

FILE NO: PPR-20-014

CONSTRUCTION DRAWING

- LTE 2C LTE 6C
 LTE 3C FN 4TXRX
 LTE 4C FN

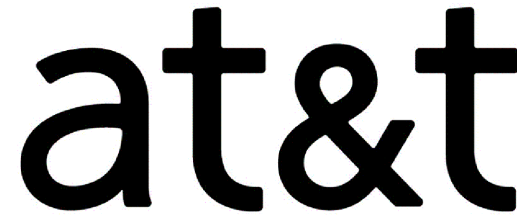


Approved

By: Craig Dossey, Executive Director

Date: 08/24/2020

El Paso County Planning & Community Development



PROJECT SUMMARY

AT&T SITE NAME: CALHAN
 AT&T SITE #: COL02031
 AT&T FA SITE #: 10093755
 RFDS ID: 3183482, VERSION 2.0
 SITE ADDRESS: 11598 HAHN ROAD, CALHAN, CO 80808
 COUNTY: EL PASO
 LATITUDE: 38° 59' 56.64" N (NAD 83)
 LONGITUDE: 104° 18' 48.845" W (NAD 83)
 PROJECT MANAGER: MD7, 10590 W OCEAN AIR DR., STE. 300, SAN DIEGO, CA 92130
 CONTACT: HAILEE PERUCCI (858) 799-7886
 APPLICANT: AT&T MOBILITY, 188 INVERNESS DRIVE WEST, ENGLEWOOD, CO 80112
 ENGINEER: INFINIGY ENGINEERING, PLLC, 2500 W. HIGGINS RD, SUITE 500, HOFFMAN ESTATES, IL 60169
 CONTACT: NANCY HERNANDEZ (847) 648-4068
 SITE ACQUISITION CONTACT: RAYMOND TAYLOR (720) 220-8954
 CONSTRUCTION MANAGER: DEREK BONK (775) 750-5818
 BUILDING CODE: 1. INTERNATIONAL BUILDING CODE (2018 IBC)
 2. TIA-EIA-222-G OR LATEST EDITION
 3. 2017 NFPA 780 - LIGHTNING PROTECTION CODE
 4. ANY OTHER NATIONAL OR LOCAL APPLICABLE CODES, MOST RECENT EDITIONS
 5. CO BUILDING CODE
 6. LOCAL BUILDING CODE
 7. CITY/COUNTY ORDINANCES
 ELECTRIC CODE: 2017 NATIONAL ELECTRIC CODE OR LATEST EDITION



PLANS PREPARED BY:
INFINIGY ENGINEERING, PLLC
 2500 W. HIGGINS RD, SUITE 500
 HOFFMAN ESTATES, IL 60169
 Office # (847) 648-4068
 JOB NUMBER: 674-003

PROJECT MANAGER:

 10590 W. OCEAN AIR DRIVE, SUITE 300
 SAN DIEGO, CA 92130



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REVISED PER JX		05/06/20	CAP	1
FINAL CD		03/31/20	CAP	0
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REVISED/ISSUED FOR REVIEW		01/30/20	CAP	C
REVISED/ISSUED FOR REVIEW		11/26/19	CAP	B

AT&T SITE NAME:
CALHAN

AT&T SITE NUMBER:
COL02031

AT&T FA NUMBER:
10093755

SITE ADDRESS:
**11598 HAHN ROAD
 CALHAN, CO 80808**

SHEET DESCRIPTION:
TITLE SHEET

SHEET NUMBER:
T-1

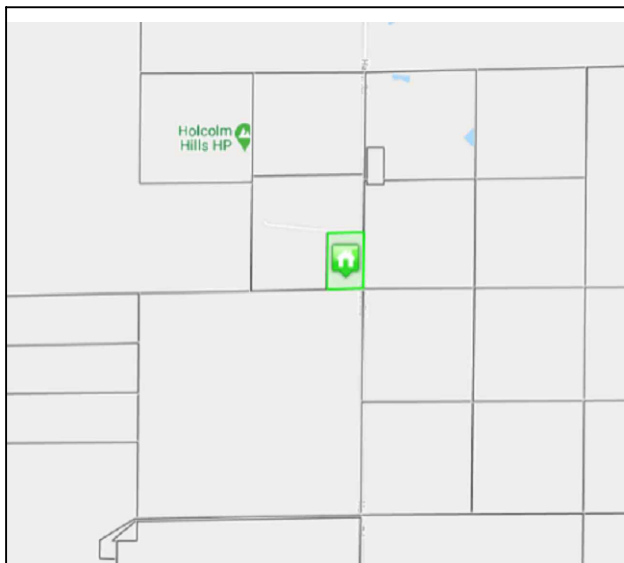
DRIVING DIRECTIONS

- FROM:
 188 INVERNESS DRIVE WEST
 ENGLEWOOD, CO 80122
- DEPART SOUTHEAST ON INVERNESS DR W
 - TURN RIGHT ONTO E COUNTY LINE RD
 - TAKE RAMP RIGHT FOR I-25 SOUTH TOWARD COLO SPGS
 - TAKE RAMP RIGHT AND FOLLOW SIGNS FOR INTERQUEST PARKWAY
 - KEEP STRAIGHT ONTO CO-83 N / INTERQUEST PKWY
 - TURN RIGHT ONTO CO-21 S / N POWERS BLVD
 - TAKE RAMP RIGHT AND FOLLOW SIGNS FOR WOODMEN ROAD
 - TURN LEFT ONTO E WOODMEN RD
 - BEAR LEFT ONTO US-24 / E US HIGHWAY 24
 - TURN RIGHT ONTO SOAPWEEED RD
 - TURN LEFT ONTO SCOTT RD
 - TURN RIGHT ONTO HAHN RD
 - ARRIVE AT 11820 HAHN ROAD, CALHAN, CO 80808

DO NOT SCALE DRAWINGS

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

VICINITY MAP



AT&T SITE NAME

CALHAN

AT&T SITE NUMBER

COL02031

AT&T PACE ID

MRUTH024745

MRUTH024966

AT&T FA NUMBER

10093755

SITE ADDRESS

**11598 HAHN ROAD
 CALHAN, CO 80808**

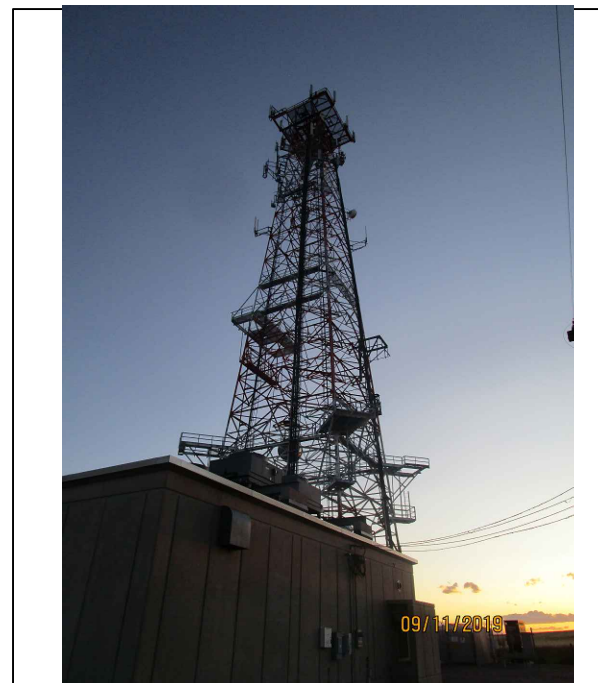
STRUCTURE TYPE

SELF SUPPORT TOWER

PROJECT DESCRIPTION

- AT&T PROPOSES TO MODIFY AN EXISTING UNMANNED TELECOMMUNICATION FACILITY BASED ON RFDS 3183482 REV 2.0:
- REMOVE AND REPLACE (6) PANEL ANTENNAS
 - REMOVE AND REPLACE (3) RRHS
 - INSTALL (3) NEW RRHS
 - RELOCATE (1) RRH FROM POSITION 2 TO POSITION 1 FOR GAMMA SECTOR
 - REMOVE AND REPLACE (12) ANTENNA PIPE MOUNTS
 - REMOVE (2) 7/8" COAX CABLES
 - REMOVE EXISTING OBSOLETE GE INFINITY NE "M" SERIES +24V DCPD [NEQ.15266] FROM SITE
 - INSTALL (1) EA. NEW VERTIV INDOOR NETSURE 7100 -48V DCPD [NEQ.19735] EQUIPPED WITH (10) EA. 2 KW -48VDC RECTIFIERS [NEQ.15930] AND (5) EA. HE 1.5 KW -48VDC/+24VDC CONVERTER MODULES [NEQ.15929]
 - REMOVE (1) EA. EXISTING +24VDC BATTERY RACK FROM SITE
 - INSTALL (1) NEW VERTIV INDOOR SEISMIC RATED -48VDC VRLA BATTERY RACK [NEQ.15312]
 - RE-INSTALL (20) OF (20) EA. EXISTING GNB M12V155F BATTERIES [NEQ.12090] I.E. (5) 155AHR STRINGS EACH CONFIGURED @ -48VDC NOMINAL TO PROVIDE 4.35 HRS OF BATTERY RESERVE CAPACITY
 - INSTALL (1) NEW NOKIA 5GNR (ASIK C-1) FSM4 BBU [CEQ.20975]
 - INSTALL (2) 50A BREAKERS FOR FSM4, (3) 25 AMP BREAKERS FOR AHCA & (3) 50 AMP BREAKERS FOR AHLBA RRH
 - INSTALL (1) DC6-48-60+18-8F RAYCAP WITH (1) FIBER LINE AND (2) 8 AWG DC LINES
 - INSTALL (3) SUPPORT KICKERS FOR NEW ANTENNAS
 - INSTALL (1) COMMSCOPE POWERSHIFT SHELF AND MODULES
 - REPLACEMENT OF EXISTING PIPE MOUNTS WITH PROPOSED PIPE 2.0 SCH. 80.
 - ADD A KICKER SUPPORT ON ALL UNSUPPORTED PIPE MOUNTS WHERE AN ANTENNA IS PROPOSED. THE KICKER MUST BE A GR.36 L3X3X3 ANGLE ATTACHED 2" AWAY FROM THE TOP OF THE PIPE WITH A 1/2" Ø A307 U-BOLT. SAME CONNECTION FOR THE BACK OF THE TRIEBACK. THE UNBRACED LENGTH OF THE KICKER SHOULD NOT EXCEED 12 FT.

SITE PHOTO



PROJECT TEAM

md7 INFINIGY ENGINEERING, PLLC
 10590 W. OCEAN AIR DRIVE, SUITE 300, SAN DIEGO, CA 92130 2500 W. HIGGINS RD, SUITE 500, HOFFMAN ESTATES, IL 60169, OFFICE # (847) 648-4068
 PROJECT MANAGER ENGINEER

PROJECT NOTES

- NOTES:
- HANDICAP ACCESS REQUIREMENTS ARE NOT REQUIRED.
 - FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.
 - FACILITY HAS NO PLUMBING OR REFRIGERANTS.
 - THIS FACILITY SHALL MEET OR EXCEED ALL FAA AND FCC REGULATORY REQUIREMENTS.
 - PAINT ANTENNAS TO MATCH EXISTING BUILDING

MOUNT ANALYSIS BY:
 VENDOR: INFINIGY
 DATE: 01/22/20

STRUCTURAL ANALYSIS BY:
 VENDOR: ATC
 DATE: TBD



Know what's below.
 Call before you dig.
 www.call811.com

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Office # (847) 648-4068
JOB NUMBER: 674-003

PROJECT MANAGER:
md7
10590 W. OCEAN AIR DRIVE, SUITE 300
SAN DIEGO, CA 92130



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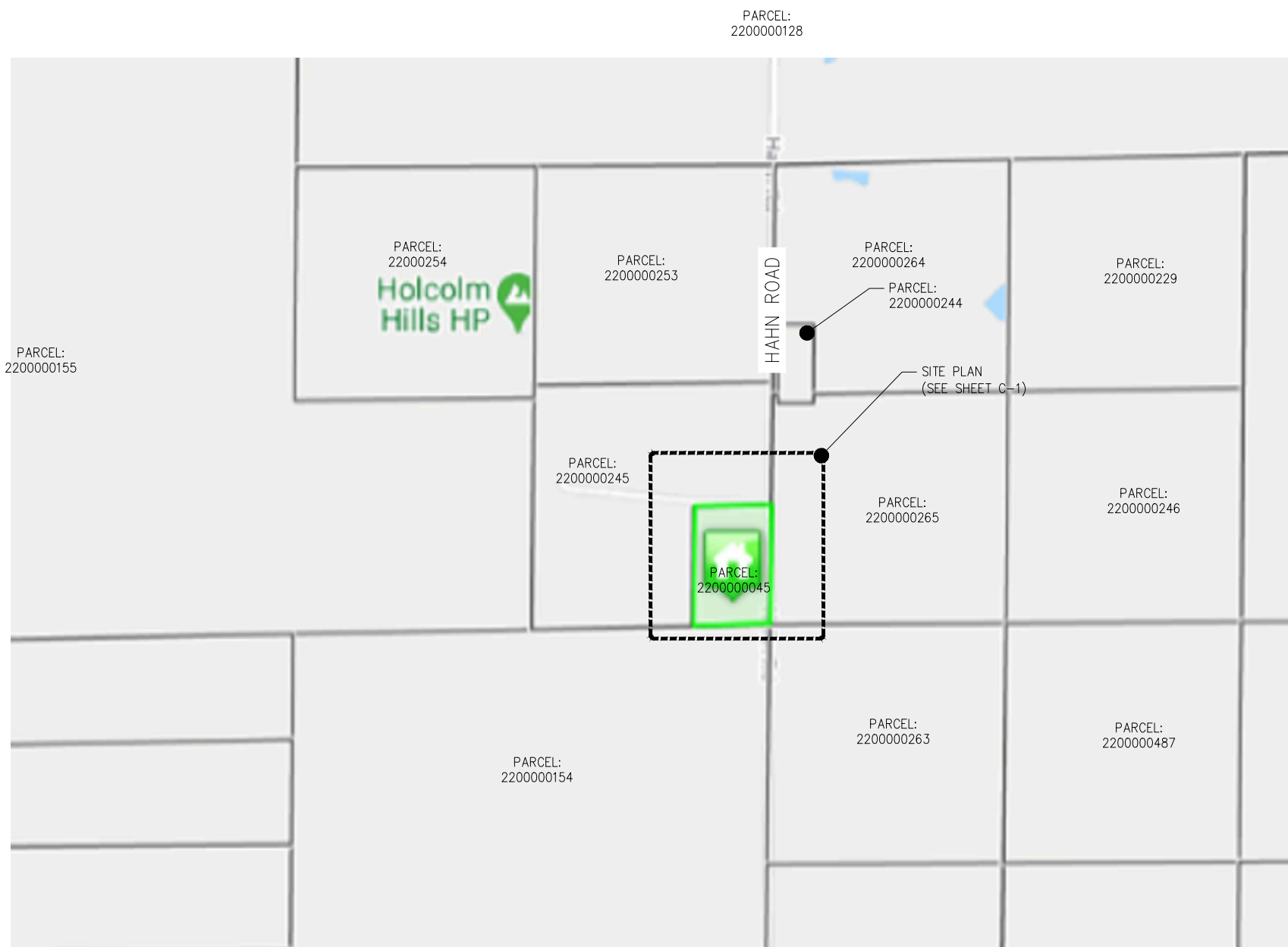
AT&T FA NUMBER:
10093755

SITE ADDRESS:
**11598 HAHN ROAD
CALHAN, CO 80808**

SHEET DESCRIPTION:
PARCEL PLAN

SHEET NUMBER:
P-1

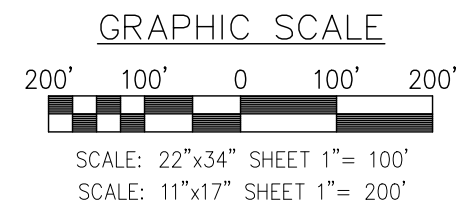
SOAP WEED ROAD



PARCEL PLAN

SCALE: NTS 1

FILE NO: PPR-20-014



SITE PLAN

SCALE: AS NOTED 1

PLANS PREPARED FOR:



PLANS PREPARED BY:

INFINIGY
ENGINEERING, PLLC

2500 W. HIGGINS RD, SUITE 500
HOFFMAN ESTATES, IL 60169
Office # (847) 648-4068

JOB NUMBER: 674-003

PROJECT MANAGER:



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SAN DIEGO, CA 92130

ENGINEERING LICENSE:



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11598 HAHN ROAD
CALHAN, CO 80808

SHEET DESCRIPTION:

SITE PLAN

SHEET NUMBER:

C-1

FILE NO: PPR-20-014



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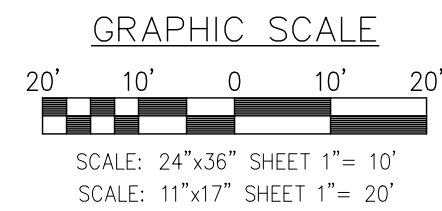
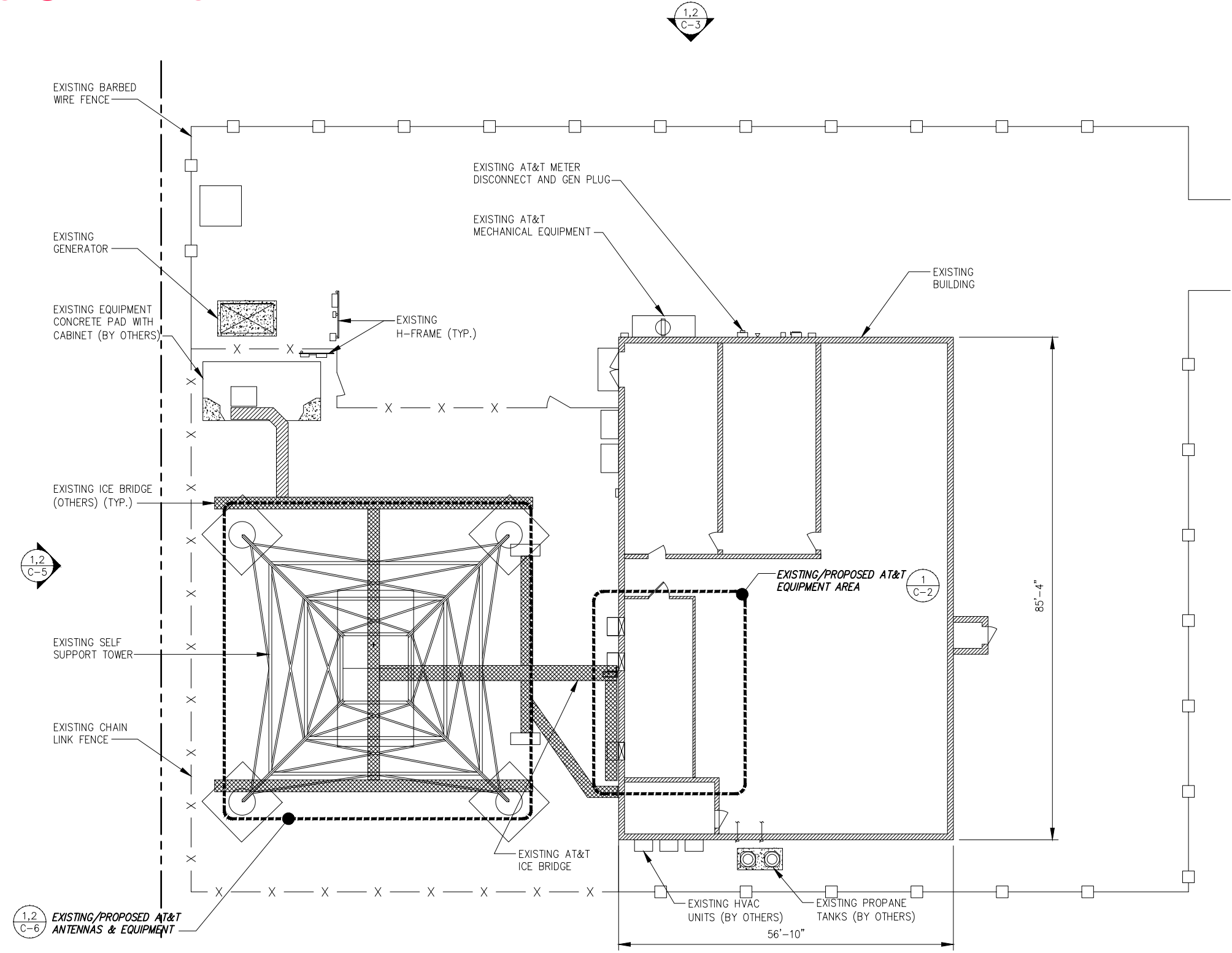
AT&T SITE NUMBER:
COL02031

AT&T FA NUMBER:
10093755

SITE ADDRESS:
**11598 HAHN ROAD
 CALHAN, CO 80808**

SHEET DESCRIPTION:
**ENLARGED
 SITE PLAN**

SHEET NUMBER:
C-1.1



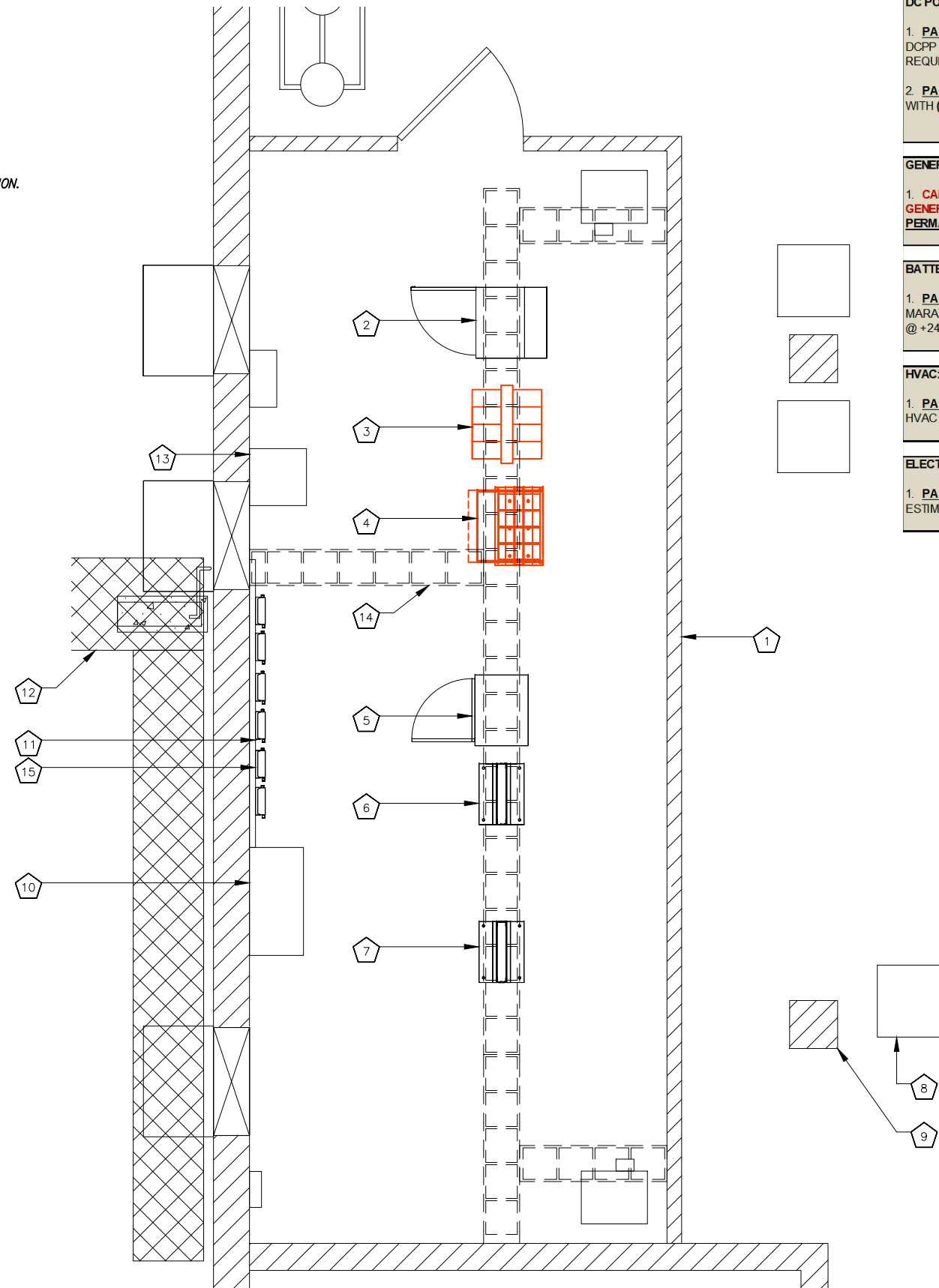
ENLARGED SITE PLAN

SCALE: AS NOTED 1

FILE NO: PPR-20-014

CODED DRAWING NOTES:

- 1 EXISTING EQUIPMENT ROOM
- 2 EXISTING GSM CABINET
- 3 EXISTING BATTERY CABINET TO BE REMOVED – RETAIN (20)
- 4 EXISTING GNB M12V155FT BATTERIES FOR ON SITE RE-UTILIZATION.
- 5 EXISTING DC POWER PLANT TO BE REMOVED
- 6 EXISTING UMTS CABINET
- 7 EXISTING LTE RACK
- 8 EXISTING FIF RACK
- 9 EXISTING COAX ENTRY PORT (TYP.)
- 10 EXISTING BUILDING SUPPORT (TYP.)
- 11 EXISTING FILE CABINET
- 12 EXISTING TELCO BOARD
- 13 EXISTING ICE BRIDGE (TYP.)
- 14 EXISTING MW CABINET
- 15 EXISTING CABLE LEDDER (TYP.)
- 16 EXISTING DIPLEXER (6 TOTAL)



DC POWER PLANT, RECTIFIERS & CONVERTERS:

1. **PASSES RECTIFIER CAPACITY;** EXISTING OBSOLETE GE INFINITY NE "M" SERIES +24V 1200A DCPP [NEQ.15266] IS EQUIPPED WITH (8) +24VDC 100A RECTIFIERS [NEQ.15263]; ONLY (4) REQUIRED FOR **N+1**.

2. **PASSES CONVERTER CAPACITY;** EXISTING OBSOLETE GE NE "M" +24V DCPP IS EQUIPPED WITH (6) +24VDC/48VDC 30A CONVERTER MODULES [NEQ.13100]. ONLY (4) REQUIRED FOR **N+1**.

GENERATOR:

1. **CALC'S BASED ON AT&T ELECTRICAL SERVICE BEING POWERED BY THE ATC SHARED GENERATOR; AT&T NEEDS TO CONFIRM IF THEY ARE INDEED BEING SERVED BY ATC'S SHARED PERMANENT STANDBY GENERATOR.**

BATTERIES:

1. **PASSES BATTERY RESERVE CAPACITY @ 9.77 HRS;** SITE IS EQUIPPED WITH (20) EA. GNB MARATHON M12V155FT BATTERIES [NEQ.12090] i.e. (10) 155 Ahr STRINGS EACH CONFIGURED @ +24VDC NOMINAL.

HVAC:

1. **PASSES HVAC TONNAGE CAPACITY;** EQUIPMENT SHELTER IS OUTFITTED WITH (2) EA. HVAC 3-TON SPLIT SYSTEMS.

ELECTRICAL SERVICE:

1. **PASSES 120/240VAC 200A (48KW) ELECTRICAL SERVICE;** MAXIMUM TOTAL CONNECTED LOAD ESTIMATED @ **28.07 KVA** [117A per phase].

PLANS PREPARED FOR:



PLANS PREPARED BY:

INFINIGY ENGINEERING, PLLC
 2500 W. HIGGINS RD, SUITE 500
 HOFFMAN ESTATES, IL 60169
 Office # (847) 648-4068
 JOB NUMBER: 674-003

PROJECT MANAGER:

md7
 10590 W. OCEAN AIR DRIVE, SUITE 300
 SAN DIEGO, CA 92130

ENGINEERING LICENSE:



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SITE ADDRESS:

**11598 HAHN ROAD
 CALHAN, CO 80808**

SHEET DESCRIPTION:

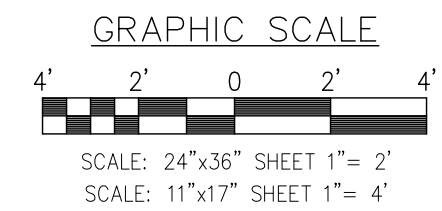
EXISTING EQUIPMENT LAYOUT

SHEET NUMBER:

C-2

EXISTING EQUIPMENT LAYOUT

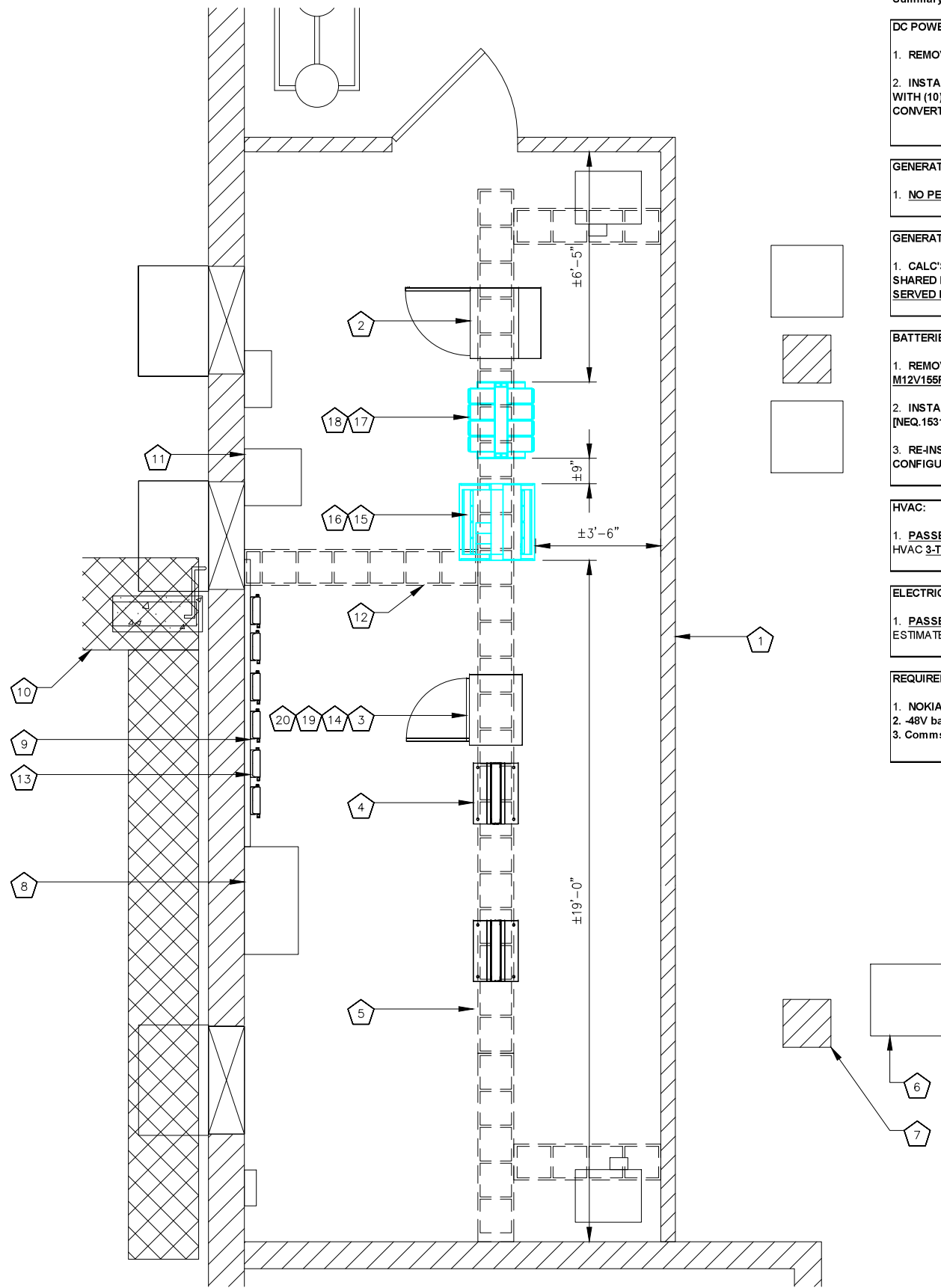
SCALE: AS NOTED 1



FILE NO: PPR-20-014

CODED DRAWING NOTES:

- 1 EXISTING EQUIPMENT ROOM
- 2 EXISTING GSM CABINET
- 3 EXISTING UMTS CABINET
- 4 EXISTING LTE RACK
- 5 EXISTING MW RACK
- 6 EXISTING COAX ENTRY PORT (TYP.)
- 7 EXISTING BUILDING SUPPORT (TYP.)
- 8 EXISTING FILE CABINET
- 9 EXISTING TELCO BOARD
- 10 EXISTING ICE BRIDGE (TYP.)
- 11 EXISTING MW CABINET
- 12 EXISTING CABLE LEDDER (TYP.)
- 13 EXISTING DIPLEXER (6 TOTAL)
- 14 **INSTALL (1) NEW NOKIA 5G NR (ASIK C-1) FSM4 BBU [CEQ.20975]** 4.5
D-1
- 15 **INSTALL (1) EA. NEW VERTIV INDOOR NETSURE 7100 -48V DCPD [NEQ.19735]** 1
D-2
- 16 **INSTALL (10) EA. 2 KW -48VDC RECTIFIERS [NEQ.15930] AND (5) EA. HE 1.5 KW -48VDC/+24VDC CONVERTER MODULES [NEQ.15929]**
- 17 **INSTALL (1) NEW VERTIV INDOOR SEISMIC RATED -48VDC VRLA BATTERY RACK [NEQ.15312]** 2
D-2 3
D-2
- 18 **RE-INSTALL (20) OF (20) EA. EXISTING GNB M12V155F BATTERIES [NEQ.12090] I.E. (5) 155AHR STRINGS EACH CONFIGURED @ -48VDC NOMINAL TO PROVIDE 4.35 HRS OF BATTERY RESERVE CAPACITY**
- 19 **INSTALL (2) 50A BREAKERS FOR FSM4, (3) 50 AMP BREAKERS FOR AHLBA, AND (3) 25 AMP BREAKERS FOR AHCA**
- 20 **INSTALL COMMSCOPE POWERSHIFT SHELF AND MODULES**



Summary:

DC POWER PLANT, RECTIFIERS & CONVERTERS:

1. REMOVE EXISTING OBSOLETE GE INFINITY NE "M" SERIES +24V DCPD [NEQ.15266] FROM SITE.
2. INSTALL (1) EA. NEW VERTIV INDOOR NETSURE 7100 -48V DCPD [NEQ.19735] EQUIPPED WITH (10) EA. HE 2 KW -48VDC RECTIFIERS [NEQ.15930] AND (5) EA. HE 1.5 KW -48VDC/+24VDC CONVERTER MODULES [NEQ.15929] ONLY 4 REQUIRED TO SATISFY N#1.

GENERATOR:

1. **NO PERMANENT STANDBY GENERATOR**

GENERATOR:

1. **CALC'S BASED ON AT&T ELECTRICAL SERVICE BEING POWERED BY THE EXISTING ATC SHARED PERMANENT STANDBY GENERATOR; AT&T NEEDS TO CONFIRM THEY ARE INDEED SERVED BY ATC'S GENERATOR.**

BATTERIES:

1. REMOVE (1) EA. EXISTING +24VDC BATTERY RACK FROM SITE; RETAIN (20) EXISTING GNB M12V155F BATTERIES FOR ON SITE RE-UTILIZATION.
2. INSTALL (1) EA. NEW VERTIV NETSURE INDOOR SEISMIC RATED -48VDC VRLA BATTERY RACK [NEQ.15312].
3. RE-INSTALL (20) EXISTING BATTERIES [NEQ.12090] i.e. (5) EA. 155 Ahr STRINGS EACH CONFIGURED @ -48VDC NOMINAL TO PROVIDE 4.35 HRS OF RESERVE CAPACITY.

HVAC:

1. **PASSES HVAC TONNAGE CAPACITY; EQUIPMENT SHELTER IS OUTFITTED WITH (2) EA. HVAC 3-TON SPLIT SYSTEMS.**

ELECTRICAL SERVICE:

1. **PASSES 120/240VAC 200A (48KW) ELECTRICAL SERVICE; MAXIMUM TOTAL CONNECTED LOAD ESTIMATED @ 35.82 KVA [149A per phase].**

REQUIRED ADDITIONAL EQUIPMENT:

1. NOKIA 5G NR (ASIK C-1) FSM4 BBU [CEQ.20975].
2. -48V battery rack
3. Commscope Power Shift (Modules for all 3 sectors)

PLANS PREPARED FOR:



PLANS PREPARED BY:

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 Office # (847) 648-4068
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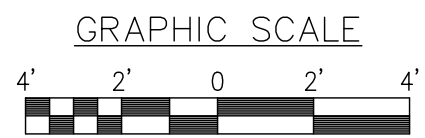
SHEET DESCRIPTION:

PROPOSED EQUIPMENT LAYOUT

SHEET NUMBER:

C-2.1

PROPOSED EQUIPMENT LAYOUT



SCALE: 24"x36" SHEET 1" = 2'
 SCALE: 11"x17" SHEET 1" = 4'

FILE NO: PPR-20-014



09/11/2019

GSM CABINET

NO SCALE

1



09/11/2019

UMTS CABINET

NO SCALE

2



09/11/2019

BATTERY RACK

NO SCALE

3



09/11/2019

FIF RACK

NO SCALE

4



09/11/2019

CABINET

NO SCALE

5



09/11/2019

POWER PLANT

NO SCALE

6

PLANS PREPARED FOR:

PLANS PREPARED BY:

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CALHAN, CO 80808

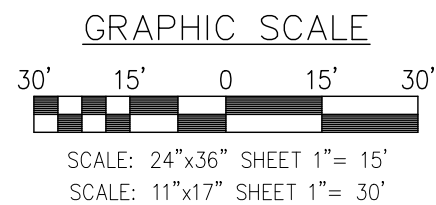
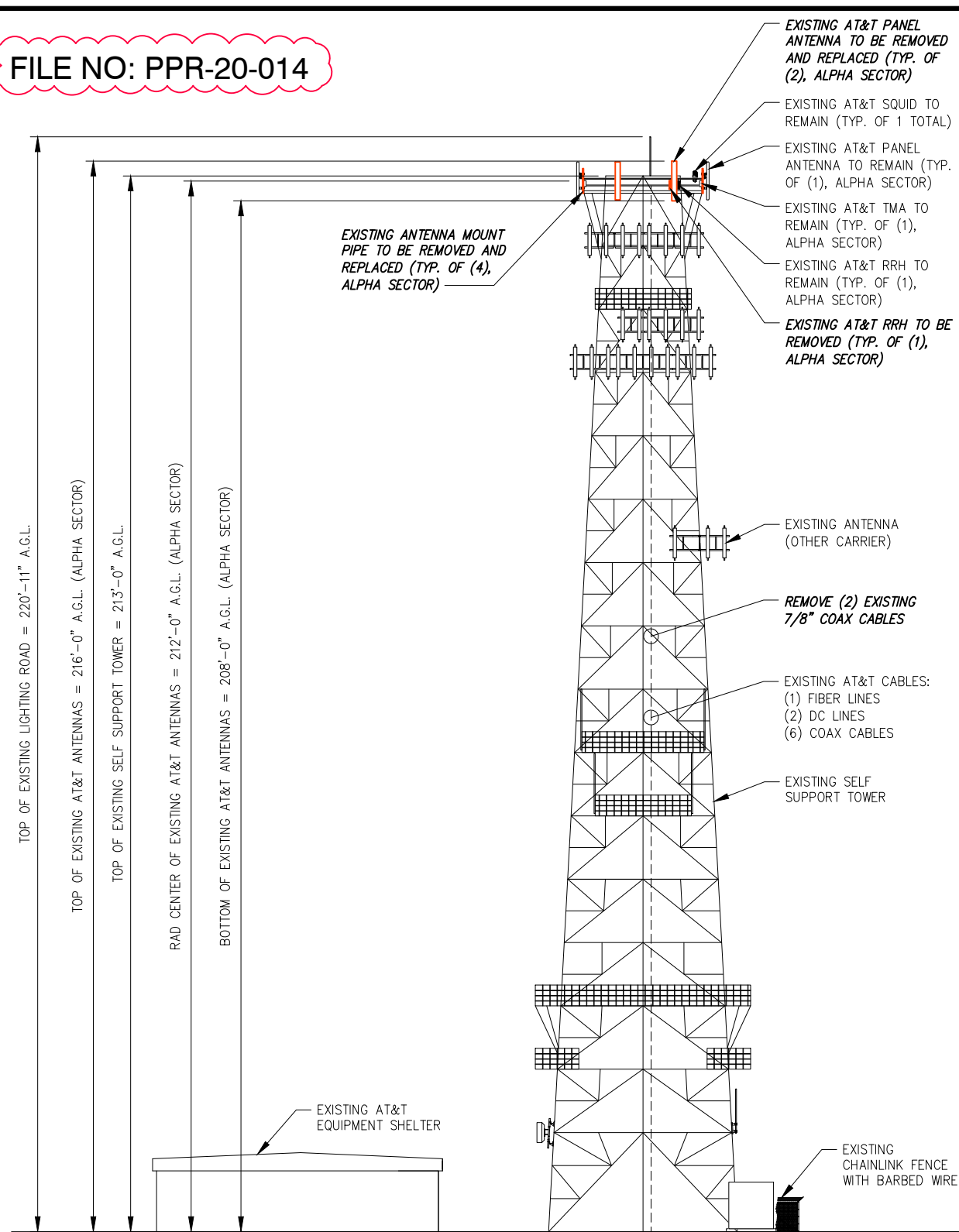
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EQUIPMENT PHOTOS

SHEET NUMBER:

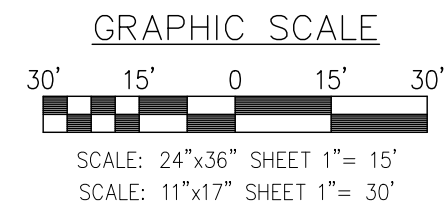
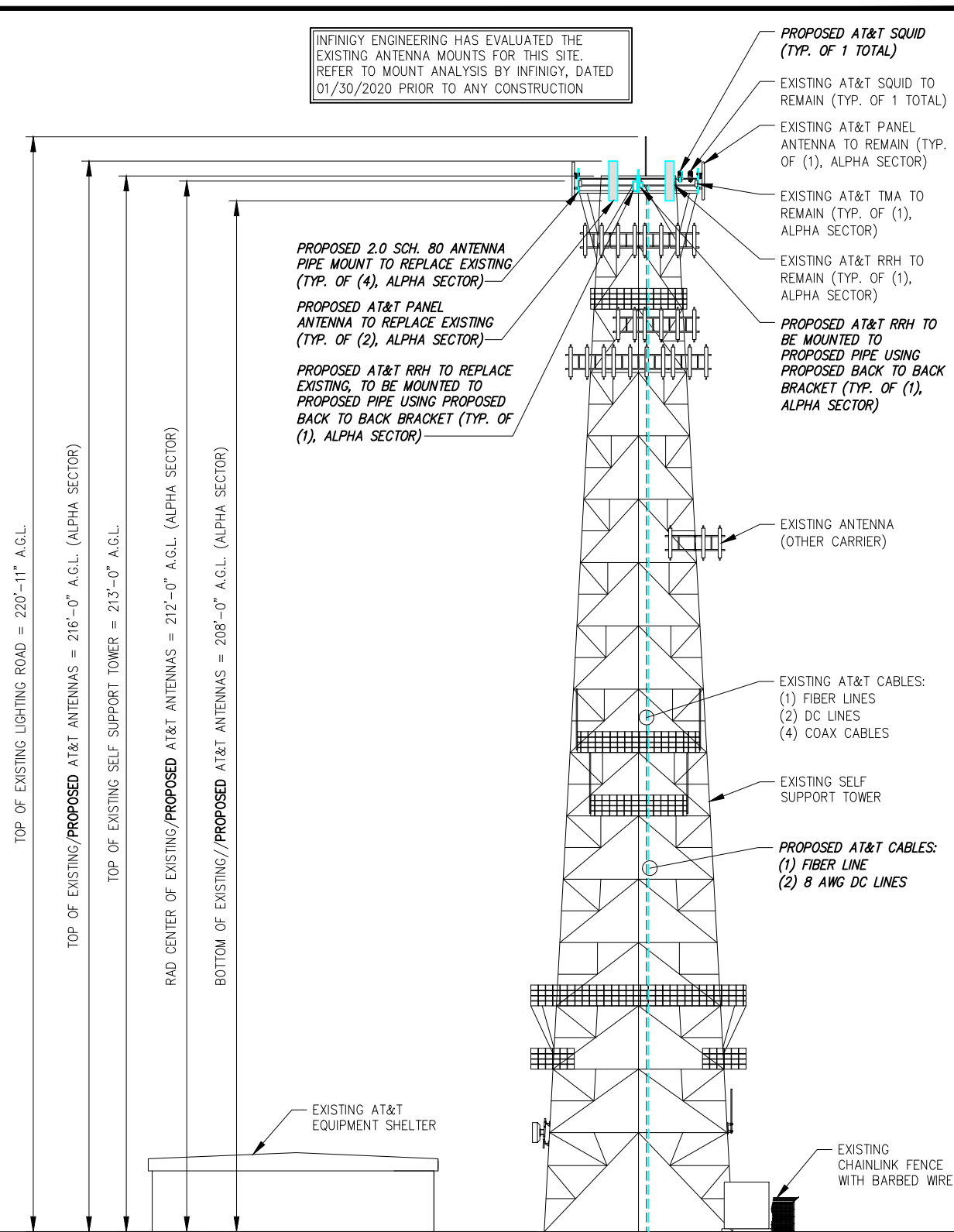
C-2.2

FILE NO: PPR-20-014



EXISTING NORTH ELEVATION

SCALE: AS NOTED 1



PROPOSED NORTH ELEVATION

SCALE: AS NOTED 2



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2500 W. HIGGINS RD, SUITE 500
HOFFMAN ESTATES, IL 60169
Office # (847) 648-4068
JOB NUMBER: 674-003

PROJECT MANAGER:
mdh
10590 W. OCEAN AIR DRIVE, SUITE 300
SAN DIEGO, CA 92130



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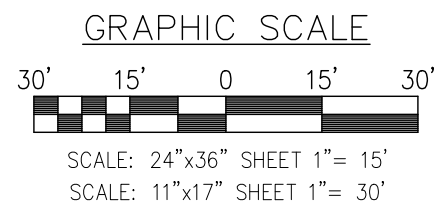
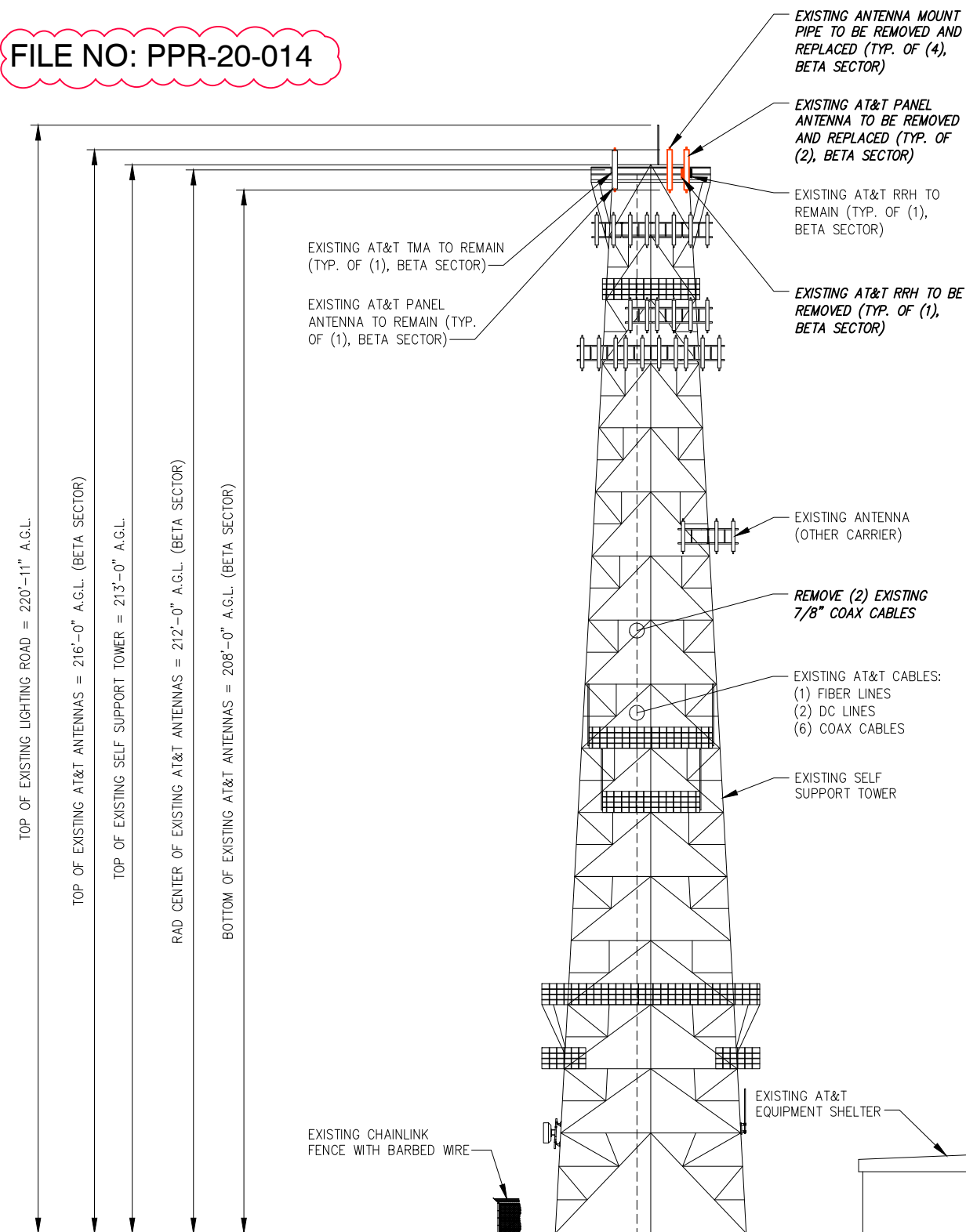
AT&T FA NUMBER:
10093755

SITE ADDRESS:
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CALHAN, CO 80808**

SHEET DESCRIPTION:
**NORTH
ELEVATION**

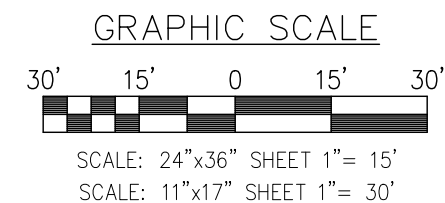
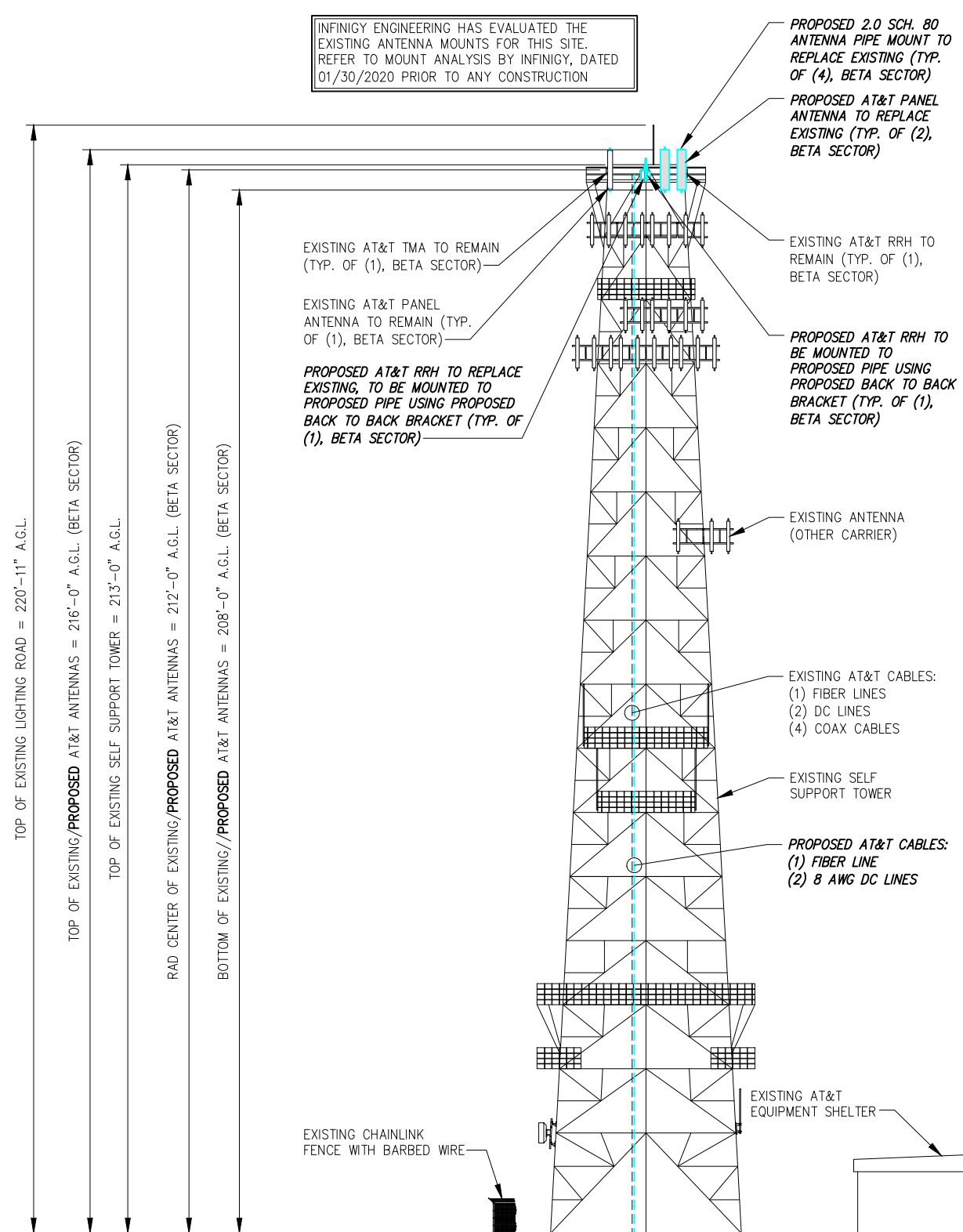
SHEET NUMBER:
C-3

FILE NO: PPR-20-014



EXISTING SOUTH ELEVATION

SCALE: AS NOTED 1



PROPOSED SOUTH ELEVATION

SCALE: AS NOTED 2

PLANS PREPARED FOR:



PLANS PREPARED BY:

INFINIGY
ENGINEERING, PLLC

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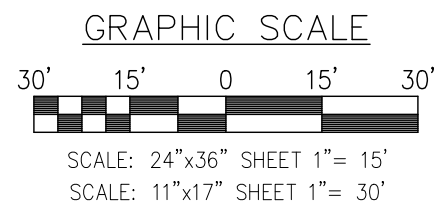
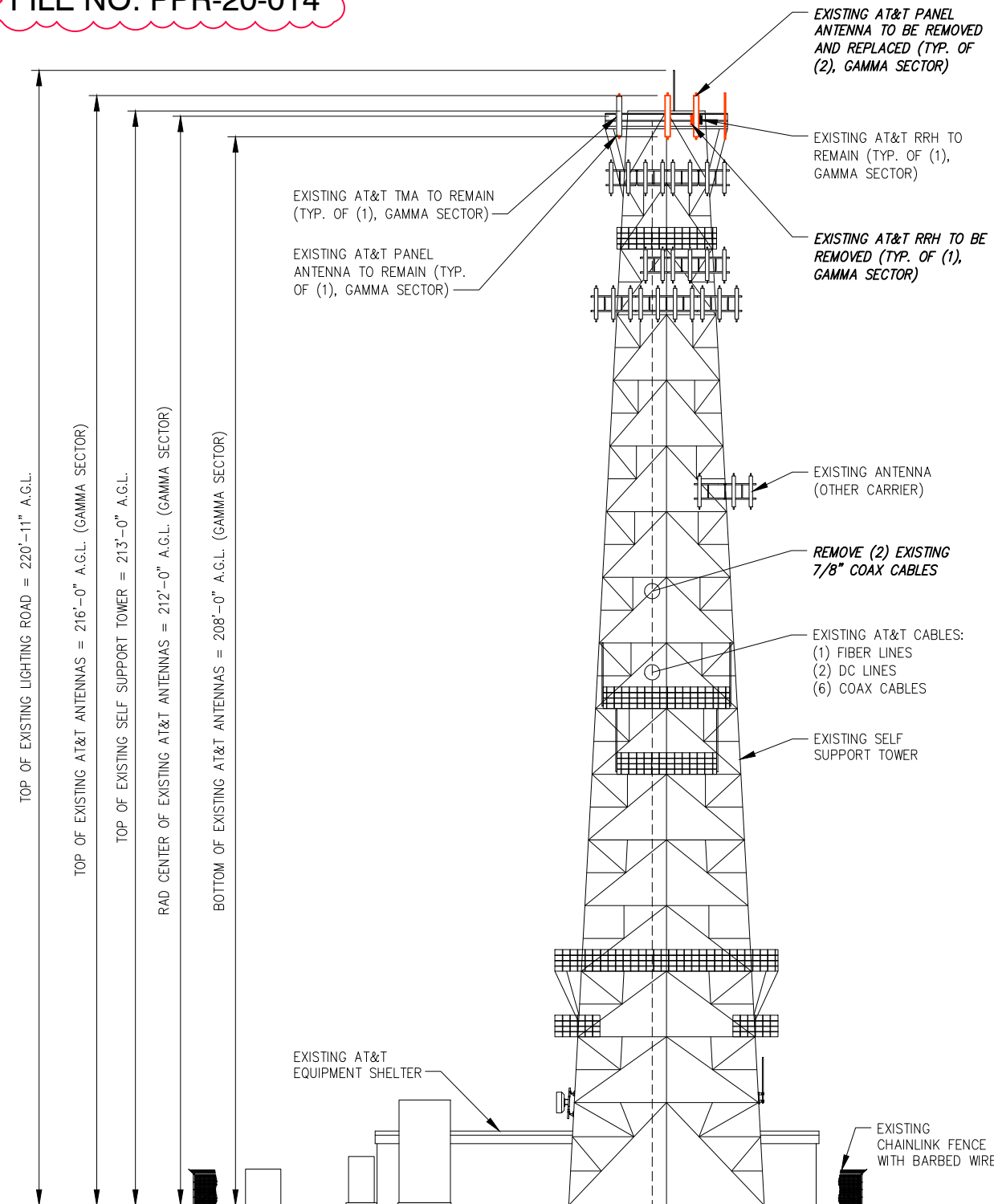
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SOUTH
ELEVATION

SHEET NUMBER:

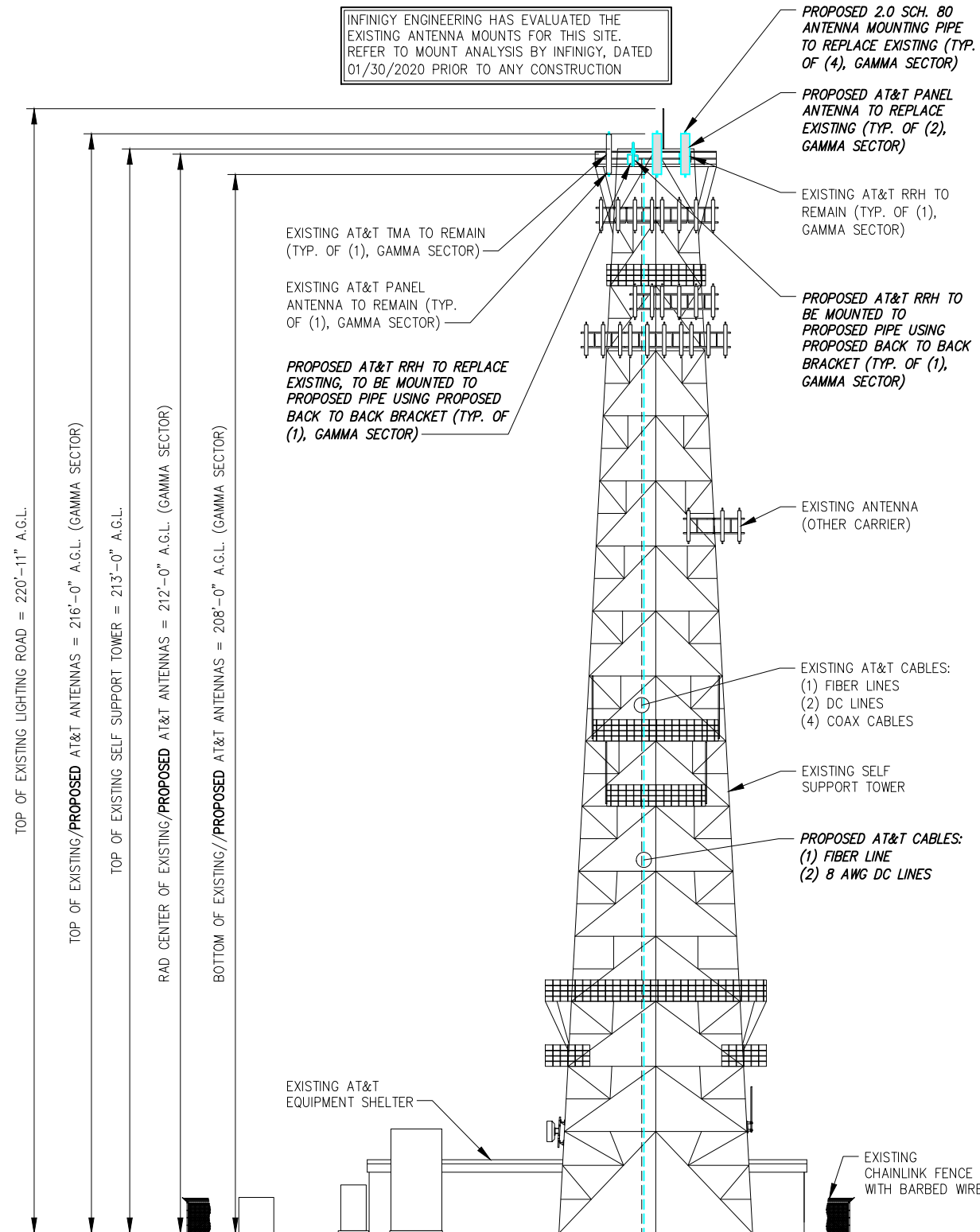
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FILE NO: PPR-20-014

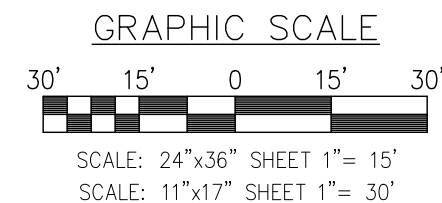


EXISTING WEST ELEVATION

SCALE: AS NOTED 1



INFINIGY ENGINEERING HAS EVALUATED THE EXISTING ANTENNA MOUNTS FOR THIS SITE. REFER TO MOUNT ANALYSIS BY INFINIGY, DATED 01/30/2020 PRIOR TO ANY CONSTRUCTION



SCALE: AS NOTED 2

PROPOSED WEST ELEVATION



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PROJECT MANAGER:
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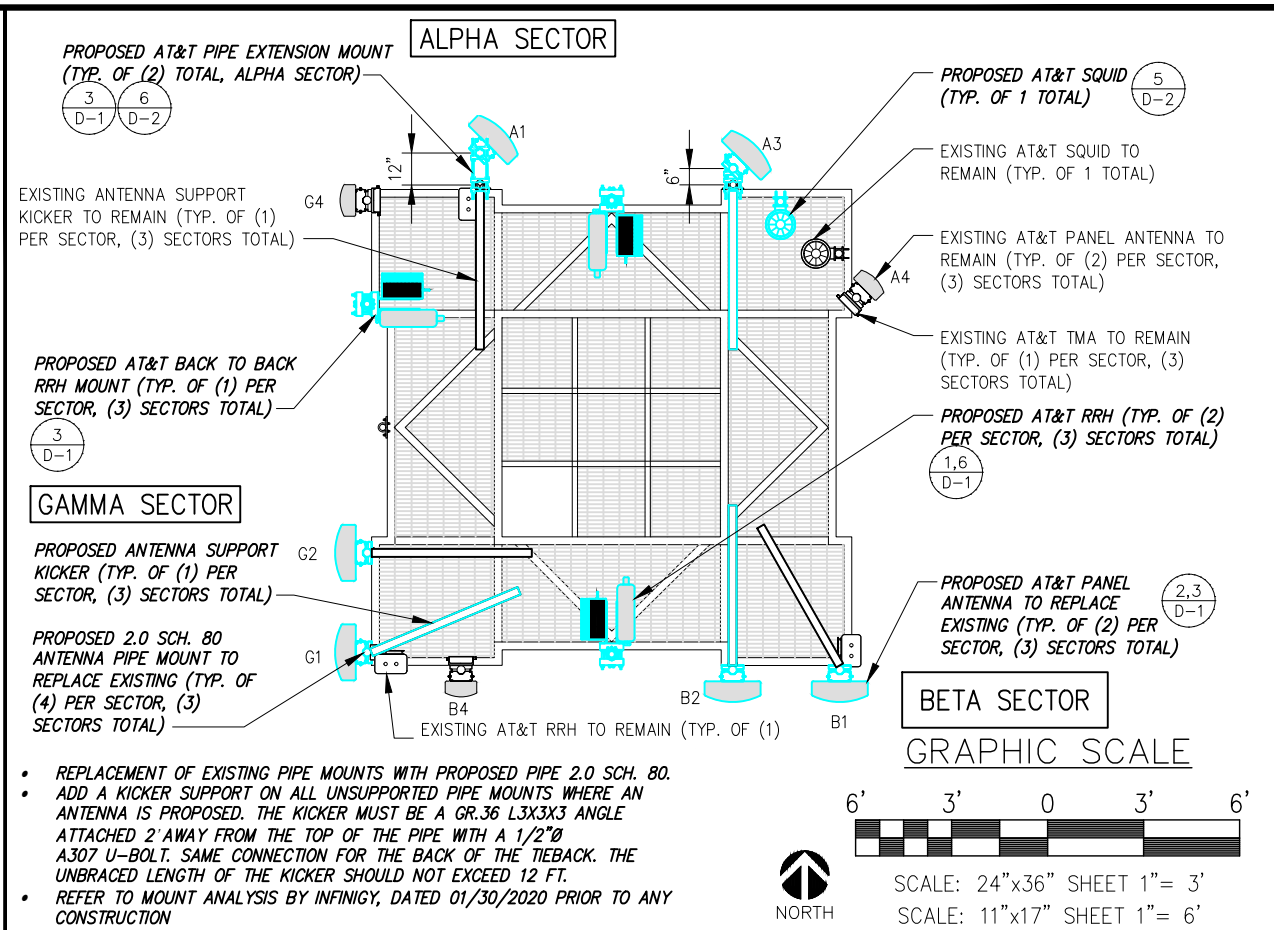
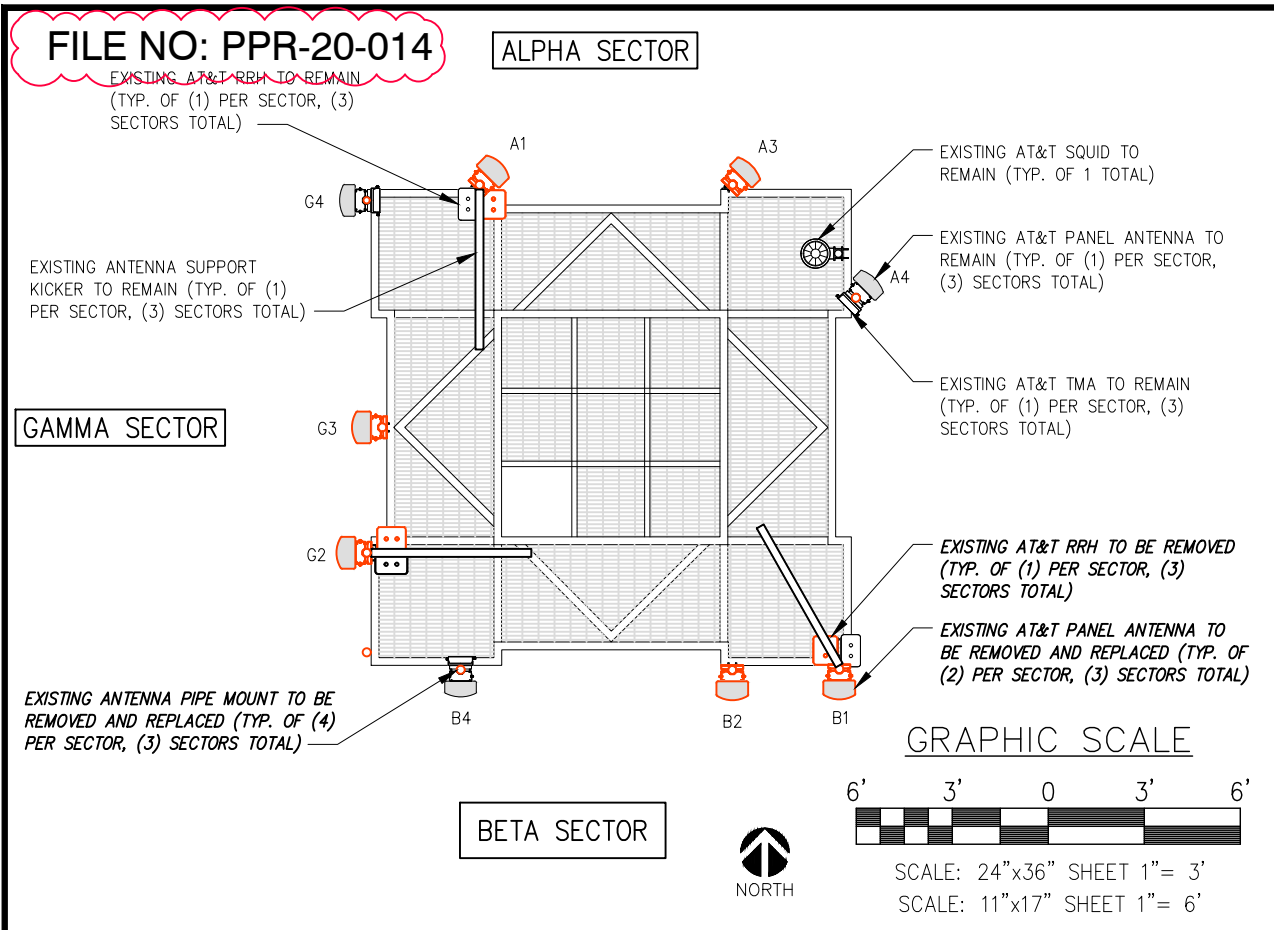
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COL02031

AT&T FA NUMBER:
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SITE ADDRESS:
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SHEET DESCRIPTION:
**WEST
ELEVATION**

SHEET NUMBER:
C-5



- REPLACEMENT OF EXISTING PIPE MOUNTS WITH PROPOSED PIPE 2.0 SCH. 80.
- ADD A KICKER SUPPORT ON ALL UNSUPPORTED PIPE MOUNTS WHERE AN ANTENNA IS PROPOSED. THE KICKER MUST BE A GR.36 L3X3X3 ANGLE ATTACHED 2' AWAY FROM THE TOP OF THE PIPE WITH A 1/2"Ø A307 U-BOLT. SAME CONNECTION FOR THE BACK OF THE TIEBACK. THE UNBRACED LENGTH OF THE KICKER SHOULD NOT EXCEED 12 FT.
- REFER TO MOUNT ANALYSIS BY INFINIGY, DATED 01/30/2020 PRIOR TO ANY CONSTRUCTION

EXISTING ANTENNA LAYOUT SCALE: AS NOTED 1

PROPOSED ANTENNA LAYOUT SCALE: AS NOTED 2

ANTENNA SCHEDULE						
SECTOR	POSITION	ANTENNA	TECHNOLOGY	RAD CENTER	RRH (QTY/TYP)	TMA/SQUID/DIPLEXER/FILTER (QTY/TYP)
ALPHA	1	(P) CCI TPA65R-BU8DA-K	LTE 700/1900	212'-0"	(P) 1/AHLBA (AT ANTENNA) (E) 1/B25 RRH4X30-4R (AT ANTENNA)	(E) (1) DC6-48-60-18-8F (AT ANTENNA) (P) (1) DC6-48-60-18-8F (AT ANTENNA)
ALPHA	2	--	--	--	--	--
ALPHA	3	(P) CCI TPA65R-BU8DA-K	LTE 850, 5G 850	212'-0"	(P) 1/AHCA (AT ANTENNA)	--
ALPHA	4	(E) KMW ET-X-UW-70-16-70-18-IR-AT	UMTS 850/1900	212'-0"	--	(E) 2/CBC721A-03 (SHELTER) (E) 1/E15S09P78 (AT ANTENNA)
BETA	1	(P) CCI TPA65R-BU8DA-K	LTE 700/1900	212'-0"	(P) 1/AHLBA (AT ANTENNA) (E) 1/B25 RRH4X30-4R (AT ANTENNA)	--
BETA	2	(P) CCI TPA65R-BU8DA-K	LTE 850, 5G 850	212'-0"	(P) 1/AHCA (AT ANTENNA)	--
BETA	3	--	--	--	--	--
BETA	4	(E) KMW ET-X-UW-70-16-70-18-IR-AT	UMTS 850/1900	212'-0"	--	(E) 2/CBC721A-03 (SHELTER) (E) 1/E15S09P78 (AT ANTENNA)
GAMMA	1	(P) CCI TPA65R-BU8DA-K	LTE 700/1900	212'-0"	(P) 1/AHLBA (AT ANTENNA) (E) 1/B25 RRH4X30-4R (AT ANTENNA)	--
GAMMA	2	(P) CCI TPA65R-BU8DA-K	LTE 850, 5G 850	212'-0"	(P) 1/AHCA (AT ANTENNA)	--
GAMMA	3	--	--	--	--	--
GAMMA	4	(E) KMW ET-X-UW-70-16-70-18-IR-AT	UMTS 850/1900	212'-0"	--	(E) 2/CBC721A-03 (SHELTER) (E) 1/E15S09P78 (AT ANTENNA)

CABLE INVENTORY		
CABLE TYPE	CABLE AMOUNT	CABLE LENGTH
1 (E)	1-1/4" FIBER (V.I.F.)	±280'
1 (P)	1/4" FIBER	±280'
2 (E)	8 AWG DC CABLES (V.I.F.)	±280'
2 (P)	8 AWG DC CABLES	±280'
4 (E)	7/8" (V.I.F.)	±280'

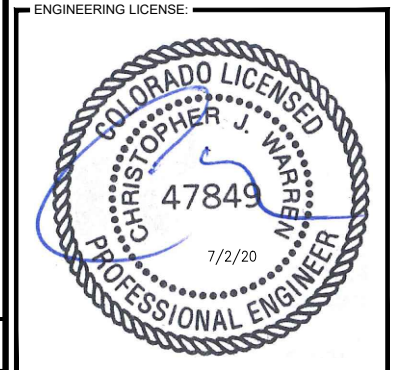
LOADING CHART NO SCALE 3

- NOTES:**
- INFORMATION BASED ON PROVIDED RFDS CURRENT AT THE TIME DRAWINGS WERE ISSUED. CONTRACTOR SHALL BASE CONSTRUCTION ON FINAL APPROVED RFDS. IN CASE OF CONFLICT, FINAL APPROVED RFDS SUPERSEDES THIS INFORMATION.
 - SEE RFDS FOR EXISTING AND PROPOSED ANTENNA MODEL/DIMENSIONS/AZIMUTHS/RAD CENTERS/TILTS.
 - CONTRACTOR TO VERIFY REQUIRED CABLE LENGTHS PRIOR TO CONSTRUCTION.
 - CONTRACTOR TO REMOVE UNUSED GSM COAX CABLES AS NECESSARY TO ACCOMMODATE PROPOSED DC & FIBER TRUNKS



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Office # (847) 648-4068
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PROJECT MANAGER:
mdj
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AT&T FA NUMBER:
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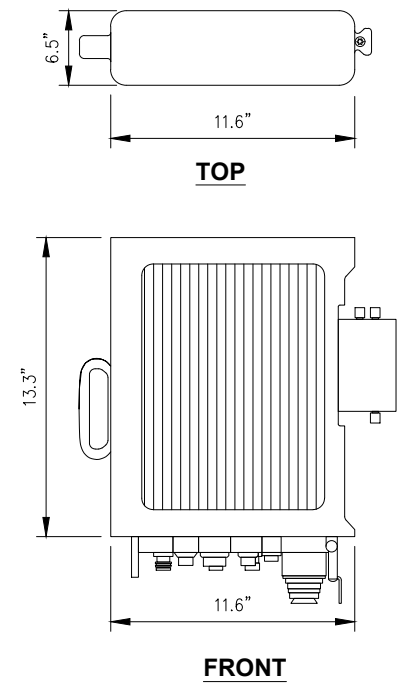
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**ANTENNA LAYOUTS
& LOADING CHART**

SHEET NUMBER:
C-6

FILE NO: PPR-20-014

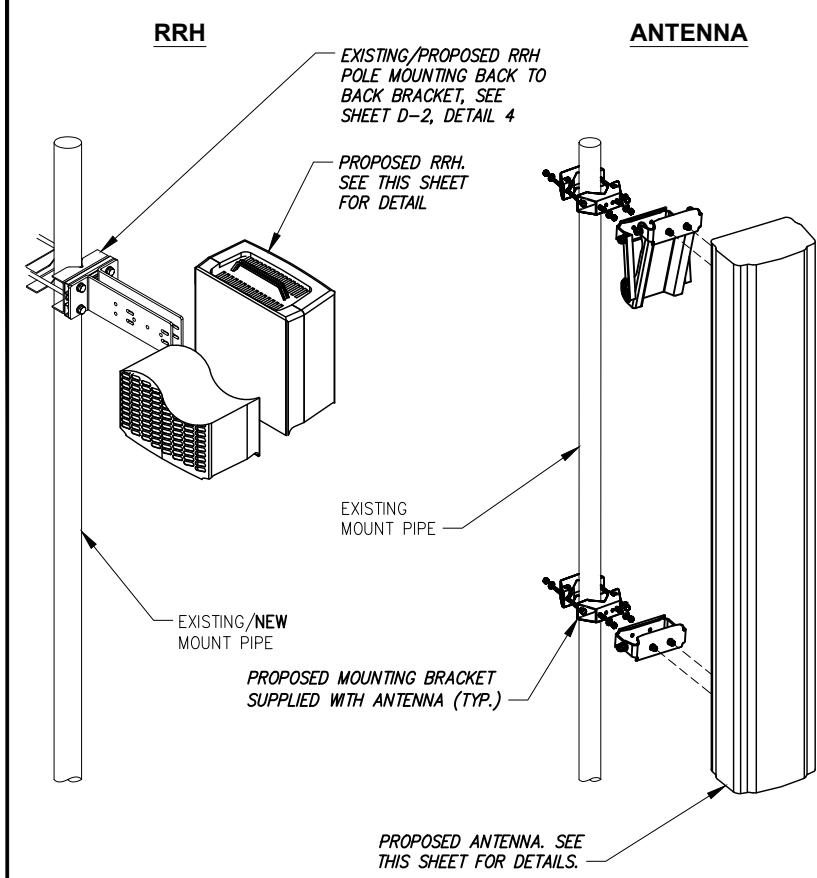
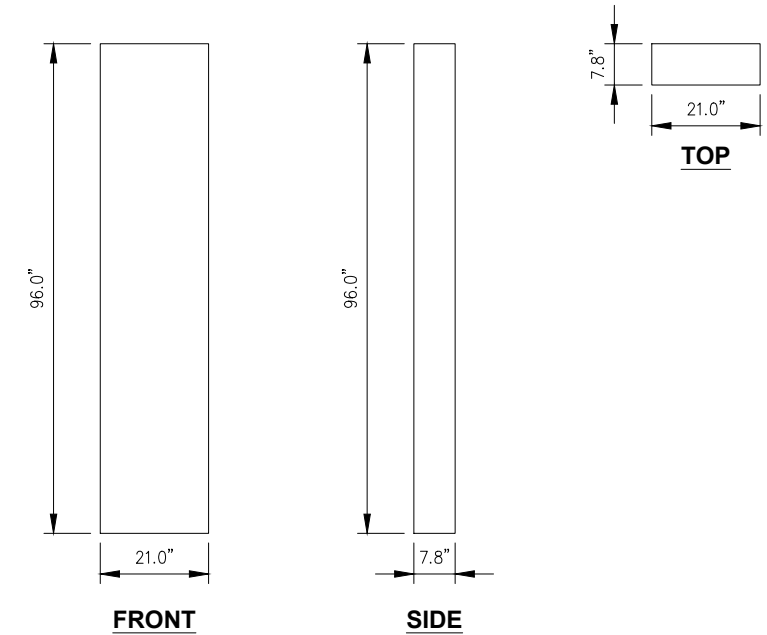
AIRSCALE RADIO MODULE (AHCA)

DIMENSIONS (WxDxH): 11.6"x6.5"x13.3"
 WEIGHT, WITHOUT BRACKETS: 36.8 lbs.



CCI PANEL ANTENNA (TPA65R-BU8DA-K)

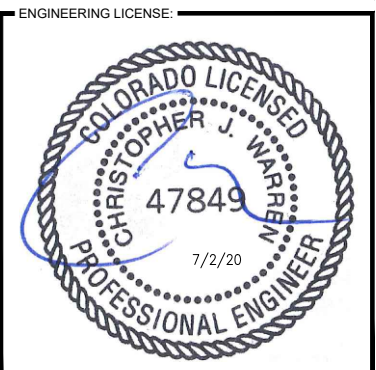
DIMENSIONS, HxWxD: 96.0"x21.0"x7.8"
 WEIGHT, W/O BRACKETS: 82.5 lbs



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SHEET DESCRIPTION:
EQUIPMENT DETAILS

SHEET NUMBER:
D-1

REMOTE RADIO HEAD SPECIFICATIONS (OR SIMILAR)

NO SCALE 1

PANEL ANTENNA SPECIFICATIONS (OR SIMILAR)

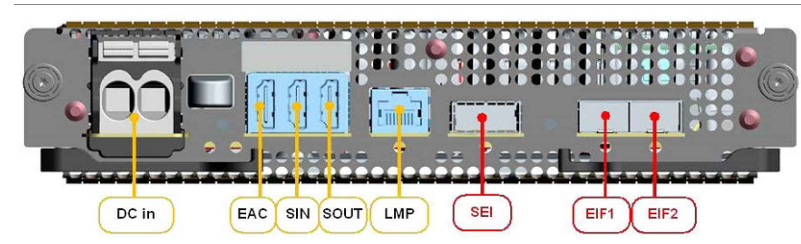
NO SCALE 2

EQUIPMENT MOUNTING DETAIL

NO SCALE 3

NOKIA ASIK UNIT

DIMENSIONS, HxWxD: 1.9"x8.6"x14.8" (UNIT ONLY)
 WEIGHT: 7.1 LBS. (UNIT ONLY)



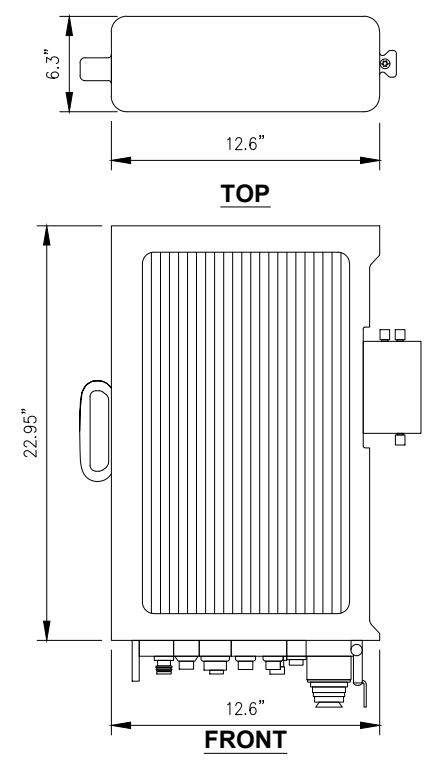
NOKIA FSM4 BBU

DIMENSIONS (WxDxH): 17.6"x15.7"x5.1"



AIRSCALE RADIO MODULE (AHLBA)

DIMENSIONS (WxDxH): 12.6"x6.3"x23.0"
 WEIGHT, WITHOUT BRACKETS: 53.0 lbs.



ASIK SPECIFICATIONS

NO SCALE 4

FSM4 BBU SPECIFICATIONS

NO SCALE 5

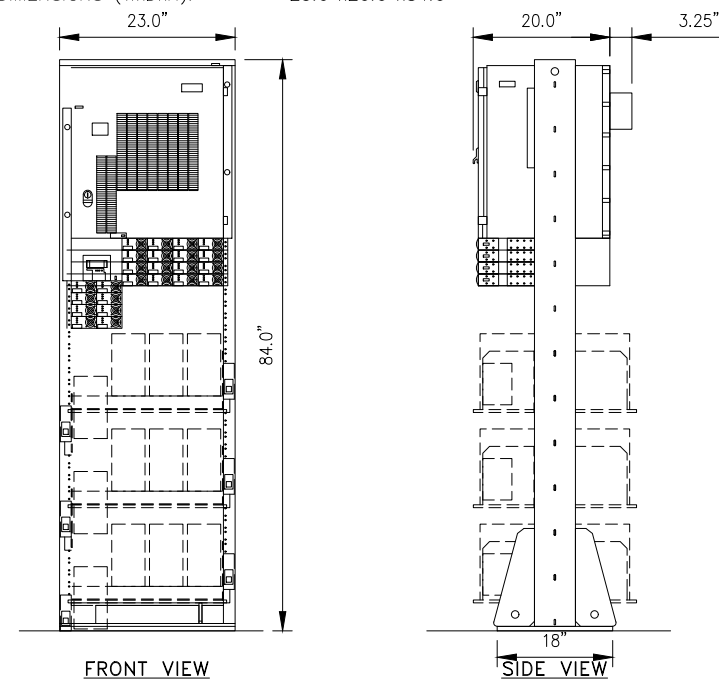
REMOTE RADIO HEAD SPECIFICATIONS (OR SIMILAR)

NO SCALE 6

FILE NO: PPR-20-014

EMERSON NETSURE 7100 -48VDC POWER SYSTEM

DIMENSIONS (WxDxH): 23.0"x20.0"x84.0"



NOTE:
FOR ANCHORAGE SEE SHEET D-2, DETAIL 3

NOTE:
FOR GROUNDING SEE SHEET G-1, DETAIL 2

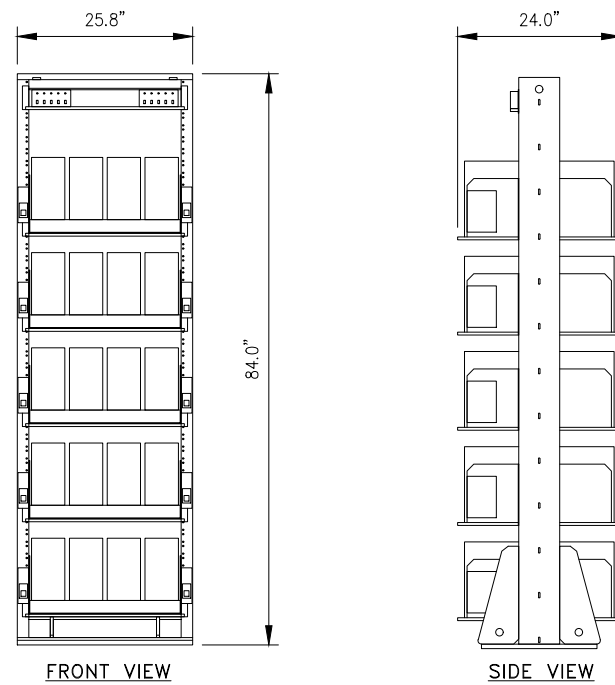
POWER SYSTEM DETAIL

NO SCALE

1

EMERSON SEISMIC RATED INDOOR -48VDC VRLA BATTERY RACK

DIMENSIONS (WxDxH): 25.8"x24.0"x84.0"



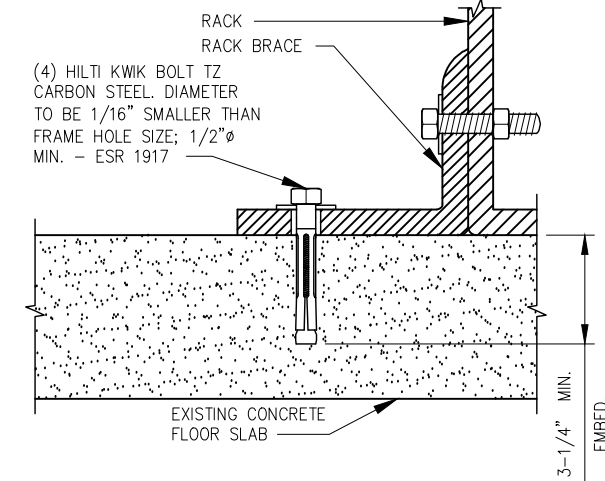
NOTE:
FOR ANCHORAGE SEE SHEET D-2, DETAIL 3

NOTE:
FOR GROUNDING SEE SHEET G-1, DETAIL 2

BATTERY RACK DETAIL

NO SCALE

2



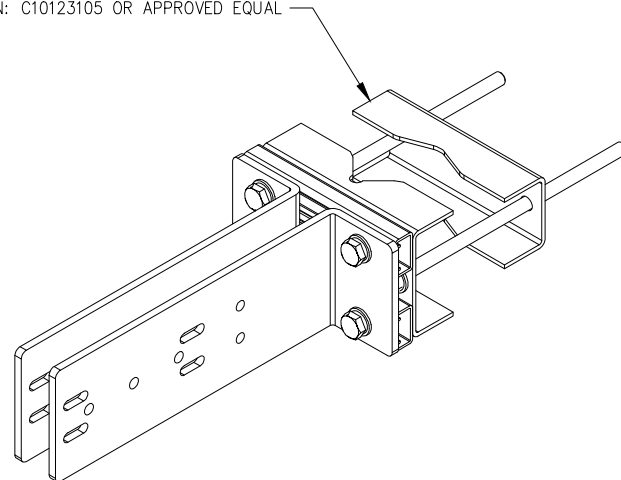
RACK MOUNT DETAIL

NO SCALE

3

UNIVERSAL PIPE MOUNT BRACKET FOR 2" TO 5" OD PIPE. FITS UP TO 20 DEGREE TAPERS. FITS 2"-6" ROUND TOWER LEGS AND 2-1/2" - 6" ANGLE TOWER LEGS

SABRE P/N: C10123105 OR APPROVED EQUAL

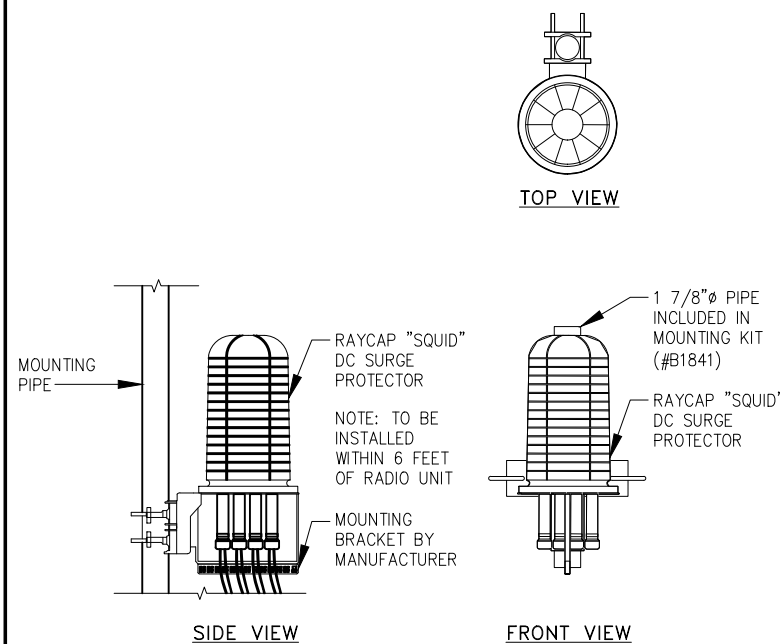


BACK TO BACK MOUNT DETAIL

NO SCALE

4

MANUFACTURER: RAYCAP
MODEL: DC6-48-60-18-8F "SQUID"



SIDE VIEW

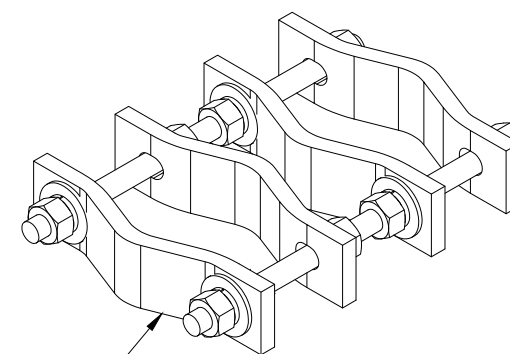
FRONT VIEW

SQUID DETAIL

NO SCALE

5

PIPE TO PIPE CLAMP SET, SITEPRO1 P/N: DCP12K OR APPROVED EQUAL



PIPE TO PIPE MOUNT DETAIL

NO SCALE

6

PLANS PREPARED FOR:



PLANS PREPARED BY:

INFINIGY
ENGINEERING, PLLC

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HOFFMAN ESTATES, IL 60169
Office # (847) 648-4068

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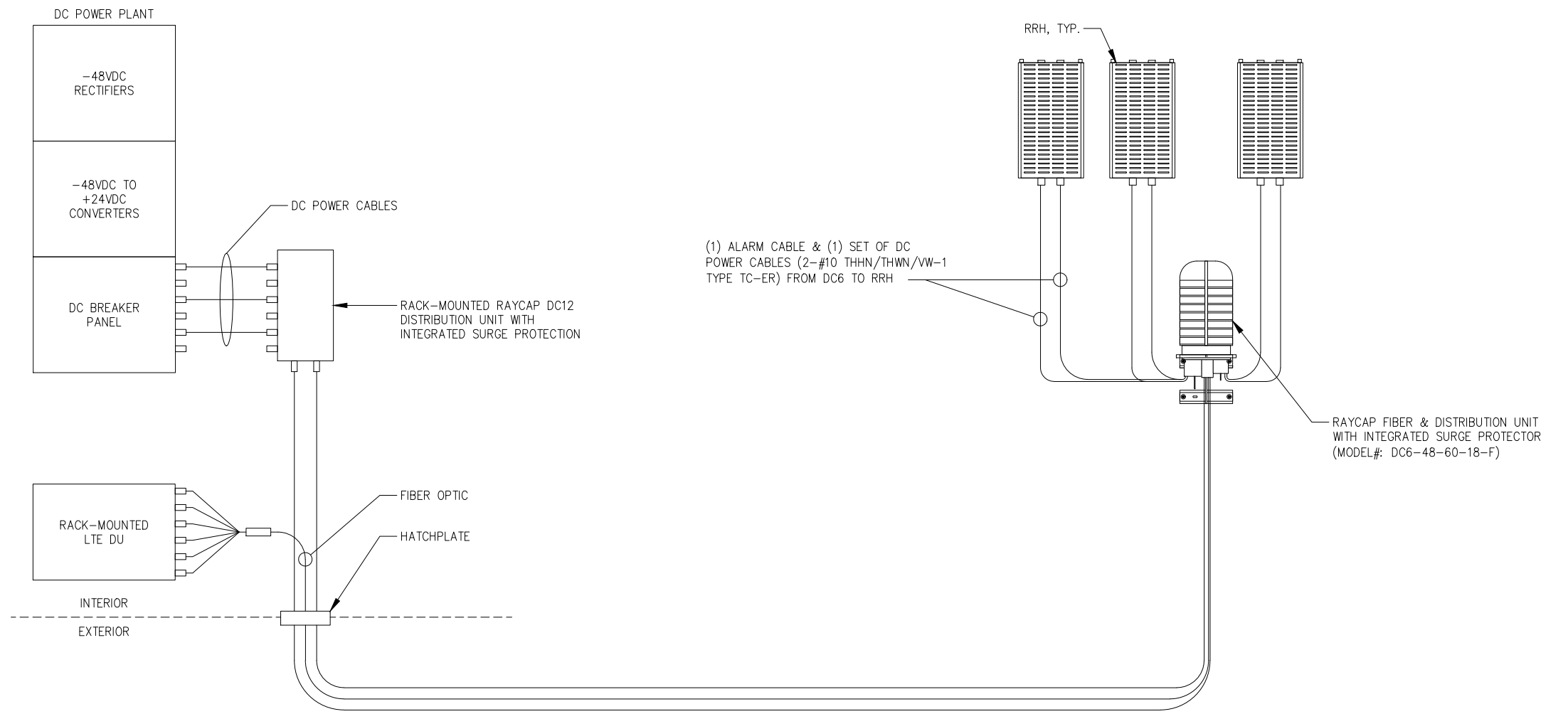
EQUIPMENT DETAILS

SHEET NUMBER:

D-2

FILE NO: PPR-20-014

- NOTE:
- DC POWER WIRING SHALL BE COLOR CODED AT EACH END FOR IDENTIFYING +24V AND -48V CONDUCTORS. RED MARKINGS SHALL IDENTIFY +24V AND BLUE MARKINGS SHALL IDENTIFY -48V. REFER TO ATT-002-290-701.
 - NON-LTE DC POWER WIRING SIZE 14AWG TO 10AWG SHALL BE TELCOFLEX III. DC POWER WIRING 8AWG AND LARGER SHALL BE TELCOFLEX IV. ALL TELCOFLEX MUST BE L2 IF REPLACED.
 - LTE POWER WIRING SHALL BE IN ACCORDANCE WITH ATT-002-290-531.
 - DC ELECTRICAL LOAD DEMAND FOR PROPOSED ADDITIONS WERE INCLUDED IN PRIOR AC LOAD CALCULATIONS.
 - ALL UPGRADES TO EXISTING SERVICE IS RESPONSIBILITY OF THE OWNER.



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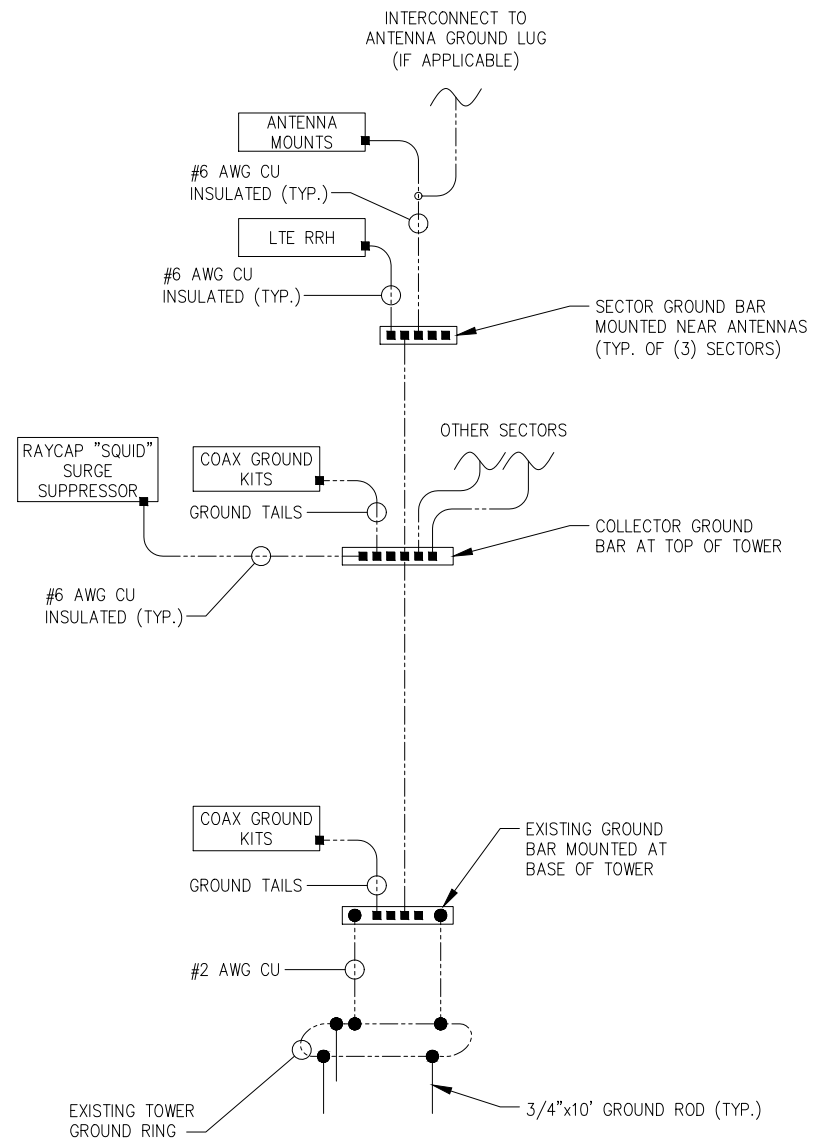
AT&T FA NUMBER:
10093755

SITE ADDRESS:
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SHEET DESCRIPTION:
**DC SCHEMATIC
 DIAGRAM**

SHEET NUMBER:
E-1

FILE NO: PPR-20-014



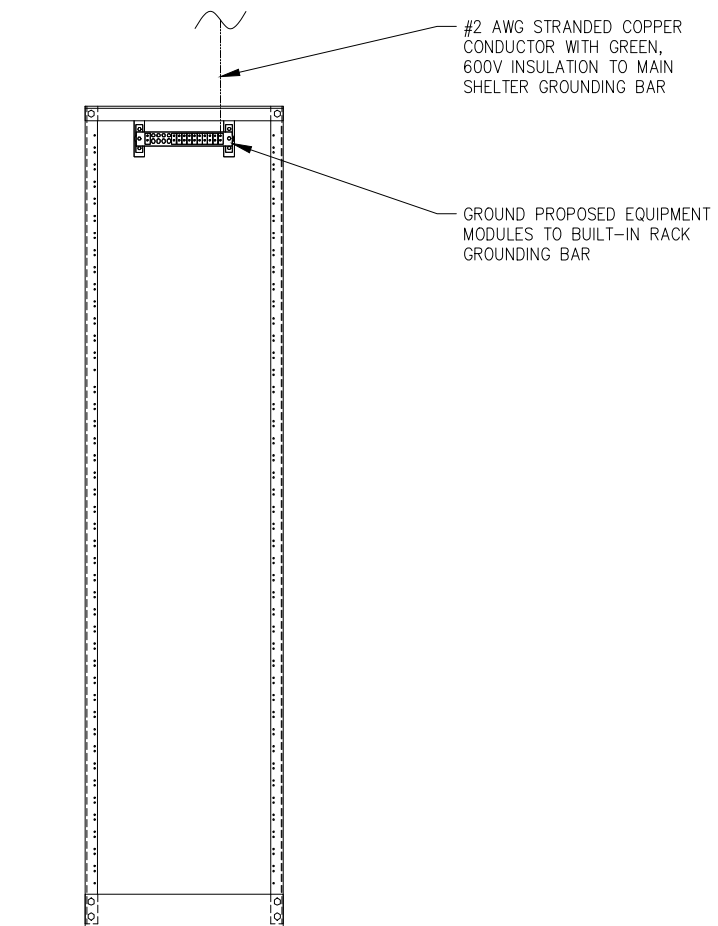
LEGEND:

- EXOTHERMIC
- COMPRESSION TYPE CONNECTIONS
- GROUNDING CONDUCTOR

LTE BUILDING GROUNDING SCHEMATIC (TYPICAL)

NO SCALE

1



- NOTES:**
1. SPACING BETWEEN EQUIPMENT WITHIN THE RACK SHALL BE ONE RACK UNIT (OR APPROXIMATELY 1-3/4").
 2. SPACING BETWEEN RACKS MUST BE 1" MINIMUM.
 3. REFER TO FINAL RFDS FOR RF DESIGN AND PLUMBING.
 4. REFER TO EQUIPMENT LAYOUT FOR RACK LOCATION.
 5. SEE PAGE G-2 FOR GROUNDING CONNECTION DETAILS.
 6. MINIMUM 8 RACK UNITS OF SPACE ABOVE EQUIPMENT IN FIF RACKS.
 7. MAINTAIN 4 RACK UNITS OF SPACE BETWEEN RAYCAP AND SUPPRESSORS.
 8. ADD P-TAPE LABELS TO ALL EQUIPMENT.
 9. DETAIL INDICATES TYPICAL CONFIGURATION. ACTUAL SITE CONDITIONS MAY DIFFER.

LEGEND:

- EXOTHERMIC
- COMPRESSION TYPE CONNECTIONS
- GROUNDING CONDUCTOR

RACK GROUNDING (TYPICAL)

NO SCALE

2



PLANS PREPARED BY:

INFINIGY
ENGINEERING, PLLC

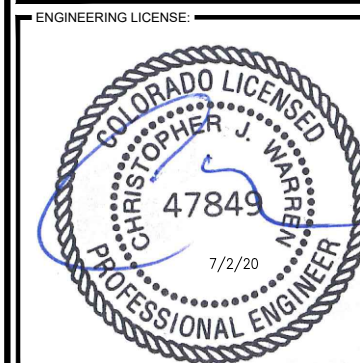
2500 W. HIGGINS RD, SUITE 500
HOFFMAN ESTATES, IL 60169
Office # (847) 648-4068

JOB NUMBER: 674-003

PROJECT MANAGER:

md7

10590 W. OCEAN AIR DRIVE, SUITE 300
SAN DIEGO, CA 92130



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REVISED/ISSUED FOR REVIEW	11/26/19	CAP	B

AT&T SITE NAME:

CALHAN

AT&T SITE NUMBER:

COL02031

AT&T FA NUMBER:

10093755

SITE ADDRESS:

11598 HAHN ROAD
CALHAN, CO 80808

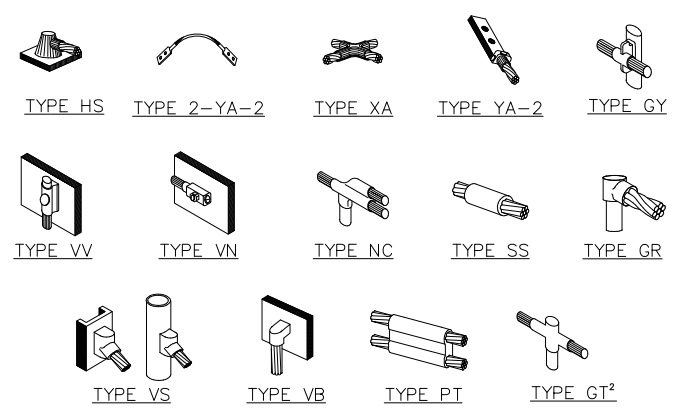
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GROUNDING SCHEMATIC
DIAGRAM

SHEET NUMBER:

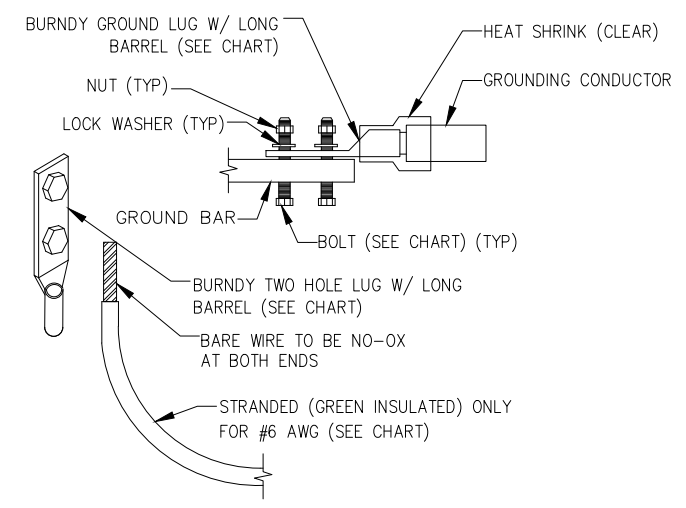
G-1

FILE NO: PPR-20-014



NOTE:
 1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
 2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" - 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" - 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" - 16 NC S 2 BOLT



NOTES:
 1. ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.



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 2500 W. HIGGINS RD, SUITE 500
 HOFFMAN ESTATES, IL 60169
 Office # (847) 648-4068
 JOB NUMBER: 674-003

PROJECT MANAGER:

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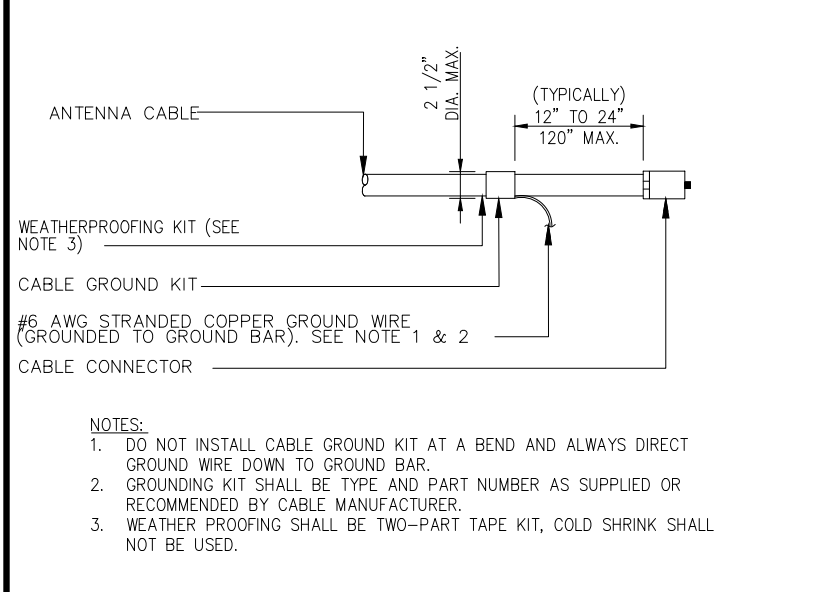
SITE ADDRESS:
**11598 HAHN ROAD
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SHEET DESCRIPTION:
GROUNDING DETAILS

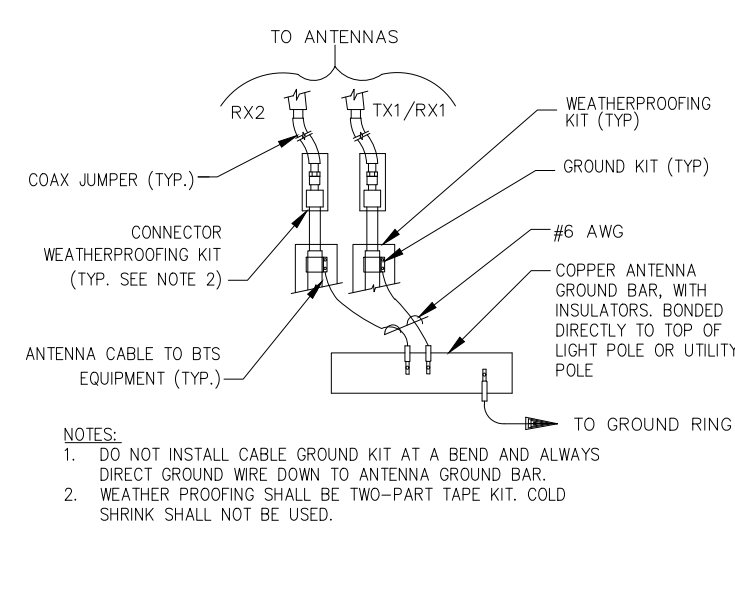
SHEET NUMBER:
G-2

EXOTHERMIC WELD GROUNDING CONNECTIONS

NO SCALE 1



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



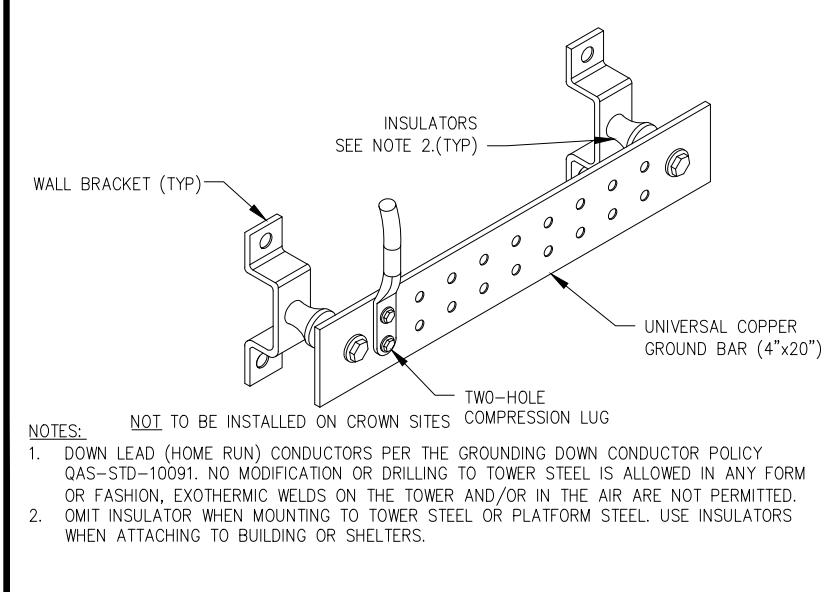
NOTES:
 1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
 2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

CABLE GROUND KIT CONNECTION

NO SCALE 3

GROUND CABLE CONNECTION

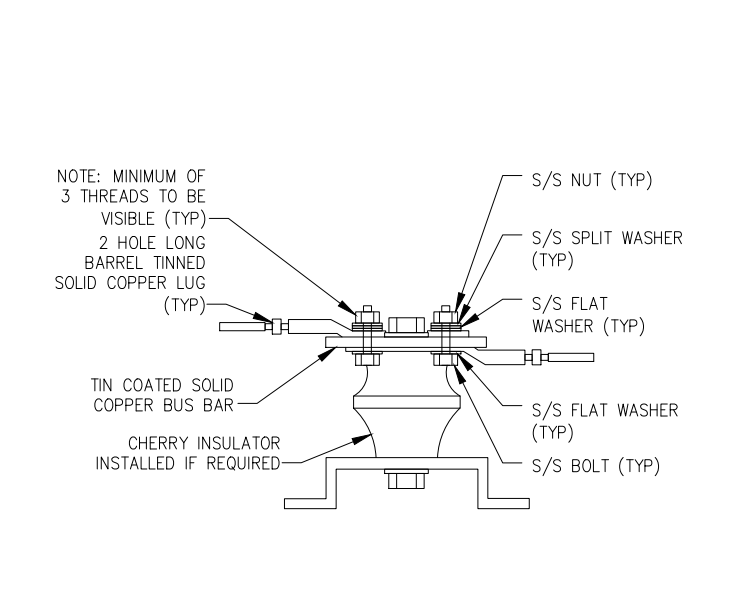
NO SCALE 4



NOTES:
 1. DOWN LEAD (HOME RUN) CONDUCTORS PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, EXOTHERMIC WELDS ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.
 2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL. USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

GROUND BAR DETAIL

NO SCALE 6



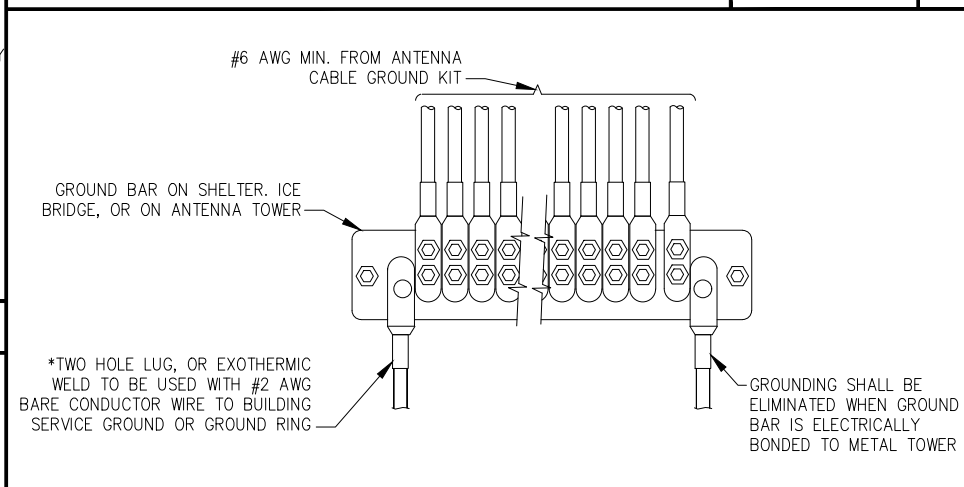
NOTE: MINIMUM OF 3 THREADS TO BE VISIBLE (TYP)
 2 HOLE LONG BARREL TINNED SOLID COPPER LUG (TYP)
 S/S NUT (TYP)
 S/S SPLIT WASHER (TYP)
 S/S FLAT WASHER (TYP)
 TIN COATED SOLID COPPER BUS BAR
 CHERRY INSULATOR INSTALLED IF REQUIRED
 S/S FLAT WASHER (TYP)
 S/S BOLT (TYP)

LUG DETAIL

NO SCALE 7

MECHANICAL LUG CONNECTION

NO SCALE 2



*TWO HOLE LUG, OR EXOTHERMIC WELD TO BE USED WITH #2 AWG BARE CONDUCTOR WIRE TO BUILDING SERVICE GROUND OR GROUND RING
 GROUNDING SHALL BE ELIMINATED WHEN GROUND BAR IS ELECTRICALLY BONDED TO METAL TOWER

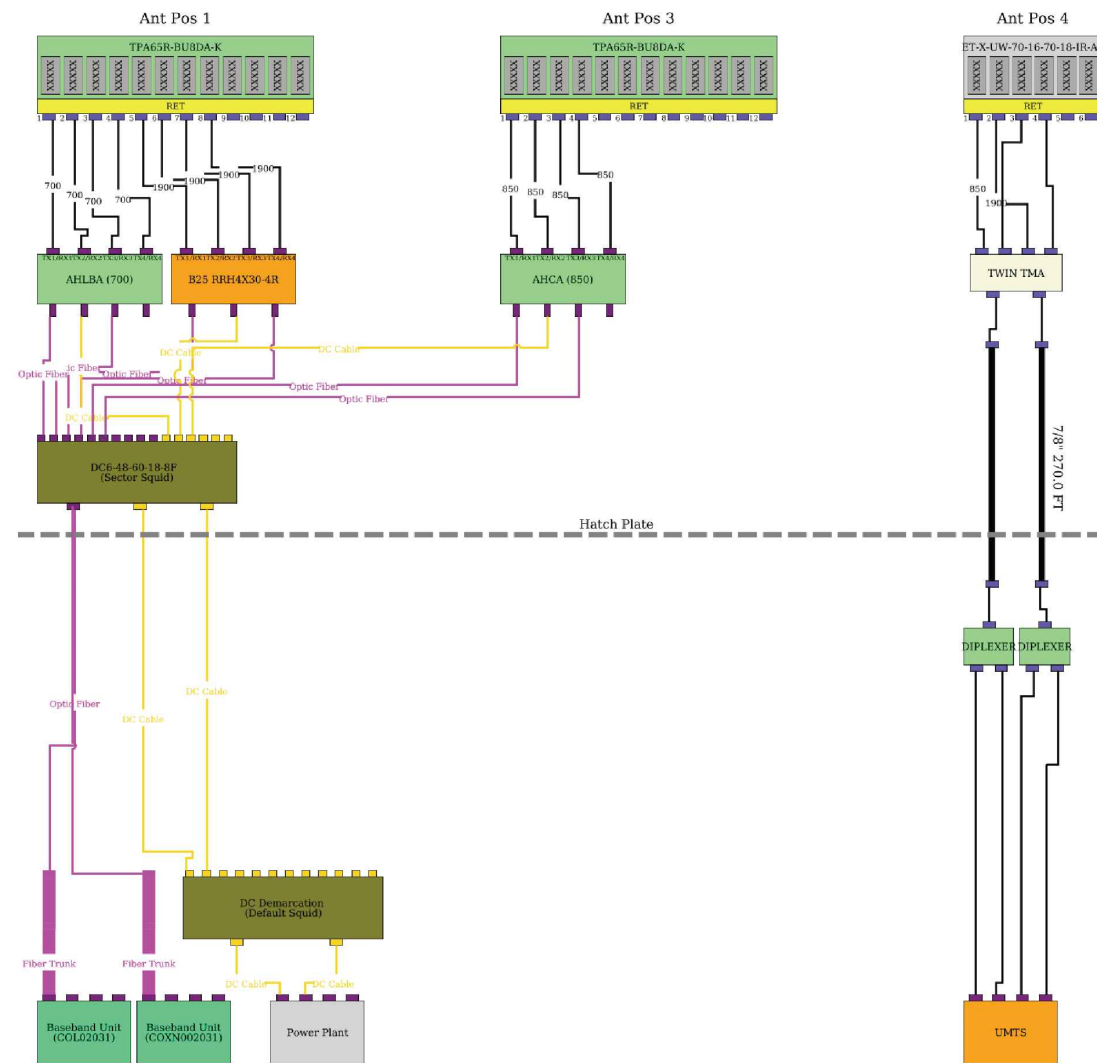
GROUND WIRE INSTALLATION

NO SCALE 5

NOT USED

NO SCALE 8

FILE NO: PPR-20-014



PLANS PREPARED FOR:



PLANS PREPARED BY:

INFINIGY
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HOFFMAN ESTATES, IL 60169
Office # (847) 648-4068

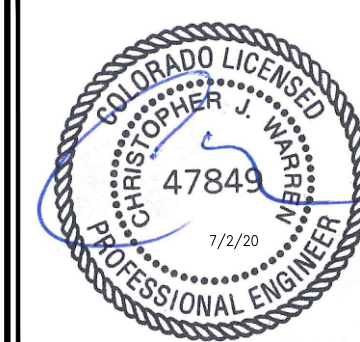
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ENGINEERING LICENSE:



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AT&T FA NUMBER:

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SITE ADDRESS:

11598 HAHN ROAD
CALHAN, CO 80808

SHEET DESCRIPTION:

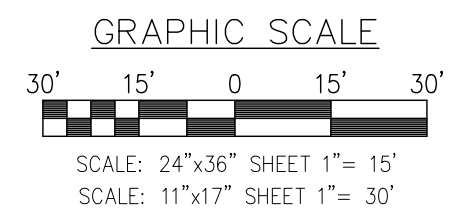
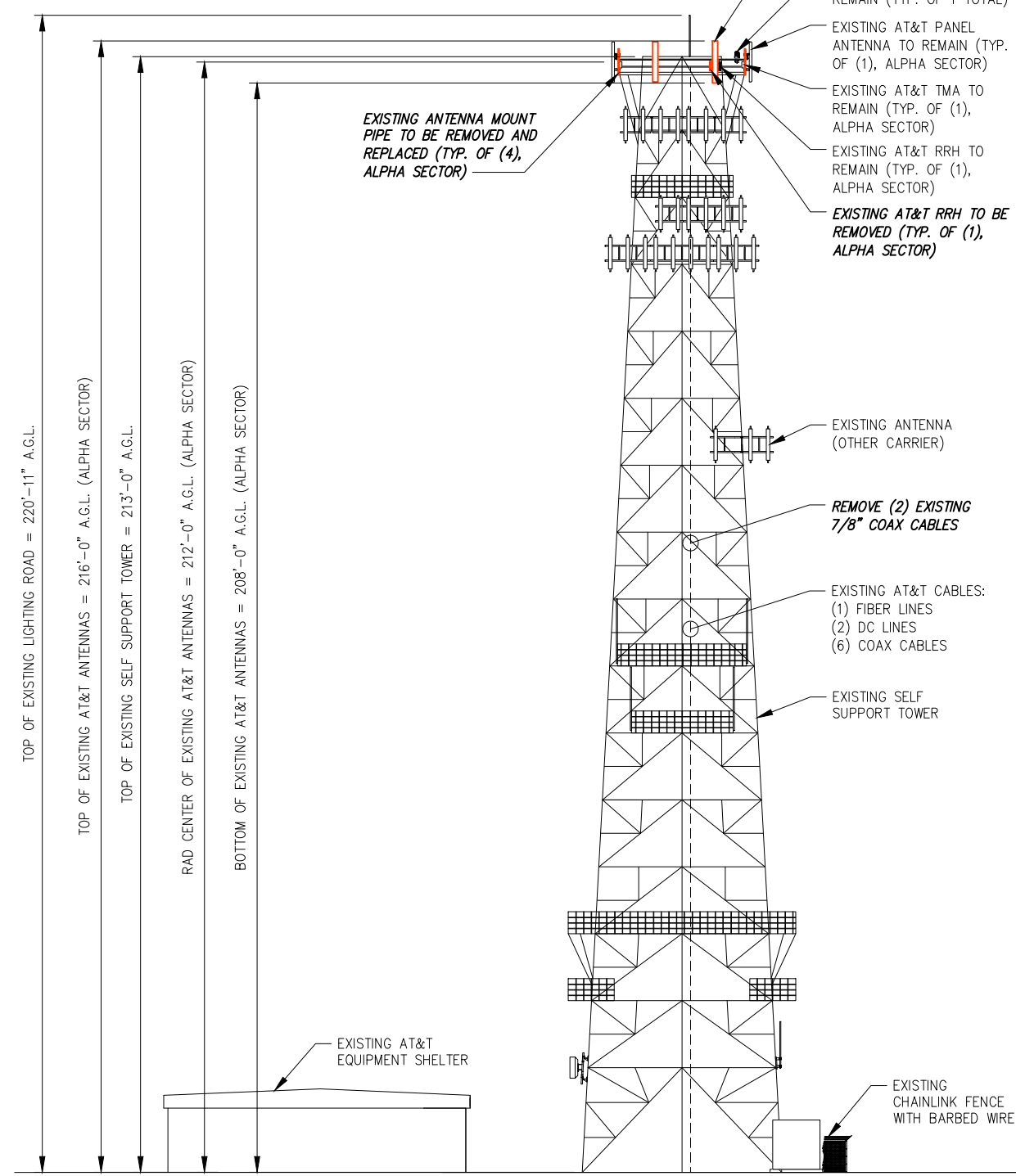
PLUMBING DIAGRAM

SHEET NUMBER:

RF-1

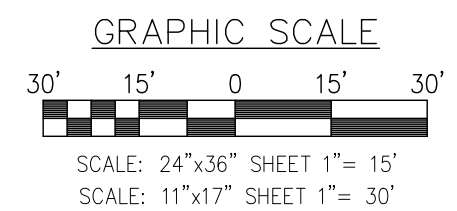
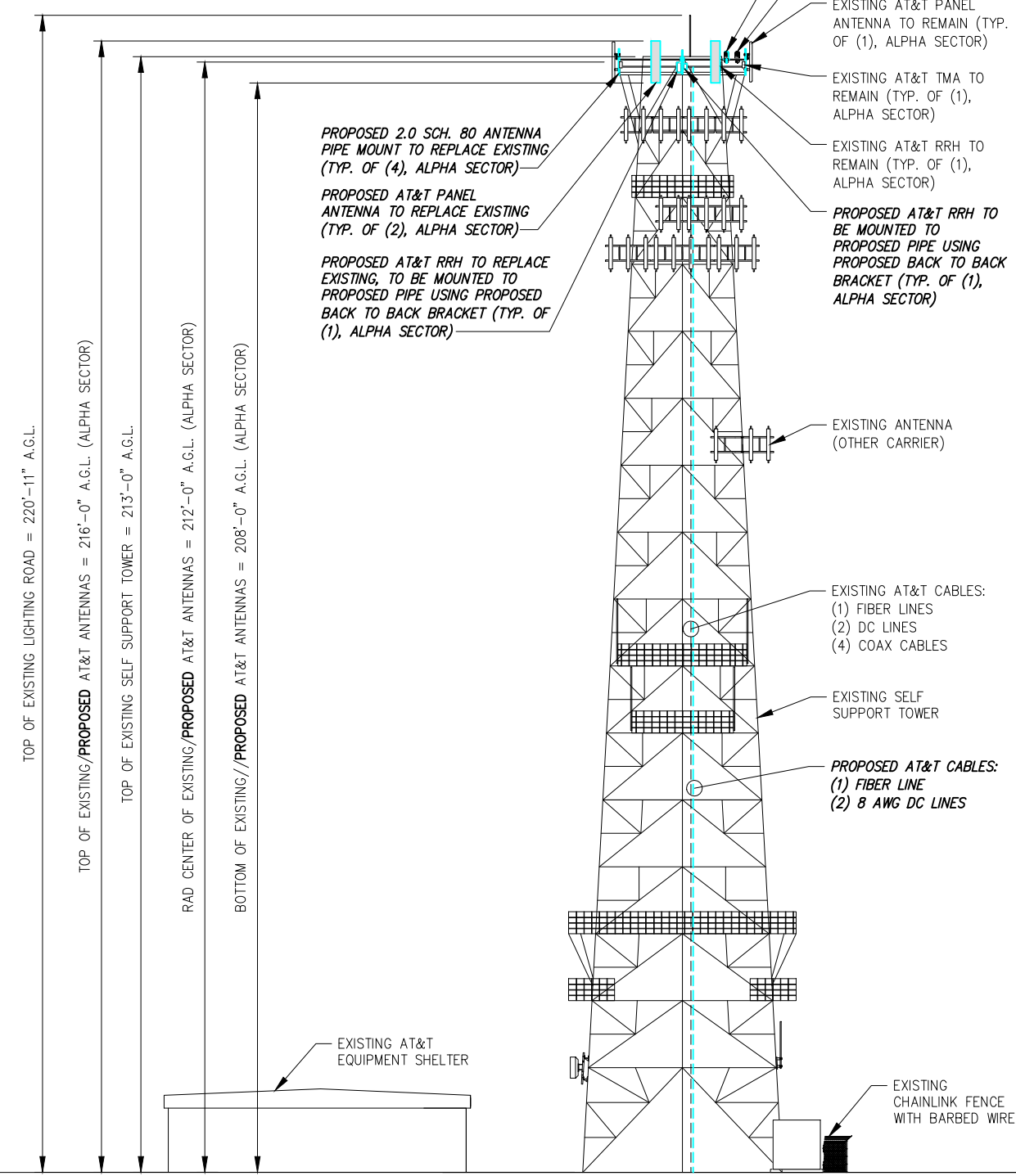
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No Comments



EXISTING NORTH ELEVATION

SCALE: AS NOTED 1



PROPOSED NORTH ELEVATION

SCALE: AS NOTED 2



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HOFFMAN ESTATES, IL 60169
Office # (847) 648-4068
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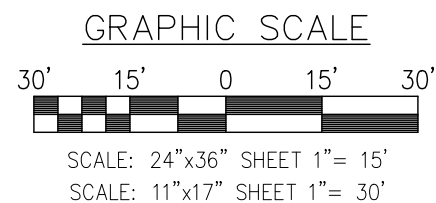
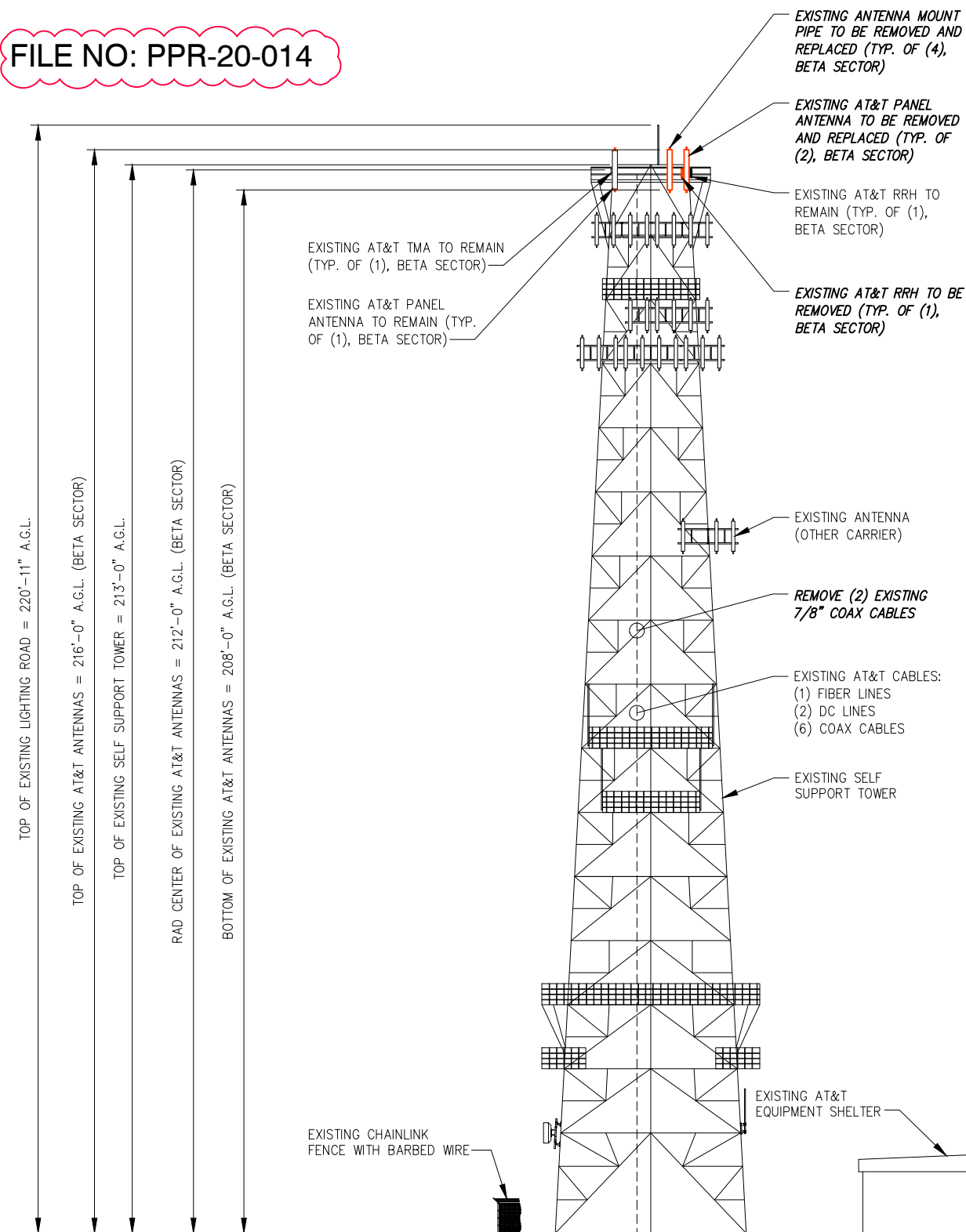
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SHEET DESCRIPTION:
**NORTH
ELEVATION**

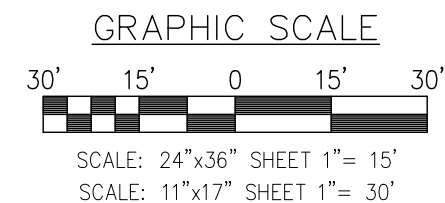
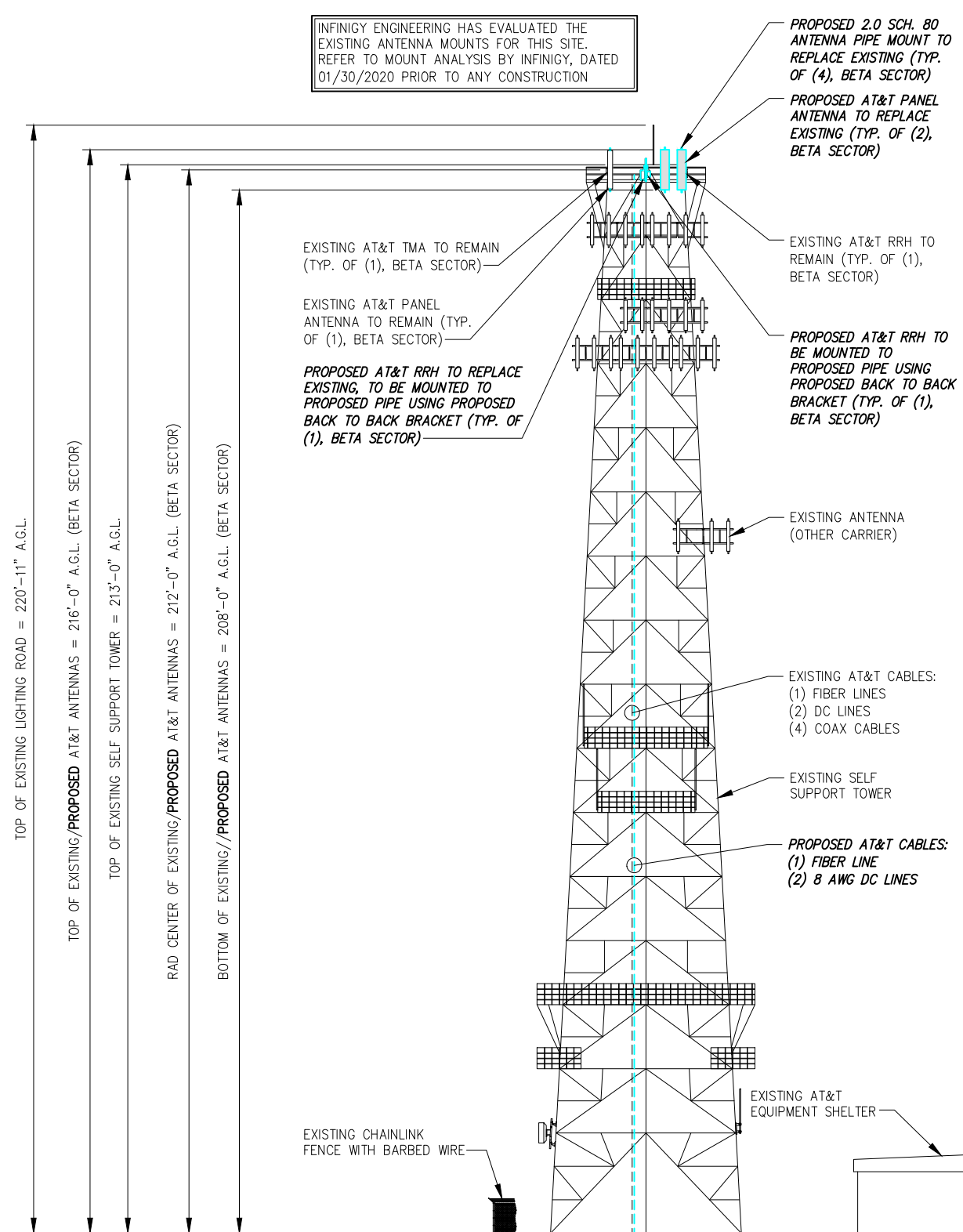
SHEET NUMBER:
C-3

FILE NO: PPR-20-014



EXISTING SOUTH ELEVATION

SCALE: AS NOTED 1



PROPOSED SOUTH ELEVATION

SCALE: AS NOTED 2



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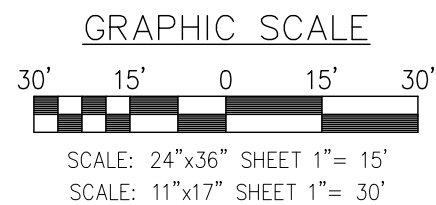
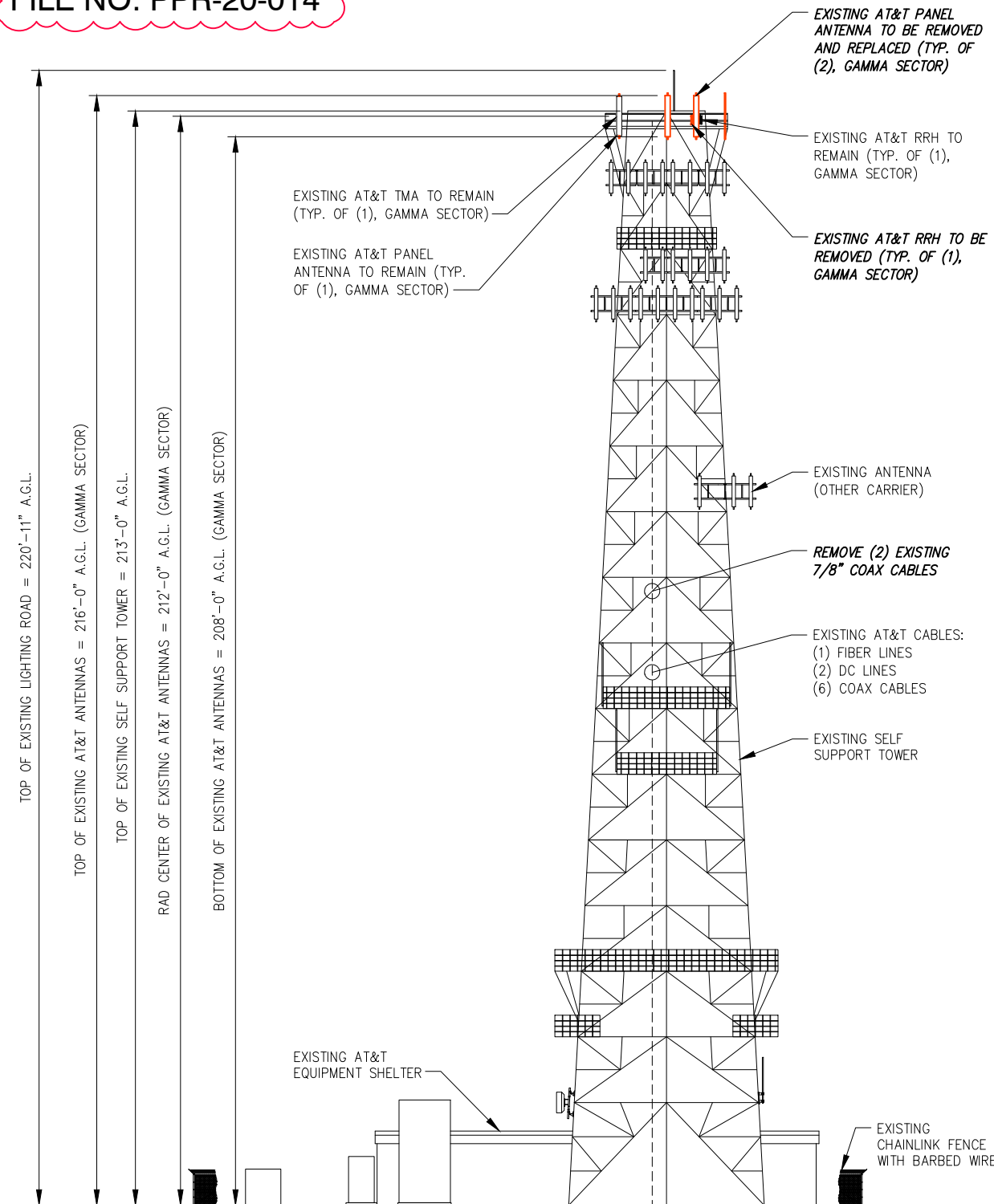
AT&T FA NUMBER:
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SHEET DESCRIPTION:
**SOUTH
ELEVATION**

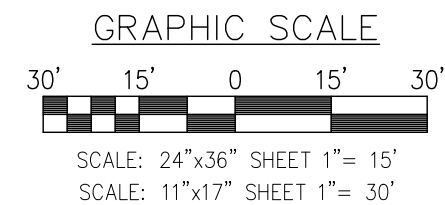
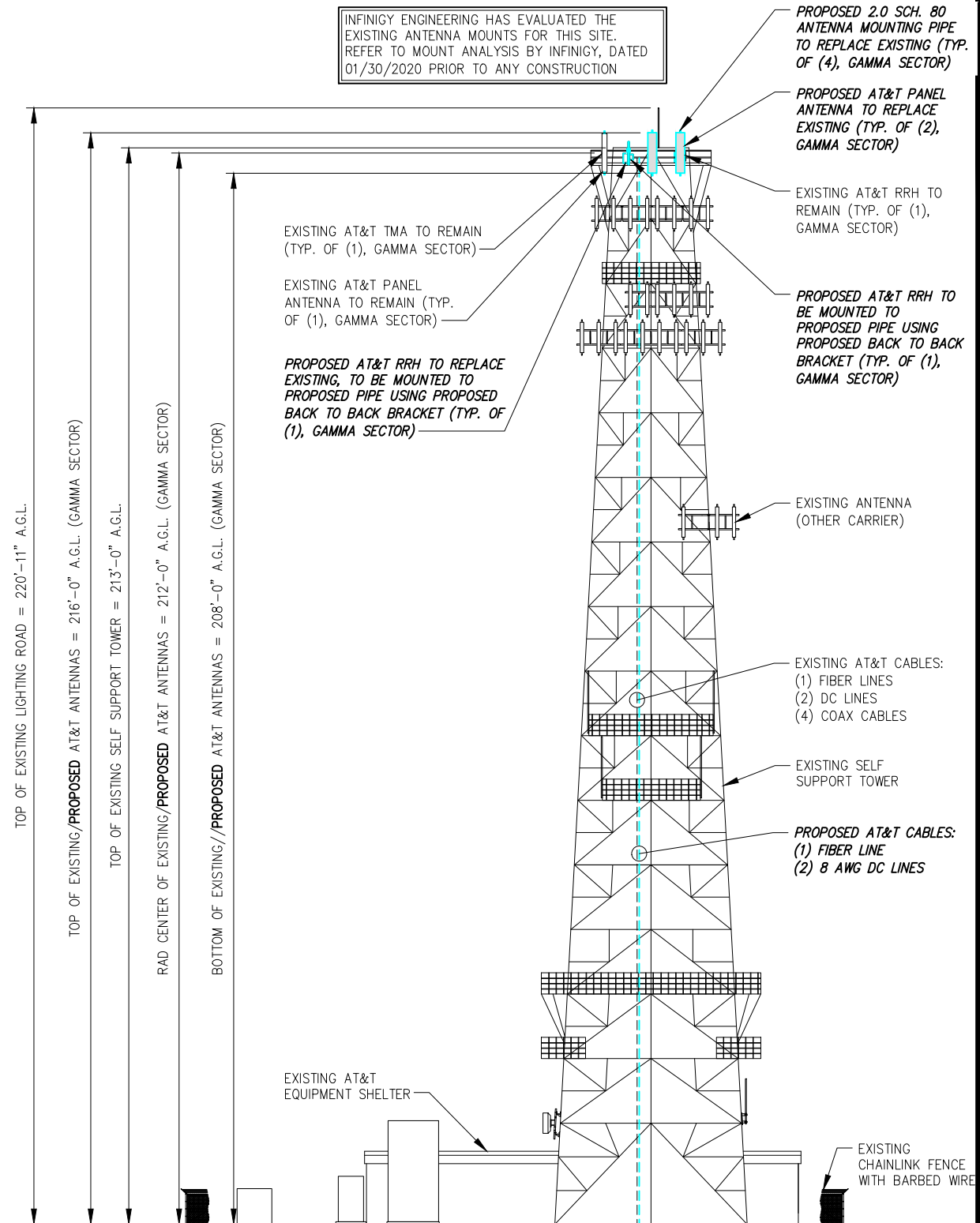
SHEET NUMBER:
C-4

FILE NO: PPR-20-014



EXISTING WEST ELEVATION

SCALE: AS NOTED 1



PROPOSED WEST ELEVATION

SCALE: AS NOTED 2



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10093755

SITE ADDRESS:
**11598 HAHN ROAD
CALHAN, CO 80808**

SHEET DESCRIPTION:
**WEST
ELEVATION**

SHEET NUMBER:
C-5



July 2, 2020

To:
El Paso County
Planning and Community Development
Department
Colorado Springs, CO 80910
(719) 520-6300

From:
Lorelei Foronda, Md7 LLC (for AT&T)
10590 W. Ocean Air Drive, Suite 300
San Diego, CA 92130
(858) 754-2151
lforonda@md7.com

Letter of Justification

Modification to an Existing AT&T Wireless Telecommunication Facility

Project Description:

AT&T seeks approval from planning to allow a modification to an existing telecommunication facility located at 11598 Hahn Rd., Calhan, CO 80808. The scope of work is as follows:

- REMOVE AND REPLACE (6) PANEL ANTENNAS
- REMOVE AND REPLACE (3) RRHS
- INSTALL (3) NEW RRHS
- RELOCATE (1) RRH FROM POSITION 2 TO POSITION 1 FOR GAMMA SECTOR
- REMOVE AND REPLACE (12) ANTENNA PIPE MOUNTS
- REMOVE (2) 7/8" COAX CABLES
- REMOVE EXISTING OBSOLETE GE INFINITY NE "M" SERIES +24V DCP (NEQ.15266) FROM SITE.
- INSTALL (1) EA. VERTIV INDOOR NETSURE 7100 -48V DCP (NEQ.19735) EQUIPPED WITH (10) EA. 2 KW -48 VDC RECTIFIERS NEQ.15930) AND (5) EA. HE 1.5 KW -48VDC/+24VDC CONVERTER MODULES (NEQ.15929).
- REMOVE (1) EA. EXISTING +24VDC BATTERY RACK FROM SITE.
- INSTALL (1) NEW VERTIV INDOOR SEISMIC RATED -48VDC VRLA BATTERY RACK (NEQ.15312).
- RE-INSTALL (20) OF (20) EA. EXISTING GNB M12V155F BATTERIES (NEQ.12090) I.E. (5) 155AHR STRINGS EACH CONFIGURES @ -48VDC NOMINAL TO PROVIDE 4.35 HRS OF BATTERY RESERVE CAPACITY.
- INSTALL (1) NEW NOKIA 5G NR (ASKIK C-1) FSM BBU (CEQ.20975)
- INSTALL (2) 50A BREAKERS FOR FSM4, (3) 25 AMP BREAKERS FOR AHCA & (3) 50 AMP BREAKERS FOR AHLBA RRH.
- INSTALL (1) DC6-48-60+18-8F RAYCAP WITH (1) FIBER LINE AND (2) 8 AWC DC LINES.
- INSTALL (3) SUPPORT KICKERS FOR NEW ANTENNAS.
- INSTALL (1) COMMSCOPE POWERSHIFT SHELF AND MODULES
- REPLACEMENT OF EXISTING PIPE MOUNTS WITH PROPOSED PIP 2.0 SCH. 80.
- ADD KICKER SUPPORT ON ALL UNSUPPORTED PIPE MOUNTS WHERE AN ANTENNA IS PROPOSED. THE KICKER MUST BE A GR.36 L3X3X3 ANGLE ATTACHED 2 AWAY FROM THE TOP OF THE PIPE WITH A 1/2" A307 U-BOLT. SAME CONNECTION FOR THE BACK OF THE TIEBACK THE UNBRACED LENGTH OF THE KICKER SHOULD NOT EXCEED 12 FT.

AT&T's self-support tower, wireless telecommunication facility, is significantly set back from the public right-of-way. AT&T's equipment needs to be upgraded to better service the public as the current technology is out of date. We will be making a simple swap of 6 older antennas for 6 new antennas to give the surrounding communities a better quality of service. The 3 RRHs will help with the effectiveness of

MD7, LLC

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these antennas and their reach to be amplified. This is necessary to keep the facility running at full capability for the public's use. This upgrade will provide greater service to the entire community while keeping in compliance with any previously approved plans.

If there are any questions within the City or the public, I would be happy to discuss the goals of AT&T's project and answer any questions or concerns.

Sincerely,

A handwritten signature in black ink, appearing to read 'Lorelei Foronda', written in a cursive style.

Lorelei Foronda

Md7 LLC, Land Use I

O: (858) 754-2151

E: lforonda@md7.com

MD7, LLC

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