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AT&T SITE ID: WI1134

FA#: 10080367

EAST TERRACE

801 NORTH EAST AVENUE

WAUKESHA, WI 53186

GENERATOR PROJECT

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

2015 INTERNATIONAL BUILDING CODE (IBC)
2015 INTERNATIONAL FIRE CODE (IFC)
2015 INTERNATIONAL PROPERTY MAINTENANCE CODE (IPMC)
2015 INTERNATIONAL FUEL GAS CODE (IFGC)
2015 INTERNATIONAL EXISTING BUILDING CODE (IEBC)
2015 INTERNATIONAL ENERGY CONSERVATION CODE (IECC)
2015 INTERNATIONAL FIRE CODE (IFC)

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: **PRIVATE OWNER**

LATITUDE: 43° 00' 39.17" N (43.0108806)
LONGITUDE: 088° 13' 34.53" W (-88.2262611)
LAT/LONG TYPE: NAD-83
EXISTING ZONING: N/A

TYPE OF CONSTRUCTION: TYPE V-B
OCCUPANCY GROUP: U
JURISDICTION: CITY OF WAUKESHA, WI

PROJECT TEAM

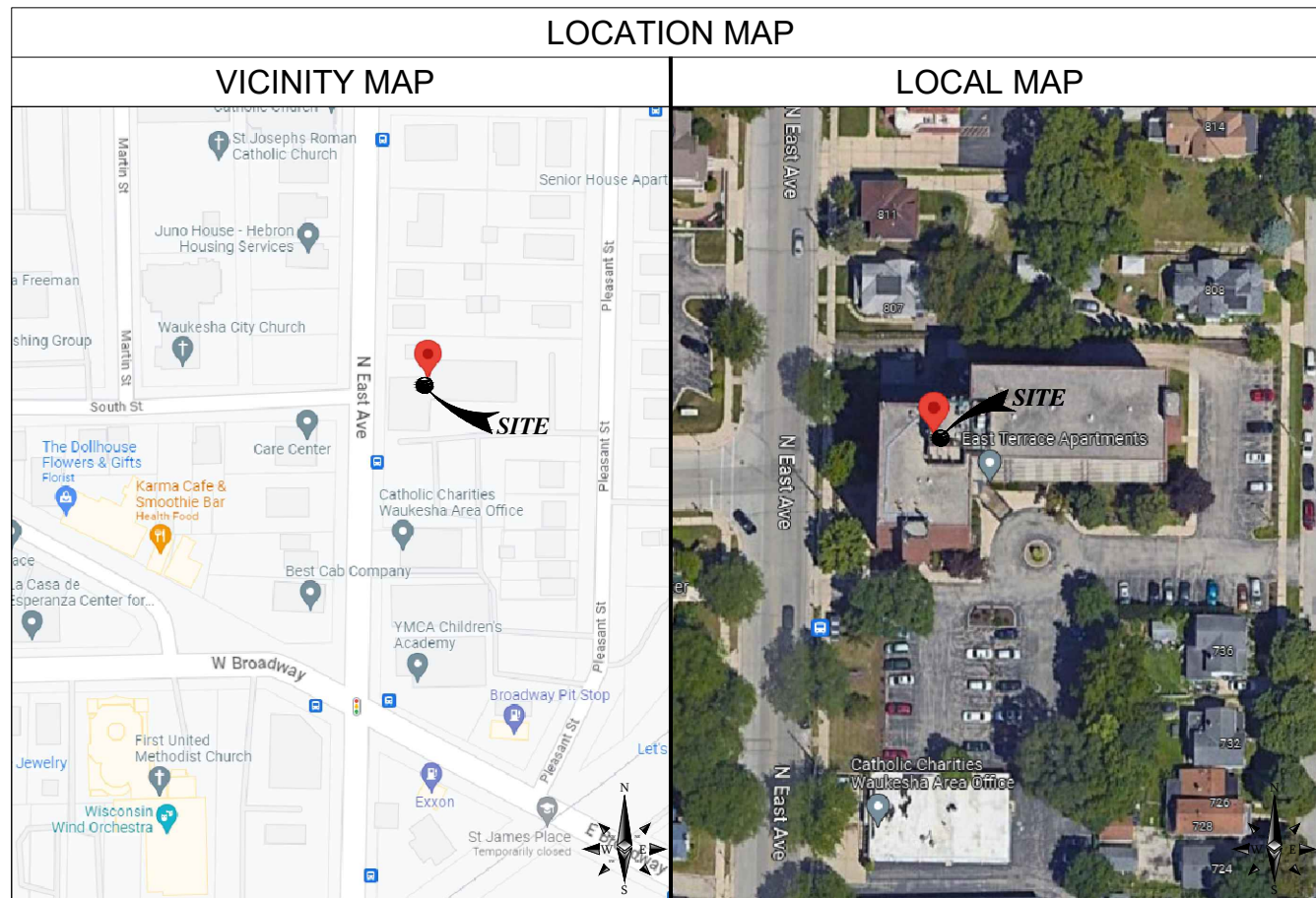
CLIENT REPRESENTATIVE (NATIONAL):
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CONTACT: JAMES FLOWERS
EMAIL: JAMES.FLOWERS@MASTEC.COM



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) CAM LOC
- INSTALL (1) 50kW GENERAC STANDBY NATURAL GAS GENERATOR (GENERAC SG050) ON A CONCRETE PAD
- INSTALL (1) 200A ATS/CAM LOC (#G0063113)
- INSTALL ATS ALARM RELAY
- INSTALL (N) 10'-0" X 16'-0" CMU/BLOCK WALL & DOUBLE SWING GATE
- INSTALL (N) GROUNDING RING
- INSTALL (N) 7'-2"x10'-0" CONCRETE PAD EXTENSION

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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.

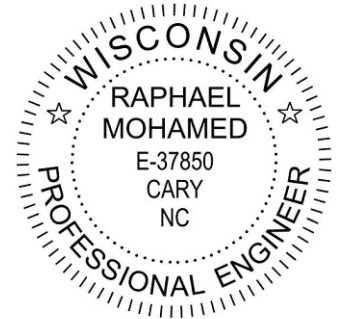
AT&T _____ DATE: _____
SITE ACQUISITION _____ DATE: _____
CONSTRUCTION MANAGER _____ DATE: _____

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.



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4/22/2025

SUBMITTALS

DATE	DESCRIPTION	REV	ISSUED BY
4/22/2025	CONSTRUCTION	0	RM

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

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PREPARED FOR:



PREPARED BY:



FA NUMBER:

10080367

SITE NAME:

EAST TERRACE

SITE ADDRESS:

801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:

N/A

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

GENERAL NOTES:

1. ALL SUB-CONTRACTORS ARE TO SIGN INTO THE LL AND AT&T NOC'S ALONG WITH BEFORE THE START OF WORK AND END OF WORK EACH DAY. THE AT&T LOGBOOK MUST ALSO BE SIGNED EACH DAY ON SITE.
2. ALL ORIGINAL PERMITS MUST BE POSTED ON SITE BEFORE WORK CAN COMMENCE. ALL PERMITS ARE REQUIRED TO BE IN A NOTICEABLE LOCATION FOR REVIEW BY THE PERMITTING JURISDICTION.
3. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
CARRIER: AT&T
TOWER OWNER:INDEPENDENT
4. 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.
5. 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.
6. 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.
7. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF 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.
8. 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 MASTEC NETWORK SOLUTIONS.
9. 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.
10. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
11. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
12. 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.
13. CONTRACTOR IS TO DETERMINE 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.
14. 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.
15. 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.
16. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL (FOR CAST IN PLACE OPTION):

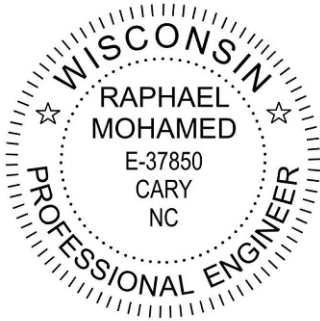
1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE 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.
4. 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.
5. 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
6. 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"
7. 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.

GREENFIELD GROUNDING NOTES:

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE, AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 ft of MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. 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.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 1/2" 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).
21. 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).

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
- 4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
- 4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED. 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.
5. 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.
6. 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).
7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
8. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
9. 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.
10. 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.
11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI-CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
12. 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.
13. 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).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT) OR METAL-CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
23. 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.
24. 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.
25. 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.
26. 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.
27. 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.
28. 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.
29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "AT&T".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.



4/22/2025

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
4/22/2025	CONSTRUCTION	0	RM
DRAWN BY:			AR
CHECKED BY:			KL
APPROVED BY:			RM

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PREPARED FOR:



PREPARED BY:



FA NUMBER:

10080367

SITE NAME:

EAST TERRACE

SITE ADDRESS:

801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:

N/A

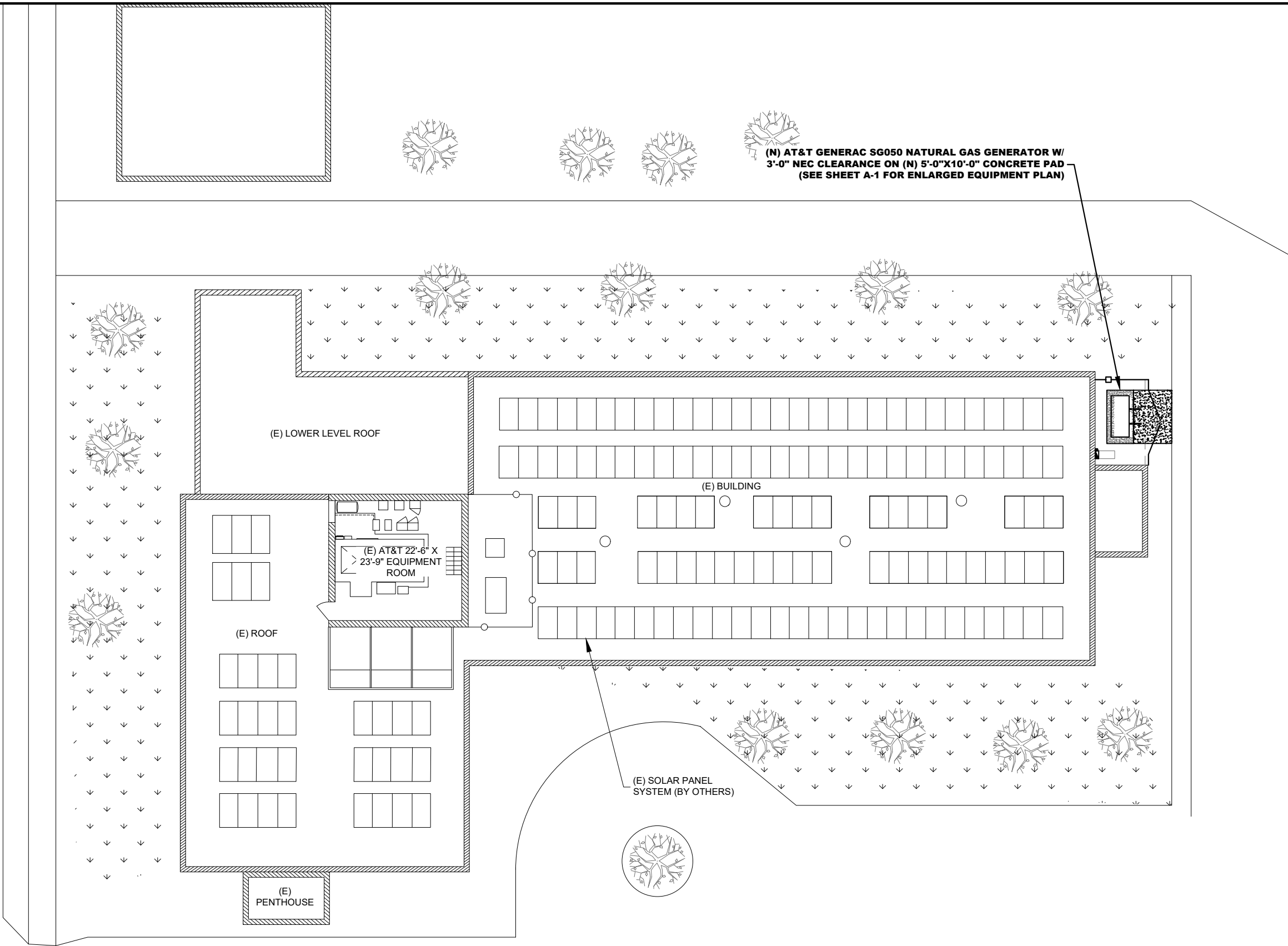
SHEET TITLE

GENERAL NOTES

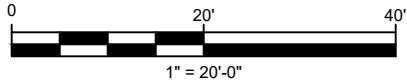
SHEET NUMBER

GN-1

NOTE
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A CURRENT LAND SURVEY. ALL PROPERTY LINES, EASEMENTS,
SETBACKS, AND EXISTING CONDITIONS ARE APPROXIMATE AND
SHALL BE VERIFIED PRIOR TO START OF CONSTRUCTION.

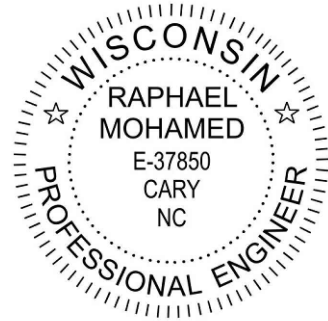


(N) AT&T GENERAC SG050 NATURAL GAS GENERATOR W/
3'-0" NEC CLEARANCE ON (N) 5'-0"X10'-0" CONCRETE PAD
(SEE SHEET A-1 FOR ENLARGED EQUIPMENT PLAN)



OVERALL SITE PLAN

11"x17" SCALE: 1" = 20'-0"
24"x36" SCALE: 1"=10'-0"



4/22/2025

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
4/22/2025	CONSTRUCTION	0	RM

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

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PREPARED FOR:



PREPARED BY:



FA NUMBER:
10080367

SITE NAME:
EAST TERRACE

SITE ADDRESS:
801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:
N/A

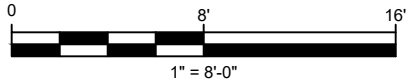
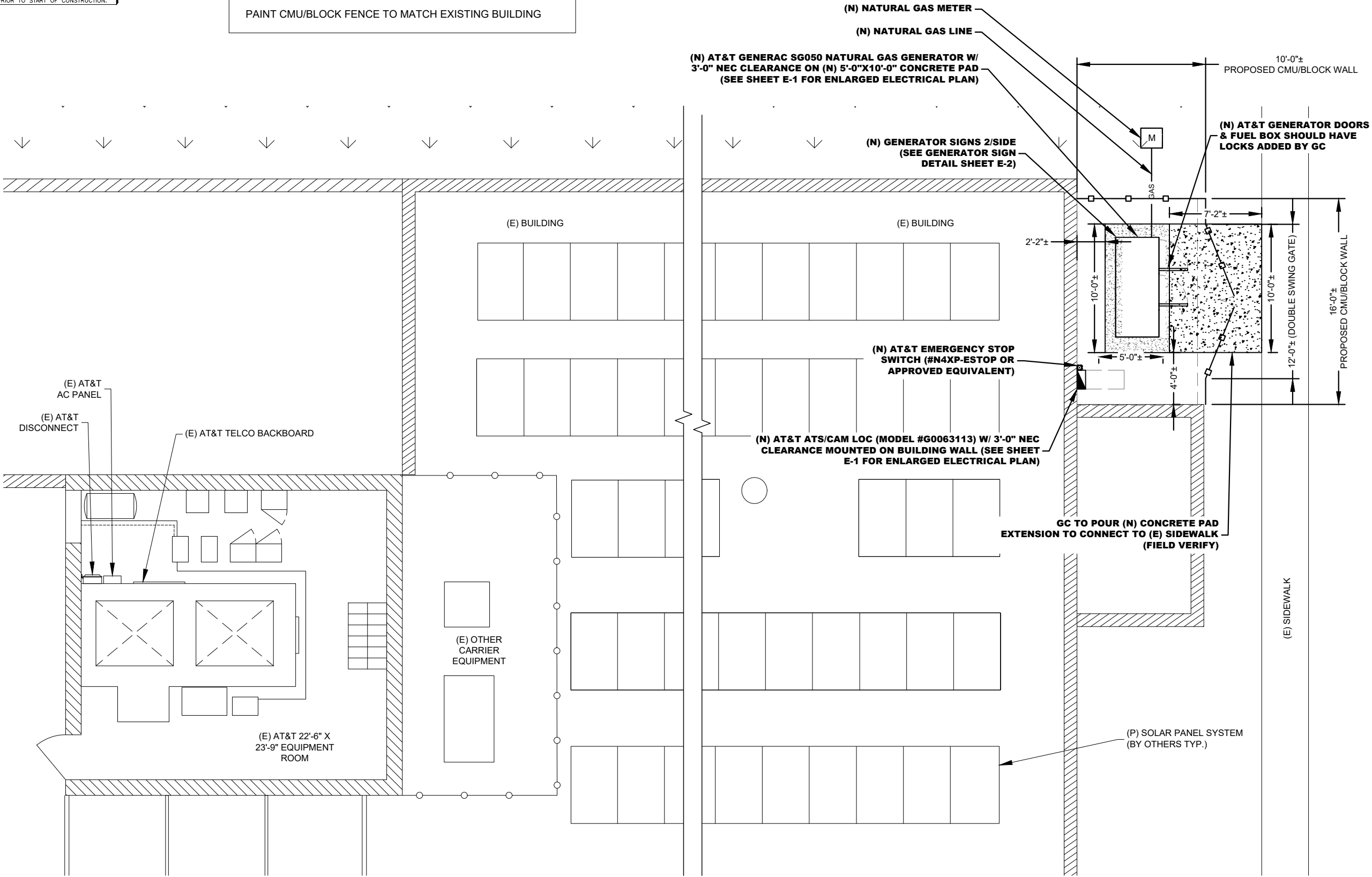
SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER
A-0

NOTE:
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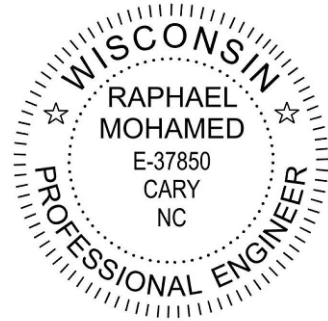
NOTE:

PAINT CMU/BLOCK FENCE TO MATCH EXISTING BUILDING



EQUIPMENT LAYOUT

11"x17" SCALE: 1" = 8'-0"
24"x36" SCALE: 1"=4'-0"



4/22/2025

SUBMITTALS			
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4/22/2025	CONSTRUCTION	0	RM

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APPROVED BY: RM

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PREPARED FOR:



PREPARED BY:

MasTec
Network Solutions
1151 SE CARY PARKWAY, SUITE 101
CARY, NC 27518

FA NUMBER:

10080367

SITE NAME:

EAST TERRACE

SITE ADDRESS:

801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:

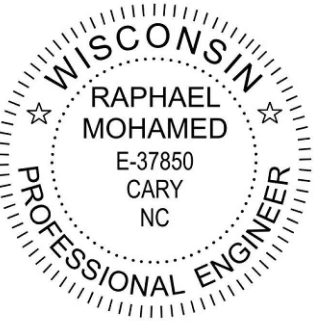
N/A

SHEET TITLE

EQUIPMENT LAYOUT

SHEET NUMBER

A-0.1



4/22/2025

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
4/22/2025	CONSTRUCTION	0	RM

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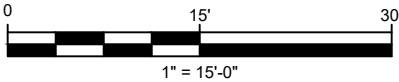
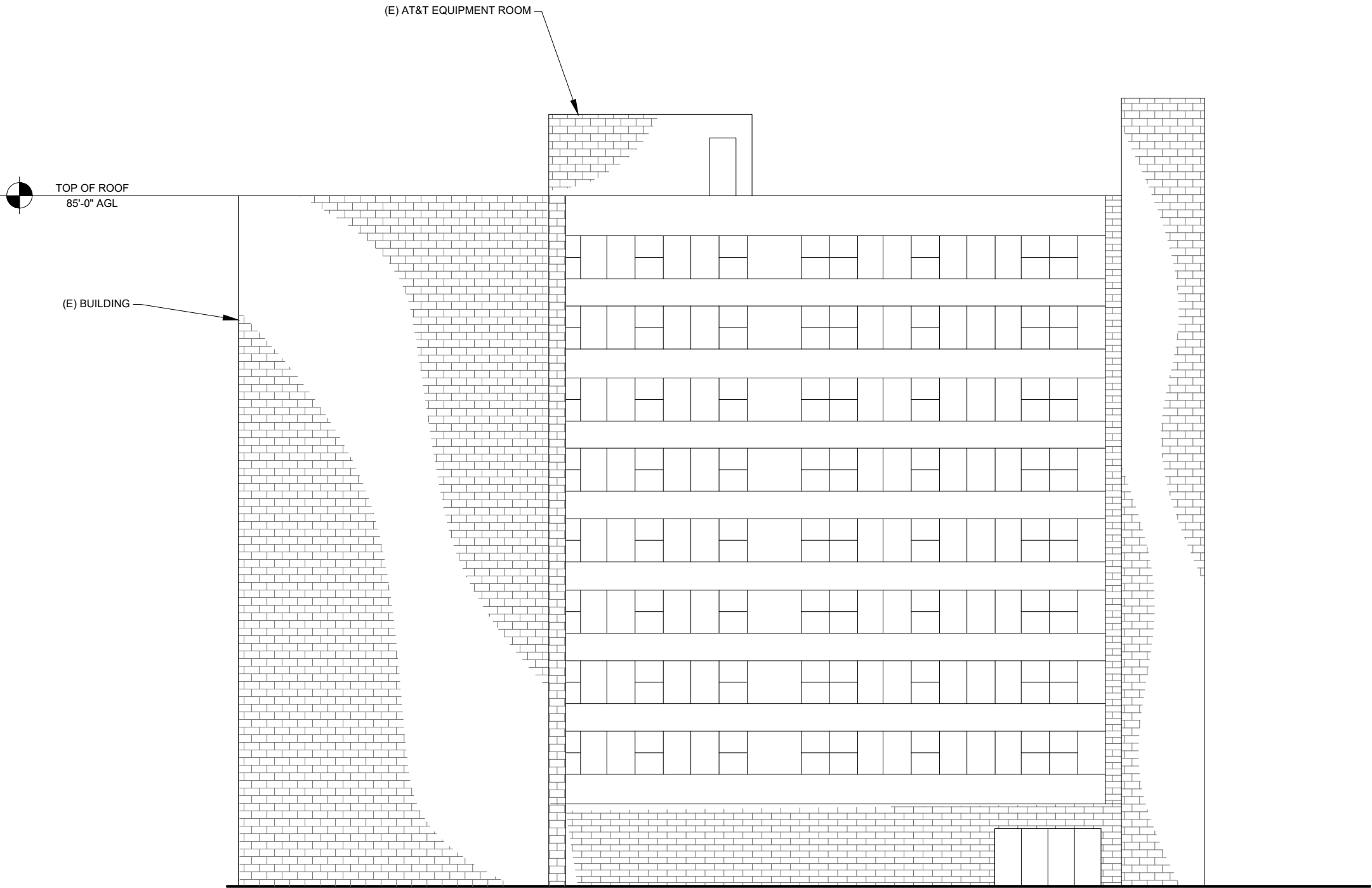
SITE NAME:
EAST TERRACE

SITE ADDRESS:
801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:
N/A

SHEET TITLE
ELEVATION VIEW

SHEET NUMBER
A-0.2

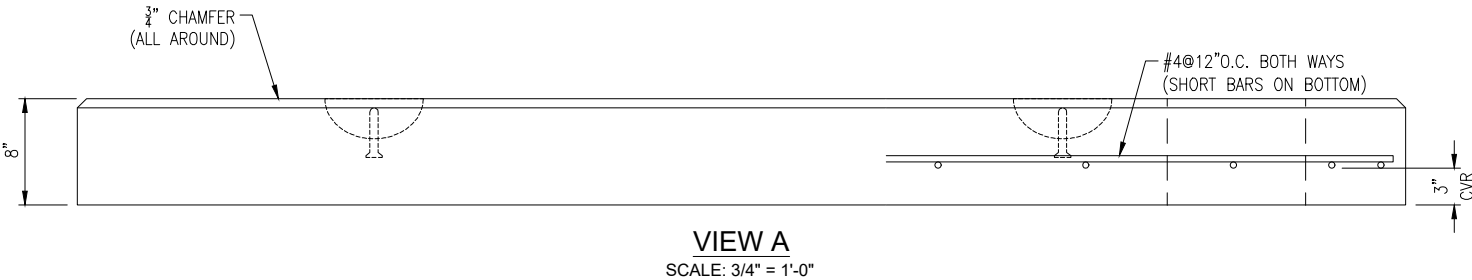
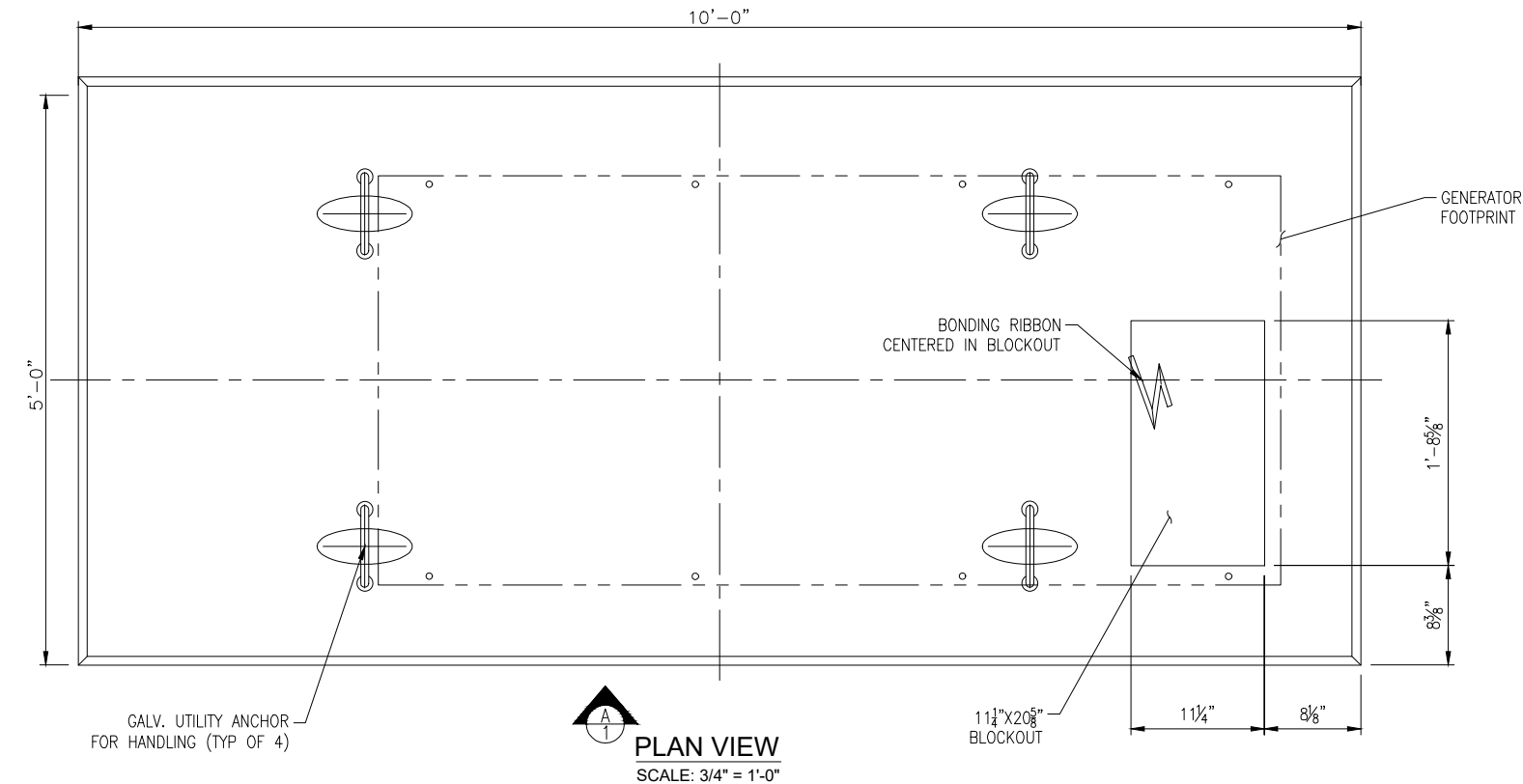


ELEVATION VIEW
11"x17" SCALE: 1" = 15'-0"
24"x36" SCALE: 1"=7'-6"

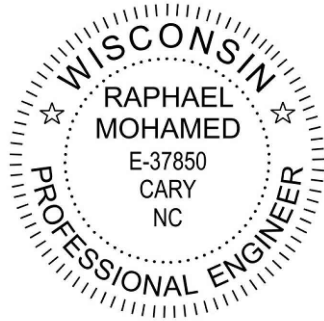


GENERAL NOTES

1. CONCRETE: 28 DAY COMPRESSIVE STRENGTH F'c = 5,000 PSI (MIN).
2. REINFORCING: ASTM A-615, GRADE 60.
3. SLAB DESIGNED BY OTHERS PER CONTRACT DRAWING #C-2.
4. SLAB SHALL BE SUPPORTED IN ACCORDANCE WITH PROJECT SPECIFICATIONS (I.E. LEVEL AND COMPACTED BEARING SURFACE).
5. ELECTRICAL STUB-UP COORDINATE SIZE & PLACEMENT W/ MANUFACTURER DRAWINGS.



WEIGHT		
SECTION	WEIGHT (lbs.)	CONCRETE (CY)
8" THK PAD	3,000	0.74



4/22/2025

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PREPARED FOR:



PREPARED BY:



FA NUMBER:

10080367

SITE NAME:

EAST TERRACE

SITE ADDRESS:

801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:

N/A

SHEET TITLE

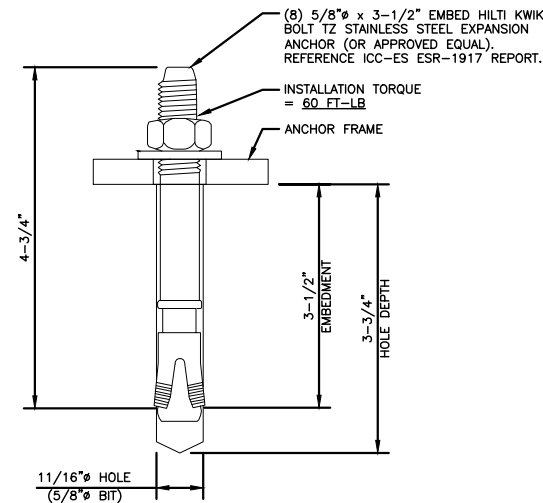
PRECAST GENERATOR
PAD DETAILS

SHEET NUMBER

A-1

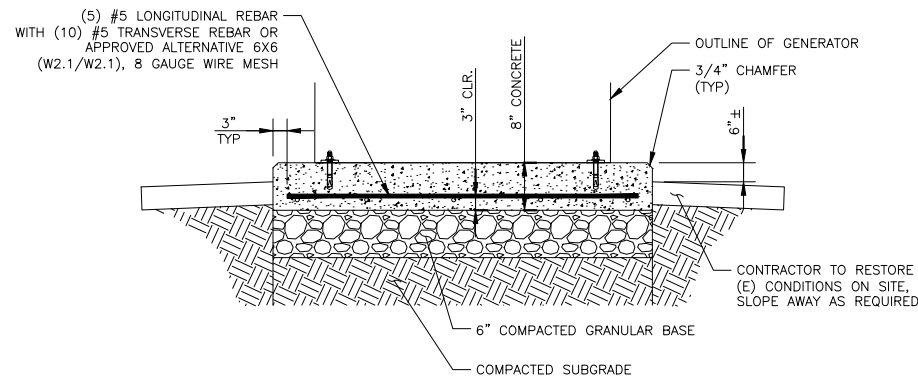
GENERAL NOTES

1. CONCRETE SHALL REACH A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI IN 28 DAYS FOR FOUNDATIONS, SLABS, AND CONDUIT ENCASEMENTS. CONCRETE SHALL HAVE A 4" NOMINAL SLUMP AND 4.5-6.5% AIR CONTENT. COMPRESSIVE STRENGTH TEST TO BE PERFORMED ON CONCRETE USED FOR FOUNDATION ONLY.
2. ALL REINFORCING STEEL SHALL BE ASTM A-615, GRADE 60 DEFORMED BARS.
3. ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 318).
4. ALL BAR SPLICES SHALL BE CLASS "B" TENSION SPLICES.
5. CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH A 3/4" X 45° CHAMFER.
6. FINISHED SLAB TO BE LEVEL $\pm 1/4"$.
7. FLEXIBLE UTILITY CONNECTIONS SHOULD BE USED AT UNDERGROUND TO GENERATOR INTERACTIONS.
8. EQUIPMENT PAD DESIGN BASED ON AN ASSUMED ALLOWABLE SOIL BEARING CAPACITY OF 2000 PSF. EQUIPMENT FOUNDATIONS BEARING ON CLAY SOILS SHALL HAVE A MAXIMUM SOIL PLASTICITY INDEX OF 27.
9. INSTALL EQUIPMENT ANCHORAGE PER MANUFACTURER'S WRITTEN RECOMMENDATIONS.
10. THE ATTACHMENT OF THE GENERATOR TO THE FOUNDATION SLAB AND THE FOUNDATION ITSELF ARE DESIGNED TO RESIST A 3 SEC. GUST WIND SPEED OF 143 MPH (ULTIMATE WIND SPEED).
11. ELECTRICAL STUB-UP AREA WILL BE DETERMINED BY GENERATOR ORIENTATION.



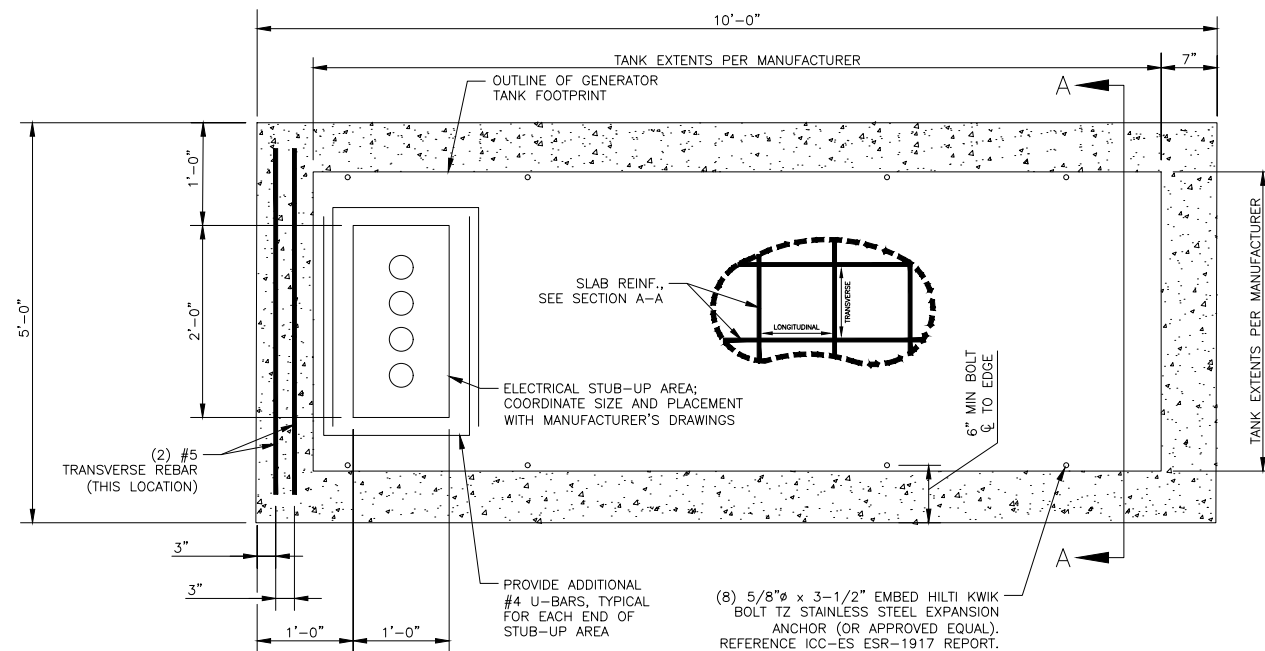
TYPICAL ANCHOR DETAIL

INSTALLER NOTE:
BASE FLOOD ELEVATION (BFE) NOT PROVIDED. CONTRACTOR TO ENSURE TOC OF GENERATOR PAD MATCHES OR EXCEEDS TOC OF EXISTING AT&T EQUIPMENT PAD/FOUNDATION.

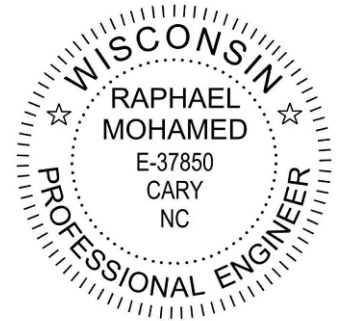


GENERATOR PAD DETAIL — SECTION A-A

INSTALLER NOTE:
CONDUIT STUB-UP LOCATIONS SHALL
BE COORDINATED ON SITE WITH
CONSTRUCTION MANAGER, PRIOR TO
INSTALLING CONCRETE PAD



CAST-IN-PLACE GENERATOR PAD DETAIL



4/22/2025

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4/22/2025	CONSTRUCTION	0	RM

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CHECKED BY:	KL
APPROVED BY:	RM

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SOLUTIONS IS PROHIBITED.

PREPARED FOR:



PREPARED BY:



FA NUMBER:
10080367

SITE NAME:
EAST TERRACE

SITE ADDRESS:
801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:
N/A

SHEET TITLE
**GENERATOR PAD
DETAILS**

SHEET NUMBER
A-1.1

SCALE:	3
NONE	

SCALE:	2
NONE	

SCALE:	1
NONE	



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

PREPARED FOR:



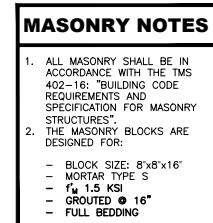
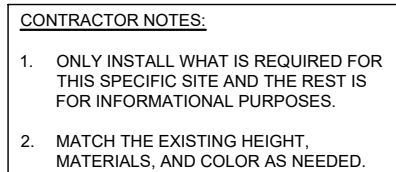
SITE ADDRESS:
801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:
N/A

SHEET TITLE

FENCE DETAILS

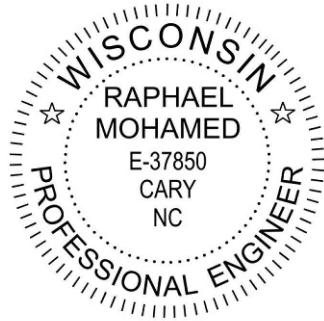
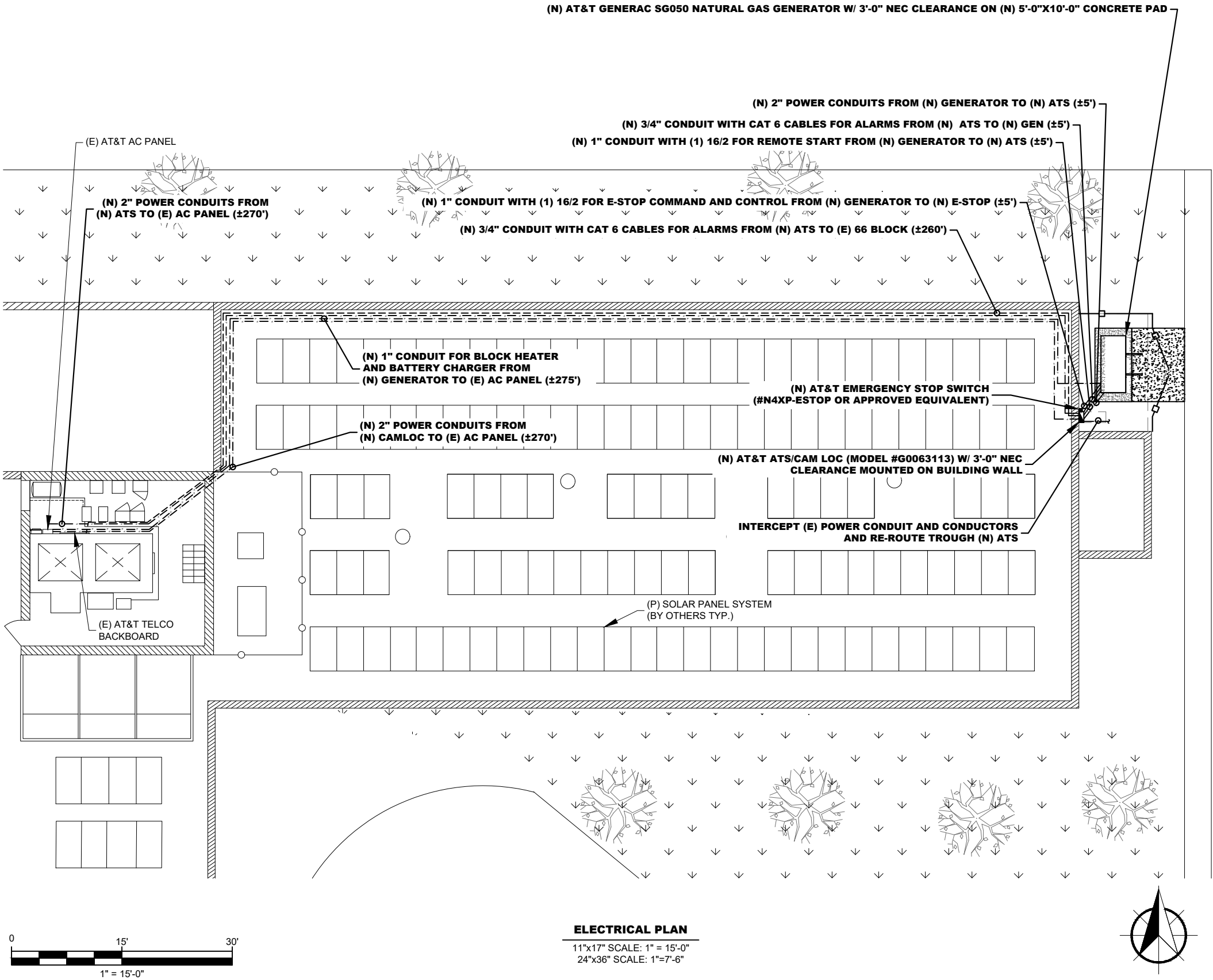
SHEET NUMBER
A-1.2



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
	GROUND	GREEN
	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
	GROUND	GREEN
	POS (+)	RED**
DC VOLTAGE	NEG (-)	BLACK**
	* SEE NEC 210.5(C)(1) AND (2) ** POLARITY MARKED AT TERMINATION	



4/22/2025

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
4/22/2025	CONSTRUCTION	0	RM

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PREPARED FOR:



PREPARED BY:

MasTec
Network Solutions
1151 SE CARY PARKWAY, SUITE 101
CARY, NC 27518

FA NUMBER:

10080367

SITE NAME:

EAST TERRACE

SITE ADDRESS:

**801 NORTH EAST AVENUE
WAUKESHA, WI 53186**

TOWER OWNER ID:

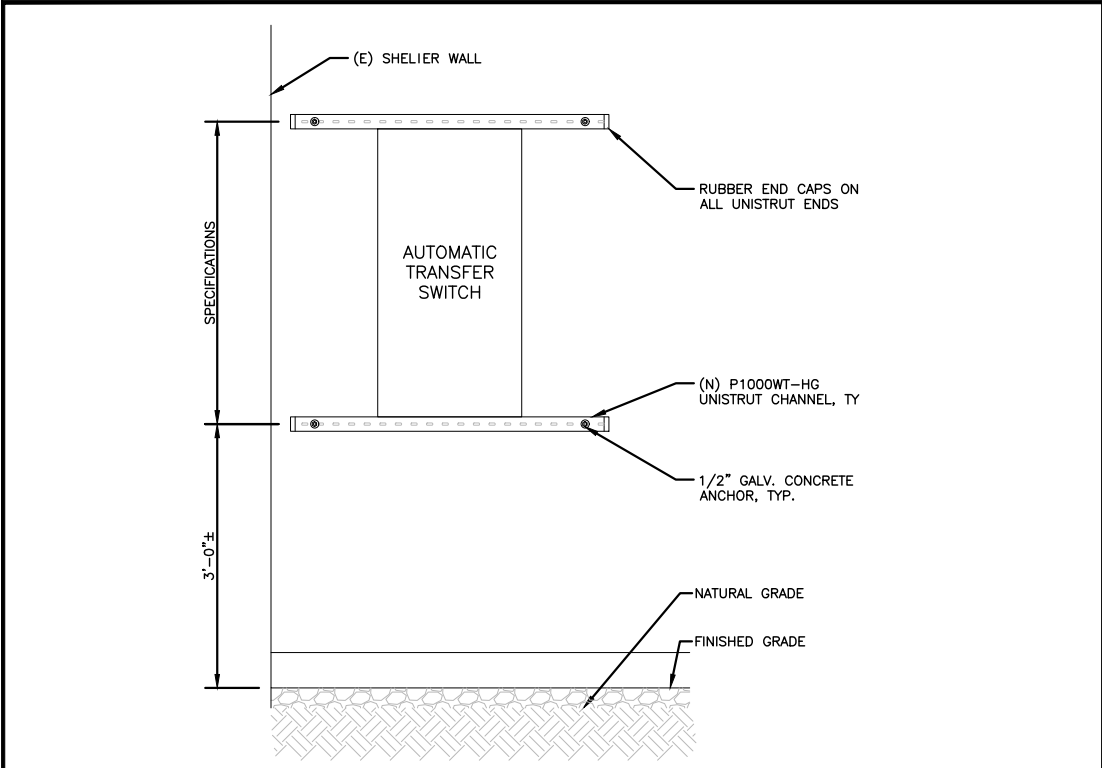
N/A

SHEET TITLE

ELECTRICAL PLAN

SHEET NUMBER

E-1



WALL MOUNT ELEVATION

SCALE:
NONE


6

GENERATOR SIGN DETAIL

SCALE:
NONE

5

Decal 6.5x3

**AT&T**
MOBILITY
ATT-DC-ATM-653

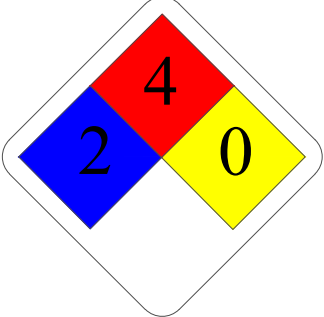
FOR FUEL & OTHER ENVIRONMENTAL EMERGENCIES
CALL EH&S
1-800-566-9347
(1-800-KNOW-EHS)

YELLOW EH&S SIGN
SCALE: NTS

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

NATURAL GAS
COMBUSTIBLE
NO SMOKING
NO OPEN FLAMES
FUEL TANK CAPACITY GALS.

FUEL TANK SIGN
12"x15" SCALE: NTS

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

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 CATZ) CATEGORY IN THE FIRE RESISTANCE DIRECTORY FOR NAMES OF MANUFACTURERS.

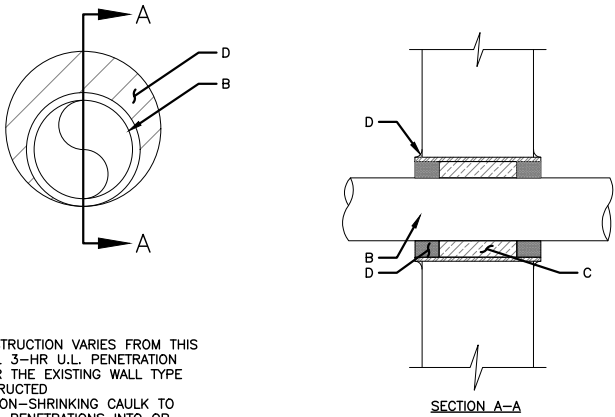
B. THROUGH PENETRATIONS : ONE METALLIC PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY. THE ANNULAR SPACE SHALL BE MINIMUM 0". (POINT CONTACT) TO MAXIMUM 1-3/8". THE FOLLOWING TYPES AND SIZES OF METALLIC PIPES OR CONDUITS MAY BE USED:
a. STEEL PIPE-NOMINAL 6" DIAMETER (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



SECTION A-A

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
- GC SHALL USE NON-SHRINKING CAULK TO WEATHERSEAL ALL PENETRATIONS INTO OR THRU SHELTER WALL.

OUTER WALL PENETRATION DETAIL

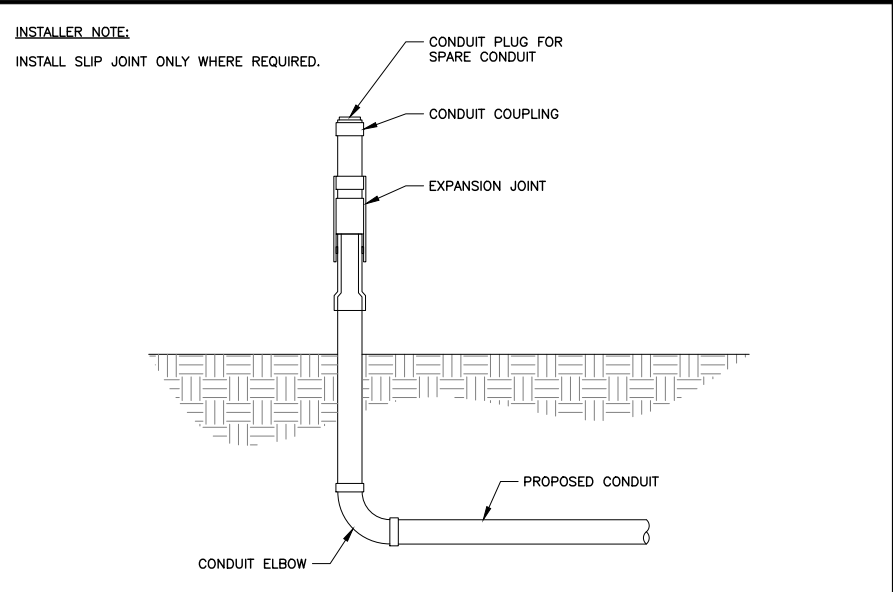
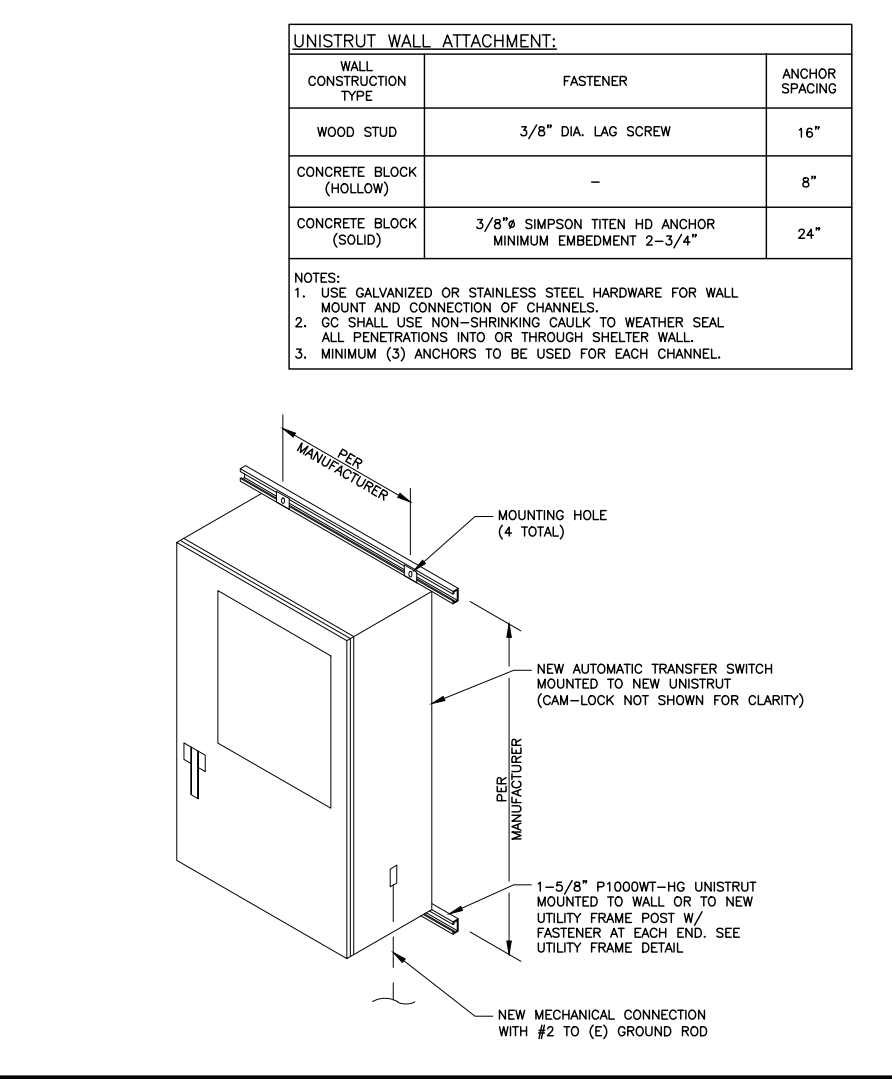
SCALE:
NONE

7

ATS MOUNTING DETAIL

SCALE:
NONE

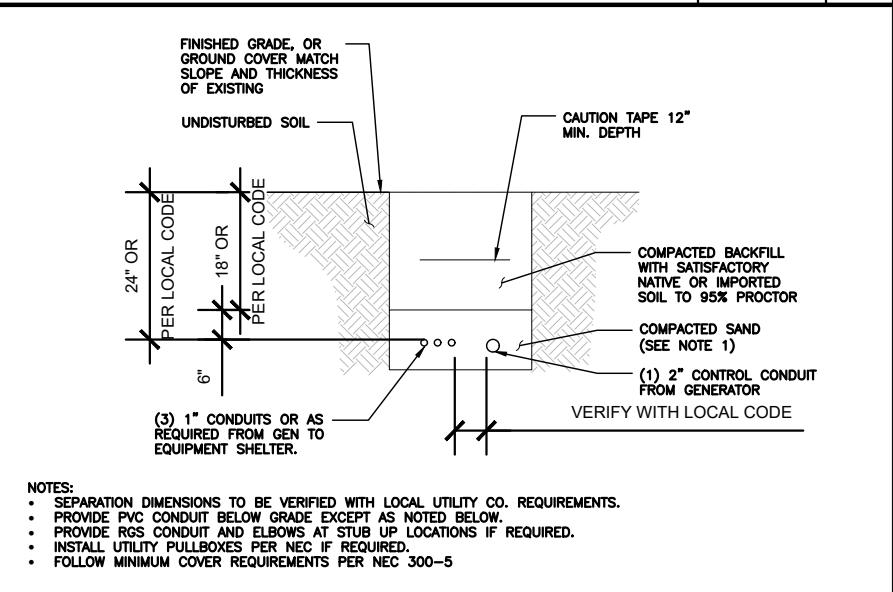
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SLIP JOINT DETAIL

SCALE:
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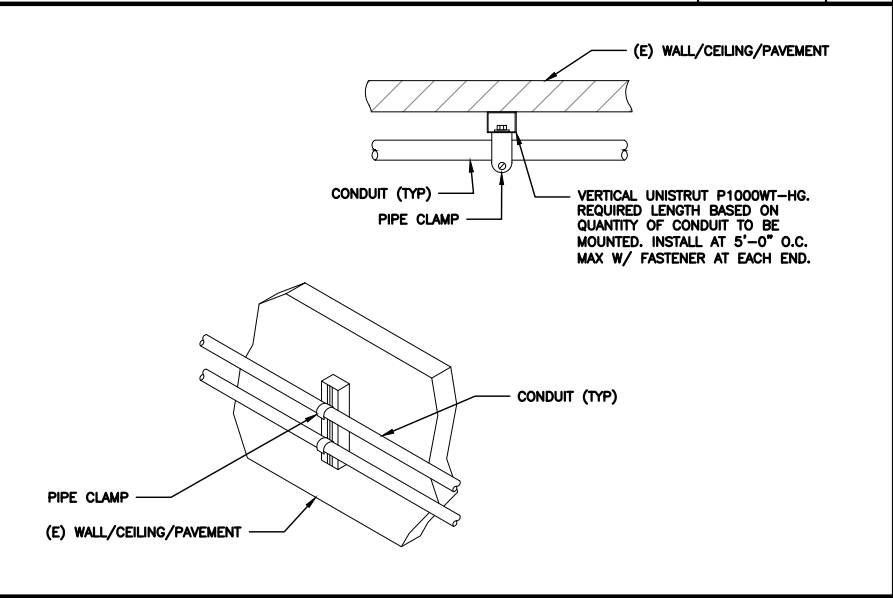
3



TRENCH DETAIL

SCALE:
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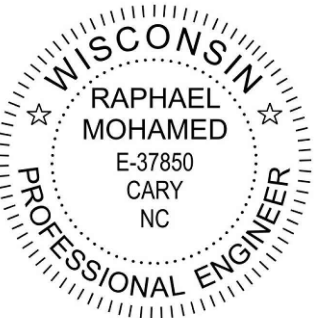
2



CONDUIT WALL MOUNT DETAIL

SCALE:
NONE

1



4/22/2025

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
4/22/2025	CONSTRUCTION	0	RM

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

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PREPARED FOR:



PREPARED BY:



1151 SE CARY PARKWAY, SUITE 101
CARY, NC 27518

FA NUMBER:

10080367

SITE NAME:

EAST TERRACE

SITE ADDRESS:

801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:

N/A

SHEET TITLE

**EQUIPMENT &
CONDUIT DETAILS**

SHEET NUMBER

E-2

-48V PRIMARY VOLTAGE DC PLANT SPECIFIED				
+24VDC EQUIPMENT LOAD:	200 WATTS	=	8 AMPS	at +24V
-48VDC EQUIPMENT LOAD:	18364 WATTS	=	341 AMPS	at -48V
-58VDC EQUIPMENT LOAD:	0 WATTS	=	0 AMPS	at -58V
6 AMPS (281 Watts) AT PRIMARY 48V REQUIRED TO SUPPORT 24V DC CONVERTER SYSTEM				
TOTAL PRIMARY 48V LOAD:	18645 WATTS	=	346 AMPS	at -48V
(DC PLANT CONFIGURATION CAN BE REVIEWED ON DC PLANT WORKSHEET)				
DC PLANT: Emerson STD -48VDC NetSure 721 Plant 800A NEQ.15920				
-48V RECTIFIERS REQUIRED (N+1):	13			
-48V RECTIFIER SLOTS:	22			
CONV. TYPE: UNIVERSAL SLOTS - RIGHT 3 RECT SLOTS/SHELF CAN BE USED FOR CONV				
+24V CONVERTERS REQUIRED:	2			
+24V COVERTER SLOTS:	12			
ESTIMATED BATTERY RESERVE TIME				
2 180 AH 48V STRINGS =	1.51	HOURS	(ON-SITE GENERATOR - 2 HOUR MINIMUM)	

SITE GENERATOR CAPACITY REQUIRED:	34 KW
ON SITE GENERATOR CAPACITY:	30 KW
GENSET UPGRADE INDICATED	
RECOMMENDED ENVIRO SYSTEM:	4-TONS COOLING
SPECIFIED ENVIRONMENTAL SYSTEM:	8-TONS
ESTIMATE SUFFICIENT HVAC CAPACITY	

- NOTES:
1. ALL NEW CONDUCTORS TO BE INSTALLED SHALL BE COPPER. ALL CONDUCTORS SHALL BE THHW, THWN, THWN-2, XHHW, OR XHHW-2 UNLESS NOTED OTHERWISE.
 2. CONTRACTOR IS TO FIELD VERIFY ALL EXISTING ITEMS SHOWN ON THE ELECTRICAL ONE-LINE DIAGRAM AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
 3. ALL GROUND AND BONDING PER THE NEC.
 4. 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:

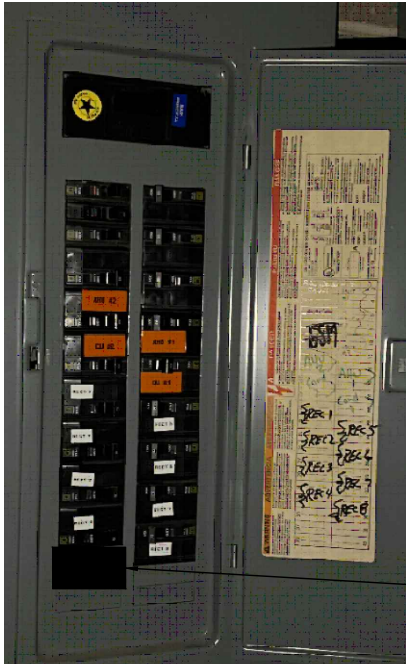
1. THE GENERATOR SIZE HAS BEEN DETERMINED BY AT&T BASED ON AN INTERNAL LOAD ANALYSIS OF THEIR EQUIPMENT. THE GENERATOR SIZE WAS PROVIDED AS PART OF THE SCOPING ANALYSIS. AT&T SHALL BE RESPONSIBLE FOR ENSURING THAT THEIR SYSTEM CONFIGURATION DOES NOT EXCEED THE MANUFACTURER POWER RATING OF THE SPECIFIED GENERATOR.
2. 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.

LOAD CALCULATIONS

SCALE:

NONE

1



PROPOSED (2) 1P-20A BREAKERS IN POSITIONS 35 AND 37

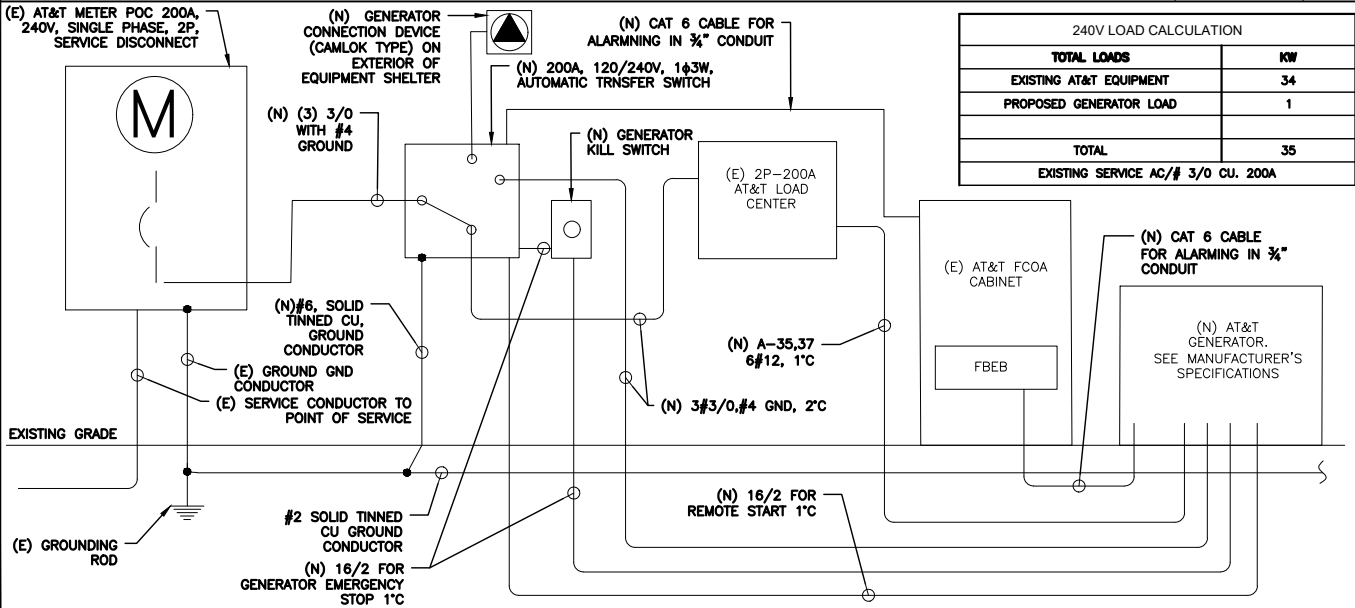
PANELBOARD DIRECTORY - 120/240 V - 200 AMP			
1	UNKNOWN	2	UNKNOWN
3	UNKNOWN	4	UNKNOWN
5	UNKNOWN	6	UNKNOWN
7	UNKNOWN	8	UNKNOWN
9	UNKNOWN	10	UNKNOWN
11	AHU #2	12	UNKNOWN
13	AHU #2	14	AHU #1
15	CU #2	16	AHU #1
17	CU #2	18	CU #1
19	RECT 1	20	CU #1
21	RECT 1	22	RECT 5
23	RECT 2	24	RECT 5
25	RECT 2	26	RECT 6
27	RECT 3	28	RECT 6
29	RECT 3	30	RECT 7
31	RECT 4	32	RECT 7
33	RECT 4	34	RECT 8
35	NEW BREAKER	36	RECT 8
37	NEW BREAKER	38	BLANK
39	BLANK	40	BLANK

EXISTING PANELBOARD

SCALE:

NONE

3



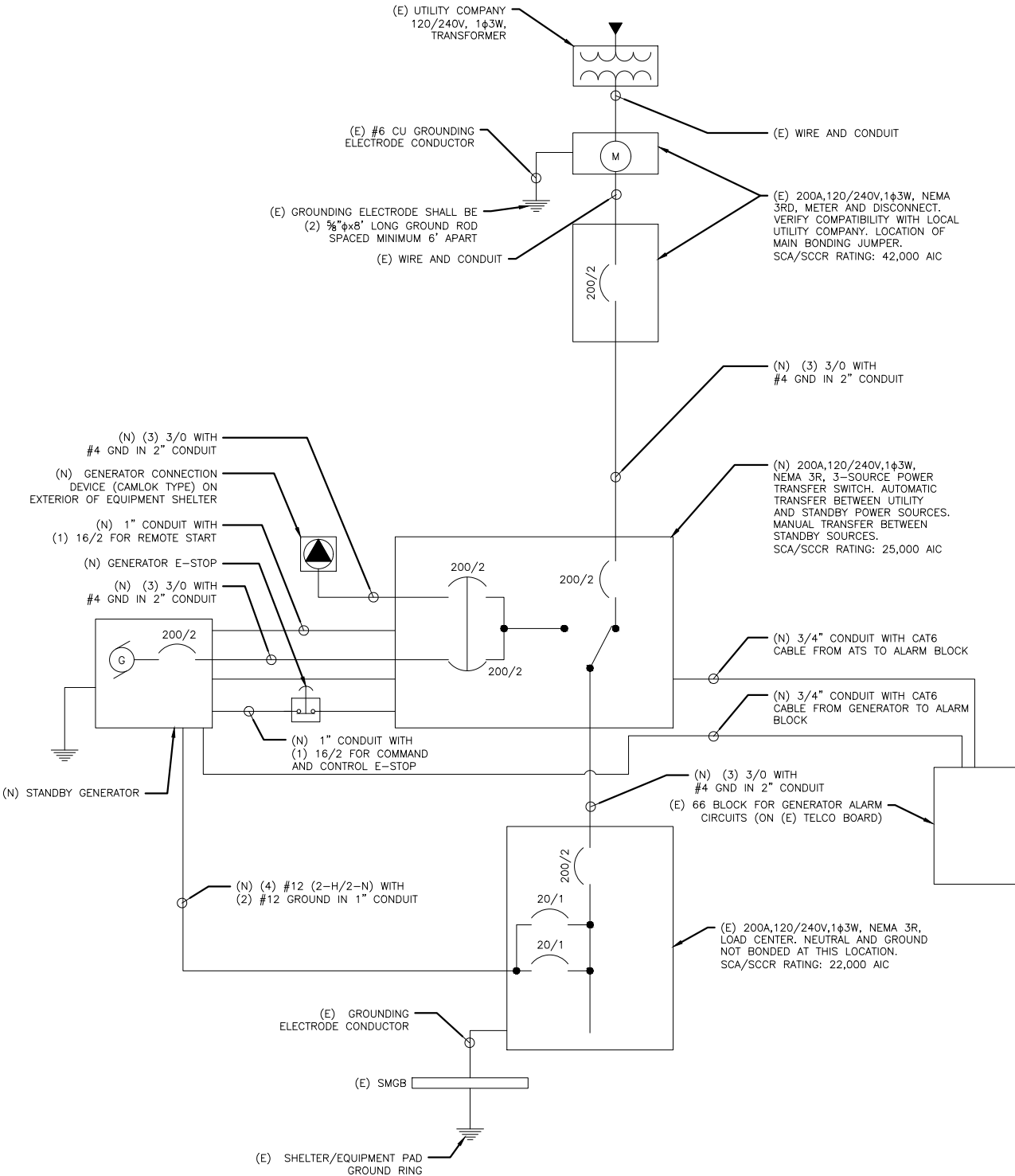
ELECTRICAL RISER DIAGRAM

SCALE:

NONE

4

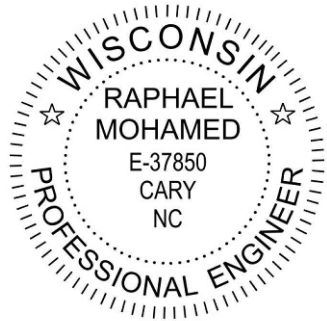
ONE LINE DIAGRAM



SCALE:

NONE

5



4/22/2025

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
4/22/2025	CONSTRUCTION	0	RM

DRAWN BY: AR

CHECKED BY: KL

APPROVED BY: RM

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PREPARED FOR:



PREPARED BY:

MasTec
Network Solutions
1151 SE CARY PARKWAY, SUITE 101
CARY, NC 27518

FA NUMBER:

10080367

SITE NAME:

EAST TERRACE

SITE ADDRESS:

801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:

N/A

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

SHEET NUMBER

E-3

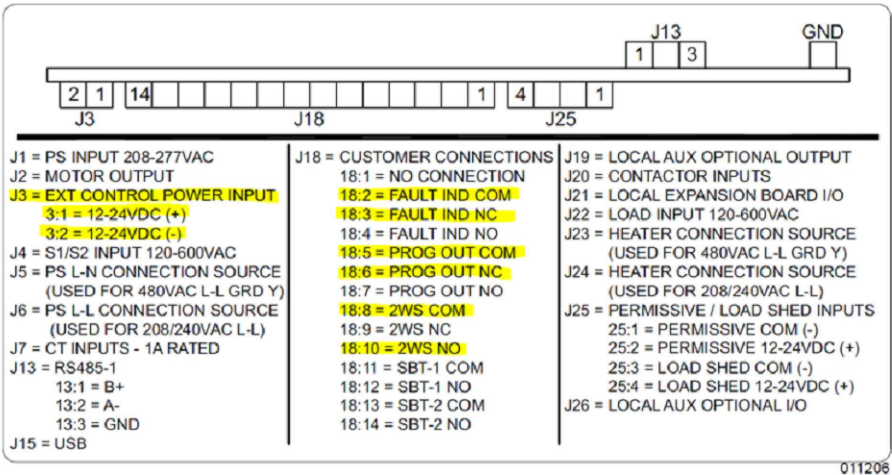
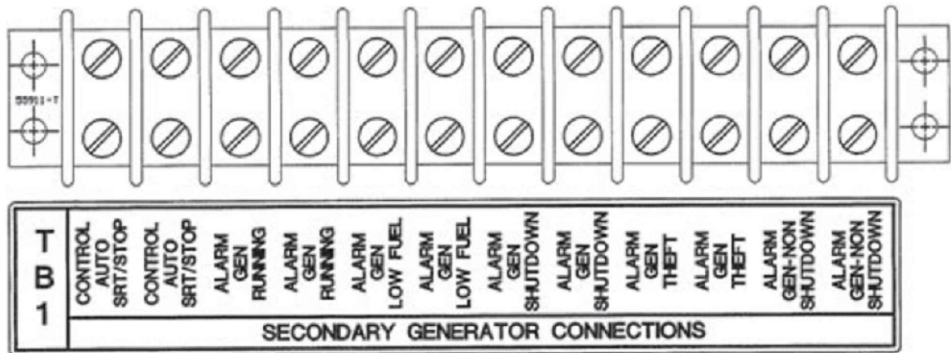


Figure 4-8. Customer Connections Diagram



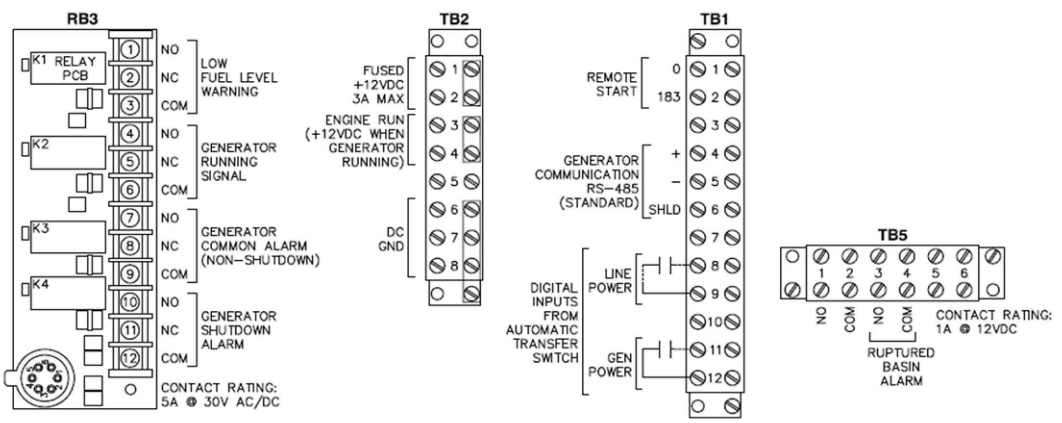
GENERATOR ALARM IDENTIFICATION CHART	
NAME	DESCRIPTION
CF	CRITICAL FAILURE
FL	FUEL LEAK OVERFILL
GR	GENERATOR RUNNING
FL	LOW FUEL
MAF	MAJOR FAULT
MF	MINOR FAULT
FL	GEN FUEL LEAK TANK WHT/SLATE

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:
1. GENERATOR RUN
2. GENERATOR FAIL
3. LOW FUEL
4. FUEL LEAK
5. RBS GENERATOR MJ
COLOR CODE
GENERATOR:
A. CABLE - (2) CAT6
B. COLOR CODE
1. GENERATOR RUN - ALARM PORT #14 (ORANGE & WHITE)
2. GENERATOR FAIL - ALARM PORT #15 (BLUE & WHITE)
3. LOW FUEL - ALARM (PORT P32) ON I/O BOARD (GREEN & WHITE)
4. FUEL LEAK - P32 ON I/O BOARD) (BROWN & WHITE)

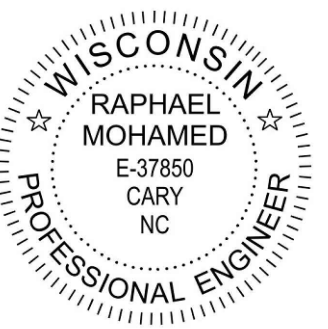
AUTOMATIC TRANSFER SWITCH
A. CABLE - cat6e
B. COLOR CODE
1. COMMERCIAL POWER FAIL IF REQUIRED (BLUE WHITE)
2. TRANSFER SWITCH POSITION (BROWN WHITE)
CAM LOCK ALARM
A. CABLE - cat6e
B. COLOR CODE
1. PORTABLE GENERATOR RUNNING (ORANGE WHITE) (IF REQUIRED)

ALARM DETAILS



NOTE:
FOR FIELD WIRING TO CUSTOMER CONNECTIONS (TERMINAL STRIP)
MAXIMUM WIRE SIZE: #14 AWG
RECOMMENDED TIGHTENING TORQUE: 14 LB-IN

KNOCKOUTS FOR 1/2" & 3/4" CONDUIT FITTINGS ON BOTTOM OF BOX



4/22/2025

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
4/22/2025	CONSTRUCTION	0	RM

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PREPARED FOR:



PREPARED BY:



1151 SE CARY PARKWAY, SUITE 101
CARY, NC 27518

FA NUMBER:

10080367

SITE NAME:

EAST TERRACE

SITE ADDRESS:

801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:

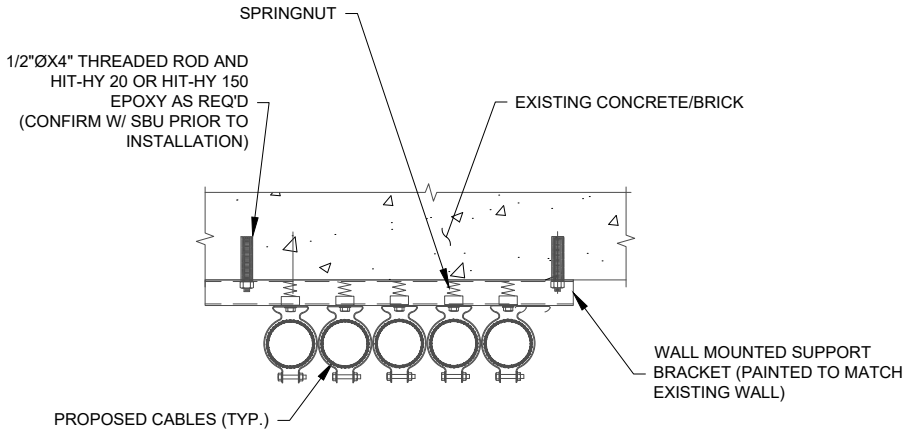
N/A

SHEET TITLE

ALARM DETAILS

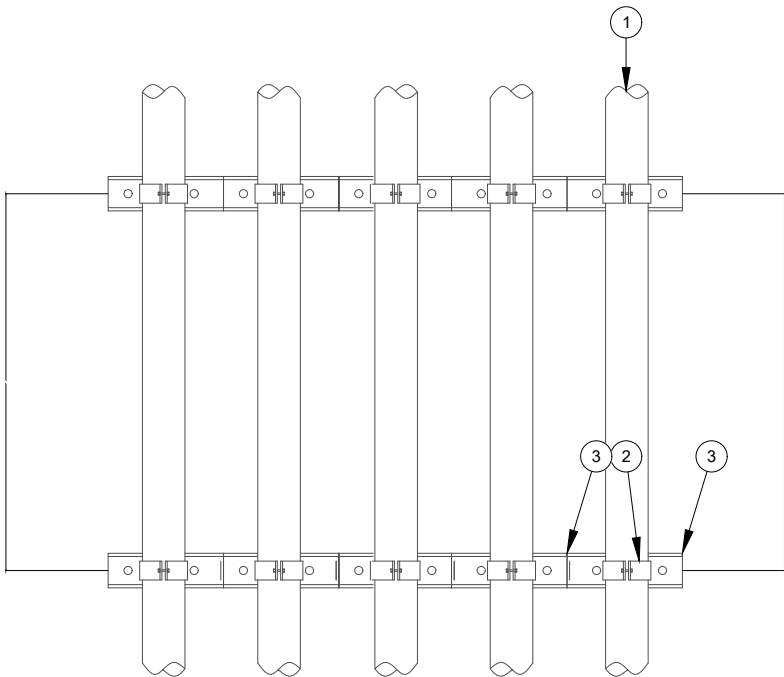
SHEET NUMBER

E-4



NOTE:

1. WALL MOUNTED SUPPORT BRACKET SHALL BE MOUNTED TO WALL @ 4'-0" O.C. AND AT TOP AND BOTTOM OF VERTICAL CONDUIT/COAX RUNS



NOTE:

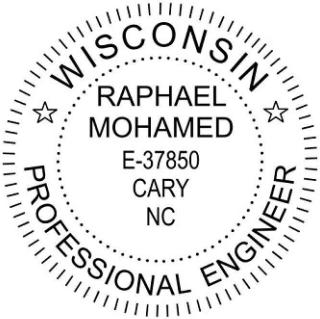
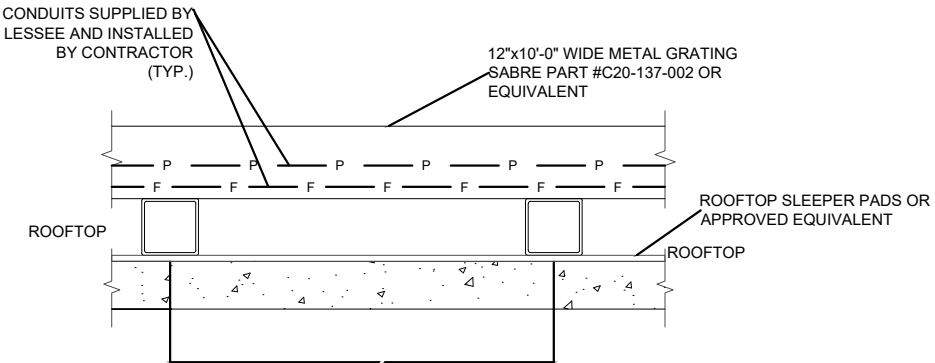
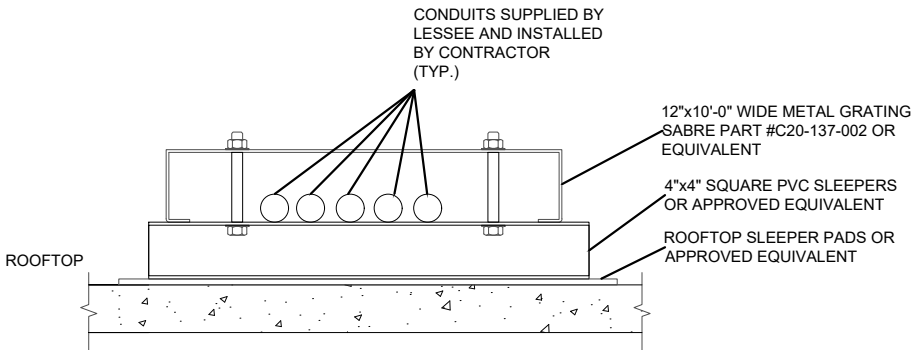
1. PAINT TO MATCH EXISTING BUILDING

NATURAL GAS LINE MOUNTING NOTES:

PROPOSED CONDUIT LINE (TYP)

GALVANIZED PIPE CLAMP. SIZE AS REQUIRED.

WALL MOUNTED SUPPORT BRACKET (B1588 FOR USE W/ COAX, B1586 FOR USE W/ CONDUIT)



4/22/2025

SUBMITTALS			
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PREPARED BY:



FA NUMBER:
10080367

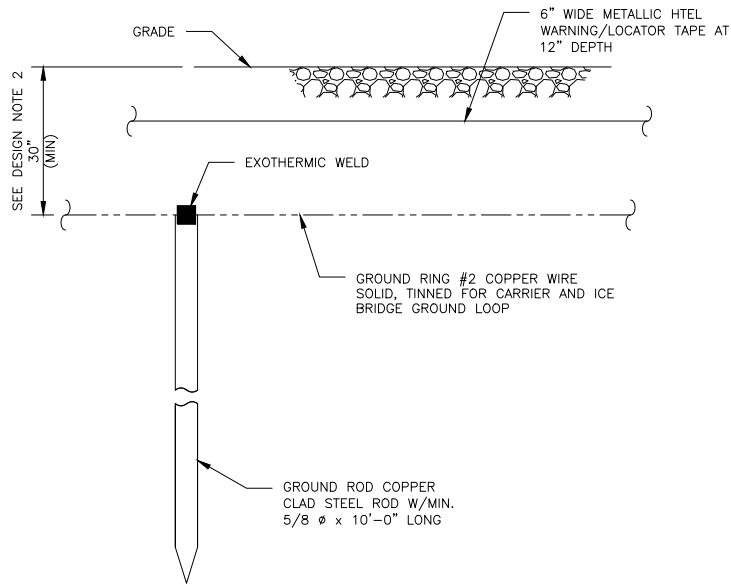
SITE NAME:
EAST TERRACE

SITE ADDRESS:
801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:
N/A

SHEET TITLE
CONDUIT DETAILS

SHEET NUMBER
E-5



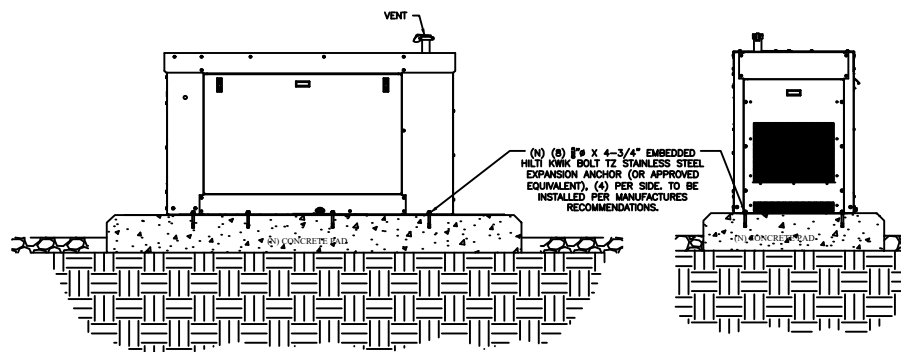
- NOTES:
- GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
 - GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

GROUND ROD DETAIL

SCALE:
NONE

3

NOTE:
GENERATOR IS NOT SEPARATELY DERIVED

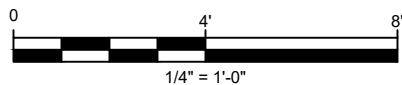
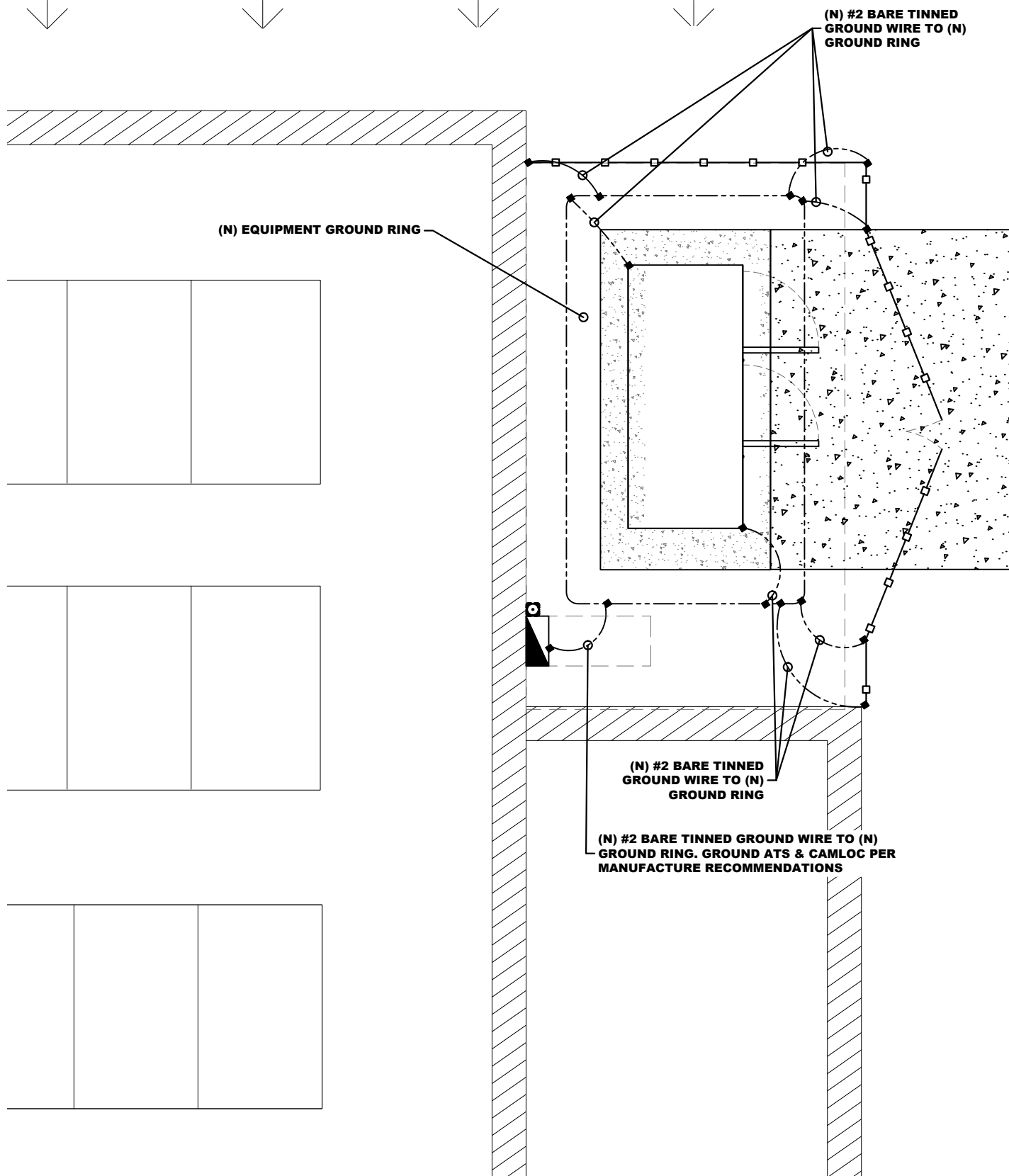


NOTE:
GENERATOR SHOWN FOR GRAPHIC
REPRESENTATION ONLY EXACT MODEL
MAY VARY IN APPEARANCE.

GENERATOR DETAIL

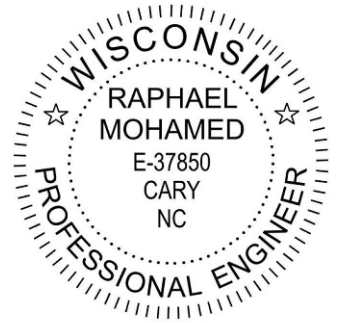
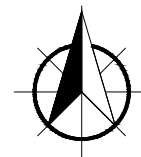
SCALE:
NONE

2



GROUNDING PLAN

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



4/22/2025

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
4/22/2025	CONSTRUCTION	0	RM

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APPROVED BY: RM

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PREPARED FOR:



PREPARED BY:

MasTec
Network Solutions
1151 SE CARY PARKWAY, SUITE 101
CARY, NC 27518

FA NUMBER:
10080367

SITE NAME:
EAST TERRACE

SITE ADDRESS:
801 NORTH EAST AVENUE
WAUKESHA, WI 53186

TOWER OWNER ID:
N/A

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-1

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 - in ³ (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%

SG050 | 5.4L | 50 kW

INDUSTRIAL SPARK-IGNITED GENERATOR SET

EPA Certified Stationary Emergency

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

|

5.4L

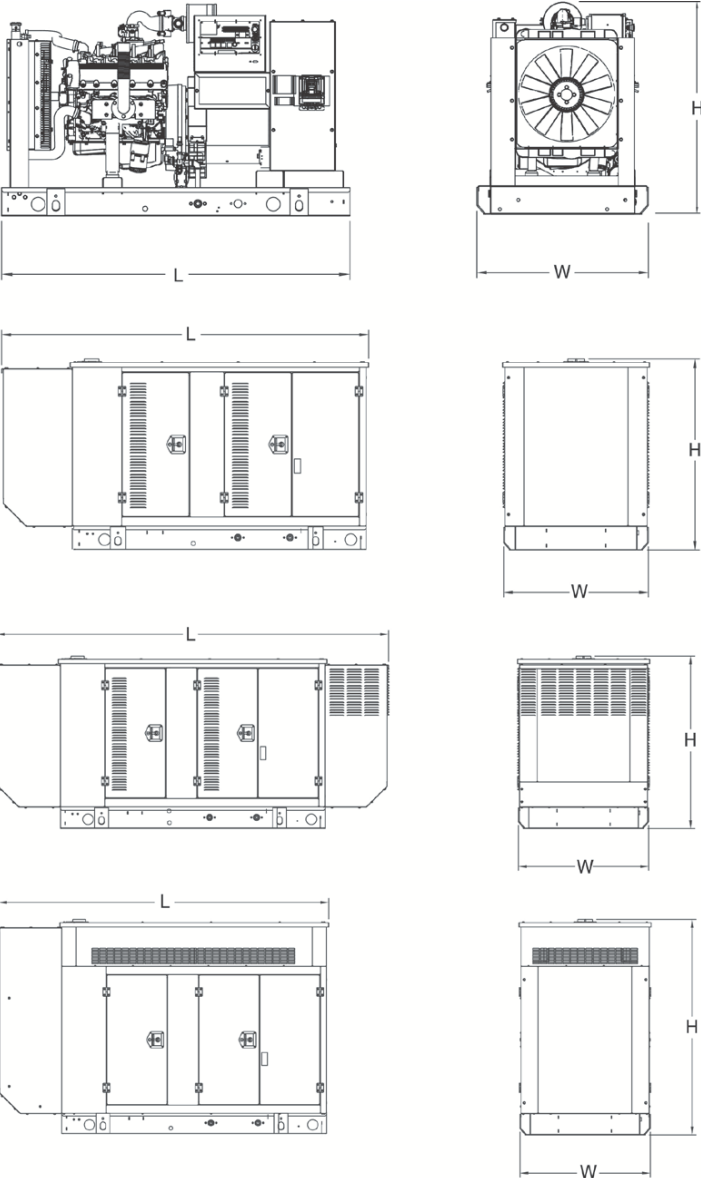
|

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.

The Generac TAS200 Automatic Transfer Switch

Flexibility for multiple application installations

Multiple generator support with 3 source panel

Designed with a 6 inch touch screen controller for improved user interface

Camlock functionality for mobile generator sources



Image used for illustration purposes only.

Features

- STEEL CONSTRUCTION
- NEMA 3R ENCLOSURE WITH HINGED "PADLOCKING" DOORS
- STAINLESS STEEL HARDWARE
- CAMLOCK "QUICK CONNECT" CAPABILITY
- OPERATIONAL STATUS VIEW VIA 6 INCH TOUCH SCREEN
- TEST FUNCTION - FAST TEST & NORMAL TEST
- UL1008 LISTED - FOR EMERGENCY SYSTEMS

Optional Features

- EXTENDED WARRANTY
- THREE-PHASE VOLTAGE CONFIGURATIONS

Codes and Standards

Generac products are designed to the following standards:



UL1008,
UL508,
UL50,
CSA C22.2 No. 178



NEC 700, 701 and 702




NEMA 250

Application and Engineering Data

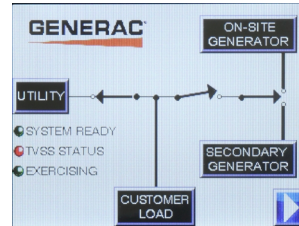
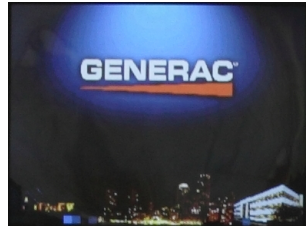
Cabinet Specifications	
Dimensions	24"W x 12"D x 48"H
Weight	210 lbs.
Construction	Single Chamber with Main Door
	Steel
	UL Type / NEMA 3R Rated
	Powder Coat Finish for Corrosion Resistance
	C-UL-US Listed - Automatic Transfer Switch
	Stainless Steel Hardware
Mounting Options	3-Point Latching System with Pad-Lockable Handles
	Wall
Installed	H-frame
	Pre-wired alarm terminal strip

Electrical Specifications	
Voltage/Phase/Amps	120/240 Single-Phase, 200A 120/208 3-Phase, 200A 120/240 3-Phase, 200A
Breaker	Eaton 200 amp Utility Breaker
	Eaton 200 amp Generator Breaker
Maximum RMS Symmetrical Fault Current - Amps	25k AIC Rated
Protective Device Continuous Rating (Max) Amp	200
Input to Generator	350MCM - #6 AWG
Output to Site	350MCM - #6 AWG
Generator Annunciator Connector	Deutsch DTM04-12PA-L012
Alarm Terminal Board	Generator Run Alarm
	Generator Fail – Shutdown Alarm
	Generator Fail – Non Shutdown Alarm
	Low Fuel Alarm
	Generator Theft Alarm
	AC Utility Fail Alarm

Camlock Component		
Camlock Component	Shipped loose for multiple installation options	
Dimensions	9" W x 9.4" D x 24.25" H	
200A Camlock Generator Connection	Single-Phase: Black L1, Red L2, White-Neutral, Green-Ground	
	3-Phase: Black L1, Red L2, Blue L3, White-Neutral, Green-Ground	
	Uses 4 CH E1016 Male Connectors	
	Mating Connector – CH E1016 Female	

TTS Control Systems

Touch Screen Interface



INDICATORS AND BUTTONS

- | | |
|---|---|
| <ul style="list-style-type: none"> • System Ready indicator • Standby Operating indicator • Utility Available indicator • GEN/UTIL Switch Position indicator • TVSS status | <ul style="list-style-type: none"> • Normal Test button • Fast Test button • Return to Normal button • Reset button • Exercising indicator |
|---|---|

DETAILS SCREEN

System Settings:

- System Voltage/Phases:
 - 120/240V single phase (standard)
 - 120/208V three phase (optional)
 - 120/240V three phase (optional)
- Utility Fail Monitor:
 - Under Voltage: 75-95% of nominal voltage
 - Over Voltage: 105%-125% of nominal voltage
 - Pickup (hysteresis): fixed at 5 volts
 - Delay time: 0-60s
- Utility Interrupt Delay: 0-60s
- Return to Utility Timer: 1-30 minutes
- Transfer:
 - In-phase, or
 - Time-Delay-Neutral at 0.0-10.0s in 1 second increments

Engine Settings:

- Engine Warm-up timer: 0-20 minutes
- Generator Load Accept:
 - Time-Delay-Neutral at 0.0-10.0s in 1 second increments
 - Voltage: 85-95% of nominal
 - Frequency: 85-95% of nominal
- Engine Minimum Run Timer: 5-30 minutes
- Engine Cooldown Timer: 0-20 minutes

Exercise Settings:

- Time of day
- Day of week
- Exercise:
 - Exercise with/without load
 - Exercise once every 1, 2, or 4 weeks.
 - Exercise time-of-day
 - Exercise day of week
 - Exercise duration: 15-30 minutes

Screen Settings:

- Brightness & Contrast button
- Screen Calibration button
- Startup/Clean screen

Diagnostics:

- Digital I/O bits status
- Voltage A/D readings

Mimic Diagram:

- System Ready
- Transfer switch position
- Utility available
- Standby available
- Maintenance/Auto switch position
- Generator source TS position
- TVSS status