



BUSINESS UNIT #: 809328
SITE ADDRESS: 555 HACKNEY LANE
 LAKE CITY, FL 32055
COUNTY: COLUMBIA
SITE TYPE: SELF SUPPORT TOWER
TOWER HEIGHT: 254'-0"



BU #: 809328
LAKE CITY W J-FL-012-058

EXISTING 254'-0"
SELF SUPPORT TOWER

LOCATION MAP

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1.0	OVERALL SITE PLAN
C-1.1	COMPOUND PLAN
C-1.2	FINAL EQUIPMENT PLAN
C-2	GENERATOR PAD DETAILS
C-3	SIGNAGE REQUIREMENTS & EQUIPMENT DETAILS
E-1	PANEL SCHEDULES & ONE-LINE DIAGRAM
E-2	CONDUIT DETAILS
G-1	TYPICAL GROUNDING SCHEMATIC
G-2	GROUNDING DETAILS
ATTACHED	GENERATOR SPECIFICATIONS

<u>T-MOBILE SIGNATURE BLOCK</u>		
<u>APPROVAL</u>	<u>SIGNATURE</u>	<u>DATE</u>
SITE ACQUISITION		
CONSTRUCTION		
RADIO		
MICROWAVE		
TELCO		
EQUIPMENT		
PROJECT ADMINISTRATOR		
WO ADMINISTRATOR		

CROWN CASTLE USA INC. SINGNATURE BLOCK

APPROVAL		
SITE ACQUISITION		
PLANNER		
CONSTRUCTION		
PROJECT MANAGER		
UTILITY MANAGER		
LANDLORD		

A map of the Lake City Commons area. Key locations include Lake City Humane Society, Marion Street Bistro, Circle K, W Duval St, Lake City Commons, Winn-Dixie, and The Home Depot. A blue line indicates a route through the area. A compass rose is in the bottom left corner.

NO SCALE

APPLICABLE CODES & REFERENCE DOCUMENTS

THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

GROUND SCOPE OF WORK:

- REMOVE (1) GENERATOR
- REMOVE (1) ATS
- INSTALL (1) GENERAC - SG050 SSM 50KW PROPANE GENERATOR
- INSTALL (1) 4'-0" x 2'-0" PAD EXTENSION
- INSTALL (1) ATS, (1) EMERGENCY STOP SWITCH & (1) FIRE EXTINGUISHER

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

<u>CODE TYPE</u>	<u>CODE</u>
BUILDING	2023 FBC 8TH EDITION
MECHANICAL	2023 FMC 8TH EDITION
ELECTRICAL	2020 NEC

REFERENCE DOCUMENTS:

ORDER ID: 693324
REVISION: 0

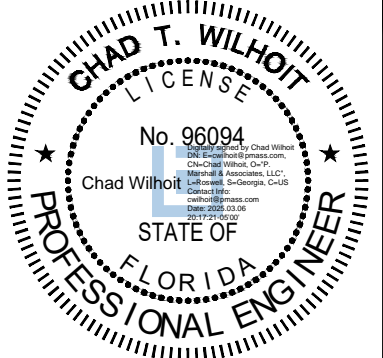
ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11X17.
CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS
AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY
THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE
PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL FLORIDA ONE CALL
(800) 432-4770
CALL 3 WORKING DAYS
BEFORE YOU DIG!



PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.

Chad T. Wilhoit, P.E.
Registered Engineer
State of Florida #96094
P Marshall & Associates Certificate of Authorization #27595



Chad T. Wilhoit, State of Florida, Professional Engineer, License No. 96094. This item has been electronically signed and sealed by Chad T. Wilhoit, PE on the Date and/or Time Stamp shown using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copy.

IT IS A VIOLATION OF LAW FOR ANY PERSON,
UNLESS THEY ARE ACTING UNDER THE DIRECTION
OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

SHEET NUMBER:

T-1

REVISION:

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CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

- NOTICE TO PROCEED– NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800-788-7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
- "LOOK UP" – CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT:
THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
- PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
- ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED–STD–10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).
- ALL SITE WORK TO COMPLY WITH QAS–STD–10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED–STD–10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS." IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
- ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
- CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
- ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
- THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
- THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
- THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
- THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
- CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GREENFIELD GROUNDING NOTES:

- ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
- THE CONTRACTOR SHALL PERFORM IEEE FALL–OF–POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
- THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
- METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
- METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
- EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
- CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
- ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
- ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
- USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
- EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
- ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
- COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
- ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
- APPROVED ANTIOXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
- ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
- MISCELLANEOUS ELECTRICAL AND NON–ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
- BOND ALL METALLIC OBJECTS WITHIN 6 FT. OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
- GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON–METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (I.E., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
- ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON–METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD–WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
- BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

GENERAL NOTES:

- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
CARRIER: T–MOBILE
TOWER OWNER: CROWN CASTLE USA INC.
- THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
- THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
- NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS, WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
- SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
- PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.
- ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
- UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
- IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
- CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
- THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC.
- CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
- CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

- ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.
- UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.
- CONCRETE EXPOSED TO FREEZE–THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER–TO–CEMENT RATIO (W/C) OF 0.45.
- ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:
#4 BARS AND SMALLER.....40 ksi
#5 BARS AND LARGER.....60 ksi
- THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.....3"
CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 BARS AND LARGER.....2"
#5 BARS AND SMALLER.....1–1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
SLAB AND WALLS.....3/4"
BEAMS AND COLUMNS.....1–1/2"
- A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

ELECTRICAL INSTALLATION NOTES:




- ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
- CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
- WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
- ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
- ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
- EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
- ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E. PANEL BOARD AND CIRCUIT ID'S).
- PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
- ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
- ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
- SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI–CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
- POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
- ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
- RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
- ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
- ELECTRICAL METALLIC TUBING (EMT) OR METAL–CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
- UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC ON STRAIGHTS AND SCHEDULE 80 PVC UNDER ALL TRAFFIC EASEMENTS AND ALL ELBOWS/90s. ABOVE GRADE CONDUIT TO BE SCH 80 PVC OR IMC/RMC CONDUIT. EMT IS ALLOWED AT STUB UP LOCATIONS AND INDOORS ONLY.
- LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
- CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
- CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
- WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
- SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
- CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON–PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (I.E. POWDER–ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
- EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
- METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
- THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
- THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
- INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "T–MOBILE".
- ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

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	GROUND	GREEN
	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
DC VOLTAGE	NEUTRAL	GREY
	GROUND	GREEN
	POS (+)	RED**
	NEG (–)	BLACK**

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

ABBREVIATIONS:

ANT	ANTENNA
(E)	EXISTING
FIF	FACILITY INTERFACE FRAME
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
GSM	GLOBAL SYSTEM FOR MOBILE
LTE	LONG TERM EVOLUTION
MGB	MASTER GROUND BAR
MW	MICROWAVE
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
(P)	PROPOSED
PP	POWER PLANT
QTY	QUANTITY
RECT	RECTIFIER
RBS	RADIO BASE STATION
RET	REMOTE ELECTRIC TILT
RFDS	RADIO FREQUENCY DATA SHEET
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
SIAD	SMART INTEGRATED DEVICE
TMA	TOWER MOUNTED AMPLIFIER
TYP	TYPICAL
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
W.P.	WORK POINT



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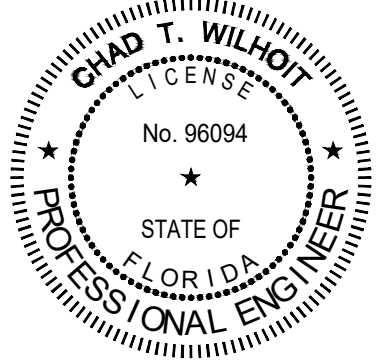
BU #: 809328
LAKE CITY W J-FL-012-058

555 HACKNEY LANE
LAKE CITY, FL 32055

EXISTING 254'-0"
SELF SUPPORT TOWER

ISSUED FOR:				
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0	03/06/25	DJW	CONSTRUCTION	CTW

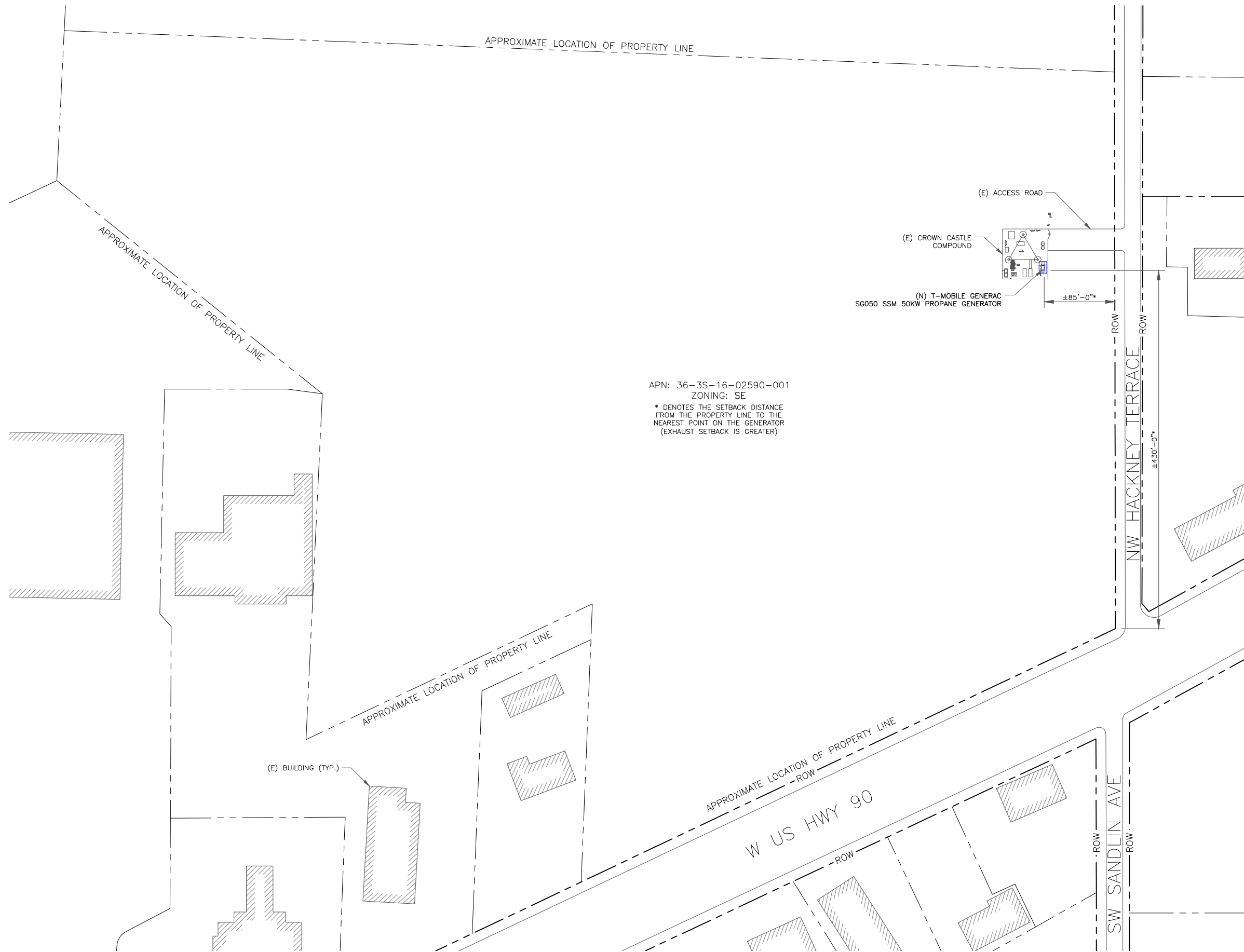
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Registered Engineer
State of Florida #96094
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APN: 36-3S-16-02590-001
ZONING: SE
* DENOTES THE SETBACK DISTANCE
FROM THE PROPERTY LINE TO THE
NEAREST POINT ON THE GENERATOR
(EXHAUST SETBACK IS GREATER)

1 OVERALL SITE PLAN
SCALE: 1" = 60'-0" (FULL SIZE)
1" = 120'-0" (11x17)



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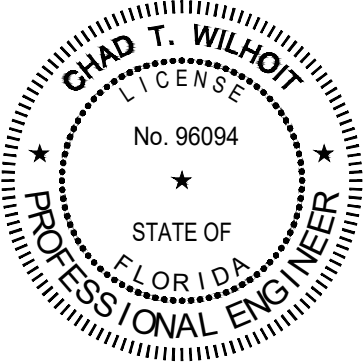
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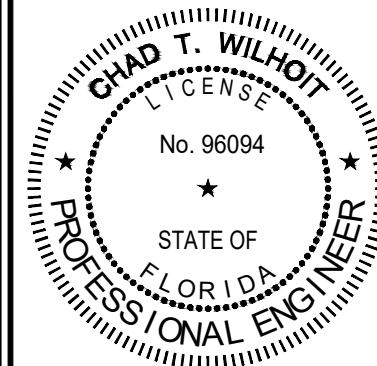


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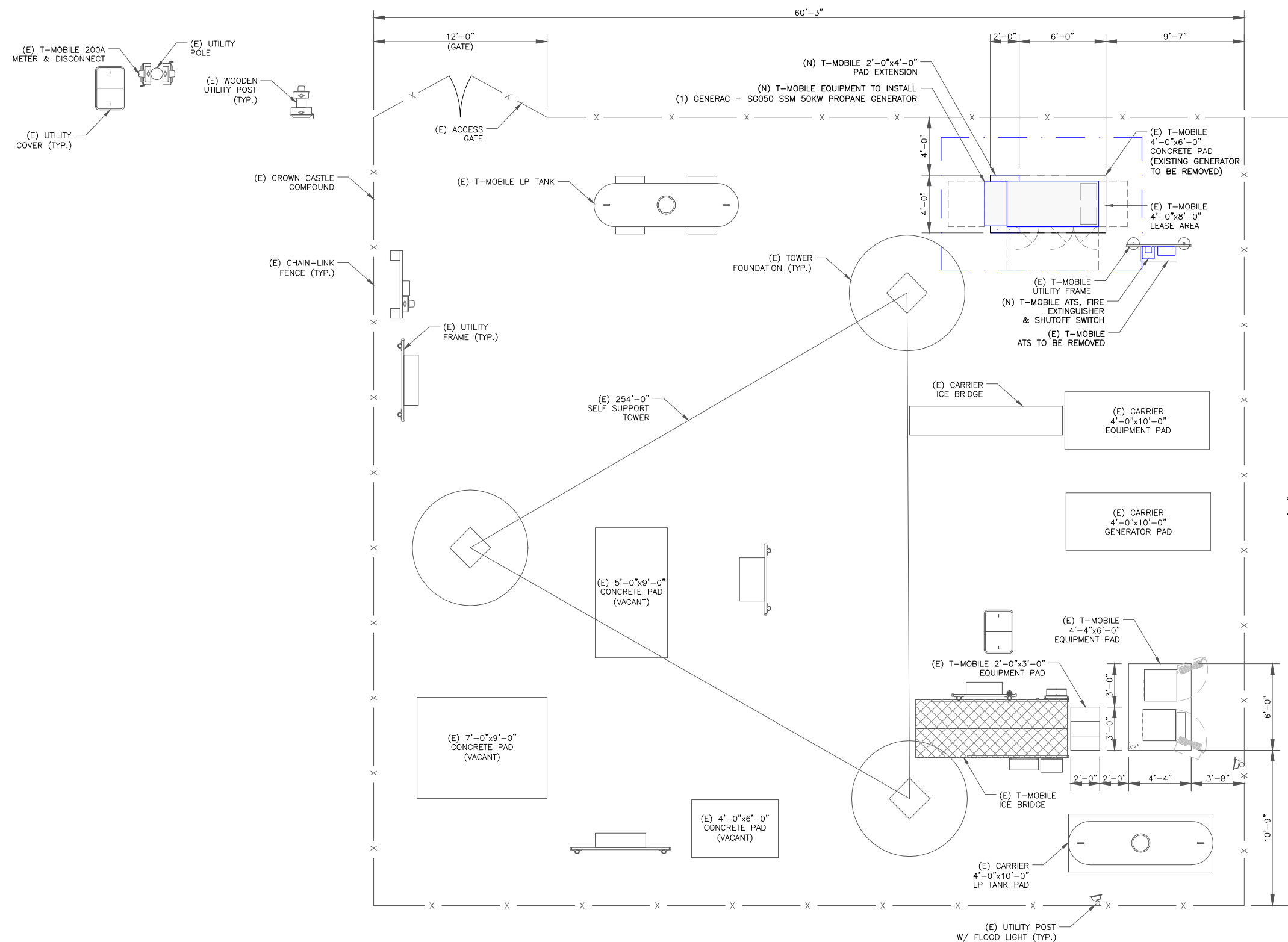
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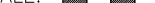
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1 COMPOUND PLAN
SCALE:  1/4" = 1'-0" (FULL SIZE)
1/8" = 1'-0" (11x17)



SITE PLAN DISCLAIMER:

THIS IS NOT AN AS-BUILT SURVEY. EXISTING EQUIPMENT LOCATIONS INSIDE THE FENCED AREA HAVE BEEN PROVIDED BY CROWN CASTLE. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

SITE LAYOUT AND DIMENSIONS ARE PROVIDED BY CROWN CASTLE

NOTE:

ALL CONDUIT TO BE DIRECT BURY. ANY ABOVE GROUND CONDUIT NEEDS TO BE RIGID METAL - ALL CONDUIT TO BE STUBBED THROUGH SLAB INTO BOTTOM OF GENERATOR.

BATTERY NOTE: THE PROPOSED GENERATOR WILL HAVE A 12V DC STARTER BATTERY INSTALLED THAT WILL BE CONTINUALLY CHARGED VIA INTERNAL BATTERY CHARGER.

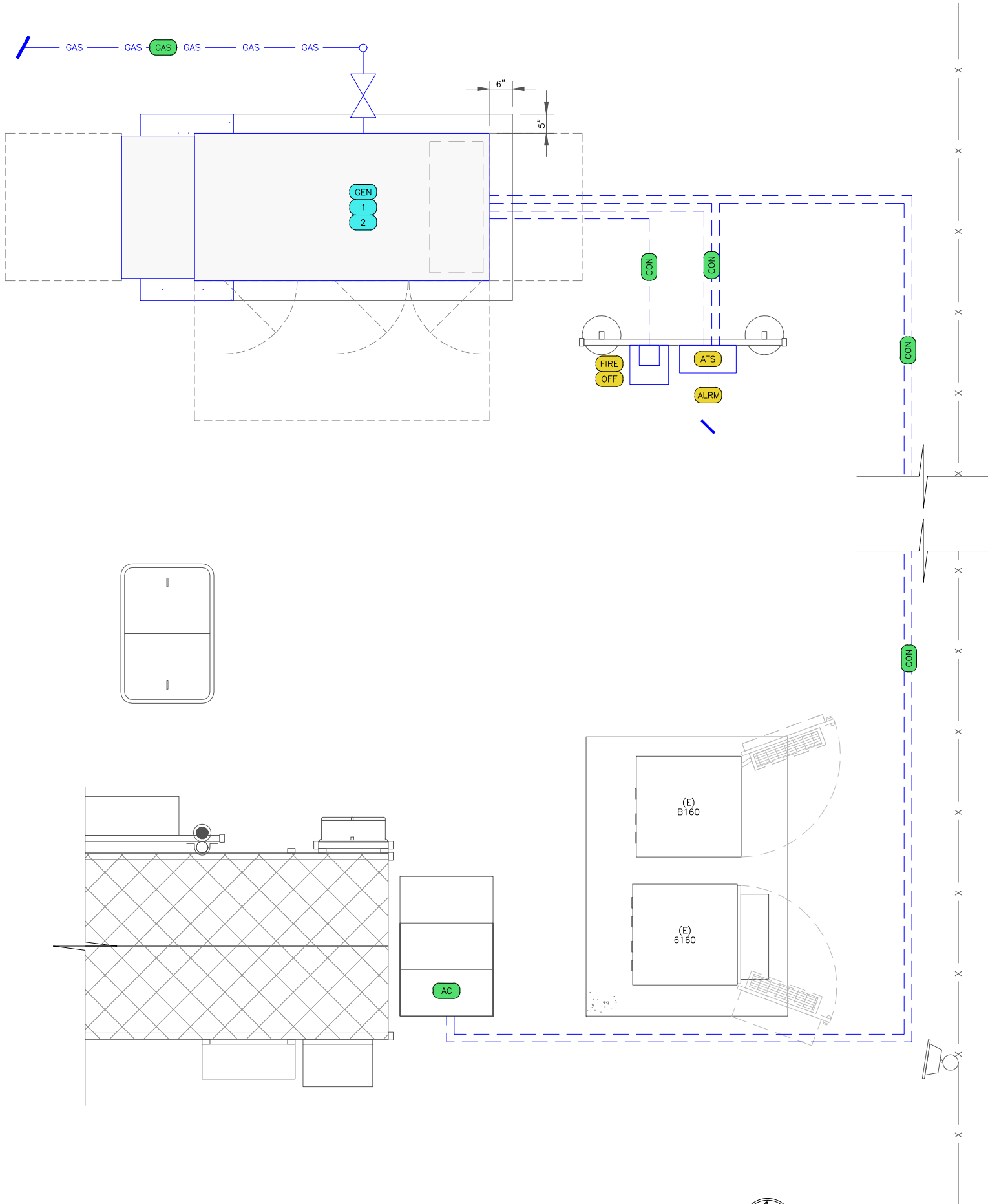
DESCRIPTION - BATT 12VDC 24F 525 CCA
EXIDE # 27F-6 650 CCA
BATT 12VDC 90-AH 27F
SEALED BATTERY - AGM TYPE - STARTER BATTERY

CLEARANCE NOTE: MINIMUM GENERATOR CLEARANCE MUST BE PROVIDED IN ACCORDANCE WITH THE MOST STRINGENT GOVERNING ADOPTED BUILDING CODE AND/OR THE MANUFACTURER'S SPECIFICATIONS AND DETAILS, WHICHEVER CRITERIA IS GREATER.

ACCESS NOTE: PROVIDE 3'-0" MINIMUM NEC AND OSHA ACCESS CLEARANCE FOR ALL GENERATOR ACCESS DOORS AND AC POWER PANELS (TYP.)

CONDUIT NOTE: ALL BURIED CONDUIT SHALL BE PVC SCHEDULE 80. ALL EXPOSED CONDUIT AND ALL CONDUIT ROUTED ACROSS THE TOPS OF SLABS AND PLATFORMS SHALL BE GALVANIZED RGS ON 1-5/8" UNISTRUT OR EQUIVALENT.

TRENCHING NOTE: THE CONTRACTOR SHALL HAND DIG ALL CONDUIT TRENCHES LOCATED WITHIN THE EXISTING FENCED COMPOUND. MECHANICAL EXCAVATION IS NOT ALLOWED BY CROWN CASTLE USA, INC.



1 FINAL EQUIPMENT PLAN

SCALE: 3/4"=1'-0" (FULL SIZE)
3/8"=1'-0" (11x17)



EQUIPMENT KEYED NOTES

GENERATOR KEYED NOTES:

- GEN** NEW T-MOBILE 50KW PROPANE GENERATOR W/ SOUND ATTENUATED ENCLOSURE ON A CONCRETE PAD. SEE SHEETS C-2, C-3, G-1.
- 1** FUEL FILL SHALL BE PROVIDED WITH SPILL CONTROL, WITH A SOLID FILL CONNECTION, AND WITH OVERFILL PREVENTION.
- 2** NFPA 704 PLACARD AND OTHER SIGNAGE. SEE SHEET C-3.
- ATS/EQUIPMENT KEYED NOTES:**
 - FIRE** FIRE EXTINGUISHER, (2A-20BC OR APPROVED EQUAL) PER IFC 906.3 IN FIRE EXTINGUISHER CABINET (BFC-7009 OR APPROVED EQUAL), MOUNTED TO BUILDING WALL OR UTILITY FRAME PER IFC 906.9 (5'-0" MAX ABOVE GRADE)
 - OFF** EMERGENCY SHUTOFF SWITCH. MOUNT TO BUILDING WALL OR UTILITY FRAME PER IFC 906.9 (5'-0" MAX ABOVE GRADE)
 - ATS** NEW ATS MOUNTED ON H-FRAME UNISTRUT RAILS WITH 36" FRONT CLEARANCE. SEE SHEET C-3.
 - ALRM** NEW 1" CONDUIT W/ (2) CAT-6 FOR ATS ALARMS TO 66 BLOCK

POWER ROUTING KEYED NOTES:

- AC** (E) T-MOBILE LOAD CENTER
- CON** NEW T-MOBILE UNDERGROUND GENERATOR CONDUIT ROUTE. CONTRACTOR TO LOCATE (E) UTILITIES PRIOR TO EXCAVATION. SEE SHEETS E-1, E-2.
- GAS** 3/4" DIA. SCHEDULE 80 BLACKPIPE GAS SUPPLY LINE. LP INSTALLER TO VERIFY GENERATOR REQUIRED FLOW RATE PRIOR TO INSTALLATION. SUPPLY LINE SHALL BE BURIED 30" MIN. BELOW GRADE AND MARKED WITH BURIED FLAGGING AT 3' O.C., 12" BELOW GRADE.

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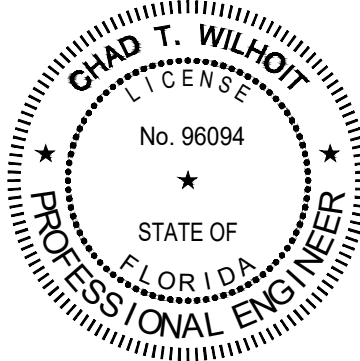
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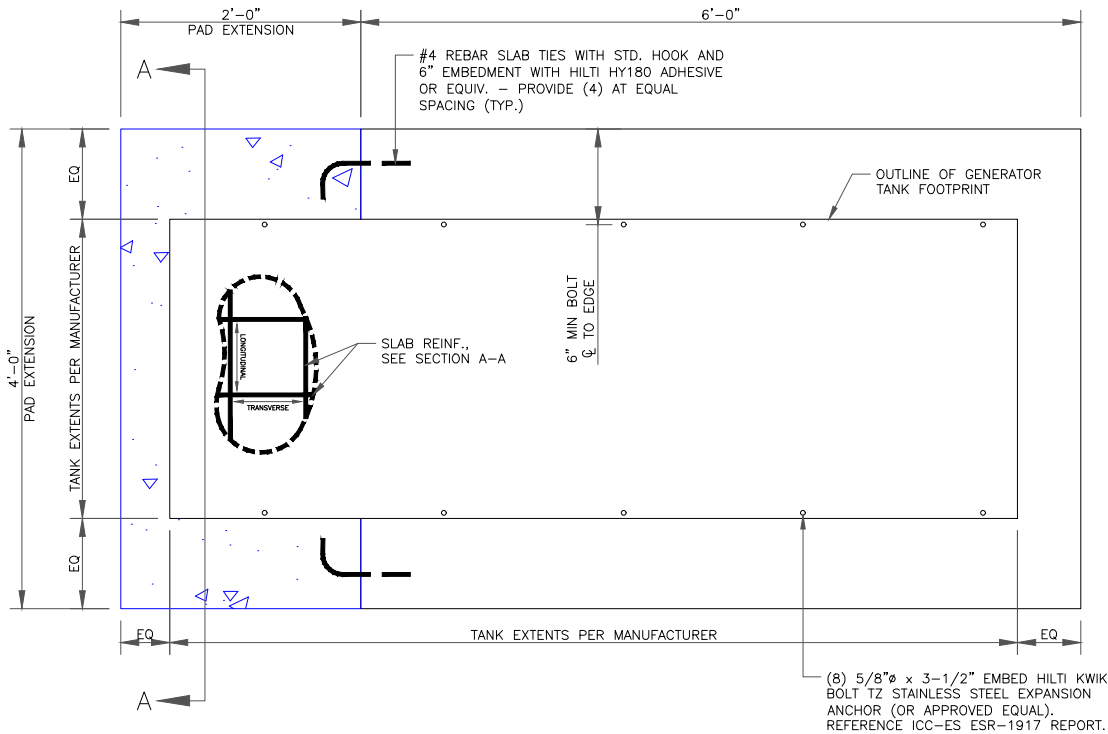
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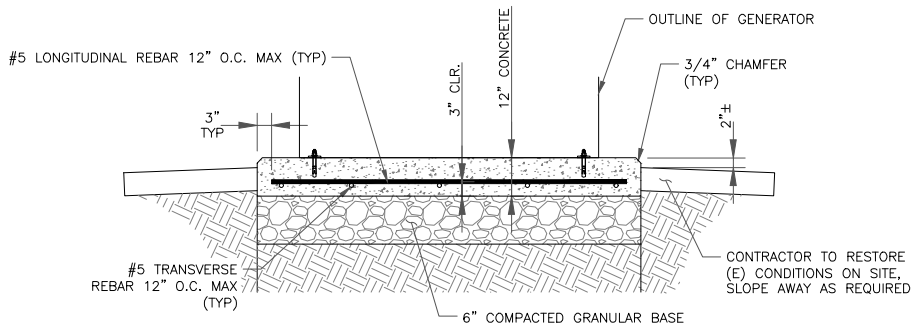
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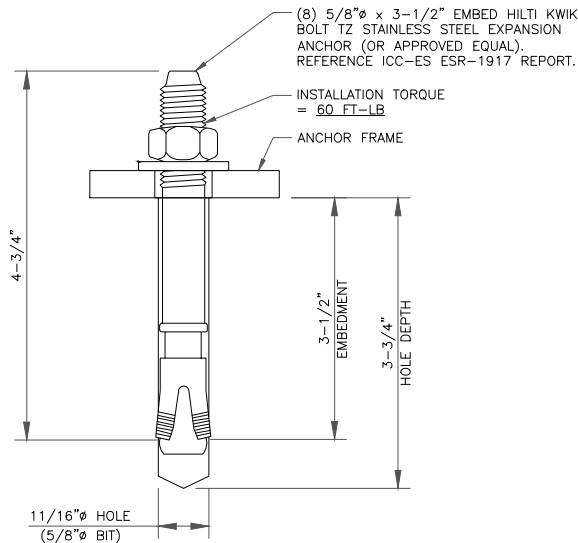


1 GENERATOR PAD DETAIL
SCALE: NOT TO SCALE



2 GENERATOR PAD DETAIL - SECTION A-A
SCALE: NOT TO SCALE

INSTALLER NOTE:
PER IBC 1705.12.6, PERIODIC SPECIAL
INSPECTION OF ANCHORAGE FOR
STANDBY POWER SYSTEMS IS REQUIRED



3 TYPICAL ANCHOR DETAIL
SCALE: NOT TO SCALE

CONCRETE NOTES:

- PRIOR TO EXCAVATION, CHECK THE AREA FOR UNDERGROUND FACILITIES.
- ALL CONCRETE SHALL BE IN ACCORDANCE WITH CHAPTER 19 OF THE IBC & ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", LATEST EDITION & HAVE THE FOLLOWING PROPERTIES:
 - MINIMUM 7-DAY COMPRESSIVE STRENGTH (f_c) OF 2,500 PSI.
 - CEMENT SHALL BE "LOW-ALKALI" TYPE IIA (MODERATE SULFATE RESISTANCE, AIR ENTRAINING) CONFORMING TO ASTM C150.
 - MAXIMUM WATER/CEMENT RATIO OF 0.45 AND AIR-ENTRAINED 4% TO 7%.
 - CONCRETE PROPORTIONING SHALL BE DESIGNED BY AN APPROVED LABORATORY. TOLERANCES IN ACCORDANCE WITH ACI 117. COPIES OF CONCRETE MIX SHALL BE SUBMITTED TO THE CROWN CASTLE CONSTRUCTION MANAGER FOR REVIEW PRIOR TO PLACEMENT.
 - ALL AGGREGATE USED IN CONCRETE SHALL CONFORM TO ASTM C33. USE ONLY AGGREGATES KNOWN NOT TO CAUSE EXCESSIVE SHRINKAGE. MAXIMUM AGGREGATE SIZE TO BE 3/4".
 - MAXIMUM SLUMP: REFER TO GEOTECHNICAL REPORT FOR CONFIRMATION OF ANY ASSUMPTIONS MADE DURING DESIGN.
- FORMWORK FOR CONCRETE SHALL CONFORM TO ACI 347. TOLERANCES FOR FINISHED CONCRETE SURFACES SHALL MEET CLASS-C REQUIREMENTS. IN NO CASE SHALL FINISHED CONCRETE SURFACES EXCEED THE FOLLOWING VALUES AS MEASURED FROM NEAT PLAN LINES AND FINISHED GRADES: $\pm 1/4"$ VERTICAL, $\pm 1"$ HORIZONTAL.
- CHAMFER ALL EXPOSED CORNERS AND FILLET ENTRANT ANGLES $3/4"$ U.N.O.
- CONCRETE FINISHING: CONCRETE SURFACES SHALL BE FINISHED IN ACCORDANCE WITH ACI. PROVIDE ROUGH FINISH FOR ALL SURFACES NOT EXPOSED TO VIEW AND SMOOTH FINISH FOR ALL OTHERS, U.N.O.
- STEEL REINFORCEMENT AND CONCRETE SHOULD BE PLACED IMMEDIATELY UPON COMPLETION OF THE FOUNDATION EXCAVATION. CONTRACTOR SHALL NOT ALLOW A COLD JOINT TO FORM IN THE CONCRETE. PORTION AT GRADE SHOULD BE FORMED. TEMPORARY CASING MAY BE REQUIRED TO PREVENT CAVING PRIOR TO CONCRETE PLACEMENT.

REINFORCING STEEL NOTES:

- ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615. VERTICAL/HORIZONTAL BARS SHALL BE GRADE 60; TIES OR STIRRUPS SHALL BE A MINIMUM OF GRADE 40. ALL REINFORCING STEEL SHALL HAVE $3"$ ($\pm 3/8"$) OF CONCRETE COVER, U.N.O.
- ALL BAR BENDS, HOOKS, SPLICES AND OTHER REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ACI 315.
- ALL BARS SHALL BE SPLICED WITH A MINIMUM LAP OF 48 BAR DIAMETERS. LAP SPLICES OF DEFORMED BARS IN TENSION ZONES SHALL BE CLASS-B SPLICES. WELDING OF BARS IS NOT PERMITTED.
- AT ALL CORNERS AND WALL INTERSECTIONS, PROVIDE BENT HORIZONTAL BARS TO MATCH THE HORIZONTAL REINFORCING STEEL.
- PROVIDE VERTICAL DOWELS IN FOOTINGS AND AT CONSTRUCTION JOINTS TO MATCH VERTICAL REINFORCING BAR SIZE AND SPACING.
- ACI-APPROVED PLASTIC-COATED BAR CHAIRS OR PRECAST CONCRETE BLOCKS SHALL BE PROVIDED FOR SUPPORT OF ALL GRADE-CAST REINFORCING STEEL & SHALL BE SUFFICIENT IN NUMBER TO PREVENT SAGGING. METAL CLIPS OR SUPPORTS SHALL NOT BE PLACED IN CONTACT WITH THE FORMS OR THE SUB-GRADE.
- DOWELS AND ANCHOR BOLTS SHALL BE WIRED OR OTHERWISE HELD IN CORRECT POSITION PRIOR TO PLACING CONCRETE. IN NO CASE SHALL DOWELS OR ANCHOR BOLTS BE "STABBED" INTO FRESHLY-POURED CONCRETE.

FOUNDATION NOTES:

- THE CONTRACTOR SHALL READ THE GEOTECHNICAL REPORT AND SHALL CONSULT THE GEOTECHNICAL ENGINEER AS NECESSARY PRIOR TO CONSTRUCTION.
- THE GEOTECHNICAL ENGINEER (OR INSPECTOR) SHALL INSPECT THE EXCAVATION PRIOR TO THE PLACEMENT OF CONCRETE AND SHALL PROVIDE A NOTICE OF INSPECTION FOR THE BUILDING INSPECTOR FOR REVIEW AND RECORDS PURPOSES.
- THE CONTRACTOR SHALL DETERMINE THE MEANS AND METHODS NECESSARY TO SUPPORT THE EXCAVATION DURING CONSTRUCTION.
- REBAR AT BOTTOM OF FOUNDATIONS SHALL BE BONDED TO SITE GROUNDING SYSTEM (WHEN APPLICABLE). SEE ADDITIONAL DETAILS ON APPROVED A&E CONSTRUCTION DRAWINGS.
- ALL FOOTINGS TO BE PLACED ON FIRM, UNDISTURBED, INORGANIC MATERIAL. PROOF ROLL SUB-GRADE PRIOR TO PLACING CONCRETE. WHERE THE MATERIAL HAS BEEN DISTURBED BY EQUIPMENT. UNACCEPTABLE/DISTURBED MATERIAL SHALL BE OVER-EXCAVATED AND REPLACED WITH "LEAN CONCRETE FILL". THE GEOTECHNICAL REPORT SHALL BE REVIEWED AND ADHERED TO FOR SPECIFIC RECOMMENDATIONS.
- STRUCTURAL BACKFILL SHALL BE GRANULAR FREE-DRAINING MATERIAL FREE OF DEBRIS, ORGANICS, REFUSE AND OTHERWISE DELETERIOUS MATERIALS. MATERIAL SHALL BE PLACED IN LIFTS NO GREATER THAN 6" IN DEPTH AND COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED PER ASTM D1557 (MODIFIED PROCTOR). THE GEOTECHNICAL REPORT SHALL BE REVIEWED AND ADHERED TO FOR SPECIFIC RECOMMENDATIONS.

SOIL NOTES:

- FOUNDATION DESIGN BASED ON THE PRESUMPTIVE MINIMUM SOIL PARAMETERS IN ACCORDANCE WITH THE IBC, CBC AND TIA. WHEN A SITE SPECIFIC GEOTECHNICAL REPORT IS AVAILABLE ON CCISITES AND THE ENGINEER AND THE CONTRACTOR SHALL ADHERE TO ALL RECOMMENDATIONS PROVIDED THEREIN.
- ALL FOUNDATIONS TO BE PLACED ON FIRM, UNDISTURBED, INORGANIC MATERIAL. PROOF ROLL SUB-GRADE PRIOR TO PLACING CONCRETE WHERE THE MATERIAL HAS BEEN DISTURBED BY EQUIPMENT. UNACCEPTABLE/DISTURBED MATERIAL SHALL BE OVER-EXCAVATED AND REPLACED WITH STRUCTURAL BACKFILL.
- STRUCTURAL BACKFILL SHALL BE GRANULAR FREE-DRAINING MATERIAL FREE OF DEBRIS, ORGANICS, REFUSE AND OTHERWISE DELETERIOUS MATERIALS. MATERIAL SHALL BE PLACED IN LIFTS NO GREATER THAN 6" IN DEPTH AND COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED PER ASTM D1557 (MODIFIED PROCTOR). THE GEOTECHNICAL REPORT SHALL BE REVIEWED AND ADHERED TO FOR SPECIFIC RECOMMENDATIONS.

MECHANICAL ANCHOR NOTES:

- HILTI PRODUCTS MUST BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS, AS INCLUDED IN THE ADHESIVE PACKAGING.
- CONTRACTOR SHALL AVOID DRILLING HOLES IN VERTICAL/HORIZONTAL REINFORCING BARS.
- HOLES MUST BE WIRE BRUSHED AND BLASTED WITH COMPRESSED AIR PRIOR TO INSTALLATION. TEMPERATURES/METHODS/WORKING TIME/ETC. ARE TO BE IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
- REFERENCE ICC-ES ESR-1917 REPORT.

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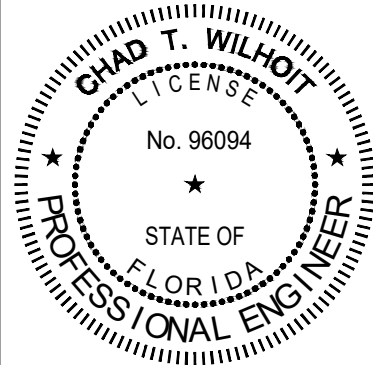
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NOTE:
CONTRACTOR TO PROVIDE REQUIRED SIGNAGE
FOR ELECTRICAL PANELS, DISCONNECTS,
TRANSFER SWITCHES, ETC. PER NATIONAL
ELECTRICAL CODE ARTICLE 700.7



PLACE ON VISIBLE SIDE OF NEW
GENERATOR TANK
10" x 7" SIGN



PLACE ON (2) VISIBLE SIDES OF
NEW GENERATOR TANK
18" x 18" SIGN

CAUTION: THIS TANK TO CONTAIN
PETROLEUM PRODUCTS ONLY

(BLACK LETTERING W/
WHITE BACKGROUND)

NO SMOKING

(RED LETTERING W/
WHITE BACKGROUND)

COMBUSTIBLE

(RED LETTERING W/
WHITE BACKGROUND)

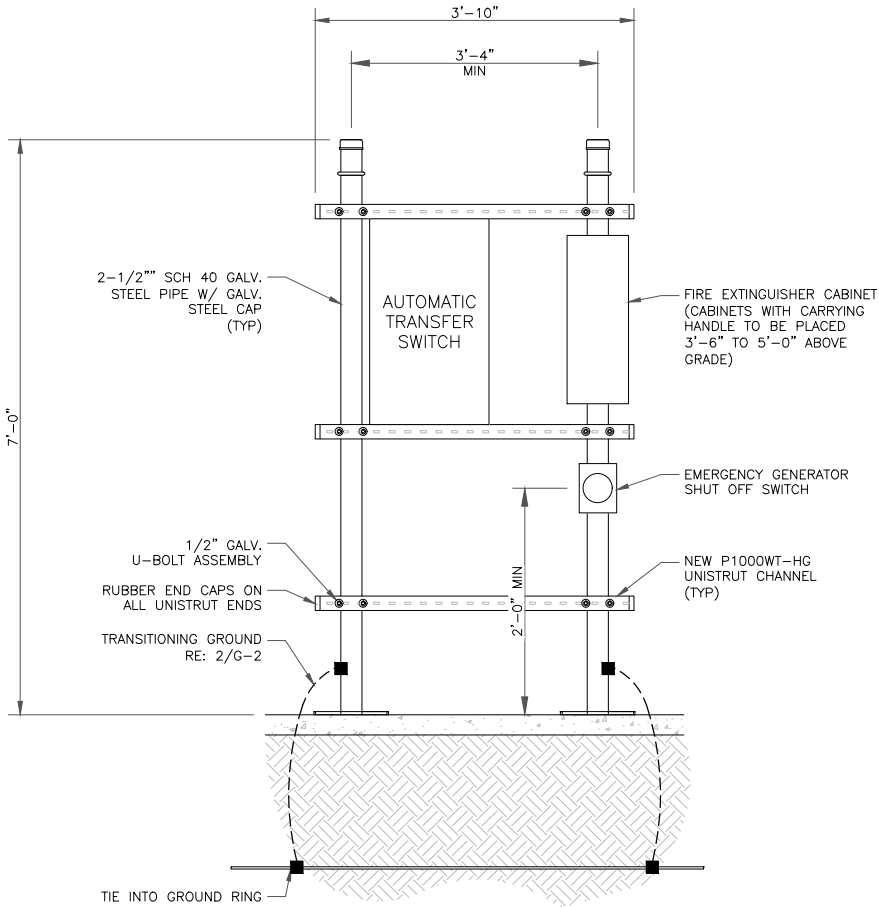
FLAMMABLE

(RED LETTERING W/
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PROPANE FUEL

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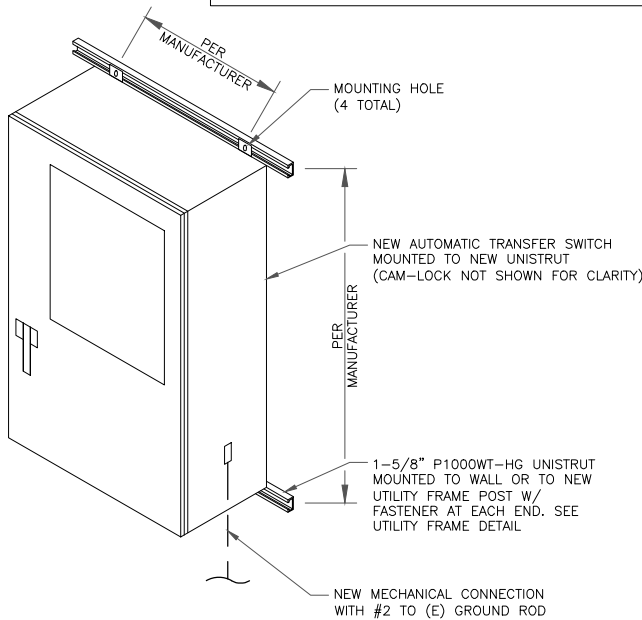
1 SIGNAGE REQUIREMENTS
SCALE: NOT TO SCALE



2 UTILITY FRAME ELEVATION
SCALE: NOT TO SCALE

UNISTRUT WALL ATTACHMENT:		
WALL CONSTRUCTION TYPE	FASTENER	ANCHOR SPACING
WOOD STUD	3/8" DIA. LAG SCREW	16"
CONCRETE BLOCK (HOLLOW)	-	8"
CONCRETE BLOCK (SOLID)	3/8"Ø SIMPSON TITEN HD ANCHOR MINIMUM EMBEDMENT 2-3/4"	24"

NOTES:
1. USE GALVANIZED OR STAINLESS STEEL HARDWARE FOR WALL MOUNT AND CONNECTION OF CHANNELS.
2. GC SHALL USE NON-SHRINKING CAULK TO WEATHER SEAL ALL PENETRATIONS INTO OR THROUGH SHELTER WALL.
3. MINIMUM (3) ANCHORS TO BE USED FOR EACH CHANNEL.



3 ATS MOUNTING DETAIL
SCALE: NOT TO SCALE

DIESEL TANK CHECKLIST:

- READILY ACCESSIBLE MANUAL SHUTOFF VALVES SHALL BE INSTALLED ON SUPPLY PIPING AT THE POINT OF USE AND THE TANK (IFC 5003.2.2.1)
SECONDARY CONTAINMENT-TYPE TANKS SHALL BE UL LISTED, UL-142, AND COMPLY WITH ALL OF THE FOLLOWING REQUIREMENTS; OTHERWISE TRADITIONAL SPILL CONTROL OR SECONDARY CONTAINMENT MEASURES, SUCH AS DIKING, SHALL BE UTILIZED (NFPA 30 22.11.4)
+ CAPACITY OF DIESEL TANK SHALL NOT EXCEED 50,000 GAL.
+ PIPING CONNECTIONS SHALL BE ABOVE THE LIQUID LEVEL.
+ MEANS SHALL BE PROVIDED TO PROTECT RELEASE OF LIQUID BY SIPHON FLOW.
+ MEANS TO DETERMINE LIQUID LEVEL IN TANK SHALL BE PROVIDED TO DRIVER. MEANS TO PREVENT OVERFILLING BY AN ALARM AT 90% CAPACITY AND AUTOMATICALLY STOPPING DELIVERY OF LIQUID TO THE TANK AT 95% CAPACITY.
+ SPACING BETWEEN ADJACENT TANKS SHALL NOT BE LESS THAN 3'.
+ TANK SHALL BE PROTECTED AGAINST DAMAGE FROM VEHICLES.
+ INTERSTITIAL SPACE SHALL HAVE EMERGENCY VENTING.
+ INTEGRITY OF SECONDARY CONTAINMENT SHALL BE ESTABLISHED. THE SECONDARY CONTAINMENT SHALL WITHSTAND THE HYDROSTATIC HEAD OF THE MAXIMUM
+ AMOUNT OF LIQUID STORED IN THE PRIMARY TANK.

TANK LABELING AND PROTECTIONS:

- THE FOLLOWING SIGNS AND LABELS SHALL BE AFFIXED TO THE TANK.
+ "DANGER-FLAMMABLE LIQUIDS" (IFC 5703.5)
+ NFPA 704 PLACARD (IFC 5003.5)
+ "NO SMOKING" (IFC 5003.7.1)
CRASH PROTECTION COMPLYING WITH FC 312 SHALL BE PROVIDED (IFC 5003.9.3) (IF APPLICABLE)

GENERATOR FEATURES:

- GENERATORS SHALL BE UL 2200 LISTED AND COMPLY WITH NFPA 37 AND NFPA 110. (IFC 604.1 AND 604.1.1)
INSTALLATIONS SHALL HAVE A LABELED REMOTE MANUAL STOP (NFPA 110 5.6.5.6 & 5.6.5.6.1 AND NFPA 37 9.2.1.1)

DOUBLE WALL FUEL TANK BASE SPECIFICATION:

- REF: T-MOBILE 50 KW GENERATOR PACKAGE
UL 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 COMBUSTIBLE LIQUIDS CODE, NFPA 30; THE STANDARD FOR INSTALLATION USE OF STATIONARY COMBUSTIBLE ENGINE GAS TURBINES, NFPA 37; AND THE STANDARD FOR EMERGENCY STANDBY POWER SYSTEMS, NFPA 110.
+ MINIMUM ANCHOR QUANTITY PER MANUFACTURER OR THIS PLAN SET; WHICHEVER IS LARGER.
SUB BASE TANK TESTING:
+ PRIMARY TANK & 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
FUEL FILL: 2.5 - 5 GALLON SPILL CONTAINMENT WITH ALARM
+ 40% REMAINING FOR ALARM
+ 20% REMAINING FOR SHUT-DOWN
FACTORY PRE-SET AT 95% 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.

NEPA NOTES:

1. CONSTRUCTION, INSTALLATION, MAINTENANCE, & OPERATIONAL TESTING OF EPSS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF NFPA 110.
2. ALL ELECTRICAL WORK SHALL COMPLY WITH LATEST ADOPTED EDITION OF NFPA 70 - NATIONAL ELECTRICAL CODE.

FUEL TANK NOTES:

- THE TANK SHALL BE MANUFACTURED WITH THE FOLLOWING:
- INTERSTITIAL ELECTRONICALLY MONITORED RUPTURE BASIN
- ALARM TO MONITOR THE SPACE BETWEEN THE PRIMARY AND SECONDARY TANK.
- OVERFILL ALERT TO VISUALLY WARN WHEN THE TANK IS FILLED UPON CAPACITY.
- OVERSPILL CONTAINMENT AT FILL PORT TO PREVENT SPILL OF FUEL DURING FILLING OPERATIONS.
- 5 GALLON OVERSPILL CONTAINMENT W/ LOCKABLE CAP.

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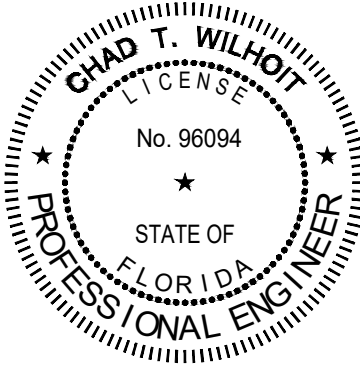
555 HACKNEY LANE
LAKE CITY, FL 32055

EXISTING 254'-0"
SELF SUPPORT TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	03/06/25	DJW	CONSTRUCTION	CTW

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Registered Engineer
State of Florida #96094
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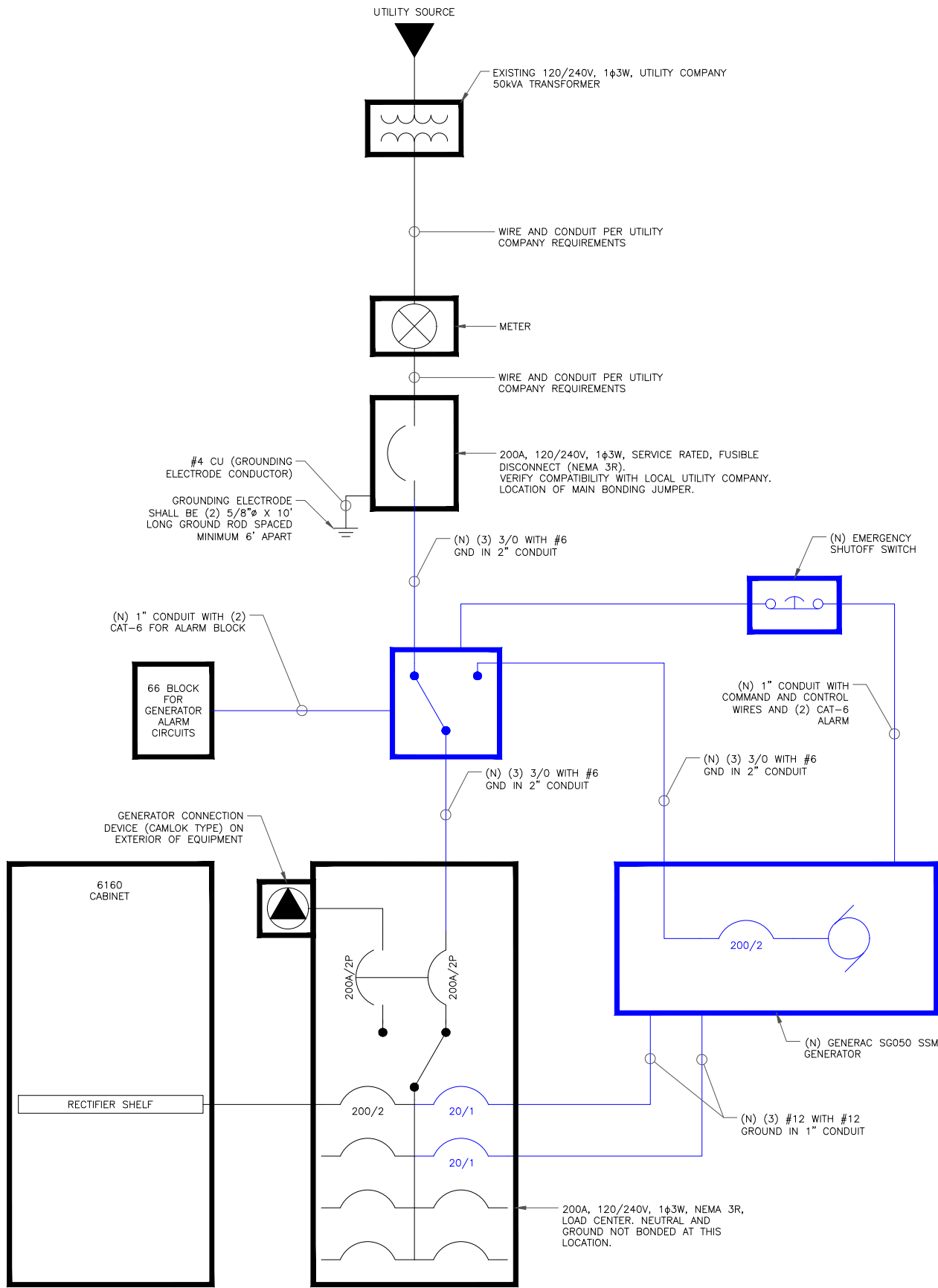
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C-3

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1 ONE-LINE DIAGRAM
SCALE: NOT TO SCALE

- UTILITY NOTES:
- CONTRACTOR SHALL VERIFY AVAILABLE FAULT CURRENT WITH POWER COMPANY AND ENSURE ALL ELECTRICAL EQUIPMENT IS SUITABLE FOR AVAILABLE FAULT CURRENT.
 - CONTRACTOR SHALL COORDINATE UTILITY SERVICES WITH LOCAL UTILITY COMPANIES. VERIFY ALL REQUIREMENTS WITH UTILITY COMPANY STANDARDS.
 - ONE-LINE DIAGRAM IS FOR SCHEMATIC PURPOSES ONLY AND IS NOT INDICATIVE OF THE ACTUAL EQUIPMENT LAYOUT.
 - ALL EQUIPMENT WILL HAVE A MINIMUM AIC OF 10 KA. CONTRACTOR TO DETERMINE AVAILABLE FAULT CURRENT BEFORE ENERGIZING EQUIPMENT. THE AMOUNT OF AVAILABLE FAULT CURRENT SHALL BE MARKED ON THE SERVICE EQUIPMENT PER NEC 110.24.
 - CONTRACTOR SHALL NOTIFY UTILITY COMPANY OF CHANGES IN ELECTRICAL LOAD.
 - CONTRACTOR TO VERIFY EXISTING CONDUIT(S) SIZE(S) PRIOR TO CONSTRUCTION AND MAY REUSE EXISTING CONDUIT(S) IF THEY MEET THE MINIMUM REQUIREMENTS PER NEC CODE.
 - GROUNDING ELECTRODE CONDUCTOR IS SIZED FOR SINGLE 200A SERVICE ONLY. IF METER BANK SHARES A COMMON NEUTRAL/GROUND POINT, CONTRACTOR WILL INSTALL (1) 3/0 COPPER GEC INSTEAD.

- GENERAL NOTES:
- ALL NEW CONDUCTORS TO BE INSTALLED SHALL BE COPPER. ALL CONDUCTORS SHALL BE THHW, THWN-2, XHHW, XHHW-2, THW, THW-2, RHW, OR RHW-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 GROUNDING AND BONDING PER THE NEC.

- UL NOTE:
- ELECTRICAL MATERIALS, DEVICES, CONDUCTORS, APPLIANCES AND EQUIPMENT SHALL BE LABELED/LISTED BY UL OR ACCEPTED BY JURISDICTION (I.E.: LOCAL COUNTY OR STATE) APPROVED THIRD PARTY TESTING AGENCY

- CONDUIT NOTES:
- ALL CONDUIT TO BE SCH40 PVC OR LTC (WITH PRIOR FSA CONSTRUCTION MANAGER APPROVAL), AS NOTED. INSTALL WEATHERPROOF FITTINGS.
 - ABOVE GRADE CONDUIT RUNS TO BE MARKED WITH HAZARD TAPE TO PREVENT TRIPPING HAZARD.
 - ALL ABOVE GROUND CONDUIT MUST BE RIGID METALLIC. RIGID METALLIC CONDUIT MAY ONLY BE INSTALLED ACROSS PAD WITH PRIOR FSA CM APPROVAL.

- ONE-LINE DIAGRAM NOTES:
- ELECTRICAL SERVICE SHALL BE 200A, 120/240V, 1 ϕ , 3W.
 - FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT, REFER TO VENDOR PRINTS PROVIDED BY EQUIPMENT MANUFACTURER.

INSTALLER NOTE:

- THE GENERATOR SIZE HAS BEEN DETERMINED BY T-MOBILE BASED ON AN INTERNAL LOAD ANALYSIS OF THEIR EQUIPMENT. THE GENERATOR SIZE WAS PROVIDED AS PART OF THE SCOPING ANALYSIS. T-MOBILE 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 T-MOBILE PANEL SCHEDULE CALCULATIONS ARE NOT EXCEEDED. IN THE EVENT THE READING EXCEEDS THE CALCULATED PANEL SCHEDULE LOADS, RECORD THE READING AND CONSULT T-MOBILE ENGINEERING MANAGER PRIOR TO PROCEEDING WITH GENERATOR INSTALLATION.

T-MOBILE SITE#		LOCATION		VOLTAGE: 240/120 1Ø				MOUNTING / ENCLOSURE: RUSTING / NEMA3R					
9JK0058A		H-FRAME		MAIN C/B: 200 AMPS				AVAIL. FAULT CURRENT: EXISTING					
3/6/2025				BUS RATING: 200 AMPS				SHORT CIRCUIT RATING: EXISTING					
AMPS/ POLES	WIRE & CONDUIT	TYPE	DESCRIPTION	KVA	CKT	A	B	CKT	KVA	DESCRIPTION	TYPE	WIRE & CONDUIT	AMPS/ POLES
20/1	EXISTING	L	NO LABEL	0.50	1	0.90		2	0.10	NO LABEL	EX	EXISTING	60/2
20/1	2W2-14726-1/2" C	H	GENUSCHEMATEL	0.20	3		0.60	4	0.10		EX	-	-
20/1	2W2-14726-1/2" C	EO	GEN BATTERY CHARGER	0.10	5	4.32		6	4.32	RBS160	EX	EXISTING	200/2
20/1	EXISTING	R	NO LABEL	0.18	7		4.50	9	4.32	-	EX	-	-
20/1	EXISTING	R	NO LABEL	0.18	9	4.50		10	4.32	-	EX	-	-
20/1	EXISTING	R	NO LABEL	0.18	11		4.50	12	4.32	-	EX	-	-
PHASE TOTAL				9.5			9.6		KVA				
									TOTAL CONNECTED LOAD		29.1 KVA		30A
									TOTAL DEMAND LOAD		29.2 KVA		30A

LOAD TYPE	DESCRIPTION	CONV. LOAD	DEMAND	DEFERRED		
		KVA	AMPS	FACTOR	KVA	AMPS
L	LIGHTING	0.5	2.1	3.25	0.6	2.6
R	RECEPTACLE	0.5	2.3	NFC	0.6	2.6
M	MOTOR	0.0	0.0	NFC	0.0	0.0
H	HEATING	0.5	2.1	1.00	0.5	2.1
AC	HVAC	0.0	0.0	1.00	0.0	0.0
EQ	EQUIPMENT	17.6	73.2	1.00	17.6	73.2
T	EXISTING	0.0	0.0	1.25	0.0	0.0

* ALL EQUIPMENT LOADS CONSIDERED CONTINUOUS LOADS

NOTES:

2 PROPOSED PANEL SCHEDULE
SCALE: NOT TO SCALE

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BU #: 809328
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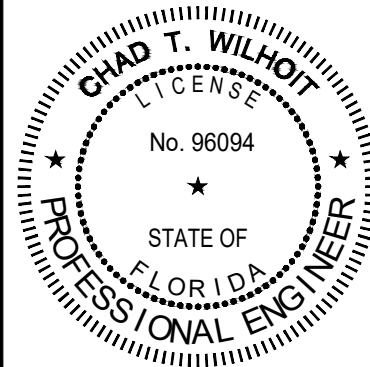
555 HACKNEY LANE
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EXISTING 254'-0"
SELF SUPPORT TOWER

ISSUED FOR:

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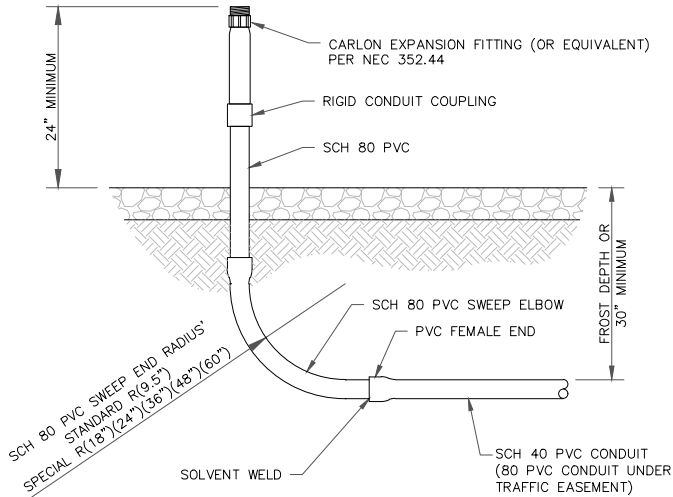
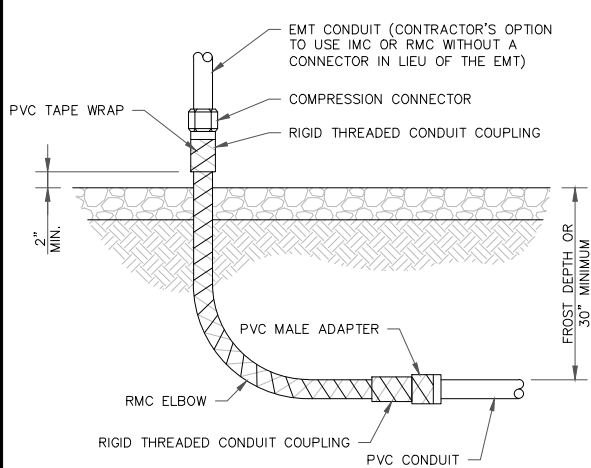
E-1

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INSTALLER NOTES:

ALL METAL CONDUIT INSTALLED IN DIRECT CONTACT WITH THE EARTH SHALL BE CONSIDERED TO BE INSTALLED IN A SEVERELY CORROSIVE ENVIRONMENT AND IS REQUIRED TO HAVE SUPPLEMENTAL PROTECTION AGAINST CORROSION (NEC ARTICLE 342.10(B) & 344.10(B)(1)). THIS PROTECTION SHALL EITHER BE AN APPROVED MANUFACTURER INSTALLED PROTECTIVE COATING ON THE CONDUIT OR SHALL BE (2) LAYERS OF 10 MIL PVC PIPE WRAP TAPE INSTALLED USING OPPOSING SPIRAL WRAPS. ON VERTICAL PIPE THE OUTSIDE LAYER OF TAPE SHALL BE WRAPPED SO AS TO PROVIDE SHEDDING OF WATER (i.e. TAPE SHOULD WRAP IN AN UPWARD DIRECTION WITH LOWER WRAP BEING BENEATH THE WRAP ABOVE). SPIRAL WRAPS SHALL HAVE A MINIMUM OF 1/4" OVERLAP WITH THE PRECEDING TAPE WRAP. ANY OTHER METHODS OF CORROSION PROTECTION SHALL REQUIRE APPROVAL BY THE ENGINEER OF RECORD PRIOR TO BEING USED.

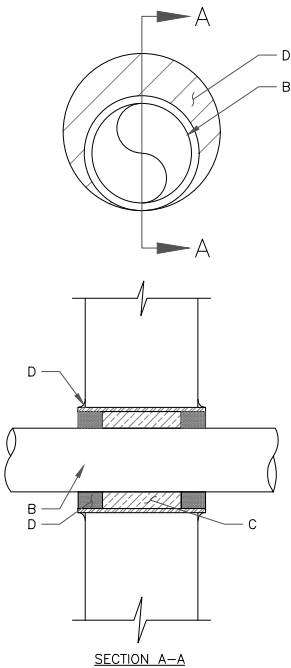


1 CONDUIT STUB UP DETAILS
SCALE: NOT TO SCALE

INSTALLER NOTES:

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

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

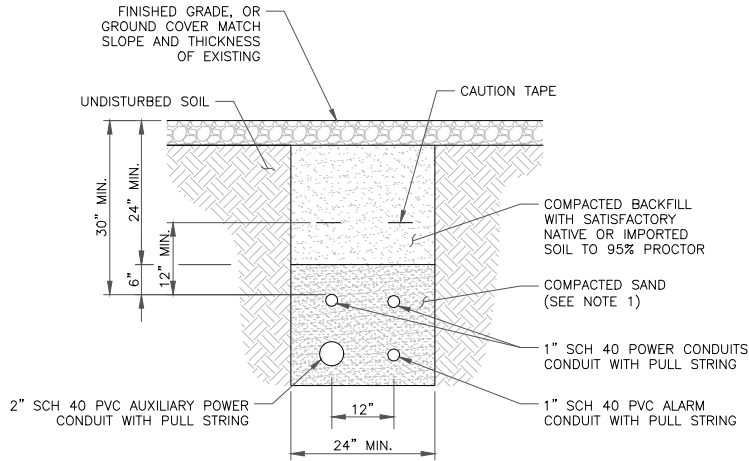


- A. FLOOR OR WALL ASSEMBLY : MINIMUM 4-1/2" THICK REINFORCED LIGHTWEIGHT OR NORMAL WEIGHT (100-150 PCF) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONCRETE BLOCKS*. MAX DIAMETER OF OPENING IS 4". (SEE CONCRETE BLOCKS 9CATZ) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.
- 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:
- STEEL PIPE-NOMINAL 6" DIAMETER (OR SMALLER) SCHEDULE 40 (OR HEAVIER) STEEL PIPE
 - IRON PIPE-NOMINAL 6" DIAMETER (OR SMALLER) CAST OR DUCTILE IRON PIPE.
 - 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

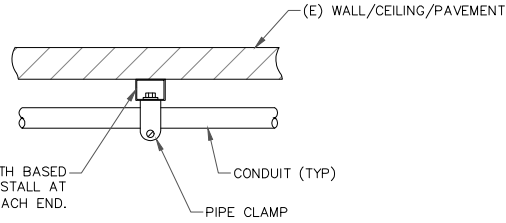
3 OUTER WALL PENETRATION DETAIL
SCALE: NOT TO SCALE

INSTALLER NOTE:

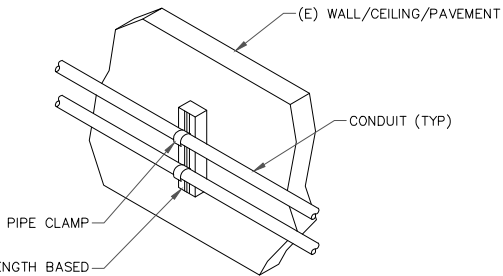
- LEAN CONCRETE, RED-COLORED TOP, MAY BE USED IN PLACE OF COMPACTED SAND



VERTICAL UNISTRUT P1000WT-HG. REQUIRED LENGTH BASED ON QUANTITY OF CONDUIT TO BE MOUNTED. INSTALL AT 5'-0" O.C. MAX W/ FASTENER AT EACH END.



VERTICAL UNISTRUT P1000WTHG. REQUIRED LENGTH BASED ON QUANTITY OF CONDUIT TO BE MOUNTED. INSTALL AT 5'-0" O.C. MAX W/ FASTENER AT EACH END.



4 CONDUIT WALL MOUNT DETAIL
SCALE: NOT TO SCALE

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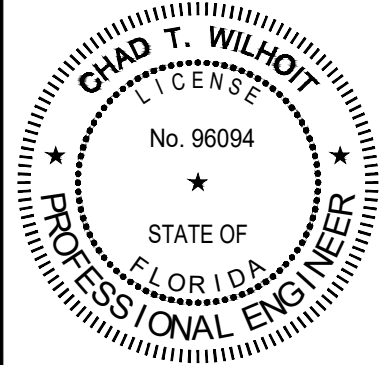
555 HACKNEY LANE
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EXISTING 254'-0"
SELF SUPPORT TOWER

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GROUNDING PLAN LEGEND:

- GROUND WIRE
■ EXOTHERMIC WELD
● MECHANICAL CONNECTION
○ NEW GROUND ROD
5/8"Ø x 10'-0"

GROUNDING NOTES:

1. IF MORE THAN 20' FROM T-MOBILE GROUND RING, INSTALL GROUND ROD (5/8" x 10'). ROD SPACING: 8' MAX. TOP OF ROD AND GROUND WIRE TO BE AT GROUND RING DEPTH BELOW FROST LINE.
2. GROUND FAULT PROTECTION REQUIRED FOR UTILITY RECEPTACLES.
3. GENERATOR NEUTRAL SHALL NOT BE GROUNDED AT THE GENERATOR. REFER TO SINGLE LINE DETAIL, SHEET E-2.
4. EQUIPMENT LOCATED OUTSIDE OR EXPOSED TO MOISTURE SHALL BE NEMA 3R RATED.

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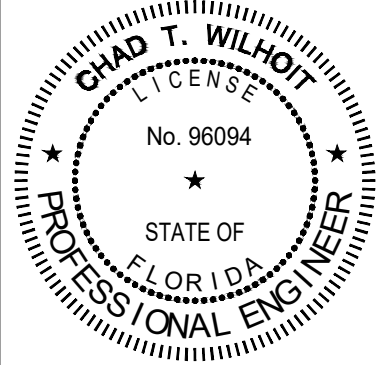
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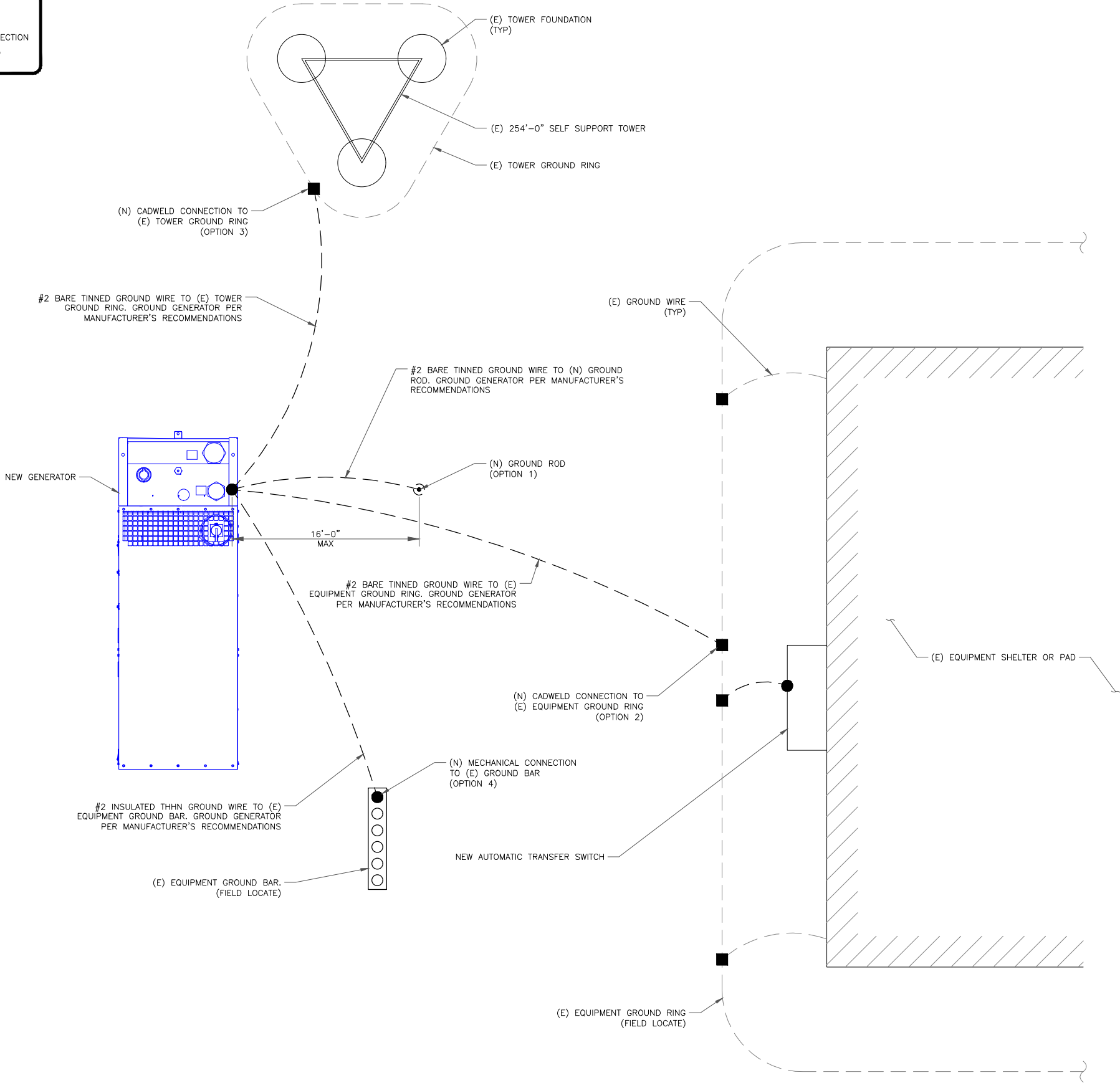
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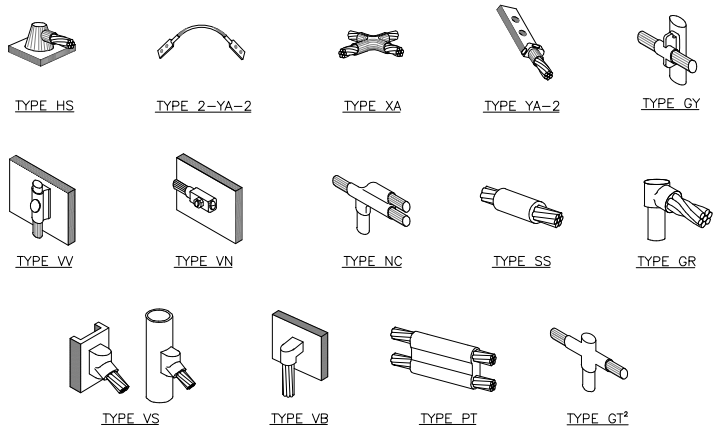
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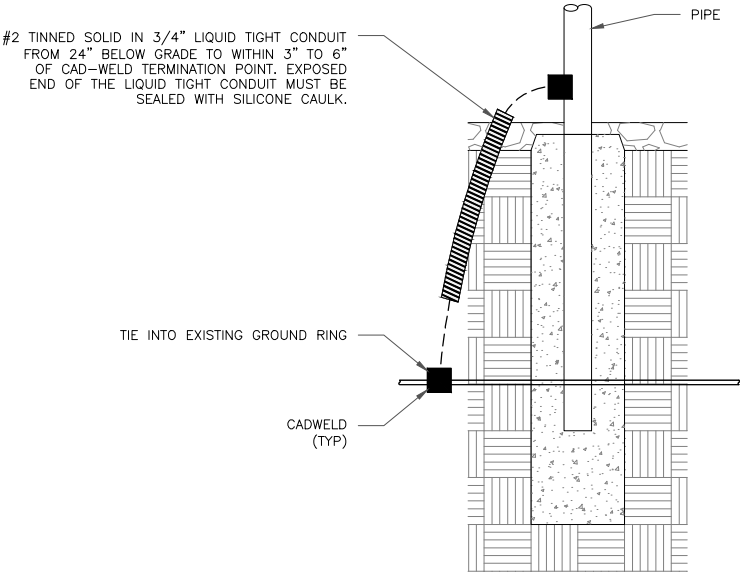


1 TYPICAL GROUNDING SCHEMATIC
SCALE: NOT TO SCALE

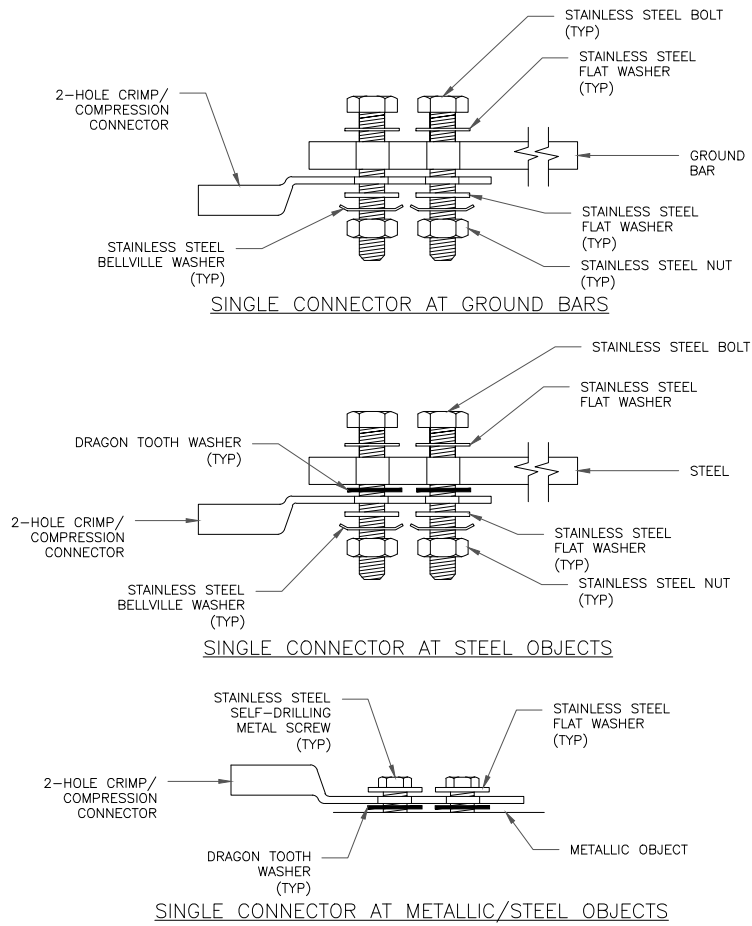


- NOTE:
1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
 2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

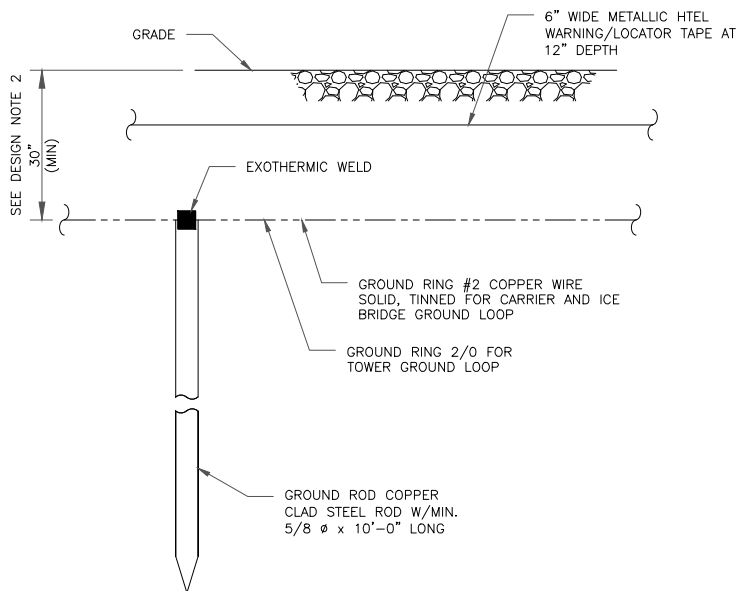
1 CADWELD GROUNDING CONNECTIONS
SCALE: NOT TO SCALE



2 TRANSITIONING GROUND DETAIL
SCALE: NOT TO SCALE



3 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



- NOTES:
1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
 2. 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)

4 GROUND ROD DETAIL
SCALE: NOT TO SCALE

T Mobile

CROWN CASTLE

PM&A

P. MARSHALL & ASSOCIATES
1000 HOLCOMB WOODS PKWY STE. 210
ROSWELL, GA 30076
OFFICE 678-280-2325

BU #: 809328
LAKE CITY W J-FL-012-058

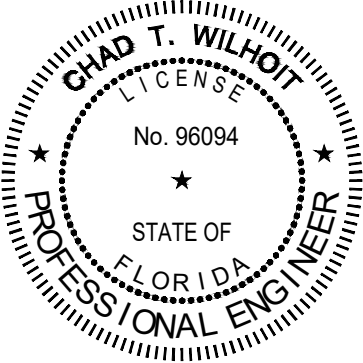
555 HACKNEY LANE
LAKE CITY, FL 32055

EXISTING 254'-0"
SELF SUPPORT TOWER

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
0	03/06/25	DJW	CONSTRUCTION	CTW

Chad T. Wilhoit, P.E.
Registered Engineer
State of Florida #96094
P Marshall & Associates Certificate of Authorization #27595



Chad T. Wilhoit, State of Florida, Professional Engineer, License No. 96094. This item has been electronically signed and sealed by Chad T. Wilhoit, PE on the Date and/or Time Stamp shown using a digital signature. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copy.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER:

G-2

REVISION:

0

100-400 Amps, Single Phase**Automatic Smart Transfer Switches****Functions**

All timing and sensing functions originate in the generator controller

Utility voltage drop-out.....	<65%
Timer to generator start.....	10 second factory set, adjustable between 2-1500 seconds by a qualified dealer*
Engine warm up delay.....	5 seconds
Standby voltage sensor.....	65% for 5 seconds
Utility voltage pickup.....	>80%
Re-transfer time delay.....	15 seconds
Engine cool-down timer.....	60 seconds
Exerciser.....	5 or 12 minutes adjustable weekly/Bi-weekly/Monthly**

The transfer switch can be operated manually without power applied.

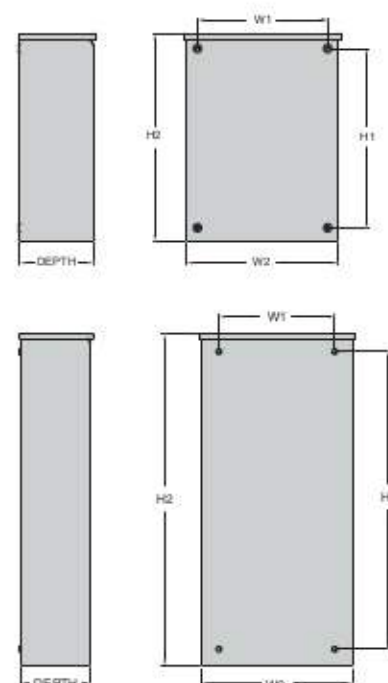
*When used in conjunction with units utilizing Evolution™ controls **Adjustable via the controller

Specifications

Model	RXSC100A3	RXSW100A3	RXSW150A3	RXSC200A3	RXSW200A3	RXSW300A3	RXSC400A3	RXSW400A3
Amps	100	100	150	200	200	300	400	400
Voltage	120/240, 1Ø	120/240, 1Ø	120/240, 1Ø	120/240, 1Ø	120/240, 1Ø	120/240, 1Ø	120/240, 1Ø	120/240, 1Ø
Load Transition Type (Automatic)	Open Transition	Open Transition Service Rated	Open Transition Service Rated	Open Transition	Open Transition Service Rated	Open Transition Service Rated	Open Transition	Open Transition Service Rated
Enclosure Type	NEMA/UL 3R	NEMA/UL 3R	NEMA/UL 3R	NEMA/UL 3R	NEMA/UL 3R	NEMA/UL 3R	NEMA/UL 3R	NEMA/UL 3R
UL Rating	UL/CUL	UL	UL	UL/CUL	UL	UL	UL/CUL	UL
Withstand Rating (Amps)	10,000	10,000	22,000	10,000	22,000	22,000	22,000	22,000
Lug Range	1/0 - #14		250 MCM - #6			600 MCM - #4 or 1/0 - 250 MCM		

Dimensions

Model		RXSC100A3	RXSW100A3	RXSW150A3	RXSC200A3	RXSW200A3	RXSW300A3	RXSC400A3	RXSW400A3
Height (in./mm)	H1	17.24/437.9	17.24/437.9	26.75/679.4	17.24/437.9	26.75/679.4	42.91/1089.9	31.25/793.8	42.91/1089.9
	H2	20/508	20/508	30/762	20/508	30/762	48/1219.2	36/914.4	48/1219.2
Width (in./mm)	W1	12.5/317.5	12.5/317.5	10.5/266.7	12.5/317.5	10.5/266.7	16.69/423.9	19.18/487.2	16.69/423.9
	W2	14.6/370.8	14.6/370.8	13.5/342.9	14.6/370.8	13.5/342.9	21.82/554.2	24.609.6	21.82/554.2
Depth (in./mm)		7.09/180.1	7.09/180.1	6.3/160.1	7.09/180.1	6.3/160.1	10.06/255.5	10.06/255.5	10.06/255.5
Weight (lbs./kilos)		20/9.07	22.5/10.21	39/17.69	20/9.07	39/17.69	140/63.5	133/60.33	140/63.5



SG050 | 5.4L | 50 kW
INDUSTRIAL SPARK-IGNITED GENERATOR SET
EPA Certified Stationary Emergency

GENERAC® | **INDUSTRIAL POWER**

Standby Power Rating

50 kW, 63 kVA, 60 Hz

Prime Power Rating*

45 kW, 56 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

Generac products are designed to the following standards:



UL2200, UL508, UL489



CSA 22.2



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



IBC 2009, CBC 2010, IBC 2012,
ASCE 7-05, ASCE 7-10,
ICC-ES AC-156 (2012)

Powering Ahead

Generac ensures superior quality by designing and manufacturing most of its generator components, such as alternators, enclosures, control systems and communications software. Generac also makes its own spark-ignited engines, and you'll find them on every Generac gaseous-fueled generator. We engineer and manufacture them from the block up — all at our facilities throughout Wisconsin. Applying natural gas and LP-fueled engines to generators requires advanced engineering expertise to ensure reliability, durability and necessary performance. By designing specifically for these dry, hotter-burning fuels, the engines last longer and require less maintenance. Building our own engines also means we control every step of the supply chain and delivery process, so you benefit from single-source responsibility.

Plus, Generac Industrial Power's distribution network provides all parts and service so you don't have to deal with third-party suppliers. It all leads to a positive owner experience and higher confidence level. Generac spark-ignited engines give you more options in commercial and industrial generator applications as well as extended run time from utility-supplied natural gas.

SG050 | 5.4L | 50 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

STANDARD FEATURES

ENGINE SYSTEM

- Oil Drain Extension
- Air Cleaner
- Fan Guard
- Stainless Steel Flexible Exhaust Connection
- Factory Filled Oil and Coolant
- Radiator Duct Adapter (Open Set Only)
- Critical Exhaust Silencer

Fuel System

- Fuel Line - NPT Connection
- Primary and Secondary Fuel Shutoff

Cooling System

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

Electrical System

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

ALTERNATOR SYSTEM

- GENprotect™
- Class H Insulation Material
- 2/3 Pitch
- Skewed Stator
- Permanent Magnet Excitation
- Sealed Bearing
- Amortisseur Winding
- Full Load Capacity Alternator

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 Only)

ENCLOSURE (If Selected)

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

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
- 3-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
- Low Fuel Pressure Alarm
- 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)

SG050 | 5.4L | 50 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

CONFIGURABLE OPTIONS

ENGINE SYSTEM

- Engine Coolant Heater
- Oil Heater
- Air Filter Restriction Indicator
- Stone Guard (Open Set Only)
- Fan and Belt Guards

ELECTRICAL SYSTEM

- 10A UL Battery Charger
- 2.5A UL Battery Charger
- Battery Warmer

ALTERNATOR SYSTEM

- Alternator Upsizing
- Anti-Condensation Heater
- Tropical Coating

CIRCUIT BREAKER OPTIONS

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

ENGINEERED OPTIONS

ENGINE SYSTEM

- Coolant Heater Ball Valves
- Fluid Containment Pan

ALTERNATOR SYSTEM

- 3rd Breaker System

CONTROL SYSTEM

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

GENERATOR SET

- Demand Response Rating
- GenLink® Communications Software (English Only)
- Extended Factory Testing (3-Phase Only)
- 8 Position Load Center
- Vapor Recovery Heater

ENCLOSURE

- Standard 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
- Enclosure Ambient Heaters
- Door Alarm Switch

GENERATOR SET

- Special Testing
- Battery Box

CONTROL SYSTEM

- NFPA 110 Compliant 21-Light Remote Annunciator
- Remote Relay Assembly (8 or 16)
- Oil Temperature Sender with 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)
- Remote Communication - Modem
- 10A Run Relay
- Ground Fault Indication and Protection Functions
- 120V GFCI and 240V Outlet
- 100 dB Alarm Horn

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

APPLICATION AND ENGINEERING DATA

ENGINE SPECIFICATIONS

General

Make	Generac
Cylinder #	8
Type	V
Displacement - in³ (L)	329.53 (5.4)
Bore - in (mm)	3.55 (90.17)
Stroke - in (mm)	4.17 (105.992)
Compression Ratio	9.0:1
Intake Air Method	Naturally Aspirated
Number of Main Bearings	4
Connecting Rods	Forged Steel
Cylinder Head	Aluminum
Cylinder Liners	No
Ignition	Single Fire
Piston Type	Aluminum Alloy
Crankshaft Type	Nodular Iron
Lifter Type	Hydraulic
Intake Valve Material	Steel Alloy
Exhaust Valve Material	Hardened Steel
Hardened Valve Seats	Yes

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	± 0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full-Flow Spin-On Cartridge
Crankcase Capacity - qt (L)	6 (5.7)

Cooling System

Cooling System Type	Pressurized Closed Recovery
Fan Type	Pusher
Fan Speed - rpm	2,143
Fan Diameter - in (mm)	20 (508)

Fuel System

Fuel Type	Natural Gas, Propane Vapor
Carburetor	Down Draft
Secondary Fuel Regulator	Standard
Fuel Shut Off Solenoid	Standard
Operating Fuel Pressure - in H ₂ O (kPa)	8 - 14 (2.0 - 3.5)

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	Generac 390 mm
Poles	4
Field Type	Revolving
Insulation Class - Rotor	H
Insulation Class - Stator	H
Total Harmonic Distortion	<5% (3-Phase)
Telephone Interference Factor (TIF)	<50

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

OPERATING DATA

POWER RATINGS - NATURAL GAS/PROPANE VAPOR

		Standby
Single-Phase 120/240 VAC @1.0pf	50 kW	Amps: 208
Three-Phase 120/208 VAC @0.8pf	50 kW	Amps: 173
Three-Phase 120/240 VAC @0.8pf	50 kW	Amps: 150
Three-Phase 277/480 VAC @0.8pf	50 kW	Amps: 75
Three-Phase 346/600 VAC @0.8pf	50 kW	Amps: 60

STARTING CAPABILITIES (sKVA)

sKVA vs. Voltage Dip

277/480 VAC								208/240 VAC							
Alternator	kW	10%	15%	20%	25%	30%	35%	Alternator	kW	10%	15%	20%	25%	30%	35%
Standard	50	34	52	69	86	103	120	Standard	50	26	39	52	65	77	90
Upsize 1	60	42	63	83	104	125	146	Upsize 1	60	32	47	62	78	94	110

FUEL CONSUMPTION RATES*

Natural Gas – ft³/hr (m³/hr)				Propane Vapor – ft³/hr (m³/hr)			
Percent Load		Standby		Percent Load		Standby	
25%		308 (8.7)		25%		102.6 (2.9)	
50%		527 (14.9)		50%		175.9 (5.0)	
75%		712 (20.2)		75%		237.5 (6.7)	
100%		879 (24.9)		100%		293.2 (8.3)	

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

COOLING

		Standby
Air Flow (Inlet Air Combustion and Radiator)	ft³/min (m³/min)	2,470 (70.0)
Coolant Flow	gpm (lpm)	38 (144)
Coolant System Capacity	gal (L)	3 (11.36)
Heat Rejection to Coolant	BTU/hr (kW)	200,000 (58.6)
Max. Operating Ambient Temperature	°F (°C)	122 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199270SSD	
Maximum Radiator Backpressure	in H ₂ O (kPa)	0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

	Standby
Flow at Rated Power cfm (m³/min)	115 (3.3)

ENGINE

		Standby
Rated Engine Speed	rpm	1,800
Horsepower at Rated kW**	hp	80
Piston Speed	ft/min (m/min)	1,251 (381.3)
BMEP	psi (kPa)	107 (738)

EXHAUST

		Standby
Exhaust Flow (Rated Output)	cfm (m³/min)	357 (10.1)
Maximum Exhaust Backpressure	inHg (kPa)	1.5 (5.1)
Exhaust Temp (Rated Output - Post Silencer)	°F (°C)	1,100 (593)

** 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

SG050

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5.4L

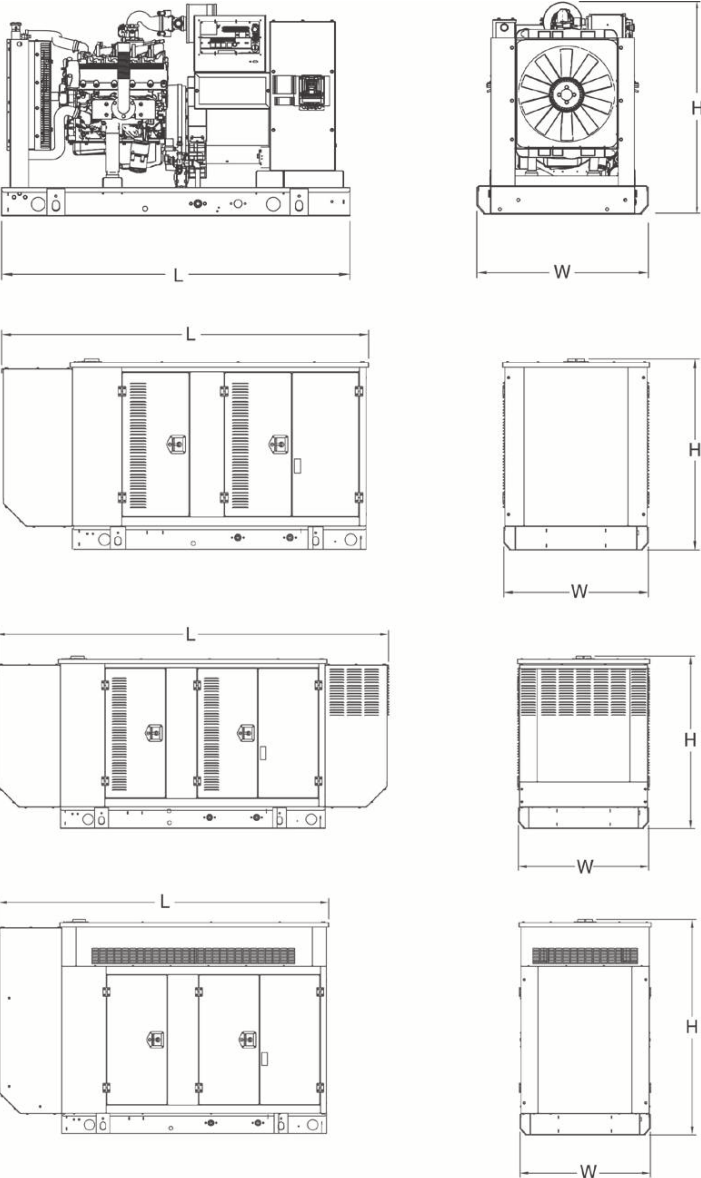
|

50 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

DIMENSIONS AND WEIGHTS*



OPEN SET (Includes Exhaust Flex)

L x W x H - in (mm)	76.0 (1,930.0) x 37.4 (950.0) x 46.3 (1,176.0)
Weight - lbs (kg)	2,256 (1,023)

STANDARD ENCLOSURE

L x W x H - in (mm)	94.8 (2,408.9) x 38.0 (965.1) x 49.5 (1,258.1)
Weight - lbs (kg)	Steel: 2,697 (1,223) Aluminum: 1,754 (795)

LEVEL 1 ACOUSTIC ENCLOSURE

L x W x H - in (mm)	112.5 (2,857.1) x 38.0 (965.1) x 49.5 (1,258.1)
Weight - lbs (kg)	Steel: 2,776 (1,259) Aluminum: 2,508 (1,138)

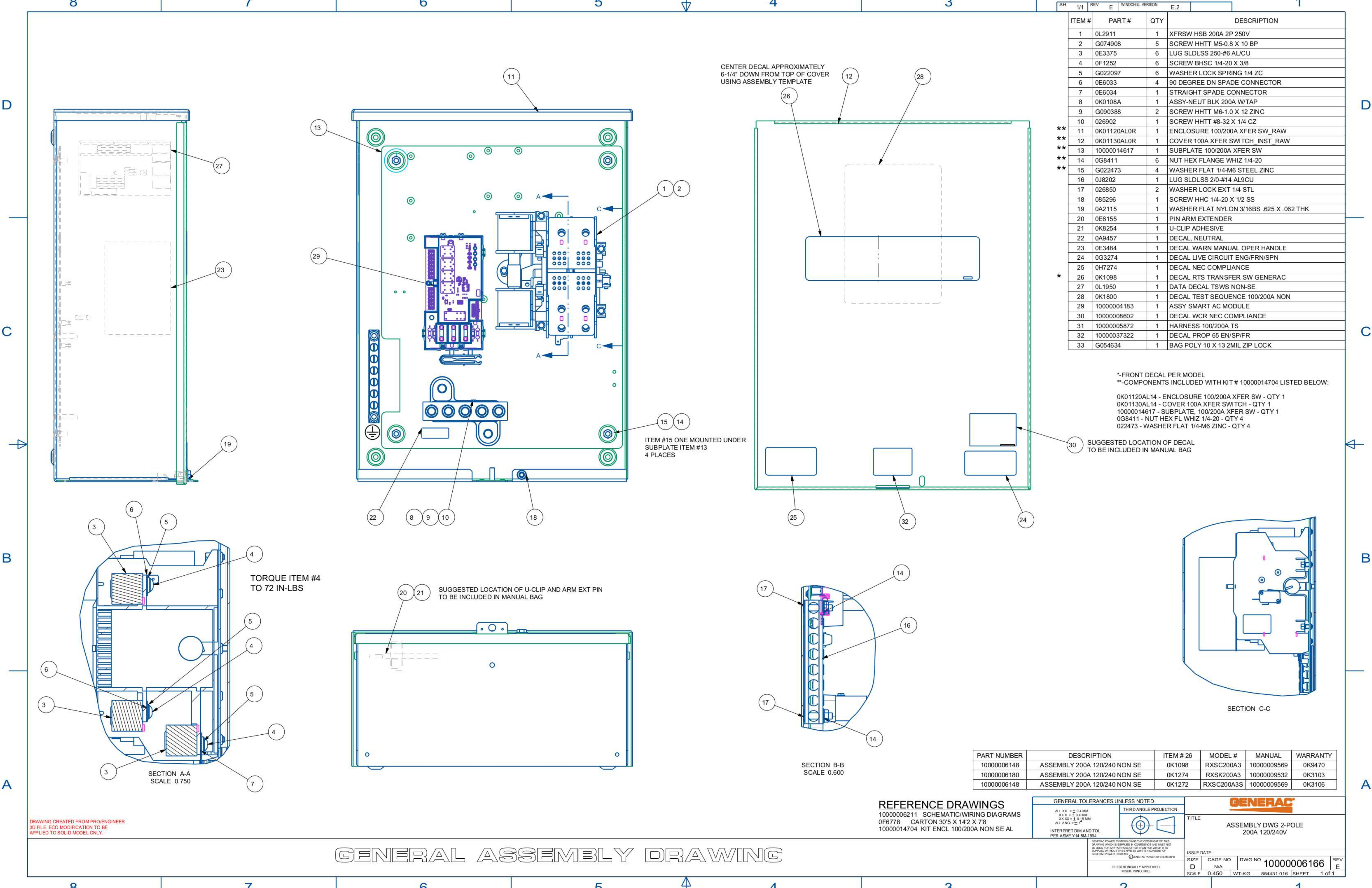
LEVEL 2 ACOUSTIC ENCLOSURE

L x W x H - in (mm)	94.8 (2,407.0) x 38.0 (965.1) x 69.1 (1,755.0)
Weight - lbs (kg)	Steel: 2,928 (1,328) Aluminum: 2,574 (1,168)

* All measurements are approximate and for estimation purposes only.

YOUR FACTORY RECOGNIZED GENERAC INDUSTRIAL DEALER

Specification characteristics may change without notice. Please contact a Generac Power Systems Industrial Dealer for detailed installation drawings.



SH	1/1	REV	E	WINDCHILL VERSION	E.2			1
ITEM #	PART #		QTY	DESCRIPTION				
1	OL2911		1	XFRSW HSB 200A 2P 250V				
2	G074908		5	SCREW HHTT M5-0.8 X 10 BP				
3	OE3375		6	LUG SLDLSS 250-#6 AL/CU				
4	OF1252		6	SCREW BHSC 1/4-20 X 3/8				
5	G022097		6	WASHER LOCK SPRING 1/4 ZC				
6	OE6033		4	90 DEGREE DN SPADE CONNECTOR				
7	OE6034		1	STRAIGHT SPADE CONNECTOR				
8	OK0108A		1	ASSY-NEUT BLK 200A W/TAP				
9	G090388		2	SCREW HHTT M6-1.0 X 12 ZINC				
10	026902		1	SCREW HHTT #8-32 X 1/4 CZ				
**	11	OK01120AL0R	1	ENCLOSURE 100/200A XFER SW_RAW				
**	12	OK01130AL0R	1	COVER 100A XFER SWITCH_INST_RAW				
**	13	10000014617	1	SUBPLATE 100/200A XFER SW				
**	14	OG8411	6	NUT HEX FLANGE WHIZ 1/4-20				
**	15	G022473	4	WASHER FLAT 1/4-M6 STEEL ZINC				
	16	0J8202	1	LUG SLDLSS 2/0-#14 AL9CU				
	17	026850	2	WASHER LOCK EXT 1/4 STL				
	18	085296	1	SCREW HHC 1/4-20 X 1/2 SS				
	19	0A2115	1	WASHER FLAT NYLON 3/16BS .625 X .062 THK				
	20	OE6155	1	PIN ARM EXTENDER				
	21	OK8254	1	U-CLIP ADHESIVE				
	22	0A9457	1	DECAL, NEUTRAL				
	23	OE3484	1	DECAL WARN MANUAL OPER HANDLE				
	24	OG3274	1	DECAL LIVE CIRCUIT ENG/FRN/SPN				
	25	0H7274	1	DECAL NEC COMPLIANCE				
*	26	OK1098	1	DECAL RTS TRANSFER SW GENERAC				
	27	OL1950	1	DATA DECAL TSWS NON-SE				
	28	OK1800	1	DECAL TEST SEQUENCE 100/200A NON				
	29	10000004183	1	ASSY SMART AC MODULE				
	30	10000008602	1	DECAL WCR NEC COMPLIANCE				
	31	10000005872	1	HARNESS 100/200A TS				
	32	10000037322	1	DECAL PROP 65 EN/SP/FR				
	33	G054634	1	BAG POLY 10 X 13 2MIL ZIP LOCK				



*-FRONT DECAL PER MODEL
**-COMPONENTS INCLUDED WITH KIT # 10000014704 LISTED BELOW:

OK01120AL14 - ENCLOSURE 100/200A XFER SW - QTY 1
OK01130AL14 - COVER 100A XFER SWITCH - QTY 1
10000014617 - SUBPLATE, 100/200A XFER SW - QTY 1
OG8411 - NUT HEX FL WHIZ 1/4-20 - QTY 4
022473 - WASHER FLAT 1/4-M6 ZINC - QTY 4

SUGGESTED LOCATION OF DECAL
TO BE INCLUDED IN MANUAL BAG

PART NUMBER	DESCRIPTION	ITEM # 26	MODEL #	MANUAL	WARRANTY
10000006148	ASSEMBLY 200A 120/240 NON SE	OK1098	RXSC200A3	10000009569	OK9470
10000006180	ASSEMBLY 200A 120/240 NON SE	OK1274	RXSK200A3	10000009532	OK3103
10000006148	ASSEMBLY 200A 120/240 NON SE	OK1272	RXSC200A3S	10000009569	OK3106

REFERENCE DRAWINGS
10000006211 SCHEMATIC/WIRING DIAGRAMS
0F6778 CARTON 30"5 X 14"2 X 7"8
10000014704 KIT ENCL 100/200A NON SE AL

GENERAL TOLERANCES UNLESS NOTED		THIRD ANGLE PROJECTION	
ALL XX = ± 0.4 MM	XX.X = ± 0.4 MM		
XX.XX = ± 0.15 MM	ALL ANG = ± 1°		
INTERPRET DIM AND TOL PER ASME Y14.5M-1994			

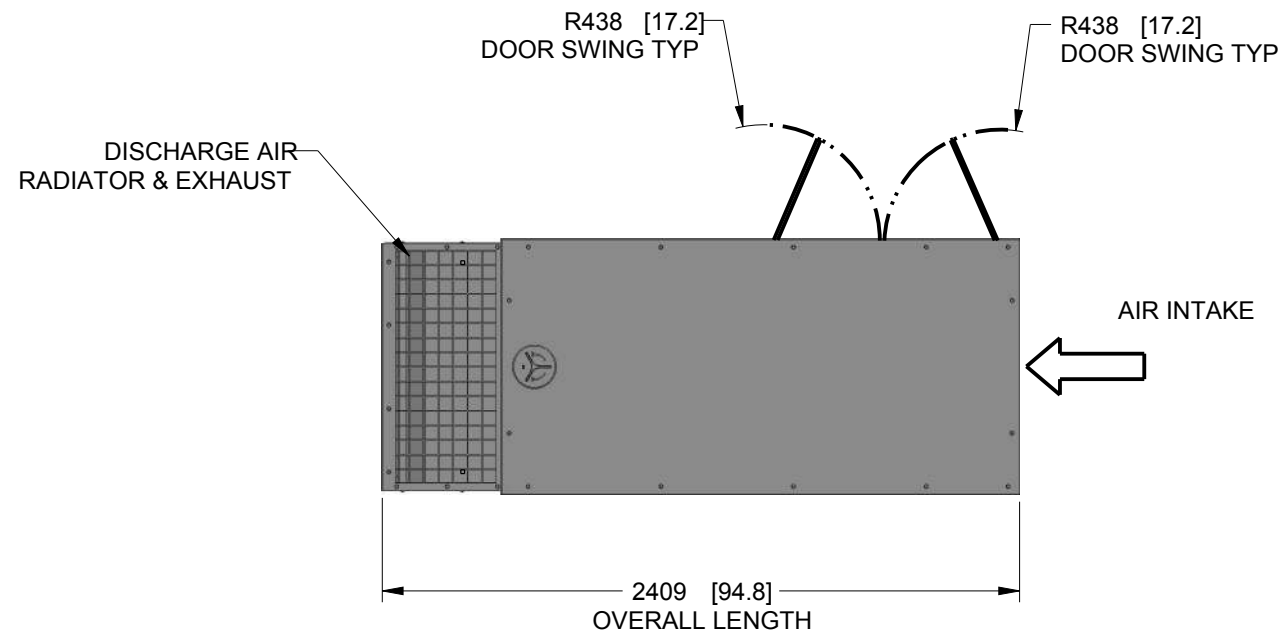
ELECTRONICALLY APPROVED INSIDE WINDCHILL			
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TITLE			
ASSEMBLY DWG 2-POLE 200A 120/240V			
ISSUE DATE:			
SIZE D	CAGE NO N/A	DWG NO 10000006166	REV E
SCALE 0.450	WT-KG 854431.016	SHEET 1 of 1	

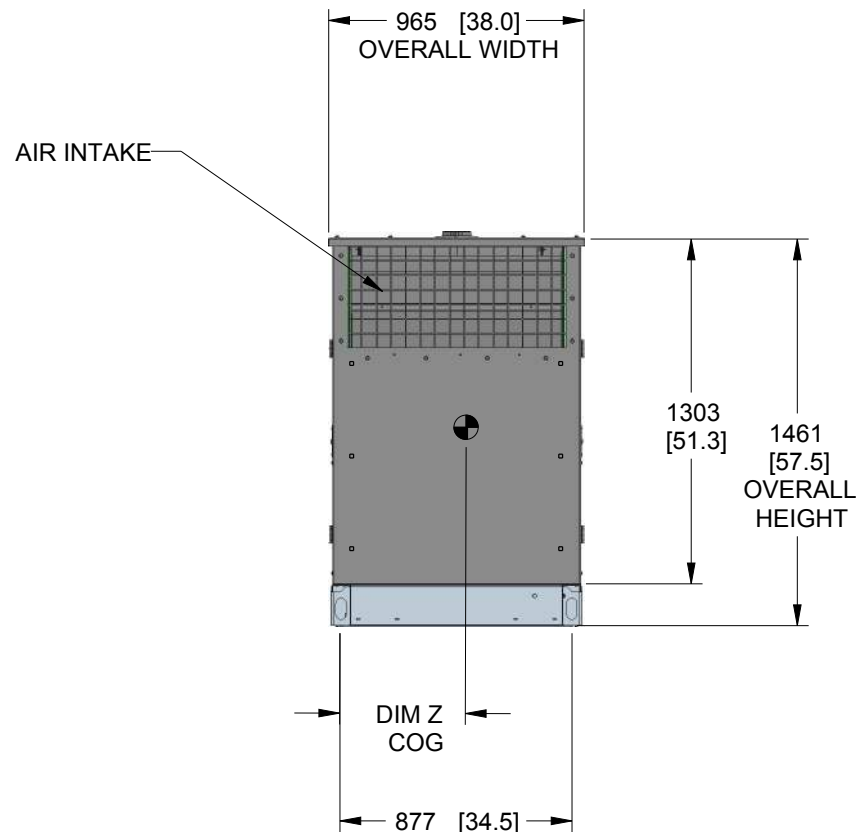
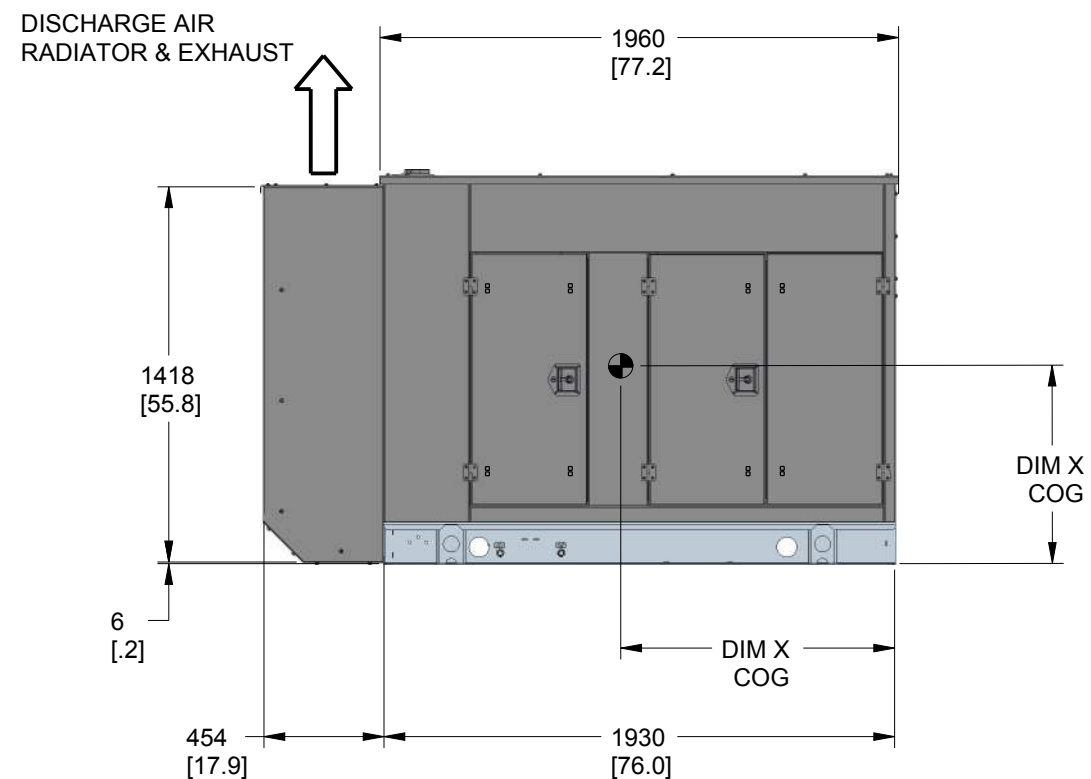
GENERAL ASSEMBLY DRAWING

B

B



FOR ALL STUB-UP, WEIGHT AND COG DETAILS, SEE
CORRESPONDING OPEN SET DRAWING PER UNIT CONFIGURATION.



A

A

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

DIMENSIONS ARE IN MILLIMETERS [INCHES]

INSTALLATION DRAWING

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ANY PURPOSE OTHER THAN FOR WHICH IT IS SUPPLIED WITHOUT
THE EXPRESS WRITTEN CONSENT OF GENERAC POWER SYSTEMS.
©GENERAC POWER SYSTEMS 2013

ELECTRONICALLY APPROVED
INSIDE WINDCHILL



TITLE				
INSTALL A-GRP ENCLOSED G4.5L 50&60Hz				
ISSUE DATE:				
SIZE B	CAGE NO N/A	DWG NO A0000335178	REV B	
SCALE 0.035	WT-KG N/A	SHEET 1 of 1		