# SITE NUMBER: SITE NAME: SITE TYPE: **TOWER HEIGHT:**

# 36075 LEE'S SUMMIT #1B **GUYED TOWER** 479'-0"

## SITE INFORMATION

IF USING 11"X17" PLOT, DRAWINGS WILL BE HALF SCALE

### SITE ADDRESS:

COUNTY:

SITE NUMBER:

AMERICAN TOWER DISTRICT : STRUCTURE HEIGHT:

LATITUDE:

LONGITUDE: LAT/LONG TYPE: **GROUND ELEVATION:** 

TOWER OWNER:

2200 LOWENSTEIN LEE'S SUMMIT, MO 64081 JACKSON

36075

MST

479'-0"

38.93324444 - 94.41758056 NAD83

± 981' AMSL

ATC

## CUSTOMER INFORMATION

COMPANY:

ADDRESS:

CUSTOMER SITE NAME:

CONTACT NAME: CONTACT MAIL: PHONE:

WISPER ISP, LLC

9711 FUESSER RD MASCOUTAH, IL 62258

LEE'S SUMMIT #1B

DAN RYAN DRYAN@WISPERISP.COM (618) 979-6679

## PROJECT TEAM:

### CONSTRUCTION MANAGER:

NAME: AJ BEERS PHONE: (618) 407-3342 MAIL: ABEERS@WISPERISP.COM

### TOWER OWNER CONTACT:

NAME: AMERICAN TOWER PHONE: 919-466-0112 MAIL: 3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518

### SITE ACQUISITION:

NAME: DAN RYAN PHONE: (618) 979-6679 MAIL: DRYAN@WISPERISP.COM

LANDLORD

CONST. MGR

PROJECT MGR

## **PROJECT DESCRIPTION**

THESE DRAWINGS DEPICT AN EXISTING SELF SUPPORTED TOWER WITH ANTENNA INSTALLATION TO PROVIDE HIGH SPEED INTERNET SERVICE IN RURAL AREAS.

## SHEET INDEX:

SHEET:	DESCRIPTION :
G-001	TITLE SHEET
G-002	GENERAL NOTES
C-101	ENLARGED SITE PLAN
C-201	EXISTING ANTENNA LAYO
C-202	PROPOSED ANTENNA LAY
C-501	CONSTRUCTION DETAILS
C-502	CONSTRUCTION DETAILS
E-101	GROUNDING LAYOUT
E-501	PANEL SCHEDULE & ONE -
E-502	GROUNDING DETAILS
E-503	GROUNDING DETAILS

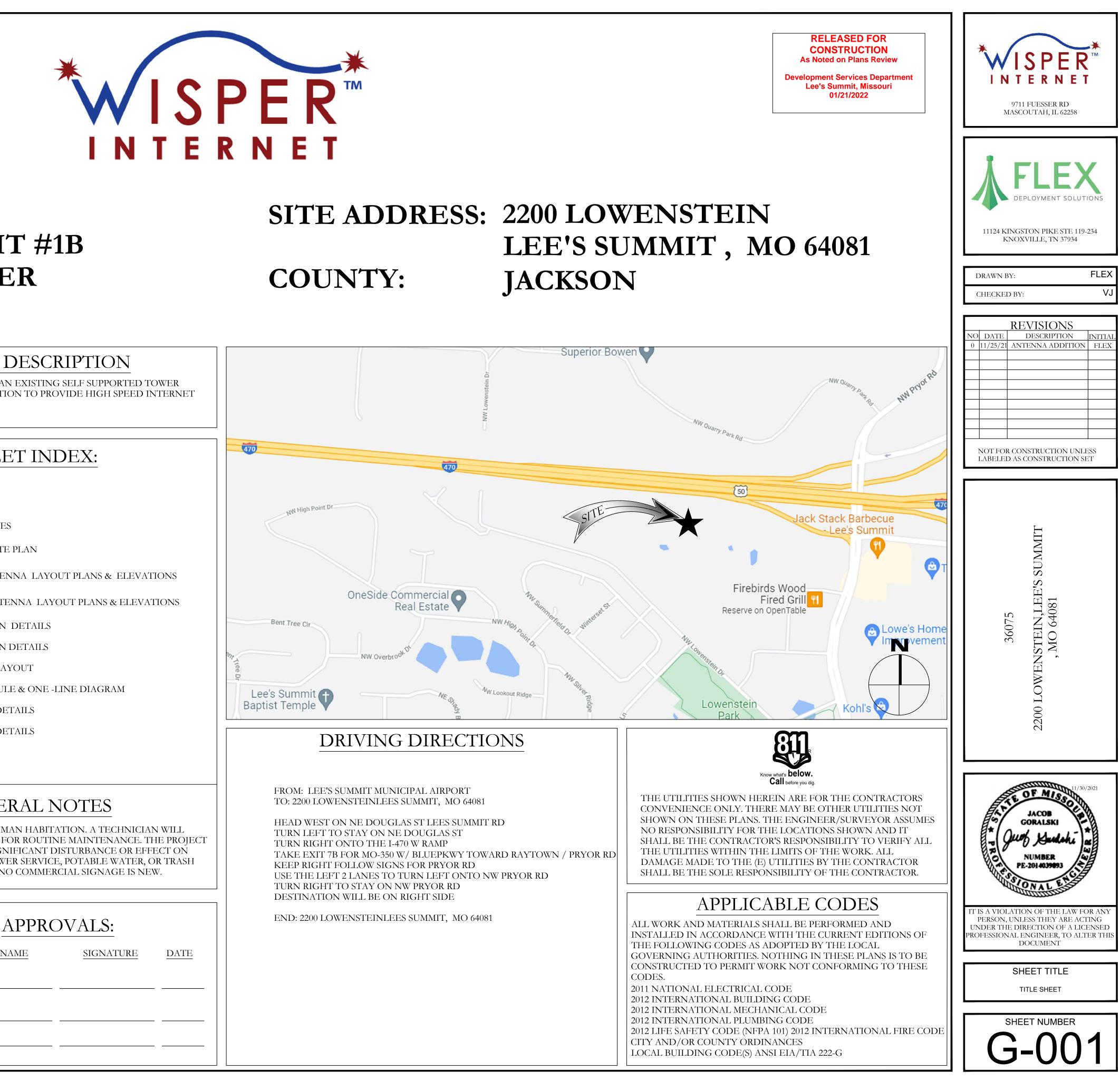
## GENERAL NOTES

THE FACILITY IS NOT FOR HUMAN HABITATION. 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 NEW.

PRINT	NAME



# JACKSON



### GENERAL CONSTRUCTION NOTES:

- 1. OWNER FURNISHED MATERIALS, "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
  - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
  - B. AC/TELCO INTERFACE BOX (PPC)
  - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
  - D. TOWERS, MONOPOLES E. TOWER LIGHTING
  - F. GENERATORS & LIQUID PROPANE TANK
  - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
  - H. ANTENNAS (INSTALLED BY OTHERS)
  - TRANSMISSION LINE
  - TRANSMISSION LINE JUMPERS
  - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
  - TRANSMISSION LINE GROUND KITS
  - M. HANGERS N. HOISTING GRIPS
  - O. BTS EQUIPMENT
- THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE 2. COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
- ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH CCI CONSTRUCTION SPECIFICATIONS.
- CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
- ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER
- DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
- DETAILS SHOWN ARE TYPICAL: SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION 9. SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING. ANCHOR BOLTS, ETC.
- CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES. GROUNDS 11. DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
- 12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION, ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE REP PRIOR TO PROCEEDING.
- 13. EACH CONTRACTOR SHALL COOPERATE WITH THE REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
- 14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER.
- 15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
- 16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE REP AND ENGINEER OF RECORD IMMEDIATELY.
- 17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- 18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
- 19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH CROWN CASTLE (CCI) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
- 20. CONTRACTOR SHALL FURNISH AND CROWN CASTLE (CCI) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
- 21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
- 22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH REP TO

DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR

- 23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH SPECIFICATIONS AND REQUIREMENTS.
- 24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- 25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
- 26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
- 27. CONTRACTOR SHALL NOTIFY REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
- 28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
- 29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR. SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
- 30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE REP. ANY WORK FOUND BY THE REP. TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
- 31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
- 32. FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
- 33. OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO OR THEIR ARCHITECT/ENGINEER

### STRUCTURAL STEEL NOTES:

- STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
- STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
  - A. ASTM A-572, GRADE 50 ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
  - B. ASTM A-36 ALL OTHER ROLLED SHAPES. PLATES AND BARS UNLESS NOTED OTHERWISE
  - C. ASTM A-500, GRADE B HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
  - D. ASTM A-325, TYPE SC OR N ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
  - E. ASTM F-1554 07 ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
- ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER 3. FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
- ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
- 5 DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
- 6 CONNECTIONS:
  - A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.
  - B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.

- C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR
- D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
- E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
- MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED F OTHERWISE.
- G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
- H. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS ARE COMPLETE.
- ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE ENGINEER, AND PROJECT MANAGER IN WRITING

### SPECIAL CONSTRUCTION

### ANTENNA INSTALLATION NOTES

- 1. WORK INCLUDED:
  - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OD COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
  - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND SPECIFICATIONS.
  - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
  - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
  - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
  - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
  - G. ANTENNA AND COAXIAL CABLE GROUNDING:
- ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
- ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

### CONCRETE AND REINFORCING STEEL NOTES:

- 1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
- 2. MIX DESIGN SHALL BE APPROVED BY REP PRIOR TO PLACING CONCRETE.
- 3. CONCRETE SHALL BE NORMAL WEIGHT, 6 % AIR ENTRAINED (+/- 1.5%) WITH A SLUMP RANGE OF 3-6" AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED.
- 4. THE FOLLOWING MATERIALS SHALL BE USED:

PORTLAND CEMENT: A	STM C150, TYPE 2
REINFORCEMENT:	ASTM A185, PLAIN STEEL WELDED WIRE FABRIC
REINFORCEMENT BARS:	ASTM A615, GRADE 60, DEFORMED
NORMAL WEIGHT AGGREGATE	E: ASTM C33
WATER:	ASTM C 94/C 94M
WELDED WIRE FABRIC:	ASTM A185
ADMIXTURES:	
-WATER-REDUCING	AGENT: ASTM C 494/C 494M, TYPE A
-AIR-ENTERING AGEI	NT: ASTM C 260/C 260M
-SUPERPLASTICIZER	R: ASTM C494, TYPE F OR TYPE G
-RETARDING:	ASTM C 494/C 494M, TYPE B
MINIMUM CONCRETE COVER FOR	R REINFORCING STEEL SHALL BE NO LESS THAN 3".

A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.

- IN "METHOD 1" OF ACI 301.
- 9. DO NOT WELD OR TACK WELD REINFORCING STEEL.
- IN PLACE BEFORE START OF CONCRETE PLACEMENT.

- 14. ALL CONCRETE SHALL HAVE A "SMOOTH FORM FINISH."
- 16.
- DRAWINGS.

- 22. GRAVEL BENEATH SLAB.

### ELECTRICAL NOTES:

- AND STATE CODES AND NATIONAL ELECTRICAL CODE.

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO CCI **ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN.** FAILURE TO COMMUNICATE DIRECTLY WITH CCI ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM CCI ENGINEERING SHALL BE THE SOLE **RESPONSIBILITY OF THE GENERAL CONTRACTOR.** 

INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR APPROVAL FROM AN CCI ENGINEER WHEN DRILLING HOLES IN CONCRETE.

ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED

10. ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE

11. REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.

12. DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.

13. FOR COLD-WEATHER (ACI 306) AND HOT-WEATHER (ACI 301M) CONCRETE PLACEMENT. CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.

15. SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.

DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).

17. ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.

LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT

19. SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 6".

20. BAR SUPPORTS SHALL BE ALL-GALVANIZED METAL WITH PLASTIC TIPS.

21. ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE OF SUFFICIENT STRENGTH FOR INTENDED PURPOSE, BUT NOT LESS THAN NO. 18 GAUGE.

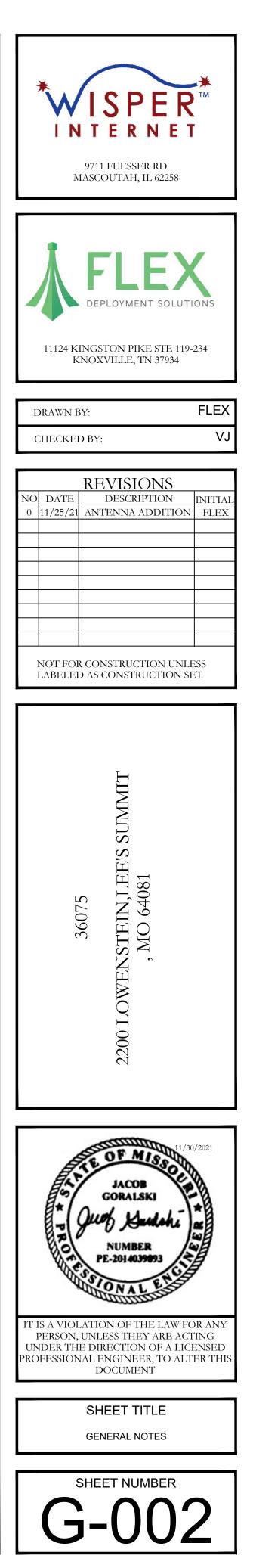
SLAB ON GROUND: COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6"

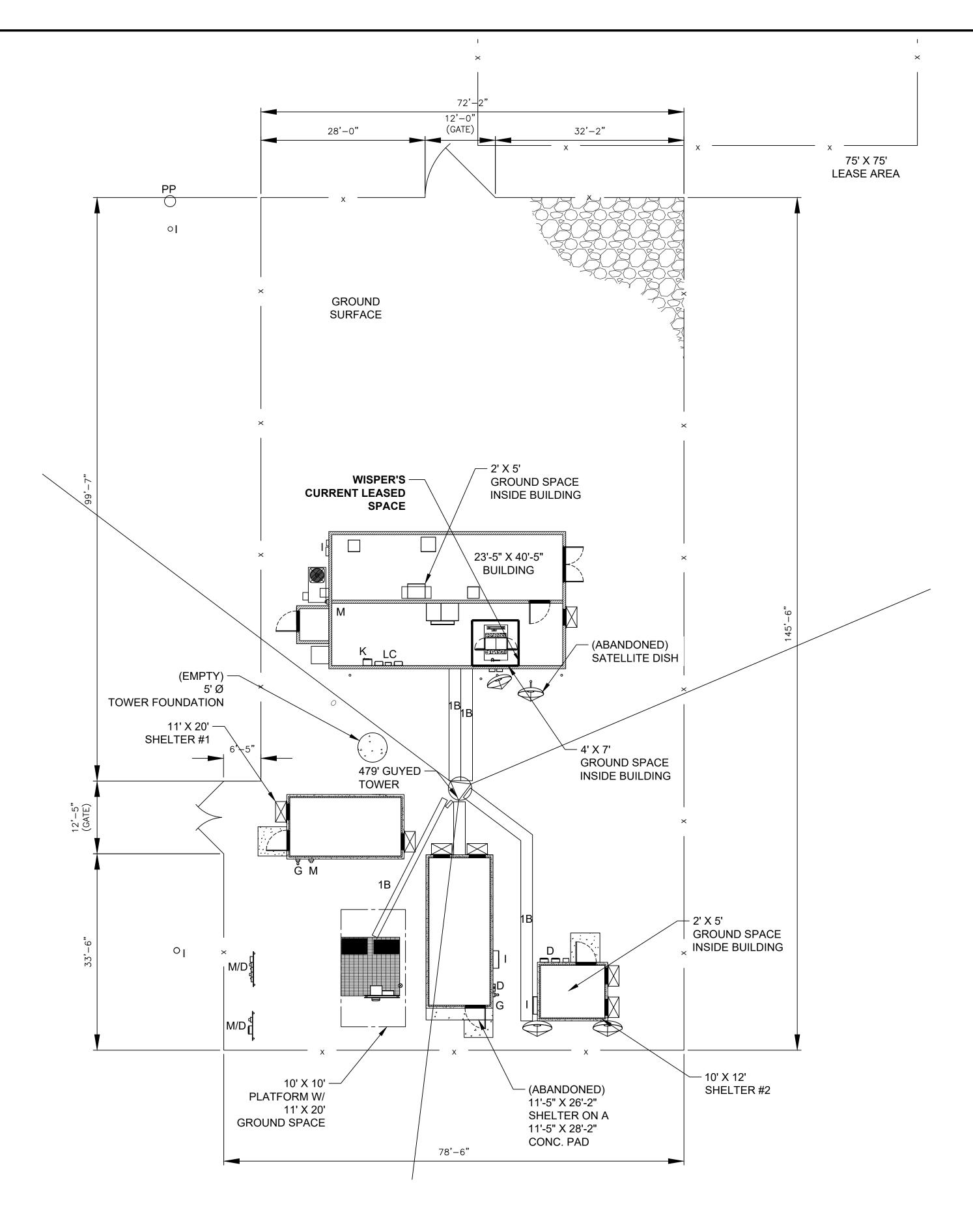
ELECTRICAL WORK SHALL BE PERFORMED BY ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL ENSURE THAT ALL WORK COMPLIES WITH ALL APPLICABLE LOCAL

ALL SUGGESTED ELECTRICAL ELEMENTS (SUCH AS BREAKER SIZES, WIRE SIZES, CONDUITS SIZES) ARE FOR ZONING PURPOSES ONLY. IT IS THE RESPONSIBILITY TO OF THE ELECTRICAL CONTRACTOR TO CONFIRM COMPLIANCE WITH LOCAL ELECTRICAL CODES AND PASS ALL APPLICABLE AND NECESSARY INSPECTIONS. IN SOME EVENTS, IT MAY BE NECESSARY TO PERFORM AN ELECTRICAL LOAD STUDY TO VERIFY THE CAPACITY OF THE EXISTING SERVICE. THIS IS NOT THE RESPONSIBILITY OF CCI. IT IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.

CONTRACTOR SHALL FIELD LOCATE ALL BELOW GRADE GROUNDING CABLES AND UTILITY LINES PRIOR TO CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR RELOCATION OF ALL UTILITIES AND GROUNDING LINES THAT MAY BECOME DISTURBED OR CONFLICTING IN THE COURSE OF CONSTRUCTION.

> RELEASED FOR CONSTRUCTION As Noted on Plans Review evelopment Services Departme Lee's Summit, Missouri 01/21/2022





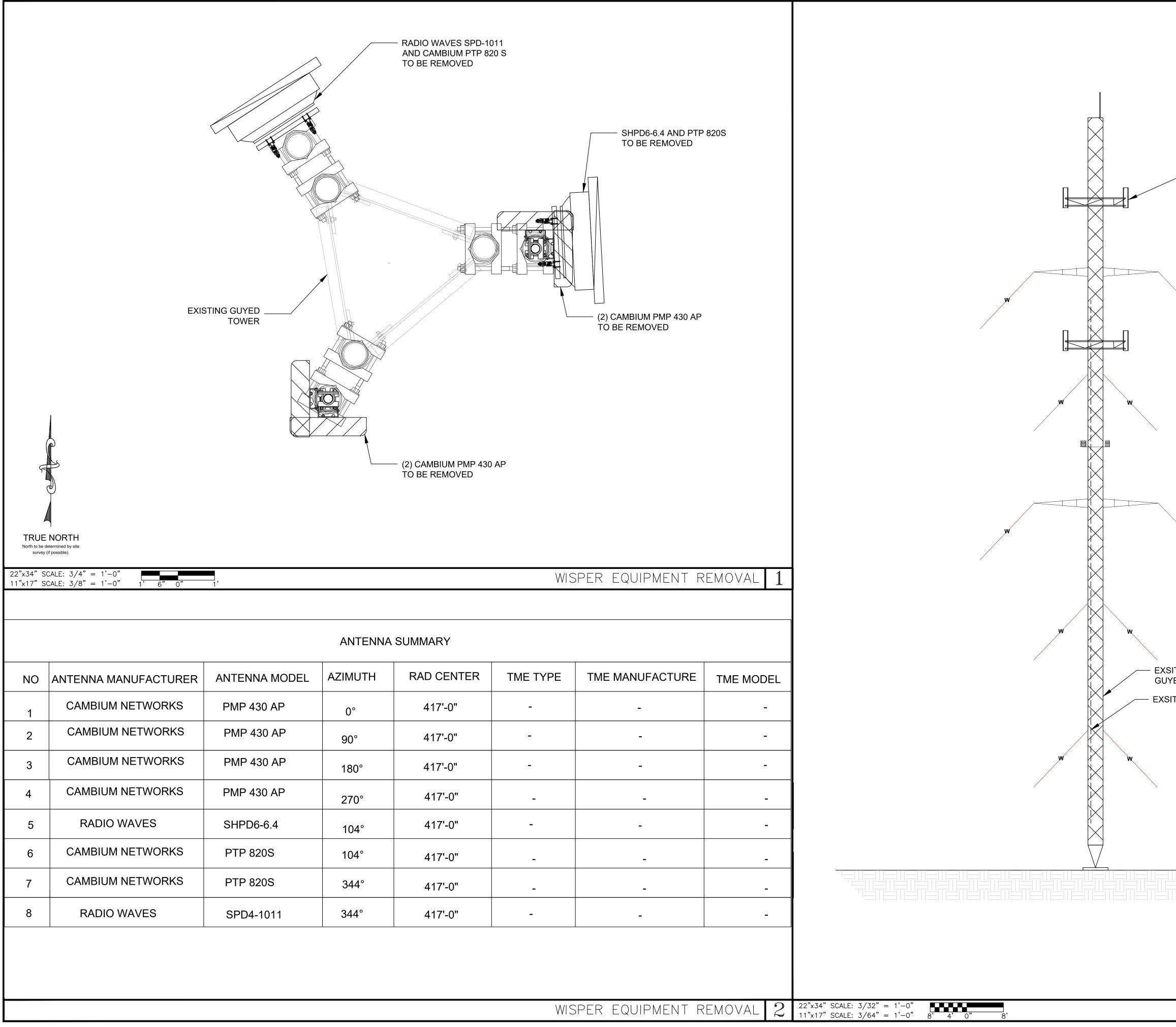
NOTE: THIS SITE PLAN WAS GENERATED FROM CROWN
CASTLE TOWER SITE PLAN AND LIMITED SITE
MEASUREMENTS, WITHOUT THE USE OF A SURVEY.
PROPERTY LINES, RIGHT-OF-WAYS, POWER AND TELCO
UTILITY POINT CONNECTIONS/ROUTES AND EASEMENT
LOCATIONS SHOWN ON THESE PLANS ARE ESTIMATED.
ALL ITEMS AND DIMENSIONS SHOULD BE VERIFIED IN THE
EIFL D
$22^{*}x34^{*}$ SCALE: $3/4^{*} = 1^{*}-0^{*}$
11"x17" SCALE: $3/8$ " = 1'-0" 1' 6" 0" 1'

* <b>ISPER</b> <b>INTERNET</b> 9711 FUESSER RD MASCOUTAH, IL 62258
<b>FLEX</b> DEPLOYMENT SOLUTIONS 11124 KINGSTON PIKE STE 119-234 KNOXVILLE, TN 37934
DRAWN BY: FLEX
CHECKED BY: VJ
REVISIONS    NO  DATE  DESCRIPTION  INITIAL    0  11/25/21  ANTENNA ADDITION  FLEX
NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET
36075 2200 LOWENSTEIN,LEE'S SUMMIT , MO 64081
TIS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT
SHEET TITLE ENLARGED SITE PLAN
SHEET NUMBER

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ENLARGED SITE PLAN

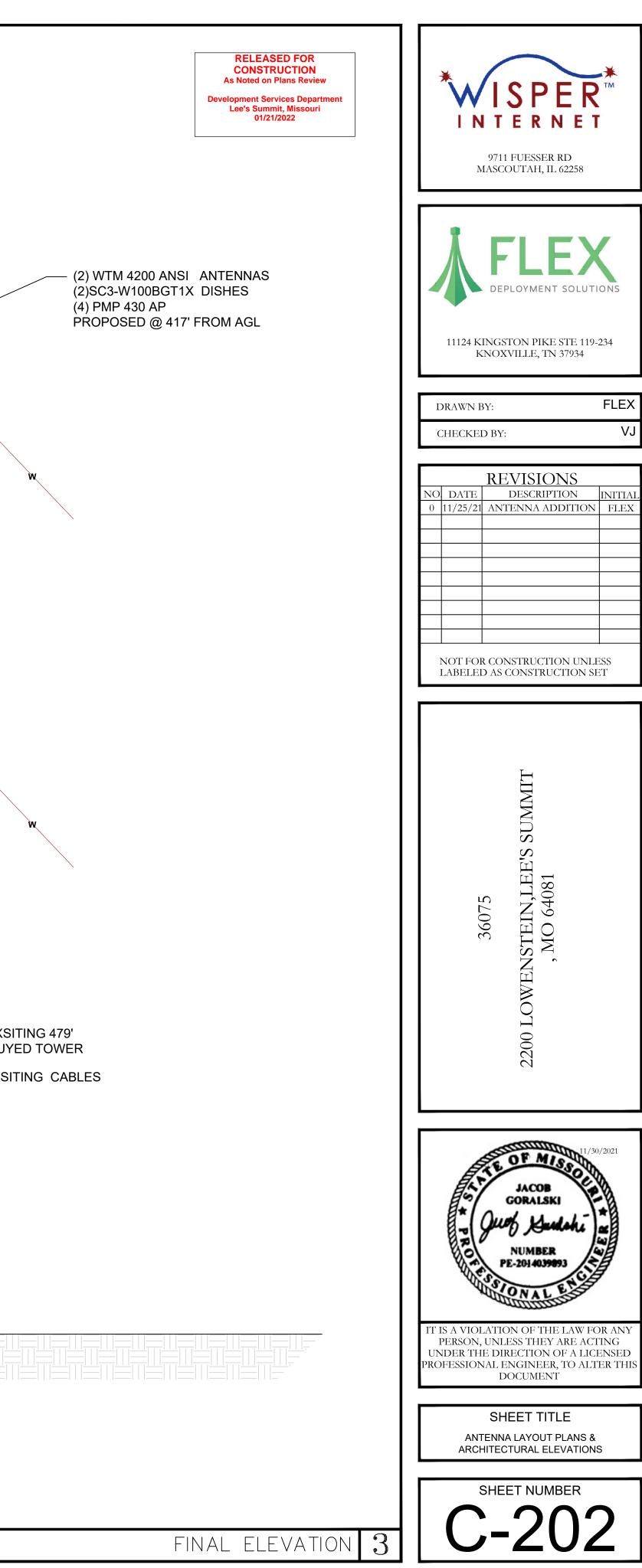
TRUE NORTH North to be determined by site survey (if possible).



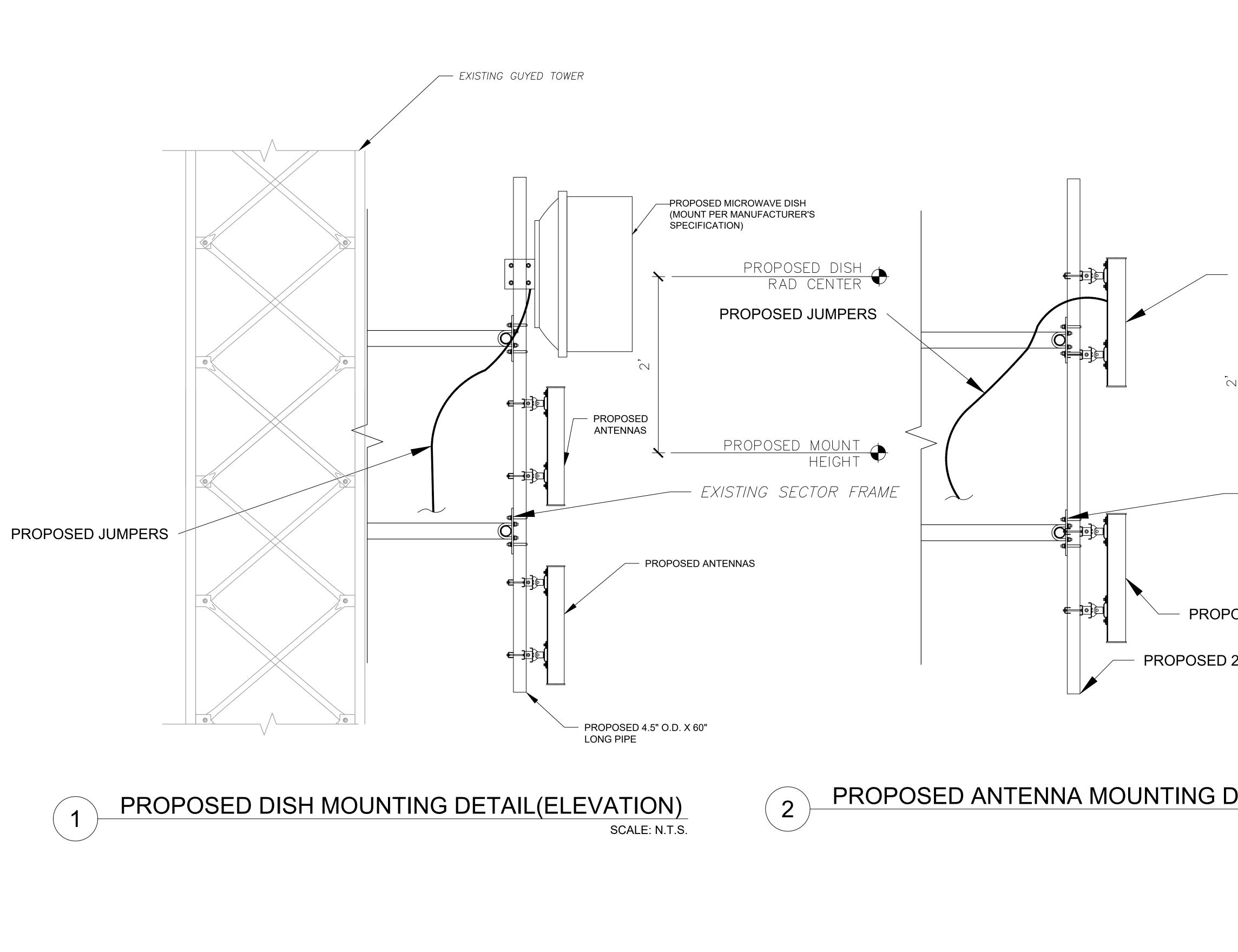
l						
	NO	ANTENNA MANUFACTURER	ANTENNA MODEL	AZIMUTH	RAD CENTER	TME TYPE
	1	CAMBIUM NETWORKS	PMP 430 AP	0°	417'-0"	-
	2	CAMBIUM NETWORKS	PMP 430 AP	90°	417'-0"	-
	3	CAMBIUM NETWORKS	PMP 430 AP	180°	417'-0"	-
	4	CAMBIUM NETWORKS	PMP 430 AP	270°	417'-0"	-
	5	RADIO WAVES	SHPD6-6.4	104°	417'-0"	-
	6	CAMBIUM NETWORKS	PTP 820S	104°	417'-0"	-
	7	CAMBIUM NETWORKS	PTP 820S	344°	417'-0"	-
	8	RADIO WAVES	SPD4-1011	344°	417'-0"	-
ſ						

	RELEASED FOR CONSTRUCTION As Noted on Plans Review Development Services Department Lee's Summit, Missouri 01/21/2022	* ISPER INTERNET 9711 FUESSER RD MASCOUTAH, IL 62258
(4) PMP 430 AP ANTENN (2) P2P 820S RADOIOS (2) SHPD6-6.4 RADOIOS (1)SPD4-1011 RADIOS TO BE REMOVED @ 417 FROM AGL		<b>FLEX</b> DEPLOYMENT SOLUTIONS 11124 KINGSTON PIKE STE 119-234 KNOXVILLE, TN 37934
W		DRAWN BY: FLEX CHECKED BY: VJ
		NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET
X		36075 BNSTEIN,LEE'S SUMMIT , MO 64081
SITING 479' YED TOWER SITING CABLES		2200 LOWEN
		TI IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT
EXISTING	g elevation <b>3</b>	SHEET TITLE ANTENNA LAYOUT PLANS & ARCHITECTURAL ELEVATIONS SHEET NUMBER C-2022

	EXISTING O T (2) PMP 430 AP'S PROPOSED	OWER	(1) RFS SC3-W1 DISH PROPSED	B-W100BGT1X DISH	(2) PMP 430 AP'S PROPOSED		
					WISPER EQUIPM	IENT INSTALL 1	
	6 <sup>°</sup> 0 <sup>°</sup> 1 <sup>′</sup>						
			ANTENNA SUMMAR				W W EXS GUY EXSI
22"x34" SCALE: 3/4" = 1'-0" 11"x17" SCALE: 3/8" = 1'-0" 1'	6" 0" 1'	AZIMUTH	ANTENNA SUMMAR RAD CENTER		TME MANUFACTURE		EXSI
	6" 0" 1'	AZIMUTH 188°		۲		TME MODEL	W W
22"x34" SCALE: 3/4" = 1'-0"    11"x17" SCALE: 3/8" = 1'-0"    1    NO    ANTENNA MANUFACTURE	6" 0" 1,		RAD CENTER	TME TYPE	TME MANUFACTURE	TME MODEL	EXSI
22"x34" SCALE: 3/4" = 1'-0"    11"x17" SCALE: 3/8" = 1'-0"    1    NO    ANTENNA MANUFACTURE    AVIAT NETWORKS	R ANTENNA MODEL	188°	RAD CENTER 417'-0"	RY TME TYPE -	TME MANUFACTURE	TME MODEL	W W
22"x34" SCALE: 3/4" = 1'-0"    11"x17" SCALE: 3/8" = 1'-0"    1"    NO    ANTENNA MANUFACTURE    1    AVIAT NETWORKS    2    AVIAT NETWORKS    RES	R ANTENNA MODEL WTM 4200 ANSI WTM 4200 ANSI	188° 344°	RAD CENTER 417'-0" 417'-0"	RY TME TYPE - -	TME MANUFACTURE - -	TME MODEL - -	W W
22"x34" SCALE: 3/4" = 1'-0"    11"x17" SCALE: 3/8" = 1'-0"    NO    ANTENNA MANUFACTURE    1    AVIAT NETWORKS    2  AVIAT NETWORKS    3  RFS	6" 0" 1    6" 0" 1    Image: Second state sta	188° 344° 188°	RAD CENTER 417'-0" 417'-0" 417'-0"	RY TME TYPE - - -	TME MANUFACTURE    -	TME MODEL - -	W W
22"x34"  SCALE:  3/4" = 1'-0"  1    11"x17"  SCALE:  3/8" = 1'-0"  1    NO  ANTENNA MANUFACTURE    1  AVIAT NETWORKS    2  AVIAT NETWORKS    3  RFS    4  RFS	6" 0" 1'    R  ANTENNA MODEL    WTM 4200 ANSI    WTM 4200 ANSI    WTM 4200 ANSI    SC3-W100BGT1X    SC3-W100BGT1X    PMP 430 AP'S	188° 344° 188° 344°	RAD CENTER 417'-0" 417'-0" 417'-0" 417'-0"	RY TME TYPE - - - - -	TME MANUFACTURE    -		
22"x34"  SCALE:  3/4" = 1'-0"  1    11"x17"  SCALE:  3/8" = 1'-0"  1    NO  ANTENNA MANUFACTURE    1  AVIAT NETWORKS    2  AVIAT NETWORKS    3  RFS    4  RFS    5  CAMBIUM NETWORKS	6" 0" 1,    6" 0" 1,    Image: Second state of the se	188°    344°    188°    344°    344°    0°	RAD CENTER    417'-0"    417'-0"    417'-0"    417'-0"    417'-0"	TME TYPE    -	TME MANUFACTURE    -	TME MODEL - - - - - -	W W

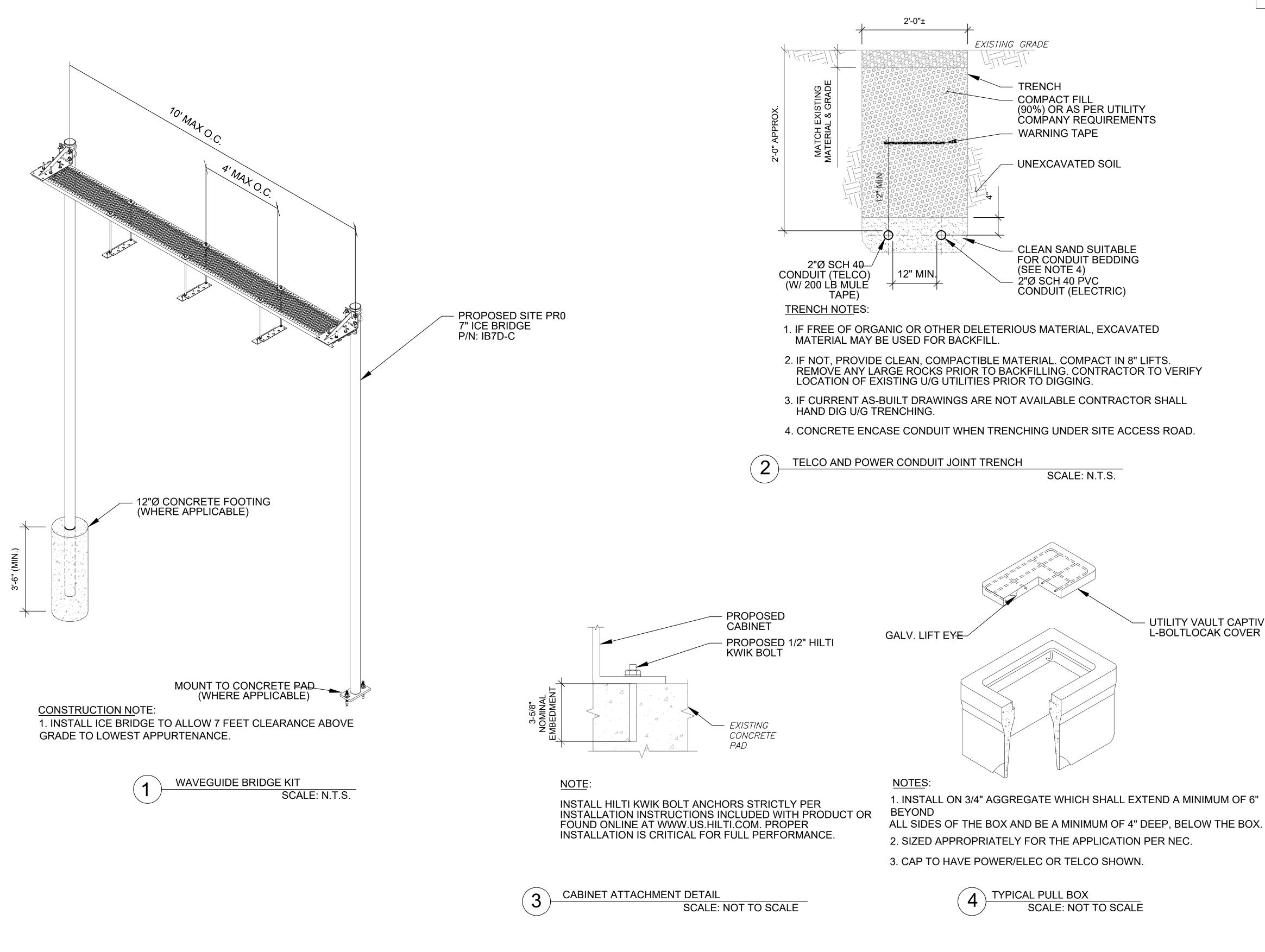


VJ



# PROPOSED ANTENNA MOUNTING D

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	<b>FLEX</b> DEPLOYMENT SOLUTIONS 11124 KINGSTON PIKE STE 119-234 KNOXVILLE, TN 37934
	DRAWN BY: FLEX CHECKED BY: VJ
PROPOSED ANTENNA PROPOSED ANTENNA RAD CENTER	REVISIONS    NO  DATE  DESCRIPTION  INITIAL    0  11/25/21  ANTENNA ADDITION  FLEX    1  1  1  1
PROPOSED MOUNT HEIGHT - EXISTING SECTOR FRAME	36075 2200 LOWENSTEIN,LEE'S SUMMIT , MO 64081
POSED ANTENNA	
2-3/8" O.D. X 96" LONG DETAIL(ELEVATION)	TI IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED
SCALE: N.T.S.	UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT
	SHEET TITLE CONSTRUCTION DETAILS
	sheet number C-501

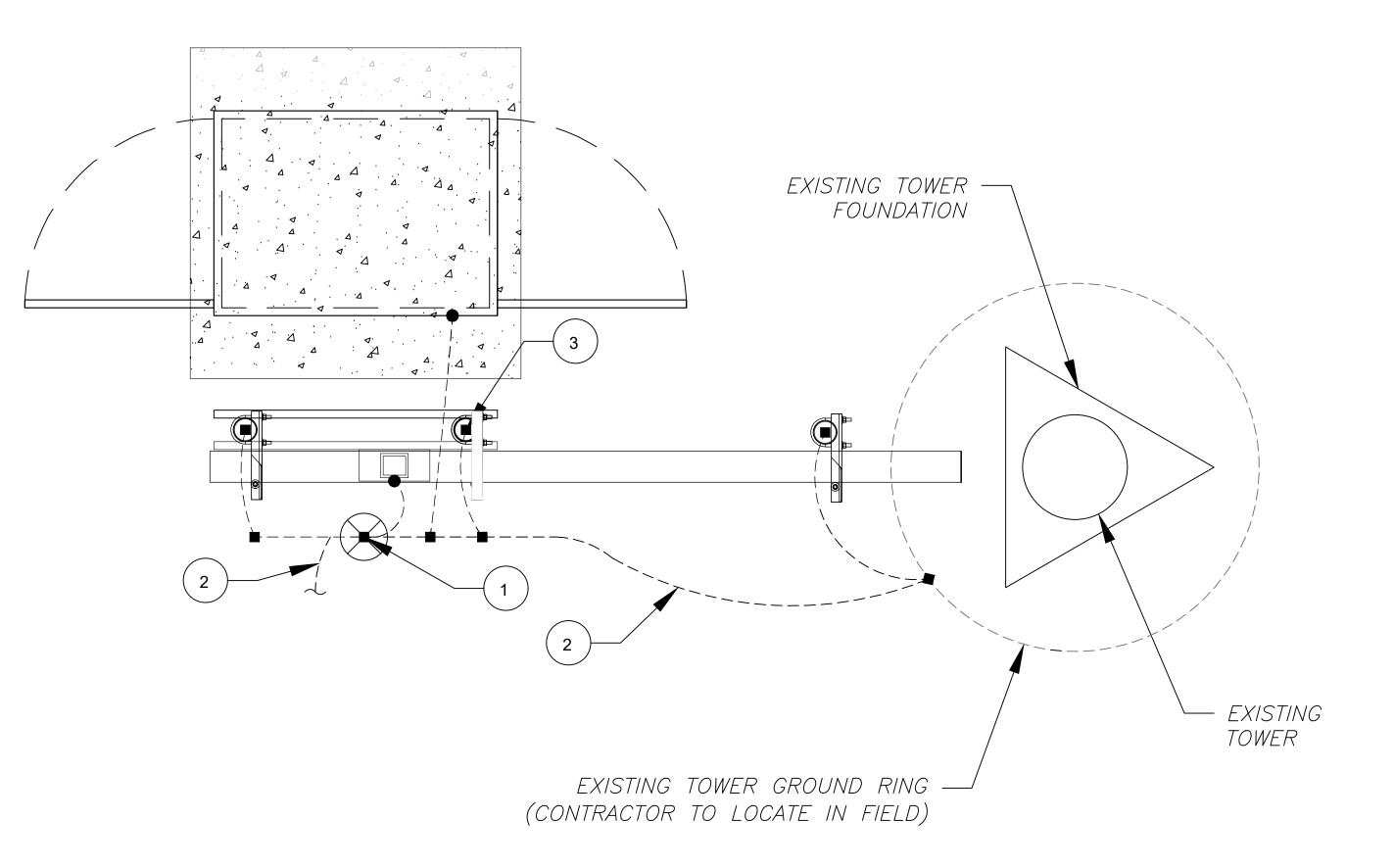


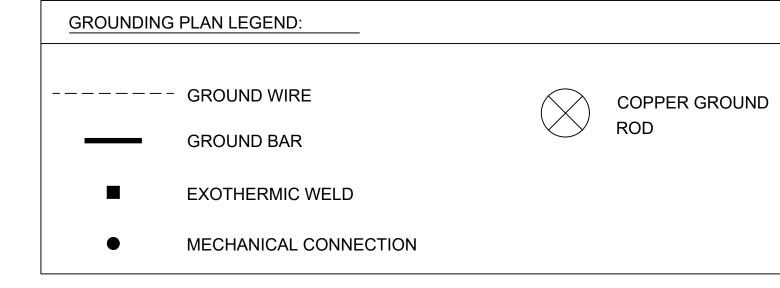


- UTILITY VAULT CAPTIVE L-BOLTLOCAK COVER



* <b>VISPER</b> <sup>™</sup>
<b>INTERNET</b> 9711 FUESSER RD MASCOUTAH, IL 62258
FLEX DEPLOYMENT SOLUTIONS
11124 KINGSTON PIKE STE 119-234 KNOXVILLE, TN 37934
DRAWN BY: FLEX CHECKED BY: VJ
REVISIONS    NO  DATE  DESCRIPTION  INITIAL    0  11/25/21  ANTENNA ADDITION  FLEX
NOT FOR CONSTRUCTION UNLESS LABELED AS CONSTRUCTION SET
36075 2200 LOWENSTEIN, LEE'S SUMMIT , MO 64081
TI IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS
DOCUMENT SHEET TITLE
CONSTRUCTION DETAILS SHEET NUMBER
C-502





GROUNDING KEYED NOTES:

(1) 5/8Ø" X 10 FT GROUND ROD.

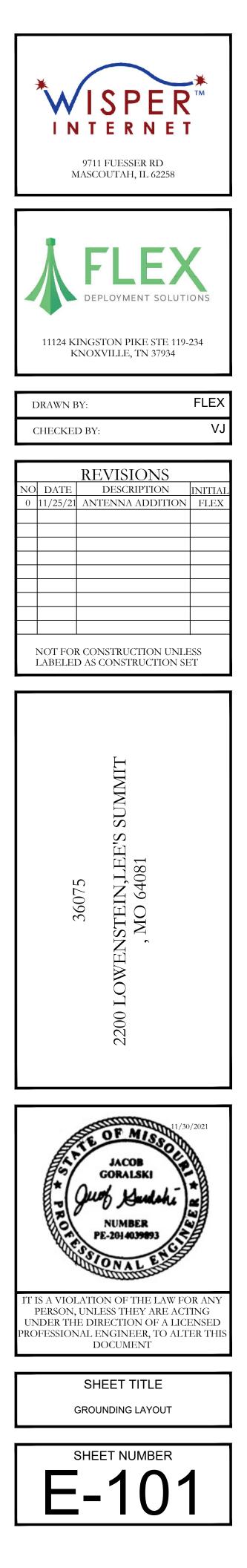
GROUNDING CONDUCTOR BETWEEN EXISTING GROUND RING AND 2 GROUND RING AND ATTACH TO CABINET WITH A MECHANICAL CONNECTION.

#2 AWG SBTC BOND FROM ICE BRIDGE AND H-FRAME POSTS TO 3 GROUNDING (TYP. EVERY POST).

DETAILED GROUNDING PLAN

1

SCALE: NOT TO SCALE



**RELEASED FOR** CONSTRUCTION As Noted on Plans Review Development Services Department Lee's Summit, Missouri 01/21/2022 NOTES:

1. ALL CONDUCTORS SHALL BE TYPE THWN AND RATED IN ACCORDANCE WITH NEC 110-14(C)

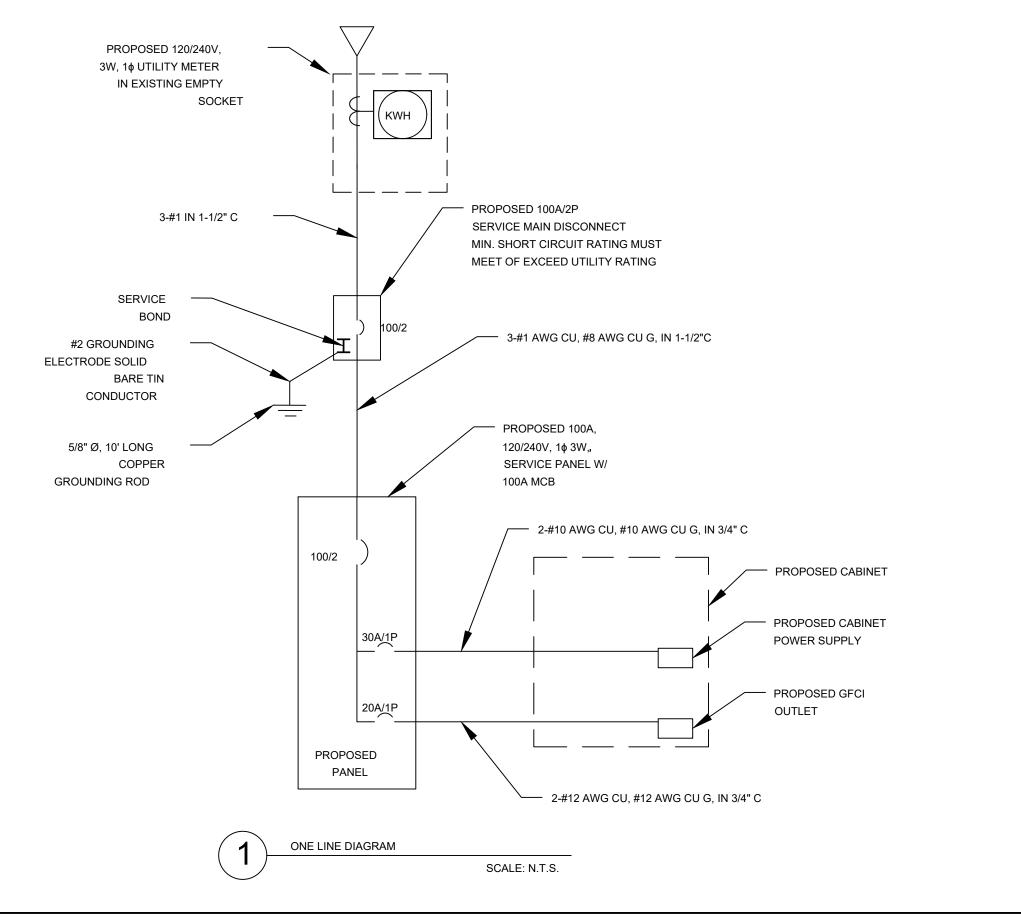
2. ALL UNDERGROUND CONDUITS SHALL BE PVC SCH40. ALL ABOVE GROUND CONDUITS SHALL BE RIGID METAL CONDUIT (RMC). TRANSITION FROM PVC SCH 40 TO RMC SHALL BE MADE UNDERGROUND WITH LISTED FITTINGS FOR THE APPLICATION.

3. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN THE MAXIMUM INTERRUPTING CURRENT TO WHICH THEY MAY BE SUBJECTED.

4. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC); ARTICLES 250, 280, AND THE UTILITY COMPANY STANDARDS.

PANEL			TYPE:			SYSTEM:		120/240V, 1Ø, 3W, 8 CKT			LOCATION:		WISPER ISP LEASE EQUIPMENT AREA								
DESIGN	IATION:	WISPER ISP	MOUNTING:		S	URFACI	E			Main B	REAKEF	R (MB):		10	0A		_				
			ENCLOSURE:			NEMA				Main B	US RATI	NG:		10	0A			PANEL NOTES:	PROPO	SED	
										MIN. A.I	.C. RATI	NG:		N	/A		_				
CONNE	ECTED			FEE			CH CIRC	UIT				FE		R BRAN		CUIT				CONN	IECTED
LOAD	(kVA)	BRIEF DESCRIPTION	BRE	AKER		CIRCUI	Т	POLE	CIR C.		CIR C .	POLE	. (	CIRCUIT	Γ	BRE	AKER	BRIEF	DESCRIPTION	LOAE	D (kVA)
А	В		AMPS	POLES	WIRE	GND	COND.	NO.	NDTES		NOTES	NO.	COND.	GND	WIRE	POLES	AMPS			A	В
1.92		GFCI	20	1	2-#12	#12	3/4"	1	1			2								0.00	
	2.88	CABINET	30	1	2-#10	#10	1/2"	3	1			4									0.00
0.00								5				6								0.00	
	0.00							7				8									0.00
1.9	2.9								Α	В	ТО	TAL								0.0	0.0
									1.9	2.9	4	.8		CTED L	OAD (kV	/A)					
									1.9	2.9	4	.8	DEMANI	D LOAD	(kVA)			DE	RATING FACTOR (80%	6)	
	CIRCUITI	NOTES								-	-		-						DEMANDLOAD SIZING	G: 25	AMPS

1) PROPOSED CIRCUIT



2

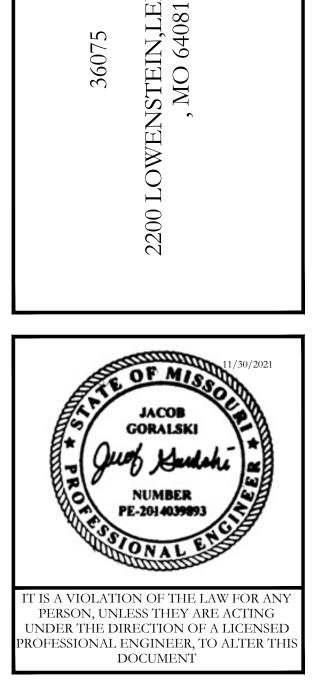
ELECTRICAL PANEL SCHEDULE

			1
E EQ	UIPMEN <sup>.</sup>	TAREA	
POSE	Đ		
	CONNECTED LOAD (kVA)		
	А	B	
	0.00	0.00	
	0.00		

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Development Services Department Lee's Summit, Missouri 01/21/2022

* <b>ISPER</b> <b>INTERNET</b> 9711 FUESSER RD MASCOUTAH, IL 62258			
<b>FLEX</b> DEPLOYMENT SOLUTIONS 11124 KINGSTON PIKE STE 119-234 KNOXVILLE, TN 37934			
DRAWN BY: FLEX			
CHECKED BY: VJ			
REVISIONS    NO  DATE  DESCRIPTION  INITIAL    0  11/25/21  ANTENNA ADDITION  FLEX    -  -  -  -    -  -  -  -    -  -  -  -    -  -  -  -  -    -  -  -  -  -    -  -  -  -  -    -  -  -  -  -    -  -  -  -  -    -  -  -  -  -    -  -  -  -  -    -  -  -  -  -    -  -  -  -  -    -  -  -  -  -    -  -  -  -  -  -    -  -  -  -  -  -    -  -  -  -  -  -    -  -  -  -  -			
E'S SUMMIT			

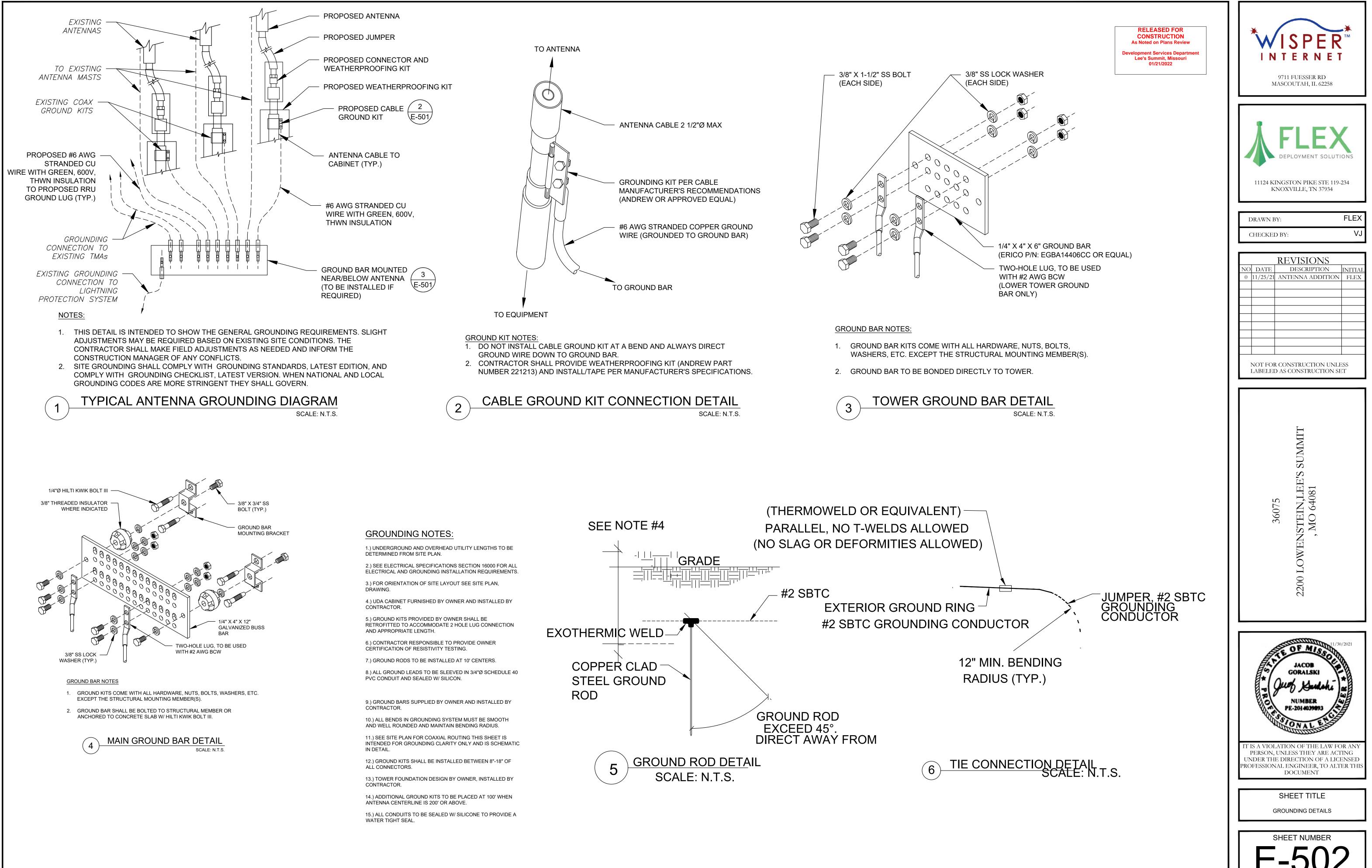


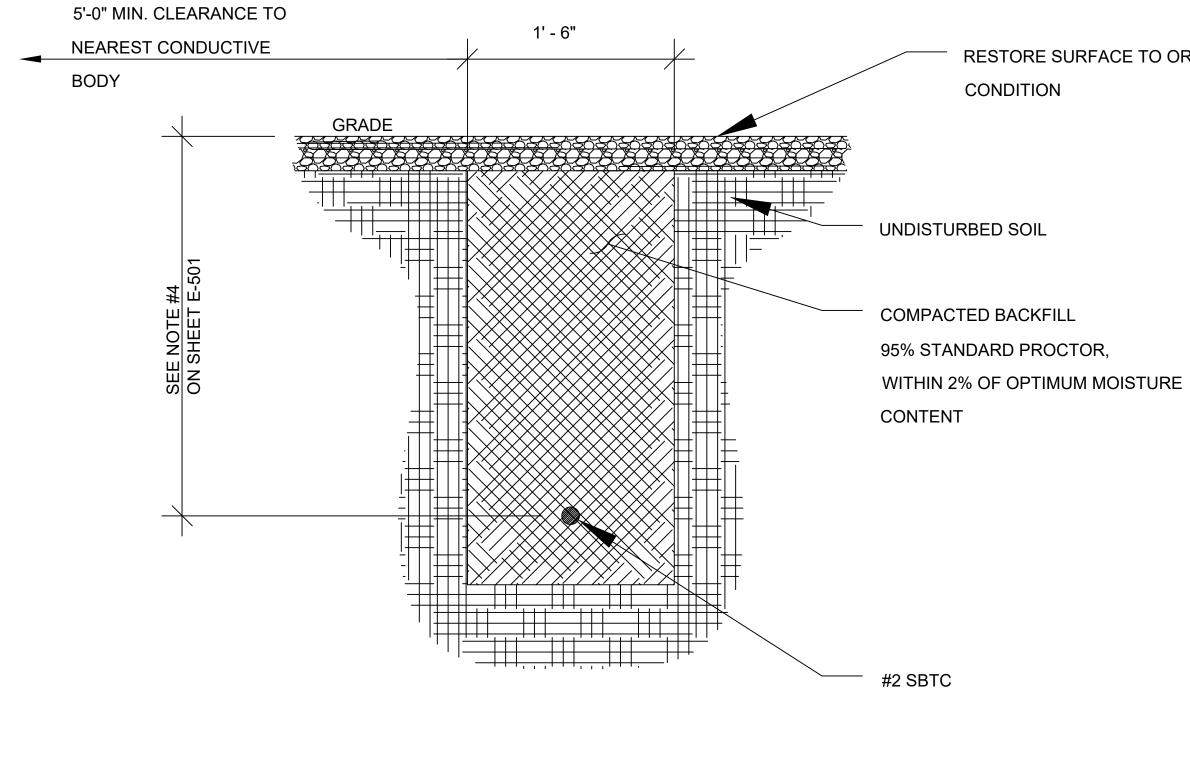
36075

SHEET TITLE PANEL SCHEDULE & ONE-LINE DIAGRAM

SHEET NUMBER

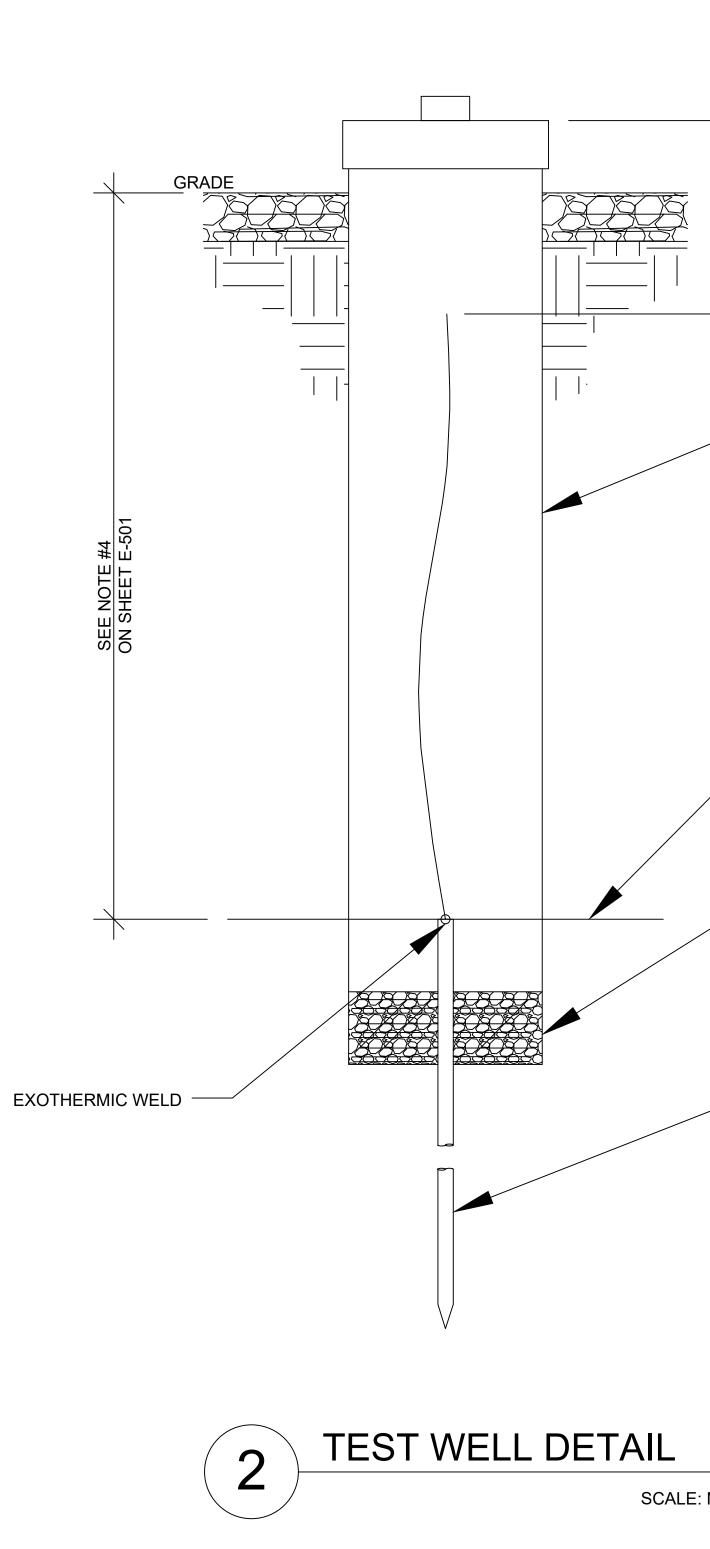
E-50







RESTORE SURFACE TO ORIGINAL



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8"Ø x 42" PVC WITH FEMALE ADAPTER AND SCREW ON CAP	DEVUELONIS	
#2 SBTC GROUNDING RING	REVISIONS    NO  DATE  DESCRIPTION  INITIAL    0  11/25/21  ANTENNA ADDITION  FLEX    -  -  -  -	
3" OF CRUSHED ROCK BELOW WELD. WELD SHALL REMAIN VISIBILE COPPER CLAD STEEL GROUND ROD (SEE SHEET E-501 FOR SIZING)	36075 36075 OWENSTEIN,LEE'S SUMMIT , MO 64081	
 :: N.T.S.	TODOT	
	PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT SHEET TITLE GROUNDING DETAILS SHEET NUMBER E-503	