Approved as noted
See sheet 5
6-2-23 WRW.

uscellular™

SITE NAME: LAWTON CRAN 019D

SITE NUMBER: 751467

SITE ADDRESS - 6432 NW. ARROWHEAD DR., LAWTON, OK 73505
TERRA PROJECT #157-329

PROJECT TEAM

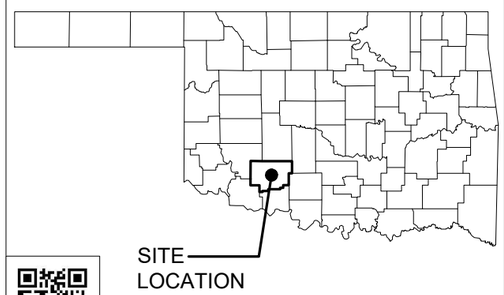
PROJECT CONTACT:
GSS MIDWEST, INC
3311 109TH ST.
URBANDALE, IA 50322
HEATHER REYNOLDS
(515) 331-2103

PROJECT CONSULTANT:
TERRA CONSULTING GROUP, LTD
910 E. BROADWAY, SUITE 206
COLUMBIA, MO 65201
ERIC WARD
(573) 777-3535

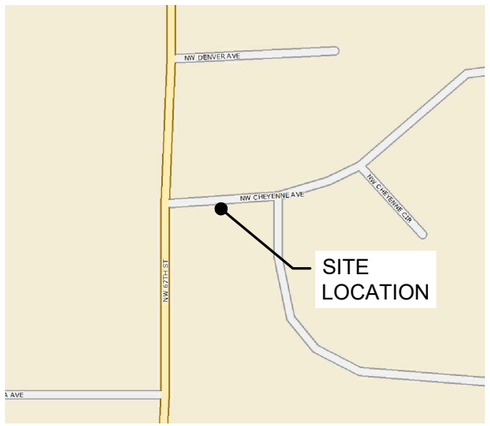
APPLICANT:
U.S. CELLULAR
12020 RIDGEMONT DR.
URBANDALE, IA 50323
DAN WHITE

SURVEYOR:
SECTION 37 SURVEYING & MAPPING
P.O. BOX 1876
DUCAN, OK 73534
MARCUS HEILMAN
(580) 786-4363

STATE MAP N.T.S.



LOCATION MAP N.T.S.



SCOPE OF WORK

1. PROPOSED U.S. CELLULAR WIRELESS FACILITY ON U.S. CELLULAR OWNED WOOD POLE LOCATED WITHIN PUBLIC RIGHT-OF-WAY.
2. PROPOSED FIBER SERVICE ROUTED TO U.S. CELLULAR FIBER HAND HOLE.
3. ELECTRICAL SERVICE ROUTED FROM DEMARCATION POINT TO ELECTRIC METER.
4. PROPOSED POLE:
   - SUPPLIED BY: U.S. CELLULAR
   - INSTALLED BY: U.S. CELLULAR
   - OWNED BY: U.S. CELLULAR
5. PROPOSED ANTENNAS AND EQUIPMENT SUPPLIED BY U.S. CELLULAR:
   - (1) OMNI ANTENNA, MODEL# ALPHA AW3747
   - (1) ANTENNA MOUNT, MODEL# ALPHA CL-V-199
   - (2) ½" COAX JUMPER CABLE
   - (1) RADIO, MODEL# NOKIA AZQC B48 AIRSCALE MICRO RRH
   - (1) RADIO MOUNT, MODEL# NOKIA AMBA AIRSCALE MICRO
   - (1) RAYCAP DISCONNECT, MODEL# RUSAC-1AN2-P-240-1
6. PROPOSED EQUIPMENT SUPPLIED BY GENERAL CONTRACTOR:
   - (1) FUSIBLE DISCCONECT, SQUARE D #D223NRB
   - (1) 12" x 12" HAND HOLE, PART# COVER - PC1212HA0021 / BOXES - PC1212BA12

SHEET INDEX

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-	SURVEY	-
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C-1	PARTIAL SITE PLAN	A
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EX-1	EXHIBIT PHOTOS	A
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SITE INFORMATION

LATITUDE (NAD83):	N 34° 37' 32.8499" (34.6257916)
LONGITUDE (NAD83):	W -98° 28' 27.5479"(-98.4743189)
ELEVATION AT GRADE:	1188.88' A.M.S.L.
INSTALLATION TYPE:	NEW POLE PLANT
POLE TYPE:	WOOD POLE
POLE LENGTH:	40'-0"
OVERALL STRUCTURE HEIGHT:	37'-0" A.G.L.
POWER PROVIDER:	AEP/PSO - POC: TERRY TRAUGHBER P: 580-581-4285
FIBER PROVIDER:	UPN

1 C-2 SEE NOTES

JURISDICTIONAL INFORMATION

JURISDICTION:
CITY OF LAWTON

ZONING:
-

RIGHT-OF-WAY CONTROL:
CITY OF LAWTON

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

CODE COMPLIANCE

WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY CITY OF LAWTON, COMANCHE COUNTY, STATE OF OKLAHOMA AND OTHER GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

BUILDING CODE:	IBC (2018)
FIRE CODE:	IBF (2012)
TIA/EIA-222G OR LATEST EDITION	
NATIONAL ELECTRICAL CODE:	NEC (2020)
ENERGY CONSERVATION CODE:	IECC (2012)

ONE CALL SYSTEM

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Know what's below Call before you dig.

BY PHONE DIAL 811 OR
1 (800) 522-OKIE (6543)

P.E. CERTIFICATION

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12020 RIDGEMONT DR.
URBANDALE, IA 50323
PHONE: (515)205-0037

TERRA CONSULTING GROUP, LTD.
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-6400
FAX: 847-698-6401

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	03/27/23	JGL

SITE# 751467
LAWTON
CRAN 019D
6432 NW ARROWHEAD DR.
LAWTON, OK 73505

DRAWN BY:	JGL
CHECKED BY:	EW
DATE:	02/29/23
PROJECT #:	157-329

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

ELECTRICAL NOTES:

1. WORK UNDER THIS CONTRACT SHALL BE DONE IN STRICT ACCORDANCE WITH ALL APPLICABLE MUNICIPAL, STATE, AND LOCAL ELECTRICAL CODES THAT GOVERN EACH PARTICULAR TRADE AND THE NATIONAL ELECTRICAL CODE (LATEST EDITION).
2. THE CONTRACTOR SHALL EXAMINE DRAWINGS AND SHALL INSPECT THE EXISTING CONDITIONS OF THE SITE. FAILURE TO COMPLY WITH THIS REQUIREMENT WILL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLYING WITH THE CONTRACT DOCUMENTS.
3. THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT OF THE ELECTRICAL INSTALLATIONS. DETAILS OF PROPOSED DEPARTURES DUE TO ACTUAL FIELD CONDITIONS OR OTHER CAUSES SHALL BE SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION. REWORK OF COMPLETED ITEMS DUE TO IMPROPER FIELD COORDINATION SHALL BE AT THE CONTRACTOR'S EXPENSE.
4. PROVIDE SUFFICIENT ACCESS AND CLEARANCE FOR ITEMS OR EQUIPMENT REQUIRING SERVICING AND MAINTENANCE.
5. THE CONTRACTOR SHALL PREPARE THREE (3) COPIES OF A RECORD AND INFORMATION BOOKLET. THE BOOKLET SHALL BE BOUND IN A THREE RING LOOSE-LEAF BINDER AND INCLUDE ALL ITEMS OF ELECTRICAL EQUIPMENT.
6. UPON COMPLETION OF THE ELECTRICAL INSTALLATION, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS OF THE ELECTRICAL CONTRACT DRAWINGS WHICH SHALL BE LEGIBLY MARKED IN RED TO SHOW ALL CHANGES AND DEPARTURES OF THE INSTALLATIONS COMPARED WITH THE ORIGINAL DESIGN. THEY SHALL BE SUITABLE FOR USE IN PREPARATION OF RECORD DRAWINGS.
7. GUARANTEE: NEW ELECTRICAL INSTALLATIONS SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR BEGINNING THE DAY OF THE FINAL ACCEPTANCE OF THE WORK OR BENEFICIAL OCCUPANCY OF THE OWNER, WHICHEVER OCCURS FIRST. THE ABOVE SHALL NOT IN ANY WAY VOID OR ABROGATE EQUIPMENT MANUFACTURER'S GUARANTEE OR WARRANTY. CERTIFICATES OF GUARANTEE SHALL BE DELIVERED TO THE OWNER. UPON RECEIPT OF NOTICE FROM THE OWNER OF FAILURE OF ANY PART OF THE ELECTRICAL INSTALLATION DURING THE GUARANTEE PERIOD, NEW REPLACEMENT PARTS SHALL BE FURNISHED AND INSTALLED PROMPTLY AND AT NO COST TO OWNER.
8. ELECTRICAL WORK WHICH WILL INTERFERE WITH THE NORMAL USE OF THE ELECTRICAL SYSTEM IN ANY MANNER SHALL BE DONE AT SUCH TIME OR TIMES AS SHALL BE MUTUALLY AGREED UPON BETWEEN THE CONTRACTOR AND THE U.S. CELLULAR CONSTRUCTION MANAGER.
9. MOUNTING AND SUPPORTING OF EQUIPMENT PROVIDED BY THE CONTRACTOR SHALL BE COORDINATED WITH U.S. CELLULAR CONSTRUCTION MANAGER IN THE FIELD.

CONDUIT AND BOXES NOTES:

1. CONDUIT BELOW GRADE SHALL BE SCHEDULED 40 PVC UNLESS NOTED OTHERWISE.
2. NON-METALLIC CONDUIT INSTALLED ABOVE GRADE SHALL BE SCHEDULED 80 UNLESS NOTED OTHERWISE.
3. BOXES (WHETHER OUTLET, JUNCTION, PULL, OR EQUIPMENT) SHALL BE FURNISHED WITH APPROPRIATE COVERS.
4. NO SECTIONALIZED BOXES SHALL BE USED.
5. EMT CONDUIT FITTINGS SHALL BE COMPRESSION TYPE.
6. FIELD CUTS OR GALVANIZED ITEMS SHALL BE BRUSHED WITH MARINE GRADE GALVANIZING.
7. METALLIC OBJECTS EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL.

GENERAL NOTES:

1. THE EXISTING TOPOGRAPHY AND VERTICAL GEOMETRY REPRESENTED ON THESE DRAWINGS IS TO BE VERIFIED BY CONTRACTOR. CONTRACTOR SHALL CONTACT UTILITY LOCATE SERVICES A MINIMUM OF 72 HOURS PRIOR TO THE START OF CONSTRUCTION TO IDENTITY THE EXISTENCE AND LOCATION OF UNDERGROUND AND OVERHEAD UTILITIES AND SERVICES. CONTRACTOR IS TO IMMEDIATELY NOTIFY ENGINEER OF DISCREPANCIES OR INTERFERENCE THAT WILL EFFECT THIS PROJECT. EXISTING UTILITIES SHALL BE PROTECTED AND REPAIRED AT THE CONTRACTORS EXPENSE IF DAMAGED, EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.
2. DAMAGE TO THE EXISTING FACILITY SHALL BE REPAIRED OR REPLACED TO MATCH EXISTING ORIGINAL CONDITIONS AT THE CONTRACTOR'S EXPENSE.
3. EXISTING INACTIVE UTILITIES, WHICH PROHIBIT CONSTRUCTION, SHALL BE REMOVED, CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AS REQUIRED TO ALLOW CONSTRUCTION TO CONTINUE, COORDINATE WITH PROJECT MANAGER, OWNER, AND/OR LOCAL UTILITY COMPANIES FOR APPROVAL.
4. CONTRACTOR SHALL NOTIFY THE PROPERTY OWNER OF THE CONSTRUCTION START WELL IN ADVANCE (MIN. 1 WEEK) OF THE CONSTRUCTION DATE.
5. PROVIDE LABOR, MATERIAL, TOOLS, EQUIPMENT, TRANSPORTATION AND TEMPORARY POWER SERVICES NECESSARY FOR, AND INCIDENTAL TO COMPLETION OF WORK AS INDICATED ON THE DRAWINGS AND/OR AS SPECIFIED HEREIN.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL MATERIALS AS REQUIRED FOR COMPLETE SYSTEMS, INCLUDING PARTS OBVIOUSLY OR REASONABLY INCIDENTAL TO A COMPLETE INSTALLATION, WHETHER SPECIFICALLY INDICATED OR NOT. SYSTEMS SHALL BE COMPLETELY ASSEMBLED, TESTED, ADJUSTED AND DEMONSTRATED TO BE READY FOR OPERATION PRIOR TO OWNER'S ACCEPTANCE.
7. THE CONTRACTOR SHALL OBTAIN, PAY FOR AND DELIVER REQUIRED PERMITS, CERTIFICATIONS OF INSPECTION, INCLUDING UTILITY CONNECTION FEES, ETC. REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. DELIVER CERTIFICATES TO THE OWNER PRIOR TO FINAL ACCEPTANCE OF THE WORK.
8. THE CONTRACTOR SHALL MAINTAIN BENCHMARKS, CONSTRUCTION STAKING, AND OTHER ELEVATION CONTROLS POINTS AND SHALL REESTABLISH, IF DISTURBED OR DESTROYED, AT NO ADDITIONAL COST TO THE OWNER.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR AND OR RESTORATION OF DAMAGE TO THE EXISTING ACCESS ROADWAY AND ADJACENT SITE AREAS AS A RESULT OF USE DURING CONSTRUCTION. DISTURBED AND DAMAGED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR BETTER UPON COMPLETION OF WORK AT THE EXPENSE OF THE CONTRACTOR.
10. THE CONTRACTOR SHALL REMOVE WASTE, DEBRIS AND TRASH FROM SITE AND DISPOSE OF IN A LEGAL MANNER ON A DAILY BASIS.
11. CONTRACTOR SHALL COORDINATE THE CONSTRUCTION STAGING AREA AND PARKING WITH THE PROPERTY OWNER PRIOR TO THE CONSTRUCTION START DATE.
12. THE CONTRACTOR SHALL NOT INTERFERE WITH THE NORMAL OPERATIONS ACCESS TO THE WORK AREA SHALL BE AS DIRECTED BY THE FACILITY'S OWNER.
13. THE CONTRACTOR SHALL CONFINE THEIR OPERATIONS TO THE DESIGNATED AREAS AND SHALL KEEP THE CONSTRUCTION AREA CLEAN AISLES AND PATHWAYS SHALL BE KEPT UNOBSTRUCTED.
14. THE CONTRACTOR SHALL COORDINATE THE WORK OF VARIOUS TRADES SO AS TO INSURE PROPER SEQUENCING AND INSTALLATION.

TURF RESTORATION:

1. ANY DAMAGED GRASS AREA SHALL BE RESTORED TO THE EXISTING OR BETTER CONDITIONS WITH 3" TOPSOIL, FERTILIZER (10-10-10), SEED (MATCH TO EXISTING TYPE GRASS), MODOT TYPE 1 MULCH AND ALL OTHER APPURTENANCES AS NECESSARY.
2. ALL DISTURBED AREAS SHALL BE RESTORED AS SOON AS POSSIBLE WITH 3" TOPSOIL, SEED FERTILIZER, AND MULCH. GRASS SEED SHALL BE SUITABLE MIX CONTAINING BOTH ANNUAL AND PERENNIAL VARIETIES OF FESCURE, RYE, AND BLUEGRASS. FERTILIZER SHALL CONTAIN MINIMUM OF 10% EACH OF NITROGEN, PHOSPHORIC ACID, AND POTASH. MULCH SHALL BE A STRAW OR HAY MIXTURE FREE OF NOXIOUS WEED SEEDS. APPLY SEED AND FERTILIZER AS RECOMMENDED BY MANUFACTURER. MULCH SHALL BE CRIMPED AFTER APPLICATION.
3. THE CONTRACTOR SHALL VERIFY, UPON COMPLETION OF DEVELOPMENT, THE SITE IS PROPERLY STABILIZED AND ALL INDICATED SWALES AND STORM WATER FACILITIES ARE CONSTRUCTED AS INDICATED ON THE PLANS.

EROSION CONTROL:

1. CONTRACTOR SHALL PROVIDE DAILY EROSION CONTROL MEASURES IN ACCORDANCE WITH THE MOST STRINGENT OF: PROJECT PLANS, SPECIAL PROVISIONS, APPLICABLE STATE DEPARTMENT OF NATURAL RESOURCES OR LOCAL ORDINANCES.
2. ESTABLISH EROSION CONTROL MEASURES PRIOR TO STARTING CONSTRUCTION AND MAINTAIN THROUGHOUT CONSTRUCTION. INSPECT EROSION CONTROL MEASURES WEEKLY AND FOLLOWING EACH RAINFALL EVENT AND REPAIR AS NECESSARY.
3. SEDIMENTATION CONTROL SHALL BE ACCOMPLISHED DURING CONSTRUCTION THROUGH THE USE OF SILT FENCING AND FIBER ROLLS PLACED AS REQUIRED. THE CONTROL DEVICES SHALL BE SET AT THE ONSET OF CONSTRUCTION TO PREVENT SILTING OF THE EXISTING STORM WATER FACILITIES.
4. SOD AND THE WATERING OF THE SOD MAY BE REQUIRED FOR RESTORATION BY SOME JURISIDICTIONS.
5. CONTRACTOR TO MINIMIZE DRIVING ON THE ROW AND UTILIZE LANE CLOSURES WHENEVER POSSIBLE TO MINIMIZE DAMAGE AND THE NEED FOR RESTORATION.
6. CONTRACTOR TO SET VAULT TOPS TO BE LEVEL WITH FINISHED GRADE AND NOT INTERFERE WITH MOWING OPERATIONS OR CREATE TRIPPING HAZARDS.

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 AND ACI 301, LATEST EDITION. THESE DOCUMENTS SHALL BE AVAILABLE IN THE FIELD OFFICE.
2. EXCEPT WHERE OTHERWISE INDICATED, CONCRETE SHALL BE NORMAL WEIGHT AND WITH MINIMUM 28-DAY COMPRESSIVE STRENGTHS OF F'c=4000 PSI. ALL EXTERIOR EXPOSED CONCRETE SHALL BE AIR ENTRAINED.
3. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

uscellular
12020 RIDGEMONT DR.
URBANDALE, IA 50323
PHONE: (515)205-0037

TERRA CONSULTING GROUP, LTD.
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-6400
FAX: 847-698-6401

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	03/27/23	JGL

SITE# 751467
LAWTON
CRAN 019D

6432 NW ARROWHEAD DR.
LAWTON, OK 73505

DRAWN BY:	JGL
CHECKED BY:	EW
DATE:	02/29/23
PROJECT #:	157-329

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

TOPOGRAPHIC SURVEY: Lawton CRAN 019D

SECTION 37 SURVEYING & MAPPING
P.O. Box 1876, DUNCAN, OK 73534
(580) 786-4363 surveyor@section-37.com
Certificate of Authorization #7984

Survey For: U.S. Cellular

SURVEYOR'S NOTES:

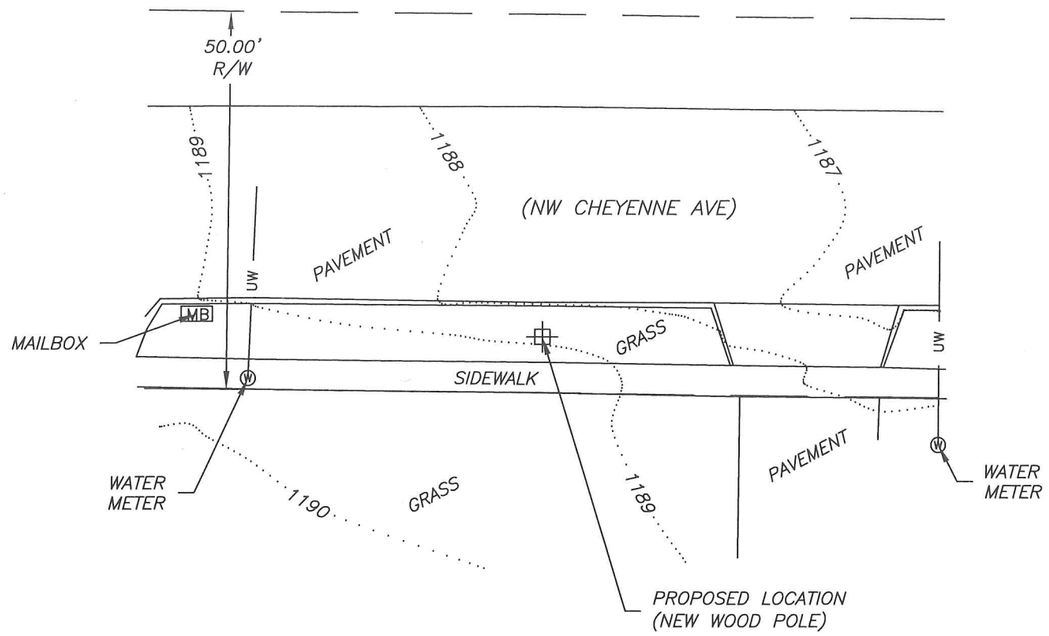
1) THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION VIA OKIE 811 TICKET #23032012292935. THE SURVEYOR MAKES NO GUARANTEE, EXPRESSED OR IMPLIED, THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. THE SURVEY DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE UTILIZING ALL AVAILABLE INFORMATION. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

2) BEARINGS ARE GRID (NAD83 OK SOUTH).

3) VERTICAL DATUM = NAVD88.

4) THIS SURVEY DOES NOT REPRESENT A BOUNDARY SURVEY.

5) BY GRAPHIC PLOTTING ONLY, THIS PROPERTY IS LOCATED IN ZONE X (AREAS OF MINIMAL FLOOD HAZARD) OF THE FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NO. 40031C0263E, EFFECTIVE DATE 7/20/2009 AND IS NOT IN A SPECIAL FLOOD HAZARD AREA. NO FIELD SURVEYING WAS PERFORMED TO DETERMINE THIS ZONE.



0 20 40 Feet

I, Marcus T. Heilman, certify that this project was completed under my direct and responsible charge from an actual survey made under my supervision; that this ground survey was performed at the 95% percent confidence level to meet Federal Geographic Data Committee Standards; that this survey was performed to meet the Specifications for Topographic and Planimetric Mapping contained in the Oklahoma Minimum Standards for the Practice of Land Surveying as adopted by the Oklahoma State Board of Licensure for Professional Engineers and Land Surveyors. The original data was obtained on March 24, 2023; that the survey was completed on March 24, 2023; and all coordinates are based on NAD83-OK South (US Survey Feet) and all elevations are based on NAVD88.

Marcus T. Heilman, PLS #1827

PROPOSED LOCATION:

Latitude:	**34°37'32.8499" (34.6257916)**
Longitude:	**-98°28'27.5479" (-98.4743189)**
Site Elevation:	**1188.88' +/- AMSL**

GAS GAS — GAS LINE
UW UW — WATER LINE
SS SS SS — SANITARY SEWER LINE
SD SD SD — STORM DRAIN LINE
UT UT — TELEPHONE LINE
UP UP — ELECTRIC LINE
OHE OHE — OVERHEAD ELECTRIC LINE
X X — FENCE
— R/W LINE
. . . . . CONTOUR LINE

1 CRAN LOCATIONS - LAWTON

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12020 RIDGEMONT DR.
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SHEET TITLE
CRAN LOCATIONS

SHEET NUMBER
C-0

SCALE: 1" = 20'±

0 10' 20' 40'

22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.

1 PARTIAL SITE PLAN
SCALE: 1" = 20' ±

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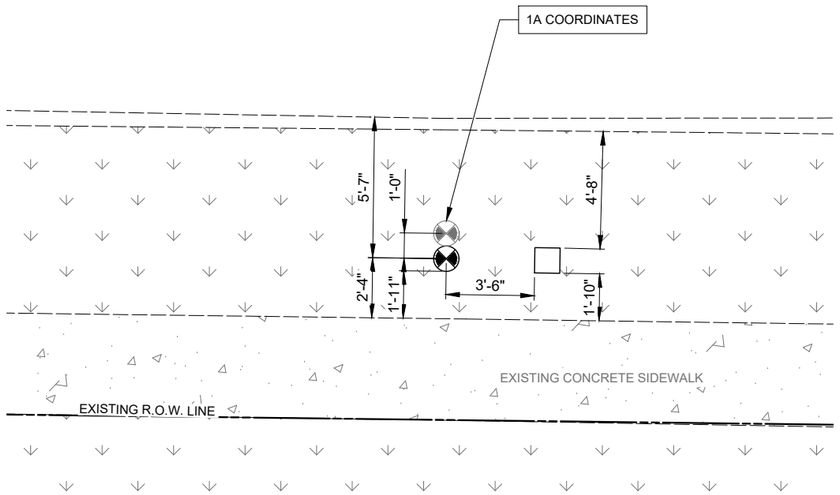
SHEET TITLE
PARTIAL SITE PLAN

SHEET NUMBER
C-1



2 DIMENSIONED SITE PLAN
SCALE: 1" = 4'

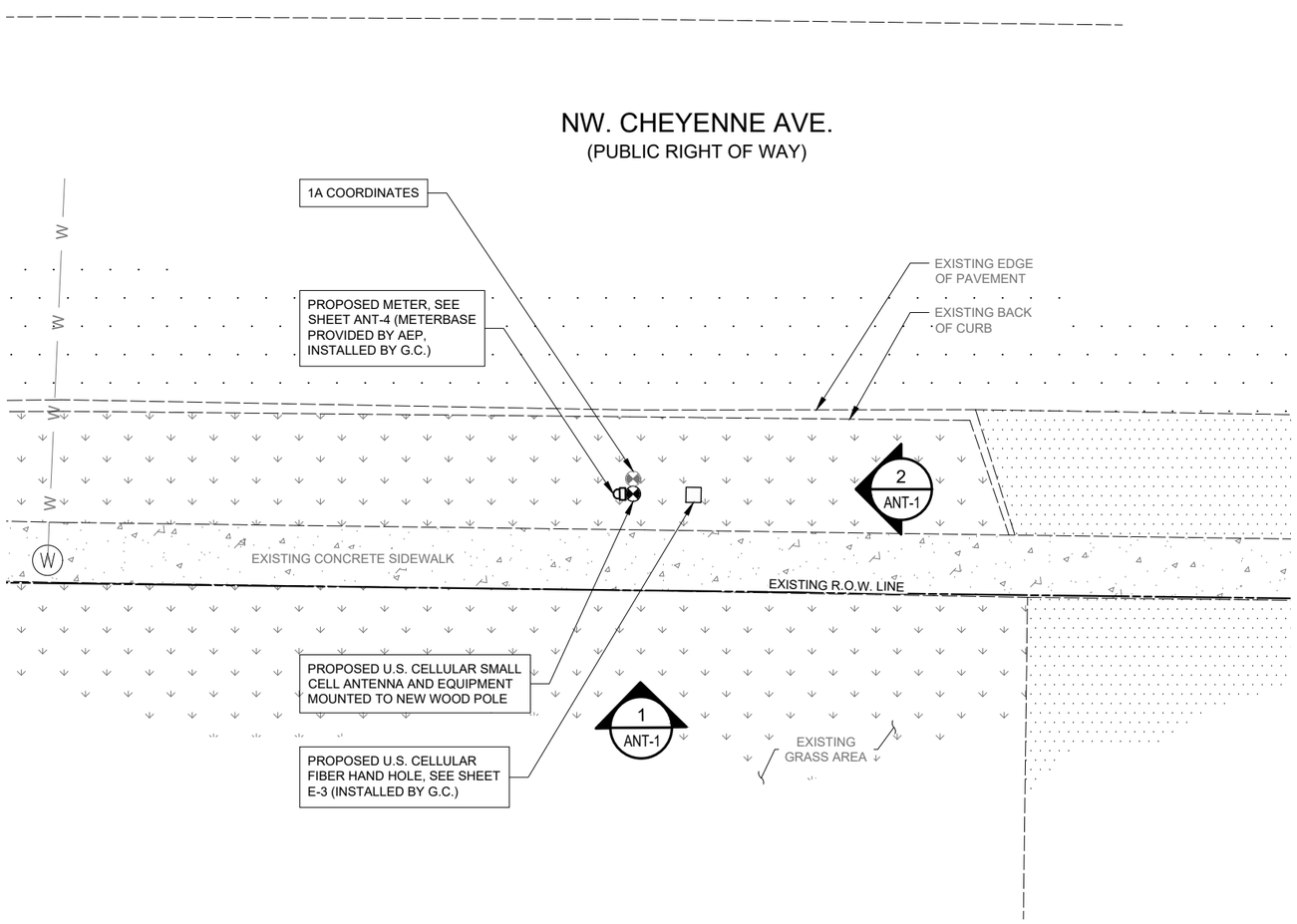
LEGEND

EXISTING WATER VALVE	(W)
PROPOSED UTILITY POLE	
(UG) WATER LINE	W W

SCALE: 1" = 5'

0 2.5' 5' 10'

22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.



1 ENLARGED SITE PLAN
SCALE: 1" = 5'

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12020 RIDGEMONT DR.
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PHONE: (515)205-0037

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SHEET TITLE
ENLARGED SITE PLAN

SHEET NUMBER
C-2

Section 37
Surveying & Mapping
P.O. BOX 1876
DUNCAN, OK 73534
(580) 786-4363
SURVEYOR@SECTION-37.COM

NOTES:
1. 1A COORDINATES ON T-1 SHEET DIFFER FROM EXACT POLE LOCATION SHOWN ON SITE PLAN.
2. SITE PLAN MAY NOT CONTAIN ALL SUBSURFACE UTILITIES. U.S. CELLULAR G.C. TO FIELD LOCATE ALL SUBSURFACE UTILITIES PRIOR TO CONSTRUCTION.

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BY PHONE DIAL 811 OR
1 (800) 522-OKIE (6543)

POLE MOUNTED EQUIPMENT

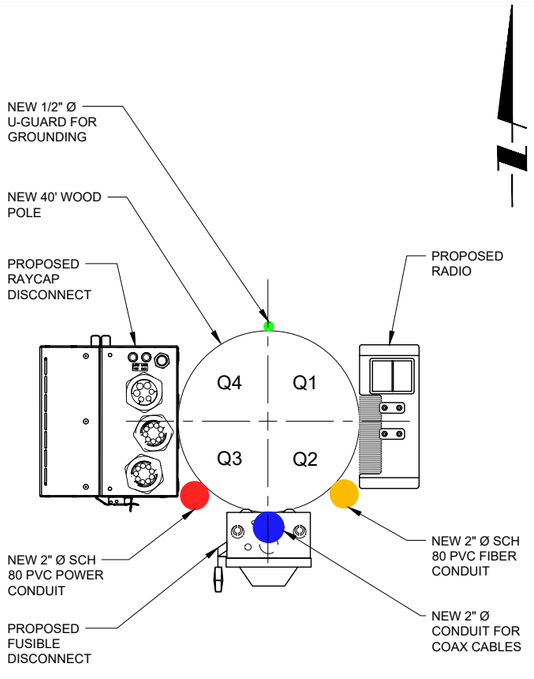
EQUIPMENT/ TYPE/ MODEL	SIZE- (H, W, D)	WEIGHT -(LBS)	MAX POWER CONSUMPTION	WIND LOAD FRONT @ >100 MPH	WIND LOAD SIDE @ >100 MPH
(1) ALPHA AW3747	24.0"x14.4"Ø	21.6	N/A	40 LBF	40 LBF
(1) NOKIA AIRSCALE AZQC	11.6"x9.6"x3"	14.3	150W	-	-
(1) RAYCAP-DISCONNECT RUSAC -1AN2-P-240-1	33"x13"x11"	60	-	-	-

ANTENNA INFORMATION

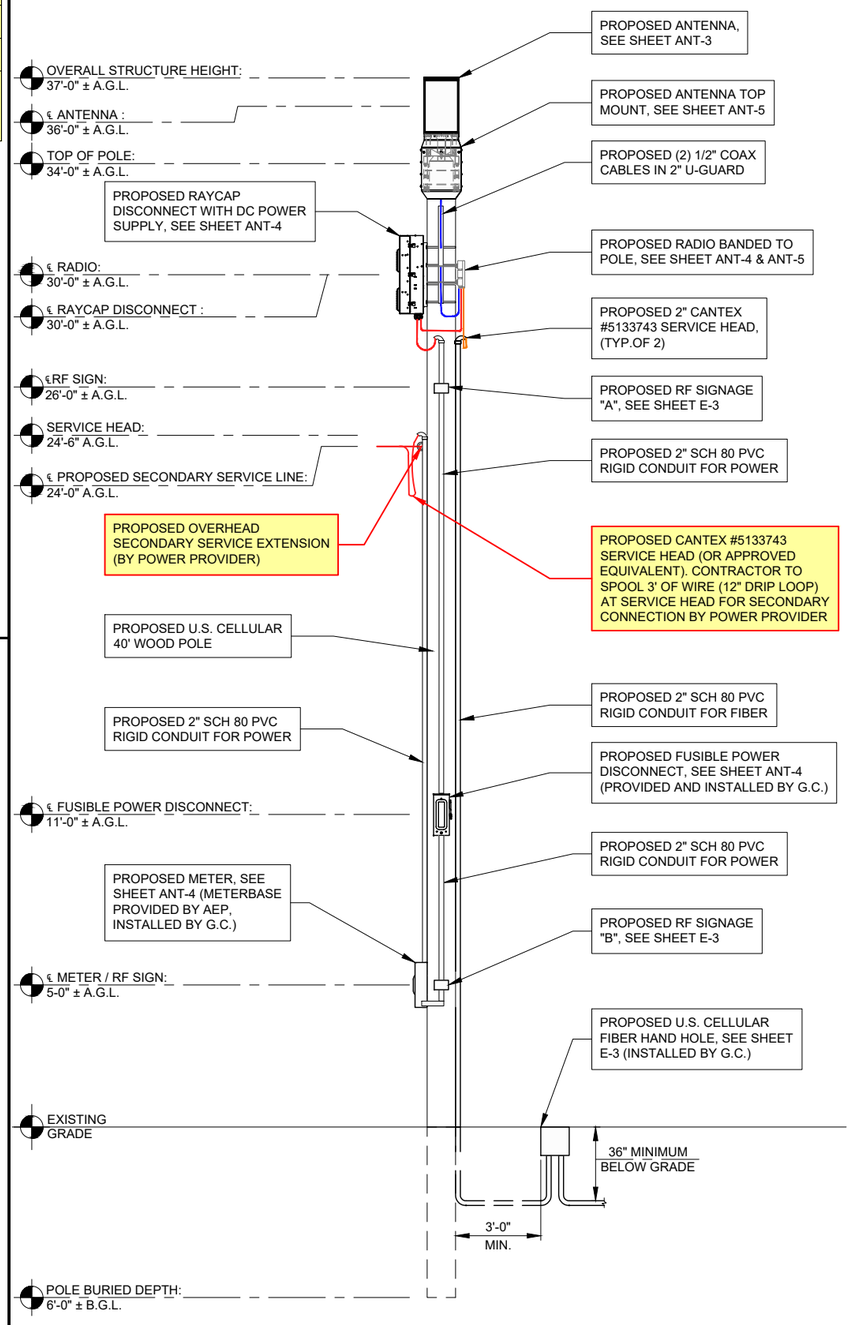
SECTOR	CENTERLINE	AZIMUTH	MECH. DOWNTILT
1	**36'-0" A.G.L.**	**0°**	**0**

NOTES:
1. THIS DRAWING IS FOR EXHIBIT AND LAYOUT PURPOSES ONLY.
2. FIBER TO BE CLEANED AND TESTED PRIOR TO CONNECTING TO RADIO.
3. GENERAL CONTRACTOR TO ENSURE RADIO IS NOT CONNECTED PRIOR TO COMMERCIAL POWER ACTIVATION.
4. PENDING STRUCTURAL ANALYSIS PREFORMED BY TERRA CONSULTING GROUP.
5. ALL HARDWARE SHALL BE STAINLESS STEEL.
6. ALL CABLES SHALL BE SECURED TO POLE EVERY 36" OR LESS.
7. ALL EQUIPMENT TO BE BANDED TO POLE.
8. EQUIPMENT PAINTING NOT REQUIRED.

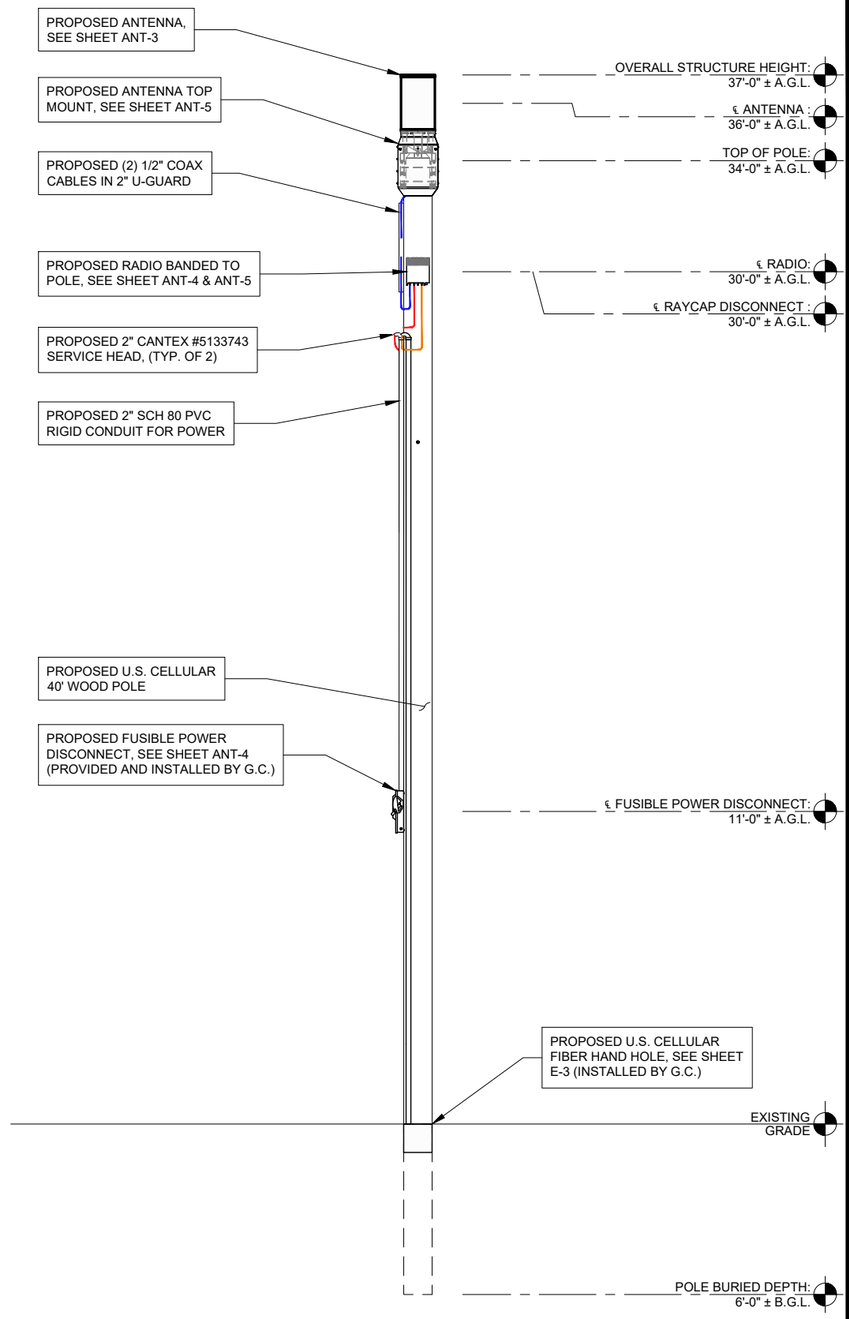
POLE INFORMATION:
1. INSTALLATION TYPE: NEW POLE PLANT
2. POLE TYPE: WOOD
3. POLE LENGTH: 40'-0"
4. TOP OF POLE: 34'-0" A.G.L.
5. OVERALL STRUCTURE HEIGHT: 37'-0" A.G.L.
7. POLE EMBEDMENT DEPTH: 6'-0"
8. POLE CLASS: CLASS 2



3 PROPOSED EQUIPMENT LAYOUT - PLAN VIEW
SCALE: 2" = 1'-0"



1 PROPOSED SITE ELEVATION (SOUTH)
SCALE: 3/8" = 1'-0" ±



2 PROPOSED SITE ELEVATION (EAST)
SCALE: 3/8" = 1'-0"

uscellular
12020 RIDGEMONT DR.
URBANDALE, IA 50323
PHONE: (515)205-0037

TERRA CONSULTING GROUP, LTD.
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-6400
FAX: 847-698-6401

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	03/27/23	JGL

SITE# 751467
LAWTON
CRAN 019D

6432 NW ARROWHEAD DR.
LAWTON, OK 73505

DRAWN BY:	JGL
CHECKED BY:	EW
DATE:	02/29/23
PROJECT #:	157-329

SHEET TITLE
PROPOSED SITE ELEVATIONS

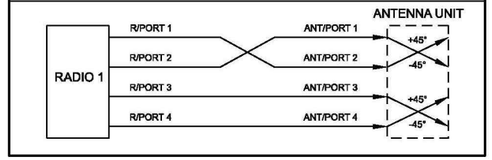
SHEET NUMBER
ANT-1

DATE CREATED: 07/01/2021

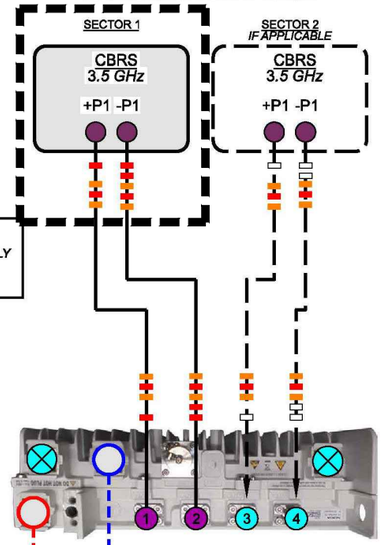
NSN// CBRS
PER SECTOR CONFIGURATION

DIAGRAM PROVIDED BY U.C. CELLULAR

ANT. TO AIRSCALE RADIO DE-CORRELATION



SEE ANTENNA PORT LAYOUT TO RIGHT

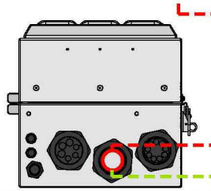


RF LOADING: 2T2R

ANCILLARY EQUIPMENT TOTAL
RADIO + AC DISCONNECT + POWER SUPPLY
WEIGHT: 79.8 LBS.
VOLUME: 2.8 CU. FT.

NOKIA AZQC CBRS
4.3-10 CONNECTORS
9.8 GB SFP
WEIGHT: 14.3 LBS.
VOLUME: 0.2 CU. FT.

9.8 GB



RAYCAP RUSAC-1AN2-P-240-1
2000w POWER SUPPLY
WEIGHT: 50 LBS.
VOLUME: 2.0 CU. FT.

TO BE PROVIDED BY G.C.
AC DISCONNECT
WEIGHT: APPROX. 15.5 LBS.
VOLUME: APPROX. 0.6 CU. FT.

TO U.S. CELLULAR UTILITY VAULT

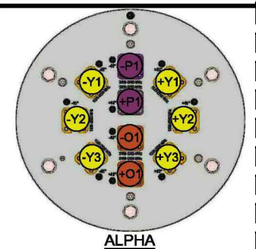
LEGEND

- 1/2" COAX JUMPER
- FIBER LEAD
- DC POWER LEAD
- AC POWER LEAD
- 3.5 GHz HIGH BAND PORT
- 5 GHz HIGH BAND PORT
- MID BAND PORT
- LOW BAND PORT
- WEATHERPROOF CAP

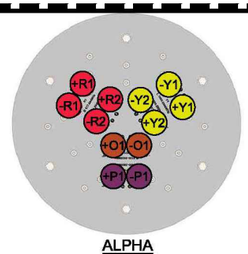
NOTES:

1. ALL JUMPERS BETWEEN RADIO UNITS & ANTENNAS MUST BE THE SAME LENGTH.
2. CONTRACTOR TO INSTALL WEATHERPROOF CAP ON ALL UN-USED PORTS.

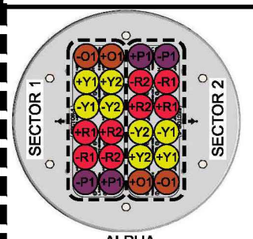
PLUMBING DIAGRAM: AZQC CBRS



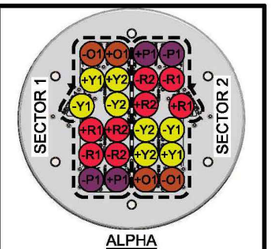
ALPHA AW3768
4.3-10 CONNECTORS
WEIGHT: 15.6 LBS.
VOLUME: 2.3 CU. FT.



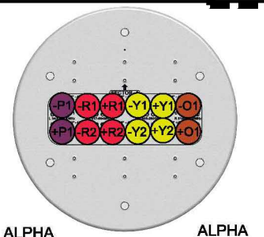
ALPHA AW3747
4.3-10 CONNECTORS
WEIGHT: 21.6 LBS.
VOLUME: 2.3 CU. FT.



ALPHA AW3759
4.3-10 CONNECTORS
WEIGHT: 21.0 LBS.
VOLUME: 2.2 CU. FT.

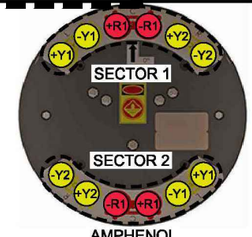


ALPHA AW3763
4.3-10 CONNECTORS
WEIGHT: 21.0 LBS.
VOLUME: 2.2 CU. FT.



ALPHA AW3751
4.3-10 CONNECTORS
WEIGHT: 13.4 LBS.
VOLUME: 2.3 CU. FT.

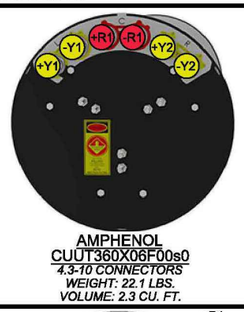
ALPHA AW3755
4.3-10 CONNECTORS
WEIGHT: 13.4 LBS.
VOLUME: 2.3 CU. FT.



AMPHENOL CUUB070X06F00s0
4.3-10 CONNECTORS
WEIGHT: 24.1 LBS.
VOLUME: 2.3 CU. FT.

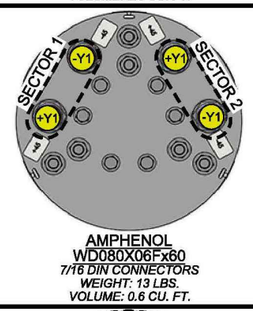
SECTOR 1 BORE SITE MARKER

AMPHENOL CUUB180X06Fxyz0
4.3-10 CONNECTORS
WEIGHT: 28 LBS.
VOLUME: 2.3 CU. FT.

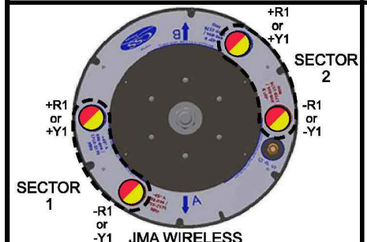


AMPHENOL CUUT360X06F00s0
4.3-10 CONNECTORS
WEIGHT: 22.1 LBS.
VOLUME: 2.3 CU. FT.

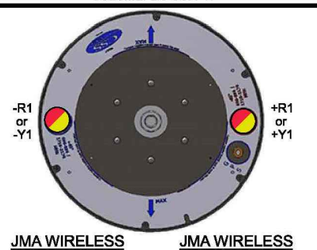
AMPHENOL CUT360X06Fxyz0
4.3-10 CONNECTORS
WEIGHT: 21.5 LBS.
VOLUME: 2.3 CU. FT.



AMPHENOL WD080X06Fx60
7/16 DIN CONNECTORS
WEIGHT: 13 LBS.
VOLUME: 0.6 CU. FT.

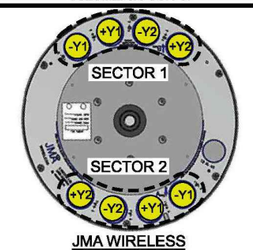


JMA WIRELESS CYL-X7CAP-2-B
7/16 DIN CONNECTORS
WEIGHT: 22.3 LBS.
VOLUME: 2.5 CU. FT.

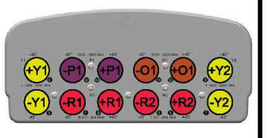


JMA WIRELESS CYL-X7CAP-2-P
7/16 DIN CONNECTORS
WEIGHT: 20.5 LBS.
VOLUME: 2.5 CU. FT.

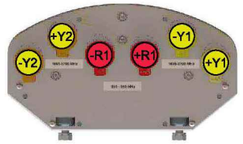
JMA WIRELESS CYL-X7CAP-2-C
7/16 DIN CONNECTORS
WEIGHT: 23.0 LBS.
VOLUME: 2.5 CU. FT.



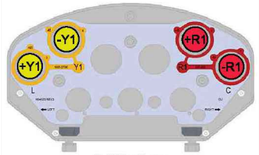
JMA WIRELESS CYL-QAP-2-B
7/16 DIN CONNECTORS
WEIGHT: 22 LBS.
VOLUME: 2.5 CU. FT.



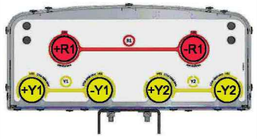
ALPHA AW3744
4.3-10 CONNECTORS
WEIGHT: 16.5 LBS.
VOLUME: 1.2 CU. FT.



AMPHENOL CUUX063X06Fxyz0
4.3-10 CONNECTORS
WEIGHT: 13 LBS.
VOLUME: 1.2 CU. FT.



AMPHENOL CUX085X06F00s0 CUX063X06F00s0
4.3-10 CONNECTORS
WEIGHT: 12 LBS.
VOLUME: 1.2 CU. FT.



AMPHENOL CUUX045X06Fxy00
7-16 DIN CONNECTORS
WEIGHT: 15.7 LBS.
VOLUME: 1.6 CU. FT.

uscellular
12020 RIDGEMONT DR.
URBANDALE, IA 50323
PHONE: (515)205-0037

TERRA CONSULTING GROUP, LTD.
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-6400
FAX: 847-698-6401

REVISIONS

NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	03/27/23	JGL

SITE# 751467
LAWTON
CRAN 019D

6432 NW ARROWHEAD DR.
LAWTON, OK 73505

DRAWN BY:	JGL
CHECKED BY:	EW
DATE:	02/29/23
PROJECT #:	157-329

SHEET TITLE
ANTENNA PLUMBING DIAGRAM

SHEET NUMBER
ANT-2

SUPPLIED BY U.S. CELLULAR

Small Cell

DATASHEET
AW3747

Common Name 12 Port - Fixed Tilt - Omni Pattern

617-894 / 1695-2690 / 3400-3800 / 5150-5925MHz | 12 Frequency Ports | Fixed Tilt | 2/8/5/5 Gain | 360° Beamwidth

TECHNICAL SPECIFICATION

Electrical Specifications		Low Band				Mid Band				3.5/ 5.5GHz	
Frequency Range	MHz	617-686	686-755	755-824	824-894	1695-1995	1920-2170	2170-2500	2500-2690	3400-3800	5150-5925
Polarisation		+/- 45° Slant Linear									
Gain	dBi	2.1	2.5	2.0	2.1	7.8	8.3	8.0	8.5	5	5
Azimuth Beamwidth	Degree	360°	360°	360°	360°	360°	360°	360°	360°	360°	360°
Azimuth Beam Squint	Degree <	5°	5°	5°	5°	5°	5°	5°	5°	3°	3°
Elevation Beamwidth	Degree	88° ±9°	72° ±8°	66° ±7°	64° ±8°	19° ±2°	17° ±2°	15° ±2°	13° ±2°	33° ±3°	26° ±3°
Electrical Downtilt	Degree	T0°	T0°	T0°	T0°	T0°	T0°	T0°	T0°	T0°	T0°
Electrical Downtilt Deviation	Degree <	5°	5°	5°	5°	1.5	1.5	1.5	1.5	3.0	3.0
Impedance	Ohms	50	50	50	50	50	50	50	50	50	50
VSWR	NA <	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Return Loss	dB >	14	14	14	14	14	14	14	14	14	14
Isolation	dB>	25	25	25	25	27	27	27	27	22	22
Passive Intermodulation	dBc <	-153	-153	-153	-153	-153	-153	-153	-153	N/A	N/A
Cross Polar Discrimination	dB >	16	16	16	16	10	10	10	10	10	10
Maximum Effective Power Per Port	W	100	100	100	100	250	250	250	250	50	1

Mechanical Specifications

Dimensions	mm (in)	610 (24) x 365 (14.4) - (L x D)
Packing Size (LxWxD)	mm (in)	685 (27) x 447 (17.6) x 447 (17.6)
Net Weight (antenna)	kg (lb)	9.8 (21.6)
Net Weight (mount)	kg (lb)	6.8 (15)
Shipping Weight	kg (lb)	18.1 (40)
Connector Type (Female)	-	4.3-10
Connector Position	-	Bottom
Connector Position Quantity	-	12 (4P Low band, 4P Mid band, 2P High band CBRS & 2P High Band LAA)
Windload Frontal (at Rated Wind Speed: 150km/h)	N (lbf)	180 (40)
Windload Lateral (at Rated Wind Speed: 150km/h)	N (lbf)	180 (40)
Survival Wind Speed	km/h (mph)	200 (125)
Radome Material	-	ASA Capped ABS
Radome Colour	RAL	7035
Product Compliance Environmental	-	RoHS
Lightening Protection	-	DC Grounded
Cold Temperature Survival	Celsius (Fahrenheit)	-40 (-40)
Hot Temperature Survival	Celsius (Fahrenheit)	70 (158)

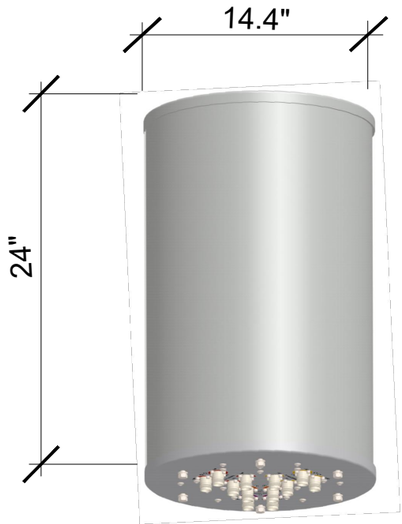
1 ANTENNA DETAILS - ALPHA AW3747

TECHNICAL SPECIFICATION

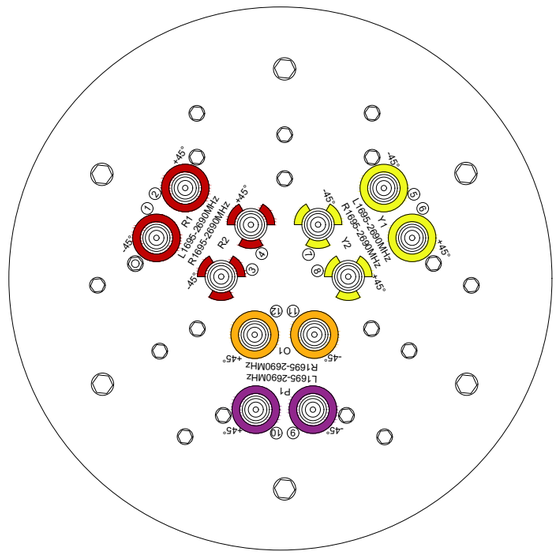
Ordering Info

Order Code - Antenna	Description
AW3747-T0-F	Zero degrees Fixed Tilt with 4.3-10 Connectors.
Order Code - Accessories	Description
CL-V-161	XYZ Adjustable Mounting - Optional Accessory
AW1012-2-FM-FM	RF Jumper Cable, connector types 4.3-10 (m) / 4.3-10 (m), length 2 metres (6'6")
AW1012-2-FM-NM	RF Jumper Cable, connector types 4.3-10 (m) / N-Type (m), length 2 metres (6'6")
AW1014-2-FM-TM	RF Jumper Cable, connector types 4.3-10 (m) / Nex10 (m), length 2 metres (6'6")

ORDERING OPTIONS



ANTENNA DIMENSIONS



BOTTOM OF ANTENNA

2 ANTENNA DETAILS - ALPHA AW3747

uscellular
12020 RIDGEMONT DR.
URBANDALE, IA 50323
PHONE: (515)205-0037

TERRA CONSULTING GROUP, LTD.
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-6400
FAX: 847-698-6401

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	03/27/23	JGL

SITE# 751467
LAWTON
CRAN 019D

6432 NW ARROWHEAD DR.
LAWTON, OK 73505

DRAWN BY:	JGL
CHECKED BY:	EW
DATE:	02/29/23
PROJECT #:	157-329

SHEET TITLE
ANTENNA DETAILS

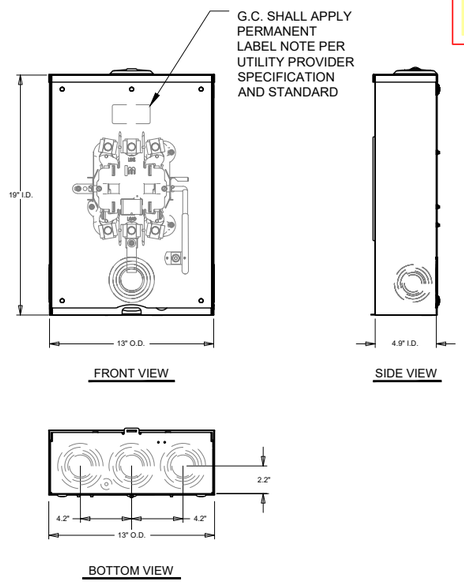
SHEET NUMBER
ANT-3

SPECIFICATIONS	
BRAND NAME	BROOKS
TYPE	RINGLESS METER SOCKET
APPLICATION	METER SOCKET
STANDARD	UL LISTED; TYPE 3R
VOLTAGE RATING	600 VOLTS ALTERNATION CURRENT
AMPERAGE RATING	200 CONTINUOUS AMPERE
PHASE	1 PHASE
FREQUENCY RATING	60 HERTZ
SIZE	4.9L x 13W x 19H
CABLE ENTRY	O.H. OR U.G.
TERMINAL	LAY IN
INSULATION	GLASS POLYESTER
MOUNTING	SURFACE MOUNT
MATERIAL	G90 GALVANIZED STEEL W/ POWDER COAT FINISH
NUMBER OF JAWS	4 TERMINAL
BYPASS PROVISION	LEVER BYPASS
NUMBER OF METER POSITION	1 POSITION
EQUIPMENT GROUND	GROUNDBAR
LINE SIDE WIRE RANGE	6AWG - 350 kmil
LOAD SIDE WIRE RANGE	6AWG - 350 kmil

NOTE:
METER PROVIDED BY AEP-PSO.
G.C. TO PICKUP METER AT PSO WAREHOUSE

PSO WAREHOUSE
226 SE B
LAWTON, OK

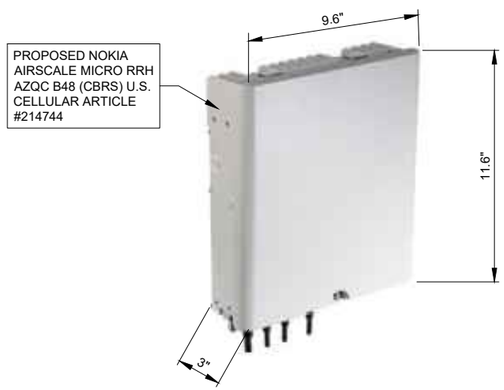
PROVIDED BY AEP

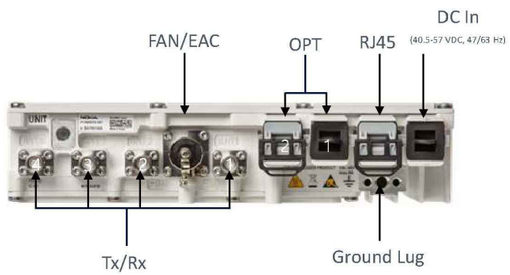


1 METER DETAILS - BROOKS #601U43W1B41-B20A00
SCALE: NTS

TITLE	SPECIFICATIONS
PART	NOKIA AIRSCALE MICRO 4T4R CBRS 20W (AZQC)
HEIGHT	295 mm (11.6 in.)
DEPTH	75 mm (3.0 in.)
WIDTH	245 mm (9.6 in.) CORE UNIT (DC UNIT VERSION) 270 mm (10.6 in.) WITH AC ADAPTER (AC VERSION)
WEIGHT	6.5 kg (14.3 lb) CORE UNIT (DC VERSION) 7.6 kg (16.8 lb) WITH AC ADAPTER (AC VERSION)
RF OUTPUT POWER	4 x 5 W
QAM	UP TO 256 QAM DL
	UP TO 64 QAM UL
NUMBER OF TXRX	UP TO 4TX4RX
AIRFLOW CLEARANCE	FRONT: 35mm (1.37 in.) / REAR: DEPENDING ON MOUNTING BRACKET TOP: 100mm (3.93 in.) / BOTTOM: 180mm (7.08 in.) LEFT: 50mm (1.96 in.) / RIGHT: 50mm (1.96 in.)

SUPPLIED BY U.S. CELLULAR





2 NOKIA MICRO AIRSCALE RADIO DETAILS

SUPPLIED BY U.S. CELLULAR

Strikesorb powered by **SPECIFICATIONS**

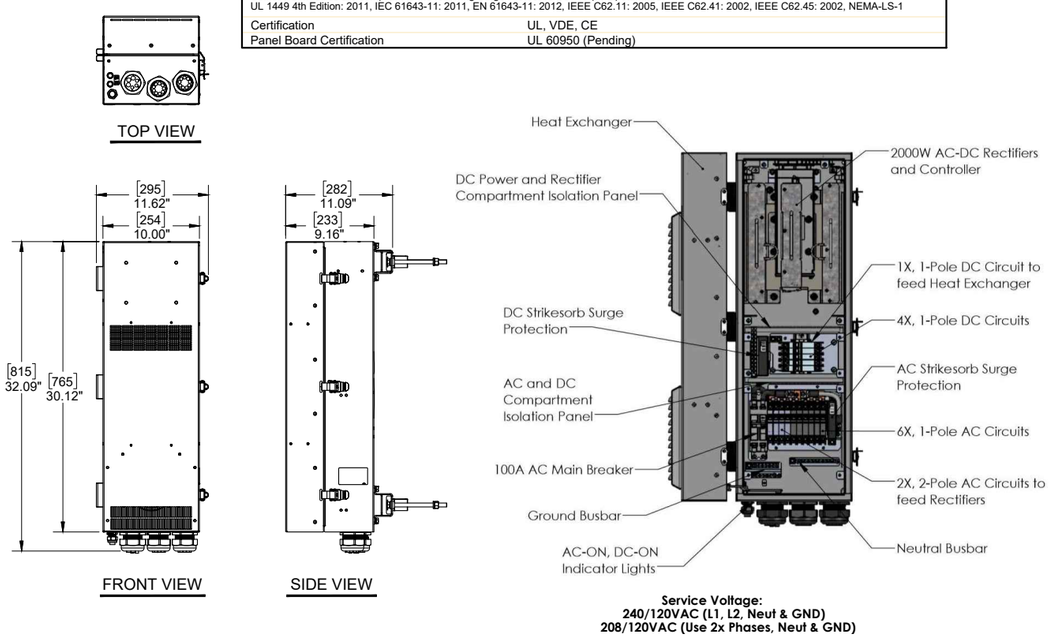
AC Disconnect with Integrated DC Power Supply for Small Cell Radio Heads
RUSAC-1AN2-P-240-1

Model Number	RUSAC-1AN2-P-240-1
Main Disconnect	100A main breaker
Number of AC Circuits	Available up to 6 for customer loads (2x 2-pole breakers feed rectifiers)
AC Breakers	Up to six
Breaker Interrupt Rating (kAIC)	10kA
DC Breakers	(4) 40 amp for customer loads
Rated Power Output	(1) 2000W @-53.5VDC, 2000W Total (expandable to 4000W)
Rated Output Voltage	53.5 VDC ± 0.1 VDC
Rated Output Current (DC)	35 Amps (expandable to 70 Amps)
Ouput Short Circuit Current Protected	Yes, long term with self-recovery
Input Voltage	110/220VAC
Input Nominal Voltage	Full DC Power (176-280VAC); 42% Power (85-175VAC)
Input Current THD	<5%@50% 176 load; <8%@20% load
Rated Power Per Rectifier	2000W (176-290VAC); 830W (85-175VAC)
Power Factor	≥ 0.99@220VAC (20%-100% load)
Efficiency	@230 VAC: ≥ 96%
Ripple Voltage	@200 mVp-p@25°C
Surge Protection Device (SPD) Type to UL	Strikesorb 30 Series
Surge Protective Device (SPD) Type per UL 1449 4th Edition	Type 2 component assembly
Surge Protection Device (SPD) Class to IEC 61643-11	Class I
Nominal Operating Voltage [Un]	120 V / 240VAC split phase
Nominal Discharge Current [In] per UL 1449 4th Edition	20 kA 8/20 µs
Maximum Discharge Current [Imax] per IEC 61643-11	60 kA 8/20 µs
Impulse Discharge Current [Iimp] per IEC 61643-11	5 kA 10/350 µs
Maximum Continuous Operating Voltage [Uc] (MCOV)	150V per line
Voltage Protection Level [Up] per IEC 61643-11	700V
Suppression Technology	MOV

Connection Terminal (Power)	Compression Lug #6) #14 AWG (13 - 2mm2) Terminal Block #10-#26 AWG (6 - 0.14mm2)
Environmental Ingress Protection (IP) Rating	NEMA Type 4
Cooling Method	Closed-Loop air-to-air heat exchanger
Operation Temperature (°C)	-40° C to +46° C
Storage Temperature (°C)	-70° C to +80° C
Enclosure Type (Outdoor)	Powder Coated Steel, NEMA Type 4
Enclosure Dimension (L × W × H)	11" x 13" x 33" [279 × 330 × 838mm]
Weight	System: 55 lbs (24.95 kg) Mount: 5 lbs (2.26 kg) Total: 60 lbs (27.22 kg)

Strikesorb modules are compliant to the following Surge Protective Device (SPD) standards:
UL 1449 4th Edition: 2011, IEC 61643-11: 2011, EN 61643-11: 2012, IEEE C62.11: 2005, IEEE C62.41: 2002, IEEE C62.45: 2002, NEMA-LS-1

Certification	UL, VDE, CE
Panel Board Certification	UL 60950 (Pending)



Service Voltage:
240/120VAC (L1, L2, Neut & GND)
208/120VAC (Use 2x Phases, Neut & GND)

3 RAYCAP DISCONNECT WITH DC POWER SUPPLY

uscellular
12020 RIDGEMONT DR.
URBANDALE, IA 50323
PHONE: (515)205-0037

TERRA CONSULTING GROUP, LTD.
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-6400
FAX: 847-698-6401

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	03/27/23	JGL

SITE# 751467
LAWTON
CRAN 019D
6432 NW ARROWHEAD DR.
LAWTON, OK 73505

DRAWN BY:	JGL
CHECKED BY:	EW
DATE:	02/29/23
PROJECT #:	157-329

SHEET TITLE
POLE MOUNTED EQUIPMENT DETAILS

SHEET NUMBER
ANT-4

CATALOG NUMBER	VOLTAGE RATING	WIRING DIAGRAM	AMPRE RATING	HORSEPOWER RATINGS 240VAC			
				STD.		MAX.	
				1 Ø	3 Ø	1 Ø	3 Ø
D223NRB	240 VAC	A	100	7.5	15 ●	15	30 ●

KNOCKOUTS				
SYMBOL	CONDUIT SIZE		DIAMETER	
	IN	MM	IN	MM
A	.50	13	.88	22
B	.75	19	1.13	29
C	1.00	25	1.38	35
D	1.25	32	1.75	45
E	1.50	38	2.00	51
F	2.00	51	2.50	64

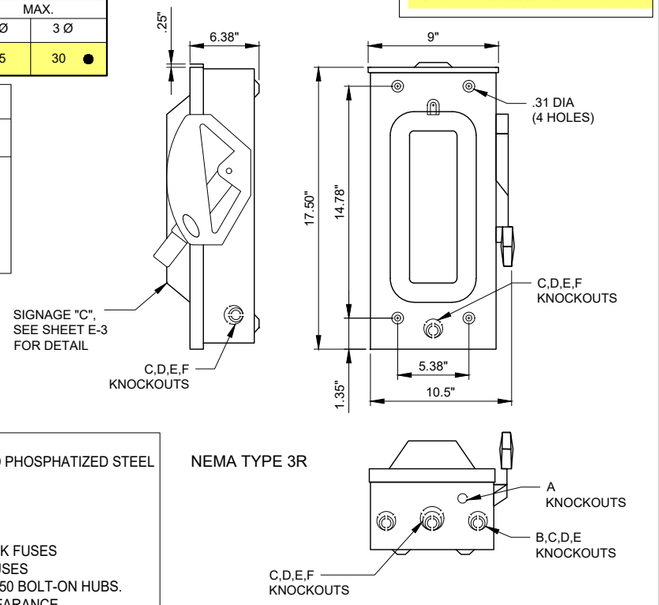
WIRING DIAGRAM

FUSIBLE

TERMINAL LUGS			
AMPRES	MAX. WIRE	MIN. WIRE	TYPE
100	# 1/0 AWG	#14 AWG	CU

MANUFACTURERS NOTES:
FINISH - GRAY BAKED ENAMEL ELECTRODEPOSITED OVER CLEANED PHOSPHATIZED STEEL
UL LISTED - FILE E-2875
ALL NEUTRALS - INSULATED GROUNDABLE
SUITABLE FOR USE AS SERVICE EQUIPMENT
SHORT CIRCUIT RATINGS:
10,000 AMPERES WHEN USED WITH OR PROTECTED BY CLASS H OR K FUSES
100,000 AMPERES WHEN USED WITH OR PROTECTED BY CLASS R FUSES
TOP ON NEMA 3R ENCLOSURES HAVE PROVISIONS FOR MAXIMIM 2.50 BOLT-ON HUBS.
WHEN MOUNTING THESE SWITCHES, ALLOW 3.00 IN / 76 MM MIN. CLEARANCE
BETWEEN ENCLOSURES FOR OPENING OF SIDE HINGED DOOR.
*USE OUTER SWITCHING POLES
o FOR CORNER GROUNDED DELTA SYSTEMS ONLY.
+ LUGS SUITABLE FOR 60°C OR 75°C CONDUCTORS.

SUPPLIED BY G.C



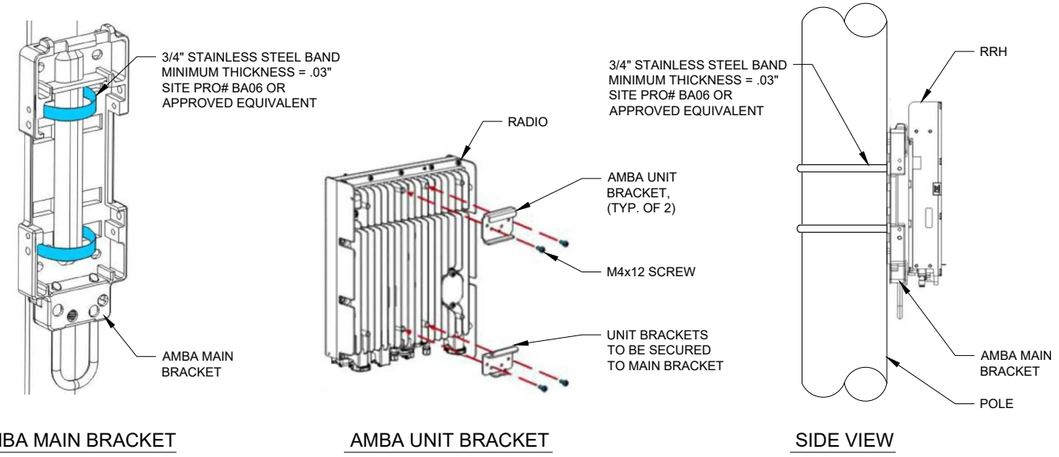
1 FUSIBLE POWER DISCONNECT SWITCH
SCALE: 3" = 1'-0"

SUPPLIED BY US CELLULAR

ORDERING INFORMATION
MANUFACTURER: NOKIA

ARTICLE#: 214744
CODE#: 474182A

DESCRIPTION: AMBA AIRSCALE MICRO BRACKET ASSEMBLY KIT



AMBA MAIN BRACKET | AMBA UNIT BRACKET | SIDE VIEW

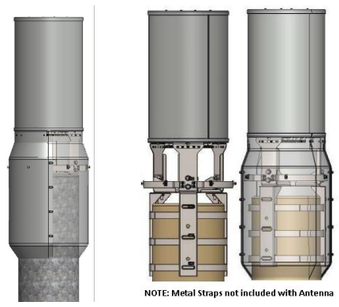
3 RADIO MOUNTING DETAILS - AMBA BRACKET ASSEMBLY KIT
NTS

Item:	Description	Quantity:
1	Pole Mounting Bracket: Main Plate	1
2	Pole Mounting Bracket: Pole Leg	3
3	Pole Mounting Bracket: Antenna Leg	3
4	M12, Flat Washer, Stainless Steel	9
5	M12, Spring Washer, Stainless Steel	9
6	M12 x 30mm Hex Head Screw, Stainless Steel	6
7	M12 x 40mm Hex Head Screw, Stainless Steel	3
8	M8 x 25, Hex Head Screw, Stainless Steel	6
9	Setscrew Grease Sachet (apply to items 6, 7 and 8 where used)	1
10	M8, Spring Washer, Stainless Steel	6
11	M8, Flat Washer, Stainless Steel	6

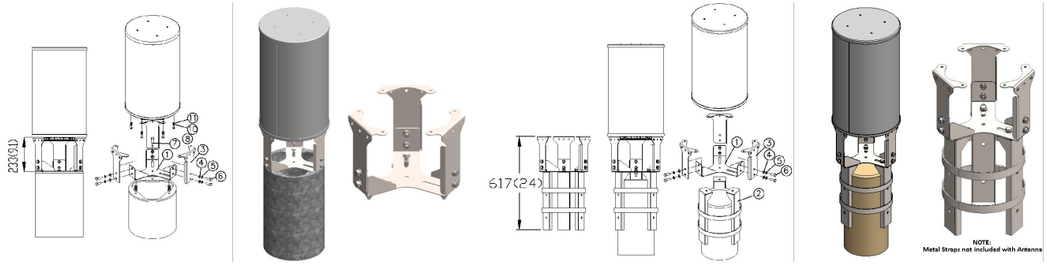
Important Note: This Mounting Kit does not include the Metal Straps (shown in the picture above) that hold the metal legs to the pole. It is intended that the installer choose the correct size of strap depending on the diameter of the pole for a given installation.

CL-V-169 CL-V-169 can be mounted on a wooden pole using the legs provided or directly on top of a metal pole.

Mechanical Specifications	
Material:	Stainless Steel
Weight:	16.0kg (35lbs)



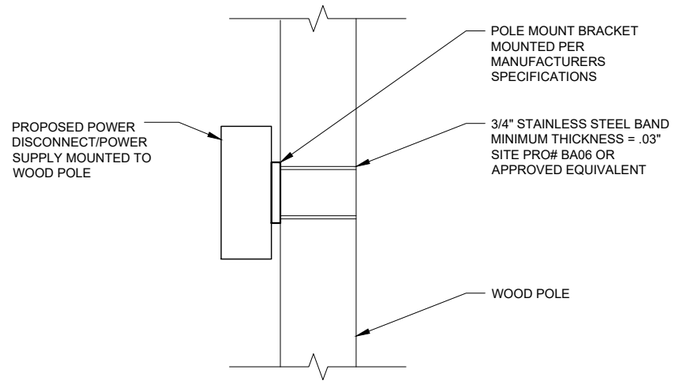
CONCEALMENT SHROUD METAL POLE | CONCEALMENT SHROUD WOOD POLE



EXPLODED ASSEMBLY METAL POLE | ISOMETRIC VIEW METAL POLE | EXPLODED ASSEMBLY WOOD POLE | ISOMETRIC VIEW WOOD POLE

2 ANTENNA MOUNTING DETAILS - ALPHA CL-V-199 - WOOD POLE TOP MOUNT
N.T.S.

SUPPLIED BY US CELLULAR



SIDE VIEW

4 SCHEMATIC MOUNTING DETAIL FOR EQUIPMENT

uscellular
12020 RIDGEMONT DR.
URBANDALE, IA 50323
PHONE: (515)205-0037

TERRA CONSULTING GROUP, LTD.
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-6400
FAX: 847-698-6401

REVISIONS			
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A	ISSUED FOR REVIEW	03/27/23	JGL

SITE# 751467
LAWTON
CRAN 019D

6432 NW ARROWHEAD DR.
LAWTON, OK 73505

DRAWN BY:	JGL
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DATE:	02/29/23
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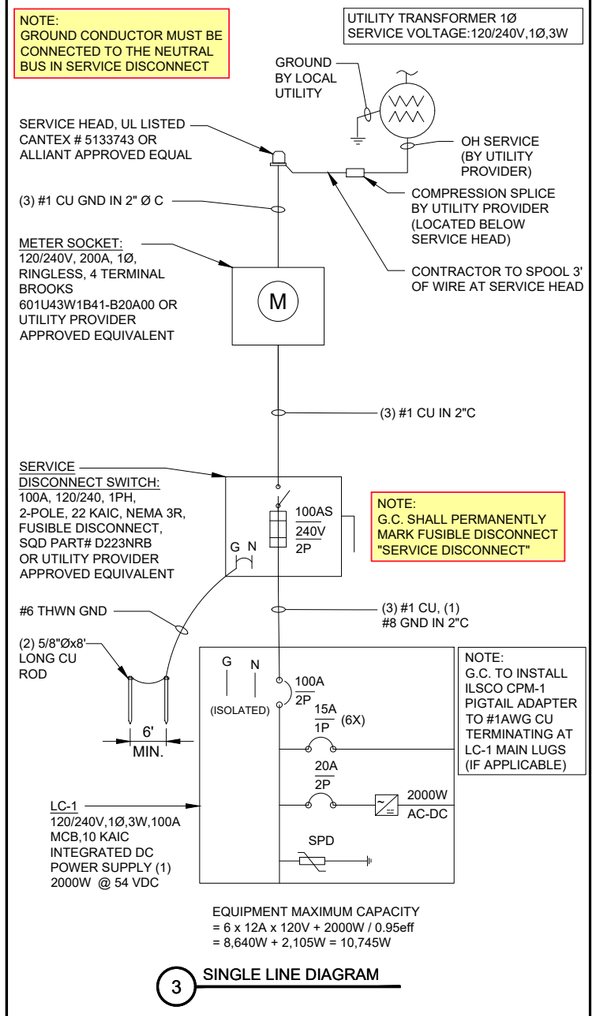
SHEET TITLE
POLE MOUNTED EQUIPMENT DETAILS

SHEET NUMBER
ANT-4

UTILITIES SCHEDULE			
	LENGTH	SIZE	QTY.
ROSENBERGER FIBER JUMPER FROM VAULT TO RADIO	200' ±	2 PAIR	1
COAX JUMPERS FROM RADIO TO ANTENNA	5' ±	½"Ø	2
ELECTRICAL SERVICE FROM ELECTRIC METER TO FUSIBLE POWER DISCONNECT	15' ±	#1 AWG	3
ELECTRICAL SERVICE FROM FUSIBLE POWER DISCONNECT TO RAYCAP DISCONNECT WITH DC POWER SUPPLY	10' ±	#1 AWG	3
ELECTRICAL SERVICE FROM RAYCAP DISCONNECT WITH DC POWER SUPPLY TO RADIO	5' ±	#14 AWG	3

2 UTILITY SCHEDULE

NOTE:
GROUND CONDUCTOR MUST BE CONNECTED TO THE NEUTRAL BUS IN SERVICE DISCONNECT



EQUIPMENT MAXIMUM CAPACITY
= 6 x 12A x 120V + 2000W / 0.95eff
= 8,640W + 2,105W = 10,745W

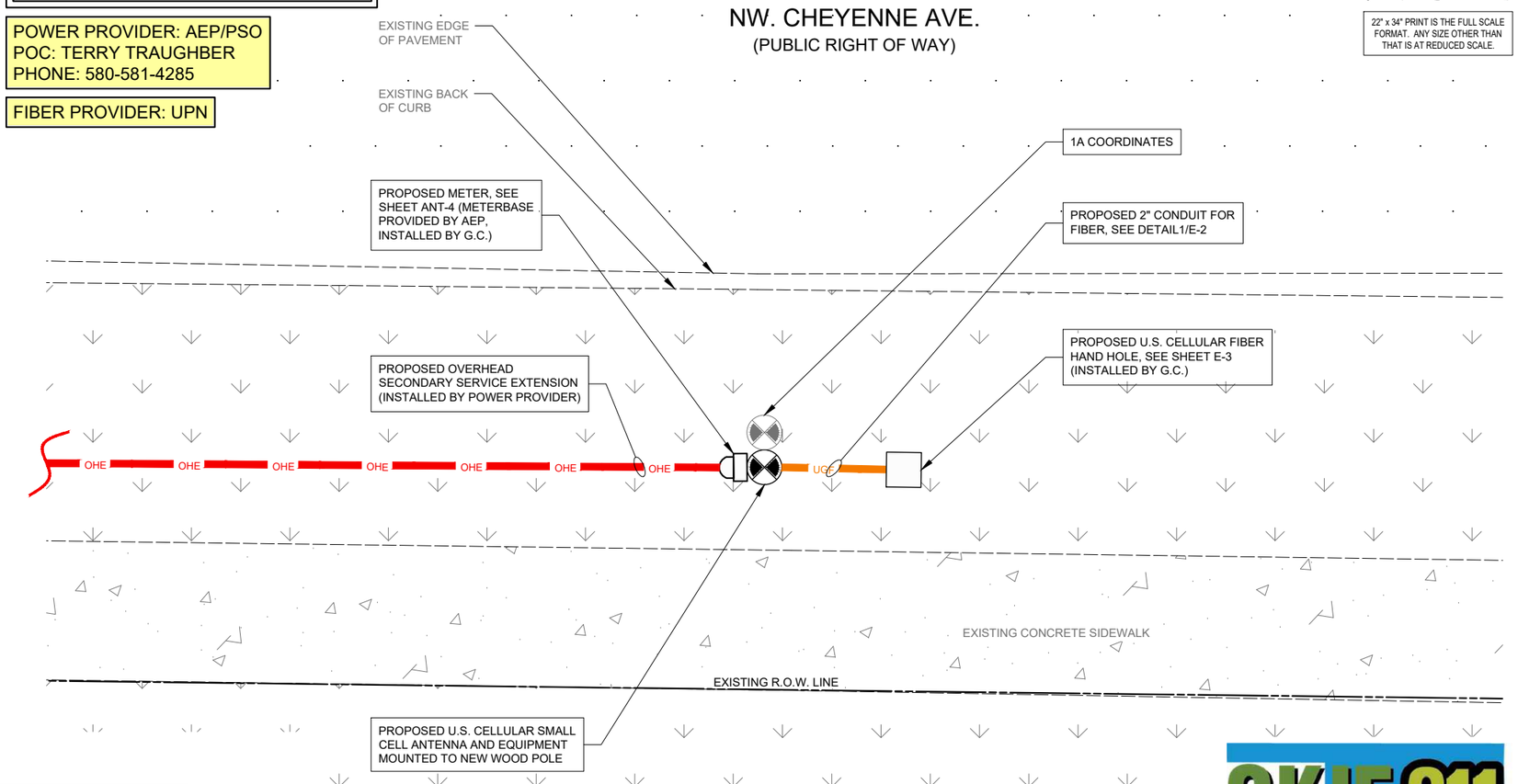
3 SINGLE LINE DIAGRAM

LEGEND

- EXISTING WATER VALVE (W)
- PROPOSED UTILITY POLE
- (UG) WATER LINE — W — W —
- (UG) PROPOSED FIBER LINE — UGF —
- (UG) PROPOSED POWER LINE — UGE —

POWER PROVIDER: AEP/PSO
POC: TERRY TRAUGHBER
PHONE: 580-581-4285

FIBER PROVIDER: UPN



SCALE: 1" = 2'
0 1' 2' 4'

22" x 34" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.

NOTE:
SEE SHEET C-1 FOR FULL UTILITY ROUTE

POWER COORDINATION NOT COMPLETE. DO NOT START WORK PRIOR TO FINALIZATION OF POWER COORDINATION.

Section 37
Surveying & Mapping
P.O. BOX 1876
DUNCAN, OK 73534
(580) 786-4363
SURVEYOR@SECTION-37.COM

1 UTILITY SITE PLAN
SCALE: 1" = 2'

OKIE 811
Know what's below Call before you dig.
BY PHONE DIAL 811 OR 1 (800) 522-OKIE (6543)

NOTES:
1. G.C. TO PERFORM ALL WORK IN ACCORDANCE TO ALL LOCAL/MUNICIPAL BUILDING CODES.
2. G.C. TO EXTEND FIBER TO FIBER PROVIDER "MEET-ME" POINT (PENDING FIBER COORDINATION).
3. G.C. TO LOCATE ALL SUBSURFACE UTILITIES PRIOR TO START OF CONSTRUCTION.
4. G.C. TO BORE UNDER ALL PAVEMENT & CONCRETE SIDEWALKS (IF APPLICABLE).
5. G.C. TO RESTORE ALL SURFACE TO ORIGINAL OR BETTER CONDITIONS.

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CRAN 019D
6432 NW ARROWHEAD DR.
LAWTON, OK 73505

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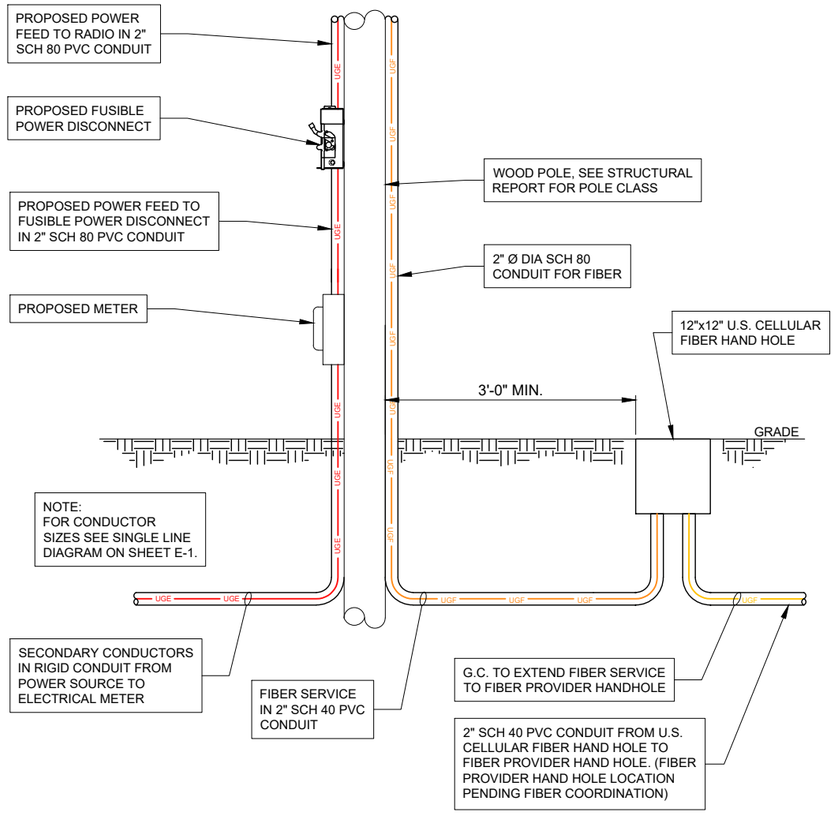
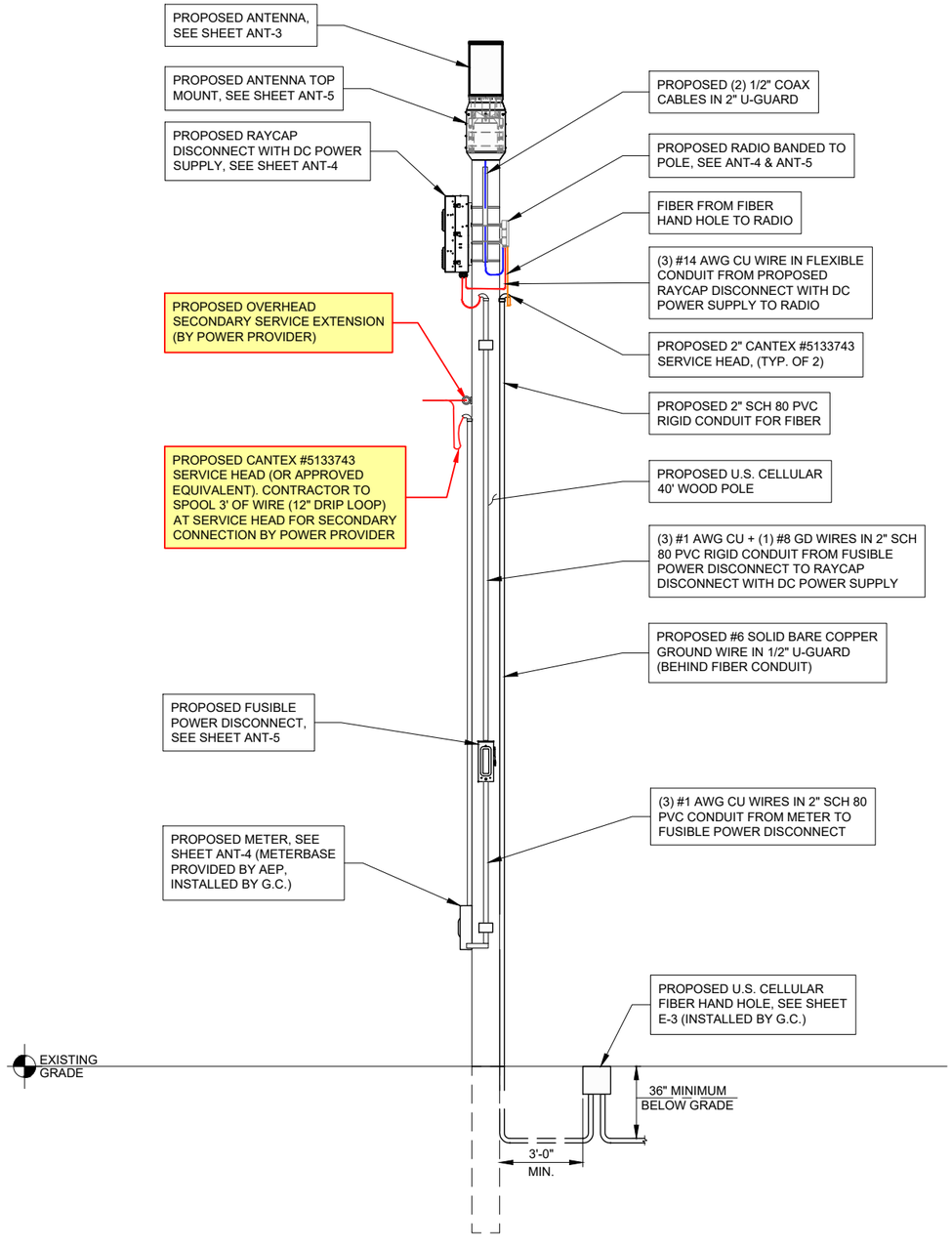
PROJECT #:	157-329

SHEET TITLE
UTILITY SITE PLAN

SHEET NUMBER
E-1





2 UTILITY ELEVATION
SCALE: 3/8" = 1'-0"

NOTE:
G.C. MAY USE APPROVED EQUIVALENT ON ALL MOUNTING HARDWARE

uscellular
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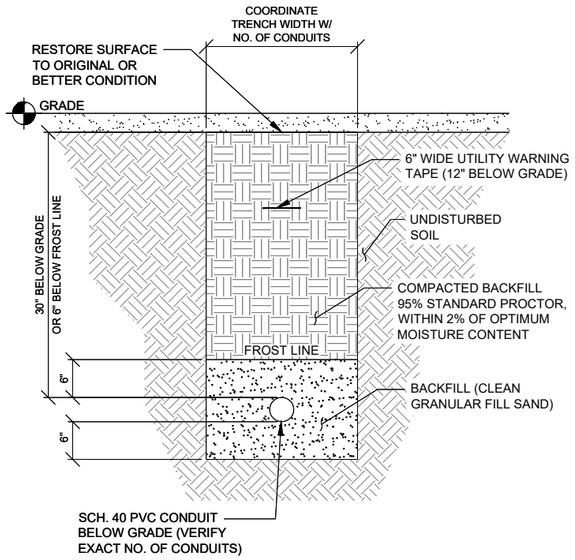
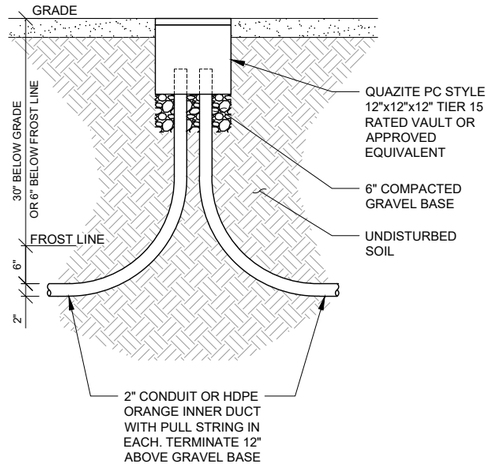
SHEET TITLE
UTILITY ELEVATION & DETAILS

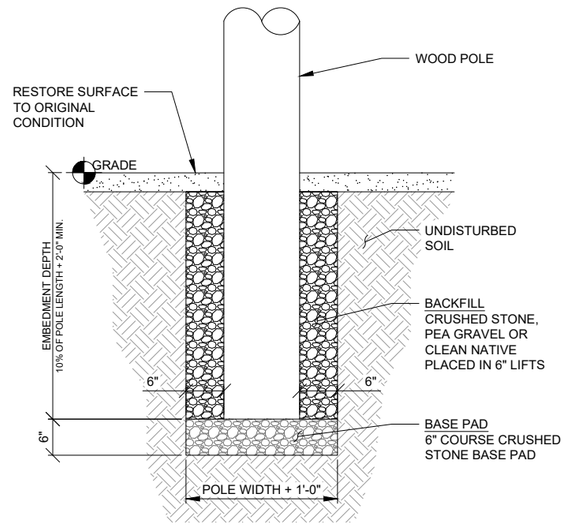
SHEET NUMBER
E-2



1 TYPICAL TRENCH DETAIL
NTS



3 12"x12"x12" - VAULT DETAIL
NTS



NOTE:
COMPACT SOIL TO 95% OF MAX DENSITY AT OPTIMUM MOISTURE CONTENT. COMPACT STONE TO 85% OF RELATIVE DENSITY.

2 WOOD POLE EMBEDMENT DETAIL
NTS

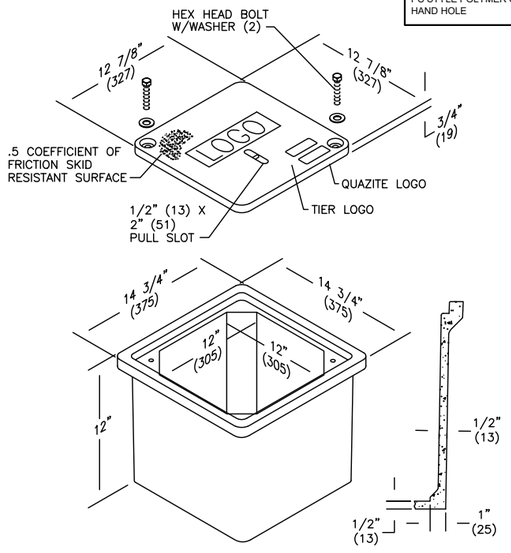
NOTE:
1. G.C. MAY USE APPROVED EQUIVALENT
2. SUPPLIED BY G.C.

ORDERING INFORMATION

MANUFACTURER - HUBBELL POWER SYSTEMS

PART#: COVER - PC1212HA0021
BOXES - PC1212BA12

DESCRIPTION - 12"x12" TIER 15 PC STYLE POLYMER CONCRETE HAND HOLE



4 FIBER HAND HOLE DETAIL

SIGNAGE "A"

SIGNAGE "B"

SERVICE DISCONNECT
XXX AMPS

SIGNAGE "C"

GENERAL NOTES:

1. U.S. CELLULAR SHALL SUPPLY AN ADHESIVE BACK UV RESISTANT EMERGENCY CONTACT DECAL TO BE MOUNTED ON THE POLE AT APPROXIMATELY 5' ABOVE GRADE. THE TAG SHALL SPECIFY AT A MINIMUM:
   1.1. POLE TOP EQUIPMENT INSTALLED. OWNED AND MAINTAINED BY (U.S. CELLULAR)
   1.2. EMERGENCY (24/7) CONTACT.
2. U.S. CELLULAR SHALL INSTALL, OWN, AND MAINTAIN THE FIBER OPTIC CABLE AND/ OR ELECTRICAL POWER CABLE AND CONNECTIONS ON THE POLE. U.S. CELLULAR SHALL PROVIDE AND INSTALL PLASTIC TAGS FOR ALL FIBER OPTIC AND POWER CABLE PLACED INSIDE THE POLE'S HAND HOLE. THE TAG SHALL SPECIFY AT A MINIMUM:
   2.1. FIBER OPTIC CABLE AND POWER SOURCE CABLE INSTALLED, OWNED AND MAINTAINED BY U.S. CELLULAR.
   2.2. EMERGENCY (24/7) PHONE NUMBER.
3. RF SIGNAGE "A" TO BE PLACED MIN. 6' BELOW U.S. CELLULAR ANTENNA ON POLE, ELEVATION VARIES SEE "PROPOSED" SITE ELEVATION FOR EXACT LOCATION.
4. U.S. CELLULAR GENERAL CONTRACTOR SHALL INSTALL A UV AND WATER RESISTANT LABEL WITH U.S. CELLULAR 6 DIGIT SITE NUMBER AND NODE # BELOW EMERGENCY CONTACT SIGNAGE "B"
5. U.S. CELLULAR GENERAL CONTRACTOR TO APPLY PERMANENT WEATHERPROOF LABEL ON FUSIBLE DISCONNECT. CONTRACTOR TO PROVIDE & INSTALL LABEL.

NOTE:
ON WOOD POLES CONTRACTOR WILL PROVIDE AND INSTALL METAL PLATES WHICH THE RF WARNING AND EMERGENCY CONTACT STICKERS CAN BE ADHERED TO AND INSTALLED ON THE WOOD POLE

5 RF SIGNAGE DETAILS & NOTES

SUPPLIED BY U.S. CELLULAR

uscellular
12020 RIDGEMONT DR.
URBANDALE, IA 50323
PHONE: (515)205-0037

TERRA CONSULTING GROUP, LTD.
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-6400
FAX: 847-698-6401

REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	03/27/23	JGL

SITE# 751467
LAWTON
CRAN 019D

6432 NW ARROWHEAD DR.
LAWTON, OK 73505

DRAWN BY:	JGL
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DATE:	02/29/23
PROJECT #:	157-329

SHEET TITLE
UTILITY DETAILS

SHEET NUMBER
E-3

GROUNDING ELECTRODE SYSTEM NOTES:

1. ALL GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC PROCESS CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, ETC. ALL CABLE TO GROUND RODS, GROUND RODS SPLICES AND LIGHTNING PROTECTION SYSTEM AS INDICATED. GROUND FOUNDATION ONLY AS INDICATED BY PM. ALL MATERIALS USED (MOLDS, WELDING, METAL, TOOLS, ETC.) SHALL BE BY EXOTHERMIC PROCESS AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND PROCEDURES. GROUND CONDUCTOR SHALL HAVE A MINIMUM 24" BENDING RADIUS.

2. ALL EXOTHERMIC CONNECTIONS ON GALVANIZED SURFACES SHALL BE CLEANED THOROUGHLY AND COLORED TO MATCH SURFACE WITH (2) TWO COATS OF SHERWIN-WILLIAMS GALVITE (WHITE) PAINT B50W3 (OR EQUAL) OR SHERWIN-WILLIAMS SILVERBRITE (ALUMINUM) B59S11 (OR EQUAL).

3. ALL ELECTRICAL & MECHANICAL GROUND CONNECTIONS SHALL HAVE ANTI-OXIDANT COMPOUND APPLIED TO CONNECTION.

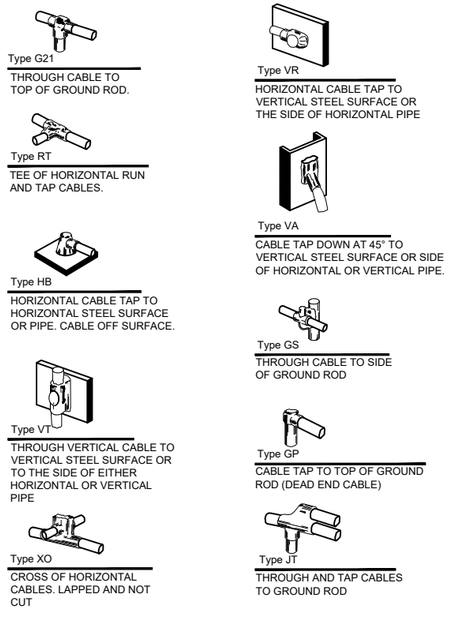
4. UTILILTY COMPANY COORINATION: ELECTRICAL CONTRACTOR SHALL CONFIRM THAT ALL WORK IS IN ACCORDANCE WITH THE RULES OF THE LOCAL UTILITY COMPANY BEFORE SUBMITTING THE BID, THE CONTRACTOR SHALL CHECK WITH THE UTILITY COMPANIES SUPPLYING SERVICE TO THIS PROJECT AND SHALL DETERMINE FROM THEM ALL EQUIPMENT AND CHARGES WHICH THEY WILL REQUIRE AND SHALL INCLUDE THE COST IN THE BID.

5. GROUND TEST: GROUND TESTS SHALL BE PERFORMED AS REQUIRED BY LESSEE STANDARD PROCEDURES. GROUND GRID RESISTANCE SHALL NOT EXCEED 5 OHMS.

6. CONTRACTOR SHALL SUBMIT THE GROUND RESISTANCE TEST REPORT AS FOLLOWS:
   6.1. ONE (1) COPY TO OWNER REPRESENTATIVE
   6.2. ONE (1) COPY TO ENGINEER

7. FOR ALL GANVANIZED ANTENNA SUPPORTING SSTRUCTURES, ZINC SHALL BE USED TO COAT ALL WELDS, CAD WELDS, AND SCRATCHES. NO APPROVED EQUALS AT THIS TIME

LEGEND	
SYMBOL	DESCRIPTION
⊗	5/8" DIAMETER x 8'-0" LONG COPPER CLAD GROUND ROD (HARGER-588)
◎	5/8" DIAMETER X 8'-0" LONG COPPER CLAD GROUND ROD WITH INSPECTION WELL
– – – – – – –	#6 AWG TNND SOLID BARE COPPER WIRE MINIMUM 42" BELOW GRADE
– – – UGE – – –	UNDERGROUND ELECTRICAL
– – – UGT – – –	UNDERGROUND TELEPHONE
– – – UGF – – –	UNDERGROUND FIBER
——●——	EXOTHERMIC WELD
—— OHE ——	OVERHEAD ELECTRICAL SERVICE
OHT ——	OVERHEAD TELEPHONE SERVICE



1 EXOTHERMIC WELD DETAILS

EXOTHERMIC AND HARGER ULTRAWELD OR APPROVED EQUAL

TYPICAL KEYED GROUNDING NOTES △

△1 #6 AWG, BARE COPPER GROUND CONDUCTOR, 42" BELOW GRADE (TYPICAL) MINIMUM 24" BENDING RADIUS

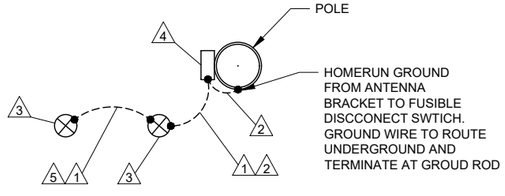
△2 USCC EQUIPMENT ENCLOSURE GROUND (TYP.) IN 1/2" DIAMETER SCHEDULE 40 PVC CONDUIT

△3 5/8" DIAMETER X 8'-0" LONG COPPER CLAD GROUND ROD (HARGER-588)

△4 ELECTRICAL SERVICE DISCONNECT

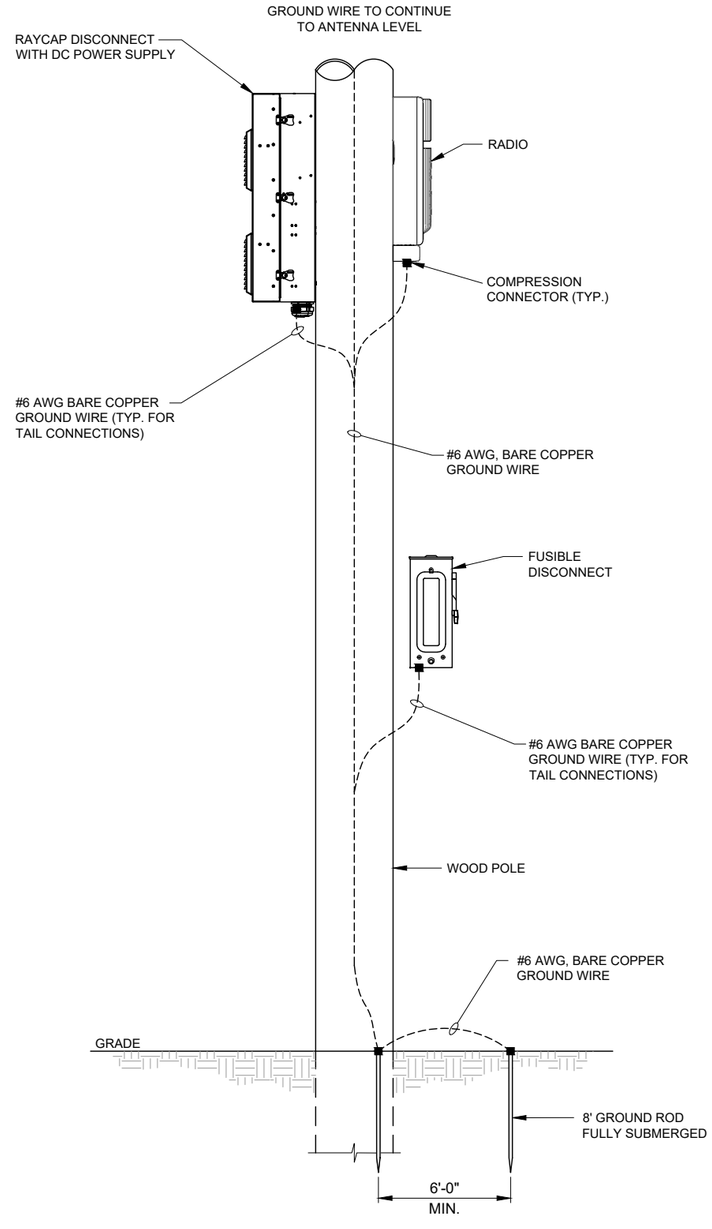
△5 6'-0" MIN. DISTANCE BETWEEN 5/8"x8'-0" GROUND RODS

NOTES:
1. GROUND LEAD TO ROUTE UP POLE TO FUSIBLE DISCONNECT.
2. ELECTRICAL CONTRACTOR TO INSTALL GROUND ROD AS BEST FIT. IN SOME INSTANCES, SITE CONDITIONS MAY DICTATE GROUND ROD PLACEMENT. DETAIL IS FOR SCHEMATIC PURPOSES ONLY.



2 GROUND ROD ARRANGEMENT

NOTE:
GROUND ALL EQUIPMENT IN ACCORDANCE TO NEC 250



3 TYPICAL GROUNDING SCHEMATIC

OKIE811 Know what's below Call before you dig.
BY PHONE DIAL 811 OR 1 (800) 522-OKIE (6543)

uscellular
12020 RIDGEMONT DR.
URBANDALE, IA 50323
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LAWTON
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LAWTON, OK 73505

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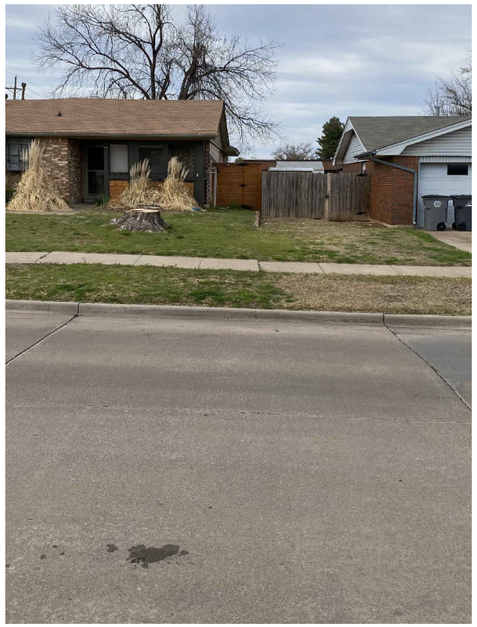
SHEET TITLE
GROUNDING PLAN AND DETAILS

SHEET NUMBER
E-4



LOOKING NORTH

LOOKING EAST

LOOKING SOUTH

LOOKING WEST

1 DIRECTIONAL VIEWS FROM POLE

uscellular
12020 RIDGEMONT DR.
URBANDALE, IA 50323
PHONE: (515)205-0037

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600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
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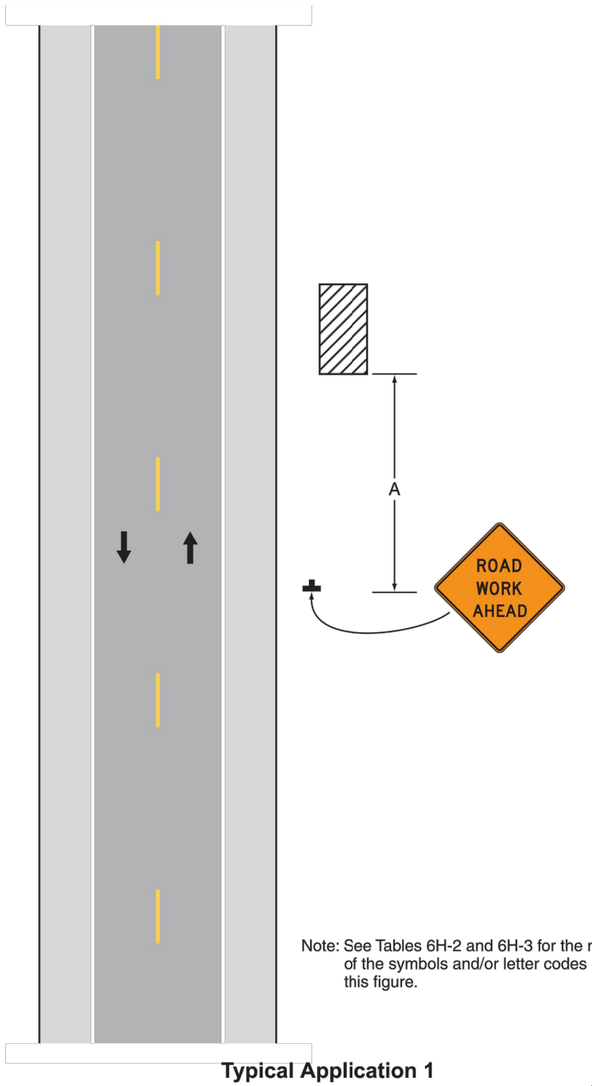
SHEET TITLE
EXHIBIT PHOTOS

SHEET NUMBER
EX-1

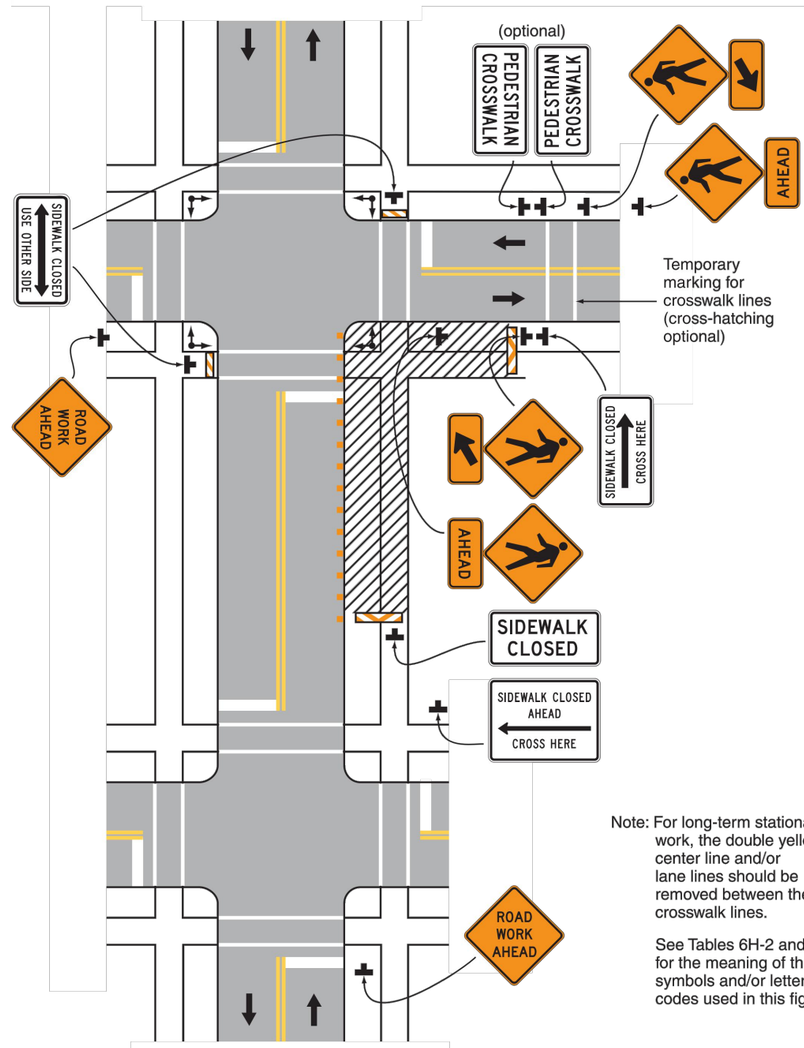
Figure 6H-1. Work Beyond the Shoulder (TA-1)



Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

Typical Application 1

Figure 6H-29. Crosswalk Closures and Pedestrian Detours (TA-29)



Note: For long-term stationary work, the double yellow center line and/or lane lines should be removed between the crosswalk lines.

See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

Typical Application 29

NOTES:
1. DETAIL PROVIDED IS FOR REFERENCE ONLY. REFER TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). TYPICAL APPLICATION DIAGRAMS SHOWN REPRESENT MINIMUM REQUIREMENTS FOR TYPICAL SITUATIONS. G.C. SHALL ADHERE TO ALL NATIONAL, STATE, AND LOCAL REQUIREMENTS.
2. U.S. CELLULAR G.C. TO BE FAMILIAR WITH CURRENT VERSION OF OKLAHOMA DEPARTMENT OF TRANSPORTATION'S GUIDELINES FOR TEMPORARY TRAFFIC CONTROL.
3. U.S. CELLULAR G.C. TO PROVIDE OTHER METHODS OF TEMPORARY TRAFFIC CONTROL DEEMED APPLICABLE PER JOB LOCATION AND CONDITIONS.

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REVISIONS			
NO.	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	03/27/23	JGL

SITE# 751467
LAWTON
CRAN 019D
6432 NW ARROWHEAD DR.
LAWTON, OK 73505

DRAWN BY:	JGL
CHECKED BY:	EW
DATE:	02/29/23
PROJECT #:	157-329

SHEET TITLE
TRAFFIC
CONTROL PLAN

SHEET NUMBER
TC-1