



**QC Development**

PO Box 916

Storrs, CT 06268

860-670-9068

Mark.Roberts@QCDevelopment.net

December 8, 2016

Melanie A. Bachman  
Acting Executive Director  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

**Notice of Exempt Modification – New Cingular Wireless PCS, LLC (AT&T) – CT2841**  
**208 Valley Road, New Canaan, CT 06840**  
**N 41-09-58.5**  
**W 73-28-13.7**

Dear Ms. Bachman:

AT&T currently maintains three (3) antennas at the 86-foot level of the existing 120-foot Silhouette Monopole at 208 Valley Road, New Canaan, CT. The structure is owned by Tarpon Towers II LLC and the property is owned by Silver Hill Hospital, Inc. AT&T now intends to remove three (3) COMMSCOPE antennas and replace them with three (3) QUINTEL antennas. AT&T also intends to remove three (3) CCI TMAs and replace them with six (6) Kaelus TMAs. The new antennas would be installed at the 86-foot level of the tower.

This facility was approved by the Connecticut Siting Council in Docket 0401, on February 2, 2012. The Decision and Order included conditions requiring a concealed antenna tower design and limiting the tower height to 120 feet AGL. No modifications to the tower's concealment design or total height are proposed by AT&T. This modification therefore complies with the aforementioned approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to Robert E. Mallozzi III, First Selectman for the Town of New Canaan, as well as the property owner and the

tower owner.

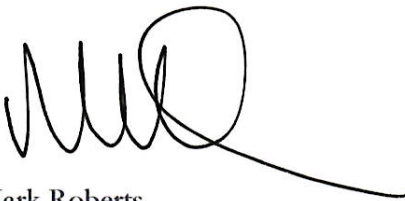
The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, AT&T respectfully submits that the proposed modifications to the above-referenced telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Please feel free to call me at (860) 670-9068 with any questions regarding this matter. Thank you for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'MR', with a long horizontal line extending to the right.

Mark Roberts  
QC Development  
Consultant for AT&T

#### Attachments

cc: Robert E. Mallozzi III - as elected official (via e-mail)  
Tarpon Towers II LLC - as structure owner (via e-mail)  
Silver Hill Hospital Inc. – as property owner

## Power Density

### Existing Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm <sup>2</sup> )	Freq. Band (MHz <sup>**</sup> )	Limit S (mW/cm <sup>2</sup> )	%MPE
Other Carriers*							3.59%
AT&T UMTS	2	500	86	0.0562	850	0.5667	0.99%
AT&T UMTS	2	500	86	0.0562	1900	1.0000	0.56%
AT&T LTE	2	500	86	0.0562	700	0.4667	1.20%
AT&T LTE	2	500	86	0.0562	2100	1.0000	0.56%
Site Total							6.91%

\*Per CSC Records (available upon request, includes calculation formulas)

\*\* If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

### Proposed Loading on Tower

Carrier	# of Channels	ERP/Ch (W)	Antenna Centerline Height (ft)	Power Density (mW/cm <sup>2</sup> )	Freq. Band (MHz <sup>**</sup> )	Limit S (mW/cm <sup>2</sup> )	%MPE
Other Carriers*							3.59%
AT&T UMTS	2	500	86	0.0562	850	0.5667	0.99%
AT&T LTE	2	500	86	0.0562	700	0.4667	1.20%
AT&T LTE	2	500	86	0.0562	1900	1.0000	0.56%
Site Total							6.35%

\*Per CSC Records (available upon request, includes calculation formulas)

\*\* If a range of frequencies are used, such as 880-894, enter the lowest value, i.e. 880

Note: Proposed Loading may also include corrections to certain Existing Loading values





# WIRELESS COMMUNICATIONS FACILITY

## CT2841 - LTE BWE

### NEW CANAAN HOSPITAL

#### 208 VALLEY ROAD

#### NEW CANAAN, CT 06840

### GENERAL NOTES

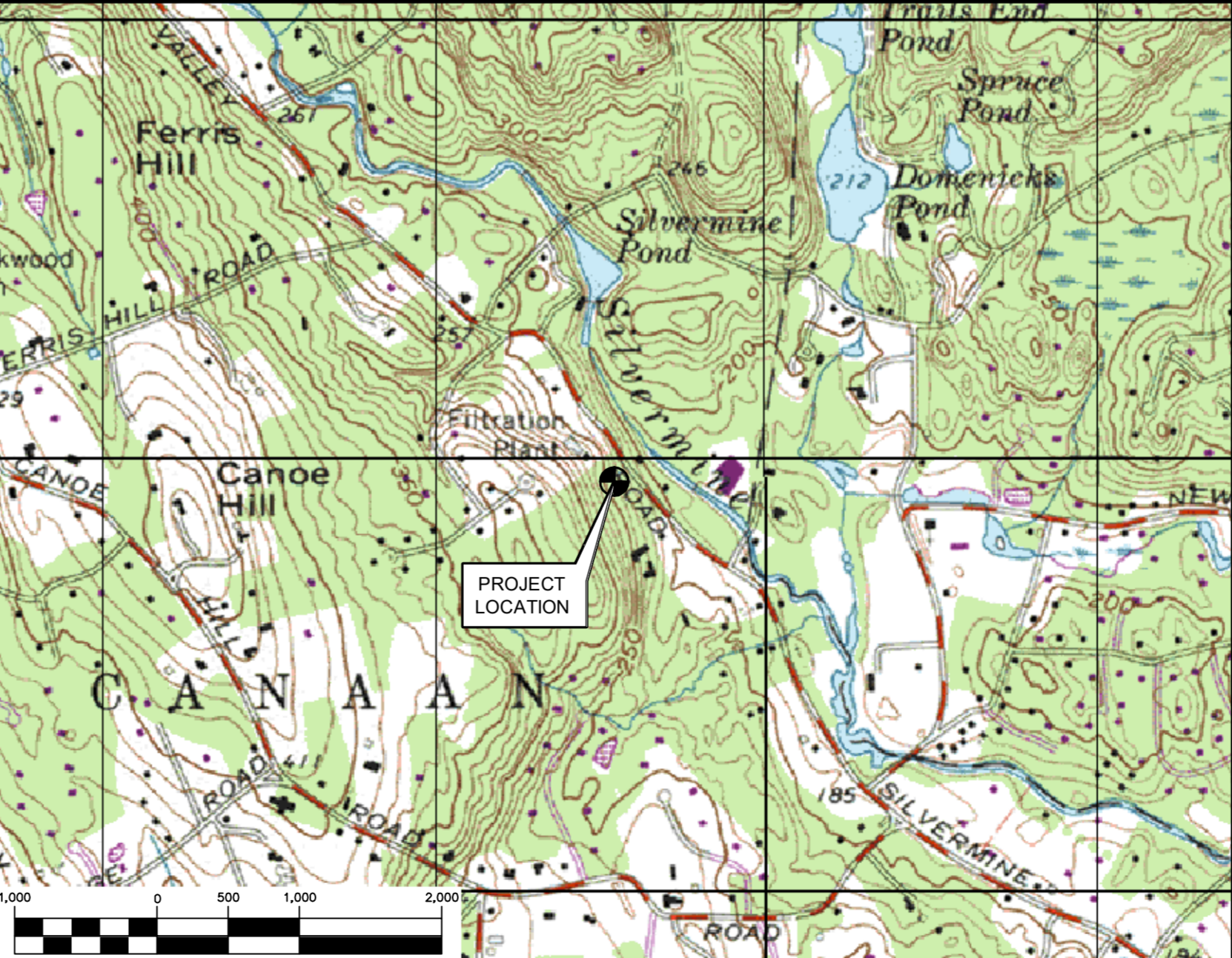
1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2012 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2016 CONNECTICUT STATE BUILDING CODE, INCLUDING THE TIA-222 REVISION "G" STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, 2016 CONNECTICUT FIRE SAFETY CODE AND, NATIONAL ELECTRICAL CODE AND LOCAL CODES.
2. THE COMPOUND, TOWER, PRIMARY GROUND RING, ELECTRICAL SERVICE TO THE METER BANK AND TELEPHONE SERVICE TO THE DEMARCATION POINT ARE PROVIDED BY SITE OWNER. AS BUILT FIELD CONDITIONS REGARDING THESE ITEMS SHALL BE CONFIRMED BY THE CONTRACTOR. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, PLUMBING, ELECTRICAL AND HVAC. PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
8. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING BUILDING'S/PROPERTY'S OPERATIONS, COORDINATE WORK WITH BUILDING/PROPERTY OWNER.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
13. ANY AND ALL ERRORS, DISCREPANCIES, AND "MISSED" ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE AT&T CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO "EXTRA" WILL BE ALLOWED FOR MISSED ITEMS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
16. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
17. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB-CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.
21. CONTRACTOR SHALL COMPLY WITH OWNERS ENVIRONMENTAL ENGINEER ON ALL METHODS AND PROVISIONS FOR ALL EXCAVATION ACTIVITIES INCLUDING SOIL DISPOSAL. ALL BACKFILL MATERIALS TO BE PROVIDED BY THE CONTRACTOR.

### SITE DIRECTIONS

<b>FROM:</b> 500 ENTERPRISE DRIVE ROCKY HILL, CONNECTICUT	<b>TO:</b> 208 VALLEY ROAD NEW CANAAN, CONNECTICUT
1. HEAD NORTHEAST ON ENTERPRISE DR TOWARD CAPITAL BLVD	0.37 MI
2. TURN LEFT ONTO CAPITAL BLVD	0.27 MI
3. TURN LEFT ONTO WEST ST	0.30 MI
4. TURN LEFT TO MERGE ONTO I-91 S TOWARD NEW HAVEN	9.59 MI
5. TAKE EXIT 17 FOR CT-15 S/W CROSS PKWY	49.00 MI
6. TAKE EXIT 38 FOR CT-123	0.15 MI
7. TURN SLIGHT LEFT ONTO CT-123	1.68 MI
8. TURN RIGHT ONTO SILVERMINE RD	1.51 MI
9. TURN LEFT ONTO VALLEY RD. DESTINATION IS ON THE LEFT	0.48 MI

### VICINITY MAP

SCALE: 1" = 1000'



### PROJECT SUMMARY

1. THE PROPOSED SCOPE OF WORK CONSISTS OF A MODIFICATION TO THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY INCLUDING THE FOLLOWING:
  - A. REMOVE AND REPLACE EXISTING LTE ANTENNA FOR PROPOSED LTE (12) PORT ANTENNA, (1) PER SECTOR.
  - B. REMOVE AND REPLACE (3) EXISTING RRU-12'S FOR PROPOSED RRU-32 B2'S, (3) TOTAL ON EXISTING EQUIPMENT FRAME.
  - C. REMOVE AND REPLACE (3) EXISTING TMA'S WITH (6) NEW KAEIUS TMA'S, (2) PER SECTOR.
  - D. INSTALL (6) NEW COAX LINES, (2) PER SECTOR, FROM GROUND EQUIPMENT TO ANTENNAS ROUTED WITHIN THE EXISTING UNIPOLE.
  - E. REMOVE AND REPLACE (6) DIPLEXERS FOR (12) PENTAPLEXERS INSTALLED AT GROUND LEVEL.
  - F. INSTALL (12) SURGE ARRESTORS, (4) PER SECTOR.
  - G. INSTALL (6) CURRENT INJECTORS, (2) PER SECTOR.
  - H. INSTALL XMU WITHIN EXISTING PURCELL CABINET HOUSING LTE DUS.

### PROJECT INFORMATION

AT&T SITE NUMBER:	CT2841
AT&T SITE NAME:	NEW CANAAN HOSPITAL
SITE ADDRESS:	208 VALLEY ROAD NEW CANAAN, CT 06840
LESSEE/APPLICANT:	AT&T MOBILITY 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067
ENGINEER:	CENITEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT 06405
PROJECT COORDINATES:	LATITUDE: 41°-09'-58.454 N LONGITUDE: 73°-28'-13.721" W GROUND ELEVATION: 261.5'± AMSL
	COORDINATES AND GROUND ELEVATION REFERENCED FROM FAA 2C CERTIFICATION AS PREPARED BY MARTINEZ, COUGH & ASSOCIATES, LLC DATED DECEMBER 15, 2009.

### SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
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C-2	LTE BWE EQUIPMENT DETAILS	0
C-3	RRU MOUNTING CONFIGURATION	0
E-1	TYPICAL ELECTRICAL DETAILS AND NOTES	0

REV. 0
DATE 11/19/16
JTD
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 WIRELESS COMMUNICATIONS FACILITY  
**NEW CANAAN HOSPITAL**  
**CT2841 - LTE BWE**  
 208 VALLEY ROAD  
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T-1

Sheet No. 1 of 6







TOP OF EXISTING UNIPOLE TOWER  
EL. ±120' A.T.B.

AT&T ANTENNAS  
EL. ±86' A.T.B.

3'-4"± TOWER DIA.  
(RANDOM)

(6) NEW AT&T COAX LINES, ROUTED  
WITHIN EXISTING UNIPOLE FROM  
GROUND EQUIPMENT TO ANTENNAS,  
TYPICAL

EXISTING BROWN CEDAR BOARD  
STOCKADE FENCE AT PERIMETER OF  
GRAVEL COMPOUND. (BY OTHERS)

EXISTING VERIZON WIRELESS 12'x24'  
EQUIPMENT SHELTER.

EXISTING AT&T ANTENNA CABLE  
ICE BRIDGE.

EXISTING AT&T EQUIPMENT ON A  
12'x20' CONCRETE SLAB-ON-GRADE.

EXISTING CONCRETE BLOCK  
RETAINING WALL, TYP. (BY  
OTHERS)

GRADE VARIES OUTSIDE  
COMPOUND

AT&T RRU's ON EQUIPMENT  
RACK MOUNTED TO ICE  
BRIDGE POSTS AT GRADE.

EXISTING T-MOBILE PAD  
MOUNTED EQUIPMENT.

**TOWER STRUCTURAL NOTES:**

1. TOWER STRUCTURAL ANALYSIS SIGNED AND SEALED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF CONNECTICUT TO BE PROVIDED PRIOR TO INSTALLATION OF THE ADDITIONAL TOWER LOADING DEPICTED HEREIN.
2. ALL ANTENNAS AND COAX TO BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS PROVIDED BY FLORIDA TOWER PARTNERS, LLC. AND FINAL AT&T RF DATA SHEET.

**NOTES:**

1. OTHER CARRIER EQUIPMENT NOT SHOWN FOR CLARITY
2. A.T.B. = ABOVE TOWER BASE

EXISTING ±120' TALL UNIPOLE TOWER  
PAINTED BROWN. (BY OTHERS)

EXISTING CONCRETE BLOCK RETAINING  
WALL, TYP. (BY OTHERS)

EXISTING BROWN CEDAR BOARD  
STOCKADE FENCE AT PERIMETER OF  
GRAVEL COMPOUND. (BY OTHERS)

EXISTING VERIZON WIRELESS 12'x24'  
EQUIPMENT SHELTER.

INSTALL (12) NEW AT&T PENTAPLEXERS (P/N: CCI  
5PX-0726), (12) NEW SURGE ARRESTORS (P/N:  
COMMSCOPE APTDC-BDFDM-DB) AND (6) NEW  
CURRENT INJECTORS (P/N: KATHREIN K SBT  
782-11055) INSTALLED ON RRU FRAME

EXISTING 1,925 SF FENCED COMPOUND/LEASE AREA.  
(BY OTHERS)

EXISTING AT&T ANTENNA CABLE ICE BRIDGE

AT&T RRU's ON EQUIPMENT RACK MOUNTED  
TO ICE BRIDGE POSTS AT GRADE.

EXISTING AT&T EQUIPMENT ON A 12'x20'  
CONCRETE SLAB-ON-GRADE. INSTALL NEW  
XMU WITHIN EXISTING PURCELL HOUSING LTE  
DUS

EXISTING T-MOBILE EQUIPMENT CABINETS ON  
15'x15' CONC. SLAB-ON-GRADE

EXISTING DOUBLE 6' WIDE  
COMPOUND ACCESS GATE (TYP.  
IN 2 LOCATIONS). (BY OTHERS)

EXISTING EMERGENCY POWER  
DISTRIBUTION CABINET ON BACKBOARD  
FOR T-MOBILE AND AT&T.

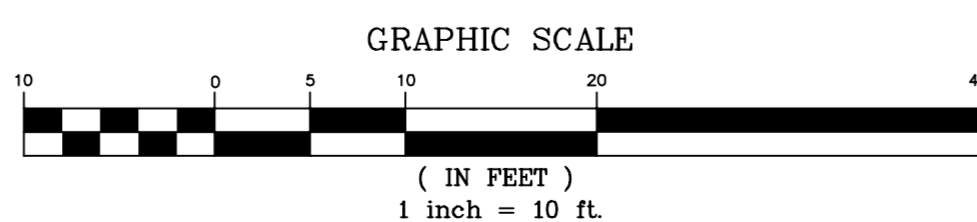
EXISTING ±120' TALL UNIPOLE TOWER  
PAINTED BROWN. (BY OTHERS)

EXISTING GRAVEL SITE SERVICE AREA  
FOR ACCESS BY BOOM TRUCK FOR  
TOWER SERVICE AND EQUIPMENT  
INSTALL ONLY. (BY OTHERS)

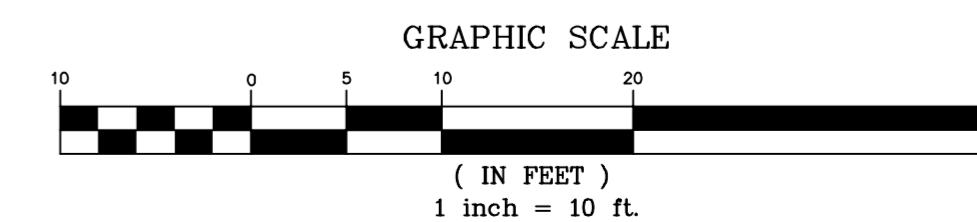
EXISTING PAD MOUNTED TRANSFORMER  
AND BOLLARDS. (BY OTHERS)

EXISTING UTILITY BACKBOARD,  
FIBER TELCO CABINET AND  
ASSOCIATED PEDISTAL, HANDHOLES  
AND BOLLARDS, TYP. (BY OTHERS)

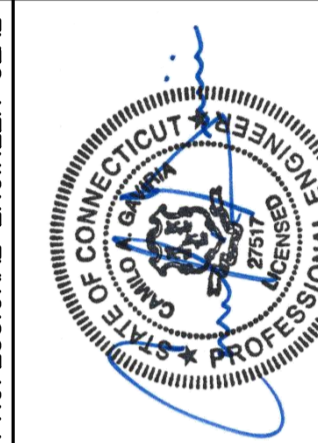
**2** COMPOUND SECTION / TOWER ELEVATION  
C-1 SCALE: 1" = 10'



**1** COMPOUND PLAN  
C-1 SCALE: 1" = 10'



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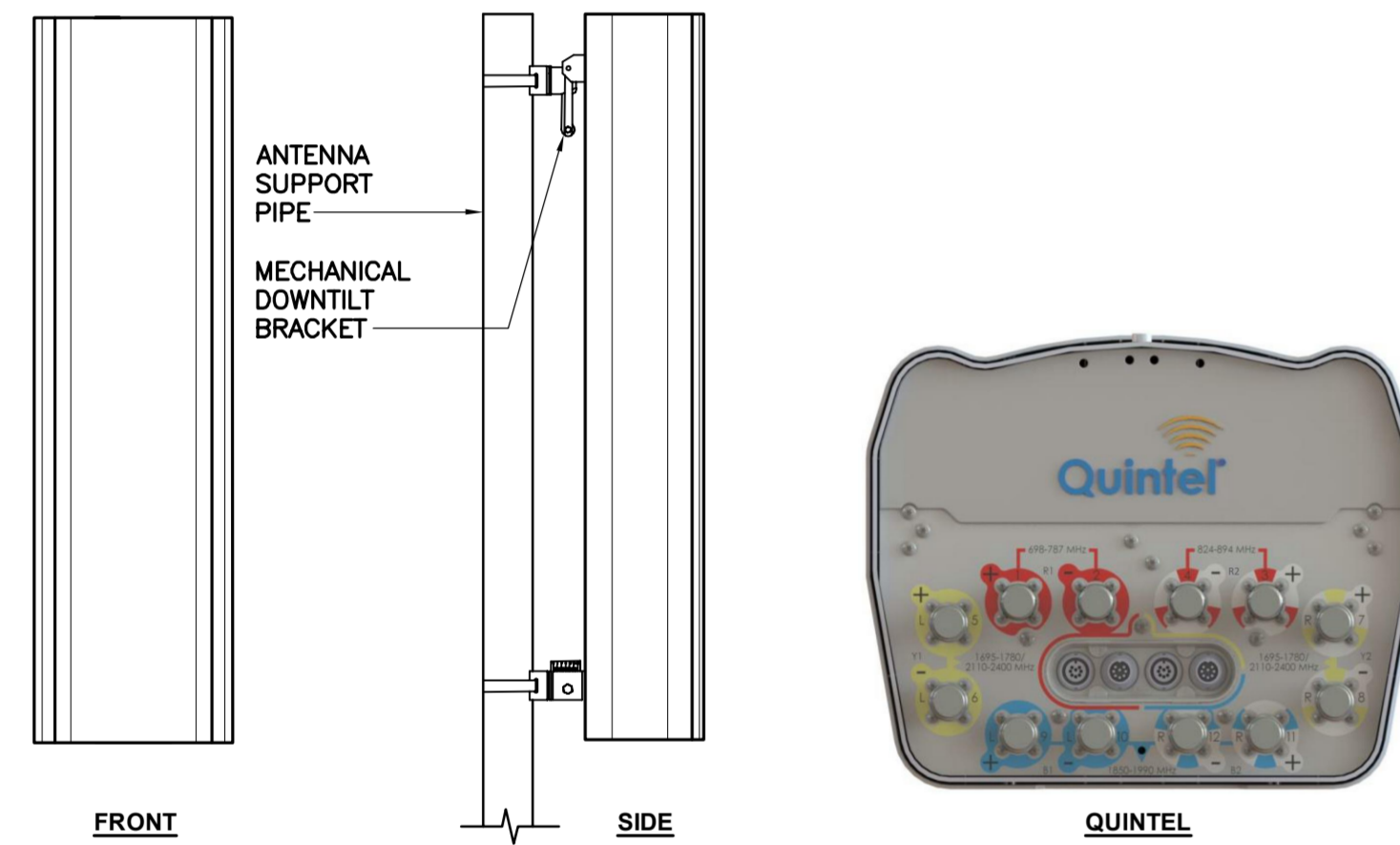
DATE: 11/03/16  
SCALE: AS NOTED  
JOB NO. 16034.10

PLANS AND ELEVATION

**C-1**  
Sheet No. 3 of 6

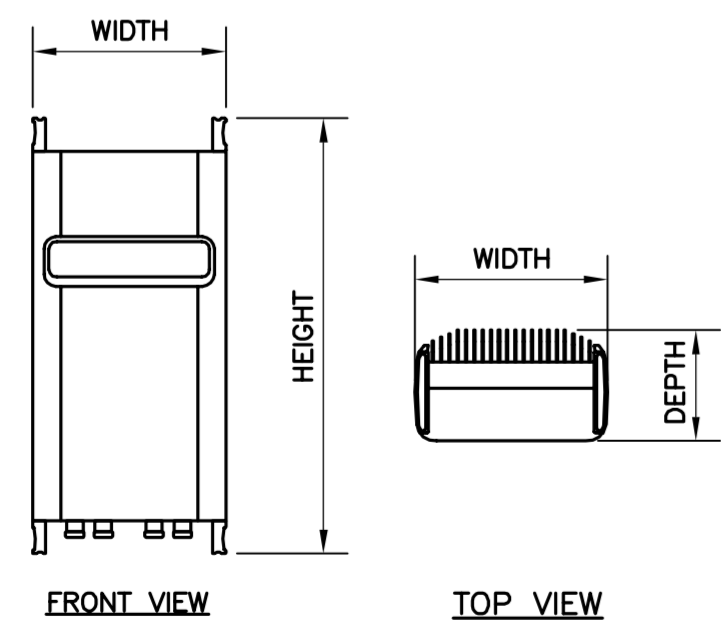
REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	11/10/16	JTD	CAG	CONSTRUCTION DOCUMENTS - ISSUED FOR CLIENT REVIEW





ALPHA/BETA/GAMMA ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: QUINTEL MODEL: QS66512-2	72.0"H x 12.0"W x 9.6"D	112.0-LBS

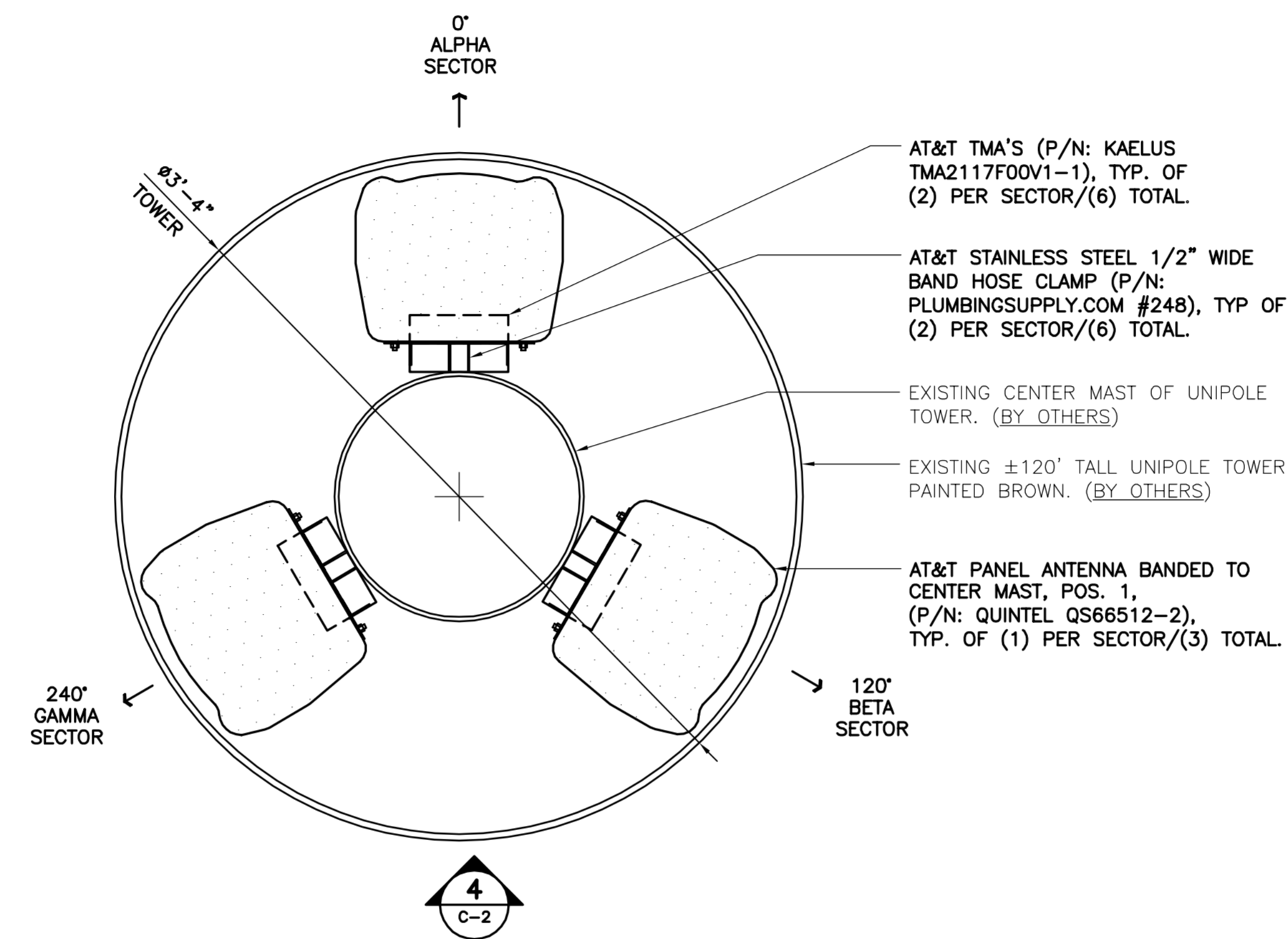
**5 PROPOSED ANTENNA DETAIL**  
C-2 SCALE: 1/2" = 1'-0"



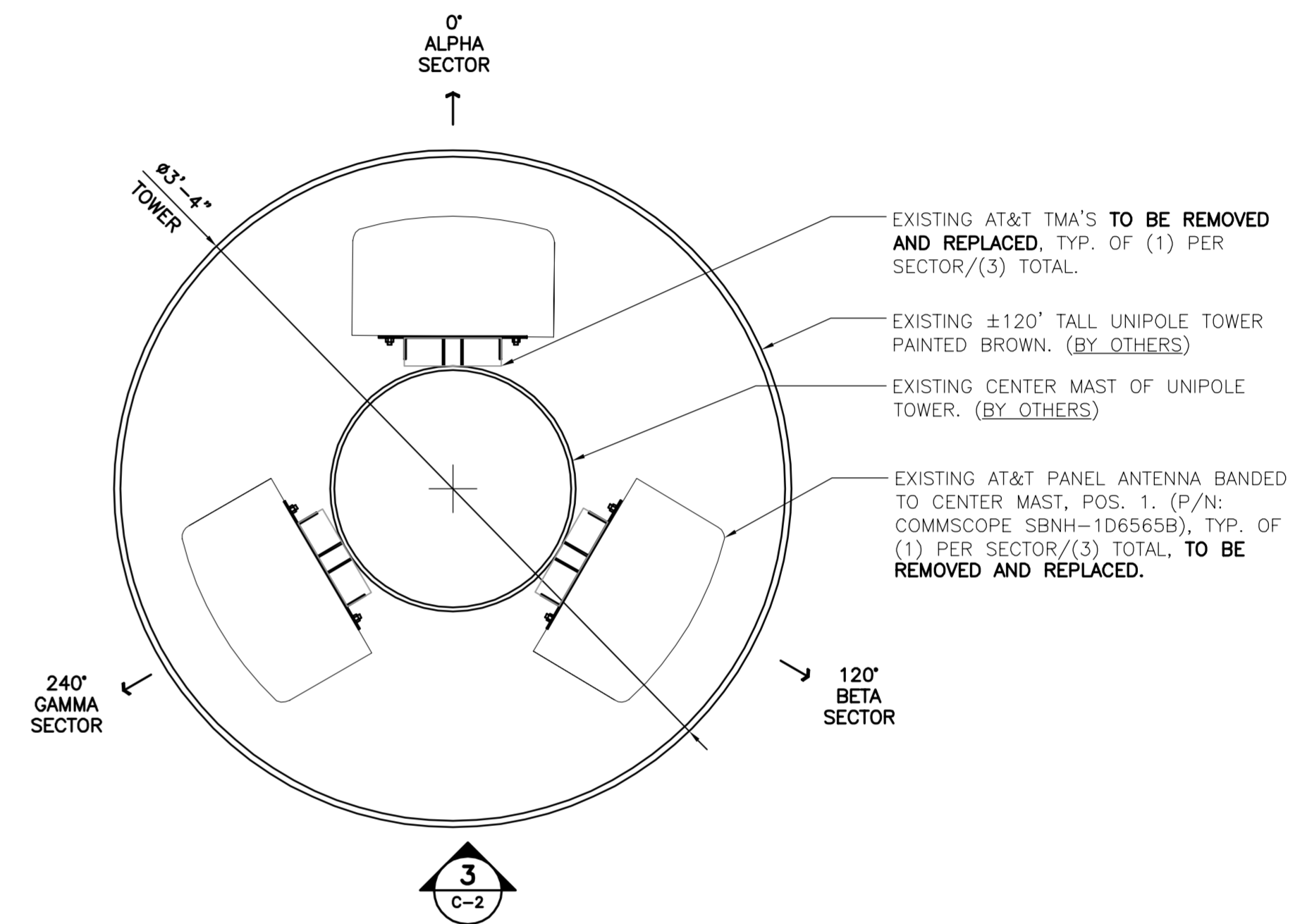
RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
MAKE: ERICSSON MODEL: RRU-32 B2	27.17"H x 12.05"W x 7.01"D	52.91 LBS.	ABOVE: 16" MIN. BELOW: 12" MIN. FRONT: 36" MIN.

NOTES:  
1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH AT&T CONSTRUCTION MANAGER PRIOR TO ORDERING.

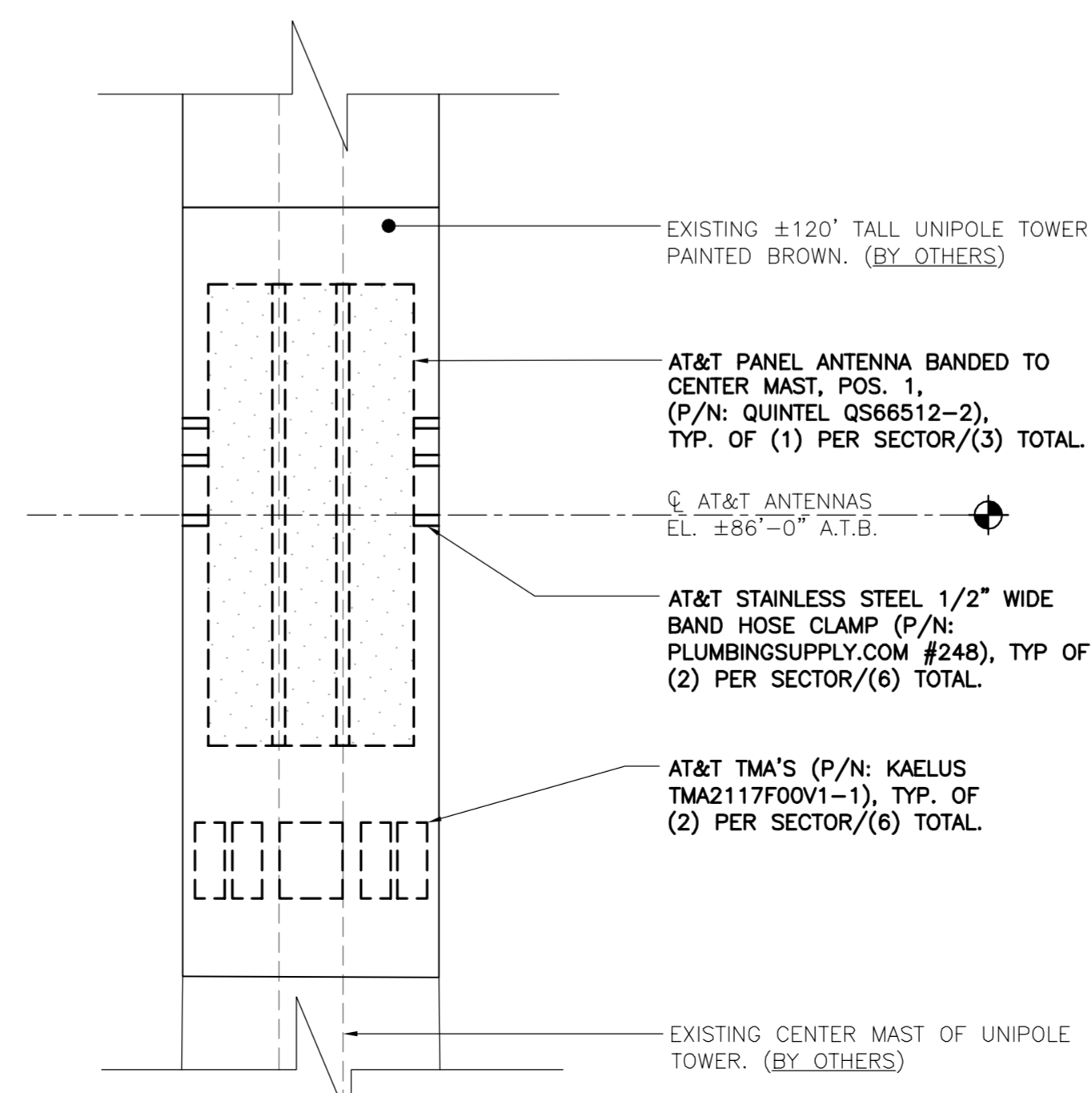
**6 ERICSSON RRU 32 B2 DETAIL**  
C-2 SCALE: 1" = 1'-0"



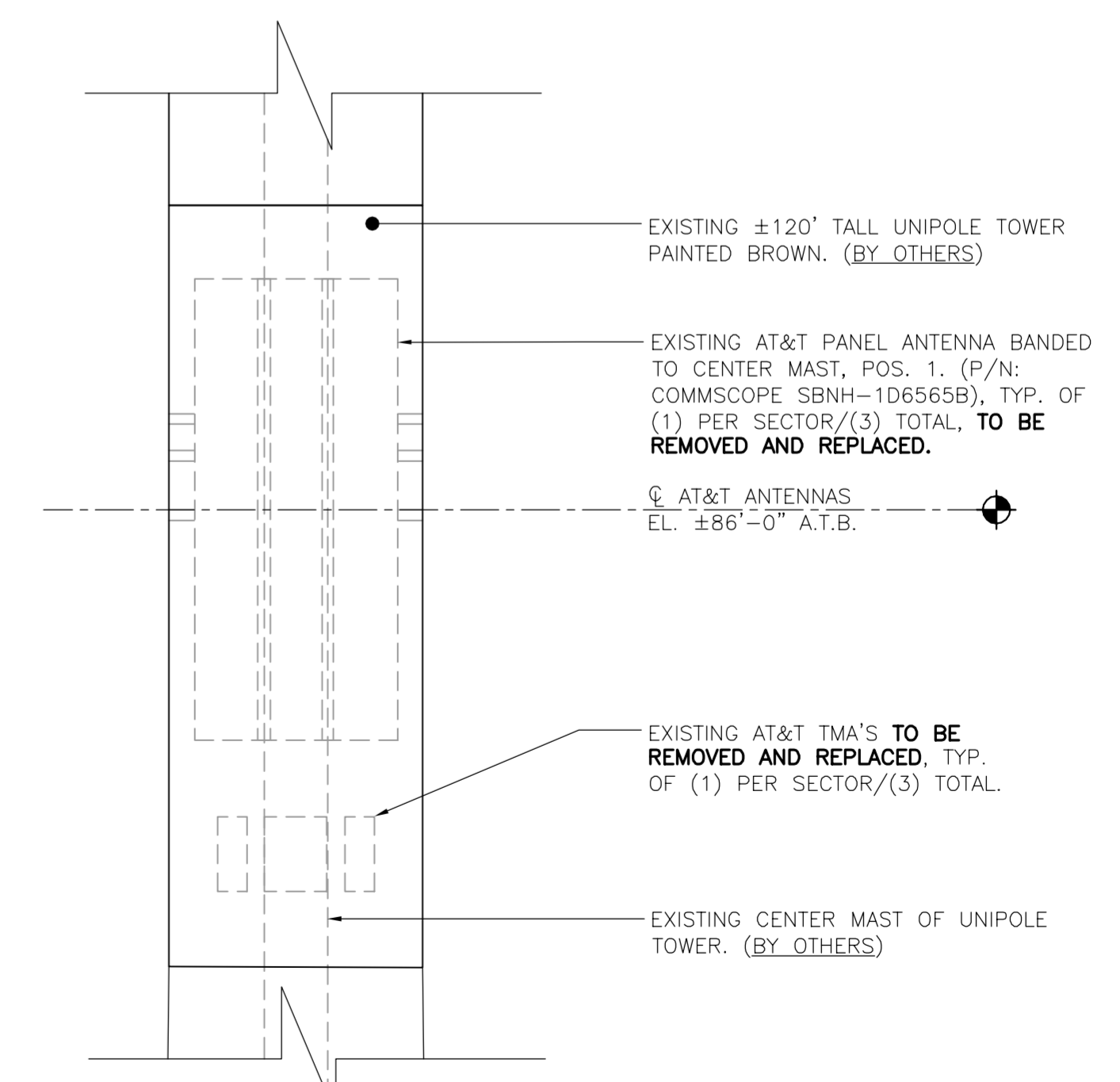
**2 PROPOSED ANTENNA PLAN**  
C-2 SCALE: 1 1/2" = 1'-0"



**1 EXISTING ANTENNA PLAN**  
C-2 SCALE: 1 1/2" = 1'-0"

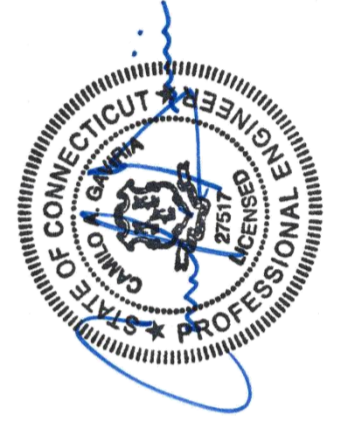


**4 PROPOSED ANTENNA ELEVATION**  
C-2 SCALE: 1/2" = 1'-0"



**3 EXISTING ANTENNA ELEVATION**  
C-2 SCALE: 1/2" = 1'-0"

REV.	DATE	JTD	CAG	CONSTRUCTION DOCUMENTS - ISSUED FOR CLIENT REVIEW
0	11/10/16	JTD	CAG	ISSUED FOR CLIENT REVIEW



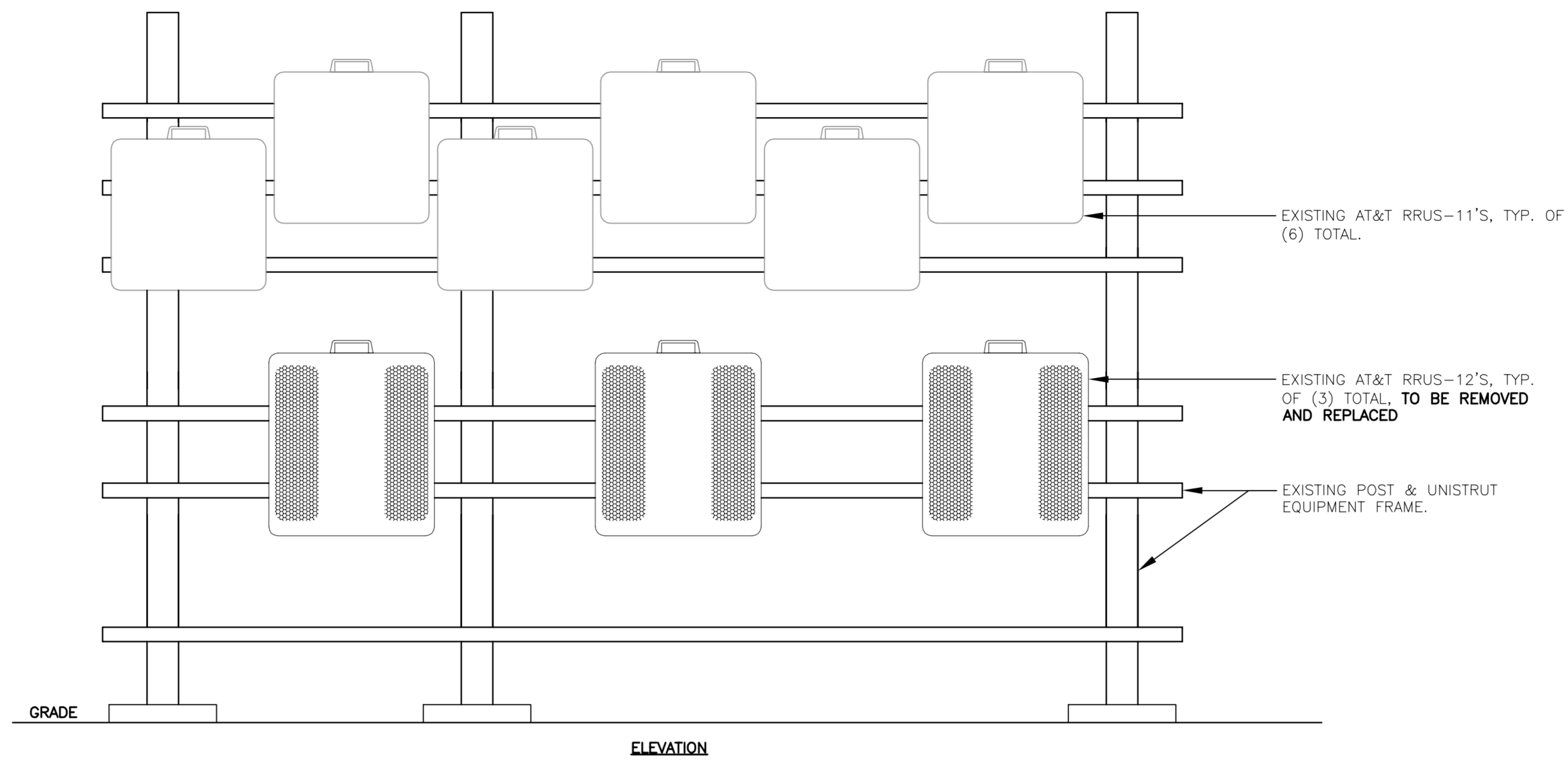
**CENTER** engineering  
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(203) 488-8387 Fax  
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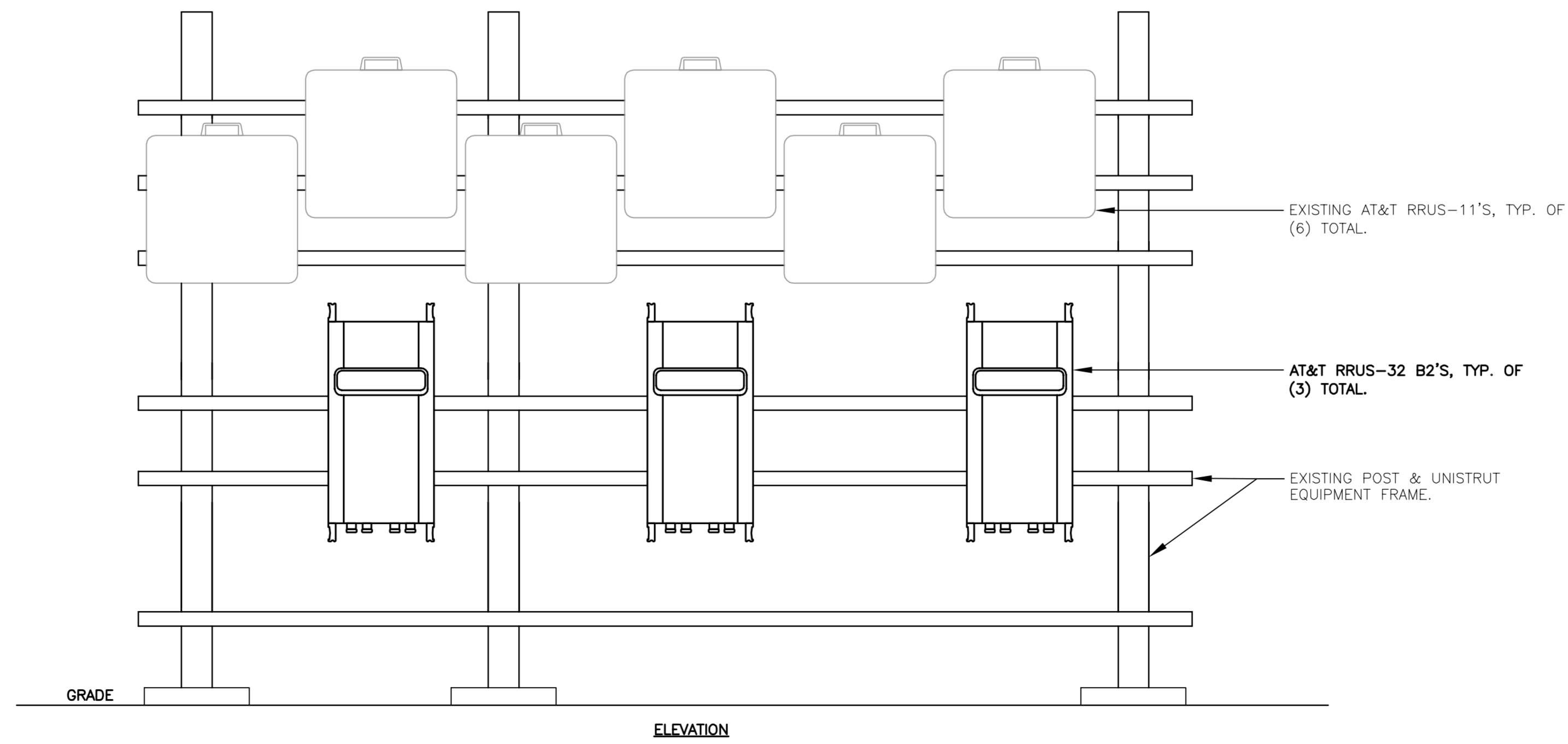
DATE: 11/03/16  
SCALE: AS NOTED  
JOB NO. 16034.10

LTE BWE  
EQUIPMENT  
DETAILS

**C-2**

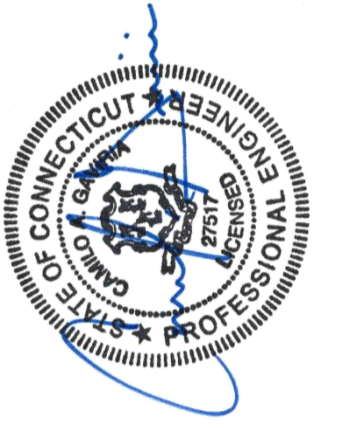


**1** EXISTING RRU MOUNTING CONFIGURATION  
 C-3 SCALE: 1" = 1'- 0"



**2** PROPOSED RRU MOUNTING CONFIGURATION  
 C-3 SCALE: 1" = 1'- 0"

PROFESSIONAL ENGINEER SEAL



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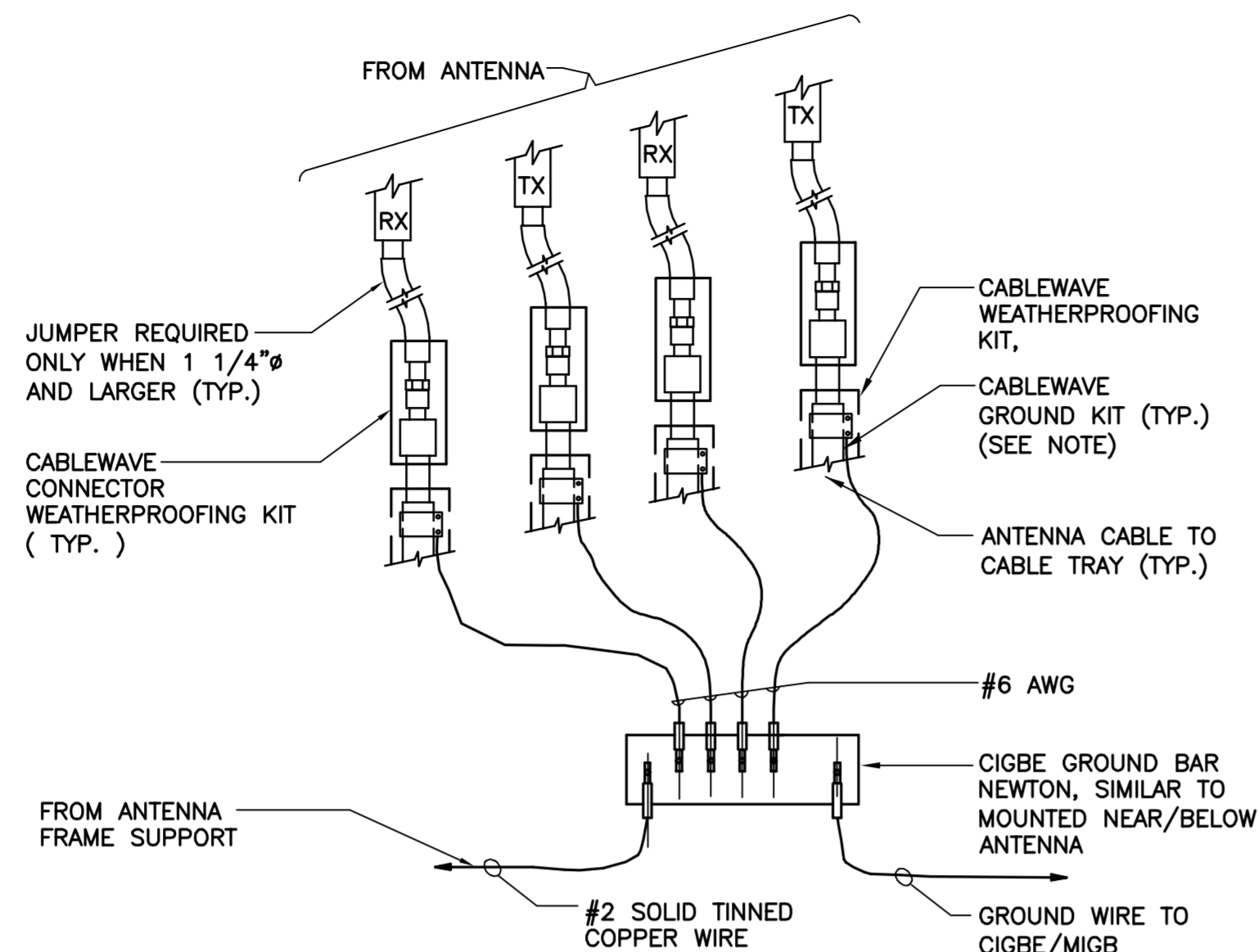
DATE: 11/03/16  
 SCALE: AS NOTED  
 JOB NO. 16034.10

RRU MOUNTING CONFIGURATION

**C-3**  
 Sheet No. 5 of 6

REV.	DATE	BY	CHK'D	DESCRIPTION
0	11/10/16	JTD	CAG	CONSTRUCTION DOCUMENTS - ISSUED FOR CLIENT REVIEW

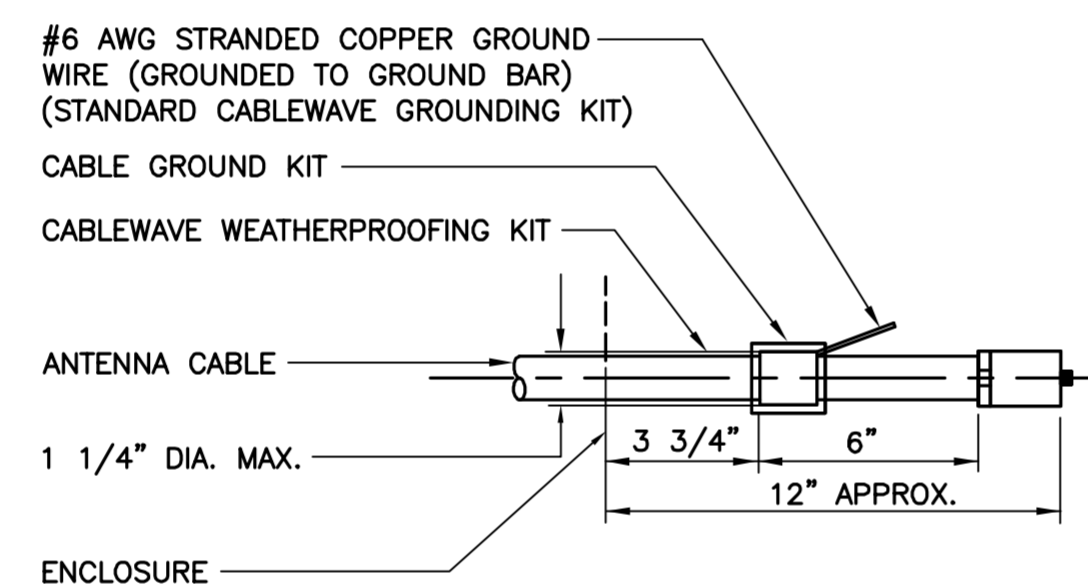




**NOTE:**

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

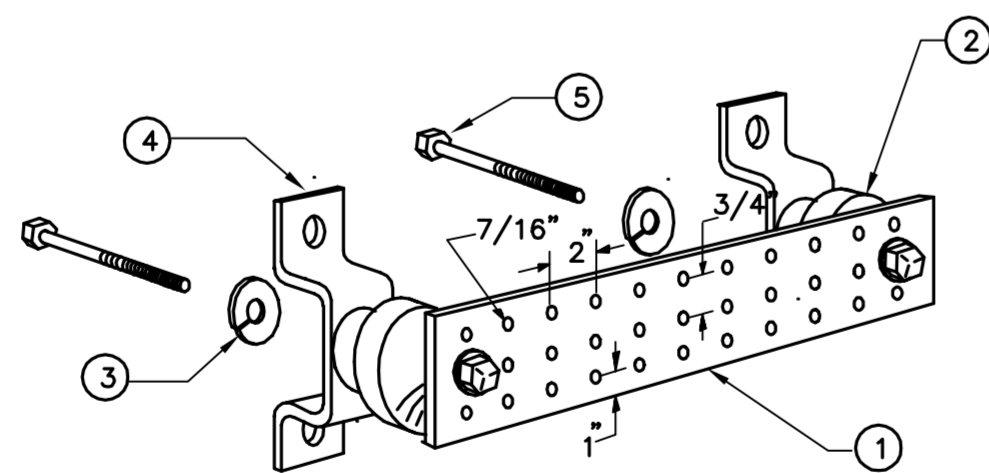
**5 CONNECTION OF GROUND WIRES TO GROUND BAR**  
E-1 NOT TO SCALE



**NOTE:**

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

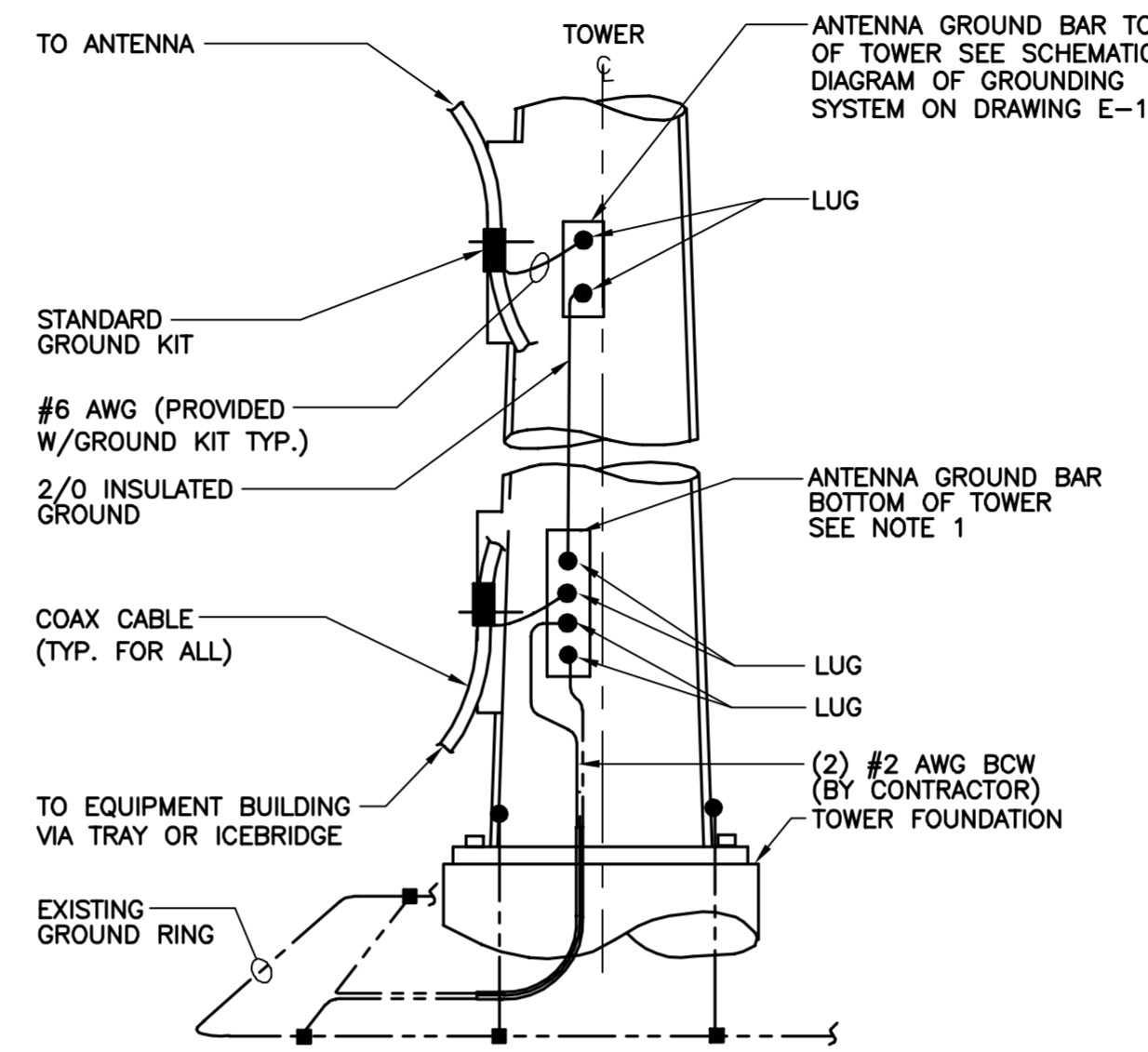
**4 ANTENNA CABLE GROUNDING DETAIL**  
E-1 NOT TO SCALE



**LEGEND**

- TINNED COPPER GROUND BAR, 1/4"x 4"x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG.
- INSULATORS, NEWTON INSTRUMENT CAT. NO. 2. 3061-4.
3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
- WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056.
- STAINLESS STEEL SECURITY SCREWS.

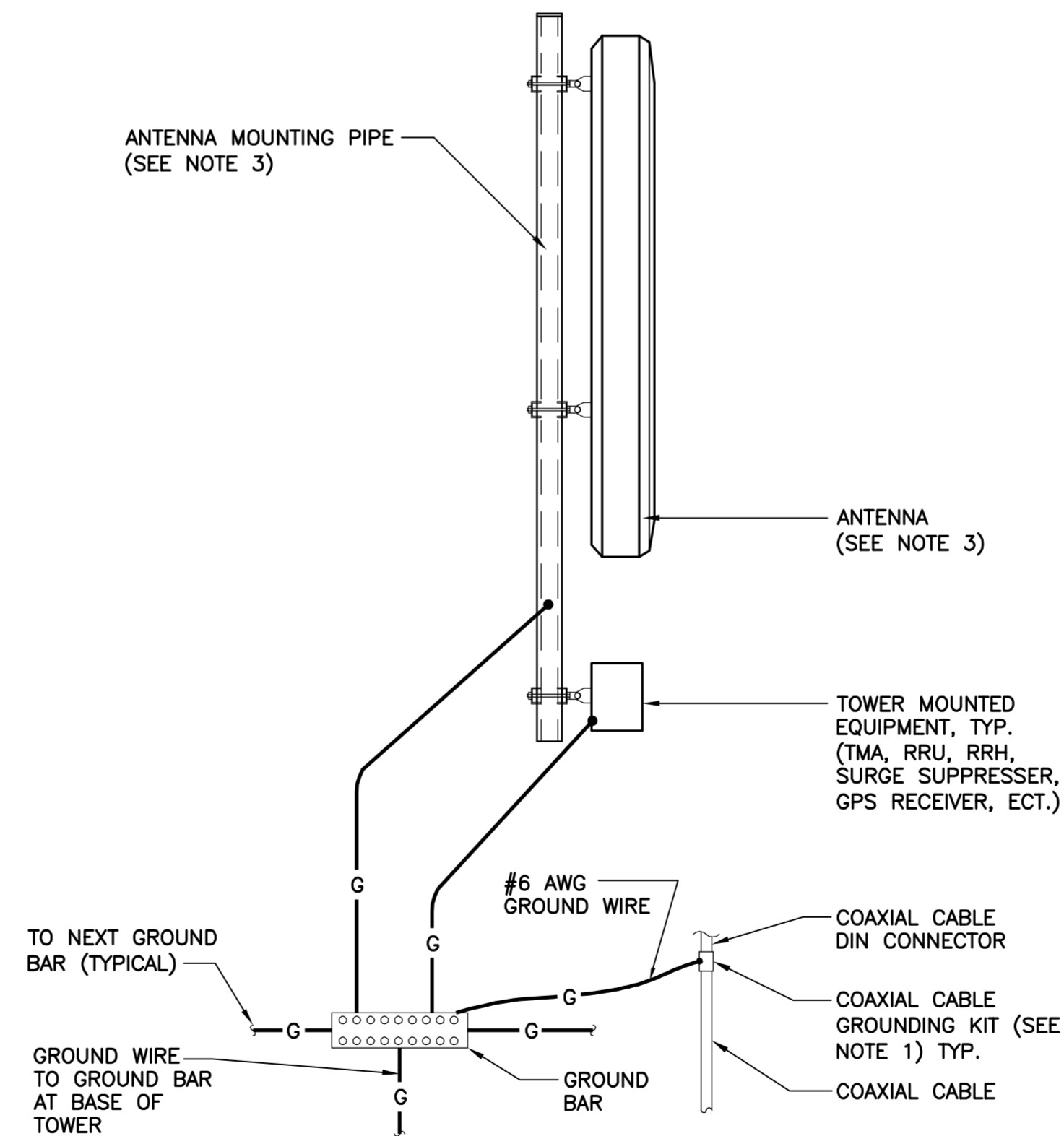
**3 GROUND BAR DETAIL**  
E-1 NOT TO SCALE



**NOTES:**

- NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED.
- A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

**2 ANTENNA CABLE GROUNDING - TOWER**  
E-1 NOT TO SCALE



**NOTES:**

- BOND COAXIAL CABLE GROUND KITS TO EACH OWNER'S GROUND BAR ALONG ENTIRE COAX RUN FROM ANTENNA TO SHELTER.
- BOND ALL EQUIPMENT TO GROUND PER NEC AND MANUFACTURERS SPECIFICATIONS.
- DETAIL IS TYPICAL FOR ALL ANTENNA SECTORS, INCLUDING GPS ANTENNA.

**1 TYPICAL ANTENNA GROUNDING DETAIL**  
E-1 NOT TO SCALE

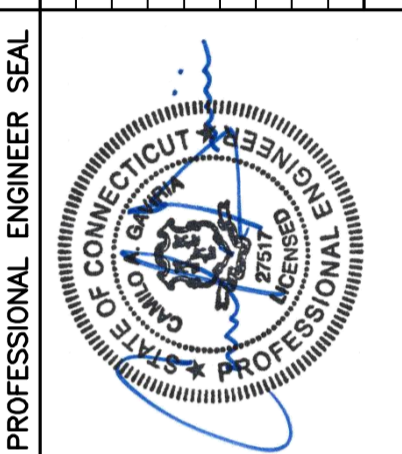
**ELECTRICAL NOTES**

- PRIOR TO START OF CONSTRUCTION CONTRACTOR SHALL COORDINATE WITH OWNER FOR ALL CONSTRUCTION STANDARDS AND SPECIFICATIONS, AND ALL MANUFACTURER DOCUMENTATION FOR ALL EQUIPMENT TO BE INSTALLED.
- INSTALL ALL EQUIPMENT IN ACCORDANCE WITH LOCAL BUILDING CODE, NATIONAL ELECTRIC CODE, OWNER AND MANUFACTURER'S SPECIFICATIONS.
- CONNECT ALL NEW EQUIPMENT TO EXISTING TELCO AS REQUIRED BY MANUFACTURER.
- MAINTAIN ALL CLEARANCES REQUIRED BY NEC AND EQUIPMENT MANUFACTURER.
- PRIOR TO INSTALLATION CONTRACTOR SHALL MEASURE EXISTING ELECTRICAL LOAD AND VERIFY EXISTING AVAILABLE CAPACITY FOR PROPOSED INSTALLATION. IF INADEQUATE CAPACITY IS AVAILABLE, CONTRACTOR SHALL COORDINATE WITH LOCAL ELECTRIC UTILITY COMPANY TO UPGRADE EXISTING ELECTRIC SERVICE.
- CONTRACTOR SHALL INSPECT EXISTING GROUNDING AND LIGHTNING PROTECTION SYSTEM AND ENSURE THAT IT IS IN COMPLIANCE WITH NEC, AND SITE OWNER'S SPECIFICATIONS. THE RESULTS OF THIS INSPECTION SHALL BE PRESENTED TO OWNERS REPRESENTATIVE, AND ANY DEFICIENCIES SHALL BE CORRECTED.
- ALL TRANSMISSION TOWER SITES CONTAIN AN EXTENSIVE BURIED GROUNDING SYSTEM. ALL GROUNDING WORK MUST BE COORDINATED WITH, AND APPROVED BY, THE TOWER OWNER'S SITE REPRESENTATIVE. ALL OF THE TOWER OWNER'S SPECIFICATIONS MUST BE STRICTLY FOLLOWED.
- PROVIDE AND INSTALL GROUND KITS FOR ALL NEW COAXIAL CABLES AND BOND TO EXISTING OWNERS GROUNDING SYSTEM PER OWNERS SPECIFICATIONS AND NEC.
- ALL CONDUCTORS SHALL BE TYPE THWN (INT. APPLICATION) AND XHHW (EXT. APPLICATION), 75 DEGREE C, 600 VOLT INSULATION, SOFT ANNEALED STRANDED COPPER. #10 AWG AND SMALLER SHALL BE SPLICED USING ACCEPTABLE SOLDERLESS PRESSURE CONNECTORS. #8 AWG AND LARGER SHALL BE SPLICED USING COMPRESSION SPLIT-BOLT TYPE CONNECTORS. #12 AWG SHALL BE THE MINIMUM SIZE CONDUCTOR FOR LINE VOLTAGE BRANCH CIRCUITS. REFER TO PANEL SCHEDULE FOR BRANCH CIRCUIT CONDUCTOR SIZE(S). CONDUCTORS SHALL BE COLOR CODED FOR CONSISTENT PHASE IDENTIFICATION.
- MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.
- THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNER'S REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES AS MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS AS MAY BE REQUIRED BY THE LOCAL AUTHORITY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE SITE AND/OR BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.
- THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.
- DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.
- ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.
- GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.
- EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122. (MIN. #12 AWG).
- CONTRACTOR SHALL PROVIDE A CELLULAR GROUNDING SYSTEM WITH THE MAXIMUM AC RESISTANCE TO GROUND OF 5 OHM BETWEEN ANY POINT ON THE GROUNDING SYSTEM AS MEASURED BY 3-POINT GROUNDING TEST. (REFER TO SECTION 16960).

**TESTS BY INDEPENDENT ELECTRICAL TESTING FIRM**

- CONTRACTOR SHALL RETAIN THE SERVICES OF A LOCAL INDEPENDENT ELECTRICAL TESTING FIRM (WITH MINIMUM 5 YEARS COMMERCIAL EXPERIENCE IN THE ELECTRICAL TESTING INDUSTRY) AS SPECIFIED BY OWNER TO PERFORM:
  - TESTING PROCEDURE INCLUDING THE MAKE AND MODEL OF TEST EQUIPMENT.
  - CERTIFICATION OF TESTING EQUIPMENT CALIBRATION WITHIN SIX (6) MONTHS OF DATE OF TESTING. INCLUDE CERTIFICATION LAB ADDRESS AND TELEPHONE NUMBER.
  - GRAPHICAL DESCRIPTION OF TESTING METHOD ACTUALLY IMPLEMENTED.
- TESTING SHALL BE PERFORMED IN THE PRESENCE AND TO THE SATISFACTION OF OWNERS CONSTRUCTION REPRESENTATIVE. TESTING DATA SHALL BE INITIALED AND DATED BY THE CONSTRUCTION AND INCLUDED WITH THE WRITTEN REPORT/ANALYSIS.
- THE CONTRACTOR SHALL FORWARD SIX (6) COPIES OF THE INDEPENDENT ELECTRICAL TESTING FIRM REPORT/ANALYSIS TO ENGINEER A MINIMUM OF TEN (10) WORKING DAYS PRIOR TO THE JOB TURNOVER.
- CONTRACTOR TO PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE TO OWNER AND ENGINEER FOR ALL TESTS REQUIRING WITNESSING.

REV.	DATE	BY	CHK'D	CAG	CONSTRUCTION DOCUMENTS - ISSUED FOR CLIENT REVIEW
0	11/10/16	JTD			



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CT2841 - LTE BWE  
208 VALLEY ROAD  
NEW CANAAN, CT 06840

DATE: 11/03/16  
SCALE: AS NOTED  
JOB NO. 16034.10

TYPICAL ELECTRICAL DETAILS AND NOTES



# Structural Analysis 120-ft Monopole

Prepared For:  
Tarpon Towers II, LLC  
1001 3<sup>rd</sup> Ave. West, Suite 420  
Bradenton, FL 34205

MFP Project #40916-151

Site Location:  
CT1192 New Canaan  
Fairfield Co., Connecticut  
Lat/Long: 41°9'58.5", -73°28'13.7"

Analysis Type:  
ANSI/TIA-222-G-2  
*Structure Rating - 68.8% Passing*

November 21, 2016



Michael F. Plahovinsak, P.E.  
18301 State Route 161 W, Plain City, OH 43064  
614-398-6250 - [mike@mfpeng.com](mailto:mike@mfpeng.com)



**Project Summary:**

I have completed a structural analysis of the existing monopole for the following new configuration:

- 86' – AT&T:
  - (3) Quintel QS66512-2 Antenna + (6) Kaelus TMA2117F00V1-1
  - (12) 1 ¼" Cable

The pole has been analyzed in accordance with the requirements of the International Building Code per IBC section 3108.4, and the recommendations of the Telecommunications Industry Association “*Structural Standard for Steel Antenna Supporting Structures*” **ANSI/TIA-222-G**.

This analysis may be considered a “Rigorous Structural Analysis” as defined in ANSI/TIA-222-G 15.5.2.

As indicated in the conclusions of this analysis, I have determined that the existing pole and foundation have *sufficient capacity* to support the existing, reserved and proposed antenna loads as detailed herein. Based on the results of my analysis, structural modifications are not required at this time.

**Source of Data:**

Resource	Source	Job Number	Date
Pole and Foundation Drawings	Michael Plahovinsak, PE	23514-110	04/05/14
Geotechnical Report	Design Earth Technology	2012.06/2011.08	06/01/12

**Structure Specifics:**

- Manufacturer: TransAmerican Power Products
- Manufacturer File #: TP-12359
- Year Built: 2014

Michael F. Plahovinsak, P.E. - 2016

[mike@mfpeng.com](mailto:mike@mfpeng.com)



**Analysis Criteria:**

International Building Code 2006-2012 Section 3108.4

Structural Standards for Steel Antenna Supporting Structures **ANSI/TIA-222-G 2**

- TIA-222-G Wind Speed 110 mph ( $V_{asd}$  / 3-Second Gust)
- TIA-222-G Wind w/ 3/4" Ice 50 mph (3-Sec Gust)
- Operational Wind Speed 60 mph (3-Sec Gust)

Structure Class	Exposure Category	Topographic Category
II (I = 1.0)	B	I

**Appurtenance Listing:**

Status	Elev.	Antenna / Mounting	Coax	Owner
Existing	117'	(3) Commscope SBNHH-1D65A Antenna Internally Mounted	(18) 1 5/8"	T-Mobile
Existing	106'	(3) Commscope LNX-6514DS-VTM Antenna Internally Mounted	(12) 1 1/4"	Verizon
	96'	(3) Commscope HBX-6517DS-VTM Antenna Internally Mounted		
<i>Proposed</i>	<i>86'</i>	<i>(3) Quintel QS66512-2 Antenna + (6) TMA2117F00V1-1 Internally Mounted</i>	<i>(12) 1 1/4"</i>	<i>AT&amp;T</i>

All antenna lines assumed internally mounted, not exposed to the wind.

Michael F. Plahovinsak, P.E. - 2016

[mike@mfpeng.com](mailto:mike@mfpeng.com)

**Foundation Analysis:**

The existing monopole foundation design was analyzed in conjunction with site specific geotechnical report. The existing foundation has sufficient capacity to support the pole with the proposed antenna configuration.

**Conclusion:**

I have completed a structural analysis of the existing monopole and foundation in accordance with the project specifics outlined above. My analysis indicates that the existing monopole and foundation are structurally adequate when considering the existing plus proposed loading. Please refer to the attached calculations for an itemized listing of all member stress ratios. The existing pole is safe and adequate to support the proposed loads, and no structural reinforcing is required to support the above loading.

If you have any questions about the contents of this structural report or require any additional information, please feel free to contact my office.

Sincerely,

**Michael F. Plahovinsak, P.E.**

A handwritten signature in black ink, appearing to read "Mike Plahovinsak".

[mike@mfpeng.com](mailto:mike@mfpeng.com) - 614.398-6250



**Standard Conditions for Providing Structural Consulting  
Services on Existing Structures**

1. The following standard conditions are a general overview of key issues regarding the work product supplied.
2. If the existing conditions are not as represented in this structural report or attached sketches, I should be contacted to evaluate the significance of the deviation and revise the structural assessment accordingly.
3. The structural analysis has been performed assuming that the structure is in "like new" condition. No allowance was made for excessive corrosion, damaged or missing structural members, loose bolts, etc. If there are any known deficiencies in the structure that potentially compromise structural integrity, I should be made aware of the deficiencies. If I am aware of a deficiency that exists in a structure at the time of my analysis, a general explanation of the structural concern due to the deficiency will be included in the structural report, but the deficiency will not be reflected in capacity calculations.
4. The structural analysis provided is an assessment of the primary load carrying capacity of the structure. I provide a limited scope of service in that I have not verified the capacity of every weld, plate, connection detail, etc. In most cases, structural fabrication details are unknown at the time of my analysis, and the detailed field measurement of this information is beyond the scope of my services. In instances where I have not performed connection capacity calculations, it is assumed that existing manufactured connections develop the full capacity of the primary members being connected.
5. The structural integrity of the existing foundation system can only be verified if exact foundation sizes and soils conditions are known. I will not accept any responsibility for the adequacy of the existing foundations unless this site-specific data is supplied.
6. Miscellaneous items such as antenna mounts, coax supports, etc. have not been designed, detailed, or specified as part of my work. It is assumed that material of adequate size and strength will be purchased from a reputable component manufacturer. The attached report and sketches are schematic in nature and should not be used to fabricate or purchase hardware and accessories to be attached to the structure. I recommend field measurement of the structure before fabricating or purchasing new hardware and accessories. I am not responsible for proper fit and clearance of hardware and accessory items in the field.
7. The structural analysis has been performed considering minimum code requirements or recommendations. If alternate wind, ice, or deflection criteria are to be considered, then I shall be made aware of the alternate criteria.

Michael F. Plahovinsak, P.E. - 2016

[mike@mfpeng.com](mailto:mike@mfpeng.com)





<b>tnxTower</b>  <b>Michael F. Plahovinsak, P.E.</b> 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com	<b>Job</b> 120-ft Monopole - MFP #40916-151	<b>Page</b> 1 of 7
	<b>Project</b> CT1192 New Canaan	<b>Date</b> 16:18:48 11/21/16
	<b>Client</b> Tarpon Towers	<b>Designed by</b> Mike

## Tower Input Data

This tower is designed using the TIA-222-G standard.

The following design criteria apply:

Tower is located in Fairfield County, Connecticut.

Basic wind speed of 110 mph.

Structure Class II.

Exposure Category B.

Topographic Category 1.

Crest Height 0.00 ft.

Nominal ice thickness of 0.7500 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

Local bending stresses due to climbing loads, feedline supports, and appurtenance mounts are not considered.

## Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	120.00-110.00	10.00	0.00	18	14.0000	14.0000	0.2188	0.8750	A572-65 (65 ksi)
L2	110.00-100.00	10.00	0.00	18	14.0000	14.0000	0.2188	0.8750	A572-65 (65 ksi)
L3	100.00-90.00	10.00	0.00	18	14.0000	14.0000	0.2188	0.8750	A572-65 (65 ksi)
L4	90.00-80.00	10.00	0.00	18	14.0000	14.0000	0.2188	0.8750	A572-65 (65 ksi)
L5	80.00-70.50	9.50	0.00	18	14.0000	14.0000	0.2188	0.8750	A572-65 (65 ksi)
L6	70.50-70.00	0.50	0.00	18	14.0000	40.0000	0.2188	0.8750	A572-65 (65 ksi)
L7	70.00-32.00	38.00	6.00	18	40.0000	45.1600	0.2500	1.0000	A572-65 (65 ksi)
L8	32.00-0.00	38.00		18	43.8453	49.0000	0.2500	1.0000	A572-65 (65 ksi)

## Tapered Pole Properties

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	I/Q in <sup>2</sup>	w in	w/t
L1	14.2160	9.5685	229.5928	4.8923	7.1120	32.2825	459.4877	4.7852	2.0790	9.504
	14.2160	9.5685	229.5928	4.8923	7.1120	32.2825	459.4877	4.7852	2.0790	9.504
L2	14.2160	9.5685	229.5928	4.8923	7.1120	32.2825	459.4877	4.7852	2.0790	9.504
	14.2160	9.5685	229.5928	4.8923	7.1120	32.2825	459.4877	4.7852	2.0790	9.504
L3	14.2160	9.5685	229.5928	4.8923	7.1120	32.2825	459.4877	4.7852	2.0790	9.504
	14.2160	9.5685	229.5928	4.8923	7.1120	32.2825	459.4877	4.7852	2.0790	9.504
L4	14.2160	9.5685	229.5928	4.8923	7.1120	32.2825	459.4877	4.7852	2.0790	9.504
	14.2160	9.5685	229.5928	4.8923	7.1120	32.2825	459.4877	4.7852	2.0790	9.504
L5	14.2160	9.5685	229.5928	4.8923	7.1120	32.2825	459.4877	4.7852	2.0790	9.504
	14.2160	9.5685	229.5928	4.8923	7.1120	32.2825	459.4877	4.7852	2.0790	9.504

<b>tnxTower</b>  <b>Michael F. Plahovinsak, P.E.</b> 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com	<b>Job</b> 120-ft Monopole - MFP #40916-151	<b>Page</b> 2 of 7
	<b>Project</b> CT1192 New Canaan	<b>Date</b> 16:18:48 11/21/16
	<b>Client</b> Tarpon Towers	<b>Designed by</b> Mike

Section	Tip Dia. in	Area in <sup>2</sup>	I in <sup>4</sup>	r in	C in	I/C in <sup>3</sup>	J in <sup>4</sup>	It/Q in <sup>2</sup>	w in	w/t
L6	14.2160	9.5685	229.5928	4.8923	7.1120	32.2825	459.4877	4.7852	2.0790	9.504
	40.6171	27.6206	5522.3981	14.1223	20.3200	271.7716	11052.0627	13.8129	6.6550	30.423
L7	40.6171	31.5416	6296.4503	14.1113	20.3200	309.8647	12601.1856	15.7738	6.6000	26.4
	45.8567	35.6361	9080.5791	15.9430	22.9413	395.8183	18173.1067	17.8214	7.5082	30.033
L8	45.3481	34.5928	8306.1982	15.4763	22.2734	372.9202	16623.3258	17.2997	7.2768	29.107
	49.7559	38.6831	11614.7065	17.3062	24.8920	466.6040	23244.6960	19.3452	8.1840	32.736

### Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C <sub>AA</sub> ft <sup>2</sup> /ft	Weight plf
1 5/8" (T-Mobile)	C	No	Inside Pole	117.00 - 0.00	18	No Ice	0.00	0.92
						1/2" Ice	0.00	0.92
						1" Ice	0.00	0.92
1 1/4" (Verizon)	C	No	Inside Pole	106.00 - 0.00	6	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66
1 1/4" (Verizon)	C	No	Inside Pole	96.00 - 0.00	6	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66
1 1/4" (AT&T)	C	No	Inside Pole	86.00 - 0.00	6	No Ice	0.00	0.66
						1/2" Ice	0.00	0.66
						1" Ice	0.00	0.66

### Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz. Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K
Radome Cylinder (40"Ø x 10')	C	None		0.0000	115.00	No Ice	26.67	26.67	0.50
						1/2" Ice	27.56	27.56	0.79
						1" Ice	28.47	28.47	1.09
Radome Cylinder (40"Ø x 10')	C	None		0.0000	105.00	No Ice	26.67	26.67	0.50
						1/2" Ice	27.56	27.56	0.79
						1" Ice	28.47	28.47	1.09
Radome Cylinder (40"Ø x 10')	C	None		0.0000	95.00	No Ice	26.67	26.67	0.50
						1/2" Ice	27.56	27.56	0.79
						1" Ice	28.47	28.47	1.09
Radome Cylinder (40"Ø x 10')	C	None		0.0000	85.00	No Ice	26.67	26.67	0.50
						1/2" Ice	27.56	27.56	0.79
						1" Ice	28.47	28.47	1.09
Radome Cylinder (40"Ø x 10')	C	None		0.0000	75.00	No Ice	26.67	26.67	0.50
						1/2" Ice	27.56	27.56	0.79
						1" Ice	28.47	28.47	1.09
** (3) Andrew SBNHH-1D65A w/ mount pipe (T-Mobile) **	C	None		0.0000	117.00	No Ice	6.46	5.05	0.05
1/2" Ice						6.93	5.72	0.10	
1" Ice						7.40	6.43	0.16	
(3) Andrew LNX-6514DS w/ mount pipe (Verizon)	C	None		0.0000	106.00	No Ice	8.41	6.83	0.06
						1/2" Ice	8.96	7.79	0.12
						1" Ice	9.52	8.62	0.20



<b>tnxTower</b>  <b>Michael F. Plahovinsak, P.E.</b> 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com	<b>Job</b>	120-ft Monopole - MFP #40916-151	<b>Page</b>	3 of 7
	<b>Project</b>	CT1192 New Canaan	<b>Date</b>	16:18:48 11/21/16
	<b>Client</b>	Tarpon Towers	<b>Designed by</b>	Mike

Description	Face or Leg	Offset Type	Offsets: Horz. Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C <sub>AA</sub> Front ft <sup>2</sup>	C <sub>AA</sub> Side ft <sup>2</sup>	Weight K	
**									
(3) Andrew HBX-6517DS-VTM w/ mount pipe (Verizon)	C	None		0.0000	96.00	No Ice 1/2" Ice 1" Ice	5.24 5.71 6.18	4.73 5.68 6.50	0.04 0.08 0.13
**									
(3) Quintel QS66512-2 Panel w/ mount pipe (ATT)	C	None		0.0000	86.00	No Ice 1/2" Ice 1" Ice	8.40 8.95 9.51	8.22 9.19 10.09	0.13 0.20 0.28
(6) Kaelus TMA2117F00V1-1 (ATT)	C	None		0.0000	86.00	No Ice 1/2" Ice 1" Ice	1.17 1.32 1.48	0.23 0.31 0.39	0.03 0.04 0.05

### Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 90 deg - No Ice
5	0.9 Dead+1.6 Wind 90 deg - No Ice
6	1.2 Dead+1.6 Wind 180 deg - No Ice
7	0.9 Dead+1.6 Wind 180 deg - No Ice
8	1.2 Dead+1.0 Ice+1.0 Temp
9	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
10	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
11	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
12	Dead+Wind 0 deg - Service
13	Dead+Wind 90 deg - Service
14	Dead+Wind 180 deg - Service

### Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	120 - 110	Pole	Max Tension	2	0.00	0.00	-0.00
			Max. Compression	8	-3.30	0.00	0.00
			Max. Mx	4	-1.24	-5.81	0.00
			Max. My	2	-1.24	0.00	5.81
			Max. Vy	4	1.16	-5.81	0.00
			Max. Vx	2	-1.16	0.00	5.81
			L2	110 - 100	Pole	Max Tension	1
Max. Compression	8	-6.87				0.00	0.00
Max. Mx	4	-2.61				-23.07	0.00
Max. My	2	-2.61				0.00	23.07
Max. Vy	4	2.29				-23.07	0.00
Max. Vx	2	-2.29				0.00	23.07
L3	100 - 90	Pole				Max Tension	1
			Max. Compression	8	-10.13	0.00	0.00
			Max. Mx	4	-3.98	-51.36	0.00
			Max. My	2	-3.98	0.00	51.36

<b>tnxTower</b>  <b>Michael F. Plahovinsak, P.E.</b> 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com	<b>Job</b>	120-ft Monopole - MFP #40916-151	<b>Page</b>	4 of 7
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	<b>Client</b>	Tarpon Towers	<b>Designed by</b>	Mike

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L4	90 - 80	Pole	Max. Vy	4	3.36	-51.36	0.00
			Max. Vx	2	-3.36	0.00	51.36
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-14.46	0.00	0.00
			Max. Mx	4	-5.98	-90.10	0.00
			Max. My	2	-5.98	0.00	90.10
			Max. Vy	4	4.37	-90.10	0.00
L5	80 - 70.5	Pole	Max. Vx	2	-4.37	0.00	90.10
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-17.04	0.00	0.00
			Max. Mx	4	-7.36	-135.37	0.00
			Max. My	2	-7.36	0.00	135.37
			Max. Vy	4	5.19	-135.37	0.00
			Max. Vx	2	-5.19	0.00	135.37
L6	70.5 - 70	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-17.12	0.00	0.00
			Max. Mx	4	-7.42	-137.97	0.00
			Max. My	2	-7.42	0.00	137.97
			Max. Vy	4	5.22	-137.97	0.00
			Max. Vx	2	-5.22	0.00	137.97
			Max Tension	1	0.00	0.00	0.00
L7	70 - 32	Pole	Max. Compression	8	-25.29	0.00	0.00
			Max. Mx	4	-12.85	-356.05	0.00
			Max. My	2	-12.85	0.00	356.05
			Max. Vy	4	8.39	-356.05	0.00
			Max. Vx	2	-8.39	0.00	356.05
			Max Tension	1	0.00	0.00	0.00
			Max. Compression	8	-36.80	0.00	0.00
L8	32 - 0	Pole	Max. Mx	4	-20.78	-740.65	0.00
			Max. My	2	-20.78	0.00	740.65
			Max. Vy	4	11.84	-740.65	0.00
			Max. Vx	2	-11.84	0.00	740.65

### Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	120 - 110	6.221	13	0.6008	0.0000
L2	110 - 100	4.965	13	0.5974	0.0000
L3	100 - 90	3.736	13	0.5705	0.0000
L4	90 - 80	2.608	13	0.4970	0.0000
L5	80 - 70.5	1.702	13	0.3550	0.0000
L6	70.5 - 70	1.197	13	0.1381	0.0000
L7	70 - 32	1.182	13	0.1375	0.0000
L8	38 - 0	0.404	13	0.0898	0.0000



<b>tnxTower</b>  <b>Michael F. Plahovinsak, P.E.</b> 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com	<b>Job</b>	120-ft Monopole - MFP #40916-151	<b>Page</b>	5 of 7
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	<b>Client</b>	Tarpon Towers	<b>Designed by</b>	Mike

### Critical Deflections and Radius of Curvature - Service Wind

<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection</i>	<i>Tilt</i>	<i>Twist</i>	<i>Radius of Curvature</i>
<i>ft</i>			<i>in</i>	<i>°</i>	<i>°</i>	<i>ft</i>
117.00	(3) Andrew SBNHH-1D65A w/ mount pipe	13	5.844	0.6006	0.0000	134324
115.00	Radome Cylinder (40"Ø x 10')	13	5.592	0.6003	0.0000	134324
106.00	(3) Andrew LNX-6514DS w/ mount pipe	13	4.467	0.5914	0.0000	24747
105.00	Radome Cylinder (40"Ø x 10')	13	4.343	0.5891	0.0000	21391
96.00	(3) Andrew HBX-6517DS-VTM w/ mount pipe	13	3.267	0.5454	0.0000	8485
95.00	Radome Cylinder (40"Ø x 10')	13	3.153	0.5380	0.0000	7834
86.00	(3) Quintel QS66512-2 Panel w/ mount pipe	13	2.210	0.4589	0.0000	4244
85.00	Radome Cylinder (40"Ø x 10')	13	2.117	0.4468	0.0000	3994
75.00	Radome Cylinder (40"Ø x 10')	13	1.383	0.2128	0.0000	2554

### Maximum Tower Deflections - Design Wind

<i>Section No.</i>	<i>Elevation</i>	<i>Horz. Deflection</i>	<i>Gov. Load Comb.</i>	<i>Tilt</i>	<i>Twist</i>
	<i>ft</i>	<i>in</i>		<i>°</i>	<i>°</i>
L1	120 - 110	37.682	2	3.6448	0.0000
L2	110 - 100	30.062	2	3.6244	0.0000
L3	100 - 90	22.610	2	3.4606	0.0000
L4	90 - 80	15.773	2	3.0139	0.0000
L5	80 - 70.5	10.282	2	2.1511	0.0000
L6	70.5 - 70	7.224	2	0.8343	0.0000
L7	70 - 32	7.137	2	0.8308	0.0000
L8	38 - 0	2.437	2	0.5421	0.0000

### Critical Deflections and Radius of Curvature - Design Wind

<i>Elevation</i>	<i>Appurtenance</i>	<i>Gov. Load Comb.</i>	<i>Deflection</i>	<i>Tilt</i>	<i>Twist</i>	<i>Radius of Curvature</i>
<i>ft</i>			<i>in</i>	<i>°</i>	<i>°</i>	<i>ft</i>
117.00	(3) Andrew SBNHH-1D65A w/ mount pipe	2	35.391	3.6440	0.0000	22255
115.00	Radome Cylinder (40"Ø x 10')	2	33.865	3.6419	0.0000	22255
106.00	(3) Andrew LNX-6514DS w/ mount pipe	2	27.042	3.5881	0.0000	4100
105.00	Radome Cylinder (40"Ø x 10')	2	26.294	3.5741	0.0000	3544
96.00	(3) Andrew HBX-6517DS-VTM w/ mount pipe	2	19.766	3.3084	0.0000	1405
95.00	Radome Cylinder (40"Ø x 10')	2	19.075	3.2634	0.0000	1297
86.00	(3) Quintel QS66512-2 Panel w/ mount pipe	2	13.362	2.7821	0.0000	701
85.00	Radome Cylinder (40"Ø x 10')	2	12.799	2.7087	0.0000	660
75.00	Radome Cylinder (40"Ø x 10')	2	8.353	1.2879	0.0000	421

<b>tnxTower</b>  <b>Michael F. Plahovinsak, P.E.</b> 18301 State Route 161 Plain City, OH 43064 Phone: 614-398-6250 FAX: mike@mfpeng.com	<b>Job</b> 120-ft Monopole - MFP #40916-151	<b>Page</b> 6 of 7
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	<b>Client</b> Tarpon Towers	<b>Designed by</b> Mike

### Pole Design Data

Section No.	Elevation ft	Size	L ft	L <sub>u</sub> ft	Kl/r	A in <sup>2</sup>	P <sub>u</sub> K	φP <sub>n</sub> K	Ratio $\frac{P_u}{\phi P_n}$
L1	120 - 110 (1)	TP14x14x0.2188	10.00	0.00	0.0	9.5685	-1.24	710.89	0.002
L2	110 - 100 (2)	TP14x14x0.2188	10.00	0.00	0.0	9.5685	-2.61	710.89	0.004
L3	100 - 90 (3)	TP14x14x0.2188	10.00	0.00	0.0	9.5685	-3.98	710.89	0.006
L4	90 - 80 (4)	TP14x14x0.2188	10.00	0.00	0.0	9.5685	-5.98	710.89	0.008
L5	80 - 70.5 (5)	TP14x14x0.2188	9.50	0.00	0.0	9.5685	-7.36	710.89	0.010
L6	70.5 - 70 (6)	TP40x14x0.2188	0.50	0.00	0.0	9.5685	-7.40	710.89	0.010
L7	70 - 32 (7)	TP45.16x40x0.25	38.00	0.00	0.0	34.9896	-12.85	2102.06	0.006
L8	32 - 0 (8)	TP49x43.8453x0.25	38.00	0.00	0.0	38.6831	-20.78	2189.77	0.009

### Pole Bending Design Data

Section No.	Elevation ft	Size	M <sub>ux</sub> kip-ft	φM <sub>ux</sub> kip-ft	Ratio $\frac{M_{ux}}{\phi M_{ux}}$	M <sub>uy</sub> kip-ft	φM <sub>uy</sub> kip-ft	Ratio $\frac{M_{uy}}{\phi M_{uy}}$
L1	120 - 110 (1)	TP14x14x0.2188	5.81	199.87	0.029	0.00	199.87	0.000
L2	110 - 100 (2)	TP14x14x0.2188	23.07	199.87	0.115	0.00	199.87	0.000
L3	100 - 90 (3)	TP14x14x0.2188	51.36	199.87	0.257	0.00	199.87	0.000
L4	90 - 80 (4)	TP14x14x0.2188	90.10	199.87	0.451	0.00	199.87	0.000
L5	80 - 70.5 (5)	TP14x14x0.2188	135.37	199.87	0.677	0.00	199.87	0.000
L6	70.5 - 70 (6)	TP40x14x0.2188	135.37	199.87	0.677	0.00	199.87	0.000
L7	70 - 32 (7)	TP45.16x40x0.25	356.05	1910.18	0.186	0.00	1910.18	0.000
L8	32 - 0 (8)	TP49x43.8453x0.25	740.64	2201.13	0.336	0.00	2201.13	0.000

### Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V <sub>u</sub> K	φV <sub>n</sub> K	Ratio $\frac{V_u}{\phi V_n}$	Actual T <sub>u</sub> kip-ft	φT <sub>n</sub> kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	120 - 110 (1)	TP14x14x0.2188	1.16	355.45	0.003	0.00	400.23	0.000
L2	110 - 100 (2)	TP14x14x0.2188	2.29	355.45	0.006	0.00	400.23	0.000
L3	100 - 90 (3)	TP14x14x0.2188	3.36	355.45	0.009	0.00	400.23	0.000
L4	90 - 80 (4)	TP14x14x0.2188	4.37	355.45	0.012	0.00	400.23	0.000
L5	80 - 70.5 (5)	TP14x14x0.2188	5.19	355.45	0.015	0.00	400.23	0.000
L6	70.5 - 70 (6)	TP40x14x0.2188	5.22	815.59	0.006	0.00	400.23	0.000
L7	70 - 32 (7)	TP45.16x40x0.25	8.39	1051.03	0.008	0.00	3825.03	0.000
L8	32 - 0 (8)	TP49x43.8453x0.25	11.84	1094.88	0.011	0.00	4407.63	0.000

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	<b>Client</b> Tarpon Towers	<b>Designed by</b> Mike

### Pole Interaction Design Data

Section No.	Elevation ft	Ratio	Ratio	Ratio	Ratio	Ratio	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
		$\frac{P_u}{P_n}$	$\frac{M_{ux}}{M_{nx}}$	$\frac{M_{uy}}{M_{ny}}$	$\frac{V_u}{V_n}$	$\frac{T_u}{T_n}$			
L1	120 - 110 (1)	0.002	0.029	0.000	0.003	0.000	0.031	1.000	4.8.2 ✓
L2	110 - 100 (2)	0.004	0.115	0.000	0.006	0.000	0.119	1.000	4.8.2 ✓
L3	100 - 90 (3)	0.006	0.257	0.000	0.009	0.000	0.263	1.000	4.8.2 ✓
L4	90 - 80 (4)	0.008	0.451	0.000	0.012	0.000	0.459	1.000	4.8.2 ✓
L5	80 - 70.5 (5)	0.010	0.677	0.000	0.015	0.000	0.688	1.000	4.8.2 ✓
L6	70.5 - 70 (6)	0.010	0.677	0.000	0.006	0.000	0.688	1.000	4.8.2 ✓
L7	70 - 32 (7)	0.006	0.186	0.000	0.008	0.000	0.193	1.000	4.8.2 ✓
L8	32 - 0 (8)	0.009	0.336	0.000	0.011	0.000	0.346	1.000	4.8.2 ✓

### Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$\phi P_{allow}$ K	% Capacity	Pass Fail
L1	120 - 110	Pole	TP14x14x0.2188	1	-1.24	710.89	3.1	Pass
L2	110 - 100	Pole	TP14x14x0.2188	2	-2.61	710.89	11.9	Pass
L3	100 - 90	Pole	TP14x14x0.2188	3	-3.98	710.89	26.3	Pass
L4	90 - 80	Pole	TP14x14x0.2188	4	-5.98	710.89	45.9	Pass
L5	80 - 70.5	Pole	TP14x14x0.2188	5	-7.36	710.89	68.8	Pass
L6	70.5 - 70	Pole	TP40x14x0.2188	6	-7.40	710.89	68.8	Pass
L7	70 - 32	Pole	TP45.16x40x0.25	7	-12.85	2102.06	19.3	Pass
L8	32 - 0	Pole	TP49x43.8453x0.25	8	-20.78	2189.77	34.6	Pass
Summary								
Pole (L5)							68.8	Pass
<b>RATING =</b>							<b>68.8</b>	<b>Pass</b>



<b>Michael F. Plahovinsak, P.E.</b> 18301 State Route 161 W Plain City, OH 43064 Phone: 614-398-6250 email: mike@mfpeng.com	<b>Job</b> 120-ft monopole - MFP #40916-151	<b>Page</b> BP-G
	<b>Project</b> CT1192 New Canaan	<b>Date</b> 11/21/2016
	<b>Client</b> TARPON TOWERS TP-12359	<b>Designed by</b> Mike

## Anchor Rod and Base Plate Calculation

**ANSI/TIA-222-G-2**

<b>Factored Base Reactions:</b>	<b>Pole Shape:</b>	<b>Anchor Rods:</b>	<b>Base Plate:</b>
Moment: 741 ft-kips	18-Sided	(6) 2.25 in. A615 GR. 75	1.75 in. x 62 in. Round
Shear: 12 kips	<b>Pole Dia. (<math>D_f</math>):</b>	Anchor Rods Evenly Spaced	$f_y = 60$ ksi
Axial: 21 kips	49.00 in	On a 56 in Bolt Circle	

**Anchor Rod Calculation According to TIA-222-G section 4.9.9**

- $\phi = 0.80$  TIA 4.9.9
- $I_{bolts} = 2352.00 \text{ in}^2$  Momet of Inertia
- $P_u = 106$  kips Tension Force
- $V_u = 2$  kips Shear Force
- $R_{nt} = 325.00$  kips Nominal Tensile Strength
- $\eta = 0.50$  for detail type (d)

The following Interaction Equation Shall Be Satisfied:

$$\left( \frac{P_u + \frac{V_u}{\eta}}{\phi R_{nt}} \right) \leq 1.0$$

$$0.423 \leq 1$$

**Base Plate Calculation According to TIA-222-G**

- $\phi = 0.90$  TIA 4.7
- $M_{pL} = 382.8$  in-kip Plate Moment
- $L = 25.7$  in Section Length
- $Z = 19.6$  Plastic Section Modulus
- $M_p = 1178.6$  in-kip Plastic Moment
- $\phi M_n = 1060.7$  in-kip Factored Resistance

Calculated Moment vs Factored Resistance

$$382.75 \text{ in-kip} \leq 1061 \text{ in-kip}$$

<b>Anchor Rods Are Adequate</b>	<b>42.3%</b> <input checked="" type="checkbox"/>
<b>Base Plate is Adequate</b>	<b>36.1%</b> <input checked="" type="checkbox"/>

## Monopole Spread Footing Calculation

ANSI/TIA-222-G-2

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Factored Base Reactions:	Footing Dimensions:		Concrete:
Moment:	741 ft-kips	16 ft x 16 ft	7 ft Square Pier
Shear:	12 kips	x 2 ft thick	w/6 in Reveal
Axial:	21 kips	Bearing 6 ft B.G.	27.1 Yd3 Concrete
			f'c = 4000 psi
			Steel fy = 60 ksi
			f = 0.75
Soil Backfill	100 pcf	Ultimate Bearing:	6000 psf
			Water Table n/a

### Foundation Weight

Weight of Pole	21.0 kips
Weight of Concrete	109.875 kips
Weight of Soil	82.8 kips
Bouyancy of Water	0.0 kips
<u>          Total</u>	<u>213.7 kips</u>

### Overturning Resistance:

Overturning Moment ( $M_u$ )	819 ft-kips	741 ft-kips + (12 kips x 6.5 ft)
Resisting Moment ( $R_s$ )	1709.4 ft-kips	213.675 kips x 16 ft / 2
$\phi \times R_s > M_u$	$M_{\text{overturning}} / f M_{\text{resist}}$	<b>63.9%    OK</b>

### Soil Bearing Pressure:

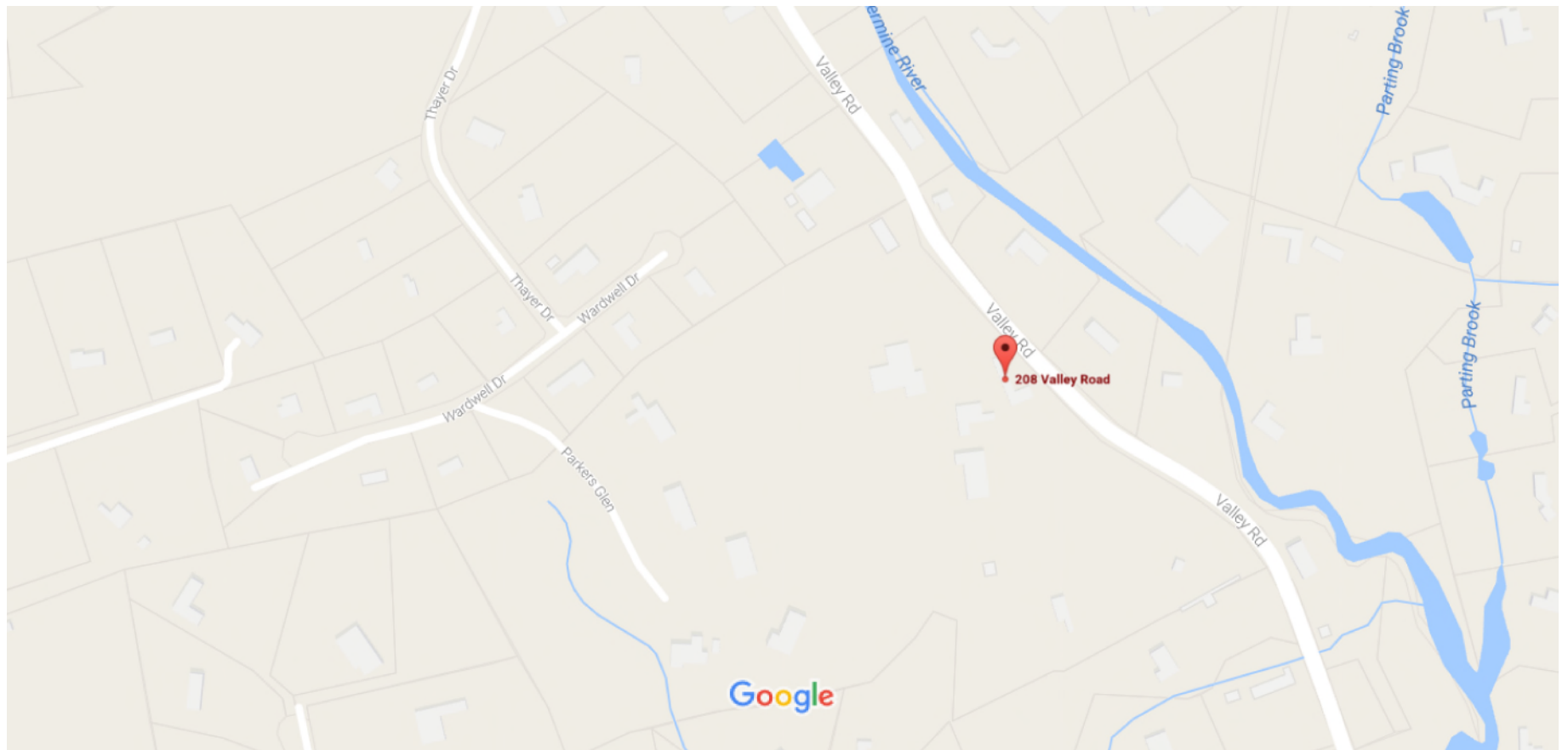
Eccentricity (e)	3.83 ft	819 ft-kips / 213.675 kips
6(e)	23.0 ft >	16.0 ft    6e > 16
Maximum Soil Bearing	2531.5332 psf	Calculated across corners
Soil Overburden	-600 psf	
Net Soil Bearing	1931.5332 psf	
Resisting Soil Bearing ( $R_s$ )	6000 psf	
Net Soil Bearing < $\phi \times R_s$	Net Bearing / f $R_s$	<b>42.9%    OK</b>

### Bending Moment in Pier:

Bending Moment	795 ft-kips	741 ft-kips + (12 kips x 4.5 ft)
Pier Steel Req'd (Loads)	9.09 in <sup>2</sup>	
Min. Pier Steel	35.28 in <sup>2</sup>	1/2% (Based on Square Pier)

### Bending Moment in Footing:

Max Bending Moment	304.58923 ft-kips	$\Sigma$ Moments about pier face
Footing Steel Req'd (Loads)	0.46 in <sup>2</sup> /ft	
Min. Footing Steel	0.52 in <sup>2</sup> /ft	0.18%







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Location	Owner	Account	MBLU
208 VALLEY RD	SILVER HILL HOSPITAL INC	30126	0044/ 0108/ 0120/

**Parcel Value**

Item	Appraised Value	Assessed Value
Buildings	9,890,300	6,923,210
Extra Building Features	0	0
Outbuildings	67,700	47,390
Land	5,092,000	3,564,400
<b>Total</b>	<b>15,050,000</b>	<b>10,535,000</b>

**Owner of Record**

SILVER HILL HOSPITAL INC 208 VALLEY RD NEW CANAAN, CT 06840
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**Owner History**

Name	Book/Page	Sale Date	Sale Price
SILVER HILL HOSPITAL INC	702/ 281	11/09/2004	0
SILVER HILL FOUNDATION INC	67/ 13	05/18/1940	136,567

**Assessment History**

Year	Total Assessment
2015	10,535,000
2014	10,535,000
2013	10,535,000
2012	9,209,060
2011	9,209,060
2010	9,209,060
2009	9,209,100
2008	10,969,100
2007	4,710,900
2006	4,710,900
2005	4,710,900
2004	4,710,900
2003	4,710,900
2002	6,112,960

**Building Permits**

Permit ID	Issue Date	Amount	Description
16-00064	01/28/2016	10,000	"REPAIR WATER DAMAGE AT MAIN HOUSE."
15-01238	12/09/2015	80,000	MARTIN CENTER - REPLACE EXISTING ENTRANCE STAIRS AND ROOF.
15-01184	11/30/2015	75,000	RENOVATE 18 EXISTING RESTROOMS (WITH NEW FINISHES AND NEW TOILETS AND SHOWER CONTROLS FOR PATIENT SAFETY.) NO INCREASE IN FIXTURE COUNT.
15-00466	06/01/2015	300,000	MAIN HOUSE - INTERIOR RENOVATIONS TO THE 2ND FLOOR
15-00280	04/07/2015	90,000	'ENLARGE MED ROOM AND SWAP LOUNGE & TREATMENT ROOMS TO FACILITATE PATIENT CARE, ADD AC UNITS TO MED, TREATMENT AND & NURSE STATION."
14-1307	12/16/2014	72,000	CONSTRUCT A 12 X 24 SHELTER- FOR PROPANE GENERATOR, 6 ANTENNAS, UG PROPANE TANKS

14-0244	03/24/2014	400,000	"MARTIN CENTER BUILDING OFFICE: - RENOVATE EXISTING OFFICE SPACE INCLUDING ADA ACCESS TO UPPER LEVEL, INCLUDES ADDING HVAC & EXTERIOR WINDOWS [**REVISION- \$25,000: CREATE NEW RESTROOM TO REPLACE ONE MOVED TO CREAT DATA CLOSET. NEW RESTROOM TO BE ADA COMPL
14-0297	03/19/2014	175,000	WIRELESS CELL TOWER ONLY.
14-0296	03/19/2014	30,000	INSTALLATION OF EQUIPMENT ON 12x20 CONCRETE PAD, CONCRETE PAD & 3 PANEL ANTENNAS AT 86'
14-0169	02/26/2014	1,600,000	"RESIDENTIAL BUILDING" -- RENOVATION TOTHE EXISTING 7800 SQ FT RESIDENTIAL BUILDING - INCLUDING ADA UPGRADES, NEW WINDOWS SIDING, ROOF, MECHANICALS AND FINISHES FOR THE K HOUSE
14-0168	02/12/2014	20,000	REMOVE POLE MOUNTED FLOOD LIGHTS & REPLACE WITH CAMPUS STD LOW LIGHT POST LIGHTS.
12-0452	09/21/2012	1,500,000	COM ADDS & ALTS
12-0359	04/02/2012	30,000	COM ADDS & ALTS
11-0059	03/15/2011	1,234,000	COM ADDS & ALTS
11-0037	01/19/2011	65,000	ASBESTOS ABATEMENT, EXPLORATION DEMO
10-0086	03/24/2010	735,000	COM ADDS & ALTS
09-0649	01/29/2010	0	SIDEWALKS & ACCESSIBLE ROUTE
09-0109	04/14/2009	100,000	COM ADDS & ALTS
08-0846	11/18/2008	25,000	INT ALTS AND DECK
07-1210	02/28/2008	250,000	CHANGE OF USE INT. ALTS & RAMP R-4
07-0675	08/20/2007	6,199,000	COM ADDITIONS AND ALTERATIONS
07-0402	05/11/2007	50,000	COM ADDS & ALTS
07-0309	04/25/2007	25,000	COM ADDS & ALTS
01-0773A	11/06/2001	0	COM CO
01-0773	09/17/2001	20,000	NEW OUTSIDE STAIRS
01-0096	03/12/2001	73,000	PATIENT ROOM REMO
20343	01/03/2001	42,000	
1914-0120	09/23/1998	150,000	SILVERHILL FOUNDATION, INC.
1796-0120	07/29/1996	1,000	SILVERHILL FOUNDATION, INC.

**Land Line Valuation**

Size	Zone	Dev Map #	Appraised Value	Assessed Value
21.57 AC	2 AC	7319, 7350	5,092,000	3,564,400

**Building Details - Click Buildings Below**

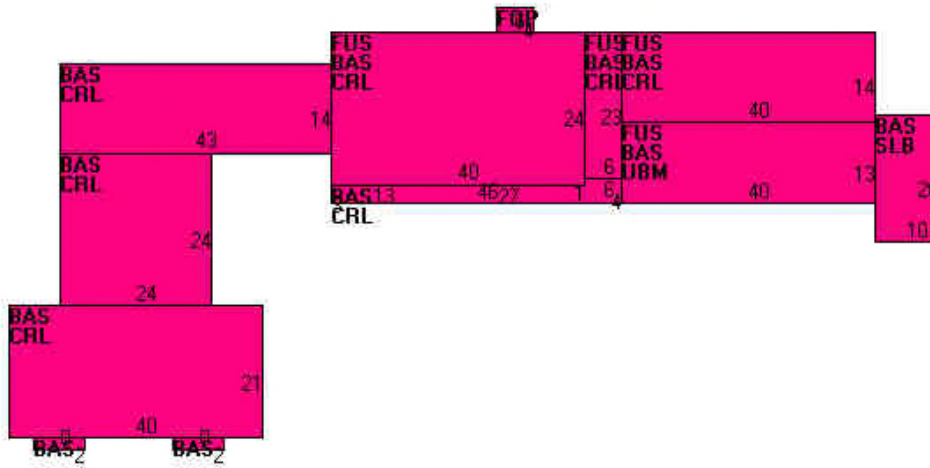
Building 1	Building 2	Building 3	Building 4	Building 5	Building 6	Building 7	Building 8
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**Building 1**



0044-0108-0120-00000

**Building Sketch**



**Subarea Summary**

<b>Code</b>	<b>Description</b>	<b>Gross Area</b>	<b>Living Area</b>
BAS	First Floor	4,572	4,572
CRL	Crawl Space	3,820	0
FOP	Open Porch	24	0
FUS	Upper Story, Finished	2,178	2,178
SLB	Slab	200	0
UBM	Basement, Unfinished	520	0
<b>Total Living Area:</b>			<b>6,750</b>