verizon

THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. § 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION, REMOVAL, AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR § 1.61000 (B)(7).

STRUCTURAL PARAMETERS	
RISK CATEGORY:	II
WIND SPEED (V_{ULT} 3-S GUST):	120 MPH
ICE WIND SPEED:	30 MPH
ICE THICKNESS:	0.25"
EXPOSURE CATEGORY:	C
TOPOGRAPHIC FACTOR:	1
SERVICE WIND SPEED:	30 MPH
SITE SOIL CLASS:	D
SEISMIC DESIGN CATEGORY:	A
S_S: 0.080 S_1: 0.048	

VERIZON SITE NAME: MASON SW
SITE TYPE: GUYED TOWER
TOWER HEIGHT: 300'-0"
LAT: 29° 57' 2.96" N
LONG: 82° 38' 59.54" W

ATC SITE: 416988
SITE ADDRESS: 5 SW CUMORAH HILL RD
FT. WHITE, FL 32024
COUNTY: COLUMBIA
JURISDICTION: COLUMBIA COUNTY

SITE INFORMATION

PROPERTY INFORMATION:

SITE ADDRESS:	5 SW CUMORAH HILL RD FT. WHITE, FL 32024
COUNTY:	COLUMBIA
LATITUDE (NAD83):	29° 57' 2.96" N (29.950822°)
LONGITUDE (NAD83):	82° 38' 59.54" W (-82.649872°)
GROUND ELEVATION (NAVD88):	±102.0' AMSL
JURISDICTION:	COLUMBIA COUNTY
APN:	TBD
ZONING:	TBD
OCCUPANCY CLASSIFICATION:	U
LEGAL DESCRIPTION:	SEE SHEET A-1

CONSTRUCTION INFORMATION:

AREA OF CONSTRUCTION:	EXISTING
TYPE OF CONSTRUCTION:	V-B
PROPOSED USE:	UNMANNED TELECOMMUNICATIONS FACILITY
HANDICAP REQUIREMENTS:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.

PROPERTY OWNER:

COMPANY:	JOHNNY W ABRAMS JR
ADDRESS:	2912 HWY 82
CITY, STATE, ZIP:	MIDWAY, AL 36053

TOWER OPERATOR:

COMPANY:	AMERICAN TOWER CORPORATION
ADDRESS:	900 CIRCLE 75 PKWY, SUITE 300
CITY, STATE, ZIP:	ATLANTA, GA 30339
CONTACT:	FRITZ LOVELACE
PHONE:	(770) 330-5496
E-MAIL:	frederick.lovelace@americantower.com

APPLICANT:

COMPANY:	VERIZON
ADDRESS:	5901 BENJAMIN CENTER DR, SUITE 110 A-B
CITY, STATE, ZIP:	TAMPA, FL 33634
CONTACT:	--
PHONE:	--
E-MAIL:	--

PROJECT TEAM

ARCHITECTURAL & ENGINEERING:

COMPANY:	INFINIGY ENGINEERING, PLLC
CONTACT:	PAUL DANNEBERG
PHONE:	(206) 375-3798
E-MAIL:	pdanneberg@infinigy.com

SITE ACQUISITION:

COMPANY:	INFINIGY SOLUTIONS, LLC
CONTACT:	ELIZABETH LEE
PHONE:	(407) 928-3219
E-MAIL:	ediaz@infinigy.com

ATC PROJECT MANAGER:

COMPANY:	AMERICAN TOWER CORPORATION
ADDRESS:	900 CIRCLE 75 PKWY, SUITE 300
CITY, STATE, ZIP:	ATLANTA, GA 30339
CONTACT:	FRITZ LOVELACE
PHONE:	(770) 330-5496
E-MAIL:	frederick.lovelace@americantower.com

SHEET INDEX

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

APPROVALS

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

	APPROVAL:	SIGNATURE:	DATE:
	PROJECT MANAGER		
	SITE ACQUISITION		
	CONSTRUCTION MANAGER		
	SITE OWNER		
VERIZON	RF ENGINEER		
VERIZON	DEVELOPMENT MANAGER		
VERIZON	CONSTRUCTION MANAGER		
VERIZON	OPS MANAGER		
VERIZON	REGULATORY REVIEW		
VERIZON	PROJECT MANAGER		

VICINITY MAP

SITE PHOTO

DRIVING DIRECTIONS FROM VERIZON LOCAL OFFICE (5901 BENJAMIN CENTER DR, SUITE 110 A-B,TAMPA, FL 33634): HEAD WEST ON BENJAMIN CENTER DR; TURN RIGHT ONTO BENJAMIN CENTER CT; TURN RIGHT ONTO JOHNS RD; TURN RIGHT ONTO W SLIGH AVE; TAKE THE RAMP ON THE LEFT FOR I-275 N; BEAR RIGHT ONTO I-75 N; HEAD RIGHT ON THE RAMP FOR US-41 / US-441 TOWARD HIGH SPRINGS / LAKE CITY; BEAR RIGHT, THEN TURN LEFT ONTO US-41 S / US-441 S / FL-25 / S US HIGHWAY 441; TURN RIGHT ONTO SW TOMMY LITES ST; TURN LEFT ONTO SW TUSTENUGGEE AVE / COUNTY HWY-131; TURN RIGHT ONTO SW CUMORAH HILL ST; SITE WILL BE ON THE LEFT: 5 SW CUMORAH HILL RD, FT. WHITE, FL 32024

PROJECT DESCRIPTION

VERIZON PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATIONS FACILITY AS FOLLOWS:

TOWER SCOPE OF WORK:
- REMOVE (6) PANEL ANTENNAS
- REMOVE (8) 1-5/8" COAX CABLES
- REMOVE (1) WEATHERVANE, (2) RRU'S, & (2) JUNCTION BOXES
- REMOVE (2) 1/2" COAX CABLES & (1) CONTROL CABLE
- INSTALL (6) MX06FRO860-02 & (3) AIR6449 B77 PANEL ANTENNAS
- INSTALL (3) 4449 & (3) 8843 RRU'S
- INSTALL (2) RCMDC-6627-PF-48 OVP'S
- INSTALL (2) 12x24 HYBRID CABLES

GROUND SCOPE OF WORK:
- REMOVE (2) CABINETS, (6) RUS'S & (6) RUL'S
- REMOVE (1) 30kW PROPANE GENERATOR
- REMOVE (1) ATS
- INSTALL (1) DC PLANT CABINET
- INSTALL (1) 50kW PROPANE GENERATOR
- INSTALL (1) ATS

DESIGN IS BASED ON: ATC APPLICATION ID 14137966, REV. #0
RFDS VERSION N/A, DATED 7/01/2021
THESE PLANS HAVE BEEN DEVELOPED FOR THE MODIFICATION OF AN UNMANNED TELECOMMUNICATIONS FACILITY OWNED OR LEASED BY VERIZON IN ACCORDANCE WITH THE PROVIDED SCOPE OF WORK, INCORPORATED IN THE PLANS BY INFINIGY. THESE PLANS ARE NOT FOR CONSTRUCTION UNLESS STAMPED & SIGNED, & ACCOMPANIED BY A PASSING STRUCTURAL STABILITY ANALYSIS FOR THE STRUCTURE AND MOUNT PREPARED BY A LICENSED PROFESSIONAL ENGINEER.

CODE COMPLIANCE

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

1. 2020 FLORIDA BUILDING CODE, 7TH EDITION
2. ANSI/TIA-222-H
3. 7TH EDITION FLORIDA FIRE PREVENTION CODE (NFPA 70)
4. 2017 NATIONAL ELECTRICAL CODE
5. CITY/COUNTY ORDINANCES

Christopher J Warren
2023.02.01 15:49:36 '00

This item has been electronically signed and sealed by Christopher J Warren, P.E., FL License #59739 using a digital signature and date. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

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verizon

AMERICAN TOWER CORPORATION

INFINIGY

BELLEVUE, WA 98004

VERIZON SITE:
MASON SW

ATC SITE:
416988
MASON SW FL

5 SW CUMORAH HILL RD
FT. WHITE, FL 32024
COLUMBIA COUNTY

300'-0" GUYED TOWER

DRAWINGS ISSUED FOR:

REV.	DATE	DRAWN	DESCRIPTION	QA/QC
A	09/16/22	RCD	PRELIMINARY REVIEW	PD
0	02/01/23	CES	ISSUED FOR CONSTRUCTION	PHR

CHRISTOPHER J WARREN LICENSE No 59739 2/1/23 STATE OF FLORIDA PROFESSIONAL ENGINEER

SHEET TITLE:
TITLE SHEET

SHEET NUMBER: T-1

REVISION: 0

A. GENERAL

1. ALL PAINT PRODUCT LINES SHALL BE SHERWIN WILLIAMS UNLESS SPECIFICALLY NOTED OTHERWISE BY VERIZON.

2. CONTRACTOR SHALL PREPARE ALL SURFACES AND APPLY ALL FINISHES PER LATEST EDITION OF MANUFACTURER'S SPECIFICATIONS.

3. COMPLY WITH MANUFACTURER'S WRITTEN INSTRUCTIONS REGARDING SUFFICIENT DRYING TIME BETWEEN COATS WITH PROVISIONS AS RECOMMENDED BY MANUFACTURER FOR EXISTING WEATHER CONDITIONS.

4. FINISH COLOR AND TEXTURE OF ALL PAINTED SURFACES SHALL MATCH EXISTING ADJACENT SURFACES UNLESS OTHERWISE NOTED BY VERIZON.

5. ALL PAINT MATERIAL DATA SHEETS SHALL BE PROVIDED TO THE VERIZON CONSTRUCTION MANAGER.

6. PREPARE PREVIOUSLY PAINTED SURFACE BY LIGHT SANDING WITH 400 GRIT SANDPAPER AND NON-HYDROCARBON WASH. PREPARE GALVANIZED SURFACES BY ACID ETCH OR SOLVENT CLEANING IN ACCORDANCE WITH SSPC-SP1.

7. FURNISH DROP CLOTHS, SHIELDS, MASKING AND OTHER PROTECTIVE METHODS TO PREVENT SPRAY OR DROPPINGS FROM DAMAGING ADJACENT SURFACES AND FACILITIES.

8. APPLY PAINT BY AIRLESS SPRAY, SANDING LIGHTLY BETWEEN EACH SUCCEEDING ENAMEL COAT ON FLAT SURFACES. APPLY MATERIAL TO ACHIEVE A COATING NO THINNER THAN THE DRY FILM THICKNESS INDICATED.

9. APPLY BLOCK FILTER TO CONCRETE BLOCK CONSTRUCTION AND ENSURE COMPLETE COVERAGE WITH PORES COMPLETELY FILLED.

10. CONTRACTOR SHALL CORRECT RUNS, SAGS, MISSES AND OTHER DEFECTS INCLUDING INADEQUATE COVERAGE AS DIRECTED BY THE VERIZON CONSTRUCTION MANAGER. REPAINT AS NECESSARY TO ACHIEVE SURFACES THAT ARE SMOOTH, EVENLY COATED WITH UNIFORM SHEEN AND FREE FROM BLEMISHES.

B. PAINTING SCOPE

1. PAINT THE FOLLOWING MATERIALS AND SYSTEMS CHECKED BELOW WITH THE COATING SYSTEM INDICATED.

PAINTING SCOPE				
SURFACE TO BE PAINTED	COATING SYSTEM	PAINT	DO NOT PAINT	N/A
BTS UNIT				X
ALL EQUIPMENT & CABINETS OTHER THAN THE BTS UNIT				X
ANTENNA COVERS, TILT BRACKETS, MOUNTING BRACKETS AND ASSOCIATED HARDWARE, CABLE AND CABLE COVERS EXPOSED TO VIEW, EXPOSED CONDUIT AND HANGERS, ETC.	SEE PLANS	SEE PLANS		
FLASHING UNITS, METAL TRIM AND OTHER METAL SURFACES				X
STUCCO, CONCRETE, CONCRETE BLOCK AND CEMENTIOUS TYPE FINISH SYSTEMS.				X
PLYWOOD, LUMBER AND WOOD TRIM INCLUDING THE BACK SIDE OF ALL SCREEN WALLS				X
DRYWALL				X
CONCRETE POLES				X
METAL POLES AND METAL POLE STAND-OFF				X

C. COATING SYSTEM SPECIFICATIONS

1. DTM ACRYLIC COATING (SERIES B66) BY SHERWIN WILLIAMS CO. 1MIL DFT PER COAT APPLIED IN TWO COATS OVER DTM BONDING PRIMER (B66A50).

2. 100% ACRYLIC, LATEX COATING EQUIVALENT TO A-100 (SERIES A-82) BY SHERWIN WILLIAMS CO. 1 MIL DFT PER COAT APPLIED IN TWO COATS OVER SPECIFIED PRIMER.

D. PAINT & PRIMER

ANTENNAS
- PRIMER: KEM AQUA E61-W525
- TOPCOAT: COROTHANE II B65W200/B60V22

BTS CABINET
- PRIMER: KEM AQUA E61-W525
- TOPCOAT: COROTHANE II B65W200/B60V22

COAXIAL JUMPER CABLES
- PRIMER: AS REQUIRED FOR ADHESION. APPLY ONE COAT OF KEM AQUA WATER REDUCIBLE PRIMER E61W25 REDUCED 25%
- TOPCOAT: 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

RAW STEEL
- PRIMER: KEM BOND HS B50WZ4, DMT ACRYLIC PRIMER
- TOPCOAT: 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

GALVANIZED METAL
- ACID ETCH WITH COMMERCIAL ETCH OR VINEGAR PRIMER COAT AND FINISH COAT (GALVITE HIGH SOLIDS OR DTM PRIMER/FINISH)

STAINLESS STEEL
- PRIMER: OTM WASH PRIMER, B71Y1
- TOPCOAT: 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

PRE-PRIMED STEEL
- TOUCH UP ANY RUST OR UN-PRIMED STEEL WITH KEM BOND HS, SS0WZ4

ALUMINUM & COPPER
- PRIMER: DTM WASH PRIMER, B71Y1
- TOPCOAT: 2 COATS COROTHANE II POLYURETHANE B65W200/B60V2

CONCRETE MASONRY
- PRIMER: PRO MAR EXTERIOR BLOCK FILLER
- TOPCOAT: 2 COATS A-100 LATEX HOUSE & TRIM, SHEEN TO MATCH

CONCRETE STUCCO (EXISTING)
- 2 COATS A-100 LATEX HOUSE & TRIM, SHEEN TO MATCH

STUCCO
- PRIMER: PRO MAR MASONRY CONDITIONER B-46-W21000
- TOPCOAT: SUPERPAINT A-80 SERIES A-89 SATIN A-84 GLOSS

WOOD
- PRIMER: A-100 EXTERIOR ALKYD WOO9D PRIMER Y-24W20
- TOPCOAT: 2 COATS A-100 LATEX HOUSE & TRIM SHEEN TO MATCH ADJACENT SURFACES

2 PAINT SPECIFICATIONS

1. THE LATEST EDITION OF THE AMERICAN INSTITUTE OF ARCHITECTS DOCUMENT A201 "GENERAL CONDITIONS OF THE CONTRACT FOR CONSTRUCTION" ARE INCLUDED IN THESE SPECIFICATIONS AS IF COMPLETELY REPRODUCED HEREIN.

2. THIS FACILITY IS AN UNOCCUPIED PCS TELECOMMUNICATIONS SITE AND IS EXEMPT FROM ADA ACCESS REQUIREMENTS.

3. PRIOR TO SUBMISSION OF BIDS, THE CONTRACTORS PARTICIPATING SHALL VISIT THE JOB SITE WITH THE CONSTRUCTION AND CONTRACT DOCUMENTS TO CONFIRM THAT THE PROJECT CAN BE ACCOMPLISHED AS DESIGNED HEREIN, AS WELL AS TO FAMILIARIZE THEMSELVES WITH ALL FIELD CONDITIONS AFFECTING THE PROPOSED PROJECT INCLUDING DEMOLITION, ELECTRICAL, MECHANICAL AND STRUCTURAL INSTALLATIONS PRIOR TO PROCEEDING WITH CONSTRUCTION. SHOULD ANY ERRORS, OMISSION, OR DISCREPANCIES BE FOUND, THE GENERAL CONTRACTOR SHALL IMMEDIATELY NOTIFY IN WRITING, THE VERIZON CONSTRUCTION MANAGER AND THE ARCHITECT.

4. IN THE EVENT OF DISCREPANCIES WITHIN THESE DRAWINGS, THE CONTRACTOR SHALL INCLUDE THE MORE COSTLY OR EXTENSIVE WORK IN THE BID, UNLESS SPECIFICALLY DIRECTED OTHERWISE BY VERIZON. IF A DISCREPANCY EXISTS AND THE PROJECT MANAGER AND ARCHITECT ARE NOT NOTIFIED, THE GENERAL CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL COSTS INCURRED TO REPAIR OR CORRECT ALL PROBLEMS THAT RESULT.

5. THESE DRAWINGS SHALL NOT BE SCALED AS THESE DRAWINGS ARE INTENDED TO BE FOR DIAGRAMMATIC PURPOSES ONLY. FIGURED DIMENSIONS HAVE PRECEDENCE OVER DRAWING SCALE AND DETAIL DRAWINGS HAVE PRECEDENCE OVER SMALL SCALE DRAWINGS. CONTRACTOR SHALL CHECK THE ACCURACY OF ALL DIMENSIONS IN THE FIELD. UNLESS SPECIFICALLY NOTED, DO NOT FABRICATE ANY MATERIALS, OR BEGIN ANY CONSTRUCTION UNTIL THE ACCURACY OF DRAWING DIMENSIONS HAS BEEN VERIFIED AGAINST ACTUAL FIELD DIMENSIONS.

6. THE CONTRACTOR SHALL INCLUDE IN HIS OR HER BID ALL MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE THE WORK AS INDICATED OR IMPLIED BY THESE DRAWINGS.

7. CONTRACTOR SHALL NOTIFY THE VERIZON CONSTRUCTION MANAGER, THE PROPERTY OWNER AND THE ARCHITECT IF ANY DETAILS ARE CONSIDERED IMPRACTICAL, UNSUITABLE, UNSAFE, NOT WATERPROOF, OR NOT WITHIN CUSTOMARY TRADE PRACTICE. IF WORK IS PERFORMED, IT WILL BE ASSUMED THAT THERE IS NO OBJECTION TO ANY DETAIL. DETAILS ARE INTENDED TO SHOW THE END RESULT OF THE DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS, AND SHALL BE INCLUDED AS PART OF THE WORK.

8. EXISTING ELEVATIONS AND LOCATIONS SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION. IF THEY DIFFER FROM THOSE SHOWN ON THE PLANS, THE CONTRACTOR SHALL NOTIFY THE VERIZON CONSTRUCTION MANAGER AND THE ARCHITECT SO THAT MODIFICATIONS CAN BE MADE BEFORE PROCEEDING WITH THE WORK.

9. THE CONTRACTOR SHALL VERIFY ALL TELEPHONE & RADIO EQUIPMENT LAYOUTS, SPECIFICATIONS, PERFORMANCE, INSTALLATION AND FINAL LOCATIONS WITH VERIZON CONSTRUCTION MANAGER PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH ERICSSON RADIO SYSTEMS.

10. ALL SYMBOLS & ABBREVIATIONS USED ON THESE DRAWINGS ARE CONSIDERED CONSTRUCTION STANDARDS. IF THE CONTRACTOR HAS QUESTIONS REGARDING THEIR EXACT MEANING, THE VERIZON CONSTRUCTION MANAGER AND THE ARCHITECT SHALL BE NOTIFIED FOR CLARIFICATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK.

11. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS NECESSARY FOR PERFORMANCE OF THE WORK AND INCLUDE THOSE IN THE COST OF THE WORK TO VERIZON.

12. THE CONTRACTOR SHALL PROVIDE CONTINUOUS SUPERVISION AND DIRECT ALL WORK WHILE ANY SUBCONTRACTORS OR WORKERS ARE ONSITE, USING HIS OR HER BEST SKILL AND ATTENTION. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, SEQUENCES, AND COORDINATION OF ALL PORTIONS OF THE CONTRACTED WORK.

13. WORKMANSHIP THROUGHOUT SHALL BE OF THE BEST QUALITY OF THE TRADE INVOLVED, AND SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REFERENCE STANDARDS FOR QUALITY AND PROFESSIONAL CONSTRUCTION PRACTICE:

NRCA - NATIONAL ROOFING CONTRACTORS ASSOCIATION
O'HARE INTERNATIONAL CENTER
10255 W HIGGINS RD, SUITE 600
ROSEMONT, IL 60018-5607

SMACNA - SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
4201 LAFAYETTE CENTER DR
CHANTILLY, VA 20151-1219

IILP - INTERNATIONAL INSTITUTE FOR LATH AND PLASTER
820 TRANSFER RD
ST. PAUL, MN 55114-1406

14. INSTALL ALL EQUIPMENT AND MATERIALS PER THE LATEST EDITION OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS UNLESS OTHERWISE INDICATED BY VERIZON, OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

15. THE CONTRACTOR SHALL VERIFY, COORDINATE, AND PROVIDE ALL NECESSARY BLOCKING, BACKING, FRAMING, HANGERS OR OTHER SUPPORTS FOR ALL ITEMS.

16. THE CONTRACTOR AND ALL SUBCONTRACTORS SHALL GIVE ALL REQUIRED CONSTRUCTION NOTICES AND SHALL COMPLY WITH ALL APPLICABLE LOCAL CODES, REGULATIONS, LAWS AND ORDINANCES, AS WELL AS THE STATE DEPARTMENT OF INDUSTRIAL RELATIONS REGULATIONS, INCLUDING BUT NOT LIMITED TO THE DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (OSHA).

17. THE CONTRACTOR SHALL PROTECT ALL PROPERTY FROM DAMAGE THAT MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW AND EXISTING FINISHES, CONSTRUCTION, STRUCTURE, LANDSCAPING, CURBS, STAIRS, OR EQUIPMENT, ETC. SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF VERIZON AND THE PROPERTY OWNER'S REPRESENTATIVE, AT THE EXPENSE OF THE CONTRACTOR.

18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR, AND SHALL REPLACE OR REMEDY, ANY FAULTY, IMPROPER, OR INFERIOR MATERIALS OR WORKMANSHIP OR ANY DAMAGE WHICH SHALL APPEAR WITHIN ONE YEAR AFTER THE COMPLETION AND ACCEPTANCE OF THE WORK BY VERIZON UNDER THIS CONTRACT.

19. IT SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROTECT AND LOCATE, OR CONTACT AN OUTSIDE AGENCY TO LOCATE, ALL EXISTING UTILITIES REGARDLESS OF WHETHER OR NOT SHOWN HEREIN. THE CONTRACTOR SHALL BEAR ALL EXPENSES FOR THE REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGED IN CONJUNCTION WITH THE EXECUTION OF WORK.

20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE PROJECT SITE WHILE THE JOB IS IN PROGRESS AND UNTIL THE JOB IS COMPLETED AND ACCEPTED BY VERIZON.

21. THE CONTRACTOR SHALL PROVIDE TEMPORARY WATER, POWER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER, VERIZON, AND THE CITY OR GOVERNING AGENCY.

22. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR REDLINING THE CONSTRUCTION DOCUMENTS TO ILLUSTRATE THE AS-BUILT CONDITION OF THE SITE. THIS SHALL BE DONE AFTER THE SITE HAS BEEN AWARDED FINAL INSPECTION BY THE RESPONSIBLE BUILDING AGENCY. ONE SET OF REDLINED DRAWINGS SHALL BE PROVIDED TO THE VERIZON CONSTRUCTION MANAGER.

23. THE LATEST EDITION OF ALL PERMITTED AND APPROVED PLANS PERTAINING TO THIS PROJECT SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY WORKERS. ALL CONSTRUCTION SETS SHALL REFLECT THE SAME INFORMATION. THE CONTRACTOR SHALL ALSO MAINTAIN IN GOOD CONDITION, ONE COMPLETE SET OF PLANS WITH ALL REVISIONS, ADDENDA AND CHANGE ORDERS ON THE PREMISES AT ALL TIMES. THESE ARE TO BE UNDER THE CARE OF THE CONSTRUCTION SUPERINTENDENT.

24. THE CONTRACTOR SHALL REMOVE ALL RUBBISH AND WASTE MATERIALS ON A DAILY BASIS, EXCEPT FOR THAT SPECIFIED AS THE PROPERTY OF THE BUILDING OR PROPERTY OWNER AND SHALL EXERCISE STRICT CONTROL OVER SITE CLEANING THROUGHOUT CONSTRUCTION AND FINAL CLEAN-UP UPON COMPLETION OF WORK. ALL AREAS ARE TO BE LEFT IN A BROOM CLEAN CONDITION AT THE END OF EACH DAY THEN AT A VACUUM CLEAN CONDITION, FREE FROM PAINT SPOTS, DUST OR SMUDGES OF ANY NATURE AT COMPLETION OF WORK.

25. THE GENERAL CONTRACTOR MUST PERFORM WORK DURING PROPERTY OWNER'S PREFERRED HOURS TO AVOID DISRUPTION OF NORMAL ACTIVITY.

26. ALL EXPOSED METAL SHALL BE HOT-DIPPED GALVANIZED.

27. SEAL ALL PENETRATIONS THROUGH FIRE-RATED AREAS WITH U.L. LISTED OR FIRE MARSHALL APPROVED MATERIALS IF AND WHERE APPLICABLE TO THIS FACILITY AND PROJECT SITE.

28. PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF THE PROJECT AREA UNDER CONSTRUCTION.

29. ELECTRICAL POWER SYSTEM SHALL BE GROUNDED PER NEC ARTICLES 250 AND 810.

30. ALL NEW OPENINGS IN THE EXTERIOR ENVELOPE OF CONDITIONED SPACES SUCH AS AT WALL AND ROOF PENETRATIONS SHALL BE CAULKED OR SEALED TO LIMIT INFILTRATION OF AIR AND MOISTURE.

31. UPON COMPLETION OF CONSTRUCTION, VERIZON CONSTRUCTION MANAGER SHALL CONDUCT A WALK-THRU WITH PROPERTY OWNER OR REPRESENTATIVE OF PROPERTY OWNER.

32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL SYSTEM EQUIPMENT IN A CLEAN WORKING ORDER UNTIL ACCEPTANCE OF THE PROJECT BY VERIZON.

33. INSTALL ALL EQUIPMENT AND MATERIALS PER THE LATEST EDITION OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED, OR WHERE LOCAL CODES OR REGULATION TAKE PRECEDENCE.

1 GENERAL SPECIFICATIONS

verizon

AMERICAN TOWER CORPORATION

INFINIGY

BELLEVUE, WA 98004

VERIZON SITE:
MASON SW

ATC SITE:
416988
MASON SW FL

5 SW CUMORAH HILL RD
FT. WHITE, FL 32024
COLUMBIA COUNTY

300'-0" GUYED TOWER

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REV.	DATE	DRAWN	DESCRIPTION	QA/QC
A	09/16/22	RCD	PRELIMINARY REVIEW	PD
0	02/01/23	CES	ISSUED FOR CONSTRUCTION	PHR

CHRISTOPHER J WARREN
LICENSE
No 59739
2/1/23
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

SHEET TITLE:
SPECIFICATIONS
& NOTES

SHEET NUMBER: T-2

REVISION: 0

A. GENERAL

1. PRECEDENCE: UNLESS OTHERWISE SHOWN OR SPECIFIED, THE FOLLOWING GENERAL NOTES SHALL APPLY. INFORMATION ON THESE DRAWINGS SHALL HAVE THE FOLLOWING PRECEDENCE.

   A. ALL DIMENSIONS TO TAKE PRECEDENCE OVER SCALE SHOWN ON PLANS, SECTIONS AND DETAILS.

   B. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.

   C. MATERIAL NOTES AND SPECIFICATIONS ON THE DRAWINGS SHALL TAKE PRECEDENCE OVER THE SPECIFICATIONS.

2. OTHER TRADES: SEE THE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.

3. GENERAL DETAILS AND NOTES ON THESE SHEETS SHALL APPLY UNLESS SPECIFICALLY SHOWN OR NOTED OTHERWISE. CONSTRUCTION DETAILS NOT FULLY SHOWN OR NOTED SHALL BE SIMILAR TO DETAILS SHOWN FOR SIMILAR CONDITIONS.

4. SHORING: IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL ALL TEMPORARY BRACING AND SHORING TO INSURE THE SAFETY OF THE WORK UNTIL IT IS COMPLETED. THIS INCLUDES UNDERPINNING EXISTING FOOTINGS WHERE APPLICABLE.

5. SAFETY: THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. UNLESS OTHERWISE INDICATED, THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION.

6. WATERPROOFING: WATERPROOFING AND DRAINAGE DETAILS OR SPECIFICATIONS SHOWN IN THESE DRAWINGS ARE FOR GENERAL INFORMATIONAL PURPOSES ONLY. CONTRACTOR TO NOTIFY THE VERIZON CONSTRUCTION MANAGER AND THE ARCHITECT IF ANY INADEQUATE OR IMPROPER CONDITIONS.

B. STEEL

1. ALL STRUCTURAL STEEL SECTIONS AND WELDED PLATE MEMBERS SHALL CONFORM TO ASTM A-36 AND BE FABRICATED IN ACCORDANCE WITH THE SPECIFICATIONS OF THE AISC.

2. ALL BOLTS SHALL CONFORM TO ASTM A-307 UNLESS OTHERWISE NOTED ON PLANS. HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM A-325

3. STEEL PIPE COLUMNS SHALL BE GRADE "B" CONFORMING TO ASTM A53.

4. STEEL TUBING SHALL BE GRADE "B" CONFORMING TO ASTM A500.

5. ALL WELDING SHALL BE DONE BY THE SHIELDED ARC METHOD. ALL WELDERS SHALL BE PROPERLY QUALIFIED AND BE PRE-APPROVED. SURPLUS METAL SHALL BE DRESSED OFF TO SMOOTH, EVEN SURFACES WHERE WELDS ARE NOT EXPOSED TO VIEW. ALL WELDING SHALL COMPLY WITH THE LATEST A.W.S. SPECIFICATIONS.

6. THE FOLLOWING WELDING EQUIPMENT MUST BE USED:
   A. 250 AMP WELDERS.
   B. ROD OVENS.
   C. GRINDERS.

7. NO BUZZ BOXES SHALL BE USED.

8. ALL STRUCTURAL STEEL SHALL HAVE MILL CERTIFICATION. MILL CERTIFICATION SHALL BE KEPT ON THE JOB SITE FOR EXAMINATION BY THE DESIGN ENGINEER AND THE CITY INSPECTOR.

9. ALL HIGH STRENGTH BOLTS SHALL HAVE MILL CERTIFICATION. MILL CERTIFICATION SHALL BE KEPT ON THE JOB SITE FOR EXAMINATION BY THE INSPECTOR.

10. STEEL THAT HAD BEEN WELDED, CUT OR SCRATCHED IN THE FIELD SHALL BE TOUCHED UP WITH COLD GALVANIZING PAINT.

11. WELDING INDICATED IN THESE DRAWINGS IS DESIGNED FOR ONE HALF OF ALLOWABLE CODE STRESSES UNLESS NOTED "FULL STRESS" AT END OF WELD SYMBOL.

C. CONCRETE

1. STRENGTH: CONCRETE FOR THE PROJECT SHALL HAVE THE FOLLOWING ULTIMATE COMPRESSIVE STRENGTH AT AGE OF 28 DAYS:

LOCATION	STRENGTH	WT.	SLUMP	ADMIXTURE
SLAB&FOOTING	3000psi	150pcf	4"	NONE

2. INSPECTION: CONCRETE WITH SPECIFIED STRENGTH GREATER THAN 2500psi SHALL BE CONTINUOUSLY INSPECTED DURING PLACEMENT BY A DEPUTY INSPECTOR EMPLOYED BY A TESTING LABORATORY APPROVED BY THE BUILDING DEPT.

3. REBAR GRADES: REINFORCING STEEL SHALL BE CLEAN PREFORMED BARS CONFORMING TO ASTM A615 AS FOLLOWS:

   #4 & SMALLER BARS.....GRADE 40
   #5 & LARGER BARS.....GRADE 60
   ALL BARS AT CAISSON FOOTING...GRADE 60

4. FOUNDATIONS & SLABS: TYPE V, LOW ALKALI, CONFORMING TO ASTM C-150. PIER/CAISSON FOOTINGS: TYPE V, LOW ALKALI, CONFORMING TO ASTM C-150.

5. AGGREGATE: USED IN THE CONCRETE SHALL CONFORM TO ASTM C-33. USE ONLY AGGREGATES KNOWN NOT TO CAUSE EXCESSIVE SHRINKAGE. THE MAXIMUM SIZE AGGREGATE IN CONCRETE WORK SHALL BE THE FOLLOWING:

A. FOUNDATIONS & SLABS 9" OR LESS: 3/4" GRAVEL
B. PIER/CAISSON FOOTING: 1" GRAVEL.

6. SHALL BE CLEAN AND FREE FROM DELETERIOUS AMOUNT OF ACIDS, ALKALIS, ORGANIC MATERIALS AND SHALL BE SUITABLE FOR HUMAN CONSUMPTION.

7. MIXING: PREPARATION OF CONCRETE SHALL CONFORM TO ASTM C-94. NO MORE THAN 90 MINUTES SHALL ELAPSE BETWEEN CONCRETE BATCHING AND CONCRETE PLACEMENT UNLESS APPROVED BY A TESTING AGENCY.

8. SEGREGATION OF AGGREGATES: CONCRETE SHALL NOT BE FLOPPED THROUGH REINFORCING STEEL (AS IN WALLS, COLUMNS, CAISSON, AND DROP CAPITALS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. USE HOPPERS, CHUTES, TRUNKS OR PUMP HOSE SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED 5 FT.

9. SPLICES OF REINFORCING STEEL SHALL BE LAPPED A MINIMUM OF 30 DIAMETERS AND SECURELY WIRED TOGETHER. SPLICES OF ADJACENT REINFORCING BARS SHALL BE STAGGERED WHEREVER POSSIBLE.

10. REAR CLEARANCE: MINIMUM COVERAGE FOR JOISTS, BEAMS, GIRDERS AND COLUMNS SHALL BE TO FACE OF STIRRUPS OR TIES. UNLESS OTHERWISE NOTED, CONCRETE COVERAGE FOR REINFORCING BARS TO FACE OF BAR SHALL BE AS FOLLOWS:

    A. CONCRETE IN CONTACT WITH EARTH, UNFORMED 3"
    B. CONCRETE IN CONTACT WITH EARTH, FORMED 2"
    C. WALL, EXTERIOR FACE 1-1/2"
    D. WALL, INTERIOR FACE 1"
    E. STRUCTURAL SLABS 3/4"
    F. JOISTS 3/4"
    G. BEAMS, GIRDERS & COLUMNS 1-1/2"

11. PENETRATIONS: NO SLEEVES OR CHASES SHALL BE PLACED IN BEAMS, SLABS, WALLS AND COLUMNS, EXCEPT THOSE SHOWN ON THE PLANS. CONTRACTOR SHALL OBTAIN PRIOR APPROVAL FOR INSTALLATIONS OF ANY ADDITIONAL SLEEVES OR CHASES. ALL PLUMBING, ELECTRICAL AND MECHANICAL OPENINGS SHALL BE SLEEVES. CORING IS NOT ALLOWED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE STRUCTURAL ENGINEER.

12. EMBEDDED ITEMS: CONDUIT PLACED IN A CONCRETE SLAB SHALL NOT HAVE AN OUTSIDE DIAMETER GREATER THAN 1/4 THE THICKNESS OF THE SLAB. CONDUIT SHALL NOT BE EMBBEDED IN A SLAB THAT IS LESS THAN 3-1/2" THICK, UNLESS SLAB IS LOCALLY THICKENED. MINIMUM CLEAR DISTANCE BETWEEN COUNDUITS SHALL BE SIX INCHES.

13. ANCHORING: ALL ANCHOR BOLTS, REINFORCING STEEL, DOWELS, INSERTS, ETC., SHALL BE WELL SECURED IN POSITION PRIOR TO PLACING CONCRETE. NO REPOSITIONING DURING CONCRETE POUR IS ALLOWED.

14. SLABS SHALL BE SPRAYED WITH A CURING COMPOUND IMMEDIATELY AFTER FINISHING. CURING COMPOUNDS USED ON CONCRETE WHERE TILE OR FLOOR COVERING IS TO BE BONDED TO THE CONCRETE SURFACE SHALL BE APPROVED BY THE TILE OR FLOOR COVERING MANUFACTURER. KEEP SLAB WET FOR 7 DAY MINIMUM PERIOD.

15. CONSOLIDATION: ALL CONCRETE SHALL BE VIBRATED AS IT IS BEING PLACED WITH ELECTRICALLY OPERATED VIBRATING EQUIPMENT.

D. TIMBER

1. ALL FRAMING LUMBER FOR 4X AND LARGER BEAMS SHALL BE NO. 1 GRADE DOUGLAS FIR., S45, UNLESS NOTED OTHERWISE.

2. ALL FRAMING LUMBER FOR 2X RAFTERS AND JOISTS SHALL BE NO.2 GRADE DOUGLAS FIR, S45, UNLESS NOTED OTHERWISE.

3. STRIPPING, BLOCKING, BACKING AND OTHER NON-STRUCTURAL LUMBER SHALL BE NO. 2 OR STD & BTR GRADE DOUGLAS FIR, S45. 2X4 STUD WALLS SHALL BE D.F. STANDARD & BTR.

4. ALL BEAMS, JOISTS AND RAFTERS SHALL BE INSTALLED WITH CROWN SIDE UP.

5. ROOF PLYWOOD SHALL MATCH EXISTING PLYWOOD SHEATHING WITH A SPAN INDEX RATIO 32/16. EDGE NAIL WITH8d AT 6" O.C. UNLESS NOTED OTHERWISE ON PLANS. FIELD NAIL WITH 8d AT 12" O.C.

6. PLYWOOD SHEETS SHALL BE LAID WITH THE FACE GRAIN PERPENDICULAR TO SUPPORTS AND WITH THE EDGES STAGGERED, UNLESS NOTED OTHERWISE ON THE PLANS.

7. PLYWOOD SHALL BE GRADE MARKED BY DFPA, TECO, OR PTL AND SHALL CONFORM TO PS 1-83.

8. THE MAXIMUM MOISTURE CONTENT OF ALL LUMBER SHALL NOT EXCEED 24% AT THE TIME OF INSTALLATION.

9. MINIMUM NAILING SHALL COMPLY WITH TABLE 23-1-q OF BUILDING CODE. ALL NAILS SHALL BE COMMON WIRE NAILS.

10. ALL BOLTS SHALL HAVE STANDARD CUT WASHERS UNDER HEADS AND/OR NUTS WHERE IN CONTACT WITH WOOD.

11. LAG BOLTS SHALL BE SCREWED INTO PLACE, NOT DRIVEN. LAG BOLTS SHALL BE INSTALLED IN PRE-DRILLED HOLES WITH A DIAMETER EQUAL TO 75% DIAMETER OF BOLT.

12. CONNECTORS: ALL SHEET METAL FRAMING CONNECTORS SHOWN IN THE PLANS SHALL BE STRONG CONNECTORS AS MANUFACTURED BY THE SAMSON COMPANY. SUBSTITUTIONS MAY BE MADE WHEN APPROVED BY THE STRUCTURAL ENGINEER.

13. ALL LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH MASONRY OR CONCRETE SHALL BE WOLMANIZED PRESSURE TREATED LUMBER OR A NATURALLY DECAY RESISTANT LUMBER SUCH AS REDWOOD OR CEDAR.

14. ALASKAN YELLOW CEDAR GLUE-LAMINATED BEAMS
    A. LUMBER SPECIES: ALASKAN YELLOW CEDAR (A.C.) CONFORMING TO 20F-V12
    B. STRENGTH PROPERTIES:
       Fb BOTTOM FIBER BENDING STRESS 2000psi MIN.
       Fb TOP FIBER BENDING STRESS 1000psi MIN.
       Fv SHEAR STRESS 190psi MIN.
       Fc COMPRESSION STRESS PERPENDICULAR TO GRAIN 560psi MIN.
    C. MODULUS ELASTICITY 1400ksi MIN.
    D. CAMBER TO RADIUS OF 1600° U.O.N.
    E. ALL GLB'S SHALL BE FABRICATED WITH EXTERIOR GLUE.
    F. MANUFACTURE OF GLB'S SHALL CONFORM TO THE UBC.
    G. GLU-LAM MATERIAL SHALL BE IN ACCORDANCE WITH ANSI/AITC A190.1 AND ASTM D3737.

2 NOT USED

1 STRUCTURAL SPECIFICATIONS

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AMERICAN TOWER CORPORATION

INFINIGY

BELLEVUE, WA 98004

VERIZON SITE:
MASON SW

ATC SITE:
416988
MASON SW FL

5 SW CUMORAH HILL RD
FT. WHITE, FL 32024
COLUMBIA COUNTY

300'-0" GUYED TOWER

DRAWINGS ISSUED FOR:

REV.	DATE	DRAWN	DESCRIPTION	QA/QC
A	09/16/22	RCD	PRELIMINARY REVIEW	PD
0	02/01/23	CES	ISSUED FOR CONSTRUCTION	PHR

CHRISTOPHER J WARREN
LICENSE
No 59739
2/1/23
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SHEET TITLE:
SPECIFICATIONS & NOTES

SHEET NUMBER: T-3

REVISION: 0

NOTE:
1. SITE PLAN SHALL MEET ALL ENGINEERING AND NPDES REQUIREMENTS

LEGAL DESCRIPTION:

NOT PROVIDED

EXISTING GRASS AREA

EXISTING GRASS AREA

SW CUMORAH HILL ST

EXISTING GRASS AREA

EXISTING PROPERTY LINE, TYP. (APPROXIMATE)

EXISTING TREE TYP.

EXISTING GRASS AREA

SUBJECT PARCEL
APN: TBD
ZONING: TBD

EXISTING ACCESS & UTILITY EASEMENT

EXISTING VERIZON LEASE AREA WITHIN EXISTING ATC COMPOUND (SEE SHEET A-2)

EXISTING GRASS AREA

EXISTING BUILDING TYP.

EXISTING GRASS AREA

EXISTING GRASS AREA

EXISTING GRASS AREA

N

INFORMATION CONTAINED WITHIN DRAWINGS IS BASED ON PROVIDED INFORMATION AND IS NOT THE RESULT OF A FIELD SURVEY.

1 OVERALL SITE PLAN

22"x34" SCALE: 1" = 40'-0"
11"x17" SCALE: 1" = 80'-0"
40' 20' 0' 40'

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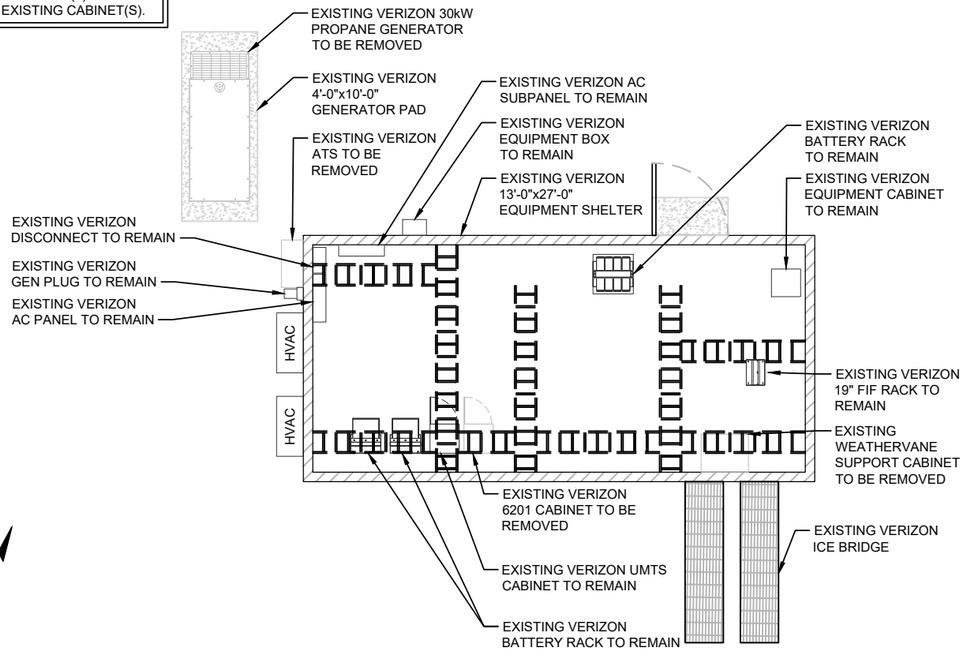
CHRISTOPHER J WARREN
LICENSE
No 59739
2/1/23
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

SHEET TITLE:
OVERALL
SITE PLAN

SHEET NUMBER: A-1

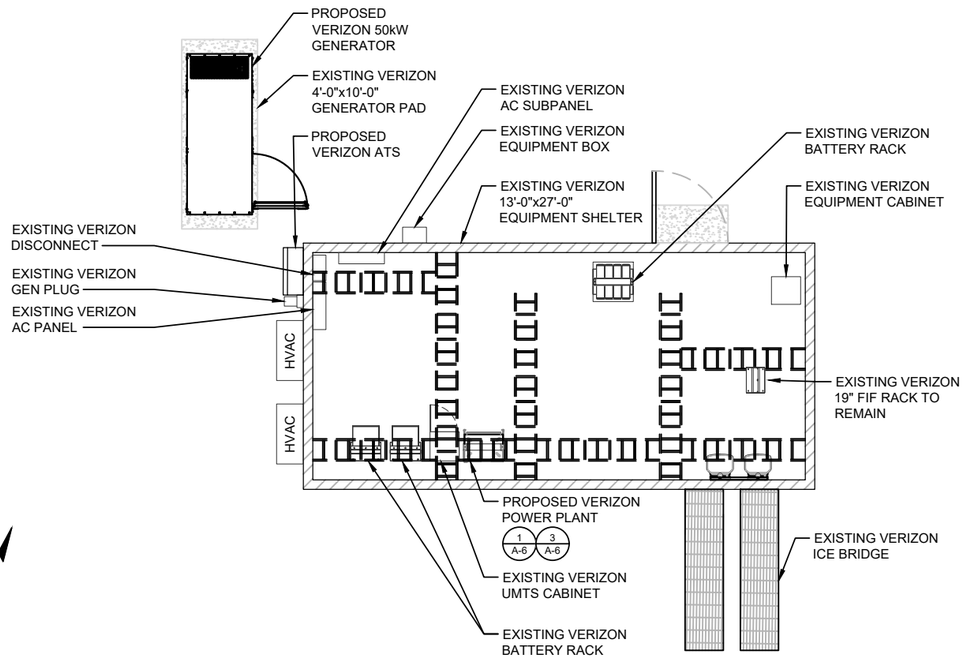
REVISION: 0

NOTE:
REMOVE (6) RUS01 B4 & (6) RUL01 B13
FROM INSIDE EXISTING CABINET(S).



3 EXISTING ENLARGED EQUIPMENT PLAN

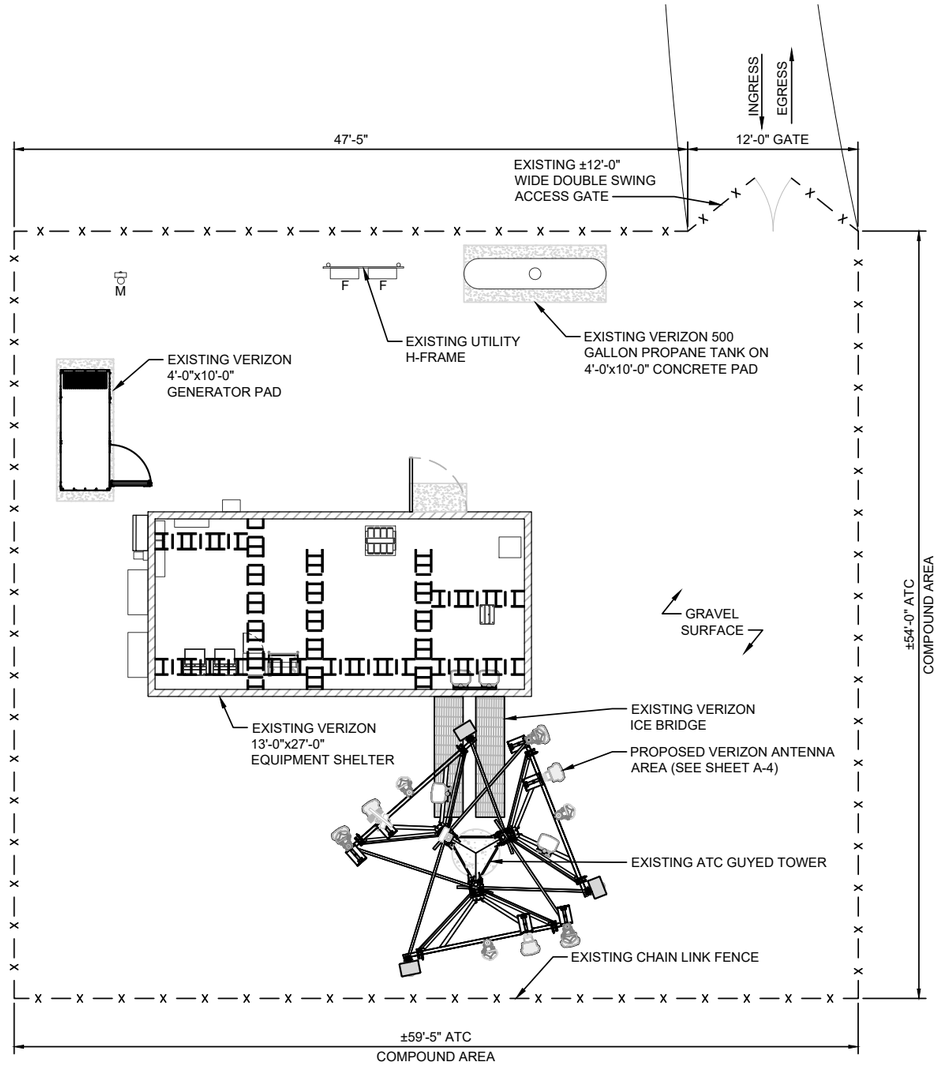
22"x34" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0' 4'



2 PROPOSED ENLARGED EQUIPMENT PLAN

22"x34" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0' 4'

INFORMATION CONTAINED WITHIN DRAWINGS IS BASED ON PROVIDED INFORMATION AND IS NOT THE RESULT OF A FIELD SURVEY.



1 ENLARGED SITE PLAN

22"x34" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0' 4'

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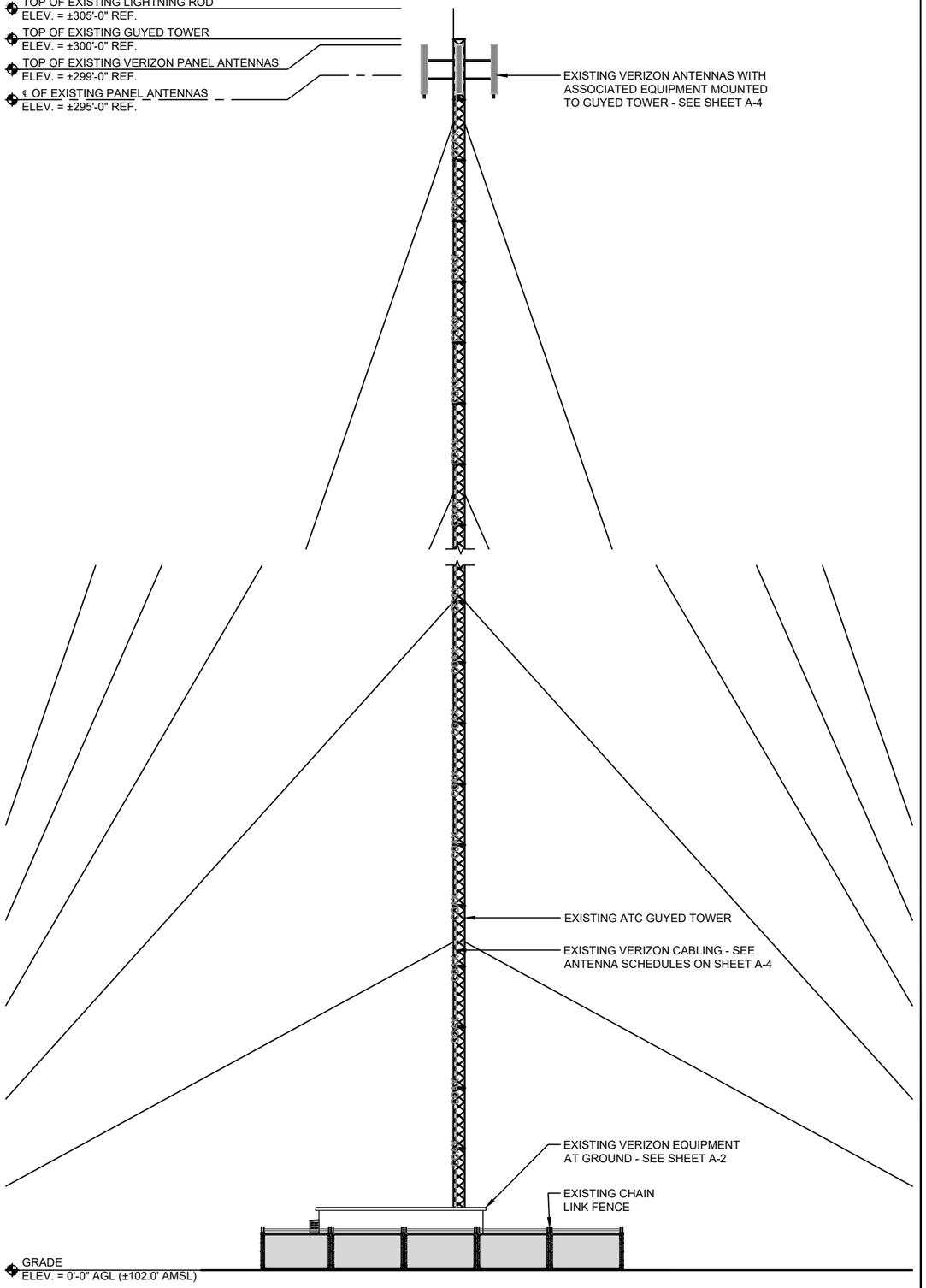
2/1/23
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SHEET TITLE:
ENLARGED SITE PLANS

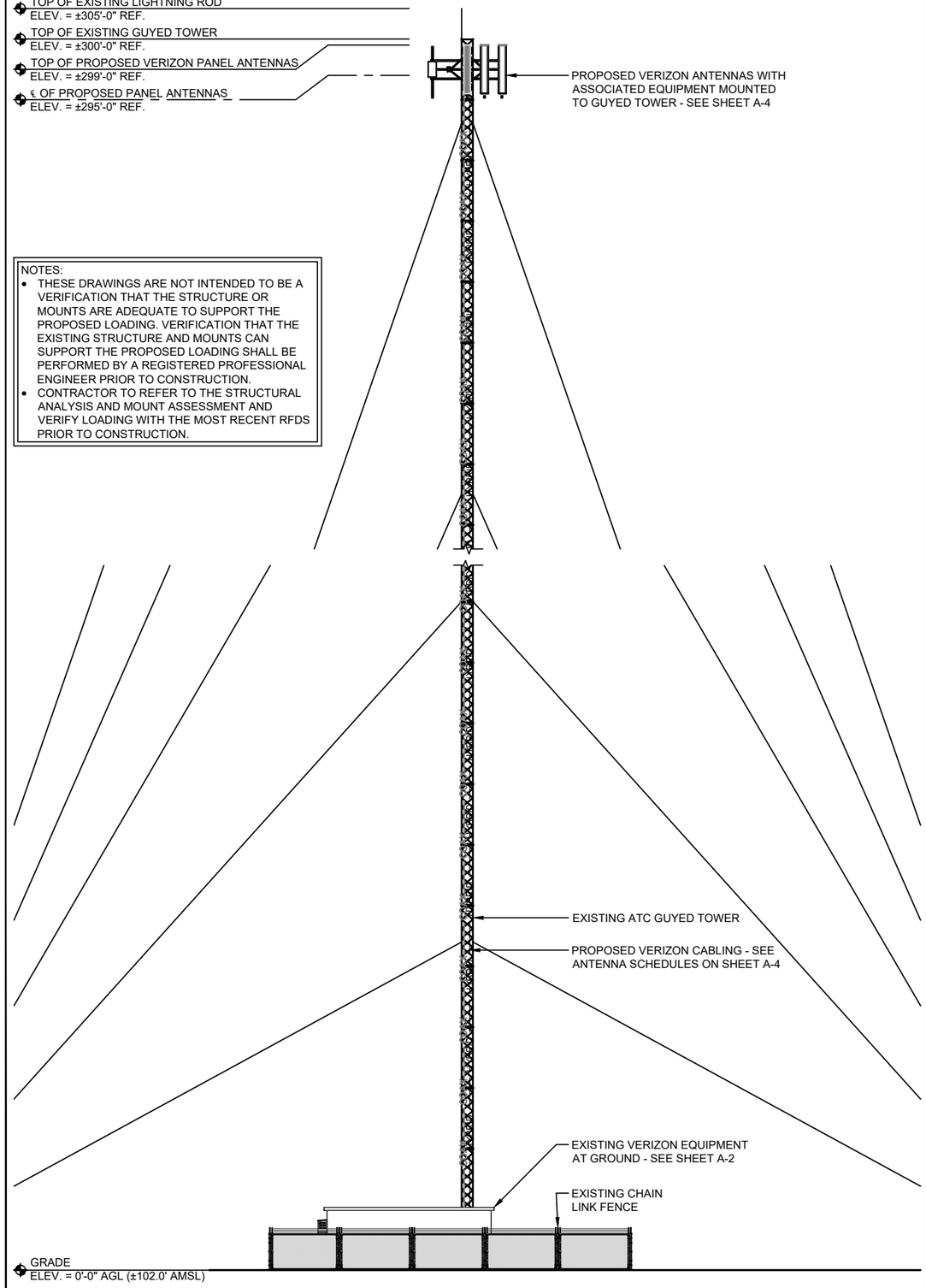
SHEET NUMBER: A-2

REVISION: 0



2 EXISTING SOUTH ELEVATION

22"x34" SCALE: 3/32" = 1'-0"
11"x17" SCALE: 3/64" = 1'-0"
8' 4' 0' 8'



1 PROPOSED SOUTH ELEVATION

22"x34" SCALE: 3/32" = 1'-0"
11"x17" SCALE: 3/64" = 1'-0"
8' 4' 0' 8'

NOTES:
- THESE DRAWINGS ARE NOT INTENDED TO BE A VERIFICATION THAT THE STRUCTURE OR MOUNTS ARE ADEQUATE TO SUPPORT THE PROPOSED LOADING. VERIFICATION THAT THE EXISTING STRUCTURE AND MOUNTS CAN SUPPORT THE PROPOSED LOADING SHALL BE PERFORMED BY A REGISTERED PROFESSIONAL ENGINEER PRIOR TO CONSTRUCTION.
- CONTRACTOR TO REFER TO THE STRUCTURAL ANALYSIS AND MOUNT ASSESSMENT AND VERIFY LOADING WITH THE MOST RECENT RFDS PRIOR TO CONSTRUCTION.

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2/1/23
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

SHEET TITLE:
SOUTH ELEVATIONS

SHEET NUMBER: A-3

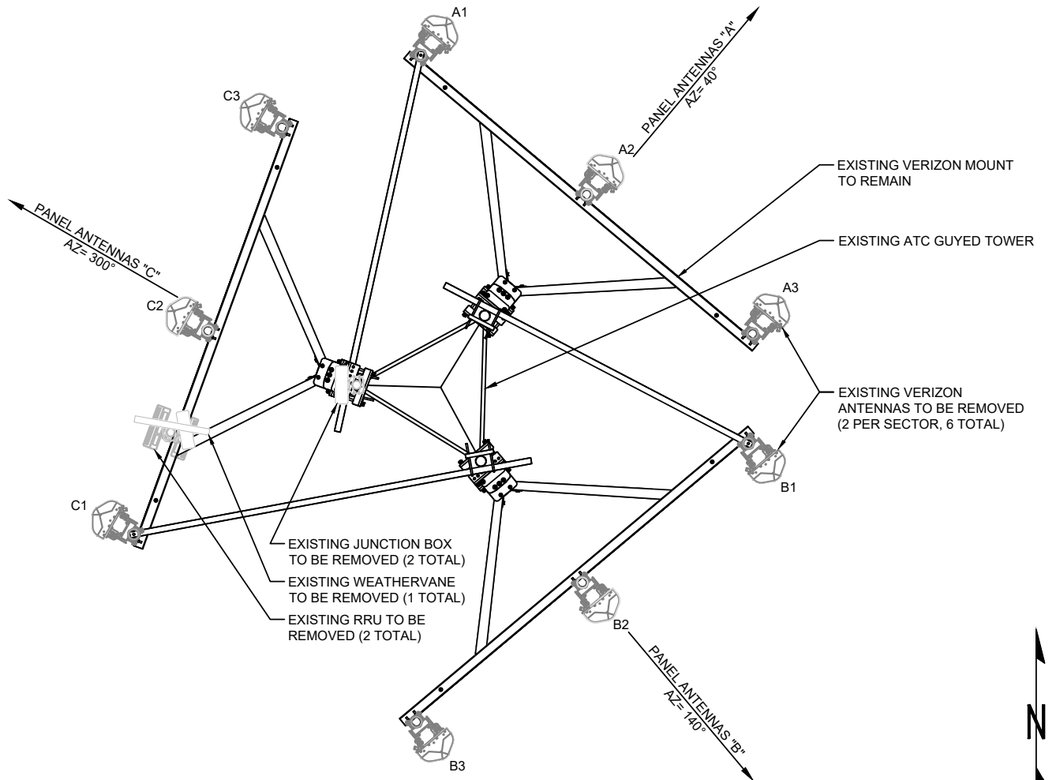
REVISION: 0

EXISTING RF CONFIGURATION SCHEDULE

* SEE LATEST RFDS FOR DOWNTILT INFO

SECTOR	POSITION	TECH.	QTY.	MANUFACTURER	MODEL	RAD CENTER	TIP HEIGHT	AZIMUTH	RET	MECH. DT *	ELEC. DT *	COAX CABLES	HYBRID CABLES
ALPHA	A1	850 CDMA/AWS LTE	1	CSS	X7CAP-865-22-IP	295'-0"	299'-0"	40°	FALSE			(18) 1-5/8" (2) 1/2" (1) CONTROL	--
	A2	700 LTE	1	CSS	X7-865-0	295'-0"	299'-0"	40°	FALSE				
	A3	850 CDMA/AWS LTE	1	CSS	X7CAP-865-22-IP	295'-0"	299'-0"	40°	FALSE				
	--	--	--	--	--	--	--	--	--				
BETA	B1	850 CDMA/AWS LTE	1	CSS	X7CAP-865-22-IP	295'-0"	299'-0"	140°	FALSE				
	B2	700 LTE	1	CSS	X7-865-0	295'-0"	299'-0"	140°	FALSE				
	B3	850 CDMA/AWS LTE	1	CSS	X7CAP-865-22-IP	295'-0"	299'-0"	140°	FALSE				
	--	--	--	--	--	--	--	--	--				
GAMMA	C1	850 CDMA/AWS LTE	1	CSS	X7CAP-865-22-IP	295'-0"	299'-0"	300°	FALSE				
	C2	700 LTE	1	CSS	X7-865-0	295'-0"	299'-0"	300°	FALSE				
	C3	850 CDMA/AWS LTE	1	CSS	X7CAP-865-22-IP	295'-0"	299'-0"	300°	FALSE				
	--	--	--	--	--	--	--	--	--				

LOCATION	SECTOR	TMA'S	COMBINERS	BIAS-TEES	RRU'S	OVP'S	RU'S
ANTENNA LEVEL	ALPHA	--	--	--	--	--	--
	BETA	--	--	--	--		
	GAMMA	--	--	--	(2) RRU3908		
GROUND LEVEL	ALPHA	--	--	--	--	--	(2) RUS01 B4, (2) RUL01 B13
	BETA	--	--	--	--		(2) RUS01 B4, (2) RUL01 B13
	GAMMA	--	--	--	--		(2) RUS01 B4, (2) RUL01 B13



2 EXISTING ANTENNA PLAN

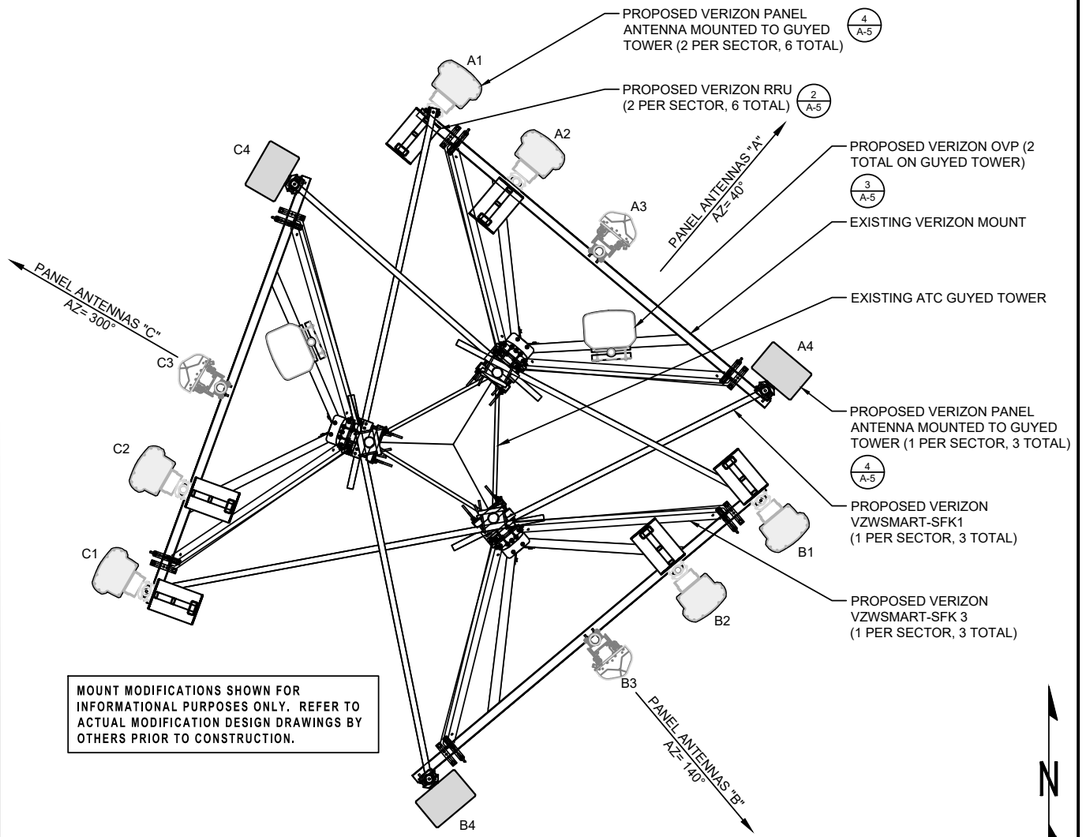
22"x34" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"
2' 1' 0' 2'

PROPOSED RF CONFIGURATION SCHEDULE

* SEE LATEST RFDS FOR DOWNTILT INFO

SECTOR	POSITION	TECH.	QTY.	MANUFACTURER	MODEL	RAD CENTER	TIP HEIGHT	AZIMUTH	RET	MECH. DT *	ELEC. DT *	COAX CABLES	HYBRID CABLES
ALPHA	A1	700/850/PCS LTE	1	JMA	MX06FRO860-02	295'-0"	299'-0"	40°	FALSE			(10) 1-5/8"	(2) 12x24
	A2	700/850/AWS LTE	1	JMA	MX06FRO860-02	295'-0"	299'-0"	40°	FALSE				
	A3	850 CDMA	1	CSS	X7-865-0	295'-0"	299'-0"	40°	FALSE				
	A4	5G L-SUB6 LTE	1	ERICSSON	AIR6449 B77	295'-0"	296'-4"	40°	FALSE				
BETA	B1	700/850/PCS LTE	1	JMA	MX06FRO860-02	295'-0"	299'-0"	140°	FALSE				
	B2	700/850/AWS LTE	1	JMA	MX06FRO860-02	295'-0"	299'-0"	140°	FALSE				
	B3	850 CDMA	1	CSS	X7-865-0	295'-0"	299'-0"	140°	FALSE				
	B4	5G L-SUB6 LTE	1	ERICSSON	AIR6449 B77	295'-0"	296'-4"	140°	FALSE				
GAMMA	C1	700/850/PCS LTE	1	JMA	MX06FRO860-02	295'-0"	299'-0"	300°	FALSE				
	C2	700/850/AWS LTE	1	JMA	MX06FRO860-02	295'-0"	299'-0"	300°	FALSE				
	C3	850 CDMA	1	CSS	X7-865-0	295'-0"	299'-0"	300°	FALSE				
	C4	5G L-SUB6 LTE	1	ERICSSON	AIR6449 B77	295'-0"	296'-4"	300°	FALSE				

LOCATION	SECTOR	TMA'S	COMBINERS	BIAS-TEES	RRU'S	OVP'S	RU'S
ANTENNA LEVEL	ALPHA	--	--	--	(1) 4449, (1) 8843	(2) RVZDC-6627-PF-48	--
	BETA	--	--	--	(1) 4449, (1) 8843		
	GAMMA	--	--	--	(1) 4449, (1) 8843		
GROUND LEVEL	ALPHA	--	--	--	--	(2) RVZDC-6627-PF-48	--
	BETA	--	--	--	--		--
	GAMMA	--	--	--	--		--



1 PROPOSED ANTENNA PLAN

22"x34" SCALE: 1/2" = 1'-0"
11"x17" SCALE: 1/4" = 1'-0"
2' 1' 0' 2'

verizon

AMERICAN TOWER CORPORATION

INFINIGY

BELLEVUE, WA 98004

VERIZON SITE:
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ATC SITE:
416988
MASON SW FL

5 SW CUMORAH HILL RD
FT. WHITE, FL 32024
COLUMBIA COUNTY

300'-0" GUYED TOWER

DRAWINGS ISSUED FOR:

REV.	DATE	DRAWN	DESCRIPTION	QA/QC
A	09/16/22	RCD	PRELIMINARY REVIEW	PD
0	02/01/23	CES	ISSUED FOR CONSTRUCTION	PHR

CHRISTOPHER J WARREN LICENSE No 59739 2/1/23 STATE OF FLORIDA PROFESSIONAL ENGINEER

SHEET TITLE:
ANTENNA PLANS
& RF SCHEDULES

SHEET NUMBER: A-4

REVISION: 0

6 NOT USED

NOT TO SCALE

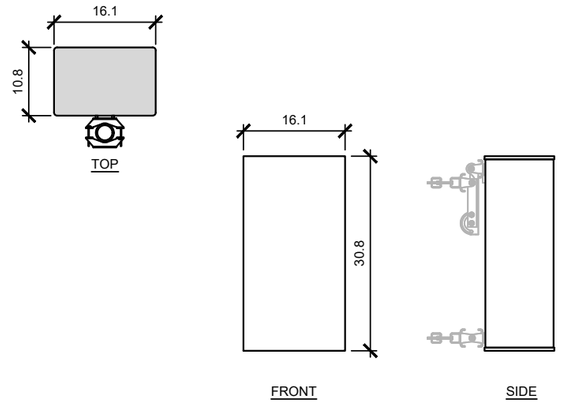
5 NOT USED

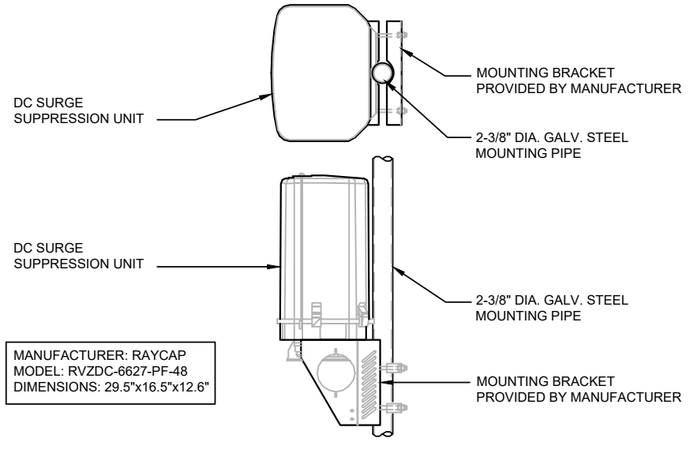
NOT TO SCALE

4 ANTENNA DETAIL

NOT TO SCALE

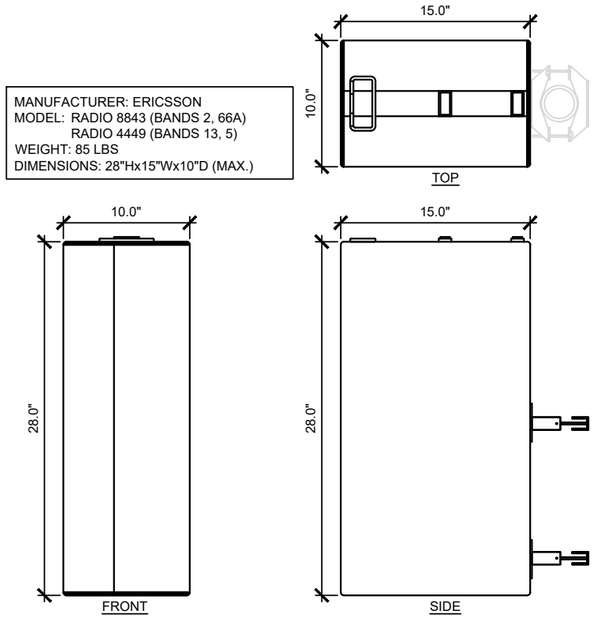
MANUFACTURER: ERICSSON
MODEL: AIR6449 B77
WEIGHT: 88.0 LBS
DIMENSIONS: 30.8" X 16.1" X 10.8"
FREQUENCY: REFER TO RF DATA SHEET



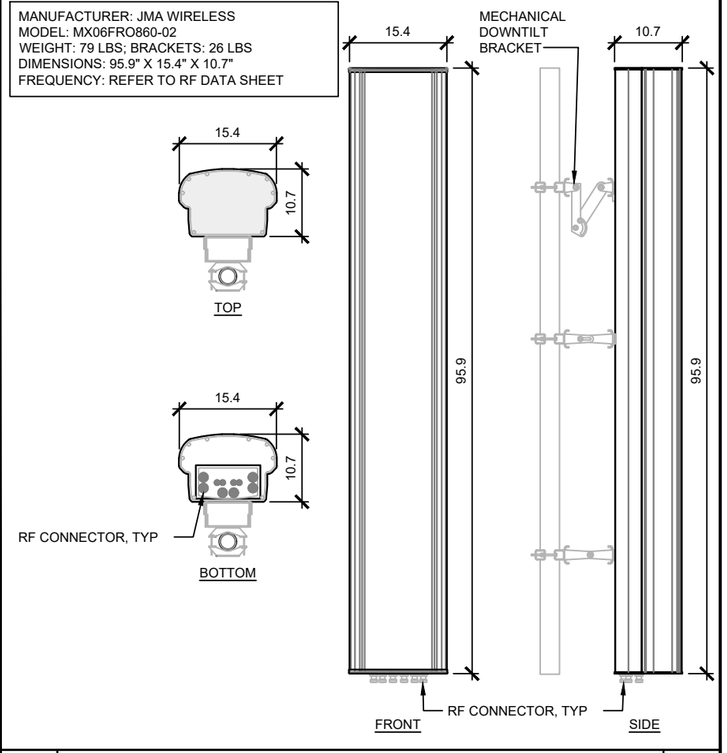


MANUFACTURER: RAYCAP
MODEL: RVZDC-6627-PF-48
DIMENSIONS: 29.5"x16.5"x12.6"

MANUFACTURER: ERICSSON
MODEL: RADIO 8843 (BANDS 2, 66A)
RADIO 4449 (BANDS 13, 5)
WEIGHT: 85 LBS
DIMENSIONS: 28"Hx15"Wx10"D (MAX.)



MANUFACTURER: JMA WIRELESS
MODEL: MX06FRO860-02
WEIGHT: 79 LBS; BRACKETS: 26 LBS
DIMENSIONS: 95.9" X 15.4" X 10.7"
FREQUENCY: REFER TO RF DATA SHEET



3 OVP DETAIL

NOT TO SCALE

2 RRU DETAIL

NOT TO SCALE

1 ANTENNA DETAIL

NOT TO SCALE

verizon

AMERICAN TOWER CORPORATION

INFINIGY

BELLEVUE, WA 98004

VERIZON SITE:
MASON SW

ATC SITE:
416988
MASON SW FL

5 SW CUMORAH HILL RD
FT. WHITE, FL 32024
COLUMBIA COUNTY

300'-0" GUYED TOWER

DRAWINGS ISSUED FOR:

REV.	DATE	DRAWN	DESCRIPTION	QA/QC
A	09/16/22	RCD	PRELIMINARY REVIEW	PD
0	02/01/23	CES	ISSUED FOR CONSTRUCTION	PHR

CHRISTOPHER J WARREN
LICENSE
No 59739
2/1/23
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

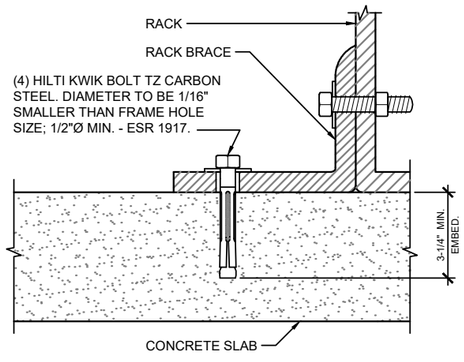
SHEET TITLE:
EQUIPMENT DETAILS

SHEET NUMBER: A-5

REVISION: 0

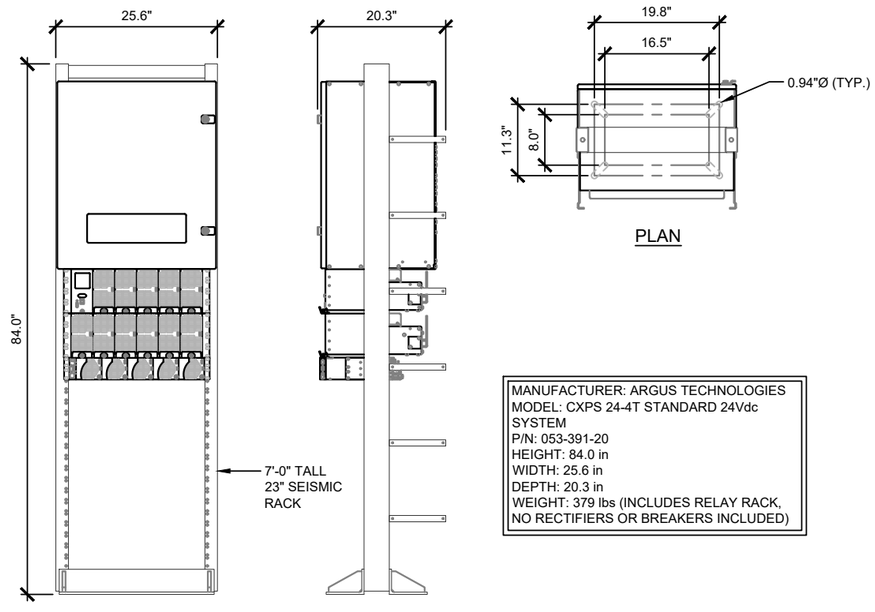
5 NOT USED — NOT TO SCALE

4 NOT USED — NOT TO SCALE



3 RACK ANCHORAGE DETAIL — NOT TO SCALE

2 NOT USED — NOT TO SCALE



MANUFACTURER: ARGUS TECHNOLOGIES
MODEL: CXPS 24-4T STANDARD 24Vdc SYSTEM
P/N: 053-391-20
HEIGHT: 84.0 in
WIDTH: 25.6 in
DEPTH: 20.3 in
WEIGHT: 379 lbs (INCLUDES RELAY RACK, NO RECTIFIERS OR BREAKERS INCLUDED)

1 POWER PLANT DETAIL — NOT TO SCALE

verizon

AMERICAN TOWER CORPORATION

INFINIGY

BELLEVUE, WA 98004

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2/1/23
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PROFESSIONAL ENGINEER

SHEET TITLE:
EQUIPMENT DETAILS

SHEET NUMBER: A-6

REVISION: 0

KOHLER

Model: KG50

190-600 V **Gas**

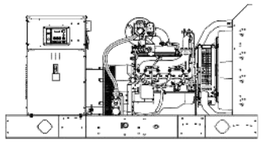
ISO 9001 KOHLER NATIONALLY REGISTERED

EPA-Certified for 60 Hz Stationary Emergency Applications

EPA certification not applicable at 50 Hz

Ratings Range

		60 Hz	50 Hz
Standby:	kW	53	44
	kVA	53-66	44-55



Generator Set Ratings

Alternator	Voltage	Ph	Hz	Natural Gas 130°C Rise Standby Rating kW/kVA	Amps	LP Gas 130°C Rise Standby Rating kW/kVA	Amps
4P8X	120/208	3	60	53/66	184	53/66	184
	127/220	3	60	53/66	174	53/66	174
	120/240	3	60	53/66	159	53/66	159
	120/240	1	60	53/53	221	53/53	221
	139/240	3	60	53/66	159	53/66	159
	220/380	3	60	53/66	101	53/66	101
	277/480	3	60	53/66	80	53/66	80
	347/600	3	60	53/66	64	53/66	64
	110/190	3	50	44/55	168	44/55	168
	115/200	3	50	44/55	159	44/55	159
	120/208	3	50	44/55	153	44/55	153
	110/220	3	50	44/55	145	44/55	145
	110/220	1	50	44/44	200	44/44	200
	220/380	3	50	44/55	84	44/55	84
	230/400	3	50	44/55	80	44/55	80
	240/415	3	50	44/55	77	44/55	77
4P10X	120/208	3	60	53/66	184	53/66	184
	127/220	3	60	53/66	174	53/66	174
	120/240	3	60	53/66	159	53/66	159
	120/240	1	60	53/53	221	53/53	221
	139/240	3	60	53/66	159	53/66	159
	220/380	3	60	53/66	101	53/66	101
	277/480	3	60	53/66	80	53/66	80
	347/600	3	60	53/66	64	53/66	64
	110/190	3	50	44/55	168	44/55	168
	115/200	3	50	44/55	159	44/55	159
	120/208	3	50	44/55	153	44/55	153
	110/220	3	50	44/55	145	44/55	145
	110/220	1	50	44/44	200	44/44	200
	220/380	3	50	44/55	84	44/55	84
	230/400	3	50	44/55	80	44/55	80
	240/415	3	50	44/55	77	44/55	77
4Q8X	120/240	1	60	53/53	221	53/53	221
	110/220	1	50	44/44	200	44/44	200
4Q10X	120/240	1	60	53/53	221	53/53	221
	110/220	1	50	44/44	200	44/44	200

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:* The standby rating is applicable to varying loads for the duration of a power outage. There is no overload capability for this rating. Ratings are in accordance with ISO-8528-1 and ISO-3046-1. For limited running time and continuous ratings, consult the factory. Obtain 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. For dual fuel engines, use the natural gas ratings for both the primary and secondary fuels.

G4-280 (KG50) 6/20g

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.
- A one-year limited warranty covers all generator set systems and components. Two- and five-year extended limited warranties are also available.
- Alternator features:
  - The unique Fast-Response® X excitation system delivers excellent voltage response and short-circuit capability using a rare-earth, permanent magnet (PM)-excited alternator.
  - The brushless, rotating-field alternator has broadrange reconnectability.

Alternator Specifications

Specifications	Alternator
Manufacturer	Kohler
Type	4-Pole, Rotating-Field
Exciter type	Brushless, Rare-Earth Permanent Magnet
Leads: quantity, type	
4P8X, 4P10X	12, Reconnectable
4Q8X, 4Q10X	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
Peak motor starting kVA:	(35% dip for voltages below)
480 V, 400 V 4P8X (12 lead)	255 (60 Hz), 215 (50 Hz)
480 V, 400 V 4P10X (12 lead)	275 (60 Hz), 220 (50 Hz)
240 V, 220 V 4Q8X (4 lead)	120 (60 Hz), 96 (50 Hz)
240 V, 220 V 4Q10X (4 lead)	144 (60 Hz), 121 (50 Hz)

- The unique Fast-Response® X excitation system delivers excellent voltage response and short-circuit capability using a rare-earth, permanent magnet (PM)-excited alternator.
- The brushless, rotating-field alternator has broadrange reconnectability.
- NEMA MG1, IEEE, and ANSI standards compliance for temperature rise and motor starting.
- Sustained short-circuit current of up to 300% of the rated current for up to 10 seconds.
- Sustained short-circuit current enabling downstream circuit breakers to trip without collapsing the alternator field.
- Self-ventilated and dripproof construction.

Application Data

Engine

Engine Specifications	60 Hz	50 Hz
Manufacturer	Kohler	
Engine: model, type	KG6208 6.2 L Natural Aspiration	
Cylinder arrangement	V-8	
Displacement, L (cu. in.)	6.2 (378)	
Bore and stroke, mm (in.)	101.6 x 95.25 (4.00 x 3.75)	
Compression ratio	10.5:1	
Rated rpm	1800	1500
Max. power at rated rpm, kW (HP)	77.0 (103)	64.3 (86)
Cylinder head material	Cast Aluminum	
Piston type and material	High Silicon Aluminum	
Crankshaft material	Cast Iron	
Valve (exhaust) material	Forged Steel	
Governor type	Electronic	
Frequency regulation, no-load to full-load	Isochronous	
Frequency regulation, steady state	±1.0%	
Frequency	Fixed	
Air cleaner type, all models	Dry	

Exhaust

Exhaust System	60 Hz	50 Hz
Exhaust manifold type	Dry	
Exhaust flow at rated kW, m³/min. (cfm)	11.7 (414)	9.8 (345)
Exhaust temperature at rated kW, dry exhaust, °C (°F)	677 (1250)	
Maximum allowable back pressure, kPa (in. Hg)	10.2 (3.0)	
Exhaust outlet size at engine hookup, mm (in.)	76 (3.0) OD	

Engine Electrical

Engine Electrical System	60 Hz	50 Hz
Ignition system	Electronic, Distributor	
Ignition system	Electronic	
Battery charging alternator:		
Ground (negative/positive)	Negative	
Volts (DC)	12	
Ampere rating	130	
Starter motor rated voltage (DC)	12	
Battery, recommended cold cranking amps (CCA):		
Qty., rating for -18°C (0°F)	1, 630	
Battery voltage (DC)	12	

Fuel

Fuel System	60 Hz	50 Hz
Fuel type	Natural Gas, LP Gas, or Dual Fuel	
Fuel supply line inlet	1 NPTF	
Natural gas fuel supply pressure, kPa (in. H_2O)	1.74-2.74 (7-11)	
LPG vapor withdrawal fuel supply pressure, kPa (in. H_2O)	1.24-2.74 (5-11)	
Dual fuel engine, LPG vapor withdrawal fuel supply pressure, kPa (in. H_2O)	1.24 (5)	

Fuel Composition Limits *	Nat. Gas	LP Gas
Methane, % by volume	90 min.	—
Ethane, % by volume	4.0 max.	—
Propane, % by volume	1.0 max.	85 min.
Propene, % by volume	0.1 max.	5.0 max.
C_4 and higher, % by volume	0.3 max.	2.5 max.
Sulfur, ppm mass	25 max.	
Lower heating value, MJ/m³ (Btu/ft³), min.	33.2 (890)	84.2 (2260)

* Fuels with other compositions may be acceptable. If your fuel is outside the listed specifications, contact your local distributor for further analysis and advice.

G4-280 (KG50) 6/20g

Lubrication

Lubricating System	60 Hz	50 Hz
Type	Full Pressure	
Oil pan capacity, L (qt.) §	5.7 (6.0)	
Oil pan capacity with filter, L (qt.) §	7.1 (7.5)	
Oil filter: quantity, type §	1, Cartridge	

§ Kohler recommends the use of Kohler Genuine oil and filters.

Cooling

Radiator System	60 Hz	50 Hz
Ambient temperature, °C (°F) *	50 (122)	
Engine jacket water capacity, L (gal.)	7.3 (1.93)	
Radiator system capacity, including engine, L (gal.)	20.8 (5.5)	
Engine jacket water flow, Lpm (gpm)	129 (34.1)	108 (28.5)
Heat rejected to cooling water at rated kW, dry exhaust, kW (Btu/min.)	61.7 (3510)	53.3 (3030)
Water pump type	Centrifugal	
Fan diameter, including blades, mm (in.)	533 (21)	
Fan, kWm (HP)	2.2 (2.9)	1.3 (1.7)
Max. restriction of cooling air, intake and discharge side of radiator, kPa (in. H_2O)	0.125 (0.5)	

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

Operation Requirements

Air Requirements	60 Hz	50 Hz
Radiator-cooled cooling air, m³/min. (scfm) †	136 (4800)	113 (4000)
Combustion air, m³/min. (cfm)	4.6 (163)	3.9 (136)
Heat rejected to ambient air:		
Engine, kW (Btu/min.)	30.9 (1760)	26.5 (1510)
Alternator, kW (Btu/min.)	7.7 (440)	6.9 (390)

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

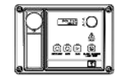
Fuel Consumption ‡	60 Hz	50 Hz
Natural Gas, m³/hr. (cfh) at % load	**Standby Ratings**	
100%	24.9 (879)	20.4 (721)
75%	19.7 (696)	14.8 (524)
50%	13.9 (490)	9.8 (345)
25%	7.9 (277)	5.8 (204)
LP Gas, m³/hr. (cfh) at % load	**Standby Ratings**	
100%	9.5 (337)	8.5 (300)
75%	7.6 (267)	5.7 (199)
50%	5.1 (178)	4.2 (146)
25%	3.2 (113)	2.7 (96)

‡ Nominal fuel rating: Natural gas, 37 MJ/m³ (1000 Btu/ft.³)
LP vapor, 93 MJ/m³ (2500 Btu/ft.³)

LP vapor conversion factors:
8.56 ft.³ = 1 lb.
0.535 m³ = 1 kg.
36.39 ft.³ = 1 gal.

MANUFACTURER: KOHLER
MODEL: KG50
DIMENSIONS W/O ENCLOSURE: 86.6"x40.9"x46.1"
WEIGHT W/O ENCLOSURE: 1900 LBS (MAX.)
DIMENSIONS W/ ENCLOSURE: 101.0"x40.9"x53.7"
WEIGHT W/ ENCLOSURE: 2438 LBS (MAX.)

Controllers

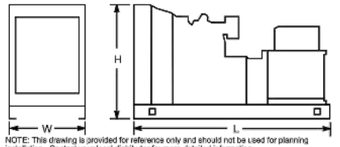


APM402 Controller
Provides advanced control, system monitoring, and system diagnostics for optimum performance and compatibility.
- Digital display and menu control provide easy local data access
- Measurements are selectable in metric or English units
- Remote communication thru a PC via network or 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.

Dimensions and Weights

Overall Size, L x W x H, mm (in.):
Wide Skid 2200 x 1040x 1170 (86.6 x 40.9 x 46.1)
Narrow Skid 2200 x 864 x 1170 (86.6 x 34.0 x 46.1)
Weight (radiator model), wet, kg (lb.): 862 (1900)



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:

G4-280 (KG50) 6/20g

verizon

AMERICAN TOWER CORPORATION

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FOR REFERENCE ONLY

SHEET TITLE:
GENERATOR SPECIFICATIONS

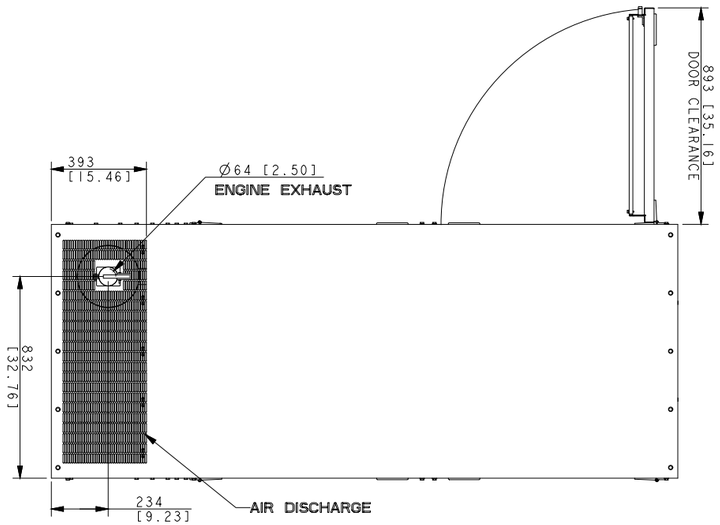
SHEET NUMBER: A-7

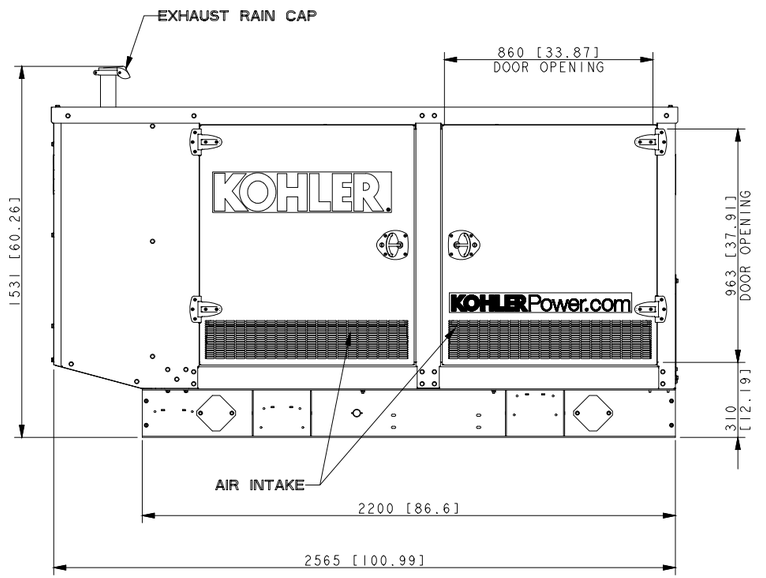
REVISION: 0

1 GENERATOR SPECIFICATION

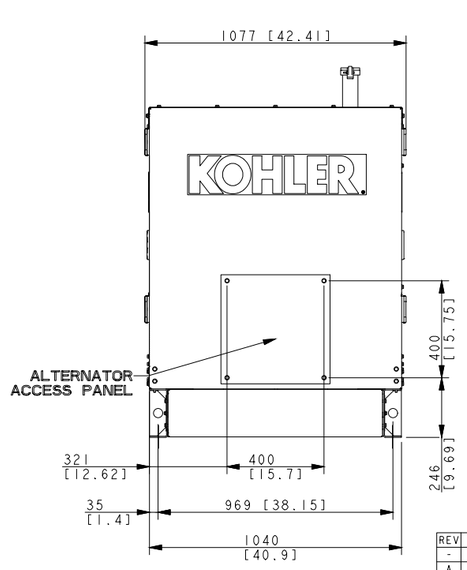
NOT TO SCALE

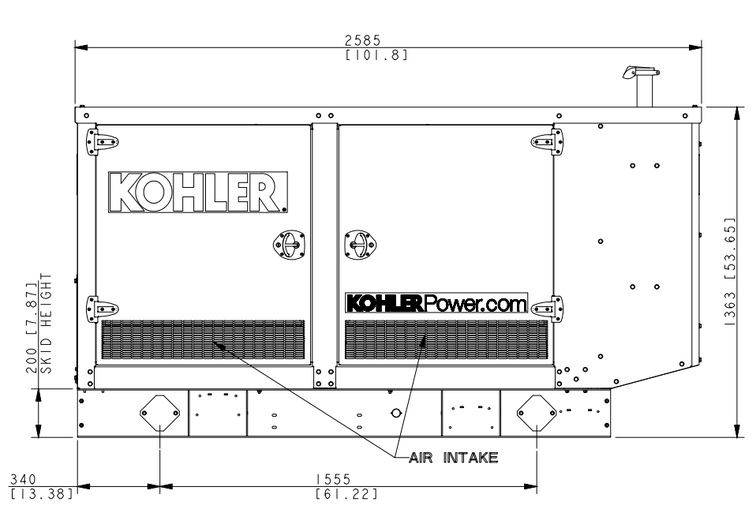
MODEL	GENSET WEIGHT (WET) WITH ENCLOSURE		ENCLOSURE ONLY
40kW 4P5X/4Q5X	STEEL WEATHER	1010 Kg [2226 LBS]	239 Kg [527 LBS]
	STEEL SOUND	1015 Kg [2237 LBS]	244 Kg [538 LBS]
	ALUMINUM SOUND	922 Kg [2034 LBS]	152 Kg [335 LBS]
40kW 4P7BX/4Q7BX 45kW 4P7BX/4Q7BX 60kW 4P7BX	STEEL WEATHER	1046 Kg [2307 LBS]	239 Kg [527 LBS]
	STEEL SOUND	1051 Kg [2318 LBS]	244 Kg [538 LBS]
	ALUMINUM SOUND	959 Kg [2115 LBS]	152 Kg [335 LBS]
45kW 4P8X 50kW 4P8X/4Q8X 60kW 4P8X	STEEL WEATHER	1062 Kg [2341 LBS]	239 Kg [527 LBS]
	STEEL SOUND	1067 Kg [2352 LBS]	244 Kg [538 LBS]
	ALUMINUM SOUND	975 Kg [2149 LBS]	152 Kg [335 LBS]
45kW 4Q10X 50kW 4P10X/4Q10X 60kW 4P10X/4Q10X	STEEL WEATHER	1101 Kg [2427 LBS]	239 Kg [527 LBS]
	STEEL SOUND	1106 Kg [2438 LBS]	244 Kg [538 LBS]
	ALUMINUM SOUND	1014 Kg [2235 LBS]	152 Kg [335 LBS]





NOTE:
IF IBC CERTIFICATION IS REQUIRED, SEE SEISMIC ADV FOR INSTALLATION INSTRUCTIONS





KG40-KG60
3PH RECONNECTABLE, 1PH AND 600V ALTERNATORS

DIMENSIONS IN [ ] ARE INCH EQUIVALENTS

REV	DATE	ON COMPOSITE DWGS, SEE PART NO. FOR REVISION LEVEL	BY
-	10-6-17	NEW DRAWING [CTI79982]	JWL
A	4-12-18	(0,2) 959 Kg [2115 LBS] WAS 1062 Kg [2341 LBS],	
		1062 Kg [2341 LBS] WAS 1067 Kg [2352 LBS],	
		1067 Kg [2352 LBS] WAS 1002 Kg [2209 LBS]	
		[PR06949]	JWL

DO NOT SCALE. REFERENCE THE MODEL FOR ALL UNSPECIFIED DIMENSIONS

UNLESS OTHERWISE SPECIFIED: ALL DIMENSIONS IN MILLIMETERS GENERAL TOLERANCES: N/A

APPROVALS		DATE
DRAWN	JWL	10-6-17
CHECKED	DJV	10-6-17
APPROVED	KJT	10-6-17

TITLE: DIMENSION PRINT, 40-60 KW ENCLOSURE

SCALE 0.40 CAD NO. SHEET 1 of 1

DWG NO. ADV-9039 D

1 GENERATOR ENCLOSURE SPECIFICATION

NOT TO SCALE

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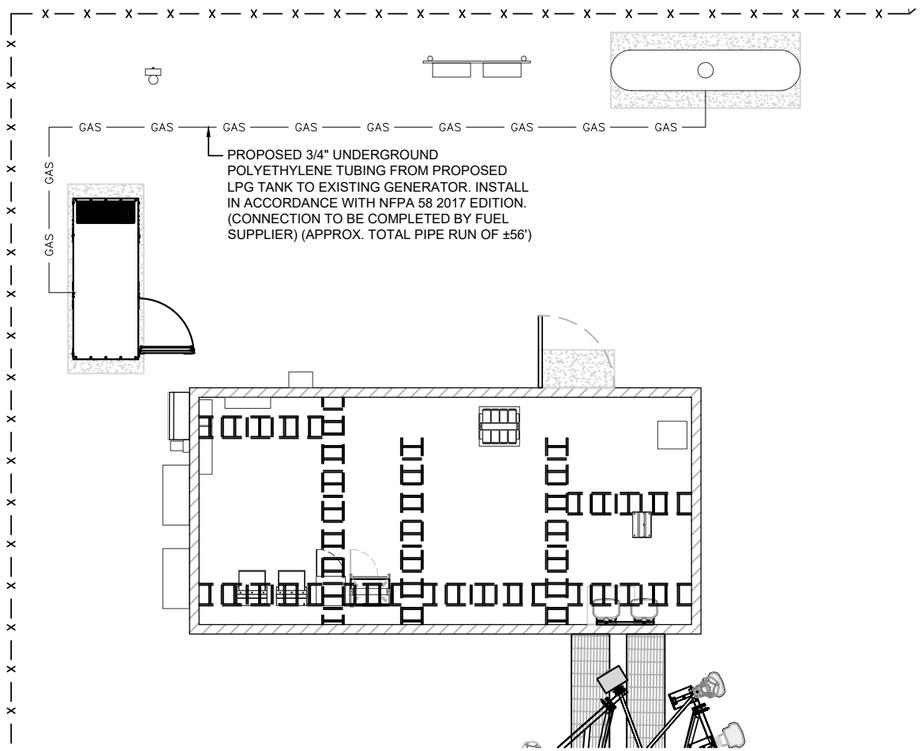
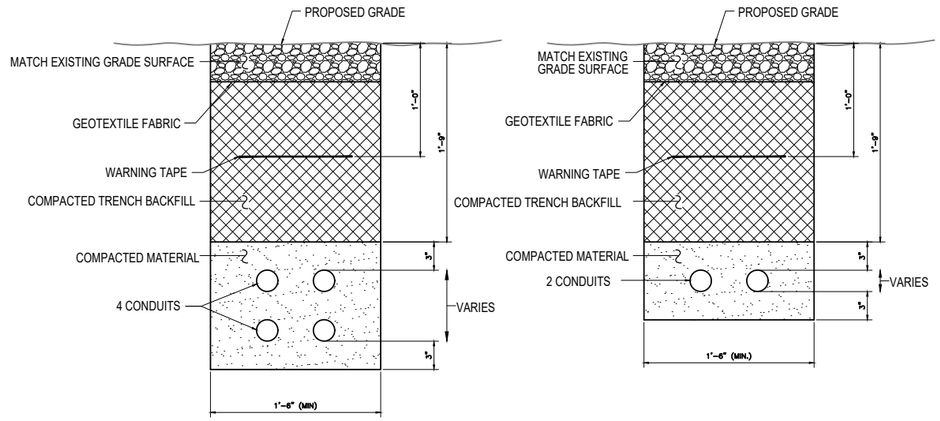
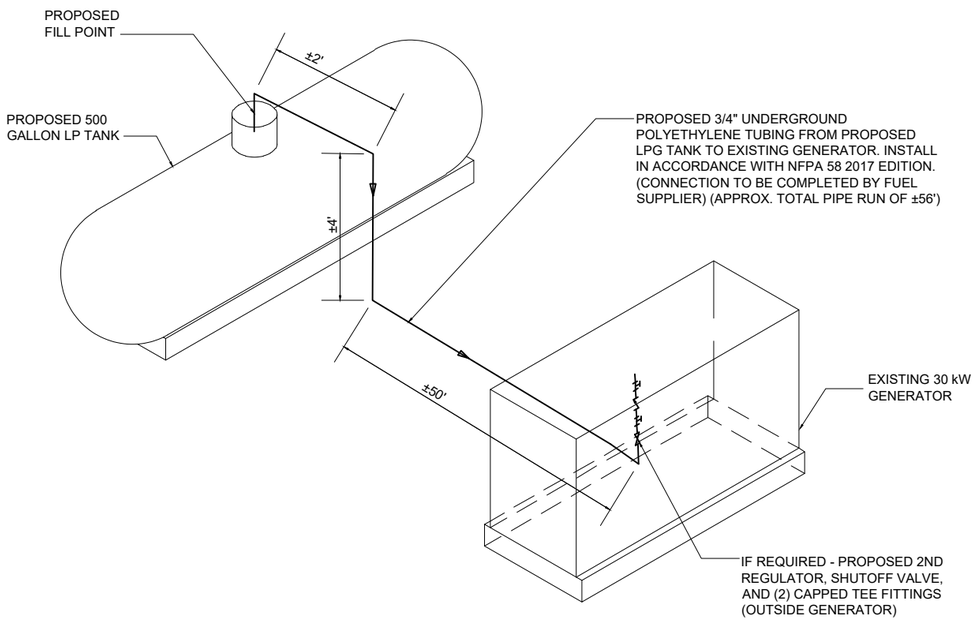
REVISION: 0



1 GENERATOR ENCLOSURE SPECIFICATION — NOT TO SCALE



2 UTILITY TRENCH DETAILS — NOT TO SCALE



3 FUEL DETAIL — NOT TO SCALE

GAS PIPING NOTES FOR LINE BETWEEN 2ND STAGE REGULATOR & GENERATOR (PER 2020 FLORIDA BUILDING CODE FUEL GAS, 7TH EDITION, AND NFPA 58, 2017 EDITION, FBC AMD.SEC.107.7.1):

1. PIPING (EFFECTIVE LENGTH) = < 36'
2. FUEL DEMAND OF GENERATOR = 136 MBH
3. BTU CAPACITY OF PIPING SYSTEM = 136,000 BTU/HR
4. ABOVE GROUND GALVANIZED PIPING SHALL BE GALVANIZED STEEL PIPING PER ASME B31.3
5. ALL GAS PIPING MATERIALS AND INSTALLATION TO BE IN ACCORDANCE WITH 2017 FLORIDA BUILDING CODE FUEL GAS 6TH EDITION 2017
6. GENERATOR SHALL BE EQUIPPED WITH A MANUAL AND AN AUTOMATIC SHUT-OFF VALVE PER NFPA 37, SECTION 5.4.

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SHEET TITLE:
FUEL DETAILS

SHEET NUMBER: A-9

REVISION: 0

NOTES:

INSTALLATION SHALL COMPLY WITH THE 2020 FLORIDA BUILDING CODE, FUEL GAS CODE, 7th EDITION, AND NFPA 58, 2014 EDITION, FBC ADM.SEC.107.7.1

FIELD VERIFY MEASUREMENTS AND ROUTE OF FUEL PIPING. NOTIFY ENGINEER AND PROJECT CPM OF DISCREPANCIES.

FOR OTHER THAN POLYETHYLENE PIPE, EXPOSED GAS PIPING SHALL BE IDENTIFIED BY A YELLOW LABEL MARKED "GAS" IN BLACK LETTERS. THE MARKING SHALL BE SPACED AT INTERVALS NOT EXCEEDING 5 FEET (1524mm). THE MARKING SHALL NOT BE REQUIRED ON PIPE LOCATED IN THE SAME ROOM AS THE EQUIPMENT SERVED.

PIPING SHALL BE MARKED WITH AN APPROVED PERMANENT IDENTIFICATION BY THE INSTALLER SO THAT THE PIPING SYSTEM SUPPLIED BY EACH METER IS READILY IDENTIFIABLE.

STEEL AND WROUGHT-IRON PIPE SHALL BE AT LEAST OF STANDARD WEIGHT (SCHEDULE 40) AND SHALL COMPLY WITH ONE OF THE FOLLOWING STANDARDS:

1. ASME B 36.10, 10M
2. ASTM A 53
3. ASTM A 106

STEEL TUBING SHALL COMPLY WITH ASTM A 254 OR ASTM A 539.

CORRUGATED STAINLESS STEEL TUBING SHALL BE TESTED AND LISTED IN COMPLIANCE WITH THE CONSTRUCTION, INSTALLATION AND PERFORMANCE REQUIREMENTS OF ANSI LC 1/CSA 6.26.

COPPER TUBING SHALL COMPLY WITH STANDARDS TYPE K OR L OF ASTM B 88 OR ASTM B 280. COPPER AND BRASS TUBING SHALL NOT BE USED IF THE GAS CONTAINS MORE THAN AN AVERAGE OF 0.3 GRAINS OF HYDROGEN SULFIDE PER 100 STANDARD CUBIC FEET OF GAS (0.7 MILLIGRAMS PER 100 LITERS).

PLASTIC PIPE, TUBING AND FITTINGS SHALL BE USED OUTSIDE, UNDERGROUND, ONLY, AND SHALL CONFORM TO ASTM D 2513. PIPE SHALL BE MARKED "GAS" AND "ASTM D 2513".

THE USE OF PLASTIC PIPE, TUBING AND FITTINGS IN UNDILUTED LIQUEFIED PETROLEUM GAS PIPING SYSTEMS SHALL BE IN ACCORDANCE WITH NFPA 58.

WHERE IN CONTACT WITH MATERIAL OR ATMOSPHERE EXERTING A CORROSIVE ACTION, METALLIC PIPING AND FITTINGS COATED WITH A CORROSION-RESISTANT MATERIAL SHALL BE USED. EXTERNAL OR INTERNAL COATINGS OR LININGS USED ON PIPING OR COMPONENTS SHALL NOT BE CONSIDERED AS ADDING STRENGTH.

METALLIC PIPE AND FITTING THREADS SHALL BE TAPER PIPE THREADS AND SHALL COMPLY WITH ASMI B1.20.1.

PIPE JOINTS SHALL BE THREADED, FLANGED, BRAZED OR WELDED. WHERE NONFERROUS PIPE IS BRAZED, THE BRAZING MATERIALS SHALL HAVE A MELTING POINT IN EXCESS OF 1,000°F (538°C). BRAZING ALLOYS SHALL NOT CONTAIN MORE THAN 0.05-PERCENT PHOSPHORUS.

METALLIC FITTINGS, INCLUDING VALVES, STRAINERS AND FILTERS, SHALL COMPLY WITH THE FOLLOWING:

1. THREADED FITTINGS IN SIZES LARGER THAN 4 INCHES (102 MM) SHALL NOT BE USED EXCEPT WHERE APPROVED.
2. FITTINGS USED WITH STEEL OR WROUGHT-IRON PIPE SHALL BE STEEL, BRASS, BRONZE, MALLEABLE IRON OR CAST IRON.

PLASTIC PIPE, TUBING AND FITTINGS SHALL BE JOINED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS. SUCH JOINT SHALL COMPLY WITH THE FOLLOWING.

1. THE JOINT SHALL BE DESIGNED AND INSTALLED SO THAT THE LONGITUDINAL PULL-OUT RESISTANCE OF THE JOINT WILL BE AT LEAST EQUAL TO THE TENSILE STRENGTH OF THE PLASTIC PIPING MATERIAL.
2. HEAT-FUSION JOINTS SHALL BE MADE IN ACCORDANCE WITH QUALIFIED PROCEDURES THAT HAVE BEEN ESTABLISHED AND PROVEN BY TEST TO PRODUCE GAS-TIGHT JOINTS AT LEAST AS STRONG AS THE PIPE OR TUBING BEING JOINED. JOINTS SHALL BE MADE WITH THE JOINING METHOD RECOMMENDED BY THE PIPE MANUFACTURER. HEAD FUSION FITTINGS SHALL BE MARKED "ASTM D 2513".
3. WHERE COMPRESSION-TYPE MECHANICAL JOINTS ARE USED, THE GASKET MATERIAL IN THE FITTING SHALL BE COMPATIBLE WITH THE PLASTIC PIPING AND WITH THE GAS DISTRIBUTED BY THE SYSTEM. AN INTERNAL TUBULAR RIGID STIFFENER SHALL BE USED IN CONJUNCTION WITH THE FITTING. THE STIFFENER SHALL BE FLUSH WITH THE END OF THE PIPE OR TUBING AND SHALL EXTEND AT LEAST TO THE OUTSIDE END OF THE PIPE OR TUBING AND AT LEAST TO THE OUTSIDE END OF THE COMPRESSION FITTING WHEN INSTALLED. THE STIFFENER SHALL BE FREE OF ROUGH OR SHARP EDGES AND SHALL NOT BE A FORCE FIT IN THE PLASTIC. SPLIT TUBULAR STIFFENERS SHALL NOT BE USED.
4. PLASTIC PIPING JOINTS AND FITTINGS FOR USE IN LIQUEFIED PETROLEUM GAS PIPING SYSTEMS SHALL BE IN ACCORDANCE WITH NFPA 58.

METALLIC PIPE OR TUBING EXPOSED TO CORROSIVE ACTION, SUCH AS SOIL CONDITION OR MOISTURE, SHALL BE PROTECTED IN AN APPROVED MANNER. ZINC COATINGS (GALVANIZING) SHALL NOT BE DEEMED ADEQUATE PROTECTION FOR GAS PIPING UNDERGROUND. FERROUS METAL EXPOSED IN EXTERIOR LOCATIONS SHALL BE PROTECTED FROM CORROSION IN A MANNER SATISFACTORY TO THE CODE OFFICIAL. WHERE DISSIMILAR METALS ARE JOINED UNDERGROUND, AN INSULATING COUPLING OR FITTING SHALL BE USED. PIPING SHALL NOT BE LAID IN CONTACT WITH CINDERS.

ALL PIPING INSTALLED OUTDOORS SHALL BE ELEVATED NO LESS THAN 3-1/2" INCHES (152 MM) ABOVE GROUND AND WHERE INSTALLED ACROSS ROOF SURFACES, SHALL BE ELEVATED NOT LESS THAN 3-1/2" INCHES (152 MM) ABOVE THE ROOF SURFACE. PIPING INSTALLED ABOVE GROUND, OUTDOORS, AND INSTALLED ACROSS THE SURFACE OF ROOFS SHALL BE SECURELY SUPPORTED AND LOCATED WHERE IT WILL BE PROTECTED FROM PHYSICAL DAMAGE. WHERE PASSING THROUGH AN OUTSIDE WALL, THE PIPING SHALL ALSO BE PROTECTED AGAINST CORROSION BY COATING OR WRAPPING WITH AN INERT MATERIAL. WHERE PIPING IS ENCASED IN A PROTECTIVE PIPE SLEEVE, THE ANNULAR SPACE BETWEEN THE PIPING AND THE SLEEVE SHALL BE SEALED.

UNDERGROUND PIPING SYSTEMS SHALL BE INSTALLED A MINIMUM DEPTH OF 12 INCHES (305 MM) BELOW GRADE. THE TRENCH SHALL BE GRADED SO THAT THE PIPE HAS A FIRM, SUBSTANTIALLY CONTINUOUS BEARING ON THE BOTTOM OF THE TRENCH.

PLASTIC PIPE SHALL BE INSTALLED OUTSIDE UNDERGROUND ONLY. PLASTIC PIPE SHALL NOT BE USED WITHIN OR UNDER ANY BUILDING OR SLAB OR BE OPERATED AT PRESSURES GREATER THAN 100 PSIG (689 KPA) FOR NATURAL GAS OR 30 PSIG (207 KPA) FOR LP-GAS.

AN INSULATED COPPER TRACER WIRE OR OTHER APPROVED CONDUCTOR SHALL BE INSTALLED ADJACENT TO UNDERGROUND NONMETALLIC GAS PIPING. ACCESS SHALL BE PROVIDED TO THE TRACER WIRE OR THE TRACER WIRE SHALL TERMINATE ABOVE GROUND AT EACH END OF THE NONMETALLIC GAS PIPING. THE TRACER WIRE SIZE SHALL NOT BE LESS THAN 12 AWG AND THE INSULATION TIPE SHALL BE SUITABLE FOR DIRECT BURIAL.

MP PRESSURE REGULATORS SHALL COMPLY WITH THE FOLLOWING:

1. THE MP REGULATOR SHALL BE APPROVED AND SHALL BE SUITABLE FOR THE INLET AND OUTLET GAS PRESSURES FOR THE APPLICATION.
2. THE MP REGULATOR SHALL MAINTAIN A REDUCED OUTLET PRESSURE UNDER LOCKUP (NO-FLOW) CONDITIONS.
3. THE CAPACITY OF THE MP REGULATOR, DETERMINED BY PUBLISHED RATINGS OF ITS MANUFACTURER, SHALL BE ADEQUATE TO SUPPLY THE APPLIANCES SERVED.
4. THE MP PRESSURE REGULATOR SHALL BE PROVIDED WITH ACCESS. WHERE LOCATED INDOORS, THE REGULATOR SHALL BE VENTED TO THE OUTDOORS OR SHALL BE EQUIPPED WITH A LEAK-LIMITING DEVICE. PRESSURE REGULATORS THAT REQUIRE A VENT SHALL HAVE AN INDEPENDENT VENT TO THE OUTSIDE OF THE BUILDING. THE VENT SHALL BE DESIGNED TO PREVENT THE ENTRY OF WATER OR FOREIGN OBJECTS. REGULATORS EQUIPPED WITH AND LABELED FOR UTILIZATION WITH APPROVED VENT-LIMITED DEVICES INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.
5. A TEE FITTING WITH ONE OPENING CAPPED OR PLUGGED SHALL BE INSTALLED BETWEEN THE MP REGULATOR AND ITS UPSTREAM SHUTOFF VALVE. SUCH TEE FITTING SHALL BE POSITIONED TO ALLOW CONNECTION OF A PRESSURE-MEASURING INSTRUMENT AND TO SERVE AS A SEDIMENT TRAP.
6. A TEE FITTING WITH ONE OPENING CAPPED OR PLUGGED SHALL BE INSTALLED NOT LESS THAN 10 PIPE DIAMETERS DOWNSTREAM OF THE MP REGULATOR OUTLET. SUCH TEE FITTING SHALL BE POSITIONED TO ALLOW CONNECTION OF A PRESSURE-MEASURING INSTRUMENT.

PRESSURE TESTS:
TEST PRESSURE SHALL BE MEASURED WITH A MANOMETER OR WITH PRESSURE-MEASURING DEVICE DESIGNED AND CALIBRATED TO READ, RECORD, OR INDICATE A PRESSURE LOSS CAUSED BY LEAKAGE DURING THE PRESSURE TEST PERIOD. THE SOURCE OF PRESSURE SHALL BE ISOLATED BEFORE THE PRESSURE TESTS ARE MADE. MECHANICAL GAUGES USED TO MEASURE TEST PRESSURES SHALL HAVE A RANGE SUCH THAT THE HIGHEST END OF THE SCALE IS NOT GREATER THAN FIVE TIMES THE TEST PRESSURE.

TEST PRESSURE.
THE TEST PRESSURE TO BE USED SHALL BE NO LESS THAN ONE AND A HALF TIMES THE PROPOSED MAXIMUM WORKING PRESSURE, BUT NO LESS THAN 3 PSIG (20 KPA GAUGE) IRRESPECTIVE OF DESIGN PRESSURE. WHERE THE TEST PRESSURE EXCEEDS 125 PSIG (862 KPA GAUGE), THE TEST PRESSURE SHALL NOT EXCEED A VALUE THAT PRODUCES A HOOP STRESS IN THE PIPING GREATER THAN 50 PERCENT OF THE SPECIFIED MINIMUM YIELD STRENGTH OF THE PIPE.

TEST DURATION.
TEST DURATION SHALL BE NOT LESS THAT 1/2" HOUR FOR EACH 500 CUBIC FEET (14 CUBIC METERS) OF PIPE VOLUME OR FRACTION THEREOF. WHEN TESTING A SYSTEM HAVING A VOLUME LESS THAN 10 CUBIC FEET (0.28 CUBIC METERS) OR A SYSTEM IN A SINGLE-FAMILY DWELLING, THE TEST DURATION SHALL BE NOT LESS THAN 10 MINUTES. THE DURATION OF THE TEST SHALL NOT BE REQUIRED TO EXCEED 24 HOURS.

DIRECTION OF LEAKS AND DEFECTS
THE PIPING SYSTEM SHALL WITHSTAND THE TEST PRESSURE SPECIFIED WITHOUT SHOWING ANY EVIDENCE OF LEAKAGE OR OTHER DEFECTS.

ANY REDUCTION OF TEST PRESSURES AS INDICATED BY PRESSURE GAUGES SHALL BE DEEMED TO INDICATE THE PRESENCE OF A LEAK UNLESS SUCH REDUCTION CAN BE READILY ATTRIBUTED TO SOME OTHER CAUSE.

NOTES:

1. FUEL PIPE TO BE ATTACHED TO SLAB WITH 304 STAINLESS STEEL UNISTRUT PIPE CLAMPS AND CHANNEL.

DESIGN	
DELIVERY PRESSURE	**11" - 14" H2O**
PIPE RUN (METER TO GENERATOR)	N/A
DESIGN FLOWRATE (100% LOAD)(LIQUID PROPANE GENERATOR)	**136 CF/HR**
GENERATOR OPERATING PRESSURE	**11" - 14" H2O**

NOTE:
* - EQUIVALENT PIPE LENGTH

1 FUEL NOTES

NOT TO SCALE

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AMERICAN TOWER CORPORATION

INFINIGY

BELLEVUE, WA 98004

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MASON SW

ATC SITE:
416988
MASON SW FL

5 SW CUMORAH HILL RD
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COLUMBIA COUNTY

300'-0" GUYED TOWER

DRAWINGS ISSUED FOR:

REV.	DATE	DRAWN	DESCRIPTION	QA/QC
A	09/16/22	RCD	PRELIMINARY REVIEW	PD
0	02/01/23	CES	ISSUED FOR CONSTRUCTION	PHR

FOR REFERENCE ONLY

SHEET TITLE:
FUEL NOTES

SHEET NUMBER:
A-10

REVISION:
0

TABLE 402.4(35)
POLYETHYLENE PLASTIC PIPE

Gas	Undiluted Propane
Inlet Pressure	11.0 in. w.c.
Pressure Drop	0.5 in. w.c.
Specific Gravity	1.50

INTENDED USE	PE pipe sizing between integral two-stage regulator at tank or second stage (low-pressure regulator) and building.							
	PIPE SIZE (inch)							
Nominal OD	1/2	3/4	1	1 1/4	1 1/2	2	3	4
Designation	SDR 9	SDR 11	SDR 11	SDR 10	SDR 11	SDR 11	SDR 11	SDR 11
Actual ID	0.660	0.860	1.077	1.328	1.554	1.943	2.864	3.682
Length (ft)	Capacity in Thousands of Btu per Hour							
10	340	680	1,230	2,130	3,210	5,770	16,000	30,900
20	233	468	844	1,460	2,210	3,970	11,000	21,200
30	187	375	677	1,170	1,770	3,180	8,810	17,000
40	160	321	580	1,000	1,520	2,730	7,540	14,600
50	142	285	514	890	1,340	2,420	6,680	12,900
60	129	258	466	807	1,220	2,190	6,050	11,700
70	119	237	428	742	1,120	2,010	5,570	10,800
80	110	221	398	690	1,040	1,870	5,180	10,000
90	103	207	374	648	978	1,760	4,860	9,400
100	98	196	353	612	924	1,660	4,590	8,900
125	87	173	313	542	819	1,470	4,070	7,900
150	78	157	284	491	742	1,330	3,690	7,130
175	72	145	261	452	683	1,230	3,390	6,560
200	67	135	243	470	635	1,140	3,160	6,100
250	60	119	215	375	563	1,010	2,800	5,410
300	54	108	195	338	510	916	2,530	4,900
350	50	99	179	311	469	843	2,330	4,510
400	46	92	167	289	436	784	2,170	4,190
450	43	87	157	271	409	736	2,040	3,930
500	41	82	148	256	387	695	1,920	3,720

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pound per square inch = 6.895 kPa, 1-inch water column = 0.2488 kPa, 1 British thermal unit per hour = 0.2931 W, 1 cubic foot per hour = 0.0283 m^3/h, 1 degree = 0.01745 rad.

Note: Table entries have been rounded to three significant digits.

1 PIPE AND TUBING SIZING TABLE — NOT TO SCALE

PRO-FLEX

Pro-Poly™

Underground Gas Distribution System

Table 4

Gas :	Undiluted Propane [LP]			Specific Gravity:	1.52
Gas Pressure:	11 in. w.c.			Pressure Drop:	0.5 in. w.c.
INTENDED USE: PE Pipe Sizing Between Integral Second-Stage Regulator at Tank or Second-Stage [Low-Pressure] Regulator and Building.					
IPS Pipe Size	3/4"	1"	1-1/4"	1-1/2"	2"
SDR	11	11	11	11	11
Pipe Length [feet]	*Capacity in CUBIC FEET per HOUR*				
10'	680	1,230	2,130	3,210	5,770
20'	468	844	1,460	2,210	3,970
30'	375	677	1,170	1,770	3,180
40'	321	580	1,000	1,520	2,730
50'	285	514	890	1,340	2,420
60'	258	466	807	1,220	2,190
70'	237	428	742	1,120	2,010
80'	221	398	690	1,040	1,870
90'	207	374	648	978	1,760
100'	196	353	612	924	1,660
125'	173	313	542	819	1,470
150'	157	284	491	742	1,330
175'	145	261	452	683	1,230
200'	135	243	420	635	1,140
250'	119	215	373	563	1,010
300'	108	195	338	510	916
350'	99	179	311	469	843
400'	92	167	289	436	784
450'	87	157	271	409	736
500'	82	148	256	387	695

2 PIPE MANUFACTURING SIZING CHART — NOT TO SCALE

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INFINIGY

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MASON SW FL

5 SW CUMORAH HILL RD
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300'-0" GUYED TOWER

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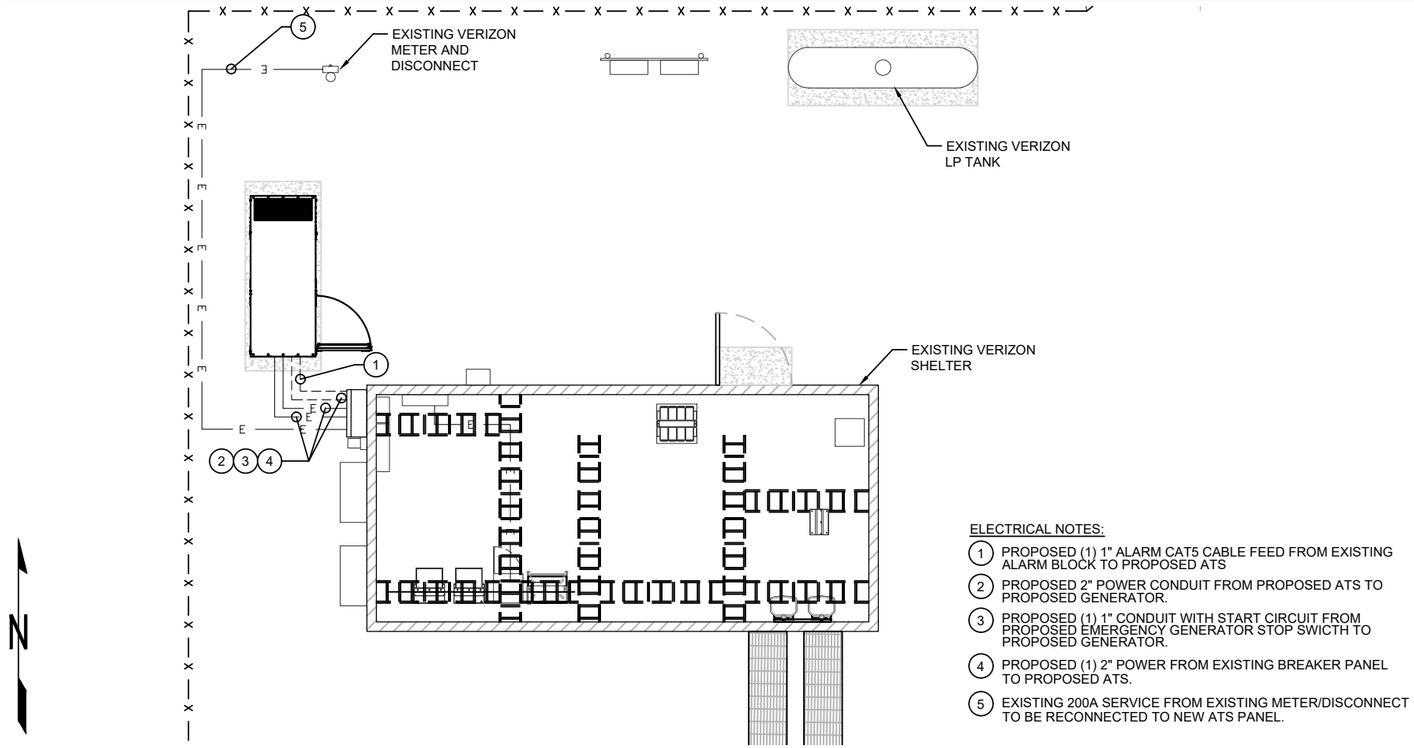
0	02/01/23	CES	ISSUED FOR CONSTRUCTION	PHR

FOR REFERENCE ONLY

SHEET TITLE:
PIPING
SIZE CHARTS

SHEET NUMBER: A-11

REVISION: 0

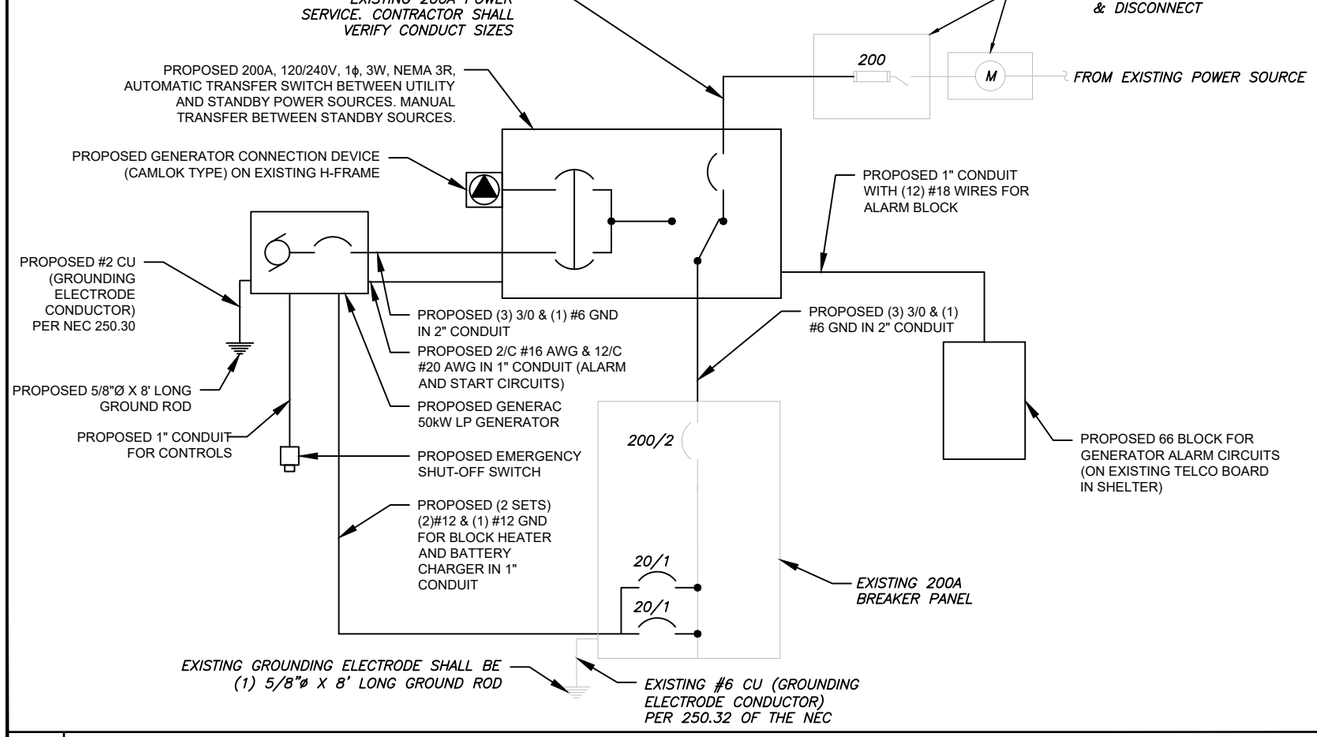


ELECTRICAL NOTES:

1. PROPOSED (1) 1" ALARM CAT5 CABLE FEED FROM EXISTING ALARM BLOCK TO PROPOSED ATS
2. PROPOSED 2" POWER CONDUIT FROM PROPOSED ATS TO PROPOSED GENERATOR.
3. PROPOSED (1) 1" CONDUIT WITH START CIRCUIT FROM PROPOSED EMERGENCY GENERATOR STOP SWICTH TO PROPOSED GENERATOR.
4. PROPOSED (1) 2" POWER FROM EXISTING BREAKER PANEL TO PROPOSED ATS.
5. EXISTING 200A SERVICE FROM EXISTING METER/DISCONNECT TO BE RECONNECTED TO NEW ATS PANEL.

4 ELECTRICAL PLAN

22"x34" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0' 4'



2 ELECTRICAL ONE-LINE DIAGRAM

NOT TO SCALE

UTILITY GENERAL NOTES:

1. UNDERGROUND ELECTRICAL CONDUIT FROM POINT OF CONNECTION TO VERIZON METER TO VERIZON EQUIPMENT, WITH MIN. 4" SAND BASE & 30" OF COVER TO FINISH GRADE.
2. ALL GROUNDINGS FOR METER MUST BE DONE PER NEC & LOCAL BUILDING & SAFETY REQUIREMENTS.
3. ALL CONDUIT TRENCHING TO THE SITE MUST HAVE MIN. 30" OF COVER TO FINISH GRADE. INSTALL HANDHOLES AS REQ'D. PER NEC AND LOCAL & STATE RULES AND REGULATIONS. PROVIDE TRAFFIC COVERS IN TRAFFIC AREAS.
4. ALL HANDHOLES MUST HAVE MIN. 2 FT. OF 1" CRUSHED ROCK AS BASE, AND TOP OF BOX TO BE 1 1/2" ABOVE FINISH GRADE.
5. ALL UNDERGROUND SPLICES SHALL BE WATER PROOF.
6. PROVIDE 12" MIN. SEPARATION BETWEEN POWER AND TELC0 CONDUITS.
7. FIELD VERIFY EXACT TRENCH ROUTE.
8. LABEL VERIZON METER / MAIN.
9. GROUND RODS MAY BE USED FOR SITE GROUNDING IF DESIRED RESISTANCE IS ACHIEVED.
10. PERFORM ALL ELECTRICAL WORK IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) AND ALL APPLICABLE LOCAL CODES AND REGULATIONS.
11. WIRING SHALL BE INSULATED COPPER CONDUCTORS INSTALLED IN CONDUIT. CONDUCTORS SHALL BE SOLID IN SIZES SMALLER THAN NO. 8 AWG AND STRANDED IN SIZES NO. 8 AWG AND LARGER. INSULATION SHALL BE THWN. COLOR CODING SHALL BE BLACK: PHASE A, RED: PHASE B, WHITE: NEUTRAL, GREEN OR BARE: GROUND.
12. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC AND BENDS SHALL BE LONG SWEEP (MIN 36" INSIDE RADIUS) SCHEDULE 40 PVC. EXTERIOR CONDUITS ABOVE GRADE SHALL BE GALVANIZED RIGID STEEL (GRS) WITH THREADED FITTINGS. INTERIOR CONDUITS SHALL BE GRS WHERE SUBJECT TO DAMAGE AND EMT, GRS OR IMC ELSEWHERE.

SYMBOLS

	DUPLEX RECEPTACLE		GROUND ROD
	QUAD RECEPTACLE		GROUND ROD WITH ACCESS
F	DISCONNECT SWITCH		XIT GROUND ROD
M	UTILITY METER		EQUIPMENT IDENTIFICATION
	CIRCUIT BREAKER	1	DENOTES FEEDER
	FUSE		COMPRESSION, CLAMP, OR DOUBLE HOLE LUG TYPE GROUND CONNECTION
G	GENERATOR		EXOTHERMIC CONNECTION (CADWELD) TO GROUND RING AND COMPRESSION TO GROUND HALO
	LIGHT SWITCH		

3 UTILITY NOTES & SYMBOLS

NOT TO SCALE

1 NOT USED

NOT TO SCALE

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INFINIGY

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CHRISTOPHER J WARREN
LICENSE
No 59739
2/1/23
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SHEET TITLE:
ELECTRICAL SITE PLAN & NOTES

SHEET NUMBER: E-1

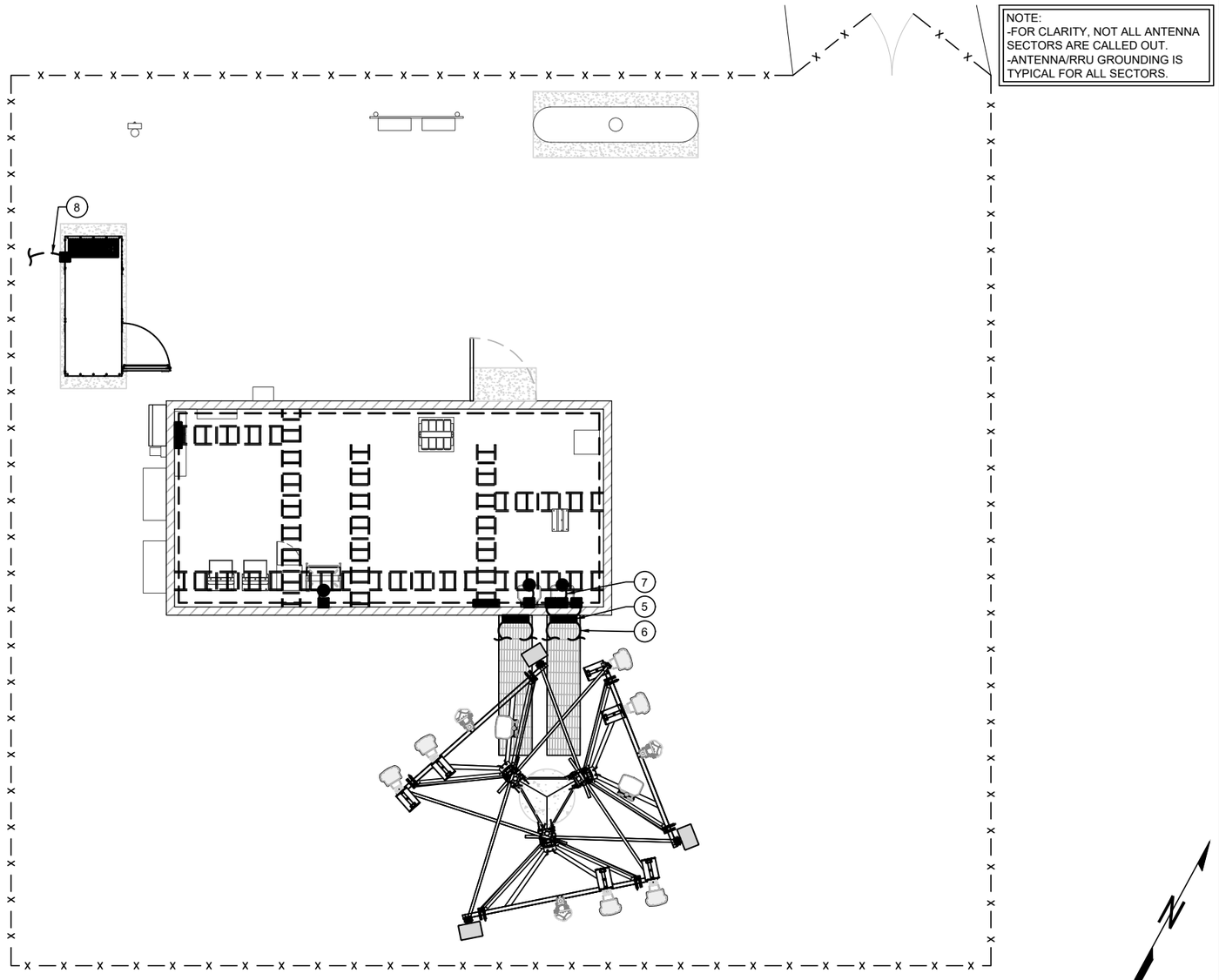
REVISION: 0

GROUNDING KEYED NOTES:

1. GUYED TOWER GROUND BUS BAR AT BASE OF GUYED TOWER WITH COAX GROUND KIT. SEE DETAIL 5/G-2 FOR GROUND BAR CONSTRUCTION, SEE DETAIL 9/G-2 FOR GROUND WIRE CONNECTIONS, AND SEE DETAIL 1/G-2 FOR COAX GROUNDING.
2. #2 AWG GROUND FROM GUYED TOWER GROUND BUS BAR TO GUYED TOWER GROUND RING (TYP OF (2) PLACES).
3. ANTENNA GROUND BUS BAR AT ANTENNA LEVEL OF GUYED TOWER WITH COAX GROUND KIT. SEE DETAIL 5/G-2 FOR GROUND BAR CONSTRUCTION, SEE DETAIL 9/G-2 FOR GROUND WIRE CONNECTIONS, AND SEE DETAIL 4/G-2 FOR COAX GROUNDING.
4. #6 AWG GROUND FROM ANTENNA / RRU / OVP TO ANTENNA GROUND BUS BAR.
5. EQUIPMENT GROUND BUS BAR MOUNTED TO EQUIPMENT SHELTER. SEE DETAIL 5/G-2 FOR GROUND BAR CONSTRUCTION AND FOR GROUND WIRE CONNECTIONS. SEE DETAIL 9/G-2.
6. #2 AWG GROUND FROM EQUIPMENT GROUND BAR TO EXTERNAL GROUND RING (TYP OF (2) PLACES).
7. #6 AWG GROUND FROM EQUIPMENT TO EQUIPMENT SHELTER GROUND SYSTEM, TYP.
8. #2 AWG GROUND FROM GENERATOR TO GROUND RING (TYP).

GROUNDING NOTES:

1. CONTRACTOR SHALL CAREFULLY REVIEW GROUNDING NOTES AND CONSULT WITH TOWER OWNER FOR SITE SPECIFIC CONDITIONS IF THERE SHOULD BE ANY FURTHER CLARIFICATIONS NEEDED.
2. VERIZON GROUNDING LEADS COMING FROM BOTH ANTENNAS AND COAX GROUND KITS SHALL BE DIRECTED TO DEDICATED VERIZON BUS BARS AND FOR A POLE OR TOWER, SHALL BE LOCATED UP ON A GIVEN POLE OR TOWER NEAR THE BOTTOM OF ANTENNAS, BEING DIRECTLY FASTENED TO THE STRUCTURE WITH STAINLESS STEEL HARDWARE AND / OR ANGLE ADAPTERS (E.G. PIROD / VALMONT GROUNDING BUS BAR PART NUMBER B2981 [VERIZON CONSTRUCTION MANAGER SHALL CONFIRM BUS BAR PART PRIOR TO CONTRACTOR PURCHASE OF PART] BEING ANCHORED TO A MOUNTING BRACKET KIT FOR B2372 OR EQUIVALENT OR BEING MOUNTED WITH UNIVERSAL CLAMP NUMBER B1852 OR EQUIVALENT [W/O CHERRY INSULATORS]).
3. ANCHORING OF VERIZON UPPER BUS BAR SHALL NOT EMPLOY THE USE OF DRILLING, WELDING OR CUTTING INTO THE EXISTING STRUCTURE (ALL NEW ATTACHMENT BRACKETS SHALL BE CLAMPED OR MECHANICALLY FASTENED TO STRUCTURE).
4. FOR A METAL POLE OR TOWER, VERIZON ANTENNA AND COAX GROUND LEADS SHALL TERMINATE AT UPPER BUS BAR W/O INSULATORS AT THE NEAR ANTENNA LOCATION WITH LEADS NOT CONTINUING DOWN THE POLE SHAFT OF TOWER LEG (TOWER STRUCTURE SHALL SERVE AS GROUNDING MEDIUM IN ORDER TO ENSURE THAT ALL EQUIPMENT ON THE TOWER IS ON THE SAME GROUND POTENTIAL MAINTAINING ONE COMMON GROUND PLANE).
5. FOR A POLE OR TOWER, A SECOND VERIZON BUS BAR WITH STAND OFF INSULATORS (E.G. PIROD / VALMONT GROUNDING BUS BAR PART NUMBER B2981 [VERIZON CONSTRUCTION MANAGER SHALL CONFIRM BUS BAR PART PRIOR TO CONTRACTOR PURCHASE OF PART] BEING ANCHORED TO A MOUNTING BRACKET KIT FOR B2372 OR EQUIVALENT OR BEING MOUNTED WITH UNIVERSAL CLAMP NUMBER B1852 OR EQUIVALENT [WITH STANDOFF CHERRY INSULATORS]) SHALL BE ADDED AT THE BASE OF THE TOWER TO CAPTURE ANY ADDITIONAL TOWER SURFACE LIGHTNING RESIDUAL SHEETING WITH A DEDICATED VERIZON GROUND LEAD BEING DIRECTED TO GROUND AND ATTACHED TO THE EXISTING TOWER GROUND RING (FINAL LOCATION OF BOTTOM OF TOWER GROUND BUS BAR SHALL BE APPROVED BY TOWER REPRESENTATIVE PRIOR TO INSTALLATION).
6. VERIZON GROUND LEAD FROM LOWER VERIZON BUS BAR SHALL BE NO. 2 OR 2/0 AWG WIRE AND SHALL BE ATTACHED TO EXISTING POLE / TOWER GROUND RING WITH PARALLEL THRU WIRE MOLD (E.G. PIROD / VALMONT PART NUMBER 171791 OR EQUIVALENT).
7. VERIZON GROUND LEADS MAY NOT BE ATTACHED TO EXISTING GROUND RINGS WITH ANY CONFIGURATION OTHER THAN THE "PARALLEL THRU WIRE MOLD" WITH THE LEAD SWEEPING INTO THE GROUND RING IN THE CONFIGURATION SHOWN ON THE GROUNDING PLAN.
8. VERIZON GROUND LEADS FROM BOTH ANTENNAS AND COAX GROUND KITS WHERE THERE IS AN ESTABLISHED GROUND BUS BAR POSITIONED AT THE TOP OF A NONCONDUCTIVE POLE OR STRUCTURE (E.G. WOOD UTILITY POLES, PRE-CAST CONCRETE POLES, BUILDINGS, FIBERGLASS STRUCTURES, ETC.) SHALL EMPLOY THE USE OF SEPARATE GROUND LEAD CONDUCTORS RUNNING DOWN THE POLE OR STRUCTURE TO A BUS BAR AT THE BASE OF THE POLE OR STRUCTURE AND FURTHER RUNNING INTO AN EXISTING GROUND RING.



NOTE:
-FOR CLARITY, NOT ALL ANTENNA SECTORS ARE CALLED OUT.
-ANTENNA/RRU GROUNDING IS TYPICAL FOR ALL SECTORS.

1 SCHEMATIC GROUNDING PLAN

22"x34" SCALE: 1/4" = 1'-0"
11"x17" SCALE: 1/8" = 1'-0"
4' 3' 2' 1' 0' 4'

ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE
BCW	BARE COPPER WIRE
DWG	DRAWING
EMT	ELECTRICAL METALLIC TUBING
GEN	GENERATOR
IGR	INTERIOR GROUND RING (HALO)
IMC	INTERMEDIATE METALLIC CONDUIT
MGB	MASTER GROUND BAR
PCS	PERSONAL COMMUNICATION SYSTEM
PTS	POWER TRANSFER SWITCH
PVC	RIGID (SCH. 40) POLYVINYL CHLORIDE CONDUIT
RGS	RIGID GALVANIZED STEEL
RWY	RACEWAY
TYP	TYPICAL

ELECTRICAL SYMBOLS

	GROUND BAR
	GROUND ROD WITH ACCESS
	CHEMICAL GROUND ROD
	GROUND ROD
	DISCONNECT SWITCH
M	METER
	CIRCUIT BREAKER
	CADWELD TYPE CONNECTION
	COMPRESSION TYPE CONNECTION
	GROUNDING WIRE
1 / A-1	REPRESENTS DETAIL NUMBER / REFERENCE SHEET NUMBER

verizon

AMERICAN TOWER CORPORATION

INFINIGY

BELLEVUE, WA 98004

VERIZON SITE:
MASON SW

ATC SITE:
416988
MASON SW FL

5 SW CUMORAH HILL RD
FT. WHITE, FL 32024
COLUMBIA COUNTY

300'-0" GUYED TOWER

DRAWINGS ISSUED FOR:

REV.	DATE	DRAWN	DESCRIPTION	QA/QC
A	09/16/22	RCD	PRELIMINARY REVIEW	PD
0	02/01/23	CES	ISSUED FOR CONSTRUCTION	PHR

CHRISTOPHER J WARREN
LICENSE
No 59739
2/1/23
STATE OF FLORIDA
PROFESSIONAL ENGINEER

SHEET TITLE:
SCHEMATIC GROUNDING PLAN & NOTES

SHEET NUMBER: G-1

REVISION: 0

12 NOT USED

NOT TO SCALE

11 NOT USED

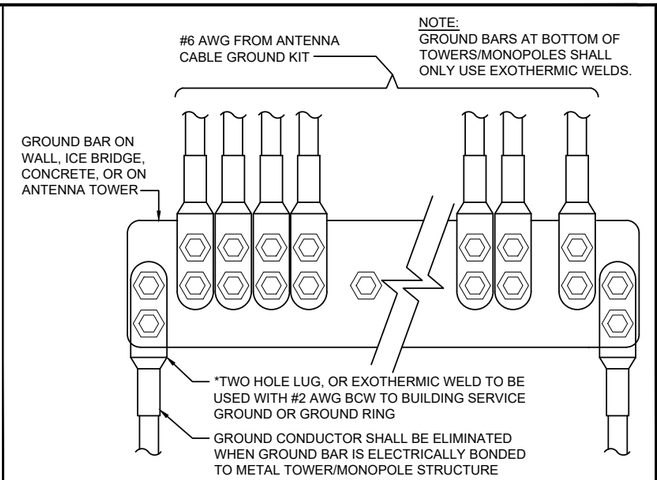
NOT TO SCALE

10 NOT USED

NOT TO SCALE

9 GROUND WIRE INSTALLATION

NOT TO SCALE



8 NOT USED

NOT TO SCALE

7 NOT USED

NOT TO SCALE

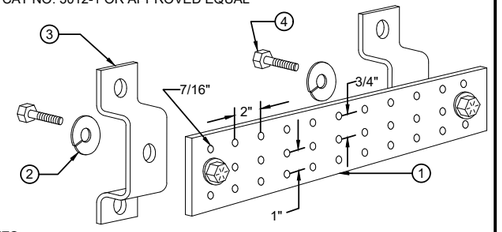
6 NOT USED

NOT TO SCALE

5 TYPICAL GROUND BAR

NOT TO SCALE

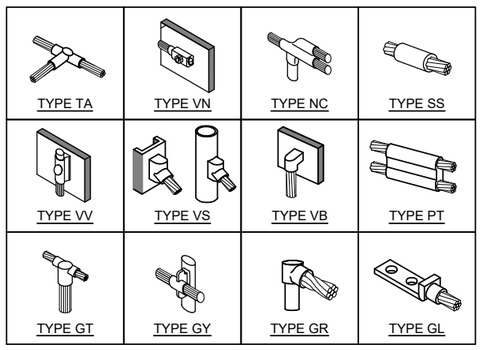
1.) COPPER GROUND BAR, 1/4"x 4"x 20", NEWTON INSTRUMENT CO. CAT. NO. B-6142 OR APPROVED EQUAL. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION. (ACTUAL GROUND BAR SIZE WILL VARY BASED ON NUMBER OF GROUND CONNECTIONS)
2.) 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR APPROVED EQUAL
3.) WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056 OR APPROVED EQUAL
4.) 5/8-11 X 1" HHCS BOLTS, NEWTON INSTRUMENT CO. CAT NO. 3012-1 OR APPROVED EQUAL



NOTES:
GROUND BARS AT ANTENNA LEVEL AND AT BASE OF TOWER STRUCTURE TO BE ATTACHED WITH INSULATORS. CONNECTION TO TOWER STRUCTURE SHALL BE PER MANUFACTURERS RECOMMENDATIONS.

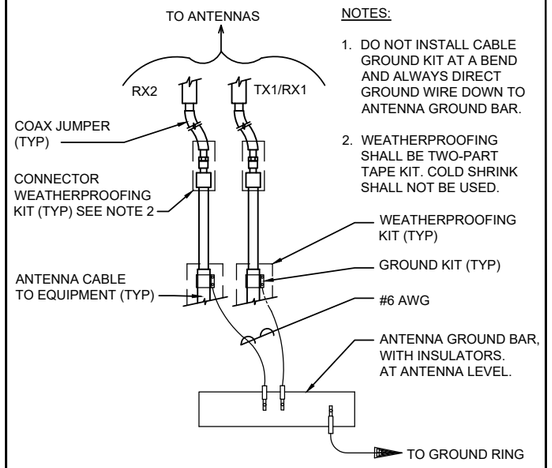
4 EXOTHERMIC CONNECTIONS

NOT TO SCALE



3 CABLE GROUND CONNECTIONS

NOT TO SCALE

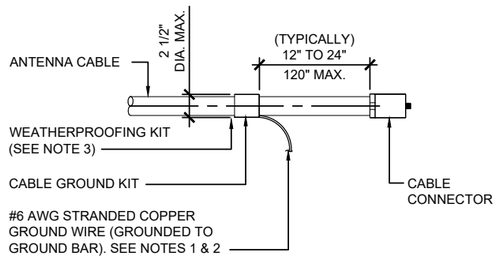


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHERPROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

2 CABLE GROUND KIT

NOT TO SCALE



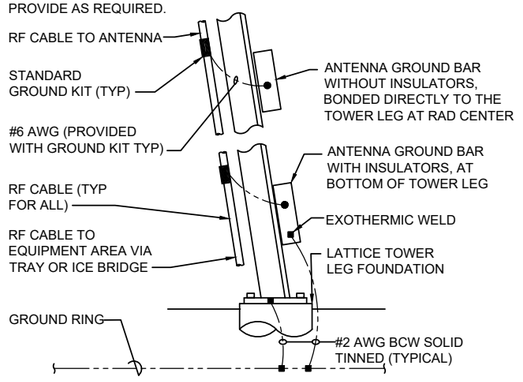
NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHERPROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

1 RF CABLE GROUND

NOT TO SCALE

NOTE:
NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS, AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.



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CHRISTOPHER J WARREN LICENSE No 59739 2/1/23 STATE OF FLORIDA PROFESSIONAL ENGINEER

SHEET TITLE:
GROUNDING DETAILS

SHEET NUMBER: G-2

REVISION: 0