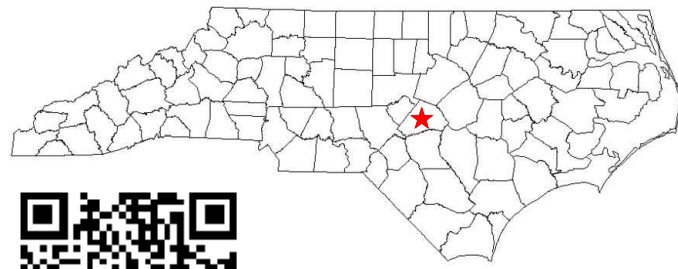


**STATE LOCATION**



**W3 AMENDMENT DRAWINGS**

SITE NAME:  
**ARLINGTON**

SITE NUMBER:  
**556470**

SITE ADDRESS:  
**11884 US HWY 421 NORTH  
BROADWAY, NC  
(HARNETT COUNTY)**

**SITE LOCATION**



**PROJECT TEAM**

**PROJECT CONTACT:**

NAME U.S. CELLULAR CORPORATION  
ADDRESS 8410 W BRYN MAWR SUITE 700  
CITY, STATE, ZIP CHICAGO, IL 60631  
CONTACT MICHAEL SZLAMCZYNSKI

**SITE ACQUISITION:**

NAME TOWER ENGINEERING PROFESSIONALS  
ADDRESS 10700 SIKES PLACE, SUITE 360  
CITY, STATE, ZIP CHARLOTTE, NC 28277  
CONTACT NEAL FLOYD  
PHONE (980) 202-5546

**TOWER OWNER:**

NAME US CELLULAR CORPORATION  
ADDRESS 8410 W. BRYN MAWR, SUITE 700  
CITY, STATE, ZIP CHICAGO, IL 60631  
CONTACT MICHAEL SZLAMCZYNSKI

**CIVIL ENGINEER:**

NAME TOWER ENGINEERING PROFESSIONALS, INC.  
ADDRESS 326 TRYON ROAD  
CITY, STATE, ZIP RALEIGH, NC 27603-3530  
CONTACT JOHN H. BEST III, P.E.  
PHONE (919) 661-6351

**PROJECT INFORMATION**

LATITUDE: N 35° 26' 15.6" \*  
LONGITUDE: W 79° 01' 11.8" \*  
GROUND ELEVATION: 140.8'± (AMSL) \*\*  
\* INFORMATION PROVIDED BY USCC  
\*\* INFORMATION FROM GOOGLE EARTH

TOWER TYPE: 280' GUYED  
LOADING TYPE: DX1010A  
ACCESS ISSUES: N/A  
GATE COMBO: 0243



Know what's below.  
Call before you dig.

**INDEX OF SHEETS**

NO.	SHEET TITLE	REV
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C-3	RRU RACK DETAILS	7
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C-6	TOWER ELEVATION	7
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C-9	GROUND BAR DETAILS	7
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C-11	RAYCAP & RRU SPEC SHEET	7
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E-1	ONE LINE DIAGRAM	7
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**STRUCTURAL NOTE**

STRUCTURAL STATUS:  
• TOWER SA - PASSING (JULY 22, 2021)  
• MOUNT SA - FAILING (JUNE 30, 2020)  
• MOUNT MODIFICATION - PASSING (OCTOBER 15, 2020)

**SCOPE OF WORK**

**TOWER SCOPE:**

EXISTING EQUIPMENT TO REMAIN:  
(3) KMW AM-X-CD-17-65-00T-RET LTE PANEL ANTENNAS  
(1) ANTEL BXA-80090/8 CDMA PANEL ANTENNA  
(2) ANTEL BXA-80063/8CF CDMA PANEL ANTENNAS  
(6) FH 1 1/2" CDMA COAX  
(1) RAYCAP RUSDC-6267-PF-48  
(1) 1 1/2" HYBRID CABLE  
(3) ERICSSON RRU-11 B5 RRUs

PROPOSED EQUIPMENT:  
(3) DENGYO OCT8-2LX2HX-BW65 LTE PANEL ANTENNAS  
(2) ERICSSON RRU 4449 B12/B71 RRUs  
(2) ERICSSON RRU 4415 B66 RRUs  
(1) RAYCAP RUSDC-6267-PF-48  
(1) 1 1/2" HYBRID CABLE

PROPOSED LTE JUMPERS:  
(4) FIBER JUMPERS FROM RAYCAP TO B12/B71 RRUs  
(4) FIBER JUMPERS FROM RAYCAP TO B66 RRUs  
(2) FIBER JUMPERS FROM RAYCAP TO B5 RRUs  
(1) FIBER JUMPERS FROM B5 TO B5 RRUs  
(4) POWER JUMPERS FROM RAYCAP TO B12/B71 RRUs  
(2) POWER JUMPERS FROM RAYCAP TO B66 RRUs  
(3) POWER JUMPERS FROM RAYCAP TO B5 RRUs  
(8) 1/2" JUMPERS FROM B12/B71 RRUs TO ANTENNAS  
(8) 1/2" JUMPERS FROM B66 RRUs TO ANTENNAS  
(6) 1/2" JUMPERS FROM B5 RRUs TO ANTENNAS  
(2) RET JUMPERS FROM B12/B71 RRUs TO ANTENNAS  
(1) RET JUMPERS FROM B66 RRUs TO ANTENNAS  
(3) RET JUMPERS FROM B5 RRUs TO ANTENNAS

TOP TOWER GROUND BAR:  
CANNOT ACCOMMODATE ADDITIONAL GROUND LEADS.  
PROPOSED GROUND BAR REQUIRED.

MIDDLE TOWER GROUND BAR:  
CAN ACCOMMODATE ADDITIONAL GROUND LEAD.

BOTTOM TOWER GROUND BAR:  
CAN ACCOMMODATE ADDITIONAL GROUND LEAD.

ICE BRIDGE:  
CAN ACCOMMODATE ADDITION OF (1) HYBRID CABLE,  
(1) GPS ANTENNA AND (1) GPS CABLE.

ICE BRIDGE GROUND BAR:  
CAN ACCOMMODATE ADDITIONAL GROUND LEAD.

LTE CABINET:  
(1) EXISTING LTE CABINET AND (1) MICROWAVE CABINET TO BE REMOVED. (1) PROPOSED ERICSSON RBS 6120 TO BE INSTALLED.

EXISTING EQUIPMENT:  
RAYCAP RUSDC-6267-PF-48 AND (1) 18"x18" JUNCTION BOX TO REMAIN.

PROPOSED EQUIPMENT:  
(1) PROPOSED RAYCAP RUSDC-6267-PF-48

EQUIPMENT RACK GROUND BAR:  
CAN ACCOMMODATE ADDITIONAL GROUND LEADS.

ANTENNA AZIMUTHS:  
ANTENNAS TO BE ROTATED TO DESIGN AZIMUTHS. AZIMUTH CHANGES MUST BE PRE SCHEDULED WITH USCC FOR POTENTIAL E911 TESTING.

BEACON:  
BEACON IS NESTED. CONTRACTOR TO INSTALL BEACON EXTENSION BY FLASH TECHNOLOGIES (P/N:11000016652). SEE SHEET C-6 FOR DETAILS.

LIGHTNING ROD:  
LIGHTNING ROD MOUNT PIPE NESTS BEACON. CONTRACTOR TO REMOVE LIGHTNING ROD AND MOUNT PIPE, AND INSTALL 8' LIGHTNING ROD. SEE SHEET C-6 FOR DETAILS.

ANTENNA MOUNT:  
EXISTING ANTENNA MOUNT HAS INSUFFICIENT CAPACITY TO SUPPORT PROPOSED LOADING AND REQUIRES MODIFICATION PRIOR TO LTE INSTALL. SEE TEP APPURTENANCE MOUNT MODIFICATION ANALYSIS FOR MODIFICATION DETAILS.

**DECOMMISSIONED EQUIPMENT REMOVAL:**

EQUIPMENT REMOVAL:  
\*(3) ERICSSON RRU-11 B12 RRUs  
\*(6) KAEUS COMBINERS  
\*(1) LTE CABINET  
\*(1) ELTEK EQUIPMENT CABINET

\* POST-INTEGRATION

PLANS PREPARED FOR:



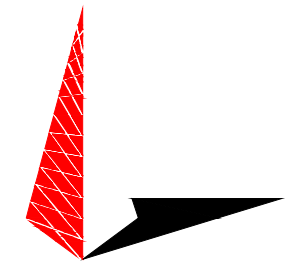
8410 W BRYN MAWR SUITE 700  
CHICAGO, IL 60631  
(773) 399-8900

PROJECT INFORMATION:

**556470  
ARLINGTON**

11884 US HWY 421 NORTH  
BROADWAY, NC  
(HARNETT COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**

326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net

N.C. LICENSE # C-1794

SEAL:



August 3, 2021

REV	DATE	ISSUED FOR:
8	08-03-21	CONSTRUCTION
7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

**TITLE SHEET**

SHEET NUMBER:	REVISION:
<b>T-1</b>	<b>8</b>
	TEP#: 43045.453871





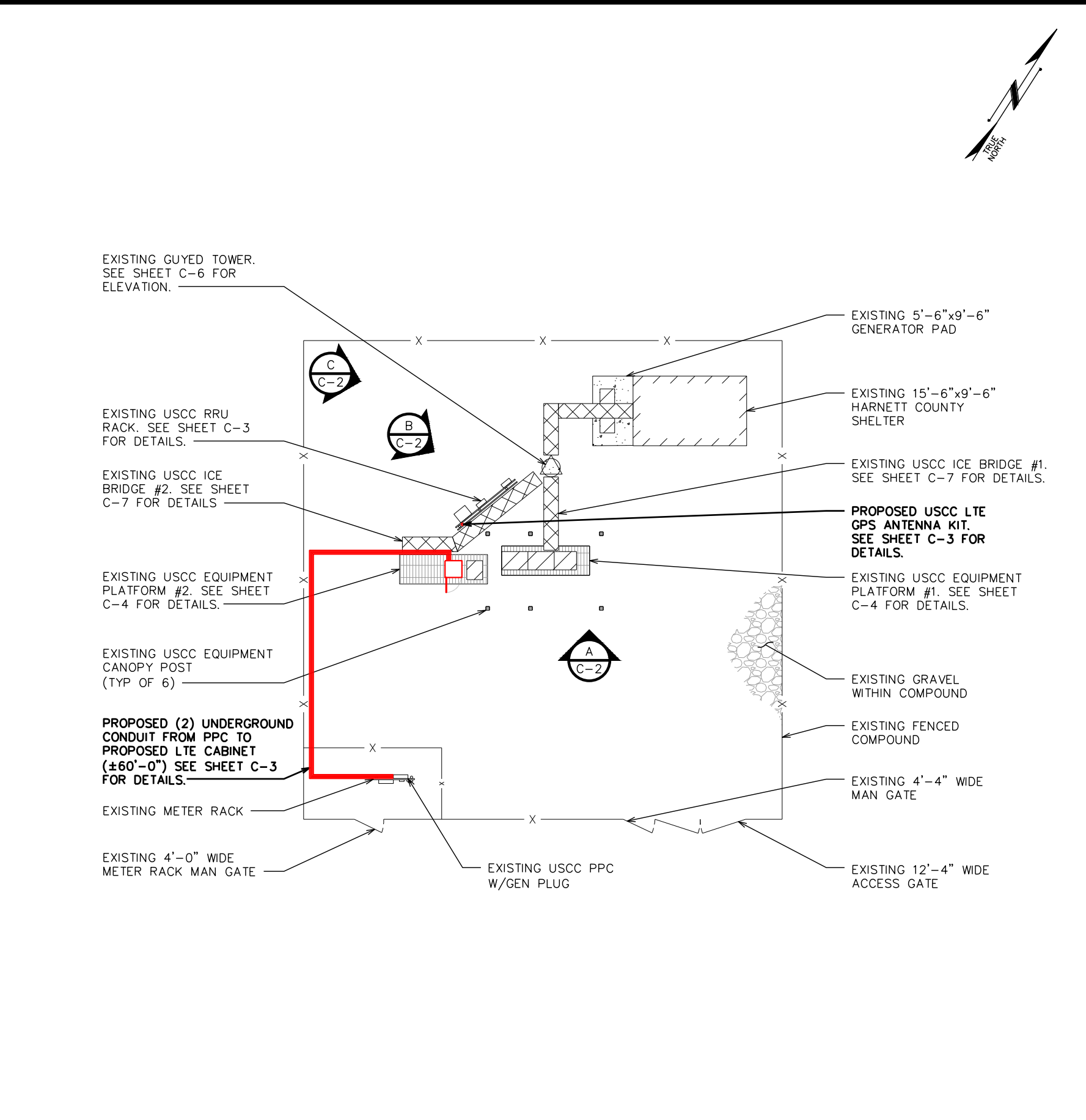
**COMPOUND VIEW "A"**



**COMPOUND VIEW "B"**



**COMPOUND VIEW "C"**



**COMPOUND DETAIL**

SCALE: 1/16" = 1'-0"



PLANS PREPARED FOR:  
 U.S. Cellular  
 8410 W BRYN MAWR SUITE 700  
 CHICAGO, IL 60631  
 (773) 399-8900

PROJECT INFORMATION:  
**556470**  
**ARLINGTON**  
 11884 US HWY 421 NORTH  
 BROADWAY, NC  
 (HARNETT COUNTY)

PLANS PREPARED BY:  
**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
 OFFICE: (919) 661-6351  
 www.tepgroup.net  
 N.C. LICENSE # C-1794

SEAL:  
**JOHN H. BEST**  
 ENGINEER  
 NORTH CAROLINA  
 PROFESSIONAL  
 SEAL  
 047120  
 APRIL 14, 2021

7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

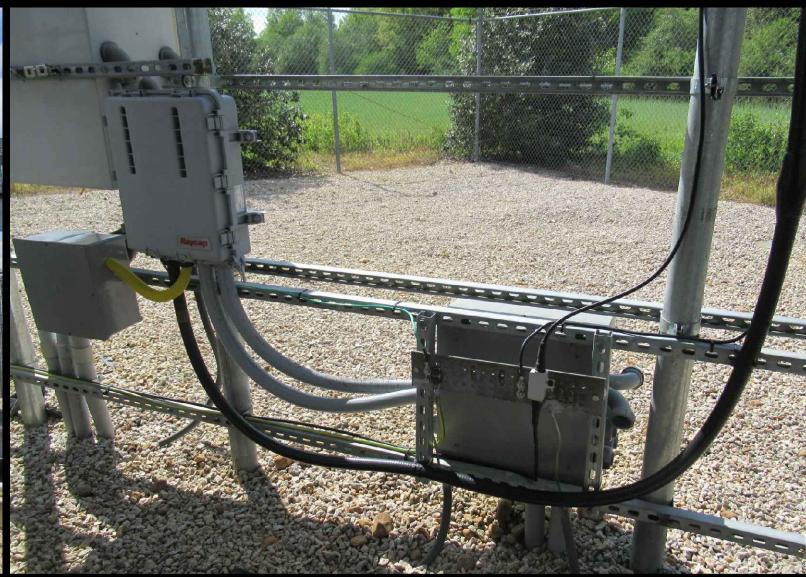
DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:  
**COMPOUND DETAILS**

SHEET NUMBER: **C-2** REVISION: **7**  
 TEP#: 43045.453871



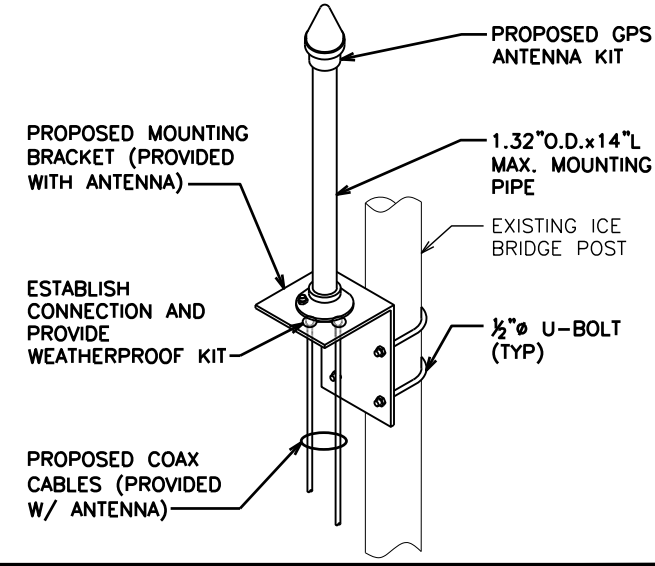
**EXISTING USCC RRU RACK (FRONT)**



**EXISTING USCC RRU RACK (BACK)**

**NOTES:**

1. LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.
2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.



**GPS ANTENNA KIT DETAIL**

SCALE: N.T.S.

PLANS PREPARED FOR:

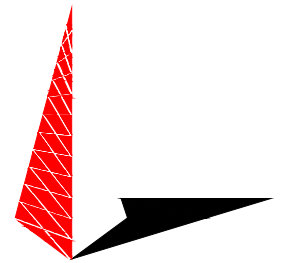
**U.S. Cellular**  
 8410 W BRYN MAWR SUITE 700  
 CHICAGO, IL 60631  
 (773) 399-8900

PROJECT INFORMATION:

**556470  
 ARLINGTON**

11884 US HWY 421 NORTH  
 BROADWAY, NC  
 (HARNETT COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
 OFFICE: (919) 661-6351  
 www.tepgroup.net  
 N.C. LICENSE # C-1794

SEAL:



April 14, 2021

REV	DATE	ISSUED FOR:
7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

**RRU RACK DETAILS**

SHEET NUMBER: REVISION:

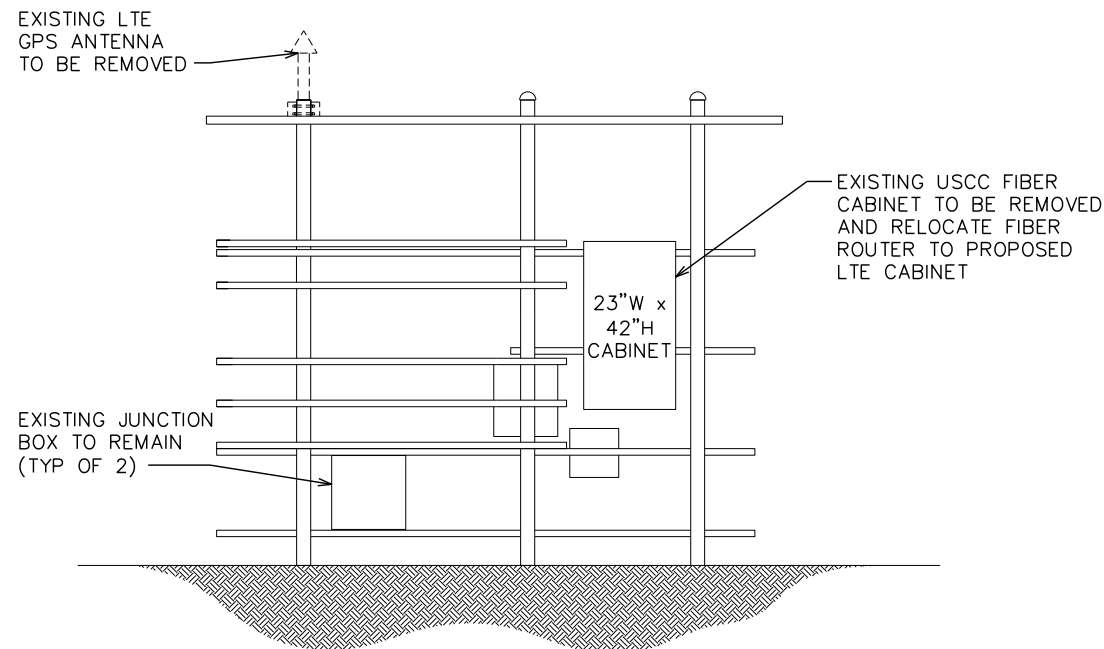
**C-3**

**7**

TEP#: 43045.453871

**NOTES:**

1. CONTRACTOR TO ADJUST EXISTING UNISTRUTS AS NEEDED.
2. THE HYBRID JUMPERS SHOULD BE PROTECTED WITH INNERDUCT IF THEY ENTER THE CABINET HIGH. IF THEY ENTER THE CABINET LOW, THEN USE A LIQUID TIGHT FLEXIBLE METAL CONDUIT.
3. CONTRACTOR TO ADJUST EXISTING RRU LOCATIONS IN ORDER TO PROVIDE SPACE FOR PROPOSED RAYCAP AS NEEDED.



**EXISTING RRU RACK ELEVATION**

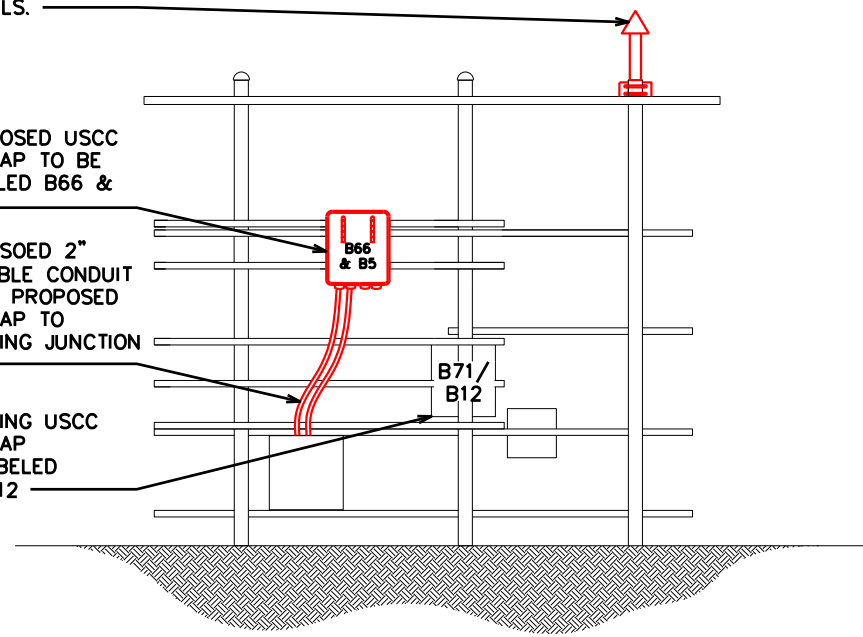
SCALE: N.T.S.

PROPOSED GPS ANTENNA MOUNTED ON ICE BRIDGE. SEE THIS SHEET FOR DETAILS.

PROPOSED USCC RAYCAP TO BE LABELED B66 & B5

PROPOSED 2\"/>

EXISTING USCC RAYCAP RELABELED B71/12



**PROPOSED RRU RACK ELEVATION**

SCALE: N.T.S.



**EXTERIOR USCC EQUIPMENT PAD #1**

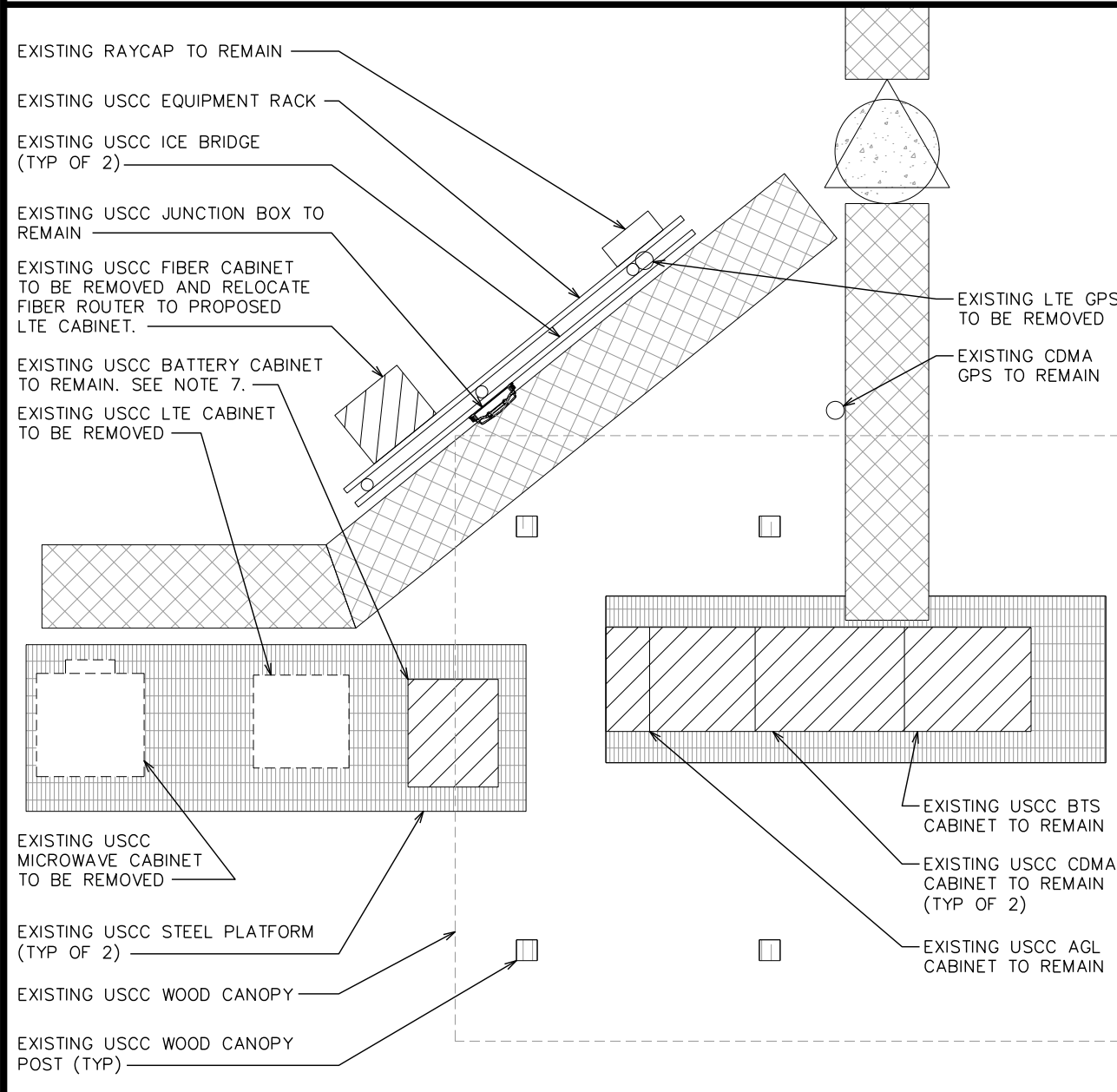


**EXTERIOR USCC EQUIPMENT PAD #2**

PLANS PREPARED FOR:  
  
 8410 W BRYN MAWR SUITE 700  
 CHICAGO, IL 60631  
 (773) 399-8900

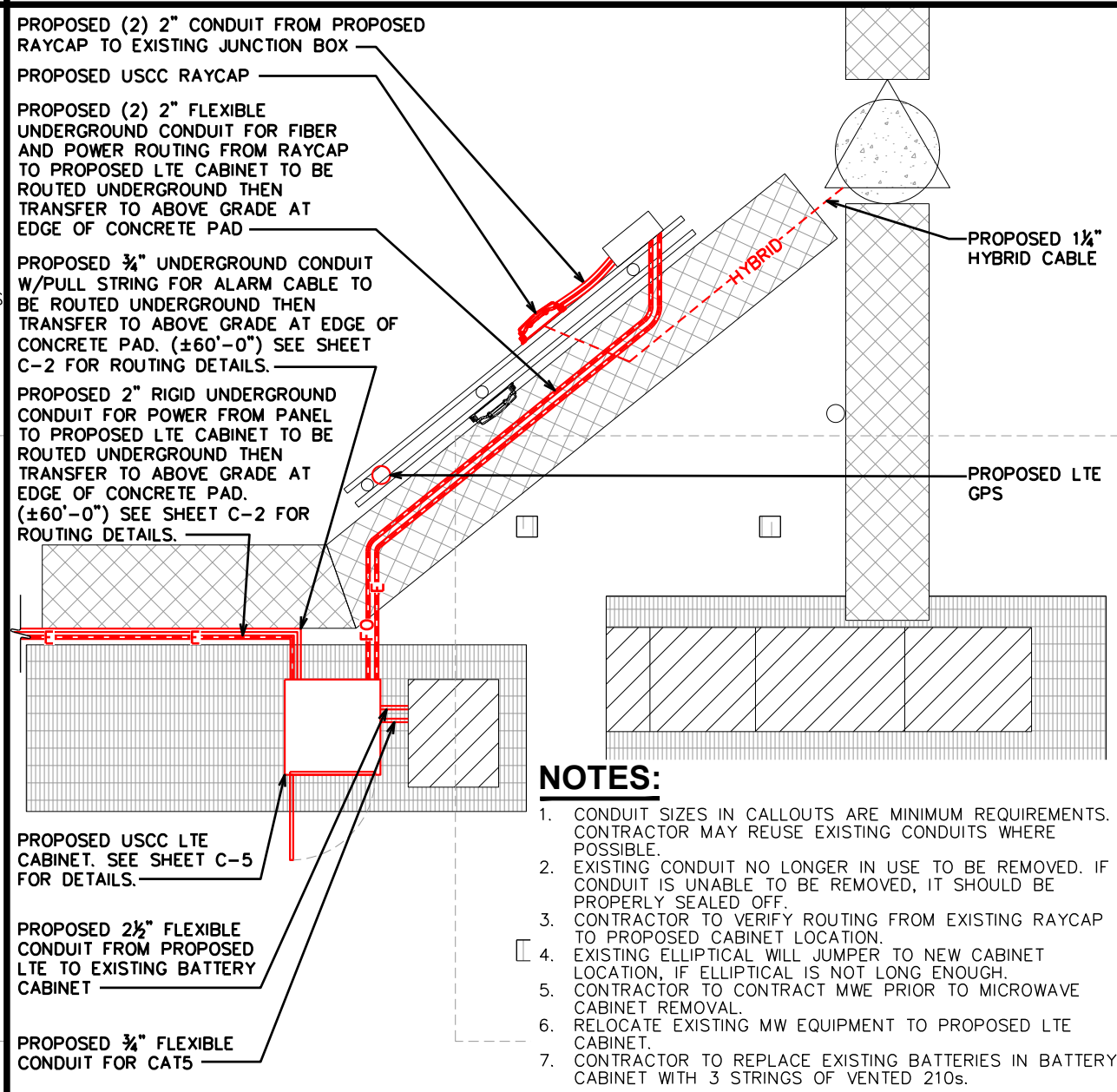
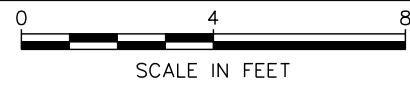
PROJECT INFORMATION:  
**556470**  
**ARLINGTON**  
 11884 US HWY 421 NORTH  
 BROADWAY, NC  
 (HARNETT COUNTY)

PLANS PREPARED BY:  
  
**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
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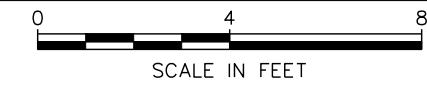
**EXISTING EQUIPMENT PAD DETAILS**

SCALE: 1/4" = 1'-0"



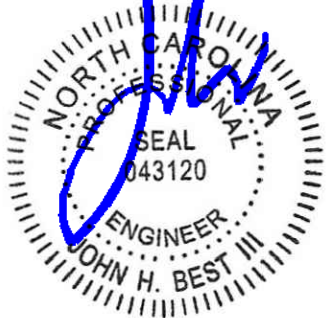
**PROPOSED EQUIPMENT PAD DETAILS**

SCALE: 1/4" = 1'-0"



**NOTES:**

1. CONDUIT SIZES IN CALLOUTS ARE MINIMUM REQUIREMENTS. CONTRACTOR MAY REUSE EXISTING CONDUITS WHERE POSSIBLE.
2. EXISTING CONDUIT NO LONGER IN USE TO BE REMOVED. IF CONDUIT IS UNABLE TO BE REMOVED, IT SHOULD BE PROPERLY SEALED OFF.
3. CONTRACTOR TO VERIFY ROUTING FROM EXISTING RAYCAP TO PROPOSED CABINET LOCATION.
4. EXISTING ELLIPTICAL WILL JUMPER TO NEW CABINET LOCATION, IF ELLIPTICAL IS NOT LONG ENOUGH.
5. CONTRACTOR TO CONTRACT MWE PRIOR TO MICROWAVE CABINET REMOVAL.
6. RELOCATE EXISTING MW EQUIPMENT TO PROPOSED LTE CABINET.
7. CONTRACTOR TO REPLACE EXISTING BATTERIES IN BATTERY CABINET WITH 3 STRINGS OF VENTED 210s.

SEAL:  
  
 April 14, 2021

REV	DATE	ISSUED FOR:
7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY

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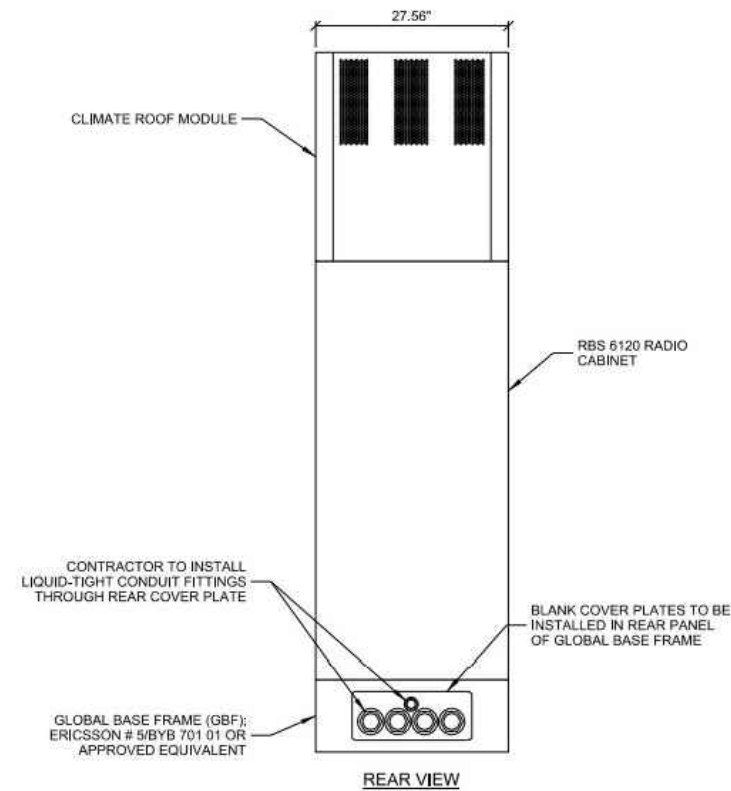
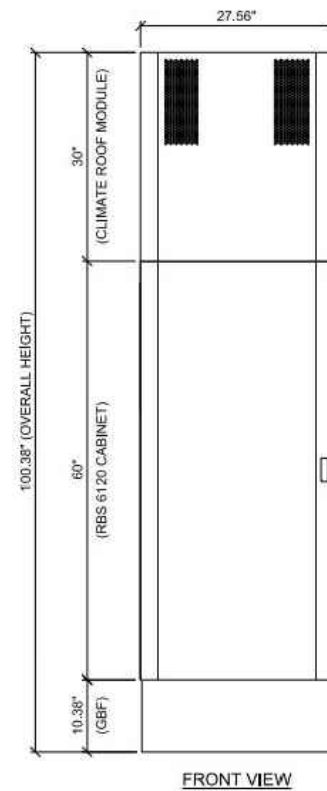
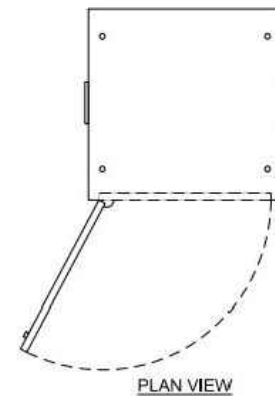
SHEET TITLE:  
**EQUIPMENT PAD DETAILS**

SHEET NUMBER: **C-4** REVISION: **7**  
 TEP#: 43045.453871

DESCRIPTION: RADIO BASE STATION  
 MANUFACTURER: ERICSSON  
 MODEL: RBS 6120  
 DIMENSIONS: 60"x27.56"x27.56" (HxWxD)  
 WEIGHT: 837.8 LBS

CLEARANCE REQUIREMENTS  
 FRONT: 47.24" (1200mm)  
 REAR: 7.87" (200mm)  
 LEFT: 3.94" (100mm)  
 RIGHT: 3.94" (100mm)


DESCRIPTION: GLOBAL BASE FRAME (GBF)  
 MANUFACTURER: ERICSSON  
 MODEL: 5/BYB 701 01  
 DIMENSIONS: 10.38"x27.09"x27.56" (HxWxD)  
 WEIGHT: 80.5 LBS



PLANS PREPARED FOR:  
  
 8410 W BRYN MAWR SUITE 700  
 CHICAGO, IL 60631  
 (773) 399-8900

PROJECT INFORMATION:  
**556470**  
**ARLINGTON**  
 11884 US HWY 421 NORTH  
 BROADWAY, NC  
 (HARNETT COUNTY)

PLANS PREPARED BY:  
  
**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
 OFFICE: (919) 661-6351  
 www.tepgroup.net  
 N.C. LICENSE # C-1794

SEAL:  
  
 April 14, 2021

REV	DATE	ISSUED FOR:
7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:  
**CABINET SPEC SHEET**

SHEET NUMBER: **C-5** REVISION: **7**  
 TEP#: 43045.453871

**LTE CABINET DETAILS**

SCALE: N.T.S.

### EUPEN HYBRID CABLE LENGTH

PROPOSED RAYCAP QUANTITY ON RACK:	1
EXISTING RAYCAP QUANTITY ON RACK:	1
ICE BRIDGE LENGTH:	21-FT
RAYCAP CENTERLINE + 12-FT BUFFER:	279-FT
TOTAL ESTIMATED LENGTH OF HYBRID CABLE:	300-FT
<b>TOTAL EST. LENGTH OF HYBRID CABLE (ROUNDED UP):</b>	<b>350-FT</b>

### JUMPER INFO

JUMPER QUANTITIES	
FIBER JUMPERS:	11
COAX JUMPERS:	22
RET JUMPERS:	6

1/2" JUMPER LENGTH FROM B12/B71 RRUs TO ANTENNAS	
ALPHA SECTOR:	25-FT
BETA SECTOR:	25-FT
GAMMA SECTOR:	25-FT

1/2" JUMPER LENGTH FROM B66 RRUs TO ANTENNAS	
ALPHA SECTOR:	25-FT
BETA SECTOR:	25-FT
GAMMA SECTOR:	25-FT

1/2" JUMPER LENGTH FROM B5 RRUs TO ANTENNAS	
ALPHA SECTOR:	25-FT
BETA SECTOR:	25-FT
GAMMA SECTOR:	25-FT

### RET JUMPER INFO

	RRU TO ANTENNA
ALPHA SECTOR:	10-M
BETA SECTOR:	10-M
GAMMA SECTOR:	10-M

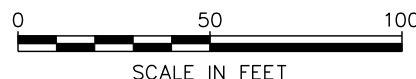
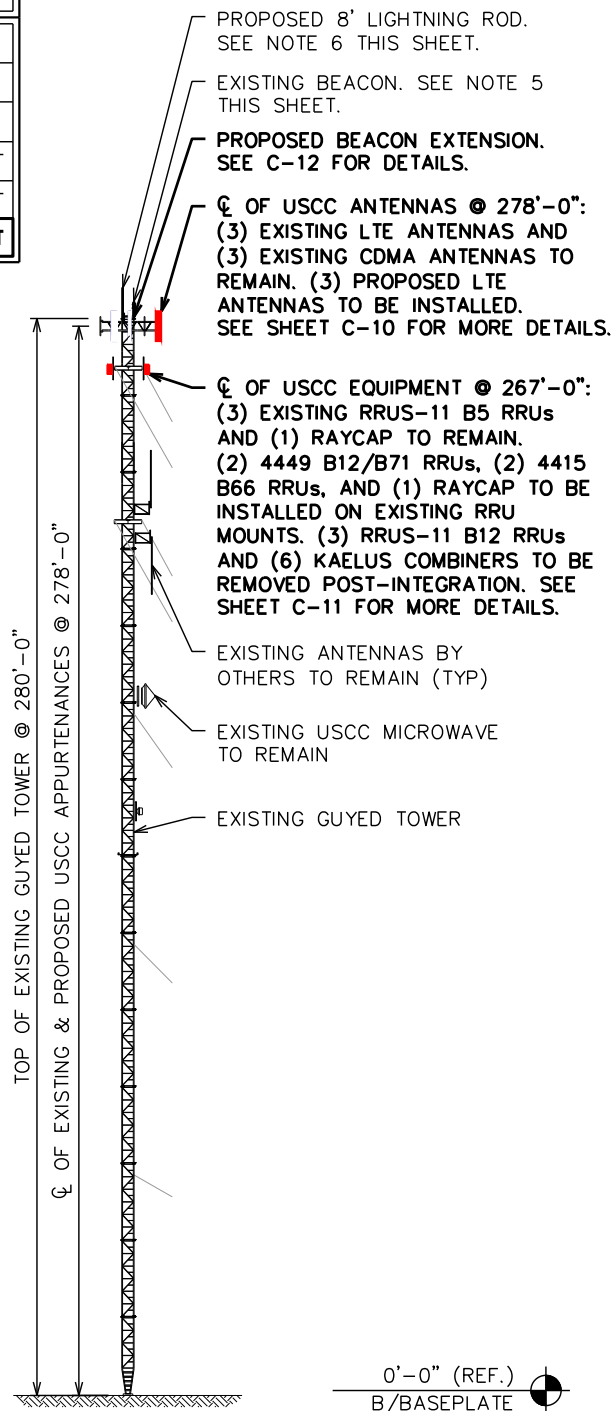
EXISTING LTE PANEL TO REMAIN:	<input type="checkbox"/>
EXISTING CDMA PANEL TO REMAIN:	<input type="checkbox"/>
PROPOSED LTE PANEL TO BE INSTALLED:	<input checked="" type="checkbox"/>

### NOTES:

- PROPOSED EQUIPMENT TO BE INSTALLED PRIOR TO LTE DECOMMISSION.
- USCC CENTERLINE OVER 200-FT REQUIRES THE USE OF A MIDDLE GROUND BAR.
- EXISTING T/APPURTENANCE = 296'-6"
- PROPOSED T/APPURTENANCE = 288'-0"
- BEACON IS NESTED BY EXISTING AND PROPOSED ANTENNAS. CONTRACTOR TO INSTALL ADJUSTABLE BEACON EXTENSION BRACKET FOR MITIGATION. CONTRACTOR TO ENSURE T/ANTENNAS AND T/MOUNT DOES NOT EXTEND ABOVE BEACON.
- LIGHTNING ROD MOUNT PIPE ALSO NESTS BEACON. CONTRACTOR TO REMOVE LIGHTNING ROD AND MOUNT PIPE, AND INSTALL PROPOSED 8' LIGHTNING ROD. CONTRACTOR TO ENSURE 2' CLEARANCE ABOVE NEXT HIGHEST APPURTENANCE.

### PROPOSED TOWER ELEVATION

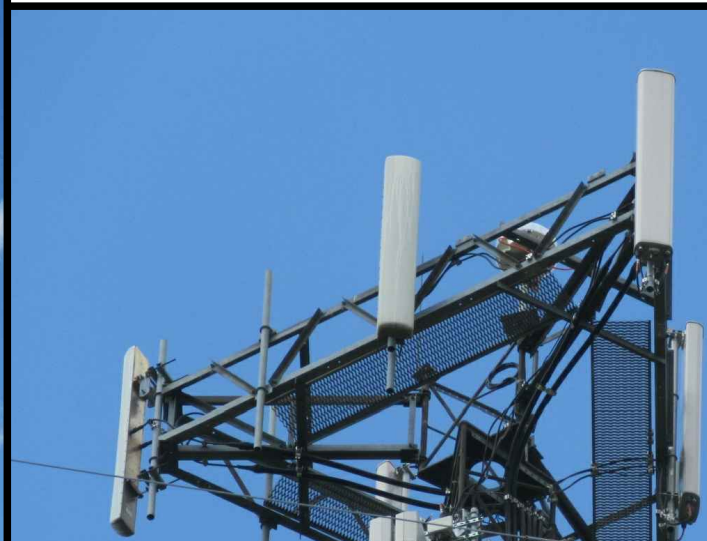
SCALE: 1" = 50'



### EXISTING TOWER ELEV.



### EXISTING ALPHA SECTOR



### EXISTING BETA SECTOR



### EXISTING GAMMA SECTOR

PLANS PREPARED FOR:



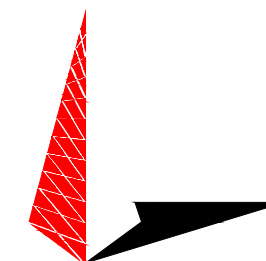
8410 W BRYN MAWR SUITE 700  
CHICAGO, IL 60631  
(773) 399-8900

PROJECT INFORMATION:

### 556470 ARLINGTON

11884 US HWY 421 NORTH  
BROADWAY, NC  
(HARNETT COUNTY)

PLANS PREPARED BY:



### TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net  
N.C. LICENSE # C-1794

SEAL:



April 14, 2021

7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

### TOWER ELEVATION

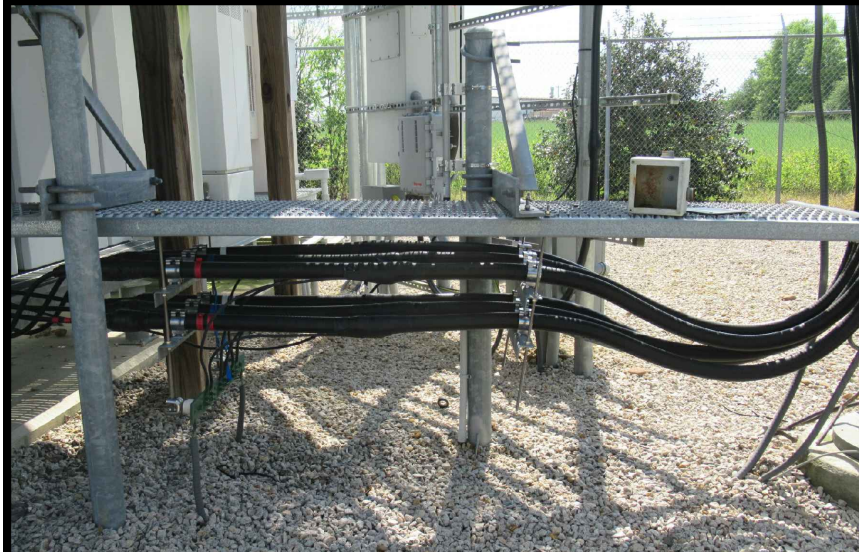
SHEET NUMBER: <b>C-6</b>	REVISION: <b>7</b>
TEP#: 43045.453871	

**NOTE:**

ANALOG COAX (IF APPLICABLE) TO BE REMOVED IS LABELED WITH GREEN TAPE.

**LEGEND**

EMPTY PORT	
EXISTING COAX TO REMAIN	
EXISTING COAX TO BE REMOVED	
EXISTING HYBRID TO REMAIN	
PROPOSED HYBRID	
EXISTING EWG	



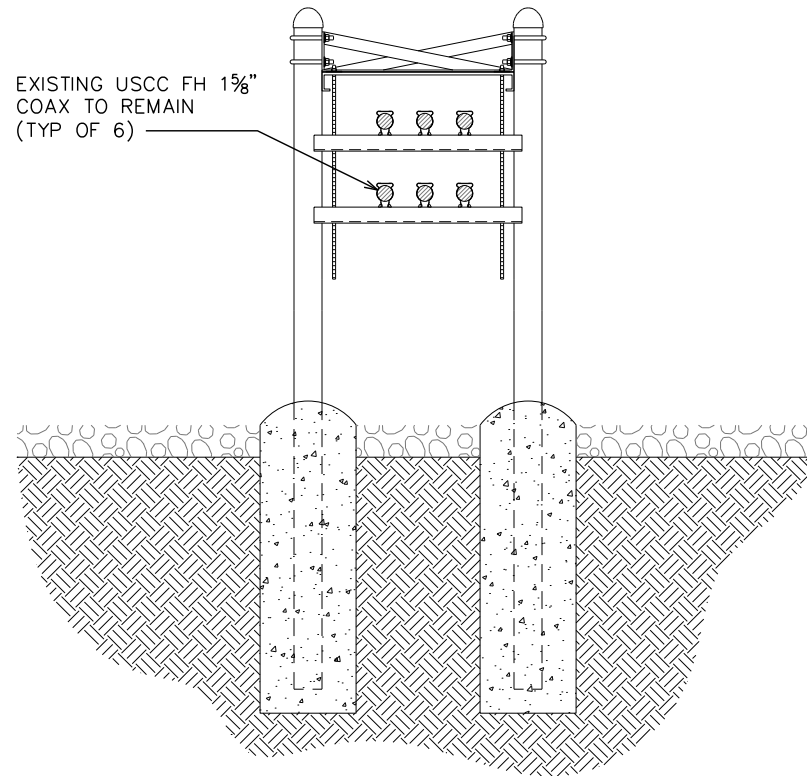
**EXISTING ICE BRIDGE #1 ELEVATION**

SCALE: N.T.S.



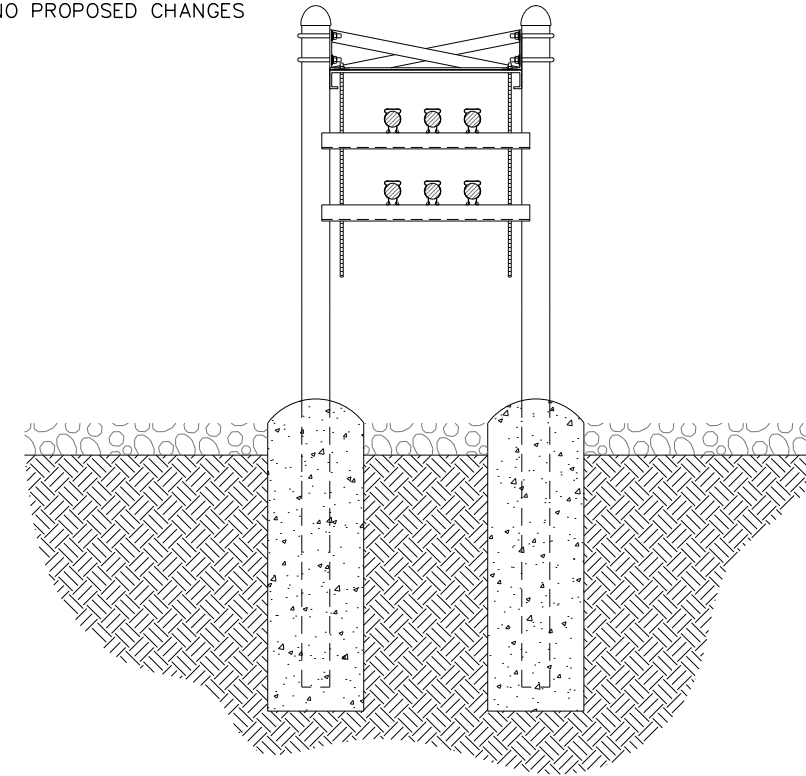
**EXISTING ICE BRIDGE #2 ELEVATION**

SCALE: N.T.S.



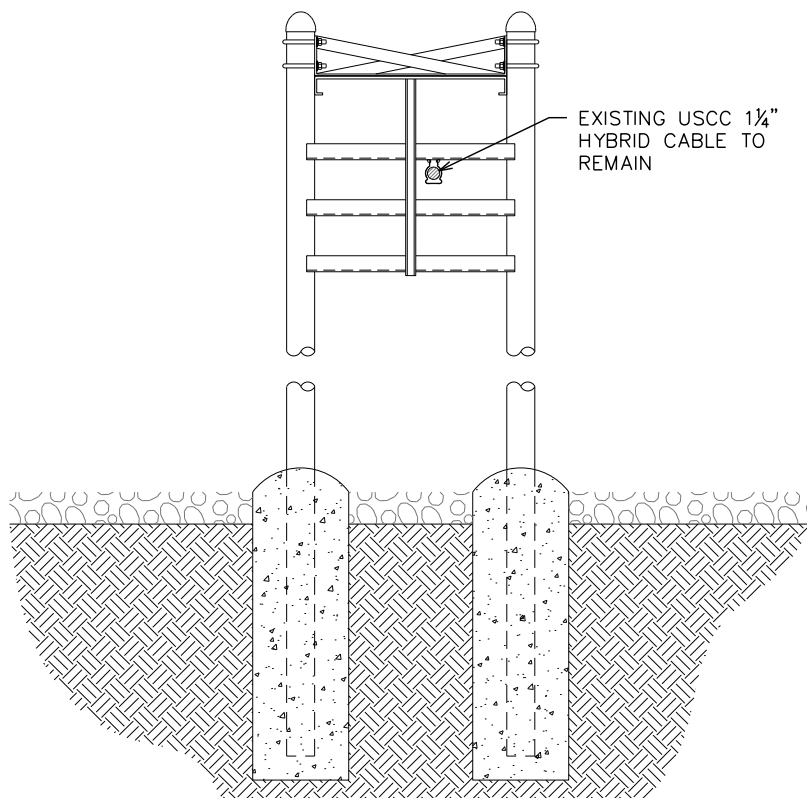
**EXISTING ICE BRIDGE #1 CONFIGURATION**

**NOTE:**  
NO PROPOSED CHANGES



**PROP. ICE BRIDGE #1 CONFIGURATION**

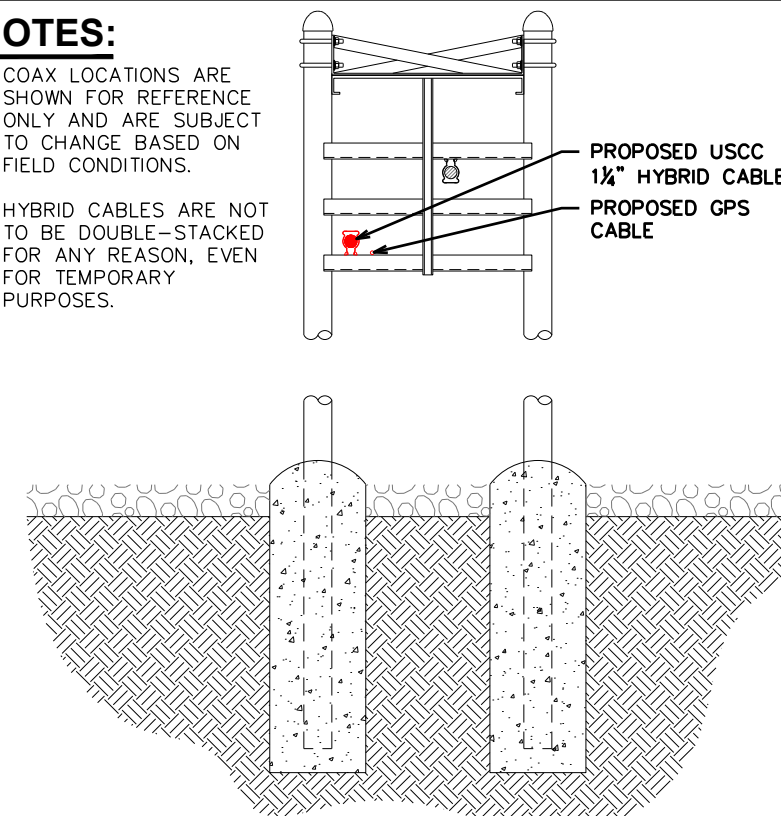
SCALE: N.T.S.



**EXISTING ICE BRIDGE #2 CONFIGURATION**

**NOTES:**

1. COAX LOCATIONS ARE SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE BASED ON FIELD CONDITIONS.
2. HYBRID CABLES ARE NOT TO BE DOUBLE-STACKED FOR ANY REASON, EVEN FOR TEMPORARY PURPOSES.



**PROP. ICE BRIDGE #2 CONFIGURATION**

SCALE: N.T.S.

PLANS PREPARED FOR:

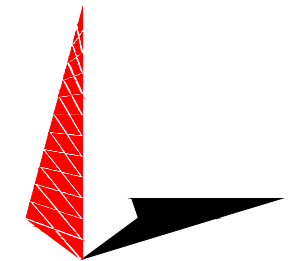
**U.S. Cellular**  
8410 W BRYN MAWR SUITE 700  
CHICAGO, IL 60631  
(773) 399-8900

PROJECT INFORMATION:

**556470**  
**ARLINGTON**

11884 US HWY 421 NORTH  
BROADWAY, NC  
(HARNETT COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net  
N.C. LICENSE # C-1794

SEAL:



April 14, 2021

7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

**HATCH PLATE  
& ICE BRIDGE  
DETAILS**






SHEET NUMBER: REVISION:

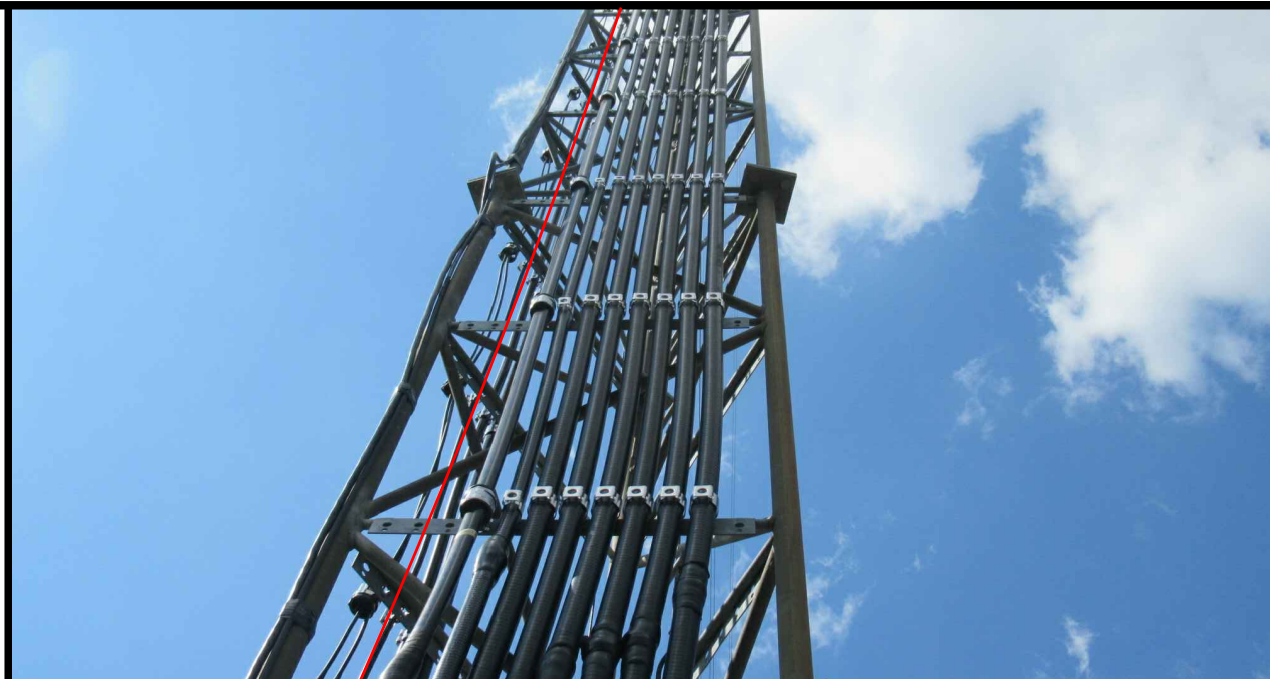
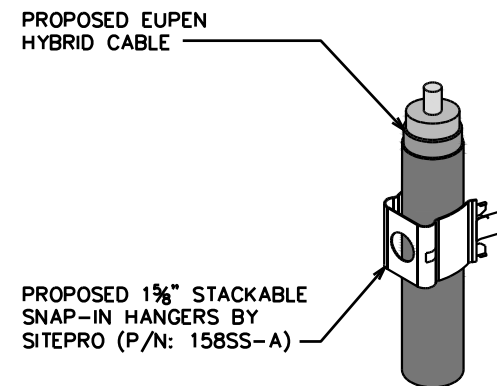
**C-7**


**7**

TEP#: 43045.453871



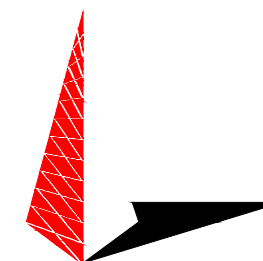
LEGEND	
EXISTING COAX TO REMAIN	
EXISTING COAX TO BE REMOVED	
PROPOSED HYBRID CABLE	
EXISTING EWG	
PROPOSED EWG	



PLANS PREPARED FOR:  
  
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 CHICAGO, IL 60631  
 (773) 399-8900

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**ARLINGTON**  
 11884 US HWY 421 NORTH  
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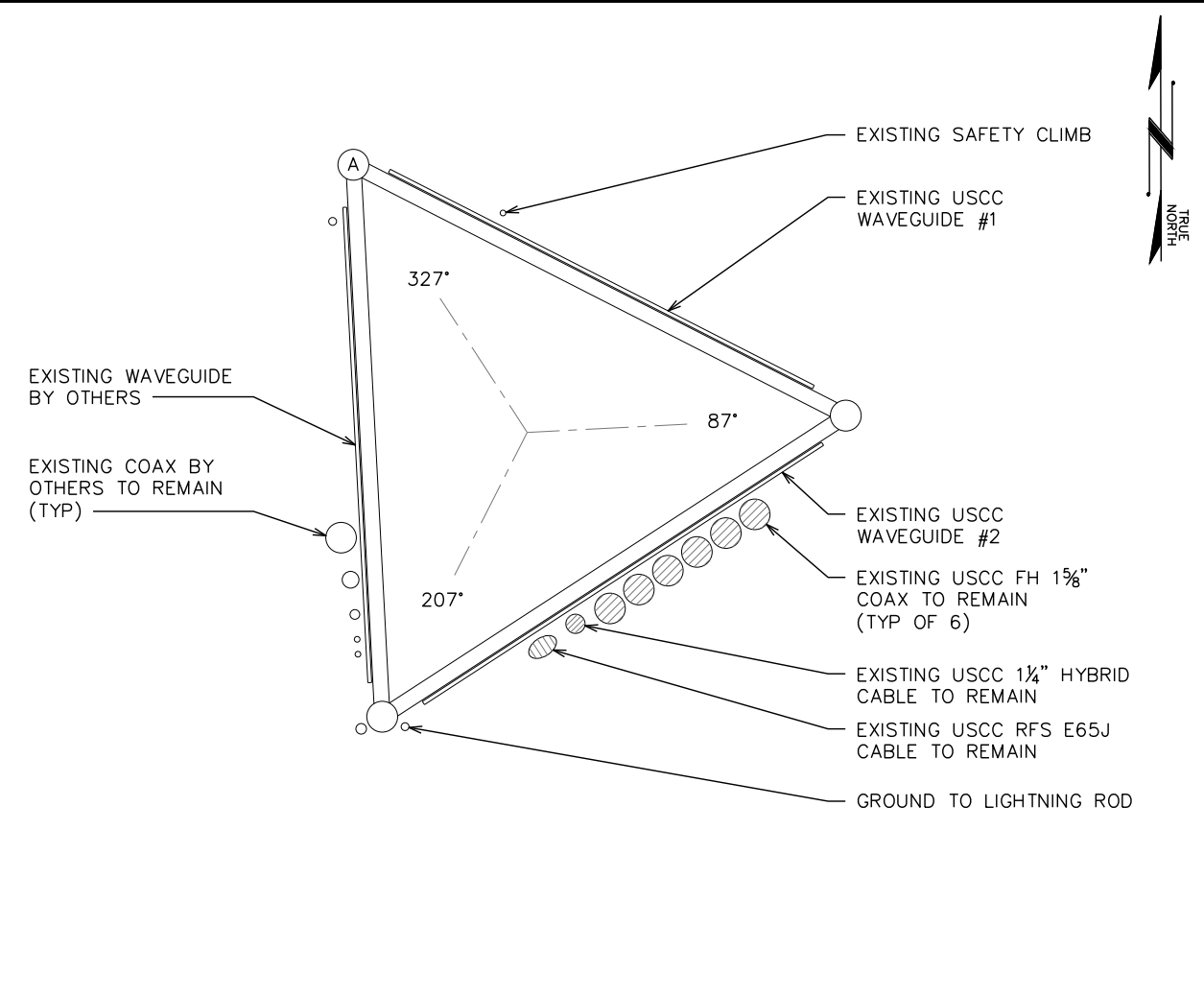
**LEGEND**

SCALE: N.T.S.

**SNAPSTAK HANGER**

SCALE: N.T.S.

**USCC WAVEGUIDE #2**



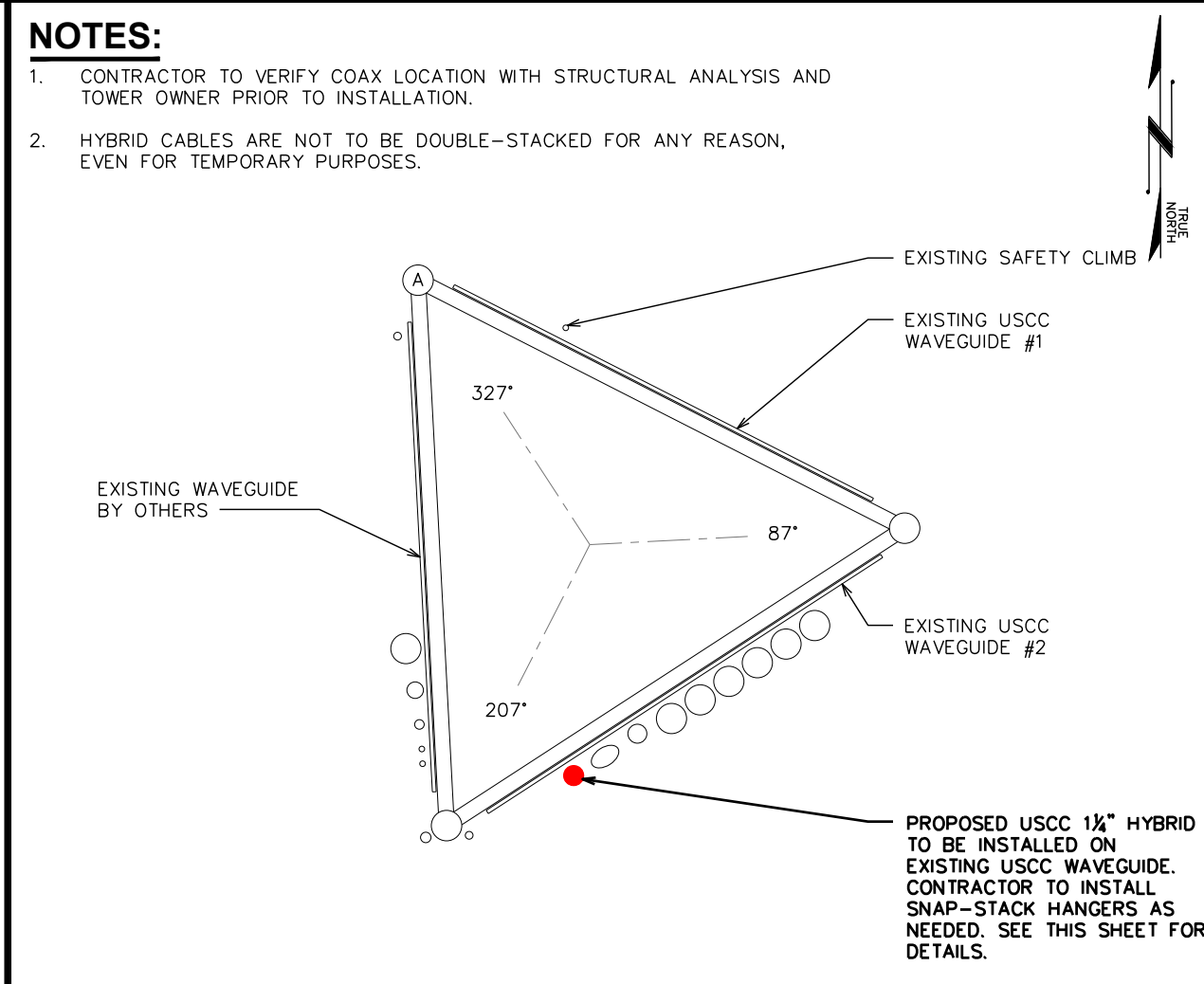
**EXISTING COAX LAYOUT**

SCALE: 1" = 1'



**NOTES:**

- CONTRACTOR TO VERIFY COAX LOCATION WITH STRUCTURAL ANALYSIS AND TOWER OWNER PRIOR TO INSTALLATION.
- HYBRID CABLES ARE NOT TO BE DOUBLE-STACKED FOR ANY REASON, EVEN FOR TEMPORARY PURPOSES.

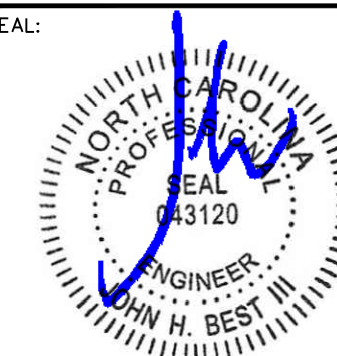


**PROPOSED COAX LAYOUT**

SCALE: 1" = 1'



SEAL:



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REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

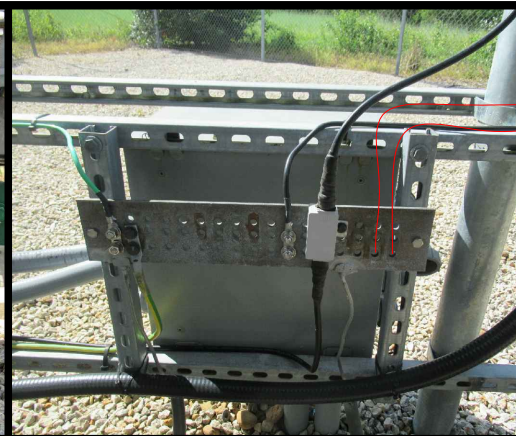
SHEET TITLE:

**COAX LAYOUT**

SHEET NUMBER: <b>C-8</b>	REVISION: <b>7</b>
TEP#: 43045.453871	



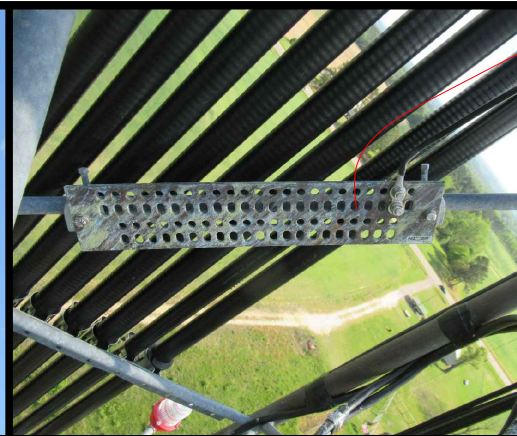
**EXIST. ICE BRIDGE**



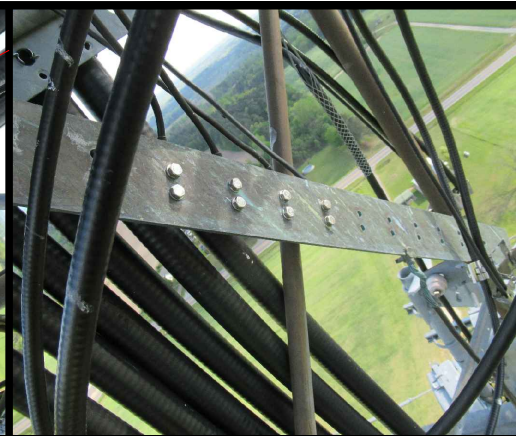
**EXIST. EQUIPMENT RACK**



**EXIST. BOTTOM TOWER**



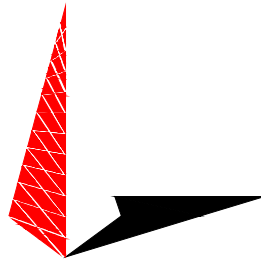
**EXISTING MIDDLE TOWER**

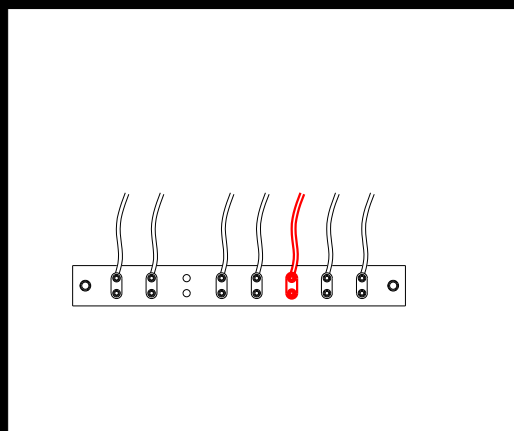


**EXISTING TOP TOWER**

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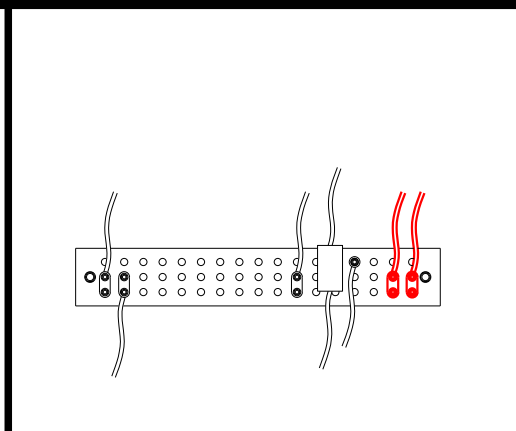
PROJECT INFORMATION:  
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**ARLINGTON**  
 11884 US HWY 421 NORTH  
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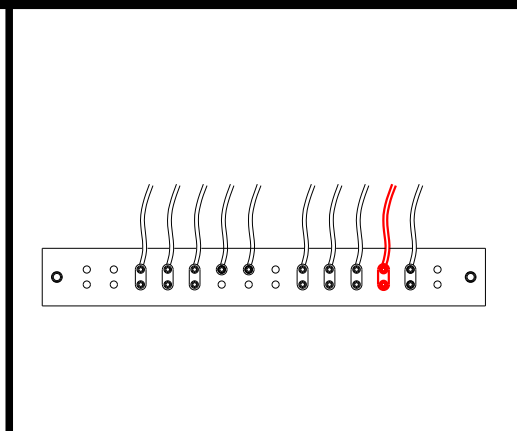
**PROP. ICE BRIDGE**

SCALE: N.T.S.



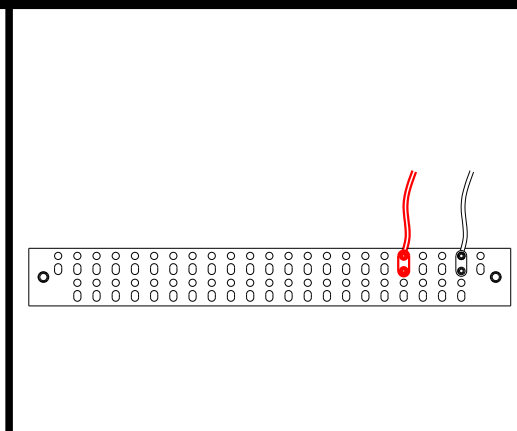
**PROP. EQUIPMENT RACK**

SCALE: N.T.S.



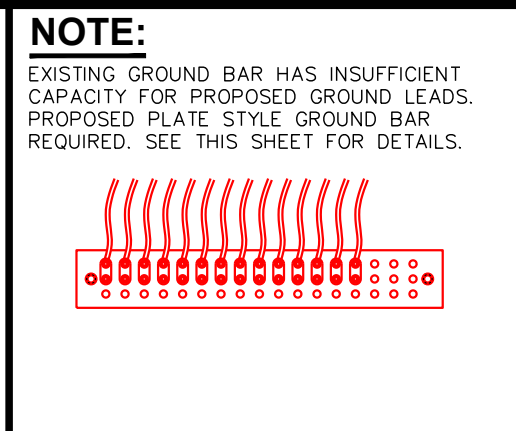
**PROP. BOTTOM TOWER**

SCALE: N.T.S.



**PROP. MIDDLE TOWER**

SCALE: N.T.S.



**PROPOSED TOP TOWER**

SCALE: N.T.S.

**NOTE:**

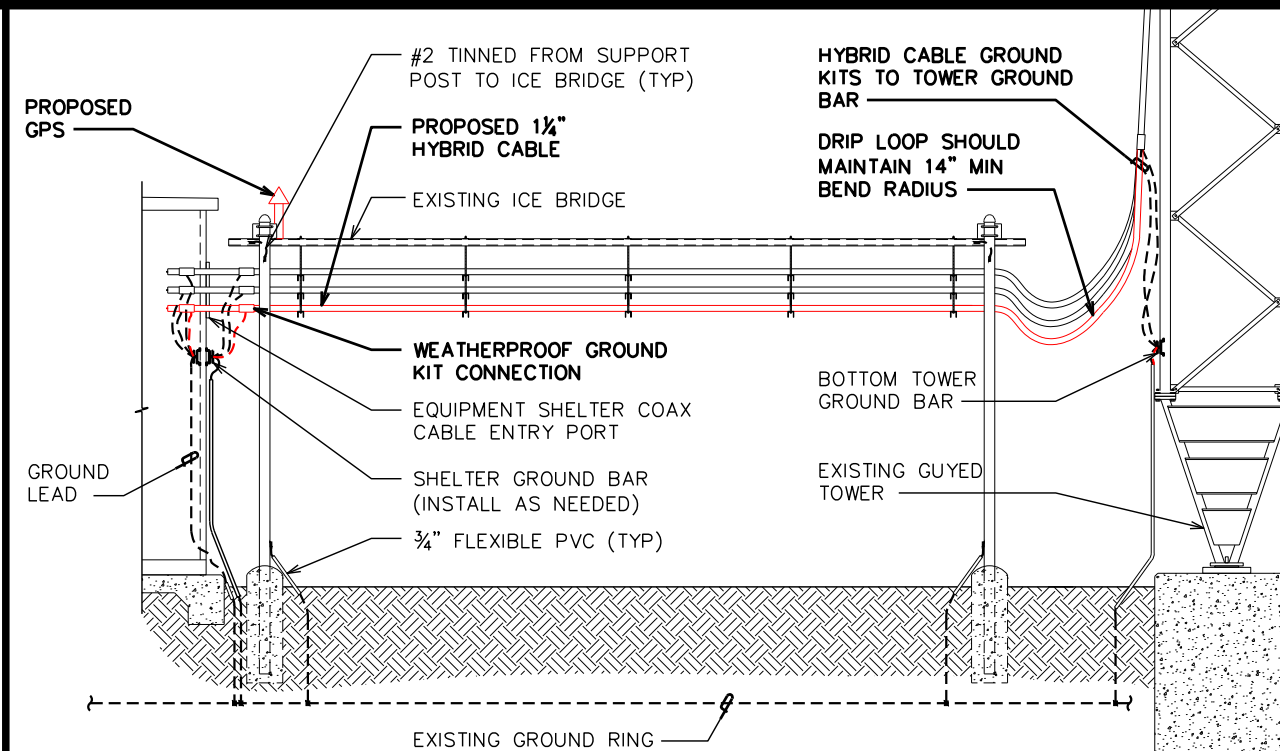
EXISTING GROUND BAR HAS INSUFFICIENT CAPACITY FOR PROPOSED GROUND LEADS. PROPOSED PLATE STYLE GROUND BAR REQUIRED. SEE THIS SHEET FOR DETAILS.

- NOTES:**
- MAX 20" GROUND BAR BY SITE PRO P/N: MG42051-K
  - ACCEPTS 3/8" LUGS
  - 51-HOLES ALLOWS UP TO 17 RUNS
  - 0.75", 0.815" OR 1" HOLE SPACING
  - KIT INCLUDES INSULATORS AND STAINLESS STEEL BRACKETS
  - CONTRACTOR TO REPLACE EXISTING LUGS AND GROUND LUG WASHERS AS NEEDED.



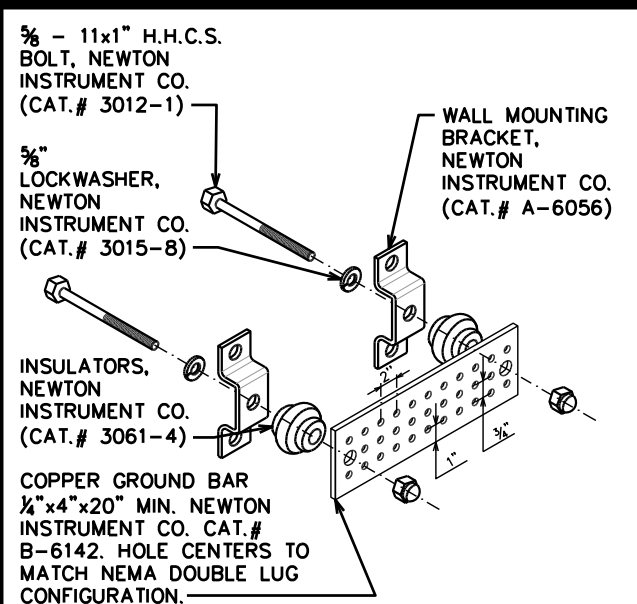
**PROPOSED GND. BAR DETAIL**

SCALE: N.T.S.



**SIDE VIEW**

SCALE: N.T.S.




**NOTES:**

1. GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY
2. MINIMUM SPACING OF 12" BETWEEN ALL CADWELDS

**STANDARD GND. BAR DETAIL**

SCALE: N.T.S.

SEAL:



April 14, 2021

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5	01-18-21	PRELIMINARY

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:  
**GROUND BAR DETAILS**

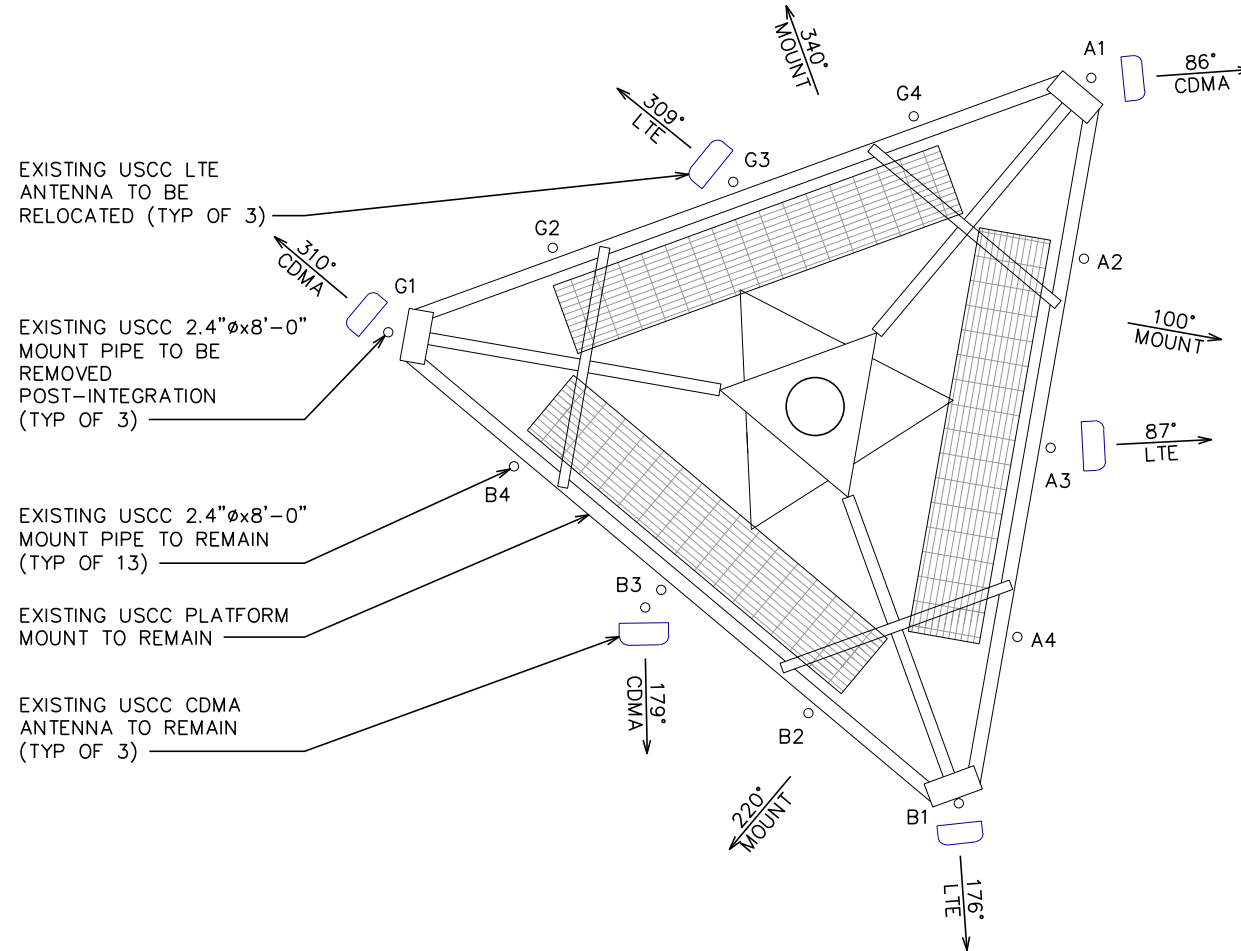
SHEET NUMBER: **C-9** REVISION: **7**  
 TEP#: 43045.453871

**LEGEND**

- EXISTING CDMA PANEL TO REMAIN
- EXISTING LTE PANEL TO REMAIN

**NOTE:**

USCC ANTENNAS AND EQUIPMENT TO BE REMOVED POST-INTEGRATION.



EXISTING LOADING														
ANTENNA POSITION	TECHNOLOGY	ANTENNA MODEL	ANTENNA QTY.	RAD CENTER	AZIMUTH	MECH. D-TILT	SURGE PROTECTOR QTY.	DIPLEXER QTY.	TMA QTY.	BIAS-T QTY.	RADIO	RADIO QTY.	CABLE TYPE	CABLE QTY.
A1	CDMA	BXA 80063/8	1	278'-0"	86°	0.1°	-	-	-	-	-	-	1 3/8" COAX	2
A2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A3	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	87°	0°	SHARED	2	-	-	RRUS-11 B5 RRUS-11 B12	1	1 1/2" HYBRID	SHARED
A4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B1	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	176°	0.2°	1	2	-	-	RRUS-11 B5 RRUS-11 B12	1	1 1/2" HYBRID	1
B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B3	CDMA	BXA 80063/8	1	278'-0"	179°	0.6°	-	-	-	-	-	-	1 3/8" COAX	2
B4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G1	CDMA	BXA 80090/BCF	1	278'-0"	310°	0.3°	-	-	-	-	-	-	1 3/8" COAX	2
G2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G3	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	309°	0.6°	SHARED	2	-	-	RRUS-11 B5 RRUS-11 B12	1	1 1/2" HYBRID	SHARED
G4	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTALS:			6				3	6	0	0		6		7

\* BLUE TEXT DENOTES EQUIPMENT TO BE REMOVED

**EXISTING ANTENNA ASSIGNMENT**

SCALE: 1/4" = 1'-0"

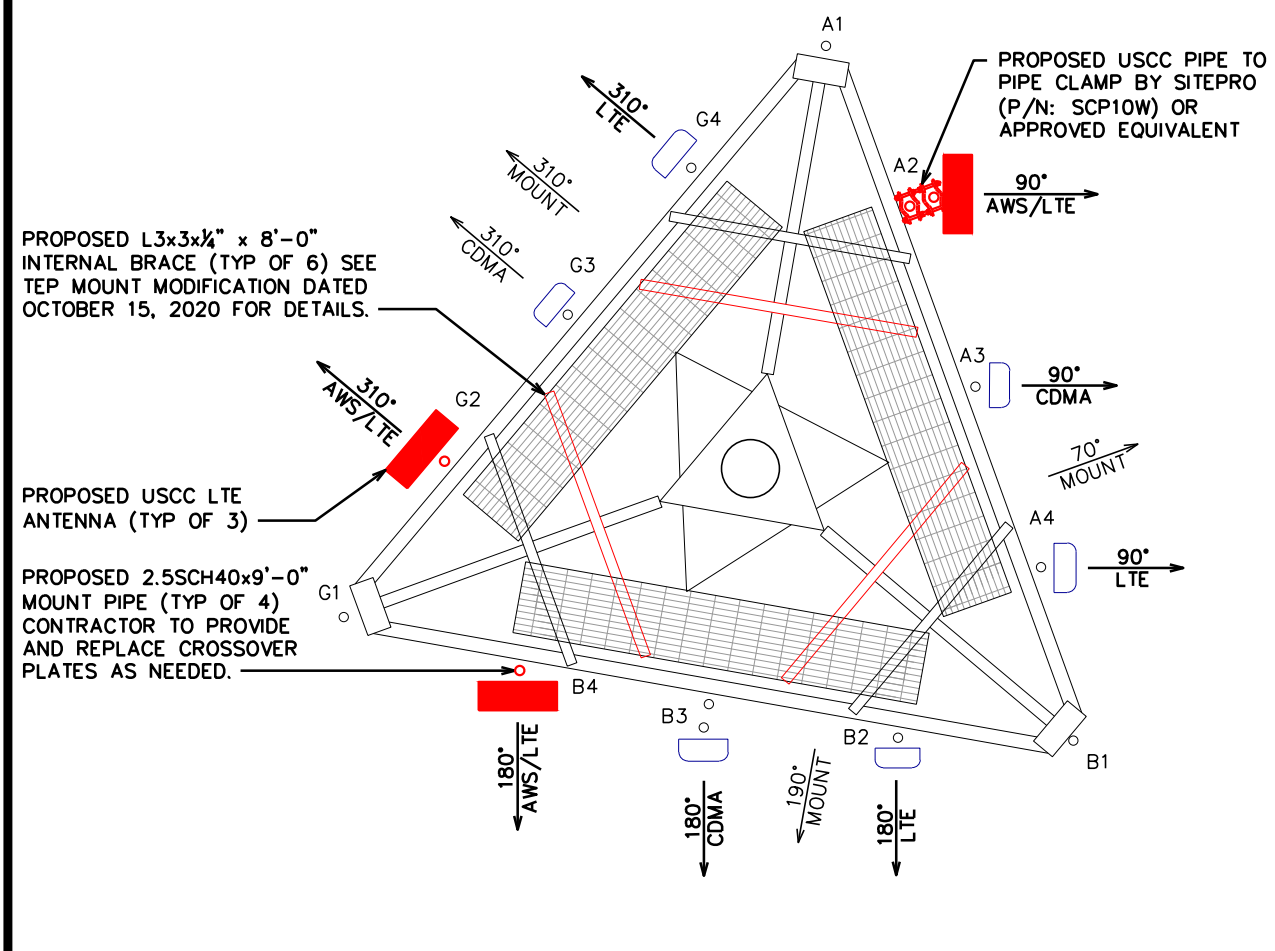


**LEGEND**

- EXISTING CDMA PANEL ANTENNA
- EXISTING LTE PANEL ANTENNA
- PROPOSED LTE PANEL ANTENNA

**NOTES:**

- EXISTING MOUNT HAS INSUFFICIENT CAPACITY TO SUPPORT PROPOSED LOADING AND REQUIRES MODIFICATION. SEE TEP APPURTENANCE MOUNT MODIFICATION ANALYSIS DATED OCTOBER 15, 2020 FOR MODIFICATION DETAILS.
- MOUNT ANTENNAS & EQUIPMENT PER MANUFACTURERS SPECIFICATIONS.
- CDMA & LTE ADJUSTMENTS REQUIRED.



PROPOSED LOADING																	
ANTENNA POSITION	TECH	ANTENNA MODEL	ANTENNA QTY.	RAD CENTER	AZIMUTH	MECH. D-TILT	LB ELEC. D-TILT	MB ELEC. D-TILT	SURGE PROTECTOR QTY.	B71/B12 RADIO	RADIO QTY.	B66 RADIO	RADIO QTY.	B5 RADIO	RADIO QTY.	CABLE TYPE	CABLE QTY.
A1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A2	AWS/LTE	OCT8-2LX2HX-BW65	1	278'-0"	90°	0°	2°	2°	1	RRU 4449	1	RRU 4415	1	-	-	1 1/2" HYBRID	1
A3	CDMA	BXA 80090/BCF	1	278'-0"	90°	0°	-	-	-	-	-	-	-	-	-	1 3/8" COAX	2
A4	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	90°	0°	2°	-	SHARED	-	-	-	RRUS-11	1	1 1/2" HYBRID	SHARED	
B1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B2	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	180°	0°	2°	-	1	-	-	-	RRUS-11	1	1 1/2" HYBRID	SHARED	
B3	CDMA	BXA 80063/8	1	278'-0"	180°	0°	-	-	-	-	-	-	-	-	-	1 3/8" COAX	2
B4	AWS/LTE	OCT8-2LX2HX-BW65	1	278'-0"	180°	0°	2°	2°	SHARED	RRU 4449	SHARED	RRU 4415	SHARED	-	-	1 1/2" HYBRID	SHARED
G1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G2	AWS/LTE	OCT8-2LX2HX-BW65	1	278'-0"	310°	0°	2°	2°	SHARED	RRU 4449	1	RRU 4415	1	-	-	1 1/2" HYBRID	1
G3	CDMA	BXA 80063/BCF	1	278'-0"	310°	0°	-	-	-	-	-	-	-	-	-	1 3/8" COAX	2
G4	LTE	AM-X-CD-17-65-00T-RET	1	278'-0"	310°	0°	2°	-	SHARED	-	-	-	RRUS-11	1	1 1/2" HYBRID	SHARED	
TOTALS:			9						2		2		2		3		8

\* RED TEXT DENOTES PROPOSED EQUIPMENT  
 \*\* CONTRACTOR TO CONFIRM FINAL LOADING PRIOR TO INSTALL.  
 \*\*\* CONTRACTOR TO REPLACE TOP HARDLINE CONNECTOR AND JUMPER ON CDMA ANTENNAS WHERE CONNECTION MUST BE BROKEN TO RELOCATE WHEN APPLICABLE.

**PROPOSED ANTENNA ASSIGNMENT**

SCALE: 1/4" = 1'-0"



PLANS PREPARED FOR:  
  
 8410 W BRYN MAWR SUITE 700  
 CHICAGO, IL 60631  
 (773) 399-8900

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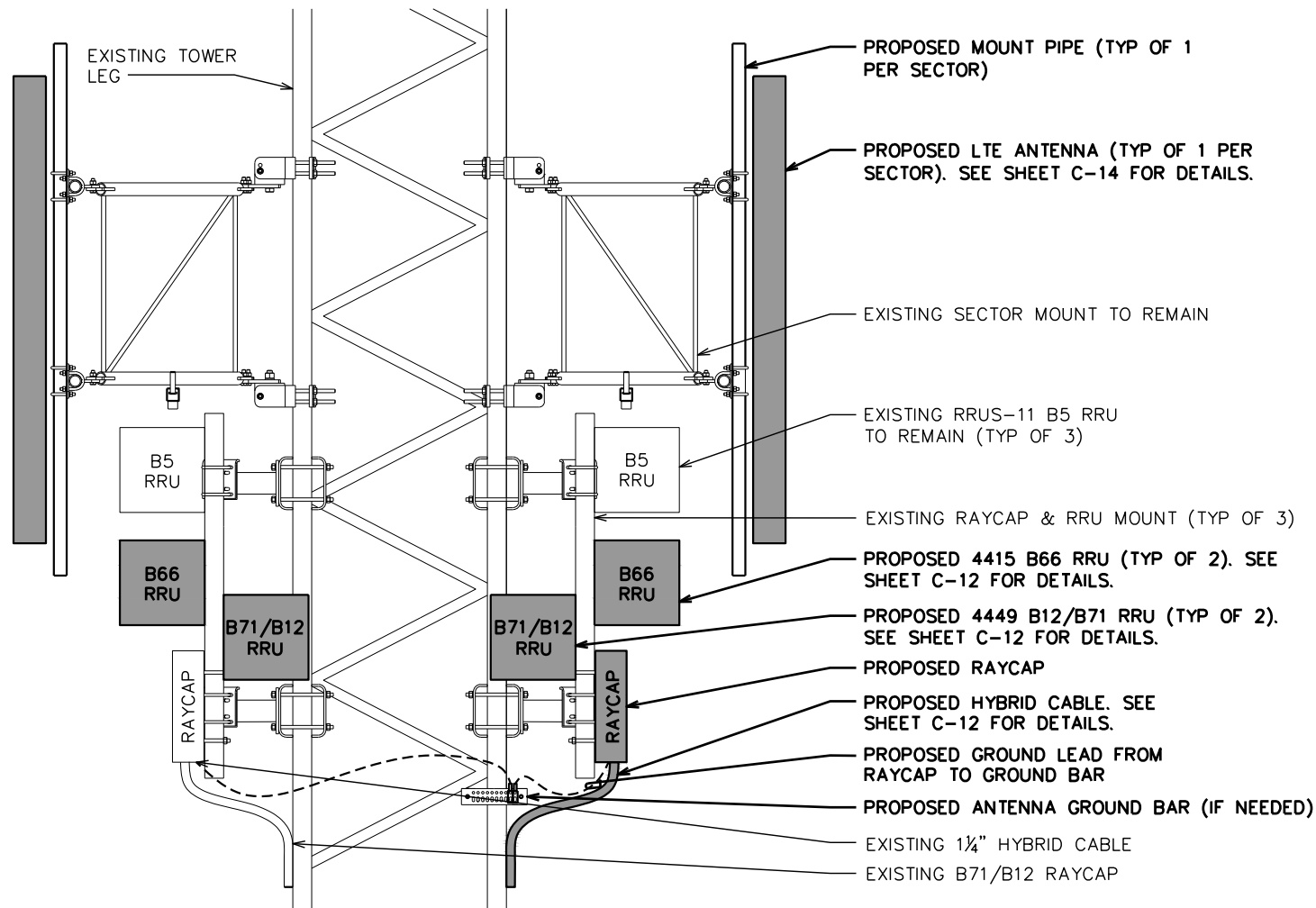
SEAL:  
  
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REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:  
**ANTENNA MOUNTING DETAILS**

SHEET NUMBER: **C-10** REVISION: **7**  
 TEP#: 43045.453671

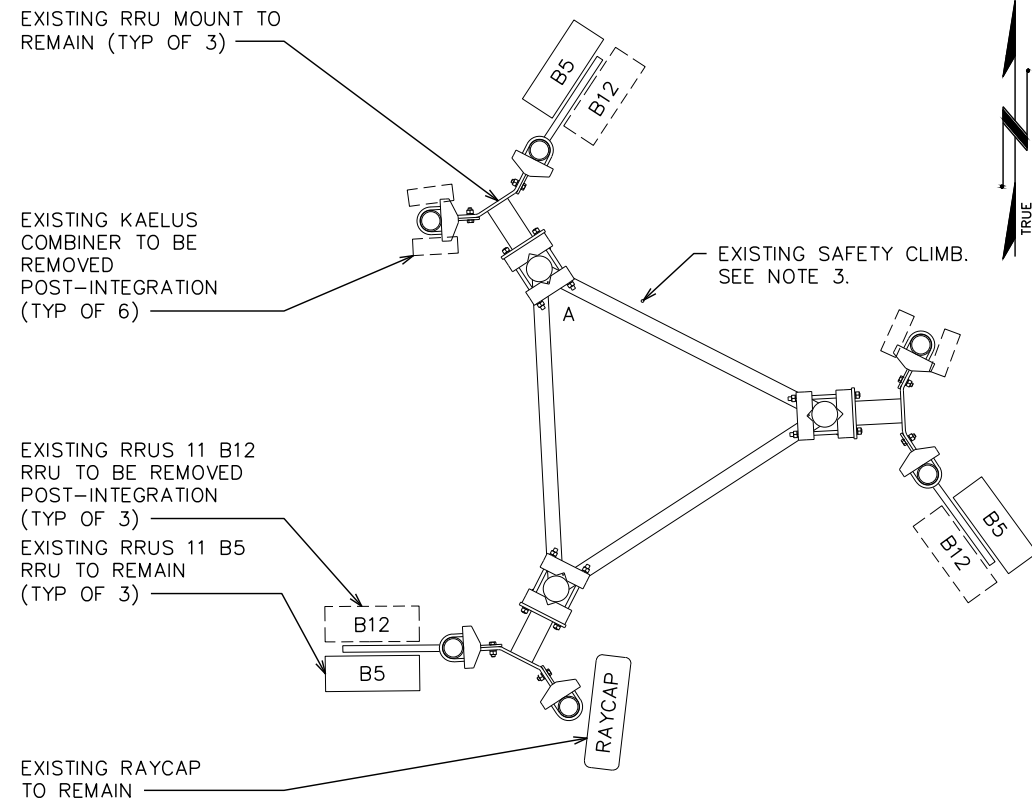


**NOTES:**

1. ERICSSON RRUs TO BE PROVIDED BY USCC.
2. SEE SHEET C-12 FOR SUPPORT KIT DETAILS.
3. CONTRACTOR TO LEAVE OPENING FOR SAFETY CLIMB AND ENSURE THAT SAFETY CLIMB IS NOT OBSTRUCTED/COMPROMISED.
4. TOWER TOP FIBER/POWER CONNECTIONS FROM RAYCAP TO RADIOS SHOULD BE SHIELDED IN 1" INNERDUCT (75' PROVIDED IN HYBRID KIT).

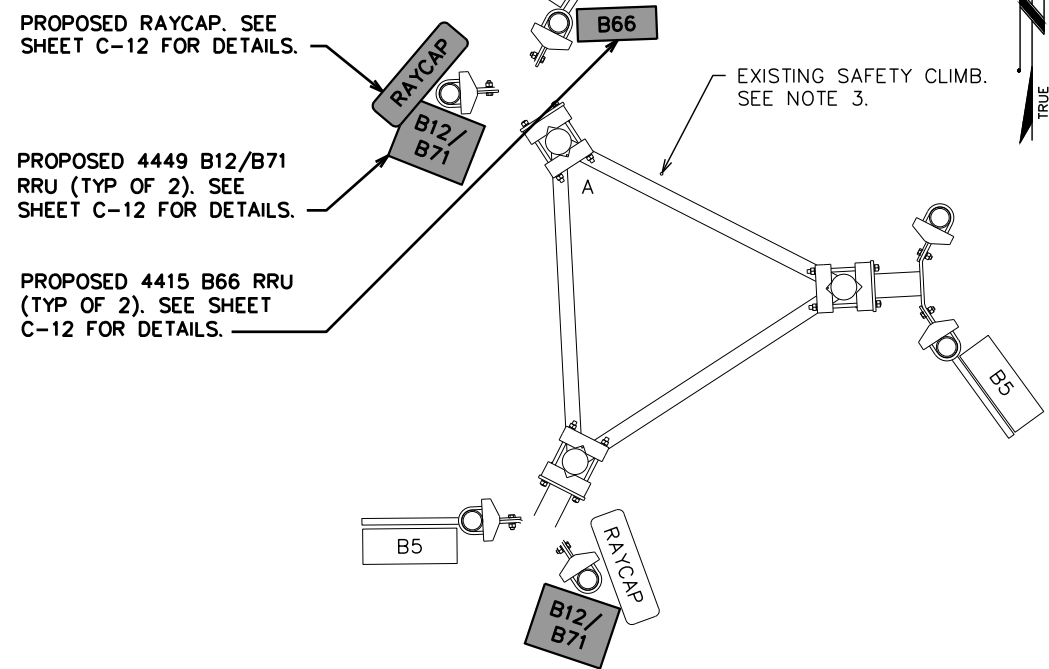
**RAYCAP & RRU MOUNTING DETAIL (ELEVATION)**

SCALE: N.T.S.



**EXISTING RAYCAP & RRU MOUNTING DETAIL (PLAN)**

SCALE: N.T.S.



**PROPOSED RAYCAP & RRU MOUNTING DETAIL (PLAN)**

SCALE: N.T.S.

PLANS PREPARED FOR:

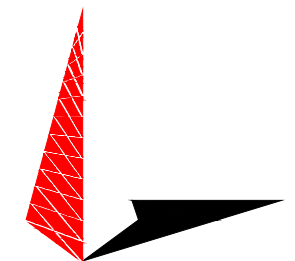


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DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

**RAYCAP & RRU SPEC SHEET**

SHEET NUMBER: REVISION:

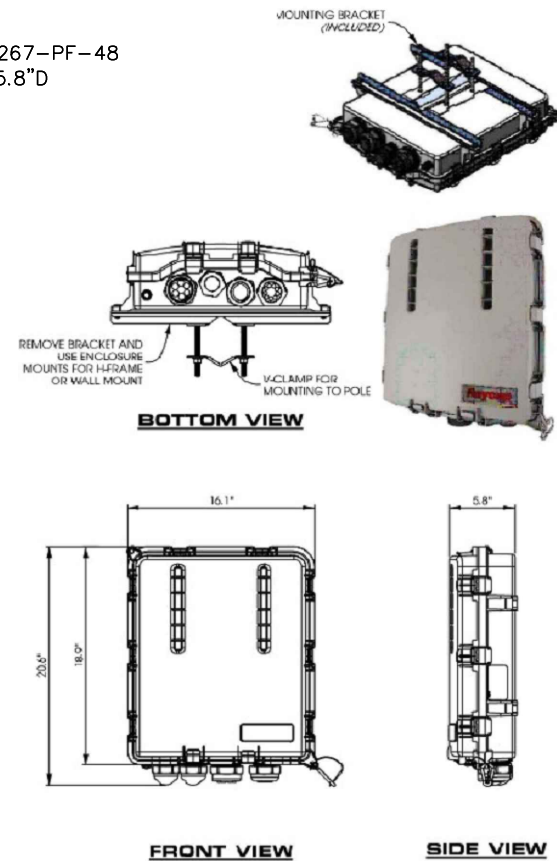
**C-11**

**7**

TEP#: 43045.453871

**NOTES:**

- P/N: RUSDC-6267-PF-48
- 20.6"Hx18.9"Wx5.8"D
- 19.95 LBS.



**RAYCAP SPEC SHEET**

SCALE: N.T.S.

**NOTES:**

1. SINGLE SUPPORT KIT:
  - ERICSSON P/N SXX1072839/1
  - WEIGHT: 11 LBS
2. EXPANSION KIT ORDERED IN ADDITION TO SINGLE SUPPORT KIT FOR DUAL MOUNT:
  - ERICSSON P/N SXX1072839/2
  - WEIGHT: 4.4 LBS
3. ALL HARDWARE INCLUDED
4. INSTALL PER MANUFACTURER RECOMMENDATIONS



**RRU SUPPORT KIT**

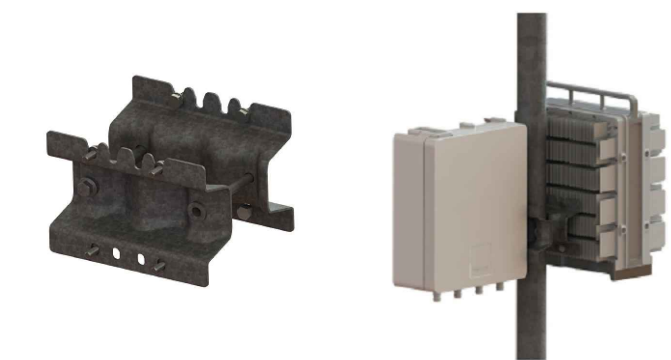
SCALE: N.T.S.

**RRU SPEC SHEET**

SCALE: N.T.S.

**NOTES:**

1. DUAL ERS BRACKET ERICSSON P/N: SXX 109 1973/2, WEIGHT: 3.75 LBS
2. CAN BE USED TO ATTACH TWO STANDARD OR HEAVY ERS UNITS TO POLE, WALL, ANGLE TOWER, OR SQUARE TUBE.
3. ALL HARDWARE INCLUDED.
4. INSTALL PER MANUFACTURER RECOMMENDATIONS.



**DUAL ERS KIT**

SCALE: N.T.S.

**NOTES:**

- 1¼" FIBER OPTIC CABLE WITH 48V ENERGY FEEDER IN CORRUGATED ALUMINUM SHIELDING WITH UV RESISTANT PE JACKET.
- MINIMUM BENDING RADIUS: 360mm (14")
- MAXIMUM PULLING STRENGTH: 150daN
- MAXIMUM HANGER SPACING: 1,0m
- APPROX WEIGHT: 2300kg/km (1.55LB/FT)
- SHIPPED W/4' PROTECTED JACKET (2.25" O.D.) AT EACH END
- NON-ARMORED ENDS ARE 3" IN LENGTH (2' O.D.)

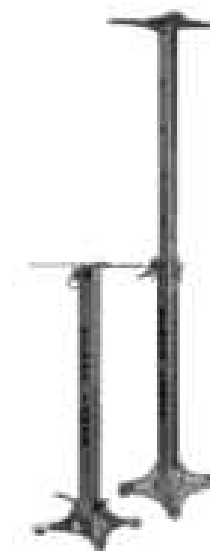


**EUPEN HYBRID CABLE**

SCALE: N.T.S.

**NOTES:**

- BEACON EXTENSION BRACKET (P/N:11000016652) BY FLASH TECHNOLOGY
- WEIGHT: 45 LBS (20.4 KG)
- 36-66" EXTENDABLE LENGTH
- INSTALL PER MANUFACTURER RECOMMENDATIONS.



**BEACON EXTENSION BRACKET**

SCALE: N.T.S.

PLANS PREPARED FOR:

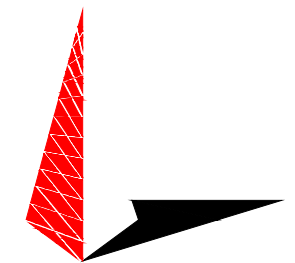


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5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JGC      CHECKED BY: JHB

SHEET TITLE:  
**RADIO SPEC SHEET  
AND MOUNTING  
DETAILS**

SHEET NUMBER: **C-12**      REVISION: **7**  
TEP#: 43045.453871



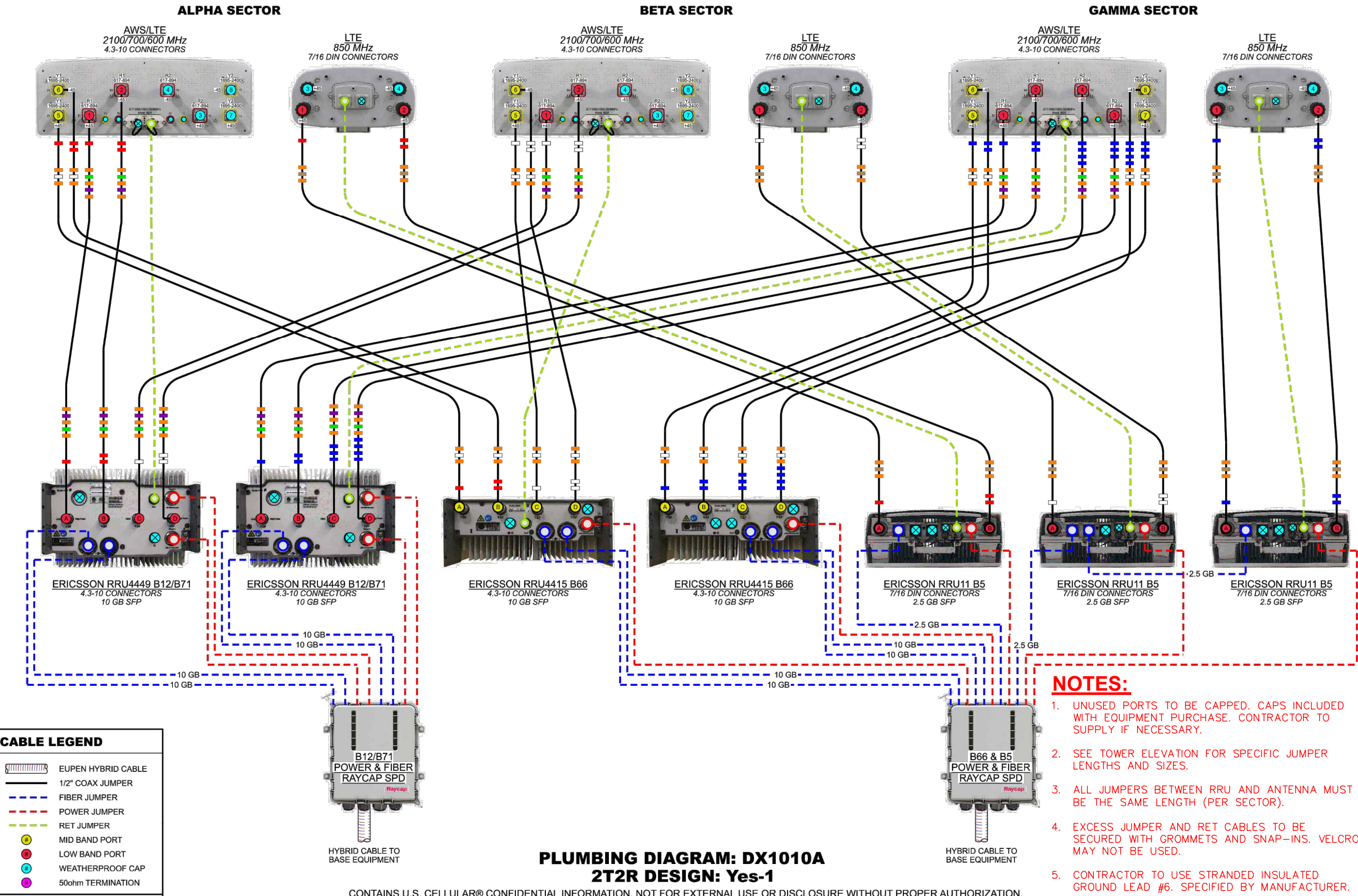
**E// B12/B71 2T2R / B66 2T2R / B5 2T2R**

PLANS PREPARED FOR:  
 U.S. Cellular  
 8410 W BRYN MAWR SUITE 700  
 CHICAGO, IL 60631  
 (773) 399-8900

PROJECT INFORMATION:  
**556470**  
**ARLINGTON**  
 11884 US HWY 421 NORTH  
 BROADWAY, NC  
 (HARNETT COUNTY)

PLANS PREPARED BY:  
**TOWER ENGINEERING PROFESSIONALS**  
 326 TRYON ROAD  
 RALEIGH, NC 27603-3530  
 OFFICE: (919) 661-6351  
 www.tepgroup.net  
 N.C. LICENSE # C-1794

SEAL:  
**SEAL**  
 JOHN H. BEST III  
 ENGINEER  
 043120  
 April 14, 2021



**CABLE LEGEND**

- EUPEN HYBRID CABLE
- 1/2" COAX JUMPER
- FIBER JUMPER
- POWER JUMPER
- RET JUMPER
- MID BAND PORT
- LOW BAND PORT
- WEATHERPROOF CAP
- 50ohm TERMINATION

- NOTES:**
- UNUSED PORTS TO BE CAPPED. CAPS INCLUDED WITH EQUIPMENT PURCHASE. CONTRACTOR TO SUPPLY IF NECESSARY.
  - SEE TOWER ELEVATION FOR SPECIFIC JUMPER LENGTHS AND SIZES.
  - ALL JUMPERS BETWEEN RRU AND ANTENNA MUST BE THE SAME LENGTH (PER SECTOR).
  - EXCESS JUMPER AND RET CABLES TO BE SECURED WITH GROMMETS AND SNAP-INS. VELCRO MAY NOT BE USED.
  - CONTRACTOR TO USE STRANDED INSULATED GROUND LEAD #6. SPECIFIED BY MANUFACTURER.

DATE CREATED: 11/16/2020

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**PLUMBING DIAGRAM**  
 SCALE: N.T.S.

**PLUMBING DIAGRAM: DX1010A**  
**2T2R DESIGN: Yes-1**

REV	DATE	ISSUED FOR:
7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:  
**PLUMBING DIAGRAM**

SHEET NUMBER: **C-13** REVISION: **7**  
 TEP#: 43045.453871



Base Station Antennas

Frequency Range	617-894x2 1695-2400x2
Polarization	±45°
Half-Power Beam Width	65°
Electrical Downtilt	2° - 12°x4

Type OCT8-2LX2HX-BW65



Base Station Antennas

Frequency Range	617-894x2 1695-2400x2
Polarization	±45°
Half-Power Beam Width	65°
Electrical Downtilt	2° - 12°x4

Type OCT8-2LX2HX-BW65

### Base Station Antenna

8-ports 617-894 / 617-894 / 1695-2400 / 1695-2400 MHz 65°, 16 / 16 / 18 / 18 dBi, 2°-12° / 2°-12° / 2°-12° / 2° - 12° Tilt Antenna With 4 Integrated RCUs.



#### Electrical Specifications

Frequency Range(MHz)	2x617-894			2x1695-2400		
	617-698	698-824	824-894	1695-1920	1920-2180	2300-2400
Polarization	±45°					
Horizontal 3dB Beamwidth(°)	70	63	60	66	63	58
Vertical 3dB Beamwidth(°)	10.4	9.1	8.0	5.5	5	4.3
Gain (dBi)	15.0	15.5	16.0	17.6	18.0	18.1
Electrical Downtilt	2°-12°			2°-12°		
Upper Sidelobe Suppression(dB)	First	≥16	≥16	≥16	≥16	≥16
Front-to-Back Ratio Total Power, ±30° (dB)	≥23	≥24	≥25	≥25	≥25	≥25
Cross polar ratio	Main direction(dB)	≥17	≥17	≥17	≥17	≥17
	±60° (dB)	≥7	≥7	≥7	≥7	≥7
Isolation ports	≥25 dB					
Isolation Frequency	≥30 dB					
VSWR	< 1.5					
Intermodulation IM3	< -150 dBc(2x43dBm carrier)					
Impedance	50 Ω					
Max. Power per Input (at 50°C ambient temperature)	500 W			300 W		
Lightning Protection	DC Ground					

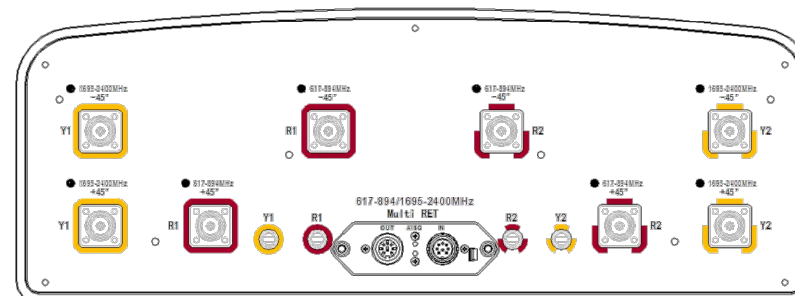
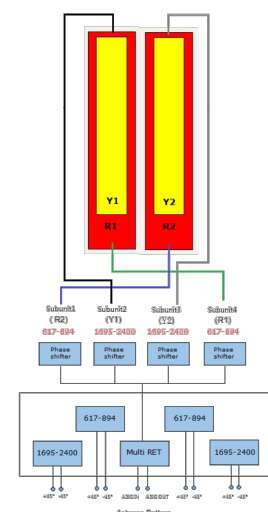
#### Mechanical Specifications

Redome Material	Fiberglass
Connector Type and Location	4,3-10x8 ,Bottom iRCU in:1 x 8 pin male iRCU out:1 x 8 pin female
Dimensions,HxWxD(mm)/(inches)	2438 x 499 x 180 / 95.9 x 19.6 x 7.1
Packing Size(mm)/(inches)	2750 x 620 x 325 / 108.3 x 24.4 x 12.8
Weight ,w/o Mounting kit(kg)/(lbs)	47 / 103.4
Weight,with Mounting kit(kg)/(lbs)	53 / 116.6
Packing Weight(kg)/(lbs)	63 / 138.6
Max. Wind Velocity(mph)	150
Mounting hardware	ϕ 50 mm ~ ϕ 115 mm
Operational Temperature(°C)	-40 to +65
Operational Humidity(%)	<95
Wind Load at 100mph (Frontal/lateral/Rearside(N))	1416/280/1027

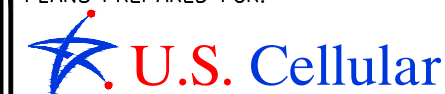
#### Integrated RET Properties

Protocols	Compliant to AISG 2.0/3GPP
Input voltage range	+10~+30VDC(pin 6)
Power consumption	<2W(stand by);<13W(motor activated)
Connectors	AISG
	Antenna
Hardware interface	2 x 8 pin connector acc. To IEC 60130-9 Acc.to AISG Daisy chain in:male Daisy chain out:female
Adjustment time(full range)	Two motor shaft(Embedded motor)
Adjustment Cycles	RS485A/B(pin5/pin3);Power supply(pin6); DC return(pin7)Acc.to AISG
Torque Max	40 sec(typically,depending on antenna)
Lightning Protection Rating	≥10000 ≥160mN.m IEC 61000-4-5 Current Pulse Profile,8/20 μs 10 Repetitions Min.@ 6kA IEC 61312-1 Annex B Current Pulse Profile, 10/350 μs,200 Repetitions Min. @ 0.6KA

#### COMPREHENSIVE TILT CONFIGURATION



PLANS PREPARED FOR:



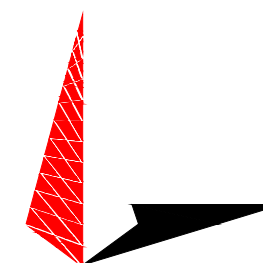
8410 W BRYN MAWR SUITE 700  
CHICAGO, IL 60631  
(773) 399-8900

PROJECT INFORMATION:

**556470**  
**ARLINGTON**

11884 US HWY 421 NORTH  
BROADWAY, NC  
(HARNETT COUNTY)

PLANS PREPARED BY:



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326 TRYON ROAD  
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OFFICE: (919) 661-6351  
www.tepgroup.net  
N.C. LICENSE # C-1794

SEAL:



April 14, 2021

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6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

**ANTENNA SPEC SHEET**

SHEET NUMBER:	REVISION:
<b>C-14</b>	<b>7</b>
TEP#:	43045.453871

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OCT8-2LX2HX-BW65 Rev.3

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OCT8-2LX2HX-BW65 Rev.3

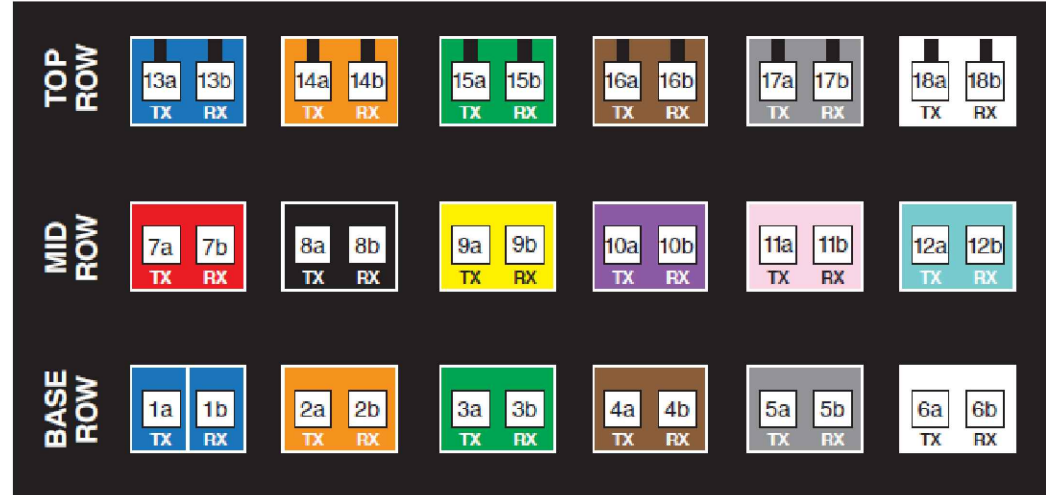
**DENGYO OCT8-2LX2HX-BW65**

SCALE: N.T.S.

**NOTE:**

REFER TO USCC DOCUMENT "TOWER MOUNTED EQUIPMENT AND TOWER CABLE STANDARDS AT CELL SITES" FOR COMPLETE COLOR CODING STANDARDS.

CONNECTOR 13 13A: BLUE TX 13B: BLUE RX with TRACERS	CONNECTOR 14 14A: ORANGE TX 14B: ORANGE RX with TRACERS	CONNECTOR 15 15A: GREEN TX 15B: GREEN RX with TRACERS	CONNECTOR 16 16A: BROWN TX 16B: BROWN RX with TRACERS	CONNECTOR 17 17A: SLATE TX 17B: SLATE RX with TRACERS	CONNECTOR 18 18A: WHITE TX 18B: WHITE RX with TRACERS
CONNECTOR 7 7A: RED TX 7B: RED RX	CONNECTOR 8 8A: BLACK TX 8B: BLACK RX	CONNECTOR 9 9A: YELLOW TX 9B: YELLOW RX	CONNECTOR 10 10A: VIOLET TX 10B: VIOLET RX	CONNECTOR 11 11A: ROSE TX 11B: ROSE RX	CONNECTOR 12 12A: AQUA TX 12B: AQUA RX
CONNECTOR 1 1A: BLUE TX 1B: BLUE RX	CONNECTOR 2 2A: ORANGE TX 2B: ORANGE RX	CONNECTOR 3 3A: GREEN TX 3B: GREEN RX	CONNECTOR 4 4A: BROWN TX 4B: BROWN RX	CONNECTOR 5 5A: SLATE TX 5B: SLATE RX	CONNECTOR 6 6A: WHITE TX 6B: WHITE RX



**FIBER CABLE LABELING**

SCALE: N.T.S.

PROPOSED (24) FIBER CABLES

PROPOSED (12) TERMINAL BLOCK  
6-20 AWG

PROPOSED (18) FIBER COUPLERS ON  
FIBER LANDING

PROPOSED (6) STRIKESORB MODULE

PROPOSED (6) FIBER CABLES

PROPOSED (5) BEND PROTECTORS

PROPOSED GROUND STRIP FOR SHIELD  
AND DRAIN WIRES

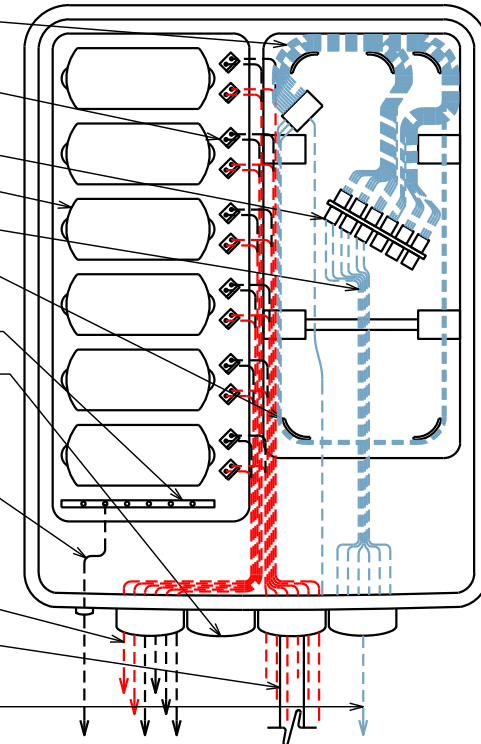
PROPOSED EMPTY PORT

PROPOSED #6 INSULATED GROUND LEAD  
WITH 2 LUG MECHANICAL CONNECTION  
BETWEEN PROPOSED RAYCAP AND  
EXISTING RF GROUND BAR

PROPOSED POWER JUMPER CABLES  
TO RRHS

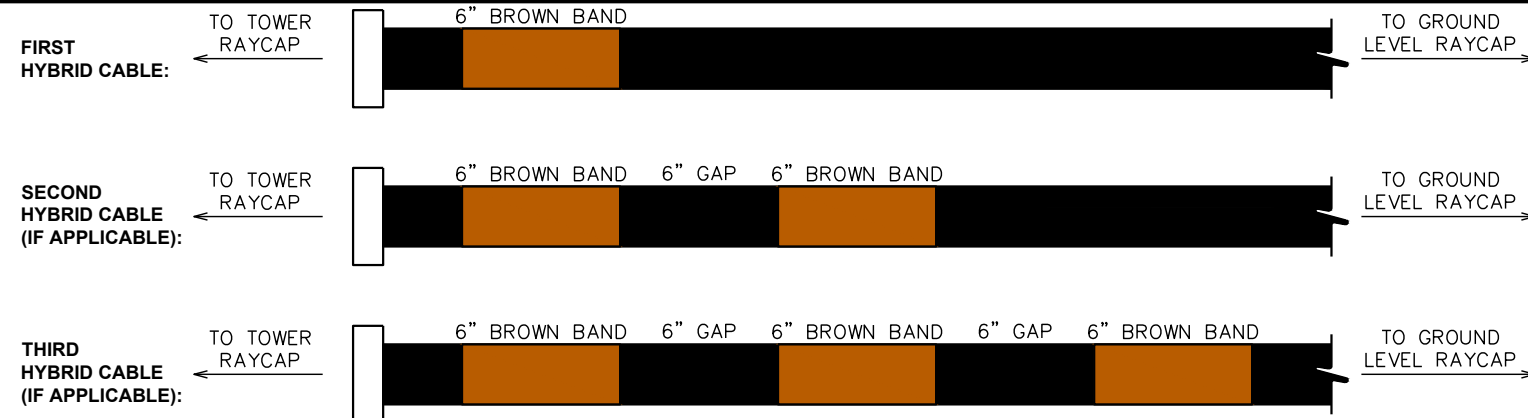
PROPOSED 1/4" HYBRID CABLE

PROPOSED FIBER OPTIC JUMPER CABLE  
TO RRHS



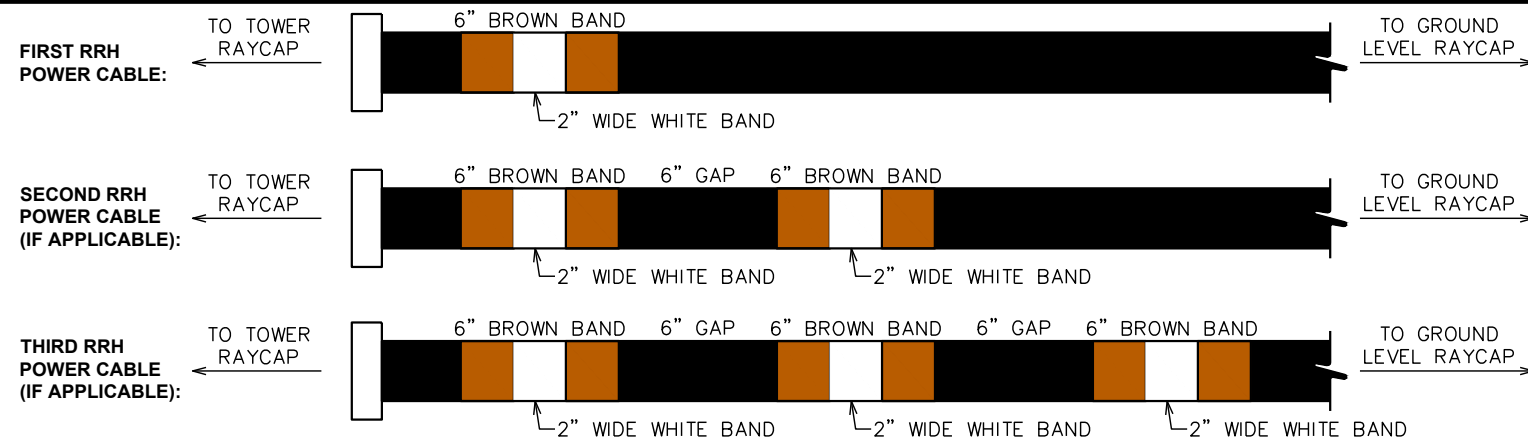
**RAYCAP CABLING**

SCALE: N.T.S.



**HYBRID CABLE BANDING**

SCALE: N.T.S.



**FIBER CABLE BANDING**

SCALE: N.T.S.

PLANS PREPARED FOR:

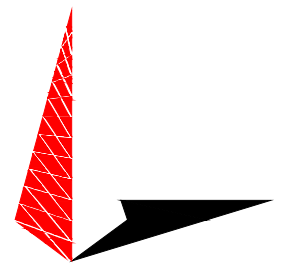
**U.S. Cellular**  
8410 W BRYN MAWR SUITE 700  
CHICAGO, IL 60631  
(773) 399-8900

PROJECT INFORMATION:

**556470  
ARLINGTON**

11884 US HWY 421 NORTH  
BROADWAY, NC  
(HARNETT COUNTY)

PLANS PREPARED BY:



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326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
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N.C. LICENSE # C-1794

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REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB


SHEET TITLE:  
**FIBER AND COAX  
LABELING  
STANDARDS I**

SHEET NUMBER: <b>C-15</b>	REVISION: <b>7</b> TEP#: 43045.453871
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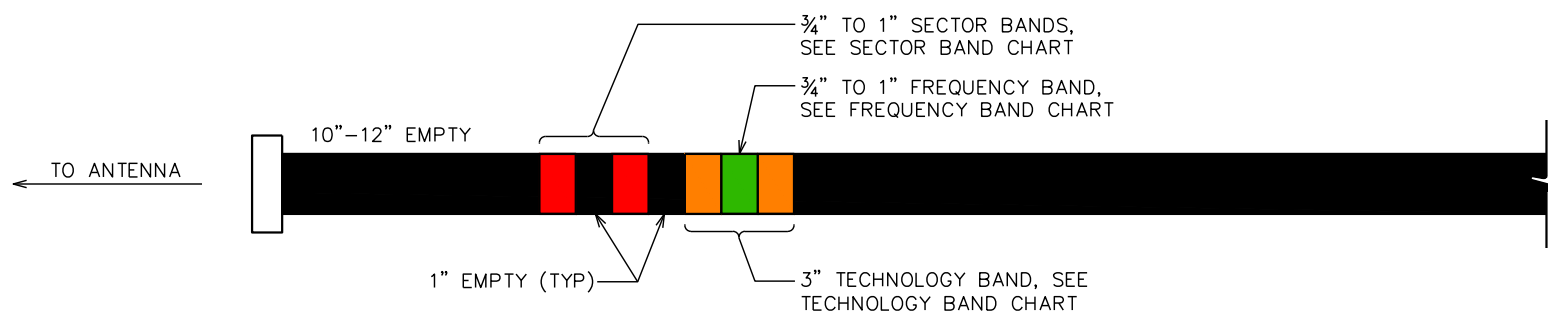
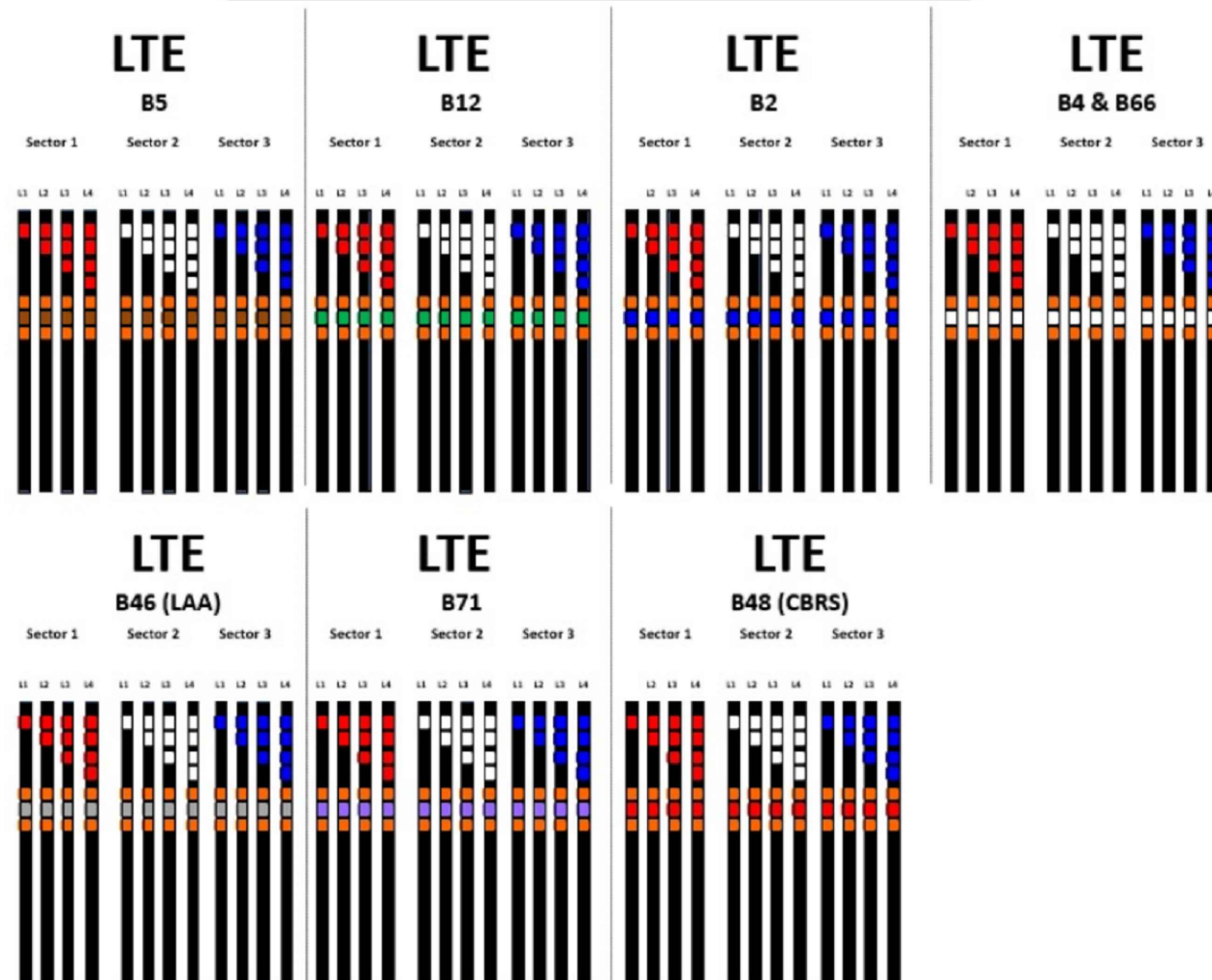
Sector Band Assignments (Most Common Case: Single Technology within the Sector)					
Sector Band	Assigned Color	Line 1	Line 2	Line 3	Line 4
Alpha (Sector 1)	red	1 red band	2 red bands	3 red bands	4 red bands
Beta (Sector 2)	white	1 white band	2 white bands	3 white bands	4 white bands
Gamma (Sector 3)	blue	1 blue band	2 blue bands	3 blue bands	4 blue bands
Delta (Sector 4, if applicable)	green	1 green band	2 green bands	3 green bands	4 green bands
Epsilon (Sector 5, if applicable)	violet	1 violet band	2 violet bands	3 violet bands	4 violet bands
Zeta (Sector 6, if applicable)	brown	1 brown band	2 brown bands	3 brown bands	4 brown bands

FREQUENCY BAND	
FREQUENCY	FREQUENCY BAND
700 (B12)	GREEN
800 (B5)	BROWN
1900 (B2)	BLUE
2100 (B4 & B66)	WHITE
5100 (B66)-LAA	GREY
600 (B71)	VIOLET
3500 (B48)-CBRS	RED

PLANS PREPARED FOR:  
  
 8410 W BRYN MAWR SUITE 700  
 CHICAGO, IL 60631  
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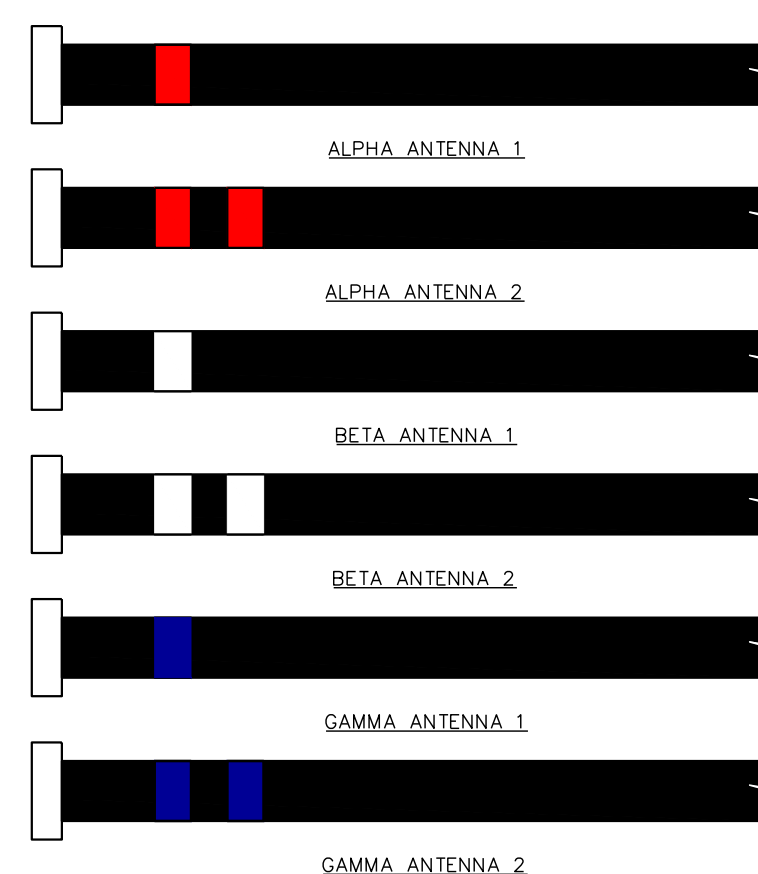
PROJECT INFORMATION:  
**556470**  
**ARLINGTON**  
 11884 US HWY 421 NORTH  
 BROADWAY, NC  
 (HARNETT COUNTY)

### USC COAX Color Code Standard

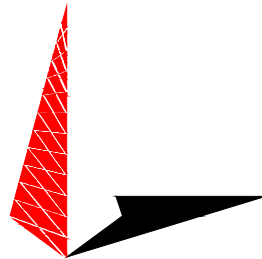



**COAX CABLE BANDING**  
 SCALE: N.T.S.

RET SECTOR BAND		
SECTOR	LINE 1 - FIRST TECHNOLOGY	LINE 2 - FIRST TECHNOLOGY
ALPHA	(1) RED BAND	(2) RED BAND
BETA	(1) WHITE BAND	(2) WHITE BAND
GAMMA	(1) BLUE BAND	(2) BLUE BAND



**RET CABLE BANDING**  
 SCALE: N.T.S.

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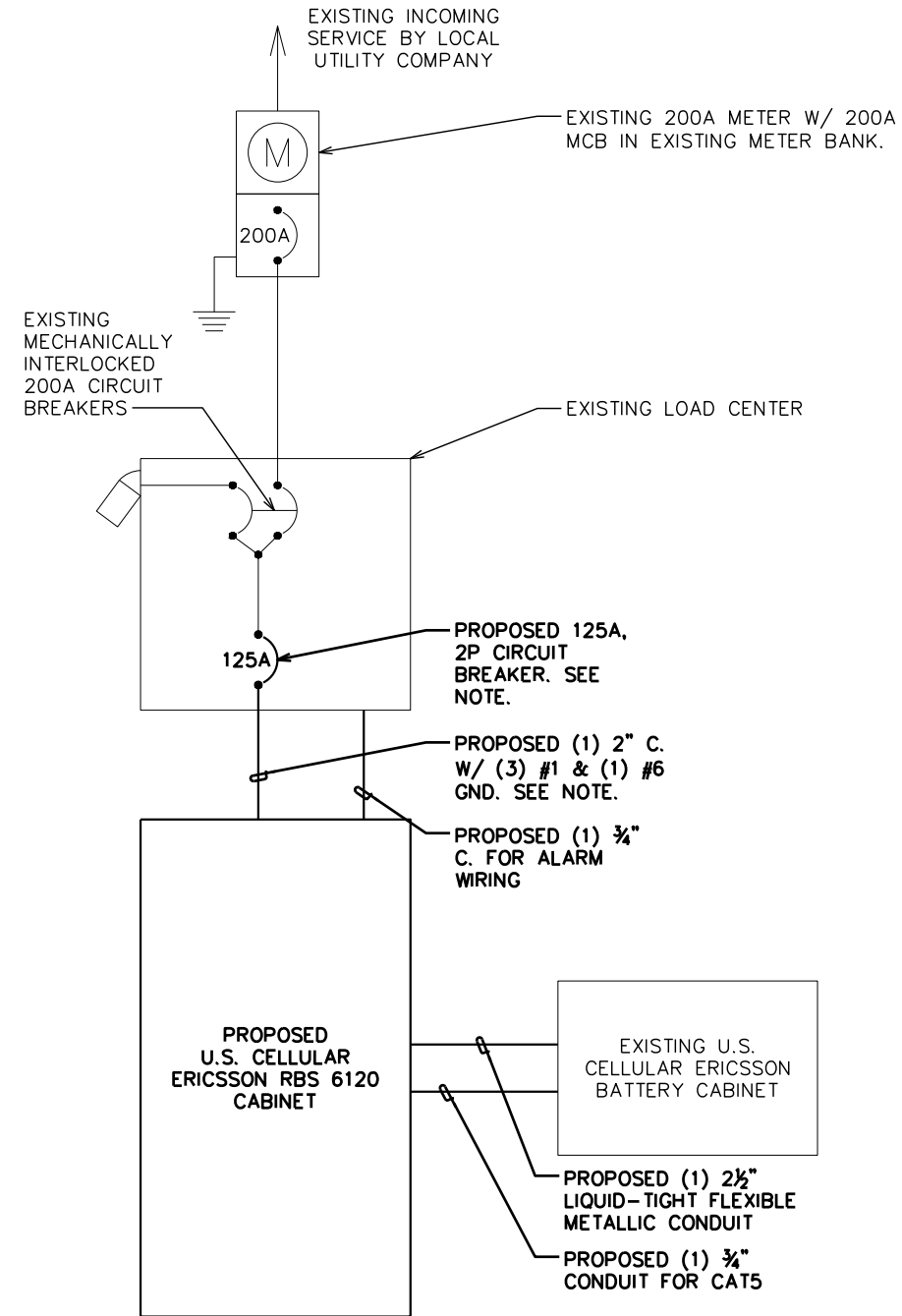
DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:  
**FIBER AND COAX LABELING STANDARDS II**

SHEET NUMBER: **C-16** REVISION: **7**  
 TEP#: 43045.453871

**NOTES:**

1. CONTRACTOR TO VERIFY CABINET AMPERAGE RATING. PROPOSED CIRCUIT BREAKER AND CONDUCTORS TO FEED NEW CABINET SHOULD BE SIZED PER CABINET RATING.
2. MAX RUN LENGTH FROM THE POWER PANEL TO THE LTE CABINET IS 180'-0" (ASSUMING 150A FEED)
3. THIS SITE IS DESIGNED IN ACCORDANCE WITH THE 2020 NATIONAL ELECTRIC CODE.



PLANS PREPARED FOR:



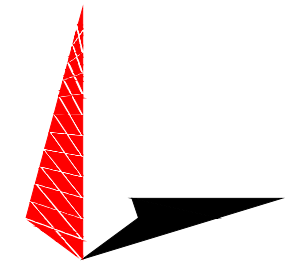
8410 W BRYN MAWR SUITE 700  
CHICAGO, IL 60631  
(773) 399-8900

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REV	DATE	ISSUED FOR:

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

**ONE-LINE DIAGRAM**

SHEET NUMBER: <b>E-1</b>	REVISION: <b>7</b>
TEP#: 43045.453871	

**PROPOSED ERICSSON RBS + BATTERY CABINET ONE-LINE DIAGRAM**

SCALE: N.T.S.

## GENERAL NOTES:

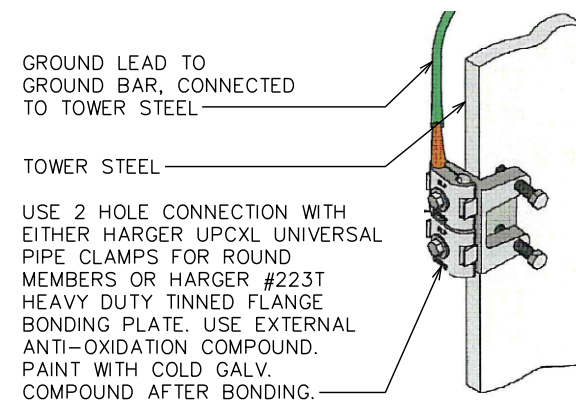
- ALL REFERENCES TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED U.S. CELLULAR OR ITS DESIGNATED REPRESENTATIVE.
- ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF NORTH CAROLINA.
- STRUCTURE IS DESIGNED IN ACCORDANCE WITH ANSI/TIA-222-H, AND THE REQUIREMENTS OF THE NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION.
- WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE NORTH CAROLINA STATE BUILDING CODE, 2018 EDITION.
- UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
- ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERCEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
- IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
- ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATIONS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
- ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
- ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
- BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR. CONTRACTOR SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
- ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
- 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.
- THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN IT PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUBGRADES SHALL BE PROOFROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFTER MATERIAL SHALL BE REWORKED OR REPLACED.

## STRUCTURAL STEEL NOTES:

- THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS AND MANUAL OF STEEL CONSTRUCTION, 14TH EDITION.
- UNLESS OTHERWISE NOTED, ALL STRUCTURAL ELEMENTS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
  - STRUCTURAL STEEL, ASTM DESIGNATION A36 OR GR50.
  - ALL BOLTS, ASTM A325 TYPE I GALVANIZED HIGH STRENGTH BOLTS.
  - ALL NUTS, ASTM A563 CARBON AND ALLOY STEEL NUTS.
  - ALL WASHERS, ASTM F436 HARDENED STEEL WASHERS.
- ALL CONNECTIONS NOT FULLY DETAILED ON THESE PLANS SHALL BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH AISC SPECIFICATIONS AND MANUAL OF STEEL CONSTRUCTION, 13TH EDITION.
- HOLES SHALL NOT BE FLAME CUT THRU STEEL UNLESS APPROVED BY THE ENGINEER.
- HOT-DIP GALVANIZE ALL ITEMS UNLESS OTHERWISE NOTED, AFTER FABRICATION WHERE PRACTICABLE. GALVANIZING: ASTM A123, ASTM, A153/A153M OR ASTM A653/A653M, G90, AS APPLICABLE.
- REPAIR DAMAGED SURFACES WITH GALVANIZING REPAIR METHOD AND PAINT CONFORMING TO ASTM A780 OR BY APPLICATION OF STICK OR THICK PASTED MATERIAL SPECIFICALLY DESIGNED FOR REPAIR OF GALVANIZING. CLEAN AREAS TO BE REPAIRED AND REMOVE SLAG FROM WELDS. HEAT SURFACES TO WHICH STICK OR PASTE MATERIAL IS APPLIED, WITH A TORCH TO A TEMPERATURE SUFFICIENT TO MELT THE METALLICS IN STICK OR PASTED; SPREAD MOLTEN MATERIAL UNIFORMLY OVER SURFACES TO BE COATED AND WIPE OFF EXCESS MATERIAL.
- A NUT LOCKING DEVICE SHALL BE INSTALLED ON ALL PROPOSED AND/OR REPLACED BOLTS.
- ALL PROPOSED AN/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH TO EXCLUDE THE THREADS FROM THE SHEAR PLANE.
- ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT BE AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
- ALL ASSEMBLY AND ANCHOR BOLTS ARE TO BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED IN SECTION 8.1 OF THE AISC, "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", DATED JUNE 30, 2004.
- FLAT WASHERS ARE TO BE INSTALLED WITH BOLTS OVER SLOTTED HOLES.
- DO NOT OVER TORQUE ASSEMBLY BOLTS. GALVANIZING ON BOLTS, NUTS, AND STEEL PARTS MAY ACT AS A LUBRICANT, THUS OVER TIGHTENING MAY OCCUR AND MAY CAUSE BOLTS TO CRACK AND SNAP OFF.
- PAL NUTS ARE TO BE INSTALLED AFTER NUTS ARE TIGHT AND WITH EDGE LIP OUT. PAL NUTS ARE NOT REQUIRED WHEN SELF-LOCKING NUTS ARE PROVIDED.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1:2010, STRUCTURAL WELDING CODE--REINFORCING STEEL. ALL WELDERS SHALL DISPLAY PROPER CERTIFICATION OF QUALIFICATION.

## GROUNDING NOTES:

- ALL CADWELD CONNECTIONS TO GALVANIZED MATERIAL SHALL BE PROPERLY PREPARED TO ASSURE A SATISFACTORY CADWELD.
- CADWELD CONNECTION SHALL BE COATED WITH COLD GALVANIZING SPRAY.
- ALL VERTICAL JUMPERS SHALL NOT BE WELDED WITHIN TWO FT OF THE GROUND ROD.
- SECTOR GROUNDING DIAGRAM:



PLANS PREPARED FOR:



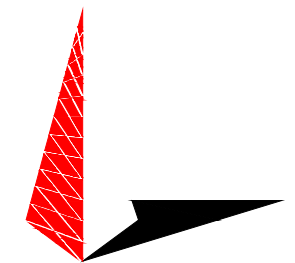
8410 W BRYN MAWR SUITE 700  
CHICAGO, IL 60631  
(773) 399-8900

PROJECT INFORMATION:

**556470**  
**ARLINGTON**

11884 US HWY 421 NORTH  
BROADWAY, NC  
(HARNETT COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**

326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net

N.C. LICENSE # C-1794

SEAL:



April 14, 2021

REV	DATE	ISSUED FOR:
7	04-14-21	CONSTRUCTION
6	03-26-21	PRELIMINARY
5	01-18-21	PRELIMINARY

DRAWN BY: JGC CHECKED BY: JHB

SHEET TITLE:

**GENERAL NOTES**

SHEET NUMBER:	REVISION:
<b>N-1</b>	<b>7</b>
TEP#: 43045.453871	