

**CITY OF HUNTINGTON WOODS
HISTORIC DISTRICT COMMISSION
AGENDA**

Wednesday January 4, 2023

**City Hall
26815 Scotia
7:30 P.M.**

1. Call to Order
2. Approval of Minutes - **October 6, 2022**
3. Applications

A. Matter of review of an extension to the cellular tower and the placement of a generator at 10100 W. Ten Mile in the Rackham Historic District by Mastec Solutions.

B. A. Matter of review of a window replacement to the Neff Residence at 26630 York

4. Other Business
5. Public Participation

You are invited to view the plans or documents online and present your thoughts to the Historic District Commission at the meeting, or you may view the plans or documents online at hwmi.org during the week prior to the meeting and present your thoughts by writing to the Historic District Commission at: Huntington Woods City Offices, 26815 Scotia Road, Huntington Woods, MI 48070. You may also email any thoughts or comments to hberry@hwmi.org. If you have any additional questions, please call the Planning Department at (248)581-2637.

Hank Berry Zoning Administrator- hberry@hwmi.org - 248-581-2637



AT&T SITE ID: 112U3007

FA#: 10011448

MI3007

10100 WEST 10 MILE ROAD
HUNTINGTON WOODS, MI 48070

GENERATOR PROJECT

APPLICABLE CODES

ALL WORK SHALL COMPLY WITH THE FOLLOWING APPLICABLE CODES:

2018 BUILDING CODE
2018 NFPA 70
2018 MECHANICAL CODE
2018 PLUMBING CODE
2018 FIRE CODE
2018 ENERGY CODE
2018 MICHIGAN BUILDING CODE

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: **AMERICAN TOWER**
10 PRESIDENTIAL WAY
WOBBURN, MA 01801

ASSESSORS PARCEL NUMBER: N/A

LATITUDE: 42° 28' 30.00" N (42.475)

LONGITUDE: 083° 09' 54.00" W (-83.165)

LAT/LONG TYPE: NAD-83

EXISTING ZONING: N/A

PROPOSED PROJECT AREA: NO INCREASE IN S.F.

TYPE OF CONSTRUCTION: TYPE V-B

OCCUPANCY GROUP: U

JURISDICTION: CITY OF HUNTINGTON WOODS

PROJECT TEAM

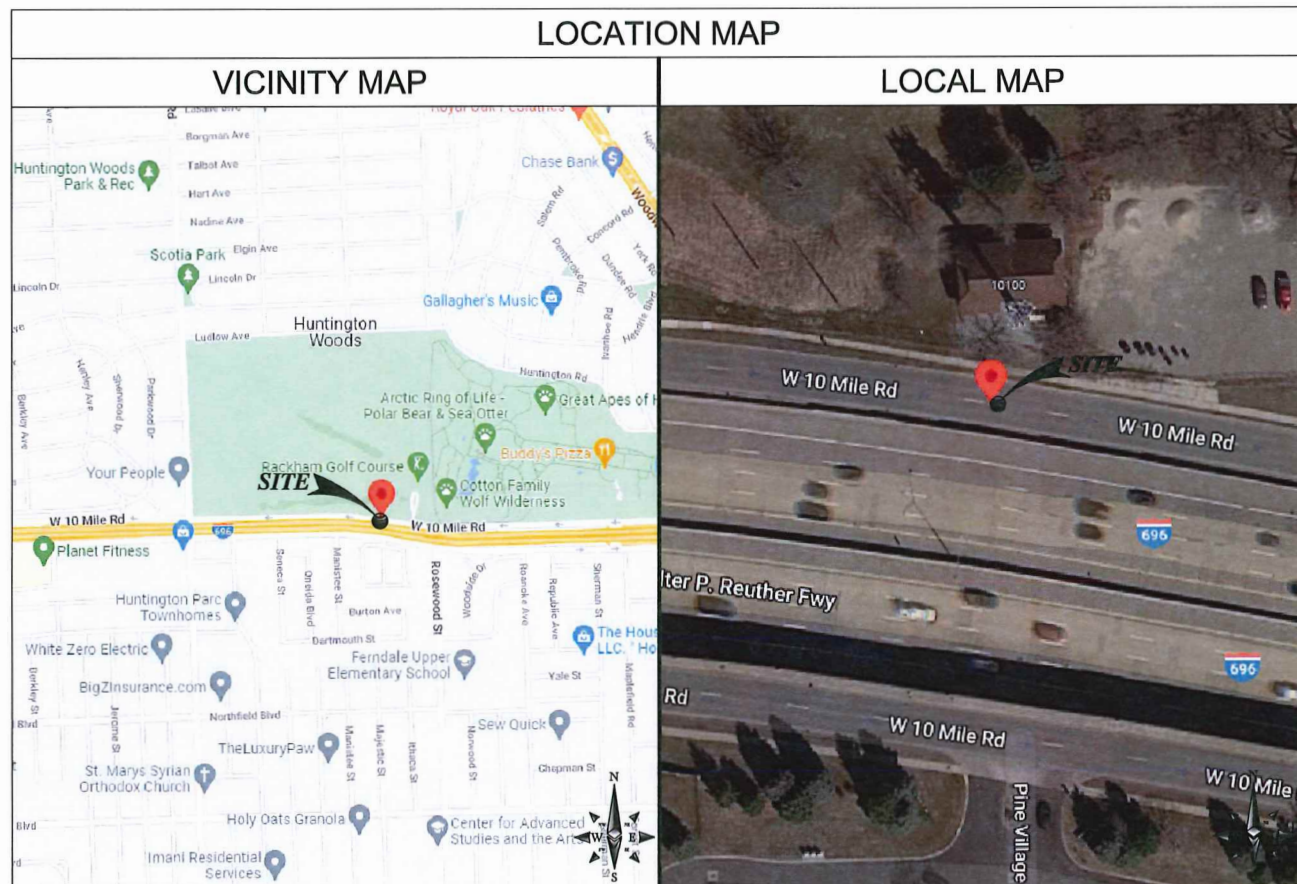
CLIENT REPRESENTATIVE (NATIONAL):
MASTEC NETWORK SOLUTIONS
3443 AIRPORT RD
SACRAMENTO, CA 95834
CONTACT: CLEON MITCHELL
EMAIL: CLEON.MITCHELL@MASTEC.COM

CONSTRUCTION:
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ADDISON, IL 60101
CONTACT: JAMES FLOWERS
EMAIL: JAMES.FLOWERS@MASTEC.COM

ENGINEERING (NATIONAL):
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CARY, NC 27518
CONTACT: RAPHAEL MOHAMED
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EMAIL: RAPHAEL.MOHAMED@MASTEC.COM

SITE ACQUISITION (NATIONAL):
MASTEC NETWORK SOLUTIONS
2189 PARKWAY LAKE DR.
HOOVER, AL 35244
CONTACT: CLEON MITCHELL
EMAIL: CLEON.MITCHELL@MASTEC.COM

SCOPING ENGINEER (NATIONAL):
MASTEC NETWORK SOLUTIONS
2189 PARKWAY LAKE DR.
HOOVER, AL 35244
CONTACT: DAVID ROGERS
EMAIL: DAVID.ROGERS@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) ATS/CAM LOC
- INSTALL (1) 30KW KOHLER STANDBY DIESEL GENERATOR (KOHLER 30RE0ZK) WITH BASE FUEL TANK ON A CONCRETE PAD
- INSTALL (1) 200A ATS/CAM LOC (#RDT)
- INSTALL ATS ALARM RELAY
- INSTALL UTILITY H-FRAME

DRAWING INDEX

SHEET NO: SHEET TITLE

T-1	TITLE SHEET
GN-1	GENERAL NOTES
A-0	EQUIPMENT LAYOUT
A-1	PRECAST GENERATOR PAD DETAILS
A-1.1	GENERATOR PAD DETAILS
E-1	ELECTRICAL PLAN
E-2	EQUIPMENT & CONDUIT DETAILS
E-3	ALARM DETAILS & ONE LINE DIAGRAM
G-1	GROUNDING DETAILS

APPROVALS

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

AT&T _____ DATE: _____

SITE ACQUISITION _____ DATE: _____

CONSTRUCTION MANAGER _____ DATE: _____

SCALE

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



CALL MICHIGAN ONE CALL
(800) 482-7171
CALL 3 WORKING DAYS
BEFORE YOU DIG!



10/20/2022

SUBMITTALS

DATE	DESCRIPTION	REV	ISSUED BY
10/20/2022	CONSTRUCTION	0	RM

DRAWN BY: _____ AR

CHECKED BY: _____ BMF

APPROVED BY: _____ RM

THE INFORMATION CONTAINED IN THESE DOCUMENTS IS PROPRIETARY BY NATURE. REPRODUCTION OR CAUSING TO BE REPRODUCED THE WHOLE OR ANY PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF MASTEC NETWORK SOLUTIONS IS PROHIBITED.

PREPARED FOR:



PREPARED BY:

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

FA NUMBER:

10011448

SITE NAME:

MI3007

SITE ADDRESS:

10100 WEST 10 MILE ROAD
HUNTINGTON WOODS, MI 48070

TOWER OWNER ID:

N/A

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

10100 W-10 Mile
PB22322

GENERAL NOTES:

- 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.
- 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.
- FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
CARRIER: AT&T
TOWER OWNER: AMERICAN TOWER
- 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 MASTEC NETWORK SOLUTIONS.
- 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.
- THE 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 (FOR CAST IN PLACE OPTION):

- 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.

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-OFF-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 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).
- 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:

- 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. 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.
- SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90a AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
- 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 SPECIMATE 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 "AT&T".
- ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.



10/20/2022

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
10/20/2022	CONSTRUCTION	0	RM

DRAWN BY: AR

CHECKED BY: BMF

APPROVED BY: RM

THE INFORMATION CONTAINED IN THESE DOCUMENTS IS PROPRIETARY BY NATURE. REPRODUCTION OR CAUSING TO BE REPRODUCED THE WHOLE OR ANY PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF MASTEC NETWORK SOLUTIONS IS PROHIBITED.

PREPARED FOR:



PREPARED BY:



FA NUMBER:

10011448

SITE NAME:

MI3007

SITE ADDRESS:

10100 WEST 10 MILE ROAD
HUNTINGTON WOODS, MI 48070

TOWER OWNER ID:

N/A

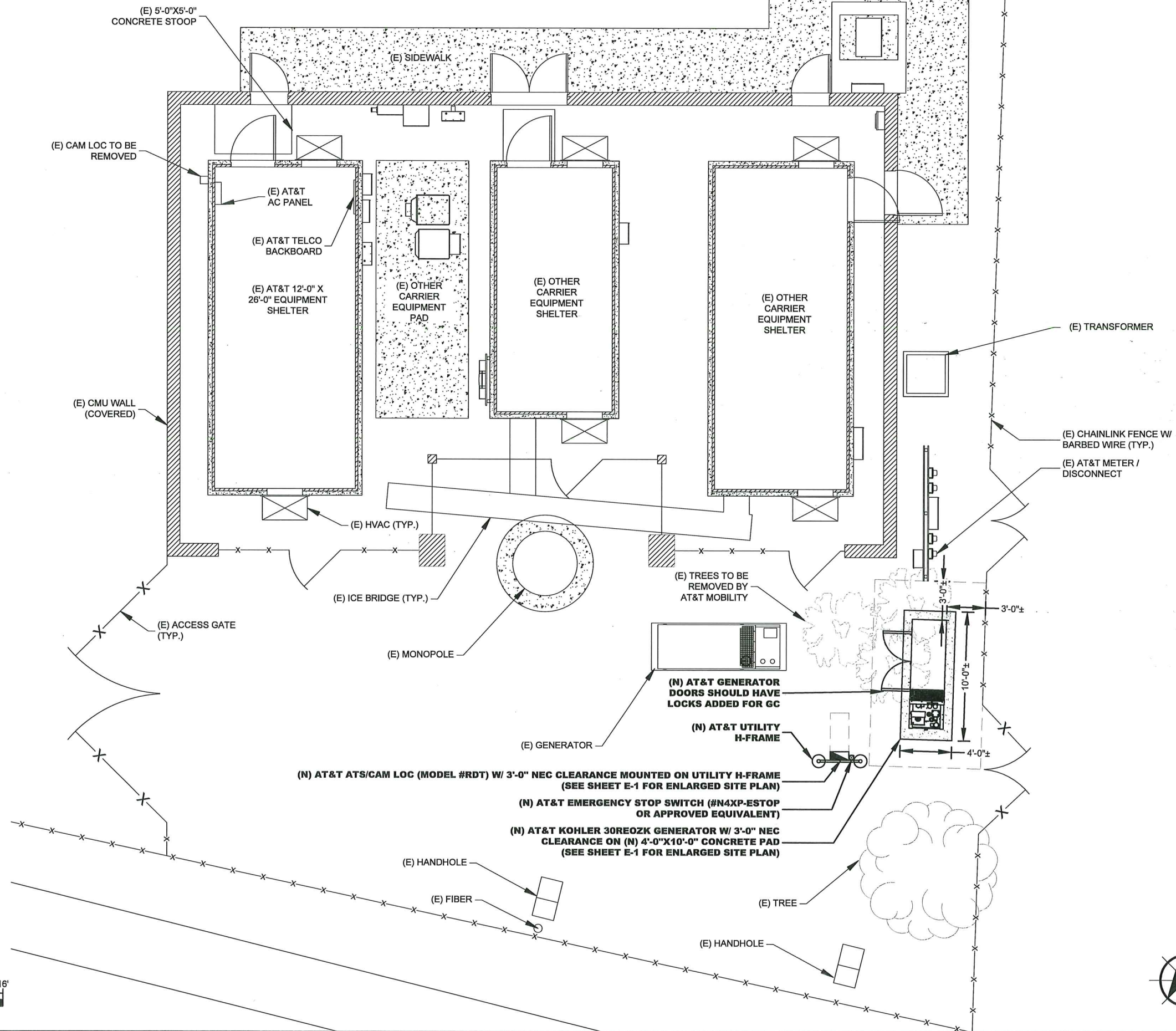
SHEET TITLE

GENERAL NOTES

SHEET NUMBER

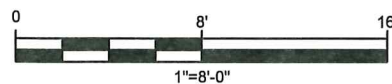
GN-1

NOTE
THESE DRAWINGS WERE PRODUCED WITHOUT THE BENEFIT OF A CURRENT LAND SURVEY. ALL PROPERTY LINES, EASEMENTS, SETBACKS, AND EXISTING CONDITIONS ARE APPROXIMATE AND SHALL BE VERIFIED PRIOR TO START OF CONSTRUCTION.



EQUIPMENT LAYOUT

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



10/20/2022

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
10/20/2022	CONSTRUCTION	0	RM

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CHECKED BY: BMF
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:
10011448

SITE NAME:
MI3007

SITE ADDRESS:
10100 WEST 10 MILE ROAD
HUNTINGTON WOODS, MI 48070

TOWER OWNER ID:
N/A

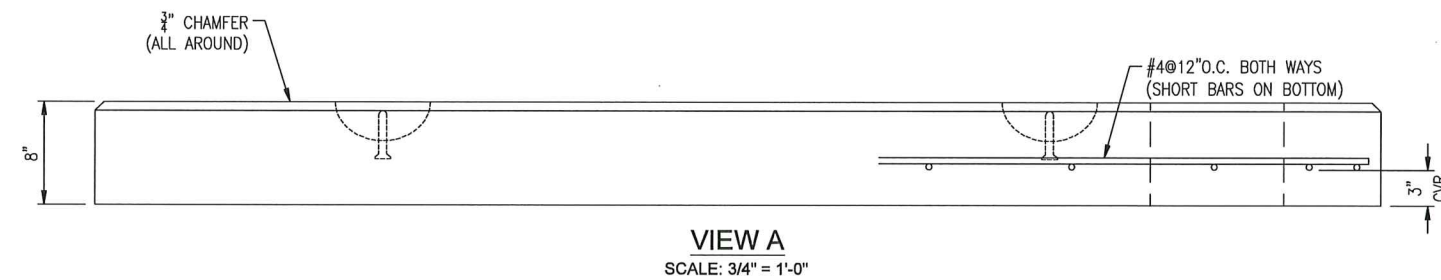
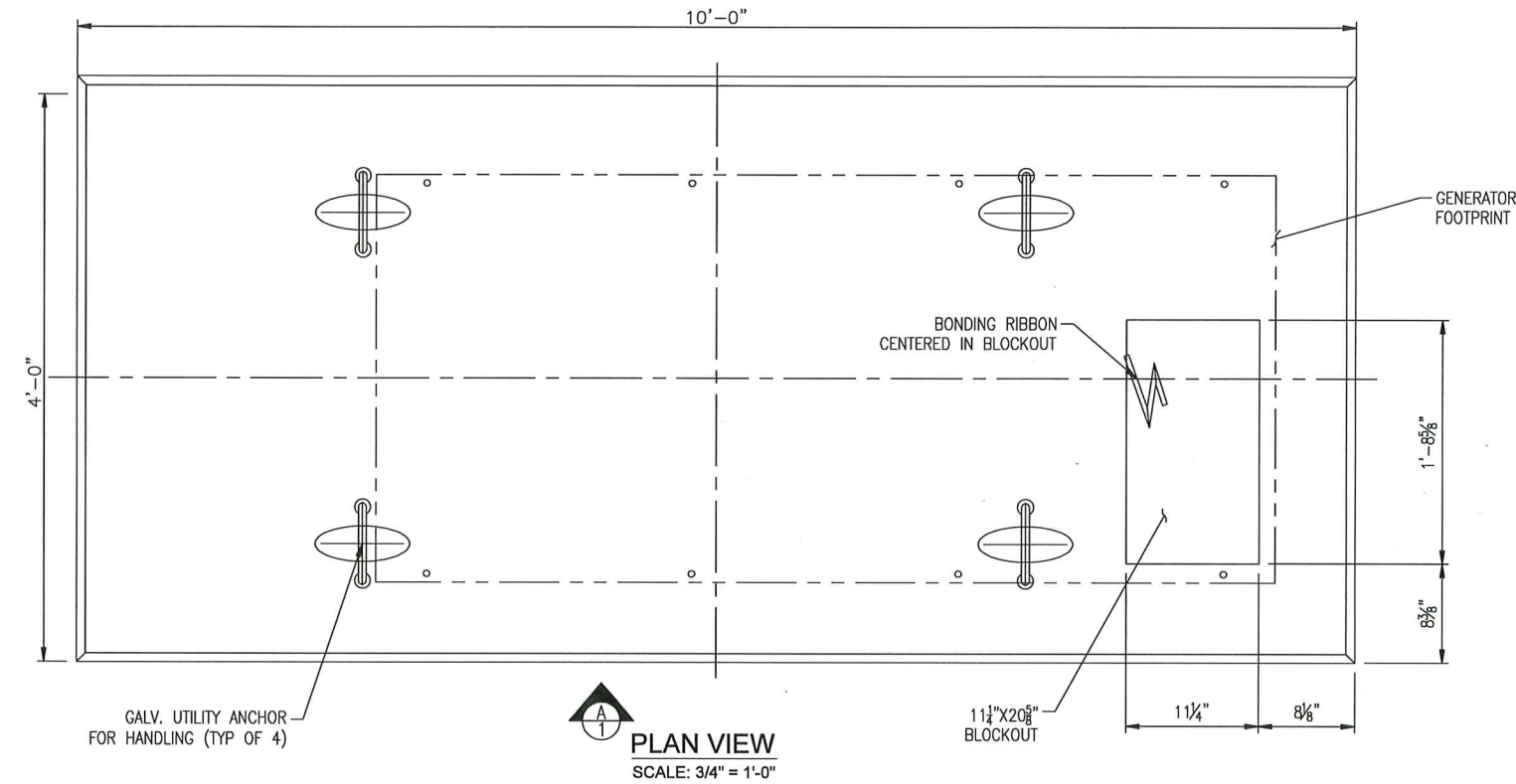
SHEET TITLE
EQUIPMENT LAYOUT

SHEET NUMBER
C-1



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



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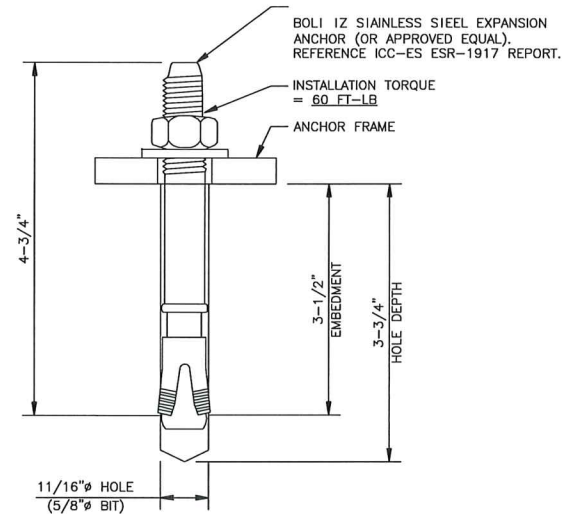
SHEET TITLE
**PRECAST GENERATOR
PAD DETAILS**

SHEET NUMBER

A-1

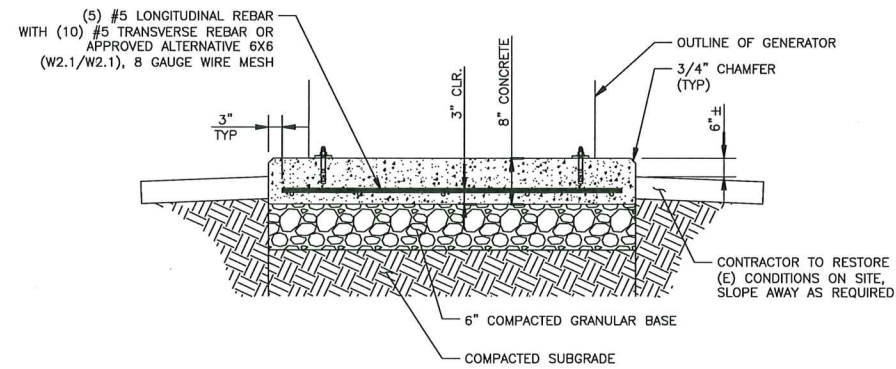
GENERAL NOTES

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.



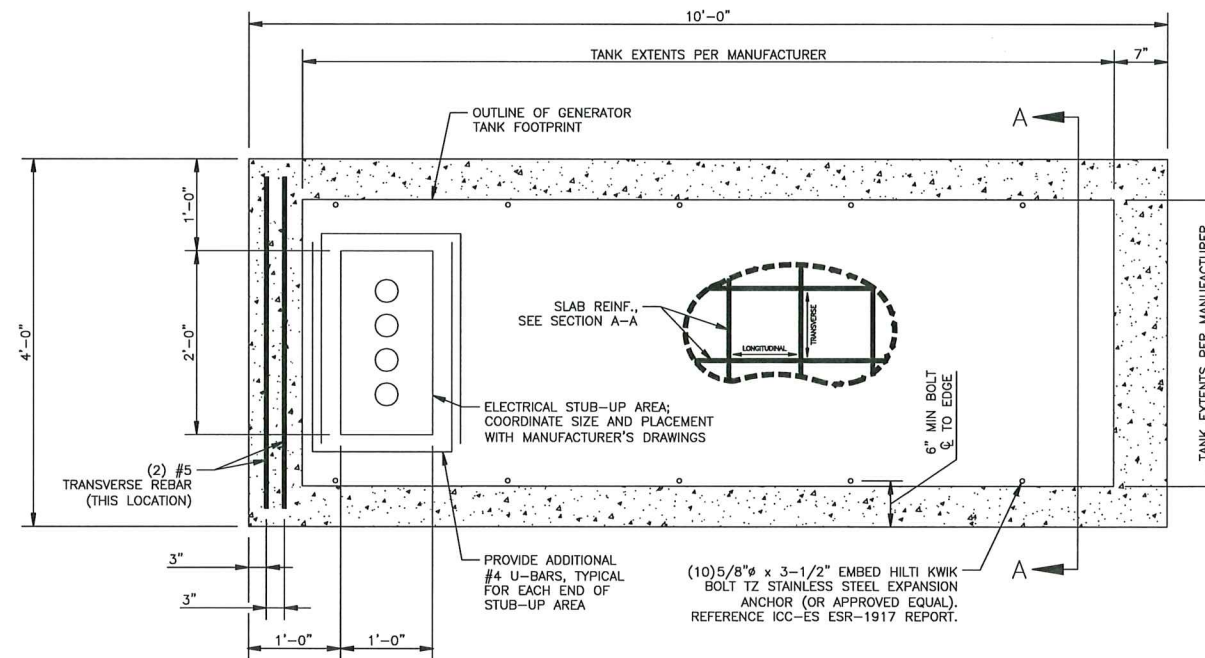
TYPICAL ANCHOR DETAIL

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



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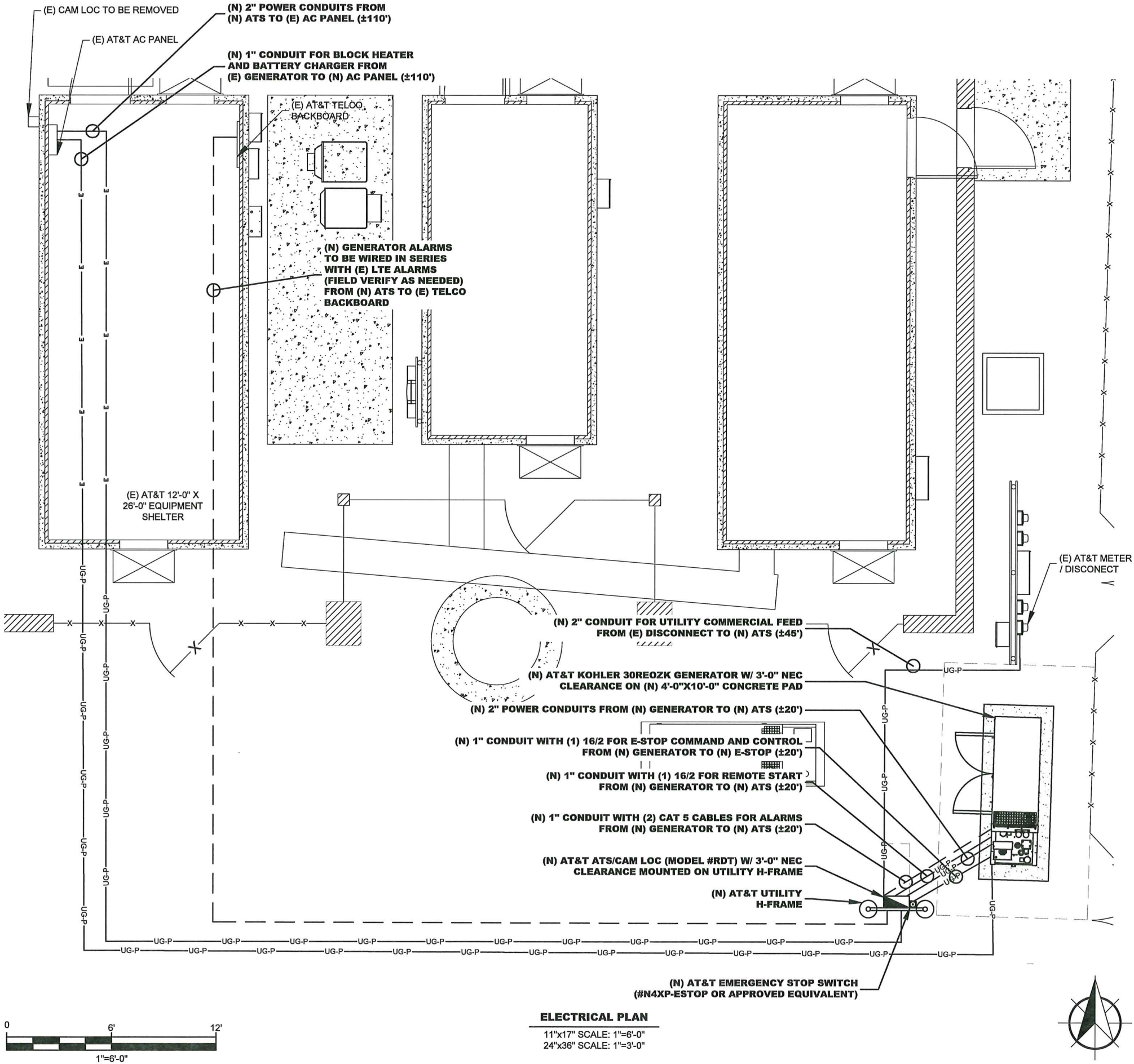
SHEET TITLE
GENERATOR PAD
DETAILS

SHEET NUMBER
A-1.1

NOTES AND SPECIFICATIONS

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

CONDUCTOR COLOR CODE		
SYSTEM	CONDUCTOR	COLOR
120/240V, 1ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
	GROUND	GREEN
120/208V, 3ø	A PHASE	BLACK
	B PHASE	RED
	C PHASE	BLUE
	NEUTRAL	WHITE
277/480V, 3ø	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
DC VOLTAGE	POS (+)	RED**
	NEG (-)	BLACK**
* SEE NEC 210.5(C)(1) AND (2) ** POLARITY MARKED AT TERMINATION		



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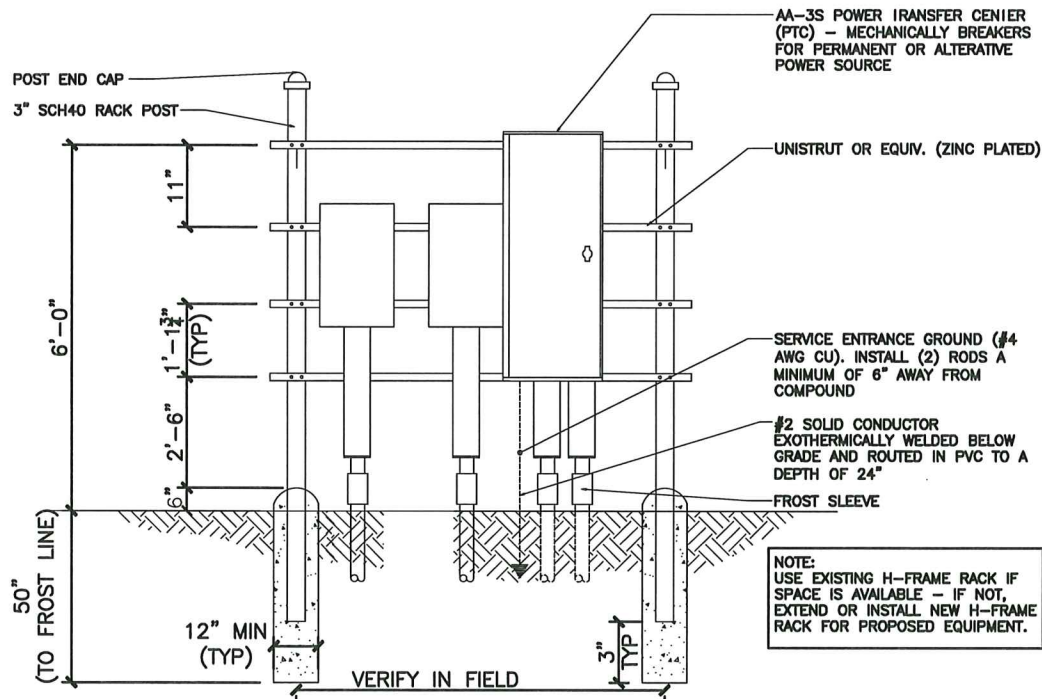
SITE NAME:
MI3007

SITE ADDRESS:
10100 WEST 10 MILE ROAD
HUNTINGTON WOODS, MI 48070

TOWER OWNER ID:
N/A

SHEET TITLE
ELECTRICAL PLAN

SHEET NUMBER
E-1



H-FRAME DETAIL

SCALE:

5

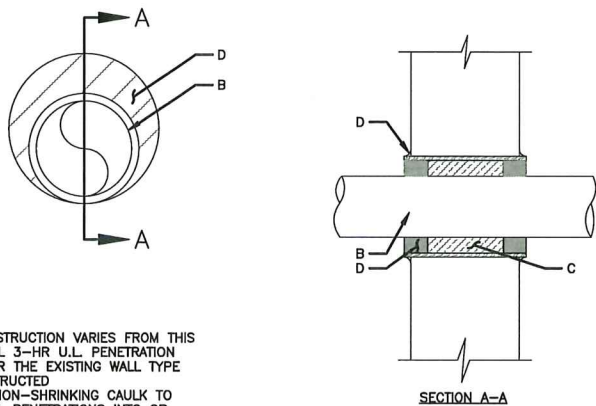
NONE

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



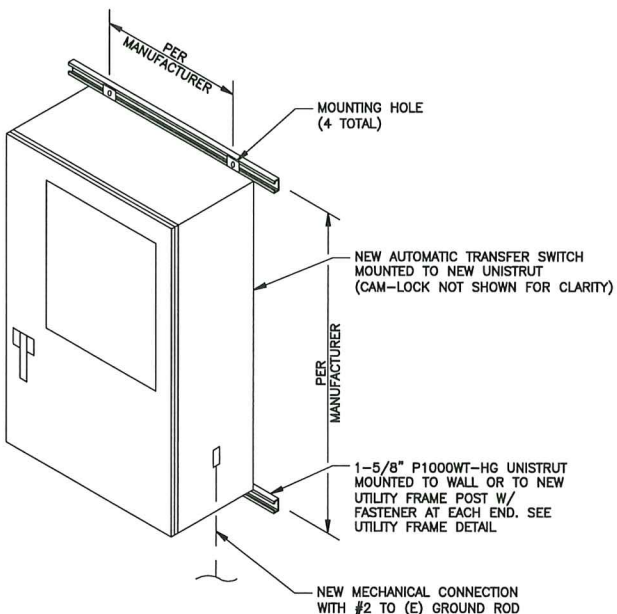
INSTALLER NOTES:

- 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.

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



OUTER WALL PENETRATION DETAIL

SCALE:

6

NONE

ATS MOUNTING DETAIL

SCALE:

4

NONE

CONDUIT WALL MOUNT DETAIL

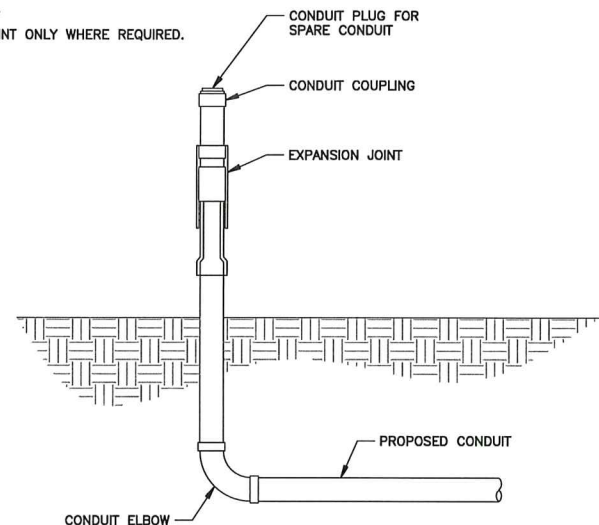
SCALE:

1

NONE

INSTALLER NOTE:

INSTALL SLIP JOINT ONLY WHERE REQUIRED.

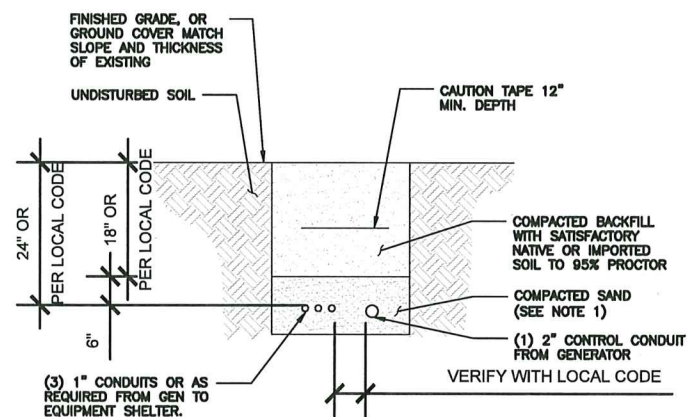


SLIP JOINT DETAIL

SCALE:

3

NONE



NOTES:

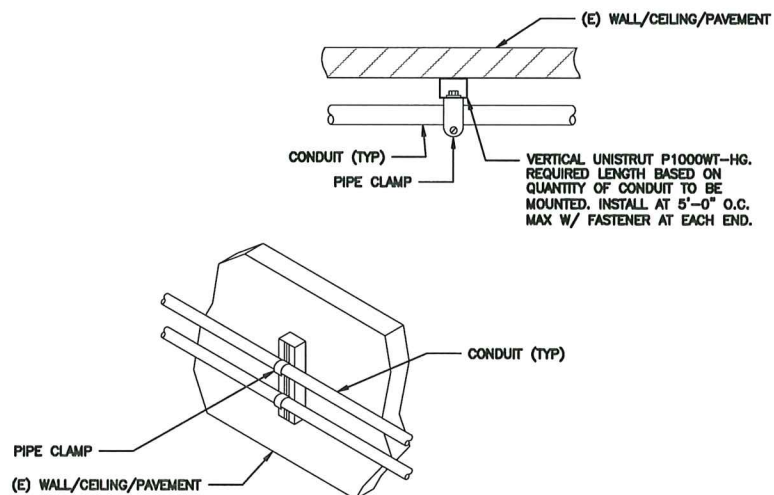
- SEPARATION DIMENSIONS TO BE VERIFIED WITH LOCAL UTILITY CO. REQUIREMENTS.
- PROVIDE PVC CONDUIT BELOW GRADE EXCEPT AS NOTED BELOW.
- PROVIDE RGS CONDUIT AND ELBOWS AT STUB UP LOCATIONS IF REQUIRED.
- INSTALL UTILITY PULLBOXES PER NEC IF REQUIRED.
- FOLLOW MINIMUM COVER REQUIREMENTS PER NEC 300-5

TRENCH DETAIL

SCALE:

2

NONE



10/20/2022

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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:	12799 WATTS	=	238 AMPs at -48V
6 AMPs (281 Watts) AT PRIMARY 48V REQUIRED TO SUPPORT 24V DC CONVERTER SYSTEM			
TOTAL PRIMARY 48V LOAD:	13080 WATTS	=	243 AMPs at -48V

ESTIMATED SITE MAX. AC LOAD (AMPs): 146.16 AMPs			
ESTIMATE 200A SERVICE SUFFICIENT			
SITE GENERATOR CAPACITY REQUIRED: 23 KW			
ON SITE GENERATOR CAPACITY: 30 KW			
ESTIMATE GENSET CAPACITY SUFFICIENT			
RECOMMENDED ENVIRO SYSTEM: 3-TONS COOLING			
SPECIFIED ENVIRONMENTAL SYSTEM: 6-TONS			
ESTIMATE SUFFICIENT HVAC CAPACITY			

DC PLANT CONFIGURATION CAN BE REVIEWED ON DC PLANT WORKSHEET			
DC PLANT: Veriv STD -48VDC NetSure 7100 Plant 1000A			
-48V RECTIFIERS REQUIRED (N+1):	9		
-48V RECTIFIER SLOTS:	22		
CONV. TYPE: UNIVERSAL SLOTS - RIGHT 3 RECT SLOTS/SHELF CAN BE USED FOR CONV			
+24V CONVERTERS REQUIRED:	2		
+24V CONVERTER SLOTS:	9		
ESTIMATED BATTERY RESERVE TIME			
2 190 AH 48V STRINGS =	2.15 HOURS	(ON-SITE GENERATOR - 2 HOUR MINIMUM)	

LOAD CALCULATIONS

SCALE: 1

NONE

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

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:	
A. CABLE - (2) CAT5	
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 (IF APPLICABLE)	
A. CABLE - cat5e	
B. COLOR CODE	
1. COMMERCIAL POWER FAIL IF REQUIRED (BLUE WHITE)	
2. TRANSFER SWITCH POSITION (BROWN WHITE)	
CAM LOCK ALARM	
A. CABLE - cat5e	
B. COLOR CODE	
1. PORTABLE GENERATOR RUNNING (ORANGE WHITE) (IF REQUIRED)	

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

ALARM DETAILS

SCALE: 2

NONE

PANELBOARD DIRECTORY - 120/240 V - 200 AMP			
1	HVAC #1	2	HVAC #2
3	HVAC #1	4	HVAC #2
5	INT.EXT. & EMERG LTS.	6	OUTDOOR LIGHT
7	OUTLETS	8	SPARE
9	BATTERY VENT FAN	10	SPARE
11	RECT 1/7	12	SPARE
13	RECT 1/7	14	SPARE
15	RECT 2/8	16	SPARE
17	RECT 2/8	18	REC 4/10
19	RECT 3/9	20	REC 4/10
21	RECT 3/9	22	REC 5/11
23	RECT #7	24	REC 5/11
25	RECT #7	26	REC 6/12

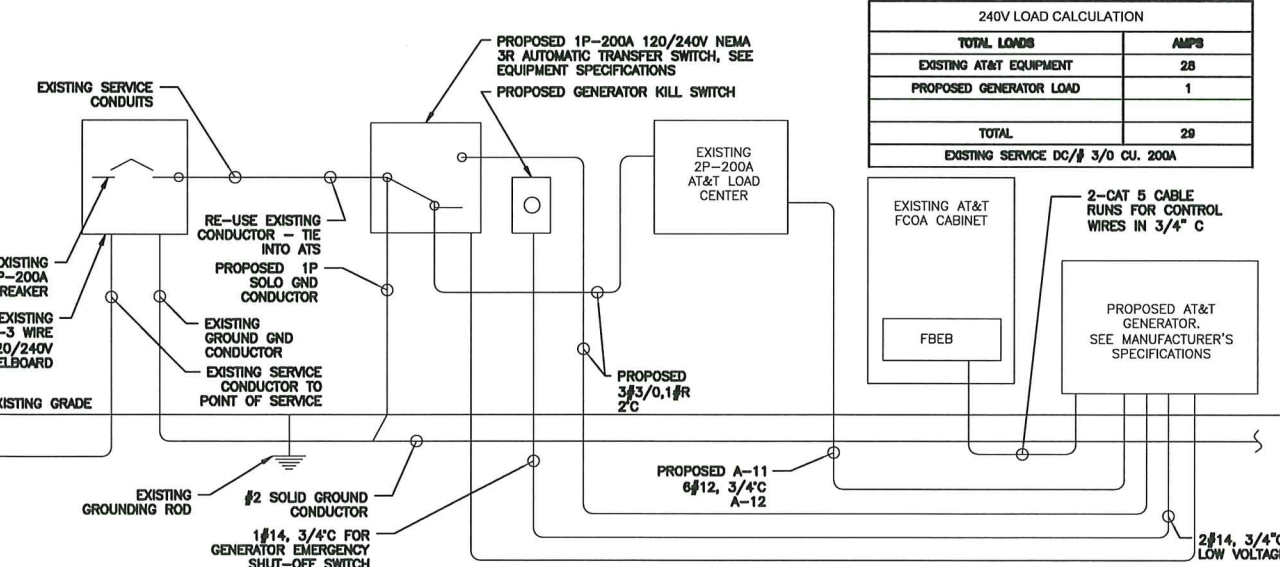
27	RECT #8	28	REC 6/12
29	RECT #8	30	SPARE
31	RECT #9	32	SPARE
33	RECT #9	34	SPARE
35	SMOKE DETECTOR	36	SPARE
37	NEW BREAKER	38	SIEMENS CSO
39	NEW BREAKER	40	SIEMENS CSO
41	EMPTY	42	EMPTY

PROPOSED (2) 1P-20A BREAKERS IN POSITIONS 37 AND 29

EXISTING PANELBOARD

SCALE: 3

NONE



ELECTRICAL RISER DIAGRAM

SCALE: 4

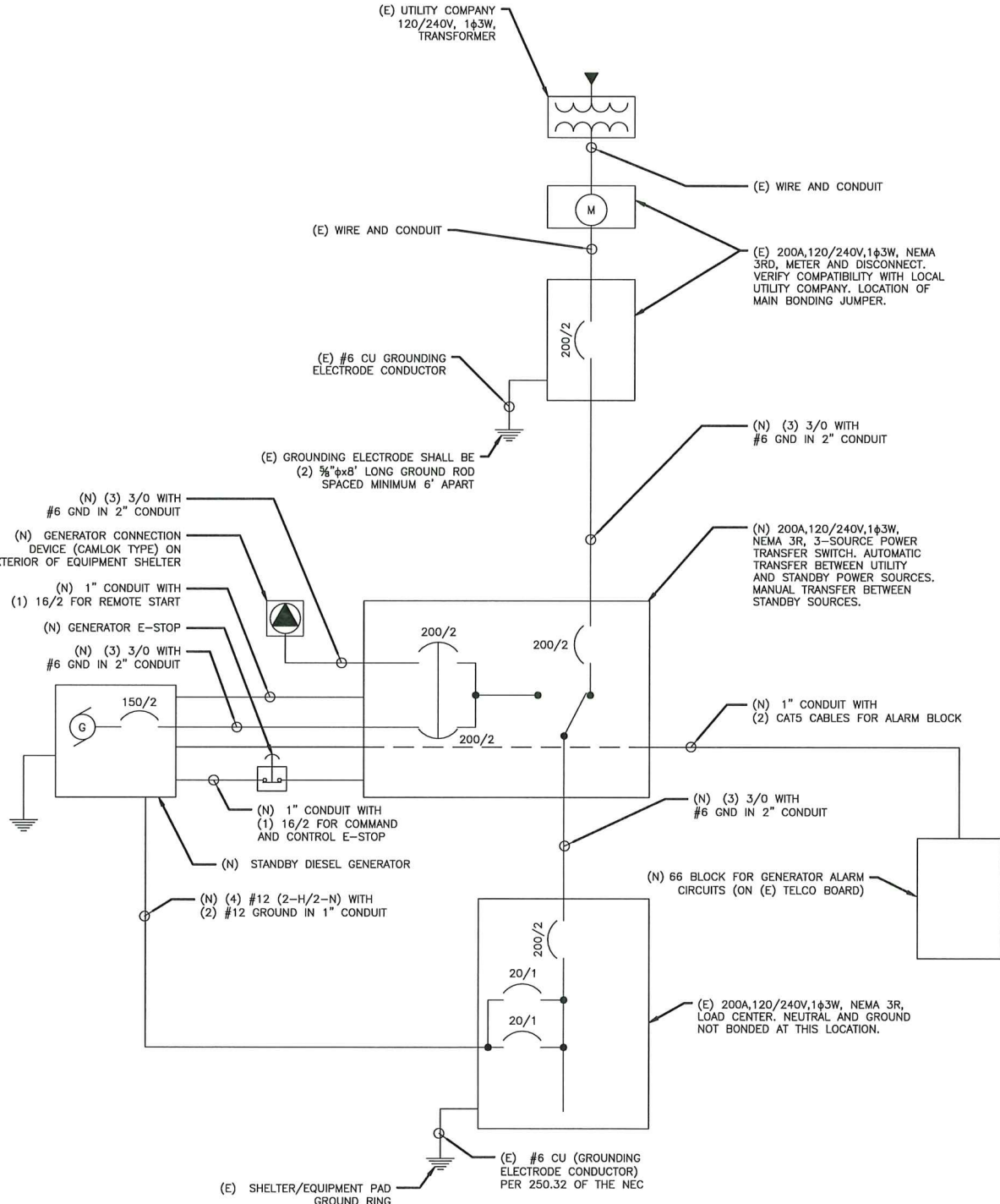
NONE

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

INSTALLER NOTE:

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

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



ONE LINE DIAGRAM

SCALE: 5

NONE



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HUNTINGTON WOODS, MI 48070

TOWER OWNER ID:

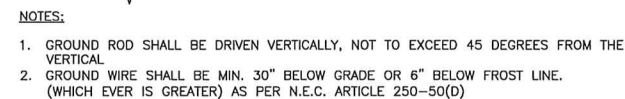
N/A

SHEET TITLE

ALARM DETAILS &
ONE LINE DIAGRAM

SHEET NUMBER

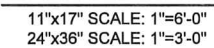
E-3



SCALE:	3
NONE	



SCALE:	2
NONE	



DRAWN BY:	AL
CHECKED BY:	BM
APPROVED BY:	RF

THE INFORMATION CONTAINED IN THESE DOCUMENTS IS PROPRIETARY BY NATURE. REPRODUCTION OR CAUSING TO BE REPRODUCED THE WHOLE OR ANY PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF MASTEC NETWORK SOLUTIONS IS PROHIBITED.

PREPARED FOR:



PREPARED BY:



1151 SE CARY PARKWAY, SUITE 101
CARY, NC 27518

FA NUMBER:

10011448

SITE NAME:

MI3007

SITE ADDRESS:

10100 WEST 10 MILE ROAD
HUNTINGTON WOODS, MI 48070

TOWER OWNER ID:

N/A

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

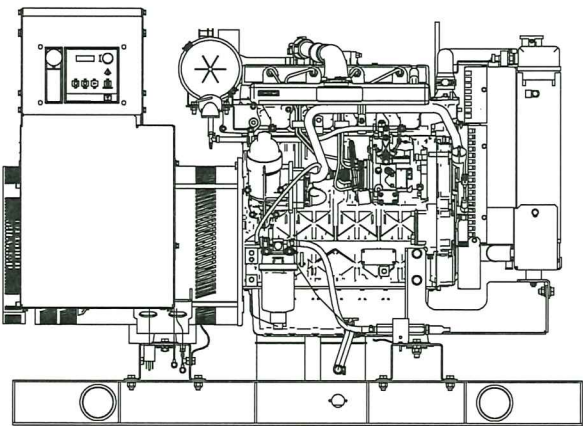
G-1



EPA-Certified for Stationary
Emergency Applications

Ratings Range

		60 Hz
Standby:	kW	23-31
	kVA	23-39
Prime:	kW	21-28
	kVA	21-35



Generator Set Ratings

Alternator	Voltage	Ph	Hz	130°C Rise Standby Rating		105°C Rise Prime Rating	
				kW/kVA	Amps	kW/kVA	Amps
4D5.6	120/208	3	60	29/36	101	26/33	90
	127/220	3	60	29/36	95	26/33	85
	120/240	3	60	29/36	87	26/33	78
	120/240	1	60	23/23	96	21/21	88
	139/240	3	60	29/36	87	26/33	78
	220/380	3	60	27/34	51	25/31	47
	277/480	3	60	29/36	44	26/33	39
	347/600	3	60	29/36	35	26/33	31
4D8.3	120/208	3	60	31/39	108	28/35	97
	127/220	3	60	31/39	102	28/35	92
	120/240	3	60	31/39	93	28/35	84
	120/240	1	60	29/29	121	26/26	108
	139/240	3	60	31/39	93	28/35	84
	220/380	3	60	31/39	59	28/35	53
	277/480	3	60	31/39	47	28/35	42
	347/600	3	60	31/39	37	28/35	34
4E5.6	120/240	1	60	29/29	121	26/26	108
4E8.3	120/240	1	60	31/31	129	27/27	113

RATINGS: All three-phase units are rated at 0.8 power factor. All single-phase units are rated at 1.0 power factor. *Standby Ratings:* Standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. *Prime Power Ratings:* At varying load, the number of generator set operating hours is unlimited. A 10% overload capacity is available for one hour in twelve. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory. Obtain the technical information bulletin (TIB-101) for ratings guidelines, complete ratings definitions, and site condition derates. The generator set manufacturer reserves the right to change the design or specifications without notice and without any obligation or liability whatsoever.

Standard Features

- Kohler Co. provides one-source responsibility for the generating system and accessories.
- The generator set and its components are prototype-tested, factory-built, and production-tested.
- The 60 Hz generator set offers a UL 2200 listing.
- The generator set accepts rated load in one step.
- The 60 Hz generator set meets NFPA 110, Level 1, when equipped with the necessary accessories and installed per NFPA standards.
- The generator set engine is certified to meet the Environmental Protection Agency (EPA) emergency stationary emissions requirements.
- A one-year limited warranty covers all generator set systems and components. Two- and five-year extended limited warranties are also available.
- Alternator features:
 - Kohler's wound field excitation system with its unique PowerBoost™ design delivers great voltage response and short-circuit capability.
 - The brushless, rotating-field alternator has broadrange reconnectability.
- Other features:
 - Kohler designed controllers for one-source system integration and remote communication. See Controllers on page 3.
 - The low coolant level shutdown prevents overheating (standard on radiator models only).
 - Integral vibration isolation eliminates the need for under-unit vibration spring isolators.

Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Wound Field
Leads: quantity, type	12, Reconnectable 4, 110- 120/220- 240 V
Voltage regulator	Solid State, Volts/Hz
Insulation:	NEMA MG1
Material	Class H
Temperature rise	130°C, Standby
Bearing: quantity, type	1, Sealed
Coupling	Flexible Disc
Amortisseur windings	Full
Voltage regulation, no-load to full-load	Controller Dependent
One-step load acceptance	100% of Rating
Unbalanced load capability	100% of Rated Standby Current

- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Capable of sustained line-to-neutral short-circuit current of up to 300% of the rated current for up to 2 seconds. (IEC 60092-301 short-circuit performance.)
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.
- Windings are vacuum-impregnated with epoxy varnish for dependability and long life.
- Superior voltage waveform from a two-thirds pitch stator and skewed rotor.

Specifications	Alternator
Peak motor starting kVA:	(35% dip for voltages below)
480 V 4D5.6 (12 lead)	75
480 V 4D8.3 (12 lead)	120
240 V 4E5.6 (4 lead)	44
240 V 4E8.3 (4 lead)	74

Application Data

Engine

Engine Specifications	
Manufacturer	Kohler Diesel
Engine model	KDI2504TM/G18
Engine type	4-Cycle, Turbocharged
Cylinder arrangement	4 Inline
Displacement, L (cu. in.)	2.5 (158)
Bore and stroke, mm (in.)	88 x 102 (3.46 x 4.02)
Compression ratio	18:1
Piston speed, m/min. (ft./min.)	367 (1206)
Main bearings: quantity, type	5, Sleeve
Rated rpm	1800
Max. power at rated rpm, kW/m (BHP)	36.4 (48.8)
Cylinder head material	Cast Iron
Crankshaft material	Cast Iron
Valve material:	
Intake	Stainless Steel
Exhaust	Stainless Steel
Governor: type, make/model	Mechanical (or Electronic *)
	Droop, 5% (or Isochr. *)
Frequency regulation, no-load to full-load	±0.5%
Frequency regulation, steady state	Fixed
Frequency	Dry
Air cleaner type, all models	
* Requires available electronic governor option	

Exhaust

Exhaust System	
Exhaust manifold type	Dry
Exhaust flow at rated kW, m³/min. (cfm)	7.8 (275)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	543 (1009)
Maximum allowable back pressure, kPa (in. Hg)	8 (2.4)
Exhaust outlet size at engine hookup, mm (in.)	50.8 (2)

Engine Electrical

Engine Electrical System	
Battery charging alternator:	
Ground (negative/positive)	Negative
Volts (DC)	12
Ampere rating	50
Starter motor rated voltage (DC)	12
Battery, recommended cold cranking amps (CCA):	
Quantity, CCA rating	One, 650
Battery voltage (DC)	12

Fuel

Fuel System	
Fuel supply line, min. ID, mm (in.)	8.0 (0.31)
Fuel return line, min. ID, mm (in.)	6.0 (0.25)
Max. lift, electric fuel pump, m (ft.)	3.0 (10.0)
Max. fuel flow, Lph (gph)	46.0 (12.2)
Max. return line restriction, kPa (in. Hg)	20 (5.9)
Fuel filter	
Prefilter	74 Microns
Primary/Water Separator	5 Microns @ 98% Efficiency
Recommended fuel	#2 Ultra Low Sulfur Diesel

Lubrication

Lubricating System	
Type	Full Pressure
Oil pan capacity, L (qt.) §	10.7 (11.3)
Oil pan capacity with filter, L (qt.) §	11 (11.6)
Oil filter: quantity, type §	1, Cartridge
Oil cooler	—
§ Kohler recommends the use of Kohler Genuine oil and filters.	

Application Data

Cooling

Radiator System		
Ambient temperature, °C (°F) *	50	(122)
Engine jacket water capacity, L (gal.)	4.4	(1.6)
Radiator system capacity, including engine, L (gal.)	11.4	(3)
Engine jacket water flow, Lpm (gpm)	59.0	(15.6)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	27.0	(1536)
Water pump type	Centrifugal	
Fan diameter, including blades, mm (in.)	406	(16.0)
Fan, kWm (HP)	0.6	(0.8)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H ₂ O)	0.125	(0.5)

* Enclosure reduces ambient temperature capability by 5°C (9°F).

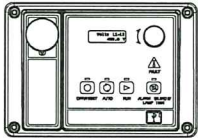
Operation Requirements

Air Requirements		
Radiator-cooled cooling air, m ³ /min. (scfm) †	53.8	(1900)
Combustion air, m ³ /min. (cfm)	2.7	(96.9)
Heat rejected to ambient air:		
Engine, kW (Btu/min.)	10.3	(587)
Alternator, kW (Btu/min.)	6.7	(381)
Max. air intake restriction, kPa (in. Hg)	3.0	(0.89)

† Air density = 1.20 kg/m³ (0.075 lbm/ft³)

Fuel Consumption		
Diesel, Lph (gph) at % load		Standby Rating
100%	9.8	(2.6)
75%	7.9	(2.1)
50%	5.7	(1.5)
25%	3.4	(0.9)
Diesel, Lph (gph) at % load		Prime Rating
100%	9.1	(2.4)
75%	7.2	(1.9)
50%	5.3	(1.4)
25%	3.0	(0.8)

Controller



APM402 Controller
Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.

- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or serial configuration
- Controller supports Modbus® protocol
- Integrated hybrid voltage regulator with ±0.5% regulation
- Built-in alternator thermal overload protection
- NFPA 110 Level 1 capability

Refer to G6-161 for additional controller features and accessories.

Modbus® is a registered trademark of Schneider Electric.



KOHLER CO., Kohler, Wisconsin 53044 USA
Phone 920-457-4441, Fax 920-459-1646
For the nearest sales and service outlet in the
US and Canada, phone 1-800-544-2444
KOHLERPower.com

Additional Standard Features

- Air Cleaner, Heavy Duty with Air Cleaner Restriction Indicator
- Alternator Protection
- Battery Rack and Cables
- Closed Crankcase Ventilation
- Oil Drain and Coolant Drain with Hose Barb
- Oil Drain Extension (with enclosure models only)
- Operation and Installation Literature
- Stainless Steel Fasteners on Enclosure (with enclosure models only)
- Rodent Guards

Available Options

Approvals and Listings

- ☐ CSA Certified
- ☐ IBC Seismic Certification
- ☐ UL2200 Listing

Enclosed Unit

- ☐ Sound Enclosure (with enclosed critical silencer)
- ☐ Weather Enclosure (with enclosed critical silencer)
- ☐ Stainless Steel Latches and Hinges

Open Unit

- ☐ Exhaust Silencer, Critical (kit: PA-352663)
- ☐ Flexible Exhaust Connector, Stainless Steel

Fuel System

- ☐ Flexible Fuel Lines
- ☐ Fuel Pressure Gauge
- ☐ Subbase Fuel Tanks

Controller

- ☐ Two Input/Five Output Module
- ☐ Manual Speed Adjust (requires Electronic Governor)
- ☐ Remote Annunciator Panel
- ☐ Remote Emergency Stop
- ☐ Run Relay

Cooling System

- ☐ Block Heater (600 W, 110- 120 V)
Required for ambient temperatures below 0°C (32°F).
- ☐ Radiator Duct Flange

Electrical System

- ☐ Alternator Strip Heater
- ☐ Battery
- ☐ Battery Charger, Equalize/Float Type
- ☐ Battery Heater
- ☐ Electronic Governor
- ☐ Line Circuit Breaker (NEMA type 1 enclosure)
- ☐ Line Circuit Breaker with Shunt Trip (NEMA type 1 enclosure)

Miscellaneous

- ☐ Engine Fluids Added
- ☐ Rated Power Factor Testing

Literature

- ☐ General Maintenance
- ☐ NFPA 110
- ☐ Overhaul
- ☐ Production

Warranty

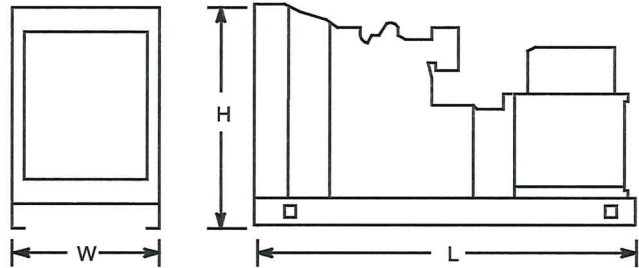
- ☐ 2-Year Basic Limited Warranty
- ☐ 5-Year Basic Limited Warranty
- ☐ 5-Year Comprehensive Limited Warranty

Other Options

- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

Dimensions and Weights

Overall Size, L x W x H, mm (in.):
Open Unit Skid: 1400 x 813 x 1024 (55.1 x 32.0 x 40.3)
Enclosure Skid: 1938 x 813 x 1174 (76.5 x 32.0 x 47.0)
Weight (radiator model), wet, kg (lb.): 512 (1130)



NOTE: This drawing is provided for reference only and should not be used for planning installation. Contact your local distributor for more detailed information.

DISTRIBUTED BY:

CITY OF HUNTINGTON WOODS, MICHIGAN

Application for HISTORIC DISTRICT COMMISSION

(248) 581-2633 Fax: (248) 541-3402

HBerry@HWMH.org

FOR OFFICE USE ONLY

APP # _____

DATE FILED: _____

BY: _____

APPLICATION FOR PERMIT TO PERFORM WORK ON A RESOURCE WITHIN THE HILL AND/OR RACKHAM HISTORIC DISTRICTS

The completed application, ten (10) copies of the proposed plan, supporting materials (see checklist for list of items to be included), an electronic PDF submission of all documents, shall be submitted to the City offices at least 15 days prior to the date of the Historic District commission meeting when the review will take place.

Applicant: Paul Wundel / Window Pro

Address: 47705 WEST RD B106

City: Wixom State: Mi Zip: 48393

Phone: 248-716-7698
(Business) (Home) (Fax)

If the applicant is not the owner, attach a signed and notarized statement from the owner that the applicant is officially acting on the owner's behalf. Include the owner's address and telephone number.

Location of Property 26630 York Rd
(Street Address or legal description of property)

Sidwell Number 25- 21 - 127 - 013

Zone District: _____ Lot Size: _____ sq. ft

Items Being Altered, Added or Removed (check all that apply)

- | | |
|---|---|
| <input type="checkbox"/> new residence (on vacant land) | <input type="checkbox"/> gutters & downspouts |
| <input type="checkbox"/> addition or alteration to residence | <input type="checkbox"/> awning or canopies |
| <input type="checkbox"/> new garage or accessory building | <input type="checkbox"/> basement egress |
| <input type="checkbox"/> addition or alteration to garage, carriage house or accessory building | <input type="checkbox"/> skylights, solar systems & roof accessories |
| <input type="checkbox"/> doors (including storm doors) | <input type="checkbox"/> satellite dishes |
| <input type="checkbox"/> garage or carriage house doors | <input type="checkbox"/> air conditioners, mechanical equipment |
| <input checked="" type="checkbox"/> windows | <input type="checkbox"/> fences, screen walls or retaining walls |
| <input type="checkbox"/> porches, steps | <input type="checkbox"/> paving |
| <input type="checkbox"/> roofs | <input type="checkbox"/> landscaping/ tree removal |
| <input type="checkbox"/> walls | <input type="checkbox"/> demolition or partial demo of residence |
| <input type="checkbox"/> substitute siding or trim | <input type="checkbox"/> demolition or partial demo of garage, carriage house or accessory buildings. |
| <input type="checkbox"/> painting, cleaning masonry or painting masonry | <input type="checkbox"/> other resource or item (explain) _____ |
| <input type="checkbox"/> chimneys | |

☐ The owner plans to apply to the State Historic Preservation Office for a State tax credit (check box)

I, the undersigned applicant, certifies that the above property has or will have, before the project competition date, a fire alarm system or a smoke alarm complying with the requirements of the Stille-DeRossett-Hale single state construction code act 1972 PA 230, MCL 125.1501 to 125.1531.

I, the undersigned applicant, have read Chapter 6, Article 8 of the Huntington woods City Code, the Secretary of the Interior's Standards for Rehabilitation, the Historic District Commissions Guidelines, have supplied all of the required information, and grants permission for the Historic District Commissioners and City staff to make an on-site inspection of the applicant's property for the purpose of gaining a better understanding of the work to be performed.

The Application Fee for Historic District Permit is \$300

Paul Wundel
Signature of Applicant

12/7/22
Date



47705 West Rd # 106
Wixom MI 48393

Historic District Commission

We are submitting an application for the window replacement at 26630 York Rd in the City of Huntington woods.

The current windows are original to the house that was built in 1950. The current windows are wood frame and sash with single pane glass & storm windows on the exterior.

The existing window sashes have rotted beyond repair, the glass stops are falling off, some of the sashes do not lock and are hard to operate, some are unsafe due to broken balance systems, and most if not all leak air. The original lead paint is also flaking off which proposes health concerns.

All of the windows are single pane glass which are not energy efficient.

We are proposing to replace them with Marvin Infinity White fiberglass double pane window that are more energy efficient than the current windows. The replacement windows will keep the same look for years to come and they are maintenance free. There are no size alterations that will be made.

Fiberglass windows are made of fibers of glass which is made of silica sand and are maintenance free unlike wood windows can not rot.

We will remove the existing sash and components and insert the new window into the current window frame.

The exterior look will not change, the modern check rails in the windows will be a 50/50 split throughout the house.

We are seeking approval and or a variance for the replacement windows to be of fiberglass material.

We have enclosed pictures of other homes in the current historical district neighborhood that have either vinyl or fiberglass window replacements. (We have attached pictures)

PG 1-8 current house photos PG 9-11 Sash distortion PG 12-25 Window sizes PG 26-27 Mkt Material

PG 28-36 current homes in the neighborhood with vinyl windows

Sincerely

Paul Windel
General Manager

Fw: Neff 503546-1 pics

Geoff Bekemeyer <gbekemeyer@windowpro.com>

Wed 12/7/2022 3:14 PM

To: James Grebeck <jgrebeck@windowpro.com>

From: gbekemeyer@gmail.com <gbekemeyer@gmail.com>

Sent: Thursday, October 6, 2022 7:57 AM

To: Geoff Bekemeyer <gbekemeyer@windowpro.com>

Subject: Neff 503546-1 pics













Sent from my iPhone











GLOBAL SPECS

The following product and option choices were designated as part of this project's Global Spec. Global Specs can be over-ridden on a line item basis. Exceptions to the specification are outlined in Line Item Quotes. Please proof all units thoroughly to ensure accuracy.

Infinity Spec



Window Screens - Screen Type

Extruded Half Screen

Neff, John

503546-1

Quote #: C6LLAE7

A Proposal for Window and Door Products prepared for:

Job Site:
48070

Shipping Address:

WINDOW PRO-WIXOM
47705 West Rd Ste B-106
Wixom, MI 48393-4738

Project Description:

Insert, white/white

Featuring products from:



JASON RIBITS
WINDOW PRO-WIXOM
47705 WEST RD STE B-106
WIXOM, MI 48393-4738
Phone: (773) 972-7385

Email: jribits@windowpro.com

This report was generated on 10/11/2022 10:11:15 AM using the Marvin Order Management System, version 0003.16.01 (Current). Price in USD. Unit availability and price are subject to change. Dealer terms and conditions may apply.

UNIT SUMMARY

The following is a schedule of the windows and doors for this project. For additional unit details, please see Line Item Quotes.

Additional charges, tax or Terms and Conditions may apply. Detail pricing is per unit.

NUMBER OF LINES: 19

TOTAL UNIT QTY: 19

LINE	MARK UNIT	PRODUCT LINE	ITEM	QTY
1	101 Den Front Left	Infinity	Insert Double Hung IO 20" X 65 5/8" Entered as Inside Opening 20" X 65 5/8"	1
2	102 Den Front Middle	Infinity	Insert Double Hung Picture IO 39 3/4" X 65 5/8" Entered as Inside Opening 39 3/4" X 65 5/8"	1
3	103 Den Front Right	Infinity	Insert Double Hung IO 20" X 65 5/8" Entered as Inside Opening 20" X 65 5/8"	1
4	104 Den Side	Infinity	Insert Double Hung IO 36" X 53 3/4" Entered as Inside Opening 36" X 53 3/4"	1
5	105 Kitchen Dining Front	Infinity	Insert Double Hung IO 20" X 65 5/8" Entered as Inside Opening 20" X 65 5/8"	1
6	106 Kitchen Dining front	Infinity	Insert Double Hung Picture IO 39 3/4" X 65 5/8" Entered as Inside Opening 39 3/4" X 65 5/8"	1
7	107 Kitchen Dining front	Infinity	Insert Double Hung IO 20" X 65 5/8" Entered as Inside Opening 20" X 65 5/8"	1
8	108 Kitchen Dining Side	Infinity	Insert Double Hung IO 36" X 53 5/8" Entered as Inside Opening 36" X 53 5/8"	1
9	109 Kitchen Back	Infinity	Insert Double Hung IO 44" X 49 1/2" Entered as Inside Opening 44" X 49 1/2"	1
10	110 Back Half Bath	Infinity	Insert Double Hung IO 24" X 45 5/8" Entered as Inside Opening 24" X 45 5/8"	1
11	211 Stairwell	Infinity	Insert Double Hung IO 36" X 53 5/8" Entered as Inside Opening 36" X 53 5/8"	1
12	212 Master Bath	Infinity	Insert Double Hung IO 28" X 45 5/8" Entered as Inside Opening 28" X 45 5/8"	1
13	213 Master Side	Infinity	Insert Double Hung IO 36" X 53 5/8" Entered as Inside Opening 36" X 53 5/8"	1

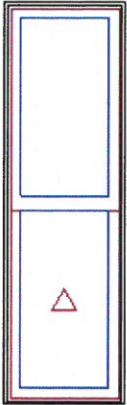
14	214 Master Front	Infinity	Insert Double Hung IO 44" X 53 5/8" Entered as Inside Opening 44" X 53 5/8"	1
15	215 Bed 1 Front	Infinity	Insert Double Hung IO 44" X 53 5/8" Entered as Inside Opening 44" X 53 5/8"	1
16	216 Bed 1 Side	Infinity	Insert Double Hung IO 28" X 53 5/8" Entered as Inside Opening 28" X 53 5/8"	1
17	217 Bed 2 Side	Infinity	Insert Double Hung IO 28" X 53 5/8" Entered as Inside Opening 28" X 53 5/8"	1
18	218 Bed 2 Rear	Infinity	Insert Double Hung IO 28" X 53 5/8" Entered as Inside Opening 28" X 53 5/8"	1
19	219 Hall Bath	Infinity	Insert Double Hung IO 28" X 45 1/2" Entered as Inside Opening 28" X 45 1/2"	1

LINE ITEM QUOTES

The following is a schedule of the windows and doors for this project. For additional unit details, please see Line Item Quotes. Additional charges, tax or Terms and Conditions may apply. Detail pricing is per unit.

Line #1	Mark Unit: 101 Den Front Left			
Qty: 1				

INFINITY
from MARVIN
REPLACEMENT WINDOWS



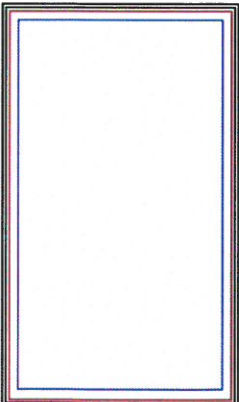
As Viewed From The Exterior

Entered As: IO
FS 19 5/8" X 65 3/8"
IO 20" X 65 5/8"

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 20" X 65 5/8"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift
Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

Line #2	Mark Unit: 102 Den Front Middle			
Qty: 1				

INFINITY
from MARVIN
REPLACEMENT WINDOWS



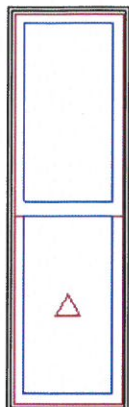
As Viewed From The Exterior

Entered As: IO
FS 39 3/8" X 65 3/8"
IO 39 3/4" X 65 5/8"

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung Picture
Inside Opening 39 3/4" X 65 5/8"
IG - 1 Lite
Tempered Low E2 w/Argon
Stainless Perimeter Bar
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

Line #3	Mark Unit: 103 Den Front Right			
Qty: 1				

INFINITY
by MARVIN
REPLACEMENT WINDOWS



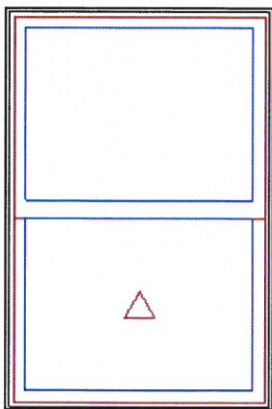
As Viewed From The Exterior

Entered As: IO
FS 19 5/8" X 65 3/8"
IO 20" X 65 5/8"

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 20" X 65 5/8"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift
Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

Line #4	Mark Unit: 104 Den Side			
Qty: 1				

INFINITY
by MARVIN
REPLACEMENT WINDOWS



As Viewed From The Exterior

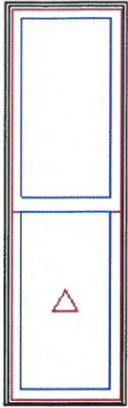
Entered As: IO
FS 35 5/8" X 53 1/2"
IO 36" X 53 3/4"

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 36" X 53 3/4"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift
Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

Line #5	Mark Unit: 105 Kitchen Dining Front			
Qty: 1				

INFINITY
by MARVIN
REPLACEMENT WINDOWS

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 20" X 65 5/8"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar



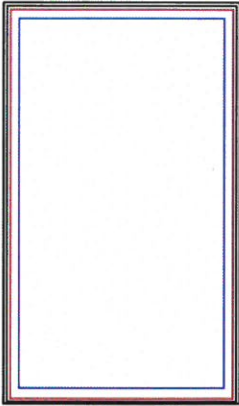
As Viewed From The Exterior

Entered As: IO
FS 19 5/8" X 65 3/8"
IO 20" X 65 5/8"

White Weather Strip Package
White Sash Lock
White Sash Lift
Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jamb
***Note: Unit Availability and Price is Subject to Change

Line #6	Mark Unit: 106 Kitchen Dining front			
Qty: 1				

INFINITY
from **MARVIN**
REPLACEMENT WINDOWS



As Viewed From The Exterior

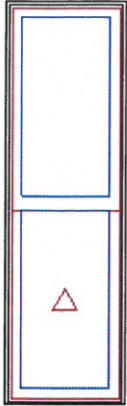
Entered As: IO
FS 39 3/8" X 65 3/8"
IO 39 3/4" X 65 5/8"

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung Picture
Inside Opening 39 3/4" X 65 5/8"
IG - 1 Lite
Tempered Low E2 w/Argon
Stainless Perimeter Bar
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jamb
***Note: Unit Availability and Price is Subject to Change

Line #7	Mark Unit: 107 Kitchen Dining front			
Qty: 1				

INFINITY
from **MARVIN**
REPLACEMENT WINDOWS

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 20" X 65 5/8"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift



Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

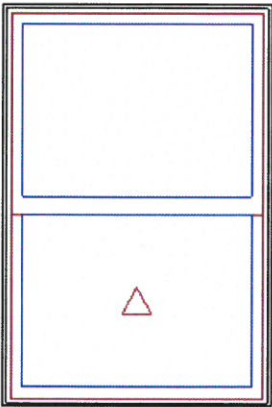
As Viewed From The Exterior

Entered As: IO
FS 19 5/8" X 65 3/8"
IO 20" X 65 5/8"

Line #8
Qty: 1

Mark Unit: 108 Kitchen Dining Side

INFINITY
by MARVIN
REPLACEMENT WINDOWS



As Viewed From The Exterior

Entered As: IO
FS 35 5/8" X 53 3/8"
IO 36" X 53 5/8"

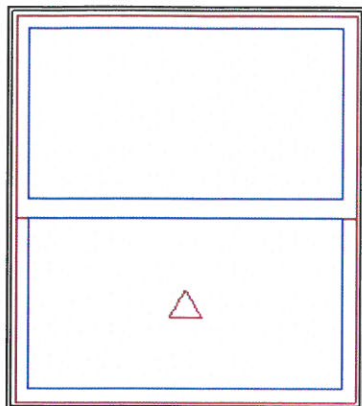
Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 36" X 53 5/8"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift
Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

Line #9
Qty: 1

Mark Unit: 109 Kitchen Back

INFINITY
by MARVIN
REPLACEMENT WINDOWS

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 44" X 49 1/2"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift



As Viewed From The Exterior

Entered As: IO

FS 43 5/8" X 49 1/4"

IO 44" X 49 1/2"

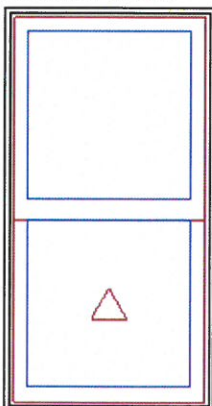
Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

Line #10

Mark Unit: 110 Back Half Bath

Qty: 1

INFINITY
by MARVIN
REPLACEMENT WINDOWS



As Viewed From The Exterior

Entered As: IO

FS 23 5/8" X 45 3/8"

IO 24" X 45 5/8"

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 24" X 45 5/8"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 Obscure w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift
Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

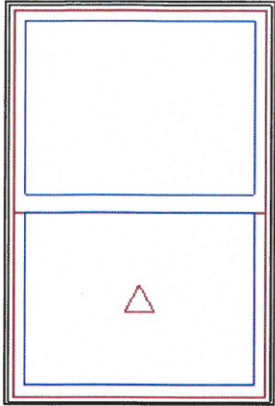
Line #11

Mark Unit: 211 Stairwell

Qty: 1

INFINITY
by MARVIN
REPLACEMENT WINDOWS

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 36" X 53 5/8"
Top Sash
IG - 1 Lite
STC/OITC Tempered Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
STC/OITC Tempered Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift



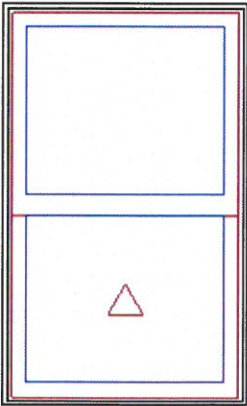
As Viewed From The Exterior

Entered As: IO
FS 35 5/8" X 53 3/8"
IO 36" X 53 5/8"

Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

Line #12	Mark Unit: 212 Master Bath			
Qty: 1				

INFINITY
by MARVIN
REPLACEMENT WINDOWS



As Viewed From The Exterior

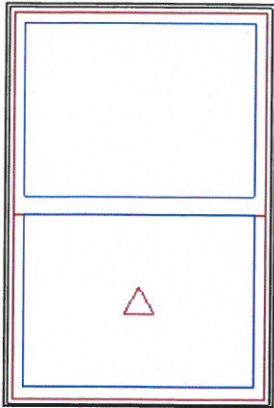
Entered As: IO
FS 27 5/8" X 45 3/8"
IO 28" X 45 5/8"

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 28" X 45 5/8"
Top Sash
IG - 1 Lite
STC/OITC Tempered Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
STC/OITC Tempered Low E2 Obscure w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift
Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

Line #13	Mark Unit: 213 Master Side			
Qty: 1				

INFINITY
by MARVIN
REPLACEMENT WINDOWS

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 36" X 53 5/8"
Top Sash
IG - 1 Lite
Tempered Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Tempered Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift



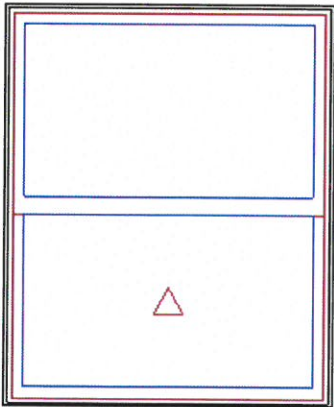
As Viewed From The Exterior

Entered As: IO
FS 35 5/8" X 53 3/8"
IO 36" X 53 5/8"

Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jamb
***Note: Unit Availability and Price is Subject to Change

Line #14	Mark Unit: 214 Master Front			
Qty: 1				

INFINITY
from **MARVIN**
REPLACEMENT WINDOWS



As Viewed From The Exterior

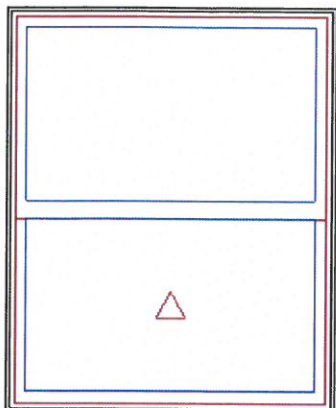
Entered As: IO
FS 43 5/8" X 53 3/8"
IO 44" X 53 5/8"

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 44" X 53 5/8"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift
Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jamb
***Note: Unit Availability and Price is Subject to Change

Line #15	Mark Unit: 215 Bed 1 Front			
Qty: 1				

INFINITY
from **MARVIN**
REPLACEMENT WINDOWS

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 44" X 53 5/8"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift



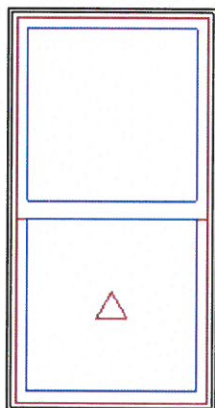
As Viewed From The Exterior

Entered As: IO
FS 43 5/8" X 53 3/8"
IO 44" X 53 5/8"

Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

Line #16	Mark Unit: 216 Bed 1 Side			
Qty: 1				

INFINITY
from MARVIN
REPLACEMENT WINDOWS



As Viewed From The Exterior

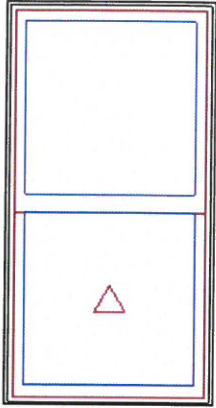
Entered As: IO
FS 27 5/8" X 53 3/8"
IO 28" X 53 5/8"

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 28" X 53 5/8"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift
Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

Line #17	Mark Unit: 217 Bed 2 Side			
Qty: 1				

INFINITY
from MARVIN
REPLACEMENT WINDOWS

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 28" X 53 5/8"
Top Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift



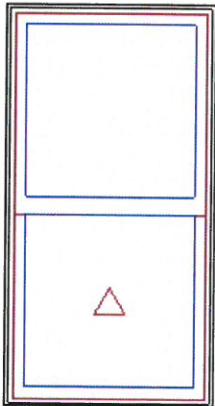
As Viewed From The Exterior

Entered As: IO
FS 27 5/8" X 53 3/8"
IO 28" X 53 5/8"

Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jamb
***Note: Unit Availability and Price is Subject to Change

Line #18	Mark Unit: 218 Bed 2 Rear			
Qty: 1				

INFINITY
by MARVIN
REPLACEMENT WINDOWS



As Viewed From The Exterior

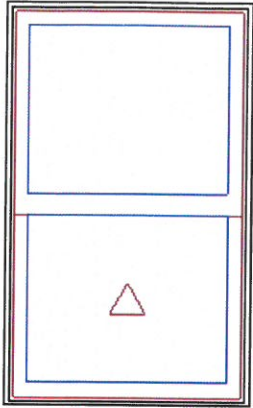
Entered As: IO
FS 27 5/8" X 53 3/8"
IO 28" X 53 5/8"

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 28" X 53 5/8"
Top Sash
IG - 1 Lite
STC/OITC Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
STC/OITC Low E2 w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift
Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jamb
***Note: Unit Availability and Price is Subject to Change

Line #19	Mark Unit: 219 Hall Bath			
Qty: 1				

INFINITY
by MARVIN
REPLACEMENT WINDOWS

Stone White Exterior
Stone White Interior
Infinity Insert Double Hung
Inside Opening 28" X 45 1/2"
Top Sash
IG - 1 Lite
STC/OITC Tempered Low E2 w/Argon
Stainless Perimeter Bar
Bottom Sash
IG - 1 Lite
STC/OITC Tempered Low E2 Obscure w/Argon
Stainless Perimeter Bar
White Weather Strip Package
White Sash Lock
White Sash Lift



Fixed Upper Sash
Extruded Half Screen
Stone White Surround
Bright View Mesh
Existing Sill Angle 0
Is the existing Sill Angle of 0 degrees correct?
3 1/4" Jambs
***Note: Unit Availability and Price is Subject to Change

As Viewed From The Exterior

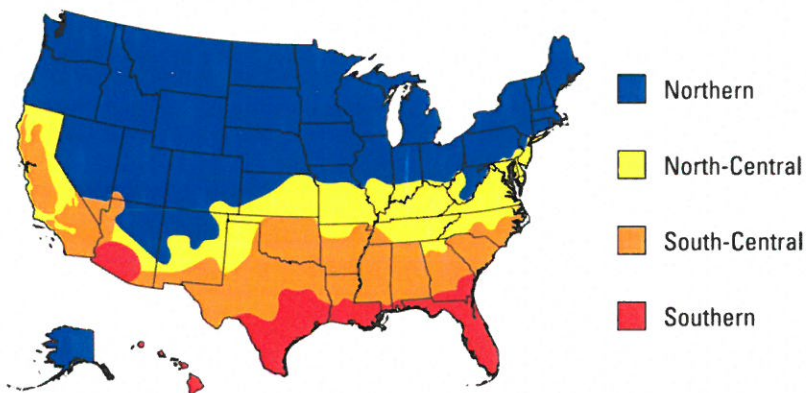
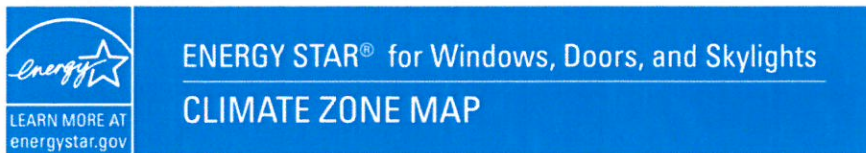
Entered As: IO
FS 27 5/8" X 45 1/4"
IO 28" X 45 1/2"

PRODUCT AND PERFORMANCE INFORMATION

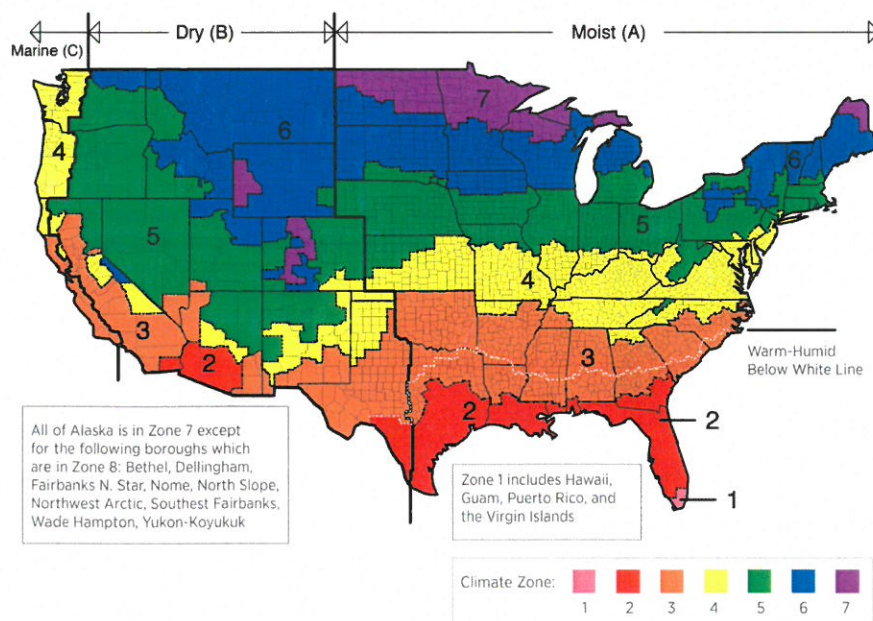
NFRC energy ratings and values may vary depending on the exact configuration of glass thickness used on the unit. This data may change over time due to ongoing product changes or updated test results or requirements.

The National Fenestration Rating Council (NFRC) has developed and operates a uniform national rating system for the energy performance of fenestration products, including windows and doors. For additional information regarding this rating system, see www.nfrc.org.

Review the map below to determine if your units meet ENERGY STAR for your location.



International Energy Conservation Code (IECC) Climate Regions



MATERIALS MATTER

Ultrex fiberglass outperforms vinyl and wood

We created Ultrex with one goal in mind: develop the most durable window material in the industry. It's not only 8 times stronger than vinyl — it resists expanding and contracting in any climate. So you get a tight, snug fit that will last.

Ultrex vs. Wood Windows

Wood windows offer classic beauty that, depending on the environment, can require maintenance and care. Infinity windows capture the beautiful details and profiles of wood - without the maintenance.



SUSTAINABILITY

GREEN WITH ENVY

- ♦ **Ultrex®** is made of silica sand, an abundant natural resource



- ♦ Requires 39% less energy to produce than vinyl
- ♦ Our commitment to sustainability extends to the recycling and reuse of materials, resourceful and responsible manufacturing practices and environmentally conscious product design

NEW WINDOWS
WITH COIL

10F9

DONE BY OTHERS

SEE ALL
ATTACHMENT PICS

