: CONTRACTOR TO LABEL WIRES W/ P-TOUCH OR SIMILAR LABELS ONLY. ABSOLUTELY NO HANDWRITTEN LABELS.

ALARM REQUIREMENTS
 AT&T REQUIRES FOUR ALARMS CONFIRMED WORKING: NORMALLY CLOSED VOLT-FREE CONTACT FOR:

- GENERATOR RUN
- GENERATOR FAIL
- LOW FUEL
- FUEL LEAK
- RBS GENERATOR MJ

COLOR CODE
 GENERATOR:
 A. CABLE - (2) CAT6
 B. COLOR CODE

- GENERATOR RUN - ALARM PORT #14 (ORANGE & WHITE)
- GENERATOR FAIL - ALARM PORT #15 (BLUE & WHITE)
- LOW FUEL - ALARM (PORT P32) ON I/O BOARD (GREEN & WHITE)
- FUEL LEAK - P32 ON I/O BOARD (BROWN & WHITE)

AUTOMATIC TRANSFER SWITCH
 A. CABLE - cat6e
 B. COLOR CODE

- COMMERCIAL POWER FAIL IF REQUIRED (BLUE WHITE)
- TRANSFER SWITCH POSITION (BROWN WHITE)

CAM LOCK ALARM
 A. CABLE - cat6e
 B. COLOR CODE

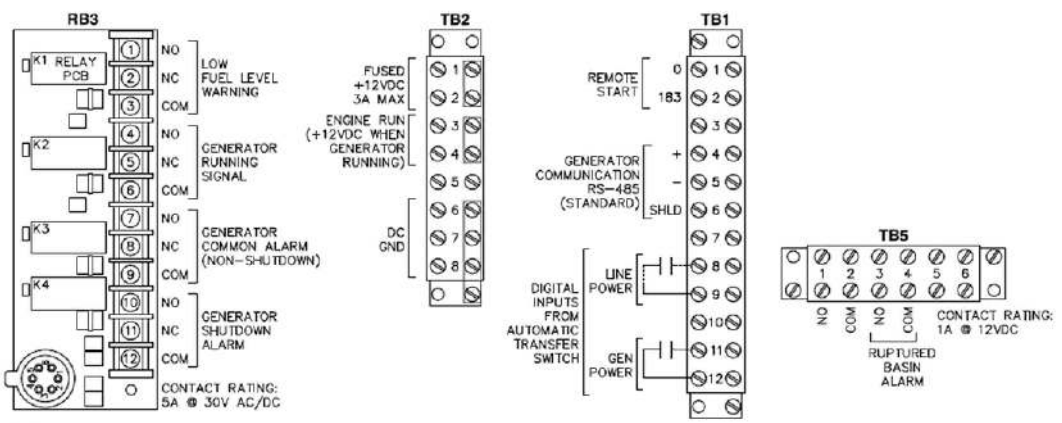
- PORTABLE GENERATOR RUNNING (ORANGE WHITE) (IF REQUIRED)



1/14/2025

ALARM DETAILS

SCALE: **3**
 NONE



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 Network Solutions
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 CARY, NC 27518

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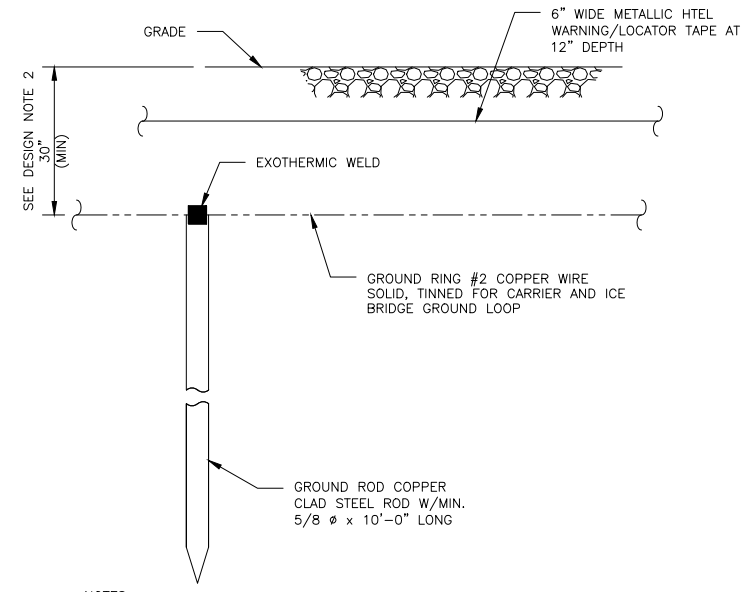
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SITE ADDRESS:
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 LAKE CITY, FL 32025

TOWER OWNER ID:
N/A

SHEET TITLE
ALARM DETAILS

SHEET NUMBER
E-4

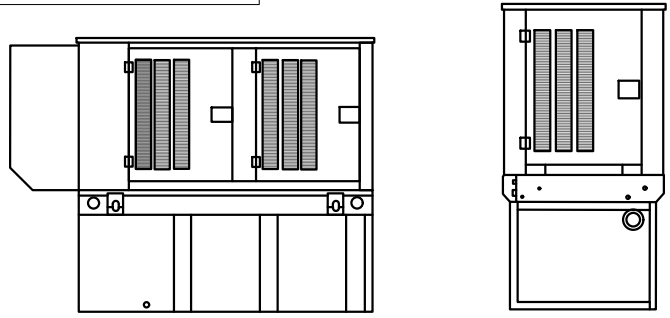


- NOTES:
- GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL
 - GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

GROUND ROD DETAIL

SCALE: NONE 3

NOTE: GENERATOR IS NOT SEPARATELY DERIVED

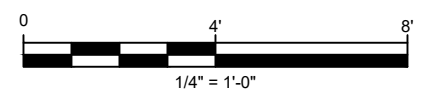


WEATHER PROTECTED ENCLOSURE

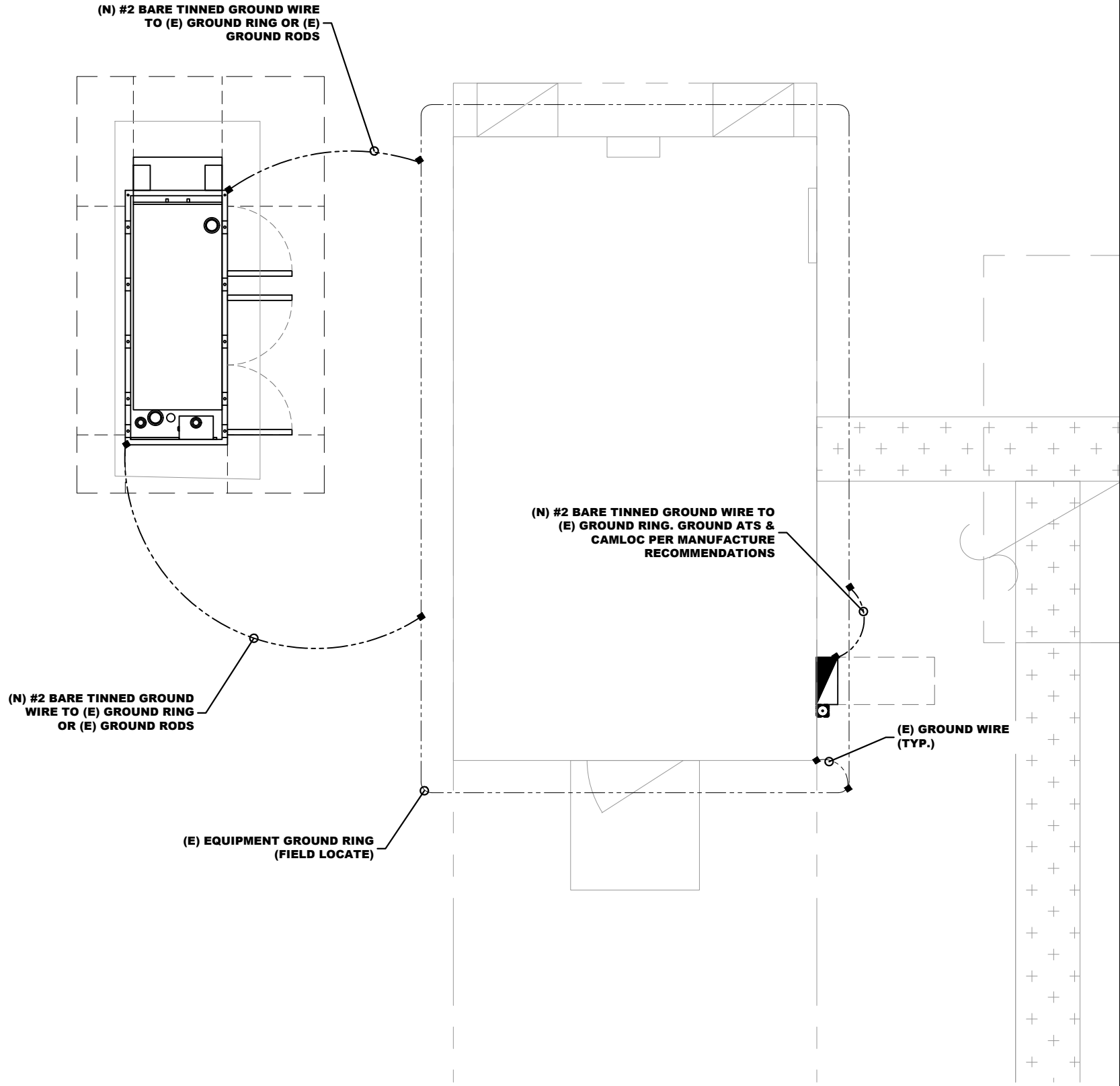
Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Steel Weight		Aluminum	
			Minimum - lbs (kg)	Maximum - lbs (kg)	Weight Min - lbs (kg)	Weight Maximum - lbs (kg)
No Tank		94.8 (2,409) x 38.0 (965) x 49.5 (1,258)	2,158 (979)	2,286 (1,037)	1,935 (878)	2,965 (1,345)
12 54 (204)	94.8 (2,409) x 38.0 (965) x 62.5 (1,588)	2,638 (1,197)	2,766 (1,255)	2,415 (1,096)	3,445 (1,563)	
30 132 (499)	94.8 (2,409) x 38.0 (965) x 74.5 (1,893)	2,868 (1,301)	2,996 (1,359)	2,645 (1,200)	3,675 (1,667)	
44 190 (719)	94.8 (2,409) x 38.0 (965) x 86.5 (2,198)	3,077 (1,396)	3,205 (1,454)	2,854 (1,295)	3,884 (1,762)	
49 211 (799)	106.0 (2,692) x 38.0 (965) x 99.0 (2,516)	4,316 (1,958)	4,572 (2,074)	3,870 (1,755)	5,930 (2,690)	
69 300 (1,136)	94.8 (2,409) x 38.0 (965) x 90.0 (2,287)	3,140 (1,424)	3,268 (1,482)	2,917 (1,323)	3,947 (1,790)	

GENERATOR DETAIL

SCALE: NONE 2



NOTE: CONTRACTOR TO RE-USE EXISTING CONDUITS AND PATHWAYS



GROUNDING PLAN
11"x17" SCALE: 1/4" = 1'-0"
24"x36" SCALE: 1" = 2'-0"



1/14/2025

SUBMITTALS

DATE	DESCRIPTION	REV	ISSUED BY
1/14/2025	CONSTRUCTION	0	RM

DRAWN BY: AR
CHECKED BY: KL
APPROVED BY: RM

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FA NUMBER:
10091918

SITE NAME:
SE LAKE CITY

SITE ADDRESS:
**603 SOUTHWEST WENDY TERRACE
LAKE CITY, FL 32025**

TOWER OWNER ID:
N/A

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-1



D030 | 2.2L | 30 kW
INDUSTRIAL DIESEL GENERATOR SET
 EPA Certified Stationary Emergency

Standby Power Rating

30 kW, 38 kVA, 60 Hz

Prime Power Rating*

27 kW, 34 kVA, 60 Hz



*Assembled in the USA using domestic and foreign parts

*EPA Certified Prime ratings are not available in the US or its Territories

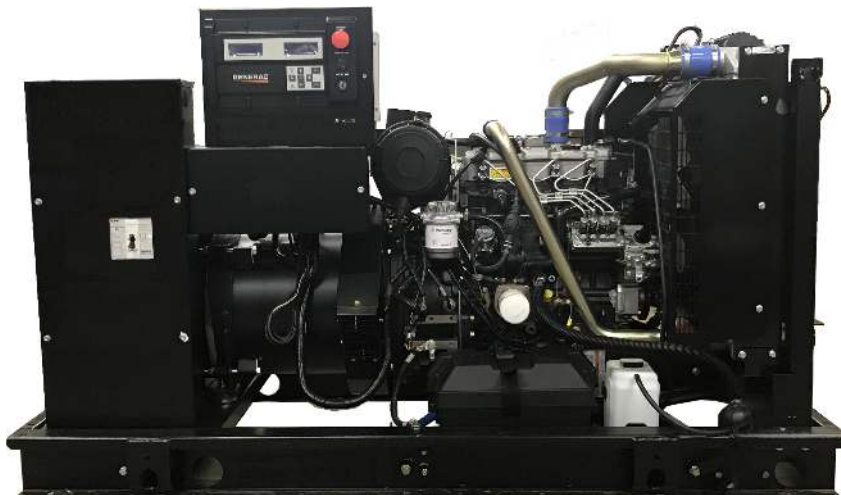


Image used for illustration purposes only

Codes and Standards

Not all codes and standards apply to all configurations. Contact factory for details.



UL2200, UL6200, UL1236, UL489, UL142



CSA C22.2, ULC S601



BS5514 and DIN 6271



SAE J1349



NFPA 37, 70, 99, 110



NEC700, 701, 702, 708



ISO 3046, 7637, 8528, 9001



NEMA ICS10, MG1, 250, ICS6, AB1



ANSI C62.41

Powering Ahead

For over 60 years, Generac has provided innovative design and superior manufacturing.

Generac ensures superior quality by designing and manufacturing most of its generator components, including alternators, enclosures and base tanks, control systems and communications software.

Generac gensets utilize a wide variety of options, configurations and arrangements, allowing us to meet the standby power needs of practically every application.

Generac searched globally to ensure the most reliable engines power our generators. We choose only engines that have already been proven in heavy-duty industrial applications under adverse conditions.

Generac is committed to ensuring our customers' service support continues after their generator purchase.



D030 | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Level 1 Fan and Belt Guards (Open Set Only)
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Silencer (Enclosed Unit Only)
- Engine Coolant Heater

FUEL SYSTEM

- Fuel Lockoff Solenoid
- Primary Fuel Filter

COOLING SYSTEM

- Closed Coolant Recovery System
- UV/Ozone Resistant Hoses
- Factory-Installed Radiator
- Radiator Drain Extension
- 50/50 Ethylene Glycol Antifreeze

ELECTRICAL SYSTEM

- Battery Charging Alternator
- Battery Cables
- Battery Tray
- Rubber-Booted Engine Electrical Connections
- Solenoid Activated Starter Motor

ALTERNATOR SYSTEM

- UL2200 GENprotect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Brushless Excitation
- Sealed Bearing
- Rotor Dynamically Spin Balanced
- Amortisseur Winding (3-Phase Only)
- Full Load Capacity Alternator
- Protective Thermal Switch

GENERATOR SET

- Internal Genset Vibration Isolation
- Separation of Circuits - High/Low Voltage
- Separation of Circuits - Multiple Breakers
- Wrapped Exhaust Piping
- Standard Factory Testing
- 2 Year Limited Warranty (Standby Rated Units)
- 1 Year Limited Warranty (Prime Rated Units)
- Silencer Mounted in the Discharge Hood (Enclosed Unit Only)

ENCLOSURE (If Selected)

- Rust-Proof Fasteners with Nylon Washers to Protect Finish
- High Performance Sound-Absorbing Material (Sound Attenuation Enclosures)
- Gasketed Doors
- Upward Facing Discharge Hoods (Radiator and Exhaust)
- Stainless Steel Lift Off Door Hinges
- Stainless Steel Lockable Handles
- RhinoCoat™ - Textured Polyester Powder Coat Paint

FUEL TANKS (If Selected)

- UL 142/ULC S601
- Double Wall
- Normal and Emergency Vents
- Sloped Top
- Sloped Bottom
- Factory Pressure Tested
- Rupture Basin Alarm
- Fuel Level
- Check Valve In Supply and Return Lines
- RhinoCoat™ - Textured Polyester Powder Coat Paint
- Stainless Steel Hardware

CONTROL SYSTEM



Digital H Control Panel- Dual 4x20 Display

Program Functions

- Programmable Crank Limiter
- 7-Day Programmable Exerciser
- Special Applications Programmable Logic Controller
- RS-232/485 Communications
- All Phase Sensing Digital Voltage Regulator
- 2-Wire Start Capability
- Date/Time Fault History (Event Log)
- Isochronous Governor Control
- Waterproof/Sealed Connectors
- Audible Alarms and Shutdowns
- Not in Auto (Flashing Light)

- Auto/Off/Manual Switch
- E-Stop (Red Mushroom-Type)
- NFPA110 Level I and II (Programmable)
- Customizable Alarms, Warnings, and Events
- Modbus® Protocol
- Predictive Maintenance Algorithm
- Sealed Boards
- Password Parameter Adjustment Protection
- Single Point Ground
- 16 Channel Remote Trending
- 0.2 msec High Speed Remote Trending
- Alarm Information Automatically Annunciated on the Display

Full System Status Display

- Power Output (kW)
- Power Factor
- kW Hours, Total, and Last Run
- Real/Reactive/Apparent Power
- All Phase AC Voltage
- All Phase Currents
- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Speed
- Battery Voltage
- Frequency

Alarms and Warnings

- Oil Pressure
- Coolant Temperature
- Coolant Level
- Engine Overspeed
- Battery Voltage
- Alarms and Warnings Time and Date Stamped
- Snap Shots of Key Operation Parameters During Alarms and Warnings
- Alarms and Warnings Spelled Out (No Alarm Codes)



D030 | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Oil Heater
- Critical Silencer (Open Set Only)
- Radiator Stone Guard
- Level 1 Fan and Belt Guards (Enclosed Units Only)

FUEL SYSTEM

- NPT Flexible Fuel Line

ELECTRICAL SYSTEM

- 10A UL Listed Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating
- Permanent Magnet Excitation

GENERATOR SET

- Extended Factory Testing
- 8 Position Load Center
- Pad Vibration Isolation

CIRCUIT BREAKER OPTIONS

- Main Line Circuit Breaker
- 2nd Main Line Circuit Breaker
- Shunt Trip and Auxiliary Contact
- Electronic Trip Breakers

ENCLOSURE

- Weather Protected Enclosure
- Level 1 Sound Attenuation
- Level 2 Sound Attenuation
- Level 2 Sound Attenuation with Motorized Dampers
- Steel Enclosure
- Aluminum Enclosure
- Up to 200 MPH Wind Load Rating (Contact Factory for Availability)
- AC/DC Enclosure Lighting Kit
- Door Open Alarm Switch
- Enclosure Heater
- Damper Alarm Contacts

WARRANTY (Standby Gensets Only)

- 2 Year Extended Limited Warranty
- 5 Year Limited Warranty
- 5 Year Extended Limited Warranty
- 7 Year Extended Limited Warranty
- 10 Year Extended Limited Warranty

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Indication and Alarm
- Remote E-Stop (Break Glass-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Surface Mount)
- Remote E-Stop (Red Mushroom-Type, Flush Mount)
- 100 dB Alarm Horn
- Ground Fault Annunciation
- 120V GFCI and 240V Outlets
- Remote Communication - Modem
- 10A Engine Run Relay

FUEL TANKS (Size On Last Page)

- 8 in (203.2 mm) Fill Extension
- 13 in (330.2 mm) Fill Extension
- 19 in (482.6 mm) Fill Extension
- Overfill Protection Valve
- 5 Gallon Spill Box Return Hose
- 5 Gallon Spill Box
- Tank Risers
- Fuel Level Switch and Alarm
- 12' Vent System
- Fire Rated Stainless Steel Fuel Hose

ENGINEERED OPTIONS

ENGINE SYSTEM

- Coolant Heater Isolation Ball Valves
- Fluid Containment Pan

CONTROL SYSTEM

- Spare Inputs (x4) / Outputs (x4)
- Battery Disconnect Switch

ALTERNATOR SYSTEM

- 3rd Breaker System

GENERATOR SET

- Special Testing

FUEL TANKS

- UL2085 Tank
- Stainless Steel Tanks
- Special Fuel Tanks
- Vent Extensions



D030 | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Perkins
EPA Emissions Compliance	Stationary Emergency
EPA Emissions Reference	See Emission Data Sheet
Cylinder #	4
Type	In-Line
Displacement - in ³ (L)	135 (2.22)
Bore - in (mm)	3.3 (84)
Stroke - in (mm)	3.9 (100)
Compression Ratio	23.3:1
Intake Air Method	Turbocharged
Cylinder Head	Cast Iron
Piston Type	Aluminum
Crankshaft Type	Forged Steel

Engine Governing

Governor	Electronic Isochronous
Frequency Regulation (Steady State)	±0.5%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow
Crankcase Capacity - qt (L)	11.2 (10.6)

Cooling System

Cooling System Type	Closed Recovery
Water Pump Type	Pre-Lubed, Self Sealing
Fan Type	Pusher
Fan Speed - RPM	1,980
Fan Diameter - in (mm)	18 (457)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel #2
Fuel Specifications	ASTM
Fuel Filtering (Microns)	5
Fuel Inject Pump	Distribution Injection Pump
Fuel Pump Type	Engine Driven Gear
Injector Type	Mechanical
Fuel Supply Line - in (mm)	0.31 (7.9) ID
Fuel Return Line - in (mm)	0.2 (4.8) ID

Engine Electrical System

System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	See Battery Index 0161970SBY
Battery Voltage	12 VDC
Ground Polarity	Negative

ALTERNATOR SPECIFICATIONS

Standard Model	K0035124Y21
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5% (3-Phase Only)
Telephone Interference Factor (TIF)	< 50

Standard Excitation	Synchronous Brushless
Bearings	Single Sealed
Coupling	Direct via Flexible Disc
Load Capacity - Standby	100%
Prototype Short Circuit Test	Yes
Voltage Regulator Type	Digital
Number of Sensed Phases	All
Regulation Accuracy (Steady State)	±0.25%



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INDUSTRIAL DIESEL GENERATOR SET

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OPERATING DATA

POWER RATINGS

	Standby	
Single-Phase 120/240 VAC @1.0pf	30 kW	Amps: 125
Three-Phase 120/208 VAC @0.8pf	30 kW	Amps: 104
Three-Phase 120/240 VAC @0.8pf	30 kW	Amps: 90
Three-Phase 277/480 VAC @0.8pf	30 kW	Amps: 45
Three-Phase 346/600 VAC @0.8pf	30 kW	Amps: 36

MOTOR STARTING CAPABILITIES (skVA)

skVA vs. Voltage Dip					
120/240 VAC 1Ø	30%	277/480 VAC 3Ø	30%	208/240 VAC 3Ø	30%
A0035044N21	20	K0035124Y21	61	K0035124Y21	46
A0040044N21	24	K0040124Y21	76	K0040124Y21	58
A0050044N21	31	K0050124Y21	98	K0050124Y21	75

FUEL CONSUMPTION RATES*

Fuel Pump Lift- ft (m)	Diesel - gph (Lph)	
	Percent Load	Standby
3 (1)	25%	1.0 (3.7)
	50%	1.4 (5.2)
Total Fuel Pump Flow (Combustion + Return) - gph (Lph)	75%	2.0 (7.5)
16.6 (63)	100%	2.8 (10.5)

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

	Standby	
Coolant Flow	gpm (Lpm)	14.9 (56.2)
Coolant System Capacity	gal (L)	2.5 (9.5)
Heat Rejection to Coolant	BTU/hr (kW)	128,638 (136)
Inlet Air	cfm (m³/hr)	2,800 (4,757)
Maximum Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199280SSD	
Maximum Additional Radiator Backpressure	in H ₂ O (kPa)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power - cfm (m³/min)	88 (2.5)

ENGINE

	Standby	
Rated Engine Speed	RPM	1,800
Horsepower at Rated kW**	hp	49
Piston Speed	ft/min (m/min)	1,181 (360)
BMEP	psi (kPa)	159 (1,096)

EXHAUST

	Standby	
Exhaust Flow (Rated Output)	cfm (m³/min)	296.6 (8.4)
Max. Allowable Backpressure (Post Turbocharger)	inHg (kPa)	1.5 (5.1)
Exhaust Temperature (Rated Output)	°F (°C)	892 (478)

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

Deration – Operational characteristics consider maximum ambient conditions. Derate factors may apply under atypical site conditions.

Please contact a Generac Power Systems Industrial Dealer for additional details. All performance ratings in accordance with ISO3046, BS5514, ISO8528, and DIN6271 standards.

Standby - See Bulletin 0187500SSB

Prime - See Bulletin 0187510SSB

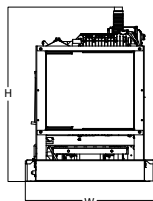
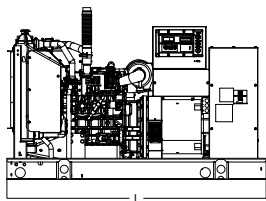


D030 | 2.2L | 30 kW

INDUSTRIAL DIESEL GENERATOR SET

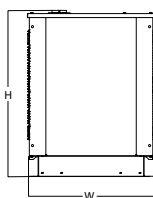
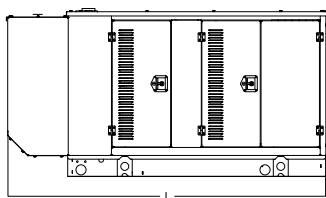
EPA Certified Stationary Emergency

DIMENSIONS AND WEIGHTS*



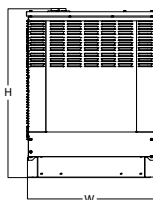
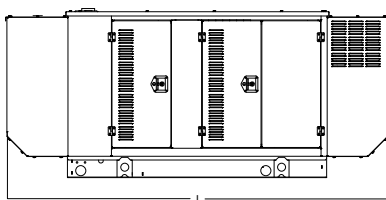
OPEN SET

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	76.0 (1,930) x 37.4 (950) x 44.8 (1,138)	1,456 - 1,641 (661 - 745)
19	54 (204)	76.0 (1,930) x 37.4 (950) x 57.8 (1,468)	1,936 - 2,121 (879 - 963)
47	132 (500)	76.0 (1,930) x 37.4 (950) x 69.8 (1,773)	2,166 - 2,351 (983 - 1,067)
67	190 (719)	76.0 (1,930) x 37.4 (950) x 79.3 (2,014)	2,380 - 2,565 (1,081 - 1,165)
75	211 (799)	76.0 (1,930) x 37.4 (950) x 81.8 (2,078)	2,375 - 2,560 (1,078 - 1,162)
107	300 (1,136)	92.9 (2,360) x 37.4 (950) x 85.3 (2,167)	2,438 - 2,623 (1,106 - 1,190)



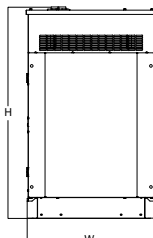
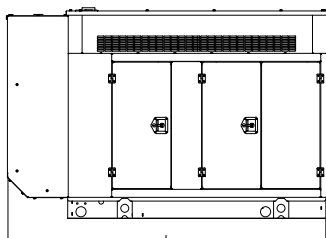
WEATHER PROTECTED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	94.8 (2,409) x 38.0 (965) x 49.5 (1,258)		
19	54 (204)	94.8 (2,409) x 38.0 (965) x 62.5 (1,588)		
47	132 (500)	106.0 (2,692) x 38.0 (965) x 84.0 (2,134)	372 (169)	241 (109)
67	190 (719)	94.8 (2,409) x 38.0 (965) x 84.0 (2,134)		
75	211 (799)	76.0 (1,930) x 38.0 (965) x 86.5 (2,198)		
107	300 (1,136)	92.9 (2,360) x 38.0 (965) x 90.0 (2,287)		



LEVEL 1 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	112.5 (2,857) x 38.0 (965) x 49.5 (1,258)		
19	54 (204)	112.5 (2,857) x 38.0 (965) x 62.5 (1,588)		
47	132 (500)	112.5 (2,857) x 38.0 (965) x 74.5 (1,893)	505 (229)	338 (153)
67	190 (719)	112.5 (2,857) x 38.0 (965) x 84.0 (2,134)		
75	211 (799)	112.5 (2,857) x 38.0 (965) x 86.5 (2,198)		
107	300 (1,136)	112.5 (2,857) x 38.0 (965) x 90.0 (2,287)		



LEVEL 2 SOUND ATTENUATED ENCLOSURE

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg) Enclosure Only	
			Steel	Aluminum
No Tank	-	94.8 (2,409) x 38.0 (965) x 49.5 (1,258)		
19	54 (204)	94.8 (2,409) x 38.0 (965) x 62.5 (1,588)		
47	132 (500)	94.8 (2,409) x 38.0 (965) x 74.5 (1,893)	510 (231)	341 (155)
67	190 (719)	106.0 (2,692) x 38.0 (965) x 84.0 (2,134)		
75	211 (799)	94.8 (2,409) x 38.0 (965) x 86.5 (2,198)		
107	300 (1,136)	94.8 (2,409) x 38.0 (965) x 90.0 (2,287)		

* All measurements are approximate and for estimation purposes only. Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings.