USPS Tracking®

FAQs > (http://faq.usps.com/?articleId=220900)

Track Another Package +

Tracking Number: 70161370000047412210 Remove ×

Expected Delivery on

MONDAY

23 OCTOBER 2017 ⓘ by **8:00pm** ⓘ

Delivered

October 23, 2017 at 10:40 am
DELIVERED, LEFT WITH INDIVIDUAL
PLAINFIELD, CT 06374

Get Updates ∨

Text & Email Updates ∨

Tracking History ∨

Product Information ∨

See Less ∧

Can't find what you're looking for?

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USPS Tracking®

FAQs > (http://faq.usps.com/?articleId=220900)

Track Another Package +

Tracking Number: 70161370000047412203 Remove ×

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(https://www.youtube.com/usps)

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ryan Lockenvitz
Project Manager
Crown Castle
3 Corporate Park Drive, Ste 101
Clifton Park, NY 12065

9590 9402 1864 6104 9533 39

2. Article Number *(Transfer from service label)*

7016 1370 0000 4741 2180

COMPLETE THIS SECTION ON DELIVERY

A. Signature

X Lindsay Bianco ☐ Agent ☐ Addressee

B. Received by *(Printed Name)* Lindsay Bianco

C. Date of Delivery 10/20/17

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type

- ☐ Adult Signature
- ☐ Adult Signature Restricted Delivery
- ☐ Certified Mail®
- ☐ Certified Mail Restricted Delivery
- ☐ Collect on Delivery
- ☐ Collect on Delivery Restricted Delivery
- ☐ Insured Mail
- ☐ tricted Delivery
- ☐ Priority Mail Express®
- ☐ Registered Mail™
- ☐ Registered Mail Restricted Delivery
- ☐ Return Receipt for Merchandise
- ☐ Signature Confirmation™
- ☐ Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053 Domestic Return Receipt

October 16, 2017

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

Regarding:	Notice of Exempt Modification – Swap of Three Antennas and Addition of Three RRH
Property Address:	47-51 Unity Street, Moosup, CT 06354
Applicant:	New Cingular Wireless PCS, LLC/AT&T Mobility ("AT&T", Site ID CT5461)

Dear Ms. Bachman:

AT&T currently maintains a wireless telecommunications facility on an existing 160-foot monopole at the above-referenced address, latitude 41.7151300, longitude -71.8962900. Said monopole is owned by the Town of Plainfield.

AT&T desires to modify its existing telecommunications facility by swapping three (3) antennas and adding three (3) remote-radio heads ("RRHs"). The centerline height of the existing antennas is and will remain at 150 feet.

Please accept this application as notification pursuant to R.C.S.A. §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 Paul E. Sweet, First Selectman for the Town of Plainfield as property owner and as the chief elected official of the municipality in which the facility is located. A copy of this letter is also being sent to Lou Soja, Planning & Engineering Supervisor, for the Town of Plainfield, Ryan Brais, Zoning Officer, for the Town of Plainfield and to Ryan Lockenvitz, Project Manager, for the tower company, Crown Castle/Global Signal Acquisitions II.

The planned modifications to AT&T's facility fall squarely within those activities explicitly provided for in R.C.S.A. §16-50j-72 (b)(2). Specifically:

1. The planned modification will not result in an increase in the height of the existing structure. The antennas and remote-radio heads to be swapped will be installed at the existing height of 150 feet on the 160-foot monopole.

2. The proposed modifications will not involve any changes to ground-mounted equipment, and therefore will not require an extension of the site boundary.

3. The proposed modification will not increase the noise level at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the modified facility will not increase radio frequency (RF) emissions at the facility to a level at or above Federal Communications Commission (FCC) safety standard. An RF emissions calculation (enclosed) for AT&T's modified facility is herein provided.

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 AT&T's proposed modifications (please see enclosed structural analysis completed by Tower Engineering Professionals dated August 25, 2017).

For the foregoing reasons, AT&T respectfully requests that the proposed swap of antennas and remote-radio head installation be allowed within the exempt modifications under R.C.S.A. §16-50j-72 (b)(2).

Sincerely,

Jennifer Iliades

Jennifer Iliades
Site Acquisition Specialist

Enclosures: Exhibit 1 – Field Card and GIS Map
Exhibit 2 – Construction Drawings
Exhibit 3 – Structural Analysis
Exhibit 4 – RF Emissions Analysis Report Evaluation

cc: Paul E. Sweet, First Selectman, Town of Plainfield (municipality and landowner)
Lou Soja, Planning & Engineering Supervisor, Town of Plainfield (municipality)
Ryan Brais, Zoning Officer, Town of Plainfield (municipality)
Ryan Lockenvitz, Project Manager, Crown Castle/Global Signal Acquisitions II (tower co.)

Exhibit 1

47-51 UNITY ST

Location	47-51 UNITY ST	**Mblu**	015/ 0071/ 0009/ /
Acct#	00145200	**Owner**	PLAINFIELD TOWN OF
Assessment	$627,590	**Appraisal**	$896,550
PID	1571	**Building Count**	3

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$358,420	$538,130	$896,550
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$250,900	$376,690	$627,590

Owner of Record

Owner	PLAINFIELD TOWN OF	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	651 NORWICH RD PLAINFIELD, CT 06374	**Book & Page**	0025/0002
		Sale Date	04/01/1878

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
PLAINFIELD TOWN OF	$0		0025/0002	04/01/1878

Building Information

Building 1 : Section 1

Year Built:	1973
Living Area:	12,000
Replacement Cost:	$345,480
Building Percent Good:	68
Replacement Cost Less Depreciation:	$234,930

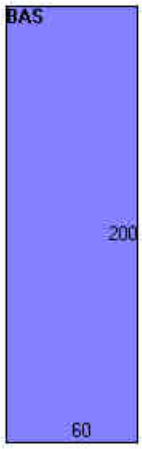
Building Attributes	
Field	**Description**

STYLE	Warehouse
MODEL	Comm/Ind
Grade	C
Stories:	1
Occupancy	
Exterior Wall 1	Pre-finsh Metl
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Oil
Heating Type	Forced Air-Duc
AC Type	None
Bldg Use	MUNICIPAL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	9030
Heat/AC	HEAT ONLY
Frame Type	STEEL
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	16
% Comn Wall	

Building Photo

(http://images.vgsi.com/photos/PlainfieldCTPhotos//\00\00\13/2

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	12,000	12,000
		12,000	12,000

Building 2 : Section 1

Year Built: 1975
Living Area: 3,150
Replacement Cost: $108,581
Building Percent Good: 69
Replacement Cost Less Depreciation: $74,920

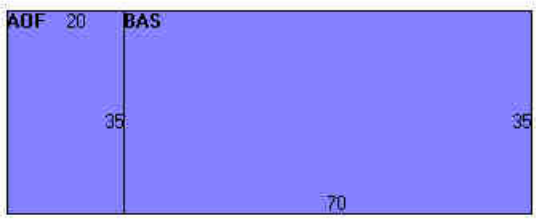
Building Attributes : Bldg 2 of 3	
Field	**Description**
STYLE	Warehouse
MODEL	Comm/Ind
Grade	C

Stories:	1
Occupancy	
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Typical
Interior Wall 2	
Interior Floor 1	Average
Interior Floor 2	
Heating Fuel	None
Heating Type	None
AC Type	None
Bldg Use	MUNICIPAL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	9030
Heat/AC	NONE
Frame Type	NONE
Baths/Plumbing	AVERAGE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	

Building Photo

(http://images.vgsi.com/photos/PlainfieldCTPhotos//\00\00\59/1

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	**Description**	**Gross Area**	**Living Area**
BAS	First Floor	2,450	2,450
AOF	Office	700	700
		3,150	3,150

Building 3 : Section 1

Year Built: 1975
Living Area: 378
Replacement Cost: $20,782
Building Percent Good: 69
Replacement Cost Less Depreciation: $14,340

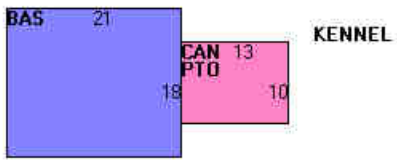
Building Attributes : Bldg 3 of 3	
Field	**Description**
STYLE	Office/Warehs
MODEL	Comm/Ind
Grade	D

Stories:	1
Occupancy	
Exterior Wall 1	Concr/Cinder
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Minim/Masonry
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	None
Bldg Use	MUNICIPAL MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	9030
Heat/AC	HEAT ONLY
Frame Type	REINF. CONCR
Baths/Plumbing	NONE
Ceiling/Wall	CEIL & WALLS
Rooms/Prtns	AVERAGE
Wall Height	10
% Comn Wall	

Building Photo

(http://images.vgsi.com/photos/PlainfieldCTPhotos//\00\00\59/1

Building Layout



Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	378	378
CAN	Canopy	130	0
PTO	Patio	130	0
		638	378

Extra Features

Extra Features				Legend
Code	Description	Size	Value	Bldg #
OD1	Overhead Dr-Wood/Mtl	1 UNITS	$360	1
OD1	Overhead Dr-Wood/Mtl	1 UNITS	$380	2
A/C	AIR CONDITION	700 S.F.	$670	2
OD1	Overhead Dr-Wood/Mtl	3 UNITS	$1,080	1
MEZ1	MEZZANINE-UNF	1200 S.F.	$3,460	1

Land

Land Use

Use Code	903C
Description	MUNICIPAL MDL-94
Zone	IND
Neighborhood	2000
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	12
Frontage	
Depth	
Assessed Value	$376,690
Appraised Value	$538,130

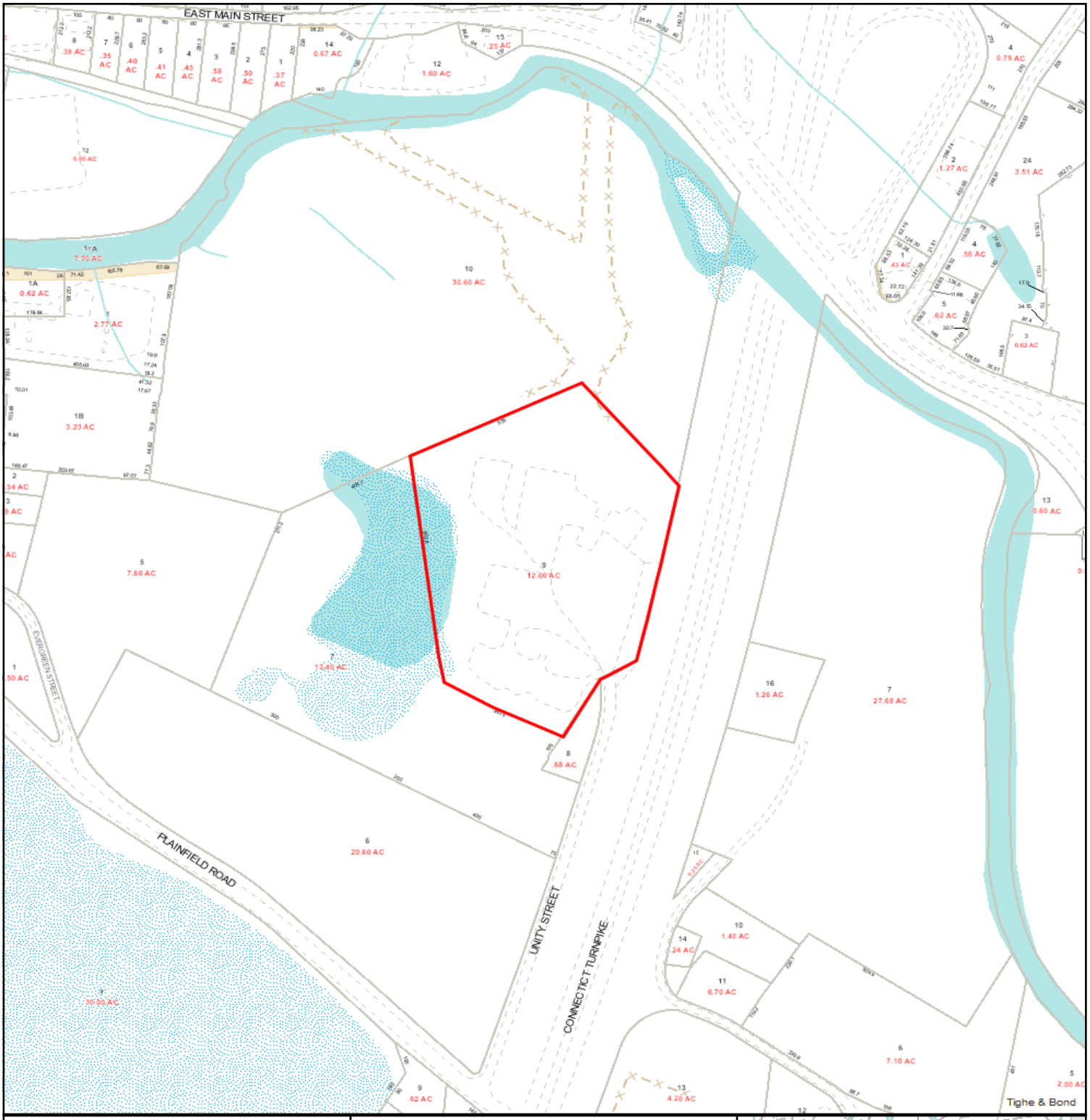
Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
AQ1	Quonset Bldg			840 S.F.	$12,180	1
KEN2	KENNEL-GOOD			468 S.F.	$5,970	3
CNP1	CANOPY AVG			312 S.F.	$1,870	3
CNP1	CANOPY AVG			800 S.F.	$3,200	2
SH1	Frame Shed			128 S.F.	$800	1
SH1	Frame Shed			170 S.F.	$1,060	1
CNP1	CANOPY AVG			800 S.F.	$3,200	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$363,620	$538,130	$901,750
2014	$363,620	$538,130	$901,750
2013	$363,620	$538,130	$901,750

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$254,540	$376,690	$631,230
2014	$254,540	$376,690	$631,230
2013	$254,540	$376,690	$631,230



47-51 UNITY ST

10/16/2017 4:08:49

1"=400'

Property Information

Parcel ID	015-0071-0009
Grantee	PLAINFIELD TOWN OF
Location	47-51 UNITY ST
Book/Page	0025/0002

The information depicted on this map is for planning purposes only. It is not adequate for legal boundary definition, regulatory interpretation, or parcel-level analyses.

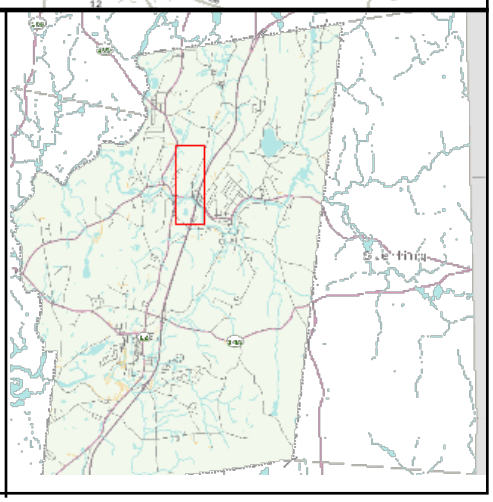


Exhibit 2

WIRELESS COMMUNICATIONS FACILITY
CT5461 - LTE 2C/BWE
PLAINFIELD N CENTRAL
CROWN CASTLE SITE NO.: 876401
47-51 UNITY STREET
MOOSUP, CT 06354

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

FROM: 500 ENTERPRISE DRIVE, ROCKY HILL, CONNECTICUT

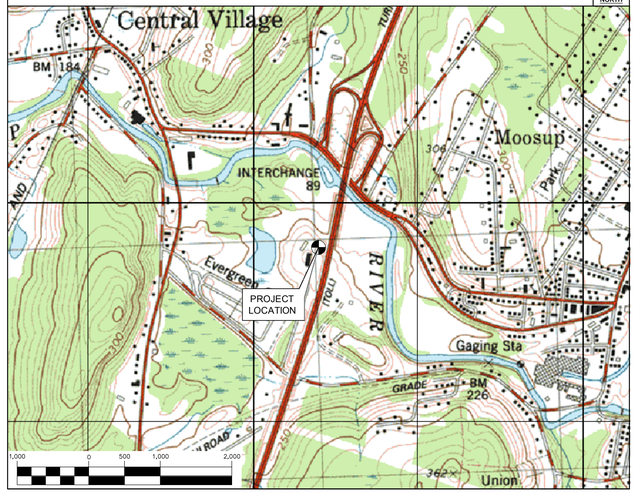
TO: 47-51 UNITY STREET, MOOSUP, CONNECTICUT

1.	HEAD NORTHEAST ON ENTERPRISE DR TOWARD CAPITAL BLVD	0.36 MI
2.	TURN LEFT ONTO CAPITAL BLVD	0.27 MI
3.	TURN LEFT ONTO WEST ST	0.16 MI
4.	TURN LEFT TO MERGE ONTO I-91 N TOWARD HARTFORD	4.44 MI
5.	MERGE ONTO CT-3 N VIA EXIT 25 TOWARD GLASTONBURY.	2.34 MI
6.	MERGE ONTO CT-2 E TOWARD NORWICH	20.08 MI
7.	KEEP LEFT TO TAKE CT-2 E TOWARD NORWICH	12.72 MI
8.	MERGE ONTO I-395 N/GOVERNOR JOHN DAVIS LODGE TPKE N VIA EXIT 28N TOWARD PROVIDENCE	15.95 MI
9.	TAKE THE CT-14A EXIT, EXIT 29, TOWARD PLAINFIELD/ONECO.	0.21 MI
10.	TURN LEFT ONTO CT-14A/PLAINFIELD PIKE. CONTINUE TO FOLLOW CT-14A.	0.40 MI
11.	TURN RIGHT ONTO NORWICH RD/CT-12.	2.03 MI
12.	TURN RIGHT ONTO PLAINFIELD RD.	0.39 MI
13.	TAKE THE 2ND LEFT ONTO UNITY ST.	0.30 MI
14.	47 UNITY ST, #51, MOOSUP, CT 06354-1624, 47 UNITY ST, #51 IS ON THE LEFT.	

VICINITY MAP

SCALE: 1" = 1000'

NORTH



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 HEXPORT ANTENNA, (1) PER SECTOR.
   - B. INSTALL (3) NEW RRUS-32 B2 BEHIND PROPOSED POSITION HEXPORT ANTENNA.
   - C. REMOVE AND REPLACE EXISTING DUL FOR A NEW 5216 + XMU UNIT WITHIN EXISTING PURCELL CABINET.

PROJECT INFORMATION

AT&T SITE NUMBER:	CT5461
AT&T SITE NAME:	PLAINFIELD N CENTRAL
SITE ADDRESS:	CROWN CASTLE SITE NO.: 876401 47-51 UNITY STREET MOOSUP, CT 06354
LESSEE/APPLICANT:	AT&T MOBILITY 500 ENTERPRISE DRIVE, SUITE 3A ROCKY HILL, CT 06067
ENGINEER:	CENTEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT 06405
PROJECT COORDINATES:	LATITUDE: 41°-42'-54.42" N LONGITUDE: 71°-53'-46.80" W GROUND ELEVATION: ±231' AMSL SITE COORDINATES AND GROUND ELEVATION REFERENCED FROM GOOGLE EARTH.

SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
N-1	NOTES, SPECIFICATIONS AND DETAILS	0
C-1	PLANS AND ELEVATION	0
C-2	LTE 2C/BWE EQUIPMENT DETAILS	1
E-1	LTE SCHEMATIC DIAGRAM AND NOTES	0
E-2	LTE WIRING DIAGRAM	0
E-3	TYPICAL ELECTRICAL DETAILS	0

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	09/25/17	CAG	TJL	CONSTRUCTION DOCUMENTS - REVISED TMA QUANTITY
0	09/20/17	KAWJR	CAG	CONSTRUCTION DOCUMENTS - ISSUED FOR CONSTRUCTION

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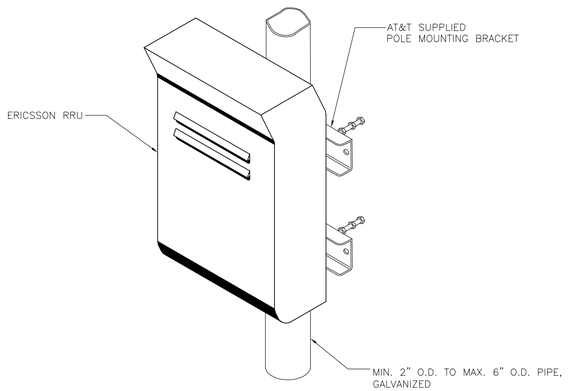
CT5461 - LTE 2C/BWE
47-51 UNITY STREET
MOOSUP, CT 06354

DATE: 08/24/17
SCALE: AS NOTED
JOB NO. 17004.37

TITLE SHEET

T-1



ISOMETRIC VIEW

NOTES:

1. AT&T SHALL SUPPLY RRU, AND RRU POLE–MOUNTING BRACKET. CONTRACTOR SHALL SUPPLY POLE/PIPE AND INSTALL ALL MOUNTING HARDWARE INCLUDING ERICSSON RRU POLE–MOUNTING BRACKET. CONTRACTOR SHALL INSTALLS RRU AND MAKES CABLE TERMINATIONS.
2. NO PAINTING OF THE RRU OR SOLAR SHIELD IS ALLOWED.

1 / N–1 **TYPICAL RRUS MOUNTING DETAILS**

SCALE: NTS

NOTES AND SPECIFICATIONS

DESIGN BASIS:

GOVERNING CODE: 2012 INTERNATIONAL BUILDING (IBC) AS MODIFIED BY THE 2016 CT STATE BUILDING CODE AND AMENDMENTS.

1. DESIGN CRITERIA:

- WIND LOAD: PER TIA 222 G (ANTENNA MOUNTS): 100–110 MPH (3 SECOND GUST)
- RISK CATEGORY: II (BASED ON IBC TABLE 1604.5)
- NOMINAL DESIGN SPEED (OTHER STRUCTURE): 97 MPH (Vasd) (EXPOSURE B/IMPORTANCE FACTOR 1.0 BASED ON ASCE 7–10) PER 2012 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2016 CONNECTICUT STATE BUILDING CODE.
- SEISMIC LOAD (DOES NOT CONTROL): PER ASCE 7–10 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE GOVERNING BUILDING CODE.
2. 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.
3. BEFORE BEGINNING THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR MAKING SUCH INVESTIGATIONS CONCERNING PHYSICAL CONDITIONS (SURFACE AND SUBSURFACE) AT OR CONTIGUOUS TO THE SITE WHICH MAY AFFECT PERFORMANCE AND COST OF THE WORK.
4. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST EXISTING FIELD CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.
6. ALL DIMENSIONS, ELEVATIONS, AND OTHER REFERENCES TO EXISTING STRUCTURES, SURFACE, AND SUBSURFACE CONDITIONS ARE APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS, ANGLES WITH EXISTING CONDITIONS AND WITH ARCHITECTURAL AND SITE DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
7. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONDITIONS WHICH ARE IN CONFLICT OR OTHERWISE NOT CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND SHALL NOT PROCEED WITH SUCH WORK UNTIL THE CONFLICT IS SATISFACTORILY RESOLVED.
8. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING AND MAINTAINING ADEQUATE SHORING, BRACING, AND BARRICADES AS MAY BE REQUIRED FOR THE PROTECTION OF EXISTING PROPERTY, CONSTRUCTION WORKERS, AND FOR PUBLIC SAFETY.
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 SITE OPERATIONS, COORDINATE WORK WITH NORTHEAST UTILITIES
10. THE STRUCTURE IS DESIGNED TO BE SELF–SUPPORTING AND STABLE AFTER FOUNDATION REMEDIATION WORK IS COMPLETE. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND TO ENSURE THE SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, TEMPORARY BRACING, GUYS OR TIEDOWNS, WHICH MIGHT BE NECESSARY.
11. 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.
12. SHOP DRAWINGS, CONCRETE MIX DESIGNS, TEST REPORTS, AND OTHER SUBMITTALS PERTAINING TO STRUCTURAL WORK SHALL BE FORWARDED TO THE OWNER FOR REVIEW BEFORE FABRICATION AND/OR INSTALLATION IS MADE. SHOP DRAWINGS SHALL INCLUDE ERECTION DRAWINGS AND COMPLETE DETAILS OF CONNECTIONS AS WELL AS MANUFACTURER'S SPECIFICATION DATA WHERE APPROPRIATE. SHOP DRAWINGS SHALL BE CHECKED BY THE CONTRACTOR AND BEAR THE CHECKER'S INITIALS BEFORE BEING SUBMITTED FOR REVIEW.
13. NO DRILLING WELDING OR TAPING ON EVERSOURCE OWNED EQUIPMENT.
14. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL IS DESIGNED BY ALLOWABLE STRESS DESIGN (ASD)

   A. STRUCTURAL STEEL (W SHAPES)–––ASTM A992 (FY = 50 KSI)
   B. STRUCTURAL STEEL (OTHER SHAPES)–––ASTM A36 (FY = 36 KSI)
   C. STRUCTURAL HSS (RECTANGULAR SHAPES)–––ASTM A500 GRADE B, (FY = 46 KSI)
   D. STRUCTURAL HSS (ROUND SHAPES)–––ASTM A500 GRADE B, (FY = 42 KSI)
   E. PIPE–––ASTM A53 (FY = 35 KSI)
   F. CONNECTION BOLTS–––ASTM A325–N
   G. U–BOLTS–––ASTM A36
   H. ANCHOR RODS–––ASTM F 1554
   I. WELDING ELECTRODE–––ASTM E 70XX

2. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS SHALL INCLUDE THE FOLLOWING: SECTION PROFILES, SIZES, CONNECTION ATTACHMENTS, REINFORCING, ANCHORAGE, SIZE AND TYPE OF FASTENERS AND ACCESSORIES. INCLUDE ERECTION DRAWINGS, ELEVATIONS AND DETAILS.
3. STRUCTURAL STEEL SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH THE LATEST PROVISIONS OF AISC MANUAL OF STEEL CONSTRUCTION.
4. PROVIDE ALL PLATES, CLIP ANGLES, CLOSURE PIECES, STRAP ANCHORS, MISCELLANEOUS PIECES AND HOLES REQUIRED TO COMPLETE THE STRUCTURE.
5. FIT AND SHOP ASSEMBLE FABRICATIONS IN THE LARGEST PRACTICAL SECTIONS FOR DELIVERY TO SITE.
6. INSTALL FABRICATIONS PLUMB AND LEVEL, ACCURATELY FITTED, AND FREE FROM DISTORTIONS OR DEFECTS.
7. AFTER ERECTION OF STRUCTURES, TOUCHUP ALL WELDS, ABRASIONS AND NON–GALVANIZED SURFACES WITH A 95% ORGANIC ZINC RICH PAINT IN ACCORDANCE WITH ASTM 780.
8. ALL STEEL MATERIAL (EXPOSED TO WEATHER) SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT DIPPED GALVANIZED) COATINGS" ON IRONS AND STEEL PRODUCTS.
9. ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC COATING (HOT–DIP) ON IRON AND STEEL HARDWARE".
10. THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NON CONFORMING MATERIALS OR CONDITIONS TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER REVIEW.
11. CONNECTION ANGLES SHALL HAVE A MINIMUM THICKNESS OF 1/4 INCHES.
12. STRUCTURAL CONNECTION BOLTS SHALL CONFORM TO ASTM A325. ALL BOLTS SHALL BE 3/4" DIAMETER MINIMUM AND SHALL HAVE A MINIMUM OF TWO BOLTS, UNLESS OTHERWISE ON THE DRAWINGS.
13. LOCK WASHER ARE NOT PERMITTED FOR A325 STEEL ASSEMBLIES.
14. SHOP CONNECTIONS SHALL BE WELDED OR HIGH STRENGTH BOLTED.
15. MILL BEARING ENDS OF COLUMNS, STIFFENERS, AND OTHER BEARING SURFACES TO TRANSFER LOAD OVER ENTIRE CROSS SECTION.
16. FABRICATE BEAMS WITH MILL CAMBER UP.
17. LEVEL AND PLUMB INDIVIDUAL MEMBERS OF THE STRUCTURE TO AN ACCURACY OF 1:500, BUT NOT TO EXCEED 1/4" IN THE FULL HEIGHT OF THE COLUMN.
18. COMMENCEMENT OF STRUCTURAL STEEL WORK WITHOUT NOTIFYING THE ENGINEER OF ANY DISCREPANCIES WILL BE CONSIDERED ACCEPTANCE OF PRECEDING WORK.
19. INSPECTION AND TESTING OF ALL WELDING AND HIGH STRENGTH BOLTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY.
20. FOUR COPIES OF ALL INSPECTION TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN TEN (10) WORKING DAYS OF THE DATE OF INSPECTION.

PAINT NOTES

PAINTING SCHEDULE:

1. ANTENNA PANELS:

   A. SHERWIN WILLIAMS POLANE–B
   B. COLOR TO BE MATCHED WITH EXISTING TOWER STRUCTURE.

2. COAXIAL CABLES:

   A. ONE COAT OF DTM BONDING PRIMER (2–5 MILS. DRY FINISH)
   B. TWO COATS OF DTM ACRYLIC PRIMER/FINISH (2.5–5 MILS. DRY FINISH)
   C. COLOR TO BE FIELD MATCHED WITH EXISTING STRUCTURE.

EXAMINATION AND PREPARATION:

1. DO NOT APPLY PAINT IN SNOW, RAIN, FOG OR MIST OR WHEN RELATIVE HUMIDITY EXCEEDS 85%. DO NOT APPLY PAINT TO DAMP OR WET SURFACES.
2. VERIFY THAT SUBSTRATE CONDITIONS ARE READY TO RECEIVE WORK. EXAMINE SURFACE SCHEDULED TO BE FINISHED PRIOR TO COMMENCEMENT OF WORK. REPORT ANY CONDITION THAT MAY POTENTIALLY AFFECT PROPER APPLICATION.
3. TEST SHOP APPLIED PRIMER FOR COMPATIBILITY WITH SUBSEQUENT COVER MATERIALS.
4. PERFORM PREPARATION AND CLEANING PROCEDURE IN STRICT ACCORDANCE WITH COATING MANUFACTURER'S INSTRUCTIONS FOR EACH SUBSTRATE CONDITION.
5. CORRECT DEFECTS AND CLEAN SURFACES WHICH AFFECT WORK OF THIS SECTION. REMOVE EXISTING COATINGS THAT EXHIBIT LOOSE SURFACE DEFECTS.
6. IMPERVIOUS SURFACE: REMOVE MILDEW BY SCRUBBING WITH SOLUTION OF TRI–SODIUM PHOSPHATE AND BLEACH. RINSE WITH CLEAN WATER AND ALLOW SURFACE TO DRY.
7. ALUMINUM SURFACE SCHEDULED FOR PAINT FINISH: REMOVE SURFACE CONTAMINATION BY STEAM OR HIGH–PRESSURE WATER. REMOVE OXIDATION WITH ACID ETCH AND SOLVENT WASHING. APPLY ETCHING PRIMER IMMEDIATELY FOLLOWING CLEANING.
8. FERROUS METALS: CLEAN UNGALVANIZED FERROUS METAL SURFACES THAT HAVE NOT BEEN SHOP COATED; REMOVE OIL, GREASE, DIRT, LOOSE MILL SCALE, AND OTHER FOREIGN SUBSTANCES. USE SOLVENT OR MECHANICAL CLEANING METHODS THAT COMPLY WITH THE STEEL STRUCTURES PAINTING COUNCIL'S (SSPC) RECOMMENDATIONS. TOUCH UP BARE AREAS AND SHOP APPLIED PRIME COATS THAT HAVE BEEN DAMAGED. WIRE BRUSH, CLEAN WITH SOLVENTS RECOMMENDED BY PAINT MANUFACTURER, AND TOUCH UP WITH THE SAME PRIMER AS THE SHOP COAT.
9. GALVANIZED SURFACES: CLEAN GALVANIZED SURFACES WITH NON–PETROLEUM–BASED SOLVENTS SO SURFACE IS FREE OF OIL AND SURFACE CONTAMINANTS. REMOVE PRETREATMENT FROM GALVANIZED SHEET METAL FABRICATED FROM COIL STOCK BY MECHANICAL METHODS.
10. ANTENNA PANELS: REMOVE ALL OIL, DUST, GREASE, DIRT, AND OTHER FOREIGN MATERIAL TO ENSURE ADEQUATE ADHESION. PANELS MUST BE WIPED WITH METHYL ETHYL KETONE (MEK).
11. COAXIAL CABLES: REMOVE ALL OIL, DUST, GREASE. DIRT, AND OTHER FOREIGN MATERIAL TO ENSURE ADEQUATE ADHESION.

CLEANING:

1. COLLECT WASTE MATERIAL, WHICH MAY CONSTITUTE A FIRE HAZARD, PLACE IN CLOSED METAL CONTAINERS AND REMOVE DAILY FROM SITE.

APPLICATION:

1. APPLY PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
2. DO NOT APPLY FINISHES TO SURFACES THAT ARE NOT DRY.
3. APPLY EACH COAT TO UNIFORM FINISH.
4. APPLY EACH COAT OF PAINT SLIGHTLY DARKER THAN PRECEDING COAT UNLESS OTHERWISE APPROVED.
5. SAND METAL LIGHTLY BETWEEN COATS TO ACHIEVE REQUIRED FINISH.
6. VACUUM CLEAN SURFACES FREE OF LOOSE PARTICLES. USE TACK CLOTH JUST PRIOR TO APPLYING NEXT COAT.
7. ALLOW APPLIED COAT TO DRY BEFORE NEXT COAT IS APPLIED.

COMPLETED WORK:

1. SAMPLES: PREPARE 24" X 24" SAMPLE AREA FOR REVIEW.
2. MATCH APPROVED SAMPLES FOR COLOR, TEXTURE AND COVERAGE. REMOVE REFINISH OR REPAINT WORK NOT IN COMPLIANCE WITH SPECIFIED REQUIREMENTS.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
0	09/20/17	KAWJR	CAG	CONSTRUCTION DOCUMENTS – ISSUED FOR CONSTRUCTION

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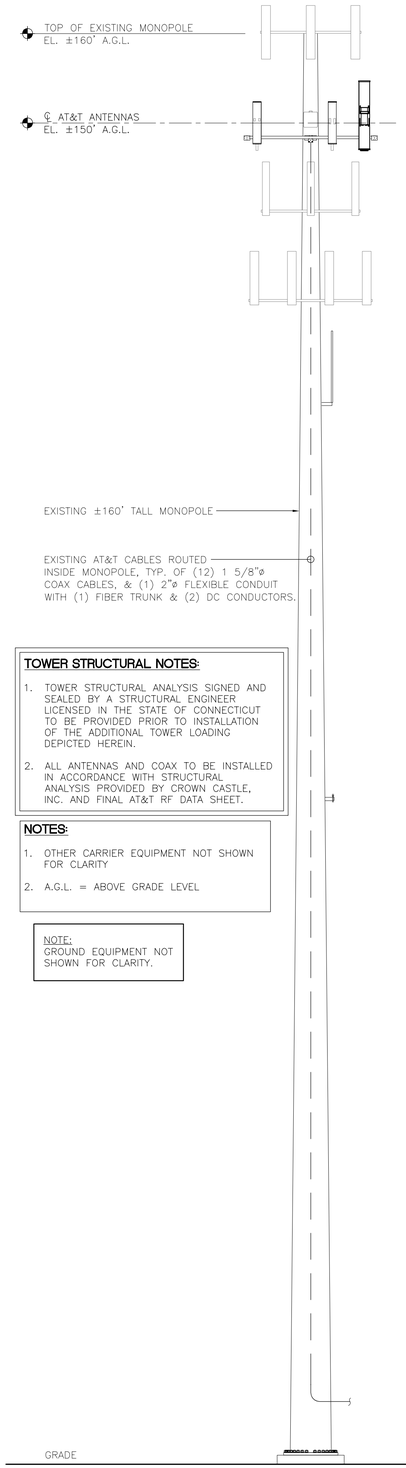
47-51 UNITY STREET
MOOSUP, CT 06354

DATE: 08/24/17
SCALE: AS NOTED
JOB NO. 17004.37

NOTES, SPECIFICATIONS AND DETAILS

N–1

Sheet No. 2 of 7



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 CROWN CASTLE, INC. AND FINAL AT&T RF DATA SHEET.

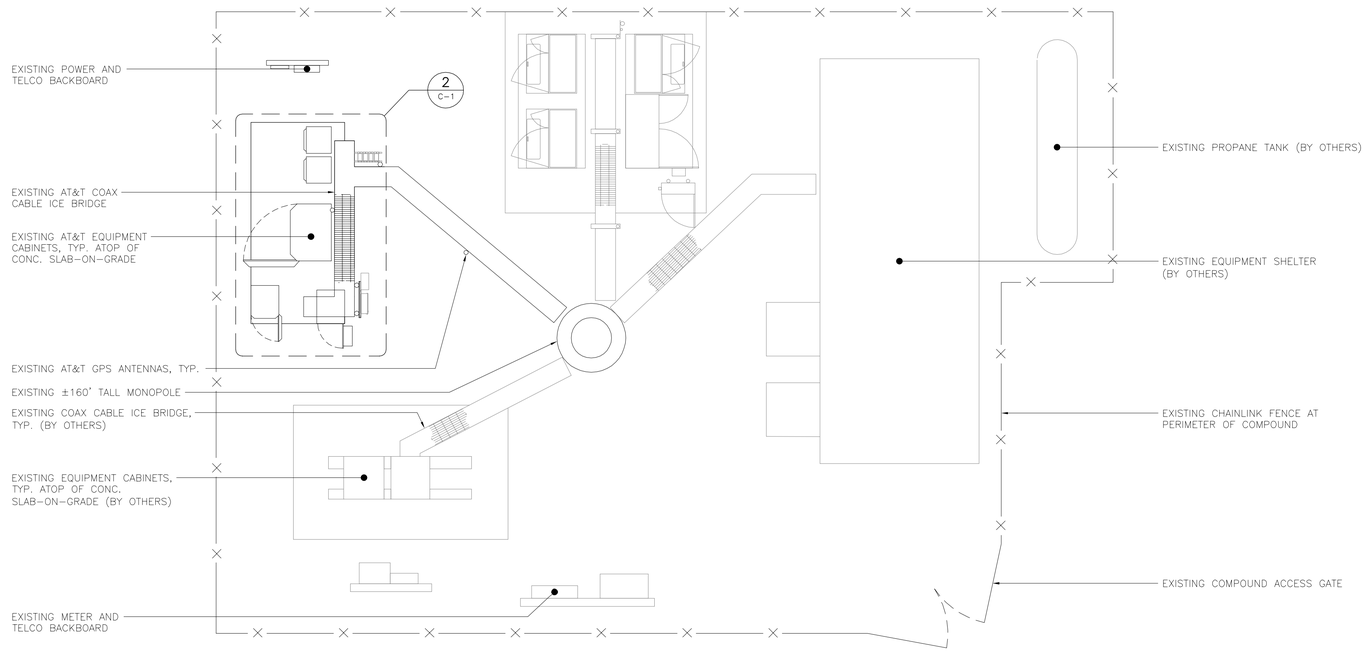
NOTES:

1. OTHER CARRIER EQUIPMENT NOT SHOWN FOR CLARITY
2. A.G.L. = ABOVE GRADE LEVEL

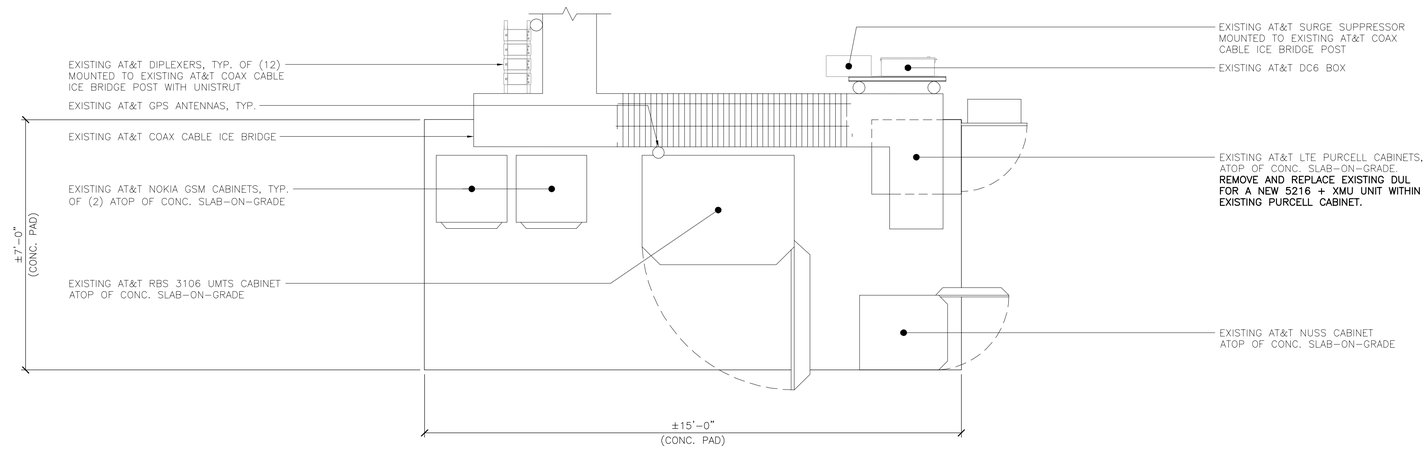
NOTE:
GROUND EQUIPMENT NOT SHOWN FOR CLARITY.

3 / C-1 **TOWER ELEVATION**
SCALE: 1/8" = 1'-0"

GRAPHIC SCALE
8 0 4 8 16 32
(IN FEET)
1 inch = 8 ft.



1 / C-1 **COMPOUND PLAN**
SCALE: 3/16" = 1'-0"
TRUE NORTH



2 / C-1 **EQUIPMENT LAYOUT PLAN**
SCALE: 1/2" = 1'-0"
TRUE NORTH

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
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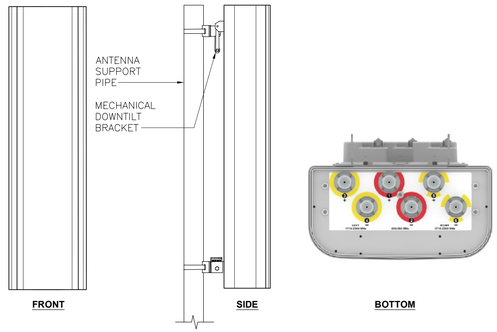
PLANS AND ELEVATION

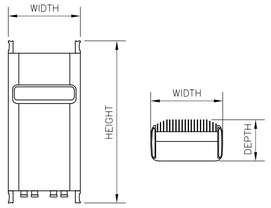
C-1

Sheet No. 3 of 7



ALPHA/BETA/GAMMA ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: CCI MODEL: HPA-65R-BUU-H8	92.4"L x 14.8"W x 7.4"D	68 LBS.

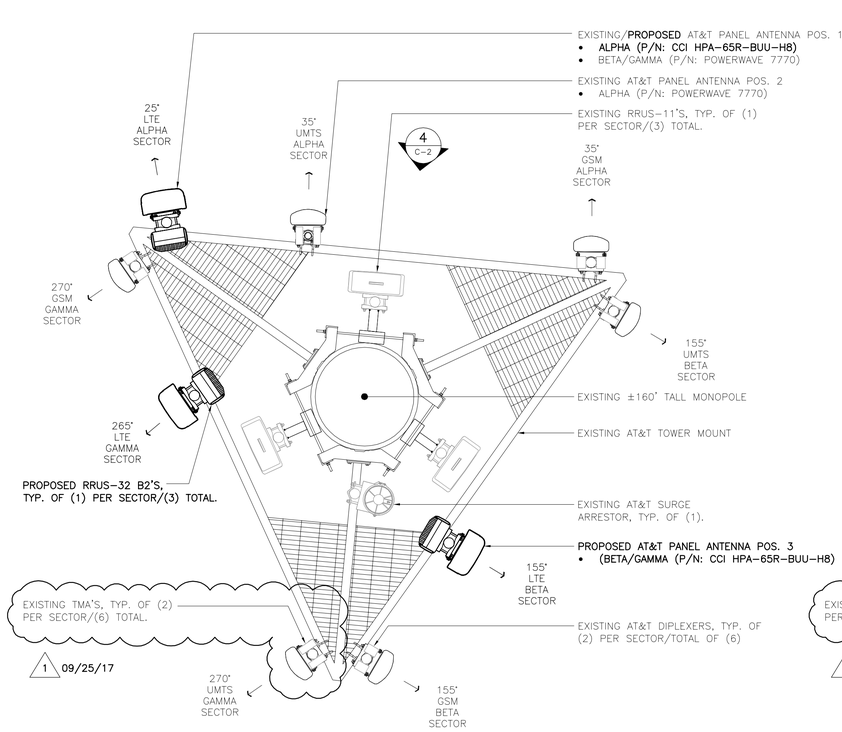
5 / C-2 **PROPOSED ANTENNA DETAIL**
SCALE: 1/2" = 1'-0"



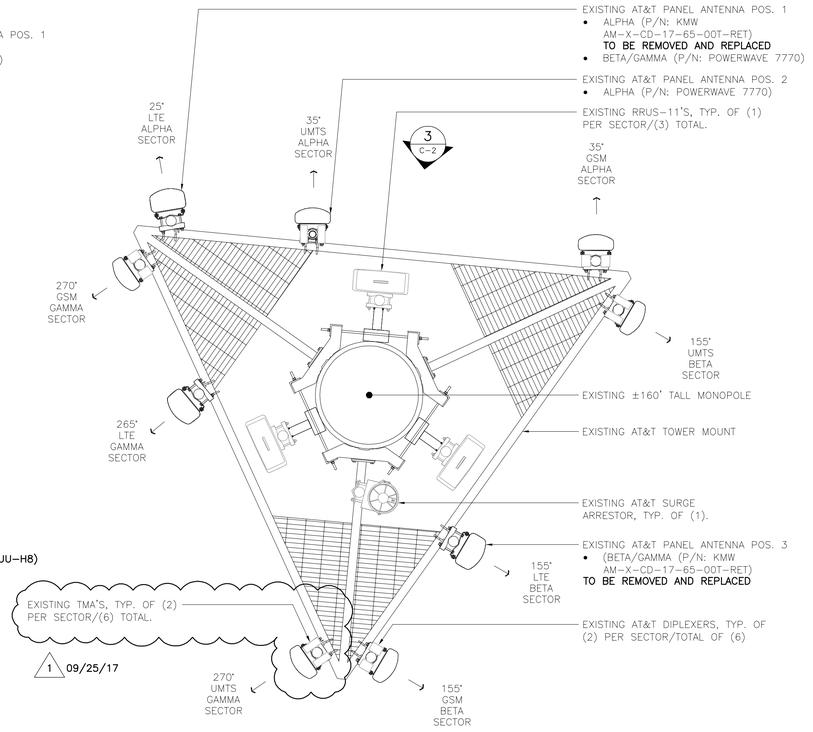
RRU (REMOTE RADIO UNIT)			
EQUIPMENT	DIMENSIONS	WEIGHT	CLEARANCES
MAKE: ERICSSON MODEL: RRUS-32 B2	27.17"H x 12.05"W x 7.01"D	52.91 LBS.	ABOVE: 16" MIN. BELOW: 12" MIN. FRONT: 36" MIN.

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

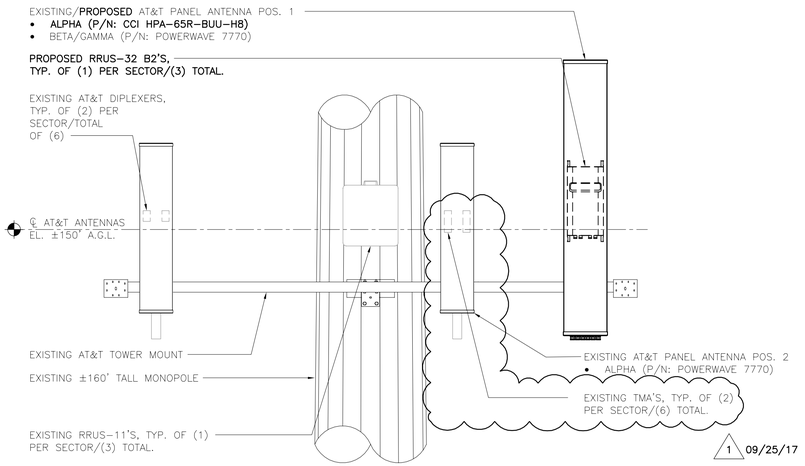
6 / C-2 **ERICSSON RRUS 32 B2 DETAIL**
SCALE: 1" = 1'-0"



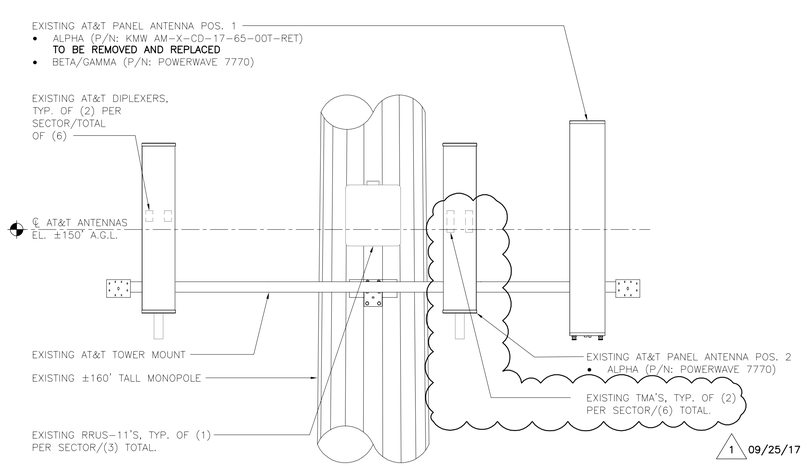
2 / C-2 **PROPOSED ANTENNA PLAN**
SCALE: 1/2" = 1'-0"



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



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



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

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
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0	09/20/17	KAW/JR	CAG	CONSTRUCTION DOCUMENTS - ISSUED FOR CONSTRUCTION

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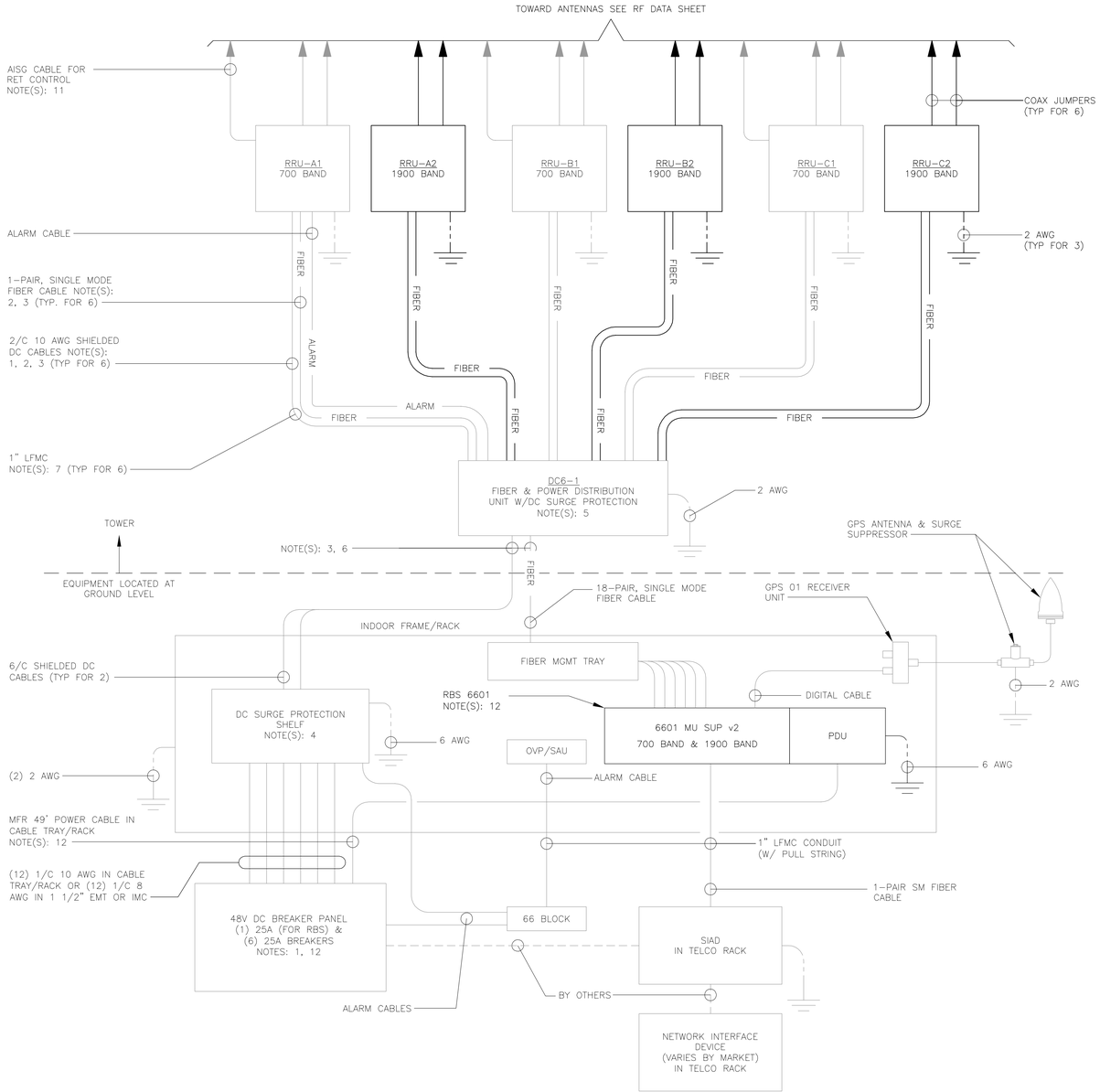
LTE 2C/BWE EQUIPMENT DETAILS

C-2

Sheet No. 4 of 7



1 / E-1 LTE SCHEMATIC DIAGRAM

NOT TO SCALE

LTE SCHEMATIC DIAGRAM NOTES:

1. BREAKERS TO BE TAGGED AND LOCKED OUT. A 20A (MIN.) OR 30A (MAX.) BREAKER FOR RRUs MAY BE SUBSTITUTED FOR THE RECOMMENDED 25A BREAKER. SIZE 12 CONDUCTORS MAY BE USED ONLY WITH 20A BREAKERS.
2. LEAVE COILED AND PROTECTED UNTIL TERMINATED.
3. DC AND FIBER CABLE SHALL BE ROUTED WITH THE EXISTING COAX CABLE.
4. DC SURGE PROTECTION SHELF SHALL BE RAYCAP DCx-48-60-RM.
5. FIBER & DC DISTRIBUTION BOX W/DC SURGE PROTECTION SHALL BE RAYCAP DC6-48-60-18-8F.
6. SUPPORT FIBER & DC POWER CABLES WITH SNAP-IN HANGERS SPACED NO GREATER THAN 3 FEET APART ON TOWER. SUPPORT FIBER AND DC POWER CABLES INSIDE MONOPOLE WITH CABLE HOISTING GRIPS AT 250 FT MAXIMUM INTERVALS. DRESS CABLES TO PREVENT CONTACT WITH ENTRANCE AND EXIT OPENINGS.
7. CONDUIT TO BE USED ON A TOWER IF THE RRU IS MORE THAN 10' FROM THE DISTRIBUTION UNITS. MAX CABLE LENGTH IS 16 FEET.
8. SINGLE-CONDUCTOR DC POWER CABLES SHALL BE TELCOFLEX® OR KS24194™, COPPER, UL LISTED RHH NON-HALOGEN, LOW SMOKE WITH BRAIDED COVER, TYPE TC (1/0 AND LARGER). UNLESS OTHERWISE NOTED, STRANDING SHALL BE CLASS B (TYPE III) FOR CABLES SIZES 14, 12 & 10 AWG AND CLASS I (TYPE IV) FOR SIZES 8 AWG AND LARGER. CABLES SHALL BE COLOR CODED RED FOR +24V, BLUE FOR -48V AND GRAY FOR 24V AND 48V RETURN CONDUCTORS. MULTI-CONDUCTOR DC POWER CABLES SHALL BE COPPER, CLASS B STRANDING WITH FLAME RETARDANT PVC JACKET, TYPE TC, UL LISTED FOR 90°C DRY/ 75°C WET INSTALLATION.
9. GROUNDING WIRES SHALL BE COPPER, GREEN THHN/THWN UL LISTED FOR 90°C DRY/75°C WET INSTALLATION. MINIMUM SIZE IS 6 AWG UNLESS NOTED OTHERWISE.
10. FIBER OPTIC CABLES SHALL BE INSTALLED IN FLEXIBLE CONDUIT AS SCOPED BY MARKET.
11. RET CONTROL FROM THE RRU IS AN OPTIONAL METHOD OF CONNECTION. REFER TO RF DATA SHEET FOR APPLICABILITY.
12. RBS 6601 VARIANT 2 REQUIRES A 25A BREAKER AND 10 AWG (MIN.) CONDUCTORS. REPLACE EXISTING 15A OR 20A BREAKERS AND 12 AWG CONDUCTORS WHEN UPGRADING AN EXISTING RBS 6601 VARIANT 1.

ELECTRICAL NOTES

1. 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.
2. INSTALL ALL EQUIPMENT IN ACCORDANCE WITH LOCAL BUILDING CODE, NATIONAL ELECTRIC CODE, OWNER AND MANUFACTURER'S SPECIFICATIONS.
3. CONNECT ALL NEW EQUIPMENT TO EXISTING TELCO AS REQUIRED BY MANUFACTURER.
4. MAINTAIN ALL CLEARANCES REQUIRED BY NEC AND EQUIPMENT MANUFACTURER.
5. 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.
6. 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.
7. 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.
8. PROVIDE AND INSTALL GROUND KITS FOR ALL NEW COAXIAL CABLES AND BOND TO EXISTING OWNERS GROUNDING SYSTEM PER OWNERS SPECIFICATIONS AND NEC.
9. 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:
10. MINIMUM BENDING RADIUS FOR CONDUCTORS SHALL BE 12 TIMES THE LARGEST DIAMETER OF BRANCH CIRCUIT CONDUCTOR.
11. 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.
12. 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.
13. 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.
14. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE SITE AND/OR BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.
15. 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.
16. 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.
17. 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.
18. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.
19. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122. (MIN. #12 AWG).
20. CONTRACTOR SHALL PROVIDE A CELLULAR GROUNDING SYNSTEM 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

A. 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:

   TEST 1: RESISTANCE TO GROUND TEST ON THE CELLULAR GROUNDING SYSTEM.

   THE TESTING FIRM SHALL INCLUDE THE FOLLOWING INFORMATION WITH THE REPORT:

   1. TESTING PROCEDURE INCLUDING THE MAKE AND MODEL OF TEST EQUIPMENT.
   2. CERTIFICATION OF TESTING EQUIPMENT CALIBRATION WITHIN SIX (6) MONTHS OF DATE OF TESTING. INCLUDE CERTIFICATION LAB ADDRESS AND TELEPHONE NUMBER.
   3. GRAPHICAL DESCRIPTION OF TESTING METHOD ACTUALLY IMPLEMENTED.

B. 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.

C. 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.

D. CONTRACTOR TO PROVIDE A MINIMUM OF ONE (1) WEEK NOTICE TO OWNER AND ENGINEER FOR ALL TESTS REQUIRING WITNESSING.

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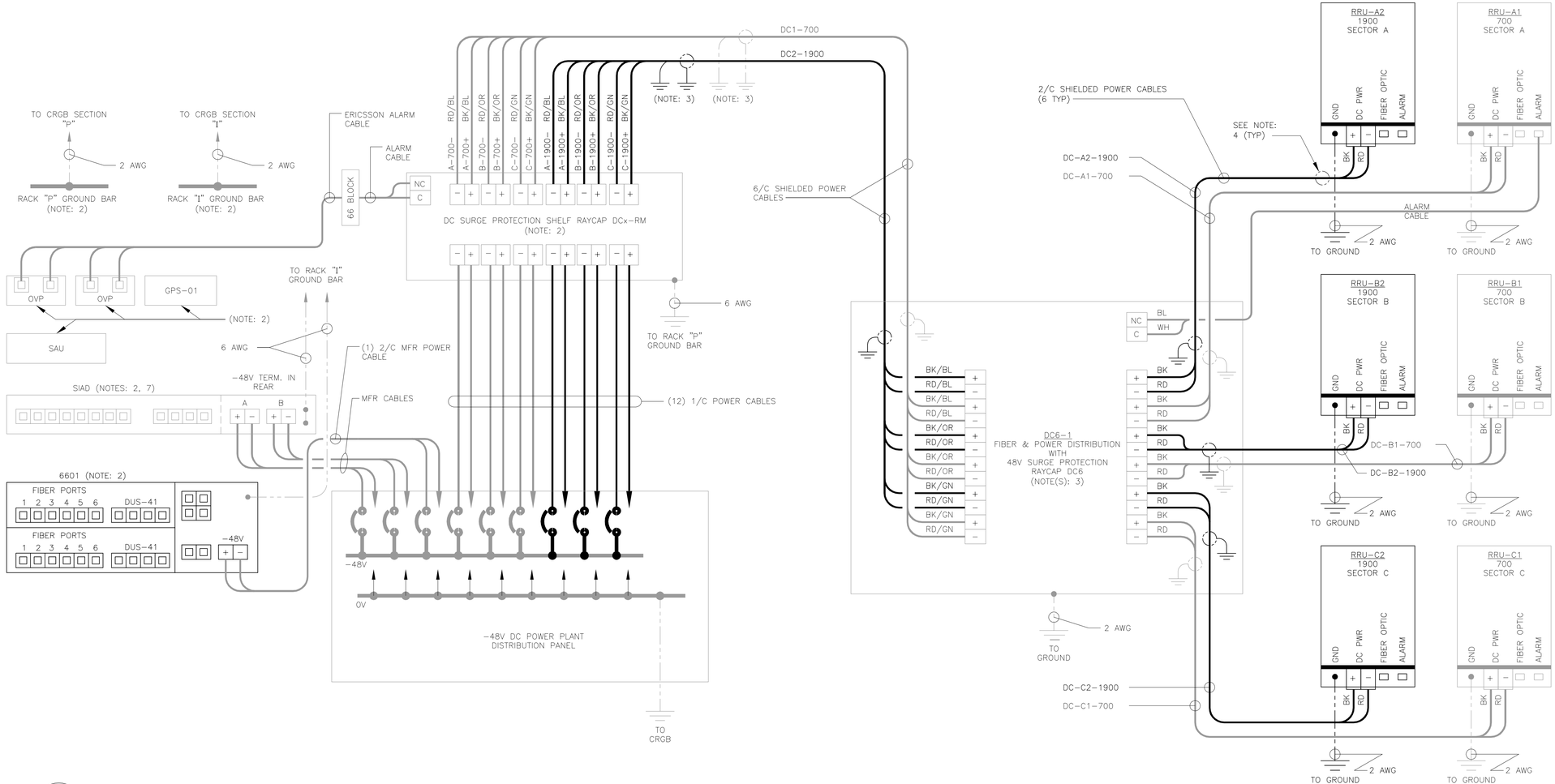
LTE SCHEMATIC DIAGRAM AND NOTES

E-1

Sheet No. 5 of 7



1 E-2 LTE WIRING DIAGRAM

NOT TO SCALE

LTE WIRING DIAGRAM NOTES:

1. LABEL THE DC POWER CABLES AT BOTH ENDS OF EVERY WIRE AND IN ANY PULL BOX IF USED. LABEL SHALL BE DURABLE, SELF ADHESIVE, WRAPPED LONGITUDINALLY ALONG THE CABLE AND STATE THE SECTOR, FREQUENCY BAND AND POLARITY; I.E. "A-1900+". CABLE AND WIRE LABELS SHOWN ARE REPRESENTATIVE AND MAY BE MODIFIED AS DIRECTED BY AT&T.
2. INSTALL ON BASEBAND EQUIPMENT RACK.
3. THE BARE GROUND WIRE OF EACH MULTI-CONDUCTOR CABLE SHALL BE CONNECTED TO THE "P" GROUND BAR ON THE RACK. WHEN A SHIELDED CABLE IS USED, THE DRAIN WIRE ALSO SHALL BE CONNECTED TO THE "P" GROUND BAR.
4. CABLE GROUND WIRE AND SHIELD DRAIN WIRE TO BE LEFT UN-TERMINATED AT RRU AND DC POWER PLANT.
5. SEE LTE SCHEMATIC DIAGRAM DETAIL 1/E-1 FOR BREAKER RATING.

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DATE: 08/24/17
SCALE: AS NOTED
JOB NO. 17004.37

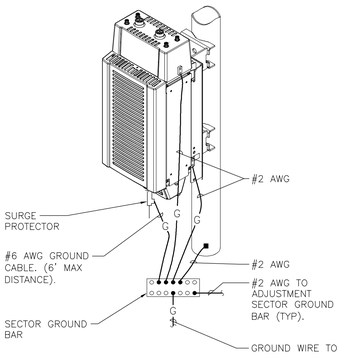
LTE WIRING DIAGRAM

E-2

Sheet No. 6 of 7

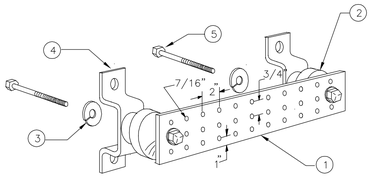
EACH RRH CABINET SHALL BE GROUNDED IN THE FOLLOWING MANNER:

1. AT TOP OF THE CABINET
2. AT RIGHT SIDE OF THE CABINET.



3 E-3 RRU POLE MOUNT GROUNDING

NOT TO SCALE

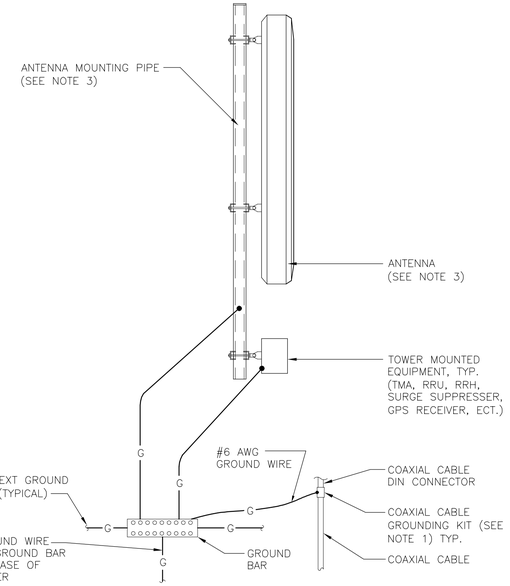


LEGEND

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

2 E-3 GROUND BAR DETAIL

NOT TO SCALE

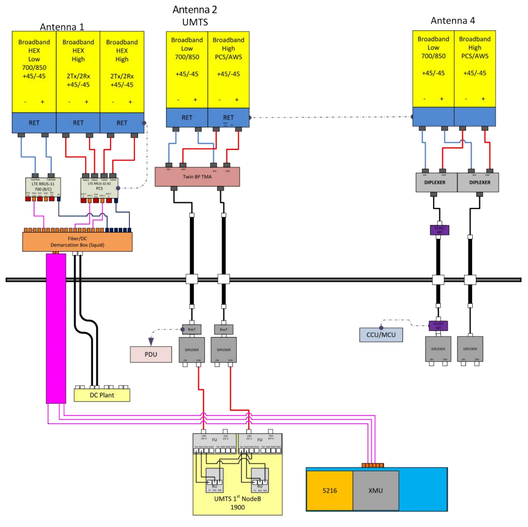


NOTES:

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

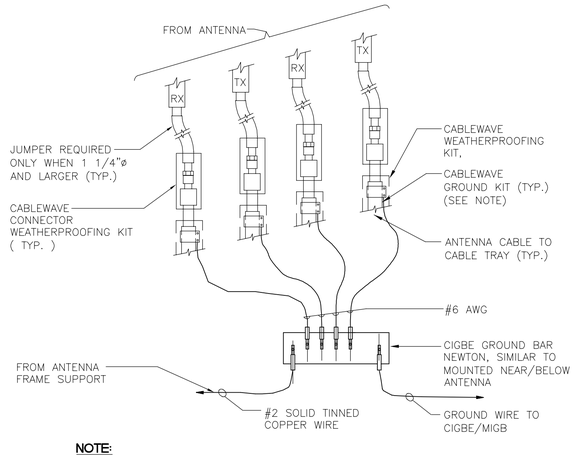
1 E-3 TYPICAL ANTENNA GROUNDING DETAIL

NOT TO SCALE



6 E-3 RF PLUMBING DIAGRAM

NOT TO SCALE

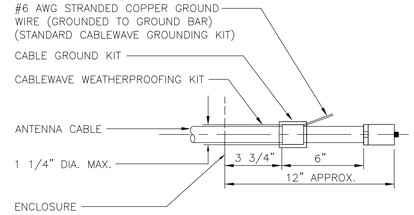


NOTE:

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

5 E-3 CONNECTION OF GROUND WIRES TO GROUND BAR

NOT TO SCALE



NOTE:

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

4 E-3 ANTENNA CABLE GROUNDING DETAIL

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TYPICAL ELECTRICAL DETAILS

E-3

Sheet No. 7 of 7

Exhibit 3

Date: **August 25, 2017**

Marianne Dunst
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277
(704) 405-6580

Tower Engineering Professionals
326 Tryon Road
Raleigh, NC 27603
(919) 661-6351
crown@tepgroup.net

Subject: Structural Analysis Report

Carrier Designation:	***AT&T Mobility* Co-Locate**	
	Carrier Site Number:	CT5461
	Carrier Site Name:	10092030
Crown Castle Designation:	**Crown Castle BU Number:**	876401
	Crown Castle Site Name:	Town of Plainfield/SSUSA
	Crown Castle JDE Job Number:	455569
	Crown Castle Work Order Number:	1446109
	Crown Castle Application Number:	403360 Rev. 4
Engineering Firm Designation:	**TEP Project Number:**	25670.128938
Site Data:	**47-51 Unity Street, Plainfield, Windham County, CT 06374**	
	Latitude *41° 42' 54.49"*, Longitude *-71° 53' 46.73"*	
	160 Foot - Monopole Tower	

Dear Marianne Dunst,

Tower Engineering Professionals is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 1071315, in accordance with application 403360, revision 4.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Existing + Reserved + Proposed Equipment **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

This analysis has been performed in accordance with the 2016 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 130 mph converted to a nominal 3-second gust wind speed of 101 mph per Section 1609.3.1 as required for use in the TIA-222-G Standard per Exception #5 of Section 1609.1.1. Exposure Category B and Risk Category II were used in this analysis.

All modifications and equipment proposed in this report shall be installed in accordance with the appurtenances listed in Tables 1 and 2 and the attached drawing for the determined available structural capacity to be effective.

We at *Tower Engineering Professionals* appreciate the opportunity of providing our continuing professional services to you and *Crown Castle.* If you have any questions or need further assistance on this or any other projects please give us a call.

Structural analysis prepared by: Matthew T. Weavil, E.I. / MGY

Respectfully submitted by:

Graham M. Andres, P.E.

STATE OF CONNECTICUT GRAHAM M. ANDRES 29538 LICENSED PROFESSIONAL ENGINEER

8/25/17

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TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 160-ft monopole tower designed by Engineered Endeavors, Inc. in November of 2007. The tower was originally designed for a wind speed of 90 mph per EIA 222F for the appurtenances listed in Table 3. The tower has been modified multiple times in the past to accommodate additional loading. TEP visited the site in September of 2013 to perform a post modification inspection. All information provided to TEP was assumed to be accurate and complete.

2) ANALYSIS CRITERIA

The analysis has been performed in accordance with the ANSI/TIA-222-G-2-2009 Structural Standard for Antenna Supporting Structures and Antennas – Addendum 2 using a nominal 3-second gust wind speed of 101 mph with no ice, 50 mph with 0.75 inch ice thickness, and 60 mph under service loads with the following design criteria:

Type of Analysis: **Rigorous Structural Analysis**
Classification of Structure: **Class II**
Exposure Category: **Exposure B**
Topographic Category: **Category 1**
Earthquake Category: **Not Considered**
Earthquake effects may be ignored per this standard for site locations where Ss does not exceed 1.0. (Windham County Max Ss = 0.27).

Table 1 - Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
150.0	150.0	3	CCI Antennas	HPA-65R-BUU-H8 w/ Mount Pipe	-	-	1
		3	Ericsson	RRUS 32 B2			
		12	Powerwave Technologies	7020.00			
		3	Powerwave Technologies	1001983			

Table 2 - Existing and Reserved Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
159.0	159.0	3	RFS Celwave	APXVTM14-ALU-I20 w/ Mount Pipe	1	1-1/4	1
		3	Alcatel Lucent	TD-RRH8x20-25			
		3	RFS Celwave	APXVSPP18-C-A20 w/ Mount Pipe	3	1-1/4	2
		1	Tower Mounts	Platform Mount [LP 714-1]			

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
157.0	157.0	3	Alcatel Lucent	PCS 1900MHz 4x45W-65MHz	-	-	2
		1	Tower Mounts	Pipe Mount [PM 601-3]			
		1	Tower Mounts	Side Arm Mount [SO 102-3]			
	154.0	3	Alcatel Lucent	800MHz 2X50W RRH w/ Filter			
152.0	152.0	3	Ericsson	RRUS-11	-	-	2
		1	Tower Mounts	Pipe Mount [PM 601-3]			
		1	Tower Mounts	Side Arm Mount [SO 103-3]			
150.0	150.0	3	KMW Communications	AM-X-CD-17-65-00T-RET w/ Mount Pipe	-	-	3
		6	Powerwave Technologies	7770.00 w/ Mount Pipe	1 2 12	3/8 7/16 1-5/8	2
		6	Powerwave Technologies	LGP21401			
		6	Powerwave Technologies	LGP21901			
		1	Raycap	DC6-48-60-18-8F			
		1	Tower Mounts	Platform Mount [LP 303-1]			
139.0	139.0	3	RFS Celwave	APXV18-203219-C-A20 w/ Mount Pipe	12	1-5/8	2
		3	Commscope	LNX-6512DS-VTM w/ Mount Pipe			
		3	Commscope	TMAT7LA-11A			
		3	Commscope	ATBT-BOTTOM-24V			
		1	Tower Mounts	T-Arm Mount [TA 602-3]			
130.0	130.0	6	Commscope	LNX-6514DS-A1M w/ Mount Pipe	2	1-5/8	4
		6	Commscope	HBXX-6517DS-A2M w/ Mount Pipe			
		2	RFS Celwave	DB-T1-6Z-8AB-0Z			
		3	Alcatel Lucent	RRH2X40-07-U			
		3	Alcatel Lucent	RRH2X60-AWS			
		3	Alcatel Lucent	RRH2X60-PCS			
		1	Tower Mounts	Platform Mount [LP 303-1]			

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
125.0	130.0	2	RFS Celwave	DB-T1-6Z-8AB-0Z	-	-	5
		3	Nokia	AIRSCALE RRH 4T4R B5 160W	-	-	6
		3	Alcatel Lucent	RRH2x60-700			
		3	Alcatel Lucent	B66A RRH4X45			
	127.0	3	Amphenol	QUAD656C0000X w/ Mount Pipe			
		6	Commscope	SBNHH-1D65B w/ Mount Pipe			
		2	Tower Mounts	Side Arm Mount [SO 102-1]	2	1-5/8	5
	125.0	1	Tower Mounts	Platform Mount [LP 303-1]			
109.0	114.0	1	Decibel	DB589	1	7/8	2
	109.0	1	Tower Mounts	Side Arm Mount [SO 701-1]			
		1	Tower Mounts	Pipe Mount [PM 601-1]			

Notes:
1) Reserved equipment
2) Existing equipment
3) Existing equipment to be removed; not considered in this analysis
4) SLA equipment controls; considered in this analysis
5) Existing equipment; not considered in this analysis; SLA Controls
6) Reserved equipment; not considered in this analysis; SLA Controls

Table 3 - Design Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
160.0	160.0	12	Dapa	48000	-	-
150.0	150.0	12	Dapa	48000	-	-
140.0	140.0	12	Dapa	48000	-	-
75.0	75.0	1	Generic	GPS Antenna	-	-

3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
Geotechnical Report / Supplemental Geotechnical Report	Clarence Welti Associates, Inc. / FDH Engineering, Inc.	1610729	CCISites
Tower Foundation Drawings	Engineered Endeavors, Inc.	1615418	CCISites
Tower Manufacturer Drawings	Engineered Endeavors, Inc.	1615382	CCISites
Tower Reinforcement Drawings	Vertical Solutions, Inc.	2819430	CCISites
Tower Reinforcement Drawings	Paul J. Ford and Company	3667143	CCISites
Post Modification Inspection	Tower Engineering Professionals	3986355	CCISites
Tower Reinforcement Drawings	Black & Veatch	5422409	CCISites
Post Modification Inspection	FDH Velocitel	5666814	CCISites

3.1) Analysis Method

tnxTower (version 7.0.5.1), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

For analysis of monopole shaft reinforcements, the plates are modeled as linear appurtenances along the exterior of the pole. The loads calculated from tnxTower are then exported to a proprietary calculation sheet created by Tower Engineering Professionals, Inc. that analyzes each reinforcing element along each critical axis and presents percent capacities for each element and the pole shaft along each critical axis. The actual percent capacity of the tower structure including the reinforcing elements is reported in Table 5 - Section Capacity (Summary).

3.2) Assumptions

1) The tower and foundation were built in accordance with the manufacturer's specifications.
2) The tower and foundation have been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2, and "Appendix B – Base Level Drawing".
4) All tower components are in sufficient condition to carry their full design capacity.
5) Serviceability with respect to antenna twist, tilt, roll, or lateral translation, is not checked and is left to the carrier or tower owner to ensure conformance.
6) All antenna mounts and mounting hardware are structurally sufficient to carry the full design capacity requirements of appurtenance wind area and weight as provided by the original manufacturer specifications. It is the carrier's responsibility to ensure compliance to the structural limitations of the existing and/or proposed antenna mounts. TEP did not analyze antennas supporting mounts as part of this structural analysis report.
7) The modifications designed by Vertical Solutions, Inc. in August of 2008 were determined to be ineffective and not considered structurally in this analysis. These modifications were only considered for wind area and weight.
8) The existing base plate grout was considered in this analysis. Grout must be maintained and inspected periodically, and must be replaced if damaged or cracked. Refer to Crown document PRC-10012, Base Plate Grout Inspection & Classification.

This analysis may be affected if any assumptions are not valid or have been made in error. Tower Engineering Professionals should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 5 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (lb)	ΦP_{allow} (lb)	% Capacity	Pass / Fail
L1	160.00-119.12	Pole	TP25.66×16.50×0.1875	1	Note 1	Note 1	92.5	Pass
L2	122.87-95.83	Pole	TP30.39×24.32×0.2500	2	Note 1	Note 1	94.4	Pass
L3	100.16-47.20	Pole	TP40.67×28.79×0.3125	3	Note 1	Note 1	57.2	Pass
L4	52.78-0.00	Pole	TP50.50×38.66×0.3750	4	Note 1	Note 1	59.6	Pass
M1	40.50-0.00	Mod (Ex)	(Aero) MP303	1	Note 1	Note 1	81.4	Pass
M2	76.58-36.58	Mod (Ex)	(Aero) MP303	2	Note 1	Note 1	80.6	Pass
M3	20.00-0.00	Mod (Ex)	CCI-WSFP-085125	3	Note 1	Note 1	69.4	Pass
M4	25.00-0.00	Mod (Ex)	CCI-WSFP-085125	4	Note 1	Note 1	62.9	Pass
M5b	55.00-20.00	Mod (Ex)	CCI-SFP-060100	5	Note 1	Note 1	82.1	Pass
M6	85.00-55.00	Mod (Ex)	CCI-SFP-060100	6	Note 1	Note 1	86.7	Pass
M7	105.00-85.00	Mod (Ex)	CCI-SFP-060100	7	Note 1	Note 1	81.9	Pass
M8	77.21-47.21	Mod (Ex)	CCI-SFP-060100	8	Note 1	Note 1	86.7	Pass
M9	102.21-77.21	Mod (Ex)	CCI-SFP-060100	9	Note 1	Note 1	85.8	Pass
M10	50.00-15.00	Mod (Ex)	CCI-SFP-060100	10	Note 1	Note 1	78.1	Pass
M11	80.00-50.00	Mod (Ex)	CCI-SFP-060100	11	Note 1	Note 1	86.7	Pass
M12	105.00-80.00	Mod (Ex)	CCI-SFP-060100	12	Note 1	Note 1	84.5	Pass
M13	95.00-85.00	Mod (Ex)	CCI-SFP-045100	13	Note 1	Note 1	70.0	Pass
							Summary	
						Pole (L2)	94.4	Pass
						Mod (M8)	86.7	Pass
						RATING =	**94.4**	**Pass**

Table 6 - Tower Component Stresses vs. Capacity

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Original Anchor Rods	-	40.4	Pass
1	Reinforced Anchor Rods	-	46.2	Pass
1	Base Plate	-	55.1	Pass
1	Base Foundation Soil Interaction	-	27.7	Pass
1	Base Foundation Structural	-	75.9	Pass

Structure Rating (max from all components) =	**94.4%**

Notes:
1) See additional documentation in "Appendix C - Additional Calculations" for calculations supporting the % capacity listed.

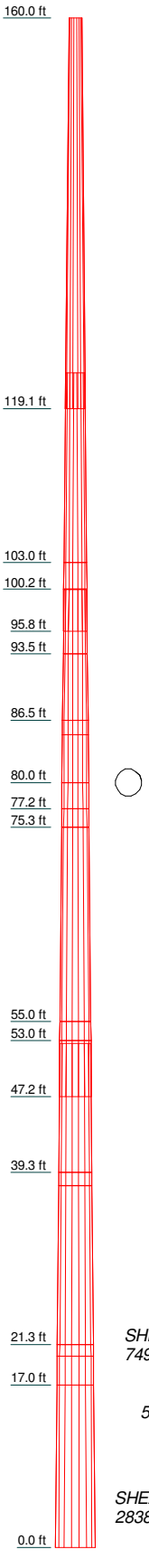
4.1) Recommendations

1) If the load differs from that described in Tables 1 and 2 of this report, "Appendix B – Base Level Drawing" or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
2) The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

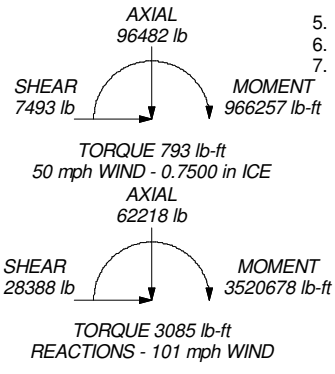
APPENDIX A

TNXTOWER OUTPUT

Section	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Length (ft)	40.88	19.87	2.79	6.88	1.50	7.00	1.50	5.00	2.79	1.88	20.33	2.00	5.80	13.53	1.42	16.58	3.00	1.25	17.00
Number of Sides	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
Thickness (in)	0.1875	0.2500	0.3002	0.4727	0.5306	0.6766	0.7152	0.5079	0.5000	0.5000	0.5563	0.5531	0.5536	0.5671	0.6409	0.5478	0.6245	0.6245	0.5860
Socket Length (ft)	3.75			4.33									5.58						
Top Dia (in)	16.5000	24.3200	28.7805	30.4068	30.3927	30.2842	31.8542	32.1997	33.0000	33.8122	34.3599	34.9203	39.3689	40.6709	41.6951	42.0137	45.0533	45.4653	46.6864
Bot Dia (in)	25.6600	28.7805	30.4068	30.3927	30.2842	31.8542	32.1997	33.3122	33.8122	34.3599	38.9203	39.3689	40.6709	41.6951	42.0137	45.7330	45.4653	45.8135	50.5000
Grade	MPRF-Fy=65ksi, Density=100%				MPRF-Fy=65ksi, Density=50%							MPRF-Fy=65ksi, Density=100%							
Weight (lb)	1729.6	1411.0	217.3	350.7	656.8	726.4	830.5	547.4	213.7	214.1	2491.7	262.1	777.4	2180.7	288.6	2920.5	553.3	230.3	3319.4
Cum. Weight (lb)	19307.4																		



ALL REACTIONS ARE FACTORED



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
APXVSPP18-C-A20 w/ Mount Pipe	159	(4) 7020.00	150
APXVSPP18-C-A20 w/ Mount Pipe	159	1001983	150
APXVSPP18-C-A20 w/ Mount Pipe	159	1001983	150
APXVTM14-ALU-I20 w/ Mount Pipe	159	1001983	150
APXVTM14-ALU-I20 w/ Mount Pipe	159	Platform Mount [LP 303-1]	150
APXVTM14-ALU-I20 w/ Mount Pipe	159	APXV18-203219-C-A20 w/ Mount Pipe	139
TD-RRH8x20-25	159	APXV18-203219-C-A20 w/ Mount Pipe	139
TD-RRH8x20-25	159	APXV18-203219-C-A20 w/ Mount Pipe	139
TD-RRH8x20-25	159	LNX-6512DS-VTM w/ Mount Pipe	139
(2) 2.4" Dia x 6-ft Pipe	159	LNX-6512DS-VTM w/ Mount Pipe	139
(2) 2.4" Dia x 6-ft Pipe	159	LNX-6512DS-VTM w/ Mount Pipe	139
(2) 2.4" Dia x 6-ft Pipe	159	TMAT7LA-11A	139
Platform Mount [LP 714-1]	159	TMAT7LA-11A	139
800MHz 2X50W RRH W/FILTER	157	TMAT7LA-11A	139
800MHz 2X50W RRH W/FILTER	157	ATBT-BOTTOM-24V	139
800MHz 2X50W RRH W/FILTER	157	ATBT-BOTTOM-24V	139
PCS 1900MHz 4x45W-65MHz	157	ATBT-BOTTOM-24V	139
PCS 1900MHz 4x45W-65MHz	157	2.4" Dia x 6-ft Pipe	139
PCS 1900MHz 4x45W-65MHz	157	2.4" Dia x 6-ft Pipe	139
Pipe Mount [PM 601-3]	157	2.4" Dia x 6-ft Pipe	139
Side Arm Mount [SO 102-3]	157	T-Arm Mount [TA 602-3]	139
RRUS-11	152	(2) LNX-6514DS-A1M w/ Mount Pipe	130
RRUS-11	152	(2) LNX-6514DS-A1M w/ Mount Pipe	130
RRUS-11	152	(2) LNX-6514DS-A1M w/ Mount Pipe	130
Pipe Mount [PM 601-3]	152	(2) HBXX-6517DS-A2M w/ Mount Pipe	130
Side Arm Mount [SO 103-3]	152	(2) HBXX-6517DS-A2M w/ Mount Pipe	130
(2) 7770.00 w/ Mount Pipe	150	(2) HBXX-6517DS-A2M w/ Mount Pipe	130
(2) 7770.00 w/ Mount Pipe	150	RRH2X40-07-U	130
(2) 7770.00 w/ Mount Pipe	150	RRH2X40-07-U	130
HPA-65R-BUU-H8 w/ Mount Pipe	150	RRH2X40-07-U	130
HPA-65R-BUU-H8 w/ Mount Pipe	150	DB-T1-6Z-8AB-0Z	130
HPA-65R-BUU-H8 w/ Mount Pipe	150	DB-T1-6Z-8AB-0Z	130
(2) LGP21401	150	RRH2x60-AWS	130
(2) LGP21401	150	RRH2x60-AWS	130
(2) LGP21401	150	RRH2x60-AWS	130
(2) LGP21901	150	RRH2X60-PCS	130
(2) LGP21901	150	RRH2X60-PCS	130
(2) LGP21901	150	RRH2X60-PCS	130
DC6-48-60-18-8F	150	Platform Mount [LP 303-1]	130
RRUS 32 B2	150	DB589	109
RRUS 32 B2	150	1.9" x 2-ft Pipe	109
RRUS 32 B2	150	Side Arm Mount [SO 701-1]	109
(4) 7020.00	150	Pipe Mount [PM 601-1]	109
(4) 7020.00	150		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
MPRF-Fy=65ks Density=100%	65 ksi	80 ksi	MPRF-Fy=65ks Density=50%	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in Windham County, Connecticut.
2. Tower designed for Exposure B to the TIA-222-G Standard.
3. Tower designed for a 101 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft

Tower Engineering Professionals

Tower Engineering Professionals
326 Tryon Road
Raleigh, NC 27603
Phone: (919) 661-6351
FAX: (919) 661-6350

Job:	***Town of Plainfield/SSUSA (BU 876401)***		
Project:	***TEP No. 25670.128938***		
Client: Crown Castle	Drawn by: mtweavil		App'd:
Code: TIA-222-G	Date: 08/25/17		Scale: NTS
Path: C:\Users\mtweavil\Desktop\SA\Monopole\Town Of Plainfield SSUSA\After Final\EQT\876401_LC7.eri			Dwg No. E-1

Tower Input Data

There is a pole section.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

Tower is located in Windham County, Connecticut.
Basic wind speed of 101 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.
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, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned		Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
√	Use Code Stress Ratios		Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-G Bracing Resist. Exemption
	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-G Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric				

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	160.00-119.12	40.88	3.75	18	16.5000	25.6600	0.1875	0.7500	MPRF-Fy=65ksi, Density=100% (65 ksi)
L2	119.12-103.00	19.87	0.00	18	24.3200	28.7805	0.2500	1.0000	MPRF-Fy=65ks

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
L3	103.00-100.21	2.79	0.00	18	28.7805	29.4068	0.3002	1.2009	i, Density=100% (65 ksi) MPRF-Fy=65ksi, Density=100% (65 ksi)
L4	100.21-95.83	4.38	4.33	18	29.4068	30.3900	0.4727	1.8910	MPRF-Fy=65ksi, Density=100% (65 ksi)
L5	95.83-93.50	6.66	0.00	18	28.7900	30.2840	0.5305	2.1221	MPRF-Fy=65ksi, Density=100% (65 ksi)
L6	93.50-86.50	7.00	0.00	18	30.2840	31.8542	0.6766	2.7063	MPRF-Fy=65ksi, Density=50% (65 ksi)
L7	86.50-85.00	1.50	0.00	18	31.8542	32.1907	0.5152	2.0608	MPRF-Fy=65ksi, Density=100% (65 ksi)
L8	85.00-80.00	5.00	0.00	18	32.1907	33.3123	0.5072	2.0287	MPRF-Fy=65ksi, Density=100% (65 ksi)
L9	80.00-77.21	2.79	0.00	18	33.3123	33.9381	0.5030	2.0119	MPRF-Fy=65ksi, Density=100% (65 ksi)
L10	77.21-75.33	1.88	0.00	18	33.9381	34.3599	0.5002	2.0009	MPRF-Fy=65ksi, Density=100% (65 ksi)
L11	75.33-55.00	20.33	0.00	18	34.3599	38.9203	0.5563	2.2253	MPRF-Fy=65ksi, Density=100% (65 ksi)
L12	55.00-53.00	2.00	0.00	18	38.9203	39.3689	0.5531	2.2125	MPRF-Fy=65ksi, Density=100% (65 ksi)
L13	53.00-47.20	5.80	5.58	18	39.3689	40.6700	0.5536	2.2143	MPRF-Fy=65ksi, Density=100% (65 ksi)
L14	47.20-39.25	13.53	0.00	18	38.6600	41.6951	0.5671	2.2682	MPRF-Fy=65ksi, Density=100% (65 ksi)
L15	39.25-37.83	1.42	0.00	18	41.6951	42.0137	0.6409	2.5634	MPRF-Fy=65ksi, Density=100% (65 ksi)
L16	37.83-21.25	16.58	0.00	18	42.0137	45.7330	0.5478	2.1912	MPRF-Fy=65ksi, Density=100% (65 ksi)
L17	21.25-20.00	1.25	0.00	18	45.7330	46.0135	0.5507	2.2029	MPRF-Fy=65ksi, Density=100%

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
L18	20.00-17.00	3.00	0.00	18	46.0135	46.6864	0.6249	2.4994	(65 ksi) MPRF-Fy=65ksi, Density=100% (65 ksi)
L19	17.00-0.00	17.00		18	46.6864	50.5000	0.5860	2.3439	(65 ksi) MPRF-Fy=65ksi, Density=100% (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	16.7545	9.7080	326.3677	5.7909	8.3820	38.9367	653.1649	4.8549	2.5740	13.728
	26.0558	15.1593	1242.6830	9.0427	13.0353	95.3323	2487.0012	7.5811	4.1862	22.326
L2	25.5500	19.0995	1398.0176	8.5449	12.3546	113.1580	2797.8748	9.5516	3.8403	15.361
	29.2244	22.6389	2328.1492	10.1283	14.6205	159.2390	4659.3618	11.3216	4.6254	18.501
L3	29.2244	27.1396	2781.1690	10.1105	14.6205	190.2243	5565.9976	13.5724	4.5370	15.112
	29.8604	27.7364	2968.7146	10.3328	14.9386	198.7273	5941.3355	13.8708	4.6472	15.479
L4	29.8604	43.4153	4591.9602	10.2716	14.9386	307.3881	9189.9625	21.7118	4.3436	9.188
	30.8588	44.8907	5076.1785	10.6206	15.4381	328.8081	10159.0364	22.4496	4.5166	9.554
L5	30.2204	47.5862	4801.1662	10.0321	14.6253	328.2777	9608.6498	23.7976	4.1333	7.791
	30.7512	50.1019	5603.5903	10.5625	15.3843	364.2418	11214.5540	25.0557	4.3962	8.287
L6	30.7512	63.5798	7041.3763	10.5106	15.3843	457.7001	14092.0179	31.7960	4.1392	6.118
	32.3456	66.9518	8222.1713	11.0681	16.1819	508.1079	16455.1615	33.4823	4.4156	6.526
L7	32.3456	51.2477	6358.8987	11.1253	16.1819	392.9627	12726.1645	25.6287	4.6996	9.122
	32.6873	51.7979	6565.9282	11.2448	16.3529	401.5153	13140.4959	25.9039	4.7588	9.237
L8	32.6873	51.0031	6468.4637	11.2477	16.3529	395.5552	12945.4388	25.5064	4.7729	9.411
	33.8262	52.8086	7180.0226	11.6458	16.9226	424.2849	14369.4928	26.4093	4.9703	9.8
L9	33.8262	52.3772	7123.1879	11.6473	16.9226	420.9264	14255.7487	26.1936	4.9777	9.897
	34.4617	53.3763	7538.6477	11.8695	17.2406	437.2618	15087.2149	26.6932	5.0879	10.116
L10	34.4617	53.0906	7499.5216	11.8705	17.2406	434.9924	15008.9112	26.5503	5.0927	10.181
	34.8899	53.7602	7786.8693	12.0202	17.4548	446.1158	15583.9848	26.8852	5.1669	10.329
L11	34.8899	59.6901	8617.1665	12.0003	17.4548	493.6842	17245.6716	29.8507	5.0682	9.11
	39.5207	67.7429	12596.4619	13.6192	19.7715	637.1016	25209.4985	33.8779	5.8708	10.553
L12	39.5207	67.3573	12526.8601	13.6204	19.7715	633.5812	25070.2033	33.6851	5.8765	10.624
	39.9763	68.1450	12971.4611	13.7796	19.9994	648.5918	25959.9904	34.0790	5.9554	10.767
L13	39.9763	68.1997	12981.5750	13.7795	19.9994	649.0975	25980.2314	34.1063	5.9547	10.757
	41.2974	70.4857	14331.2126	14.2413	20.6604	693.6574	28681.2826	35.2495	6.1836	11.17
L14	40.5274	68.5614	12569.1548	13.5230	19.6393	640.0008	25154.8484	34.2872	5.8061	10.239
	42.3384	74.0242	15819.3345	14.6005	21.1811	746.8596	31659.4844	37.0191	6.3403	11.181
L15	42.3384	83.5072	17781.9166	14.5743	21.1811	839.5167	35587.2312	41.7615	6.2104	9.691
	42.6618	84.1551	18199.0522	14.6874	21.3430	852.6959	36422.0513	42.0856	6.2665	9.778
L16	42.6618	72.0989	15662.0165	14.7204	21.3430	733.8260	31344.6416	36.0563	6.4303	11.738
	46.4385	78.5659	20265.8325	16.0408	23.2324	872.3096	40558.3314	39.2904	7.0849	12.933
L17	46.4385	78.9799	20369.9858	16.0397	23.2324	876.7927	40766.7749	39.4974	7.0797	12.855
	46.7233	79.4700	20751.6034	16.1393	23.3748	887.7754	41530.5123	39.7426	7.1291	12.945
L18	46.7233	90.0185	23429.4858	16.1130	23.3748	1002.3381	46889.8007	45.0178	6.9986	11.2
	47.4066	91.3532	24487.1900	16.3519	23.7167	1032.4869	49006.6008	45.6853	7.1171	11.39
L19	47.4066	85.7414	23021.7740	16.3657	23.7167	970.6985	46073.8407	42.8789	7.1855	12.262
	51.2790	92.8342	29220.7128	17.7195	25.6540	1139.0315	58479.8750	46.4259	7.8567	13.408

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 160.00-119.12				1	1	1			
L2 119.12-103.00				1	1	1			
L3 103.00-100.21				1	1	0.834135			
L4 100.21-95.83				1	1	0.532895			
L5 95.83-93.50				1	1	0.593349			
L6 93.50-86.50				1	1	0.934566			
L7 86.50-85.00				1	1	0.610434			
L8 85.00-80.00				1	1	0.619817			
L9 80.00-77.21				1	1	0.624855			
L10 77.21-75.33				1	1	0.628174			
L11 75.33-55.00				1	1	0.565286			
L12 55.00-53.00				1	1	0.568481			
L13 53.00-47.20				1	1	0.56802			
L14 47.20-39.25				1	1	0.664395			
L15 39.25-37.83				1	1	0.588918			
L16 37.83-21.25				1	1	0.687161			
L17 21.25-20.00				1	1	0.683543			
L18 20.00-17.00				1	1	0.603396			
L19 17.00-0.00				1	1	0.642665			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
Safety Line 3/8	C	Surface Ar (CaAa)	160.00 - 0.00	1	1	0.500 0.500	0.3750		0.22
Step Pegs (5/8" SR) 7-in. w/30" step ***MODS***	C	Surface Ar (CaAa)	160.00 - 0.00	1	1	0.500 0.500	0.3500		0.49
PL 1.25x5.375	A	Surface Ar (CaAa)	89.25 - 0.00	1	1	0.500 0.500	1.2500		22.86
PL 1.25x5.375	A	Surface Ar (CaAa)	89.25 - 0.00	1	1	-0.250 -0.250	1.2500		22.86
PL1.25x4.375	A	Surface Ar (CaAa)	119.00 - 89.25	1	1	0.500 0.500	1.2500		18.61
PL1.25x4.375	A	Surface Ar (CaAa)	119.00 - 89.25	1	1	-0.250 -0.250	1.2500		18.61
PL 1.25x3.125	A	Surface Ar (CaAa)	127.00 - 119.00	1	1	0.500 0.500	1.2500		13.82
PL 1.25x3.125	A	Surface Ar (CaAa)	127.00 - 119.00	1	1	-0.250 -0.250	1.2500		13.82

Description	Sector	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
Aero MP3-03	B	Surface Ar (CaAa)	40.50 - 0.00	1	1	0.250 0.250	1.5700		9.90
Aero MP3-03	C	Surface Ar (CaAa)	40.50 - 0.00	1	1	0.000 0.000	1.5700		9.90
Aero MP3-03	B	Surface Ar (CaAa)	76.58 - 40.50	1	1	0.250 0.250	1.5700		9.90
Aero MP3-03	C	Surface Ar (CaAa)	76.58 - 40.50	1	1	0.000 0.000	1.5700		9.90
CCI-65FP-060100	B	Surface Ar (CaAa)	105.00 - 76.58	1	1	0.250 0.250	1.0000		20.42
CCI-65FP-060100	C	Surface Ar (CaAa)	105.00 - 76.58	1	1	0.000 0.000	1.0000		20.42

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
159								
HB114-1-08U4-M5J(1-1/4)	A	No	Inside Pole	159.00 - 0.00	3	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	1.08 1.08 1.08
HB114-21U3M12-XXXF(1-1/4)	A	No	Inside Pole	159.00 - 0.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	1.22 1.22 1.22
150								
LDF7-50A(1-5/8)	A	No	Inside Pole	150.00 - 0.00	12	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.82 0.82 0.82
FB-L98B-002-75000(3/8)	A	No	Inside Pole	150.00 - 0.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.06 0.06 0.06
WR-VG122ST-BRDA(7/16)	A	No	Inside Pole	150.00 - 0.00	2	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.14 0.14 0.14
139								
LDF7-50A(1-5/8)	B	No	Inside Pole	139.00 - 0.00	12	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.82 0.82 0.82
130 SLA								
LDF7-50A(1-5/8)	B	No	Inside Pole	130.00 - 0.00	2	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.82 0.82 0.82
125								
109								
CR 50 1070(7/8)	B	No	Inside Pole	109.00 - 0.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.28 0.28 0.28
PL 1.25x5.375	C	No	CaAa (Out Of Face)	89.25 - 0.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	22.86 23.87 25.22
PL1.25x4.375	C	No	CaAa (Out Of Face)	119.00 - 89.25	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	18.61 19.55 3.78
PL 1.25x3.125	C	No	CaAa (Out Of Face)	127.00 - 119.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	13.82 14.69 15.91
Aero MP3-03	A	No	CaAa (Out Of	40.50 - 0.00	1	No Ice	0.00	9.90

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
			Face)			1/2" Ice	0.00	11.06
						1" Ice	0.00	12.57
Aero MP3-03	A	No	CaAa (Out Of Face)	40.50 - 36.58	1	No Ice	0.00	9.90
						1/2" Ice	0.00	11.06
						1" Ice	0.00	12.57
Aero MP3-03	B	No	CaAa (Out Of Face)	40.50 - 36.58	1	No Ice	0.00	9.90
						1/2" Ice	0.00	11.06
						1" Ice	0.00	12.57
Aero MP3-03	C	No	CaAa (Out Of Face)	40.50 - 36.58	1	No Ice	0.00	9.90
						1/2" Ice	0.00	11.06
						1" Ice	0.00	12.57
Aero MP3-03	A	No	CaAa (Out Of Face)	76.58 - 40.50	1	No Ice	0.00	9.90
						1/2" Ice	0.00	11.06
						1" Ice	0.00	12.57
CCI-65FP-085125	A	No	CaAa (Out Of Face)	25.00 - 0.00	1	No Ice	0.00	36.15
						1/2" Ice	0.00	37.36
						1" Ice	0.00	38.92
CCI-65FP-085125	B	No	CaAa (Out Of Face)	20.00 - 0.00	1	No Ice	0.00	36.15
						1/2" Ice	0.00	37.36
						1" Ice	0.00	38.92
CCI-65FP-085125	C	No	CaAa (Out Of Face)	20.00 - 0.00	1	No Ice	0.00	36.15
						1/2" Ice	0.00	37.36
						1" Ice	0.00	38.92
CCI-65FP-060100	B	No	CaAa (Out Of Face)	76.58 - 20.00	1	No Ice	0.00	20.42
						1/2" Ice	0.00	21.37
						1" Ice	0.00	22.66
CCI-65FP-060100	C	No	CaAa (Out Of Face)	55.00 - 20.00	1	No Ice	0.00	20.42
						1/2" Ice	0.00	21.37
						1" Ice	0.00	22.66
CCI-65FP-060100	A	No	CaAa (Out Of Face)	102.21 - 47.21	1	No Ice	0.00	20.42
						1/2" Ice	0.00	21.37
						1" Ice	0.00	22.66
CCI-65FP-060100	C	No	CaAa (Out Of Face)	76.58 - 15.00	1	No Ice	0.00	20.42
						1/2" Ice	0.00	21.37
						1" Ice	0.00	22.66
CCI-65FP-045100	A	No	CaAa (Out Of Face)	95.00 - 85.00	1	No Ice	0.00	15.31
						1/2" Ice	0.00	16.17
						1" Ice	0.00	17.36
CCI-65FP-045100	B	No	CaAa (Out Of Face)	95.00 - 85.00	1	No Ice	0.00	15.31
						1/2" Ice	0.00	16.17
						1" Ice	0.00	17.36
CCI-65FP-045100	C	No	CaAa (Out Of Face)	95.00 - 85.00	1	No Ice	0.00	15.31
						1/2" Ice	0.00	16.17
						1" Ice	0.00	17.36

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	160.00-119.12	A	0.000	0.000	1.970	0.000	710
		B	0.000	0.000	0.000	0.000	213
		C	0.000	0.000	2.964	0.000	138
L2	119.12-103.00	A	0.000	0.000	4.030	0.000	835
		B	0.000	0.000	0.200	0.000	228
		C	0.000	0.000	1.369	0.000	352
L3	103.00-100.21	A	0.000	0.000	0.698	0.000	186
		B	0.000	0.000	0.279	0.000	90

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
		C	0.000	0.000	0.481	0.000	111
L4	100.21-95.83	A	0.000	0.000	1.095	0.000	317
		B	0.000	0.000	0.438	0.000	141
		C	0.000	0.000	0.756	0.000	174
L5	95.83-93.50	A	0.000	0.000	0.583	0.000	191
		B	0.000	0.000	0.233	0.000	98
		C	0.000	0.000	0.402	0.000	116
L6	93.50-86.50	A	0.000	0.000	1.750	0.000	637
		B	0.000	0.000	0.700	0.000	332
		C	0.000	0.000	1.208	0.000	397
L7	86.50-85.00	A	0.000	0.000	0.375	0.000	144
		B	0.000	0.000	0.150	0.000	71
		C	0.000	0.000	0.259	0.000	89
L8	85.00-80.00	A	0.000	0.000	1.250	0.000	404
		B	0.000	0.000	0.500	0.000	161
		C	0.000	0.000	0.863	0.000	220
L9	80.00-77.21	A	0.000	0.000	0.698	0.000	225
		B	0.000	0.000	0.279	0.000	90
		C	0.000	0.000	0.481	0.000	123
L10	77.21-75.33	A	0.000	0.000	0.470	0.000	164
		B	0.000	0.000	0.259	0.000	73
		C	0.000	0.000	0.396	0.000	95
L11	75.33-55.00	A	0.000	0.000	5.082	0.000	1844
		B	0.000	0.000	3.192	0.000	855
		C	0.000	0.000	4.666	0.000	1096
L12	55.00-53.00	A	0.000	0.000	0.500	0.000	181
		B	0.000	0.000	0.314	0.000	84
		C	0.000	0.000	0.459	0.000	149
L13	53.00-47.20	A	0.000	0.000	1.450	0.000	526
		B	0.000	0.000	0.911	0.000	244
		C	0.000	0.000	1.331	0.000	431
L14	47.20-39.25	A	0.000	0.000	1.988	0.000	571
		B	0.000	0.000	1.248	0.000	347
		C	0.000	0.000	1.825	0.000	603
L15	39.25-37.83	A	0.000	0.000	0.355	0.000	114
		B	0.000	0.000	0.223	0.000	74
		C	0.000	0.000	0.326	0.000	120
L16	37.83-21.25	A	0.000	0.000	4.145	0.000	1313
		B	0.000	0.000	2.603	0.000	710
		C	0.000	0.000	3.805	0.000	1244
L17	21.25-20.00	A	0.000	0.000	0.313	0.000	133
		B	0.000	0.000	0.196	0.000	53
		C	0.000	0.000	0.287	0.000	93
L18	20.00-17.00	A	0.000	0.000	0.750	0.000	319
		B	0.000	0.000	0.471	0.000	173
		C	0.000	0.000	0.689	0.000	270
L19	17.00-0.00	A	0.000	0.000	4.250	0.000	1809
		B	0.000	0.000	2.669	0.000	983
		C	0.000	0.000	3.902	0.000	1224

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L1	160.00-119.12	A	1.731	0.000	0.000	6.891	0.000	809
		B		0.000	0.000	0.000	0.000	213
		C		0.000	0.000	31.271	0.000	536

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight lb
L2	119.12-103.00	A	1.693	0.000	0.000	15.185	0.000	1038
		B		0.000	0.000	0.892	0.000	239
		C		0.000	0.000	13.223	0.000	312
L3	103.00-100.21	A	1.679	0.000	0.000	2.571	0.000	228
		B		0.000	0.000	1.216	0.000	105
		C		0.000	0.000	3.291	0.000	115
L4	100.21-95.83	A	1.672	0.000	0.000	4.025	0.000	389
		B		0.000	0.000	1.903	0.000	165
		C		0.000	0.000	5.151	0.000	180
L5	95.83-93.50	A	1.667	0.000	0.000	2.141	0.000	237
		B		0.000	0.000	1.012	0.000	117
		C		0.000	0.000	2.740	0.000	125
L6	93.50-86.50	A	1.658	0.000	0.000	6.393	0.000	782
		B		0.000	0.000	3.022	0.000	400
		C		0.000	0.000	8.172	0.000	483
L7	86.50-85.00	A	1.650	0.000	0.000	1.365	0.000	175
		B		0.000	0.000	0.645	0.000	86
		C		0.000	0.000	1.744	0.000	123
L8	85.00-80.00	A	1.644	0.000	0.000	4.538	0.000	485
		B		0.000	0.000	2.144	0.000	187
		C		0.000	0.000	5.794	0.000	311
L9	80.00-77.21	A	1.636	0.000	0.000	2.523	0.000	270
		B		0.000	0.000	1.192	0.000	104
		C		0.000	0.000	3.220	0.000	173
L10	77.21-75.33	A	1.631	0.000	0.000	1.697	0.000	201
		B		0.000	0.000	0.873	0.000	90
		C		0.000	0.000	2.235	0.000	136
L11	75.33-55.00	A	1.605	0.000	0.000	18.135	0.000	2266
		B		0.000	0.000	9.718	0.000	1072
		C		0.000	0.000	24.245	0.000	1563
L12	55.00-53.00	A	1.576	0.000	0.000	1.761	0.000	222
		B		0.000	0.000	0.944	0.000	105
		C		0.000	0.000	2.350	0.000	202
L13	53.00-47.20	A	1.564	0.000	0.000	5.078	0.000	642
		B		0.000	0.000	2.725	0.000	304
		C		0.000	0.000	6.773	0.000	584
L14	47.20-39.25	A	1.541	0.000	0.000	6.961	0.000	702
		B		0.000	0.000	3.735	0.000	435
		C		0.000	0.000	9.284	0.000	819
L15	39.25-37.83	A	1.523	0.000	0.000	1.220	0.000	142
		B		0.000	0.000	0.656	0.000	95
		C		0.000	0.000	1.624	0.000	162
L16	37.83-21.25	A	1.483	0.000	0.000	13.980	0.000	1578
		B		0.000	0.000	7.520	0.000	874
		C		0.000	0.000	18.557	0.000	1654
L17	21.25-20.00	A	1.431	0.000	0.000	1.028	0.000	156
		B		0.000	0.000	0.554	0.000	64
		C		0.000	0.000	1.360	0.000	122
L18	20.00-17.00	A	1.416	0.000	0.000	2.449	0.000	373
		B		0.000	0.000	1.320	0.000	202
		C		0.000	0.000	3.237	0.000	341
L19	17.00-0.00	A	1.308	0.000	0.000	13.144	0.000	2084
		B		0.000	0.000	7.116	0.000	1130
		C		0.000	0.000	17.243	0.000	1529

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L1	160.00-119.12	-0.1295	0.0099	-0.6820	0.2498
L2	119.12-103.00	-0.2318	-0.1032	-0.8478	-0.0342
L3	103.00-100.21	-0.1103	0.0119	-0.4700	0.2389
L4	100.21-95.83	-0.1107	0.0120	-0.4758	0.2419
L5	95.83-93.50	-0.1108	0.0120	-0.4768	0.2425
L6	93.50-86.50	-0.1113	0.0122	-0.4832	0.2457
L7	86.50-85.00	-0.1118	0.0123	-0.4894	0.2488
L8	85.00-80.00	-0.1121	0.0123	-0.4939	0.2511
L9	80.00-77.21	-0.1125	0.0124	-0.4991	0.2537
L10	77.21-75.33	-0.0603	0.0622	-0.4622	0.2850
L11	75.33-55.00	-0.0355	0.0871	-0.4538	0.3074
L12	55.00-53.00	-0.0360	0.0878	-0.4630	0.3139
L13	53.00-47.20	-0.0362	0.0881	-0.4655	0.3158
L14	47.20-39.25	-0.0363	0.0883	-0.4696	0.3185
L15	39.25-37.83	-0.0365	0.0886	-0.4673	0.3179
L16	37.83-21.25	-0.0369	0.0890	-0.4688	0.3198
L17	21.25-20.00	-0.0372	0.0895	-0.4668	0.3197
L18	20.00-17.00	-0.0373	0.0896	-0.4654	0.3192
L19	17.00-0.00	-0.0376	0.0900	-0.4500	0.3119

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	1	Safety Line 3/8	119.12 - 160.00	1.0000	1.0000
L1	2	Step Pegs (5/8" SR) 7-in. w/30" step	119.12 - 160.00	1.0000	1.0000
L1	25	PL 1.25x3.125	119.12 - 127.00	1.0000	1.0000
L1	26	PL 1.25x3.125	119.12 - 127.00	1.0000	1.0000
L1	22	PL1.25x4.375	119.12 - 119.00	1.0000	1.0000
L1	23	PL1.25x4.375	119.12 - 119.00	1.0000	1.0000
L1	41	CCI-65FP-060100	119.12 - 105.00	1.0000	1.0000
L1	45	CCI-65FP-060100	119.12 - 105.00	1.0000	1.0000
L3	1	Safety Line 3/8	100.21 - 103.00	1.0000	1.0000
L3	2	Step Pegs (5/8" SR) 7-in. w/30" step	100.21 - 103.00	1.0000	1.0000
L3	22	PL1.25x4.375	100.21 - 103.00	1.0000	1.0000
L3	23	PL1.25x4.375	100.21 - 103.00	1.0000	1.0000
L3	41	CCI-65FP-060100	100.21 - 103.00	1.0000	1.0000
L3	45	CCI-65FP-060100	100.21 - 103.00	1.0000	1.0000
L4	1	Safety Line 3/8	95.83 - 100.21	1.0000	1.0000
L4	2	Step Pegs (5/8" SR) 7-in. w/30" step	95.83 - 100.21	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L4	22	PL1.25x4.375	95.83 - 100.21	1.0000	1.0000
L4	23	PL1.25x4.375	95.83 - 100.21	1.0000	1.0000
L4	41	CCI-65FP-060100	95.83 - 100.21	1.0000	1.0000
L4	45	CCI-65FP-060100	95.83 - 100.21	1.0000	1.0000
L6	1	Safety Line 3/8	86.50 - 93.50	1.0000	1.0000
L6	2	Step Pegs (5/8" SR) 7-in. w/30" step	86.50 - 93.50	1.0000	1.0000
L6	19	PL 1.25x5.375	86.50 - 89.25	1.0000	1.0000
L6	20	PL 1.25x5.375	86.50 - 89.25	1.0000	1.0000
L6	22	PL1.25x4.375	89.25 - 93.50	1.0000	1.0000
L6	23	PL1.25x4.375	89.25 - 93.50	1.0000	1.0000
L6	41	CCI-65FP-060100	86.50 - 93.50	1.0000	1.0000
L6	45	CCI-65FP-060100	86.50 - 93.50	1.0000	1.0000
L7	1	Safety Line 3/8	85.00 - 86.50	1.0000	1.0000
L7	2	Step Pegs (5/8" SR) 7-in. w/30" step	85.00 - 86.50	1.0000	1.0000
L7	19	PL 1.25x5.375	85.00 - 86.50	1.0000	1.0000
L7	20	PL 1.25x5.375	85.00 - 86.50	1.0000	1.0000
L7	41	CCI-65FP-060100	85.00 - 86.50	1.0000	1.0000
L7	45	CCI-65FP-060100	85.00 - 86.50	1.0000	1.0000
L8	1	Safety Line 3/8	80.00 - 85.00	1.0000	1.0000
L8	2	Step Pegs (5/8" SR) 7-in. w/30" step	80.00 - 85.00	1.0000	1.0000
L8	19	PL 1.25x5.375	80.00 - 85.00	1.0000	1.0000
L8	20	PL 1.25x5.375	80.00 - 85.00	1.0000	1.0000
L8	41	CCI-65FP-060100	80.00 - 85.00	1.0000	1.0000
L8	45	CCI-65FP-060100	80.00 - 85.00	1.0000	1.0000
L9	1	Safety Line 3/8	77.21 - 80.00	1.0000	1.0000
L9	2	Step Pegs (5/8" SR) 7-in. w/30" step	77.21 - 80.00	1.0000	1.0000
L9	19	PL 1.25x5.375	77.21 - 80.00	1.0000	1.0000
L9	20	PL 1.25x5.375	77.21 - 80.00	1.0000	1.0000
L9	41	CCI-65FP-060100	77.21 - 80.00	1.0000	1.0000
L9	45	CCI-65FP-060100	77.21 - 80.00	1.0000	1.0000
L10	1	Safety Line 3/8	75.33 - 77.21	1.0000	1.0000
L10	2	Step Pegs (5/8" SR) 7-in. w/30" step	75.33 - 77.21	1.0000	1.0000
L10	19	PL 1.25x5.375	75.33 - 77.21	1.0000	1.0000
L10	20	PL 1.25x5.375	75.33 - 77.21	1.0000	1.0000
L10	35	Aero MP3-03	75.33 - 76.58	1.0000	1.0000
L10	36	Aero MP3-03	75.33 - 76.58	1.0000	1.0000
L10	41	CCI-65FP-060100	76.58 - 77.21	1.0000	1.0000
L10	45	CCI-65FP-060100	76.58 - 77.21	1.0000	1.0000
L11	1	Safety Line 3/8	55.00 - 75.33	1.0000	1.0000
L11	2	Step Pegs (5/8" SR) 7-in. w/30" step	55.00 - 75.33	1.0000	1.0000
L11	19	PL 1.25x5.375	55.00 - 75.33	1.0000	1.0000
L11	20	PL 1.25x5.375	55.00 - 75.33	1.0000	1.0000
L11	35	Aero MP3-03	55.00 - 75.33	1.0000	1.0000
L11	36	Aero MP3-03	55.00 - 75.33	1.0000	1.0000
L12	1	Safety Line 3/8	53.00 - 55.00	1.0000	1.0000
L12	2	Step Pegs (5/8" SR) 7-in. w/30" step	53.00 - 55.00	1.0000	1.0000
L12	19	PL 1.25x5.375	53.00 - 55.00	1.0000	1.0000
L12	20	PL 1.25x5.375	53.00 - 55.00	1.0000	1.0000
L12	35	Aero MP3-03	53.00 - 55.00	1.0000	1.0000
L12	36	Aero MP3-03	53.00 - 55.00	1.0000	1.0000
L13	1	Safety Line 3/8	47.20 - 53.00	1.0000	1.0000
L13	2	Step Pegs (5/8" SR) 7-in. w/30" step	47.20 - 53.00	1.0000	1.0000
L13	19	PL 1.25x5.375	47.20 - 53.00	1.0000	1.0000
L13	20	PL 1.25x5.375	47.20 - 53.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L13	35	Aero MP3-03	47.20 - 53.00	1.0000	1.0000
L13	36	Aero MP3-03	47.20 - 53.00	1.0000	1.0000
L13	29	Aero MP3-03	47.20 - 40.50	1.0000	1.0000
L13	30	Aero MP3-03	47.20 - 40.50	1.0000	1.0000
L15	1	Safety Line 3/8	37.83 - 39.25	1.0000	1.0000
L15	2	Step Pegs (5/8" SR) 7-in. w/30" step	37.83 - 39.25	1.0000	1.0000
L15	19	PL 1.25x5.375	37.83 - 39.25	1.0000	1.0000
L15	20	PL 1.25x5.375	37.83 - 39.25	1.0000	1.0000
L15	29	Aero MP3-03	37.83 - 39.25	1.0000	1.0000
L15	30	Aero MP3-03	37.83 - 39.25	1.0000	1.0000
L16	1	Safety Line 3/8	21.25 - 37.83	1.0000	1.0000
L16	2	Step Pegs (5/8" SR) 7-in. w/30" step	21.25 - 37.83	1.0000	1.0000
L16	19	PL 1.25x5.375	21.25 - 37.83	1.0000	1.0000
L16	20	PL 1.25x5.375	21.25 - 37.83	1.0000	1.0000
L16	29	Aero MP3-03	21.25 - 37.83	1.0000	1.0000
L16	30	Aero MP3-03	21.25 - 37.83	1.0000	1.0000
L17	1	Safety Line 3/8	20.00 - 21.25	1.0000	1.0000
L17	2	Step Pegs (5/8" SR) 7-in. w/30" step	20.00 - 21.25	1.0000	1.0000
L17	19	PL 1.25x5.375	20.00 - 21.25	1.0000	1.0000
L17	20	PL 1.25x5.375	20.00 - 21.25	1.0000	1.0000
L17	29	Aero MP3-03	20.00 - 21.25	1.0000	1.0000
L17	30	Aero MP3-03	20.00 - 21.25	1.0000	1.0000
L18	1	Safety Line 3/8	17.00 - 20.00	1.0000	1.0000
L18	2	Step Pegs (5/8" SR) 7-in. w/30" step	17.00 - 20.00	1.0000	1.0000
L18	19	PL 1.25x5.375	17.00 - 20.00	1.0000	1.0000
L18	20	PL 1.25x5.375	17.00 - 20.00	1.0000	1.0000
L18	29	Aero MP3-03	17.00 - 20.00	1.0000	1.0000
L18	30	Aero MP3-03	17.00 - 20.00	1.0000	1.0000
L19	1	Safety Line 3/8	0.00 - 17.00	1.0000	1.0000
L19	2	Step Pegs (5/8" SR) 7-in. w/30" step	0.00 - 17.00	1.0000	1.0000
L19	19	PL 1.25x5.375	0.00 - 17.00	1.0000	1.0000
L19	20	PL 1.25x5.375	0.00 - 17.00	1.0000	1.0000
L19	29	Aero MP3-03	0.00 - 17.00	1.0000	1.0000
L19	30	Aero MP3-03	0.00 - 17.00	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
159									
APXVSPP18-C-A20 w/ Mount Pipe	A	From Centroid-Face	4.00 6.00 0.00	0.0000	159.00	No Ice 1/2" Ice 1" Ice	8.26 8.82 9.35	6.95 8.13 9.02	83 151 227
APXVSPP18-C-A20 w/ Mount Pipe	B	From Centroid-Face	4.00 6.00	30.0000	159.00	No Ice 1/2" Ice	8.26 8.82	6.95 8.13	83 151

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
		ce	0.00			1" Ice	9.35	9.02	227
APXVSPP18-C-A20 w/	C	From	4.00	40.0000	159.00	No Ice	8.26	6.95	83
Mount Pipe		Centroid-Fa	6.00			1/2" Ice	8.82	8.13	151
		ce	0.00			1" Ice	9.35	9.02	227
APXVTM14-ALU-I20 w/	A	From	4.00	0.0000	159.00	No Ice	6.58	4.96	77
Mount Pipe		Centroid-Fa	-6.00			1/2" Ice	7.03	5.75	132
		ce	0.00			1" Ice	7.47	6.47	193
APXVTM14-ALU-I20 w/	B	From	4.00	30.0000	159.00	No Ice	6.58	4.96	77
Mount Pipe		Centroid-Fa	-6.00			1/2" Ice	7.03	5.75	132
		ce	0.00			1" Ice	7.47	6.47	193
APXVTM14-ALU-I20 w/	C	From	4.00	40.0000	159.00	No Ice	6.58	4.96	77
Mount Pipe		Centroid-Fa	-6.00			1/2" Ice	7.03	5.75	132
		ce	0.00			1" Ice	7.47	6.47	193
TD-RRH8x20-25	A	From	4.00	0.0000	159.00	No Ice	4.05	1.53	70
		Centroid-Fa	-6.00			1/2" Ice	4.30	1.71	97
		ce	0.00			1" Ice	4.56	1.90	128
TD-RRH8x20-25	B	From	4.00	30.0000	159.00	No Ice	4.05	1.53	70
		Centroid-Fa	-6.00			1/2" Ice	4.30	1.71	97
		ce	0.00			1" Ice	4.56	1.90	128
TD-RRH8x20-25	C	From	4.00	40.0000	159.00	No Ice	4.05	1.53	70
		Centroid-Fa	-6.00			1/2" Ice	4.30	1.71	97
		ce	0.00			1" Ice	4.56	1.90	128
(2) 2.4" Dia x 6-ft Pipe	A	From	4.00	0.0000	159.00	No Ice	1.43	1.43	22
		Centroid-Fa	0.00			1/2" Ice	1.93	1.93	33
		ce	0.00			1" Ice	2.30	2.30	48
(2) 2.4" Dia x 6-ft Pipe	B	From	4.00	0.0000	159.00	No Ice	1.43	1.43	22
		Centroid-Fa	0.00			1/2" Ice	1.93	1.93	33
		ce	0.00			1" Ice	2.30	2.30	48
(2) 2.4" Dia x 6-ft Pipe	C	From	4.00	0.0000	159.00	No Ice	1.43	1.43	22
		Centroid-Fa	0.00			1/2" Ice	1.93	1.93	33
		ce	0.00			1" Ice	2.30	2.30	48
Platform Mount [LP 714-1]	C	None		0.0000	159.00	No Ice	37.47	37.47	1600
						1/2" Ice	44.23	44.23	2040
						1" Ice	50.99	50.99	2480
157									
800MHz 2X50W RRH	A	From Face	2.00	0.0000	157.00	No Ice	2.06	1.93	64
W/FILTER			0.00			1/2" Ice	2.24	2.11	86
			-3.00			1" Ice	2.43	2.29	111
800MHz 2X50W RRH	B	From Face	2.00	30.0000	157.00	No Ice	2.06	1.93	64
W/FILTER			0.00			1/2" Ice	2.24	2.11	86
			-3.00			1" Ice	2.43	2.29	111
800MHz 2X50W RRH	C	From Face	2.00	40.0000	157.00	No Ice	2.06	1.93	64
W/FILTER			0.00			1/2" Ice	2.24	2.11	86
			-3.00			1" Ice	2.43	2.29	111
PCS 1900MHz	A	From Face	2.00	0.0000	157.00	No Ice	2.32	2.24	60
4x45W-65MHz			0.00			1/2" Ice	2.53	2.44	83
			0.00			1" Ice	2.74	2.65	110
PCS 1900MHz	B	From Face	2.00	30.0000	157.00	No Ice	2.32	2.24	60
4x45W-65MHz			0.00			1/2" Ice	2.53	2.44	83
			0.00			1" Ice	2.74	2.65	110
PCS 1900MHz	C	From Face	2.00	40.0000	157.00	No Ice	2.32	2.24	60
4x45W-65MHz			0.00			1/2" Ice	2.53	2.44	83
			0.00			1" Ice	2.74	2.65	110
Pipe Mount [PM 601-3]	C	None		0.0000	157.00	No Ice	4.39	4.39	195
						1/2" Ice	5.48	5.48	237
						1" Ice	6.57	6.57	280
Side Arm Mount [SO 102-3]	C	None		0.0000	157.00	No Ice	3.00	3.00	81

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
						1/2" Ice	3.48	3.48	111
						1" Ice	3.96	3.96	141
152									
RRUS-11	A	From Leg	2.00 1.00 0.00	25.0000	152.00	No Ice 1/2" Ice 1" Ice	2.79 3.00 3.21	1.19 1.34 1.50	50 71 95
RRUS-11	B	From Leg	2.00 1.00 0.00	35.0000	152.00	No Ice 1/2" Ice 1" Ice	2.79 3.00 3.21	1.19 1.34 1.50	50 71 95
RRUS-11	C	From Leg	2.00 1.00 0.00	25.0000	152.00	No Ice 1/2" Ice 1" Ice	2.79 3.00 3.21	1.19 1.34 1.50	50 71 95
Pipe Mount [PM 601-3]	C	None		0.0000	152.00	No Ice 1/2" Ice 1" Ice	4.39 5.48 6.57	4.39 5.48 6.57	195 237 280
Side Arm Mount [SO 103-3]	C	None		0.0000	152.00	No Ice 1/2" Ice 1" Ice	9.50 11.80 14.10	9.50 11.80 14.10	224 317 410
150									
(2) 7770.00 w/ Mount Pipe	A	From Centroid-Leg	4.00 2.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	5.75 6.18 6.61	4.25 5.01 5.71	55 103 157
(2) 7770.00 w/ Mount Pipe	B	From Centroid-Leg	4.00 0.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	5.75 6.18 6.61	4.25 5.01 5.71	55 103 157
(2) 7770.00 w/ Mount Pipe	C	From Centroid-Leg	4.00 0.00 0.00	30.0000	150.00	No Ice 1/2" Ice 1" Ice	5.75 6.18 6.61	4.25 5.01 5.71	55 103 157
HPA-65R-BUU-H8 w/ Mount Pipe	A	From Centroid-Leg	4.00 -6.00 0.00	25.0000	150.00	No Ice 1/2" Ice 1" Ice	13.21 13.90 14.59	9.58 11.05 12.50	100 196 303
HPA-65R-BUU-H8 w/ Mount Pipe	B	From Centroid-Leg	4.00 2.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	13.21 13.90 14.59	9.58 11.05 12.50	100 196 303
HPA-65R-BUU-H8 w/ Mount Pipe	C	From Centroid-Leg	4.00 2.00 0.00	30.0000	150.00	No Ice 1/2" Ice 1" Ice	13.21 13.90 14.59	9.58 11.05 12.50	100 196 303
(2) LGP21401	A	From Centroid-Leg	4.00 -2.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	1.10 1.24 1.38	0.21 0.27 0.35	14 21 30
(2) LGP21401	B	From Centroid-Leg	4.00 -6.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	1.10 1.24 1.38	0.21 0.27 0.35	14 21 30
(2) LGP21401	C	From Centroid-Leg	4.00 -6.00 0.00	30.0000	150.00	No Ice 1/2" Ice 1" Ice	1.10 1.24 1.38	0.21 0.27 0.35	14 21 30
(2) LGP21901	A	From Centroid-Leg	4.00 6.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	0.23 0.29 0.36	0.16 0.21 0.28	6 8 11
(2) LGP21901	B	From Centroid-Leg	4.00 6.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	0.23 0.29 0.36	0.16 0.21 0.28	6 8 11
(2) LGP21901	C	From Centroid-Leg	4.00 6.00 0.00	30.0000	150.00	No Ice 1/2" Ice 1" Ice	0.23 0.29 0.36	0.16 0.21 0.28	6 8 11
DC6-48-60-18-8F	A	From Leg	1.00 0.00	25.0000	150.00	No Ice 1/2" Ice	0.92 1.46	0.92 1.46	19 37

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			0.00			1" Ice	1.64	1.64	57
RRUS 32 B2	A	From Centroid-Leg	4.00 -6.00 0.00	25.0000	150.00	No Ice 1/2" Ice 1" Ice	2.73 2.95 3.18	1.67 1.86 2.05	53 74 98
RRUS 32 B2	B	From Centroid-Leg	4.00 2.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	2.73 2.95 3.18	1.67 1.86 2.05	53 74 98
RRUS 32 B2	C	From Centroid-Leg	4.00 2.00 0.00	30.0000	150.00	No Ice 1/2" Ice 1" Ice	2.73 2.95 3.18	1.67 1.86 2.05	53 74 98
(4) 7020.00	A	From Centroid-Leg	4.00 2.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	0.10 0.15 0.20	0.17 0.24 0.31	2 5 9
(4) 7020.00	B	From Centroid-Leg	4.00 0.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	0.10 0.15 0.20	0.17 0.24 0.31	2 5 9
(4) 7020.00	C	From Centroid-Leg	4.00 0.00 0.00	30.0000	150.00	No Ice 1/2" Ice 1" Ice	0.10 0.15 0.20	0.17 0.24 0.31	2 5 9
1001983	A	From Centroid-Leg	4.00 6.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	0.18 0.23 0.30	0.08 0.13 0.18	2 4 6
1001983	B	From Centroid-Leg	4.00 6.00 0.00	35.0000	150.00	No Ice 1/2" Ice 1" Ice	0.18 0.23 0.30	0.08 0.13 0.18	2 4 6
1001983	C	From Centroid-Leg	4.00 6.00 0.00	30.0000	150.00	No Ice 1/2" Ice 1" Ice	0.18 0.23 0.30	0.08 0.13 0.18	2 4 6
Platform Mount [LP 303-1]	C	None		0.0000	150.00	No Ice 1/2" Ice 1" Ice	14.66 18.87 23.08	14.66 18.87 23.08	1250 1481 1713
139									
APXV18-203219-C-A20 w/ Mount Pipe	A	From Face	3.00 -6.00 0.00	0.0000	139.00	No Ice 1/2" Ice 1" Ice	5.76 6.19 6.62	4.00 4.74 5.43	60 107 159
APXV18-203219-C-A20 w/ Mount Pipe	B	From Face	3.00 -6.00 0.00	-30.0000	139.00	No Ice 1/2" Ice 1" Ice	5.76 6.19 6.62	4.00 4.74 5.43	60 107 159
APXV18-203219-C-A20 w/ Mount Pipe	C	From Face	3.00 -6.00 0.00	10.0000	139.00	No Ice 1/2" Ice 1" Ice	5.76 6.19 6.62	4.00 4.74 5.43	60 107 159
LNX-6512DS-VTM w/ Mount Pipe	A	From Face	3.00 6.00 0.00	0.0000	139.00	No Ice 1/2" Ice 1" Ice	5.33 5.72 6.12	4.53 5.15 5.77	47 95 150
LNX-6512DS-VTM w/ Mount Pipe	B	From Face	3.00 6.00 0.00	-30.0000	139.00	No Ice 1/2" Ice 1" Ice	5.33 5.72 6.12	4.53 5.15 5.77	47 95 150
LNX-6512DS-VTM w/ Mount Pipe	C	From Face	3.00 6.00 0.00	10.0000	139.00	No Ice 1/2" Ice 1" Ice	5.33 5.72 6.12	4.53 5.15 5.77	47 95 150
TMAT7LA-11A	A	From Face	3.00 -6.00 0.00	0.0000	139.00	No Ice 1/2" Ice 1" Ice	0.64 0.75 0.86	0.35 0.42 0.51	22 29 37
TMAT7LA-11A	B	From Face	3.00 -6.00 0.00	-30.0000	139.00	No Ice 1/2" Ice 1" Ice	0.64 0.75 0.86	0.35 0.42 0.51	22 29 37
TMAT7LA-11A	C	From Face	3.00	10.0000	139.00	No Ice	0.64	0.35	22

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
			-6.00			1/2" Ice	0.75	0.42	29
			0.00			1" Ice	0.86	0.51	37
ATBT-BOTTOM-24V	A	From Face	3.00	0.0000	139.00	No Ice	0.10	0.06	3
			6.00			1/2" Ice	0.15	0.10	4
			0.00			1" Ice	0.20	0.15	6
ATBT-BOTTOM-24V	B	From Face	3.00	-30.0000	139.00	No Ice	0.10	0.06	3
			6.00			1/2" Ice	0.15	0.10	4
			0.00			1" Ice	0.20	0.15	6
ATBT-BOTTOM-24V	C	From Face	3.00	10.0000	139.00	No Ice	0.10	0.06	3
			6.00			1/2" Ice	0.15	0.10	4
			0.00			1" Ice	0.20	0.15	6
2.4" Dia x 6-ft Pipe	A	From Face	3.00	0.0000	139.00	No Ice	1.43	1.43	22
			0.00			1/2" Ice	1.93	1.93	33
			0.00			1" Ice	2.30	2.30	48
2.4" Dia x 6-ft Pipe	B	From Face	3.00	0.0000	139.00	No Ice	1.43	1.43	22
			0.00			1/2" Ice	1.93	1.93	33
			0.00			1" Ice	2.30	2.30	48
2.4" Dia x 6-ft Pipe	C	From Face	3.00	0.0000	139.00	No Ice	1.43	1.43	22
			0.00			1/2" Ice	1.93	1.93	33
			0.00			1" Ice	2.30	2.30	48
T-Arm Mount [TA 602-3]	C	None		0.0000	139.00	No Ice	11.59	11.59	774
						1/2" Ice	15.44	15.44	990
						1" Ice	19.29	19.29	1206
130 SLA									
(2) LNX-6514DS-A1M w/ Mount Pipe	A	From Centroid-Face	4.00	0.0000	130.00	No Ice	8.41	7.08	65
			-2.00			1/2" Ice	8.97	8.27	134
			0.00			1" Ice	9.50	9.18	211
(2) LNX-6514DS-A1M w/ Mount Pipe	B	From Centroid-Face	4.00	0.0000	130.00	No Ice	8.41	7.08	65
			-2.00			1/2" Ice	8.97	8.27	134
			0.00			1" Ice	9.50	9.18	211
(2) LNX-6514DS-A1M w/ Mount Pipe	C	From Centroid-Face	4.00	0.0000	130.00	No Ice	8.41	7.08	65
			-2.00			1/2" Ice	8.97	8.27	134
			0.00			1" Ice	9.50	9.18	211
(2) HBXX-6517DS-A2M w/ Mount Pipe	A	From Centroid-Face	4.00	0.0000	130.00	No Ice	8.77	6.96	67
			2.00			1/2" Ice	9.34	8.18	137
			0.00			1" Ice	9.89	9.14	215
(2) HBXX-6517DS-A2M w/ Mount Pipe	B	From Centroid-Face	4.00	0.0000	130.00	No Ice	8.77	6.96	67
			2.00			1/2" Ice	9.34	8.18	137
			0.00			1" Ice	9.89	9.14	215
(2) HBXX-6517DS-A2M w/ Mount Pipe	C	From Centroid-Face	4.00	0.0000	130.00	No Ice	8.77	6.96	67
			2.00			1/2" Ice	9.34	8.18	137
			0.00			1" Ice	9.89	9.14	215
RRH2X40-07-U	A	From Centroid-Face	4.00	0.0000	130.00	No Ice	1.93	1.05	50
			-2.00			1/2" Ice	2.10	1.19	67
			0.00			1" Ice	2.28	1.33	86
RRH2X40-07-U	B	From Centroid-Face	4.00	0.0000	130.00	No Ice	1.93	1.05	50
			-2.00			1/2" Ice	2.10	1.19	67
			0.00			1" Ice	2.28	1.33	86
RRH2X40-07-U	C	From Centroid-Face	4.00	0.0000	130.00	No Ice	1.93	1.05	50
			-2.00			1/2" Ice	2.10	1.19	67
			0.00			1" Ice	2.28	1.33	86
DB-T1-6Z-8AB-0Z	A	From Centroid-Face	4.00	0.0000	130.00	No Ice	4.80	2.00	44
			-2.00			1/2" Ice	5.07	2.19	80
			0.00			1" Ice	5.35	2.39	120
DB-T1-6Z-8AB-0Z	B	From Centroid-Face	4.00	0.0000	130.00	No Ice	4.80	2.00	44
			-2.00			1/2" Ice	5.07	2.19	80
			0.00			1" Ice	5.35	2.39	120

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
RRH2x60-AWS	A	From Centroid-Face	4.00 2.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	3.50 3.76 4.03	1.82 2.05 2.29	60 83 109
RRH2x60-AWS	B	From Centroid-Face	4.00 2.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	3.50 3.76 4.03	1.82 2.05 2.29	60 83 109
RRH2x60-AWS	C	From Centroid-Face	4.00 2.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	3.50 3.76 4.03	1.82 2.05 2.29	60 83 109
RRH2X60-PCS	A	From Centroid-Face	4.00 6.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	2.20 2.39 2.59	1.72 1.90 2.09	55 75 99
RRH2X60-PCS	B	From Centroid-Face	4.00 6.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	2.20 2.39 2.59	1.72 1.90 2.09	55 75 99
RRH2X60-PCS	C	From Centroid-Face	4.00 6.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	2.20 2.39 2.59	1.72 1.90 2.09	55 75 99
Platform Mount [LP 303-1]	C	None		0.0000	130.00	No Ice 1/2" Ice 1" Ice	14.66 18.87 23.08	14.66 18.87 23.08	1250 1481 1713
125 ***109*** DB589	C	From Face	6.00 0.00 5.00	0.0000	109.00	No Ice 1/2" Ice 1" Ice	2.13 3.00 3.76	2.13 3.00 3.76	12 27 49
1.9" x 2-ft Pipe	C	From Face	6.00 0.00 0.00	0.0000	109.00	No Ice 1/2" Ice 1" Ice	0.29 0.42 0.56	0.29 0.42 0.56	5 9 13
Side Arm Mount [SO 701-1]	C	From Face	3.00 0.00 0.00	0.0000	109.00	No Ice 1/2" Ice 1" Ice	0.85 1.14 1.43	1.67 2.34 3.01	65 79 93
Pipe Mount [PM 601-1]	C	From Face	1.00 0.00 0.00	0.0000	109.00	No Ice 1/2" Ice 1" Ice	3.00 3.74 4.48	0.90 1.12 1.34	65 79 93
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Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L1	160 - 119.12 (1)	TP25.66x16.5x0.1875	40.88	0.00	0.0	14.6593	-12385	1003600	0.012
L2	119.12 - 103 (2)	TP28.7805x24.32x0.25	19.87	0.00	0.0	22.6389	-16857	1622660	0.010

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u lb	ϕP_n lb	Ratio $\frac{P_u}{\phi P_n}$
L3	103 - 100.21 (3)	TP29.4068x28.7805x0.3002	2.79	0.00	0.0	27.7364	-17658	2060670	0.009
L4	100.21 - 95.83 (4)	TP30.39x29.4068x0.4727	4.38	0.00	0.0	43.4322	-17696	3226790	0.005
L5	95.83 - 93.5 (5)	TP30.284x28.79x0.5305	6.66	0.00	0.0	50.1019	-20182	3722320	0.005
L6	93.5 - 86.5 (6)	TP31.8542x30.284x0.6766	7.00	0.00	0.0	66.9518	-22781	4974190	0.005
L7	86.5 - 85 (7)	TP32.1907x31.8542x0.5152	1.50	0.00	0.0	51.7979	-23357	3848320	0.006
L8	85 - 80 (8)	TP33.3123x32.1907x0.5072	5.00	0.00	0.0	52.8086	-25051	3923420	0.006
L9	80 - 77.21 (9)	TP33.9381x33.3123x0.503	2.79	0.00	0.0	53.3763	-26000	3965590	0.007
L10	77.21 - 75.33 (10)	TP34.3599x33.9381x0.5002	1.88	0.00	0.0	53.7602	-26685	3994110	0.007
L11	75.33 - 55 (11)	TP38.9203x34.3599x0.5563	20.33	0.00	0.0	67.7429	-34583	5032960	0.007
L12	55 - 53 (12)	TP39.3689x38.9203x0.5531	2.00	0.00	0.0	68.1450	-35430	5062830	0.007
L13	53 - 47.2 (13)	TP40.67x39.3689x0.5536	5.80	0.00	0.0	68.2864	-35531	5073340	0.007
L14	47.2 - 39.25 (14)	TP41.6951x38.66x0.5671	13.53	0.00	0.0	74.0242	-42432	5499630	0.008
L15	39.25 - 37.83 (15)	TP42.0137x41.6951x0.6409	1.42	0.00	0.0	83.5072	-42456	6204170	0.007
L16	37.83 - 21.25 (16)	TP45.733x42.0137x0.5478	16.58	0.00	0.0	72.0989	-43132	5356580	0.008
L17	21.25 - 20 (17)	TP46.0135x45.733x0.5507	1.25	0.00	0.0	78.9799	-50869	5867810	0.009
L18	20 - 17 (18)	TP46.6864x46.0135x0.6249	3.00	0.00	0.0	90.0185	-51499	6687920	0.008
L19	17 - 0 (19)	TP50.5x46.6864x0.586	17.00	0.00	0.0	85.7414	-53133	6370160	0.008

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} lb-ft	ϕM_{nx} lb-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} lb-ft	ϕM_{ny} lb-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	160 - 119.12 (1)	TP25.66x16.5x0.1875	462944	508468	0.910	0	508468	0.000
L2	119.12 - 103 (2)	TP28.7805x24.32x0.25	886450	951133	0.932	0	951133	0.000
L3	103 - 100.21 (3)	TP29.4068x28.7805x0.3002	948058	1230367	0.771	0	1230367	0.000
L4	100.21 - 95.83 (4)	TP30.39x29.4068x0.4727	949167	1904608	0.498	0	1904608	0.000
L5	95.83 - 93.5 (5)	TP30.284x28.79x0.5305	1098792	2255108	0.487	0	2255108	0.000
L6	93.5 - 86.5 (6)	TP31.8542x30.284x0.6766	1259908	3145825	0.401	0	3145825	0.000
L7	86.5 - 85 (7)	TP32.1907x31.8542x0.5152	1294950	2485883	0.521	0	2485883	0.000
L8	85 - 80 (8)	TP33.3123x32.1907x0.5072	1412883	2626850	0.538	0	2626850	0.000
L9	80 - 77.21 (9)	TP33.9381x33.3123x0.503	1479442	2707200	0.546	0	2707200	0.000
L10	77.21 - 75.33 (10)	TP34.3599x33.9381x0.5002	1524617	2762017	0.552	0	2762017	0.000
L11	75.33 - 55 (11)	TP38.9203x34.3599x0.5563	2028675	3944458	0.514	0	3944458	0.000
L12	55 - 53 (12)	TP39.3689x38.9203x0.5531	2079850	4015592	0.518	0	4015592	0.000
L13	53 - 47.2 (13)	TP40.67x39.3689x0.5536	2085492	4029025	0.518	0	4029025	0.000
L14	47.2 - 39.25 (14)	TP41.6951x38.66x0.5671	2439625	4623992	0.528	0	4623992	0.000
L15	39.25 - 37.83 (15)	TP42.0137x41.6951x0.6409	2439625	5197658	0.469	0	5197658	0.000
L16	37.83 - 21.25 (16)	TP45.733x42.0137x0.5478	2477442	4543300	0.545	0	4543300	0.000
L17	21.25 - 20 (17)	TP46.0135x45.733x0.5507	2926358	5428442	0.539	0	5428442	0.000
L18	20 - 17 (18)	TP46.6864x46.0135x0.6249	2960733	6205725	0.477	0	6205725	0.000
L19	17 - 0 (19)	TP50.5x46.6864x0.586	3043567	6009833	0.506	0	6009833	0.000

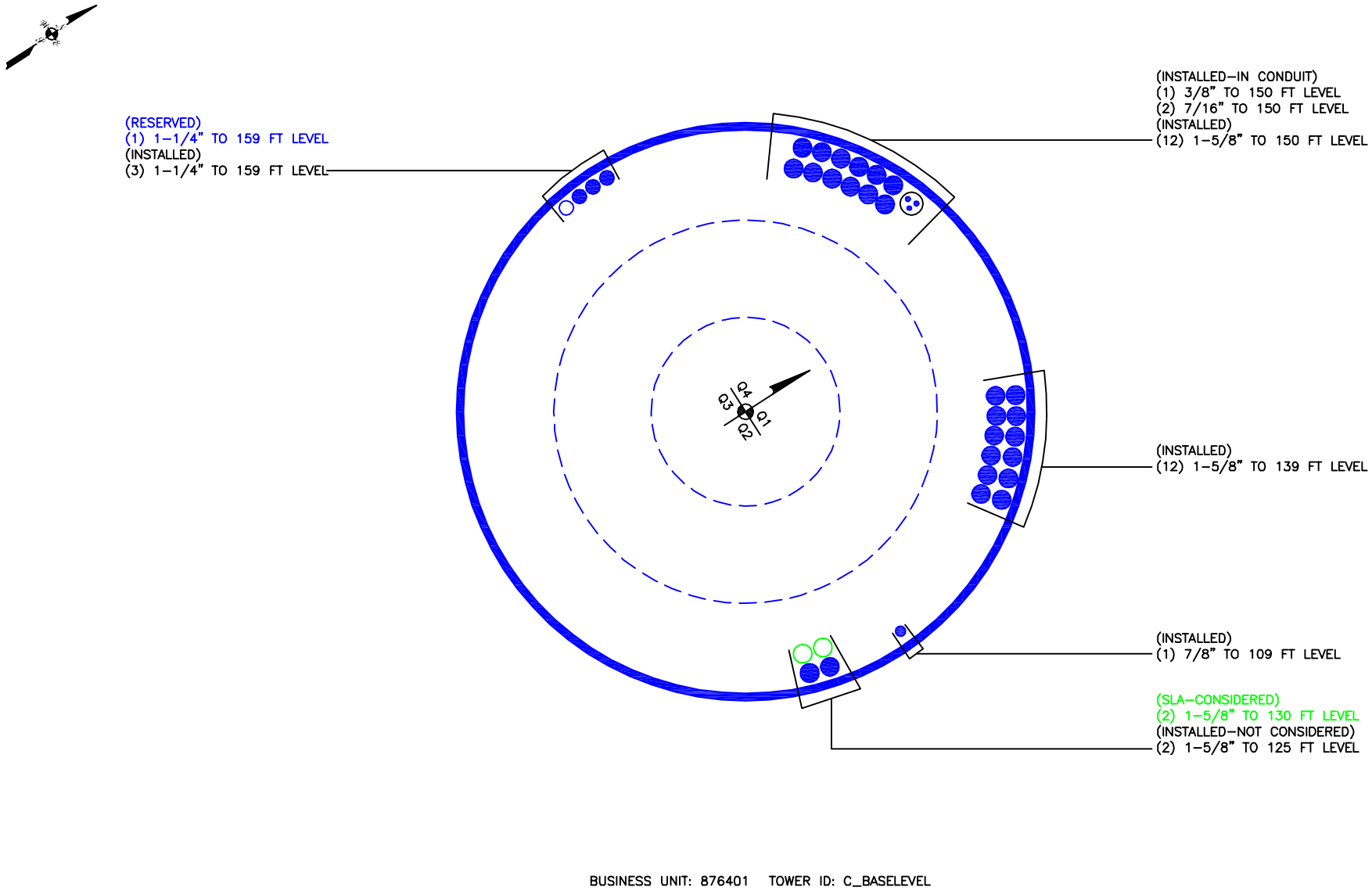
Section No.	Elevation ft	Size	M_{ux} lb-ft	ϕM_{nx} lb-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} lb-ft	ϕM_{ny} lb-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u lb	ϕV_n lb	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u lb-ft	ϕT_n lb-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	160 - 119.12 (1)	TP25.66x16.5x0.1875	20592	501800	0.041	149	1018183	0.000
L2	119.12 - 103 (2)	TP28.7805x24.32x0.25	21992	811329	0.027	1050	1904583	0.001
L3	103 - 100.21 (3)	TP29.4068x28.7805x0.3002	22167	1030340	0.022	1049	2463750	0.000
L4	100.21 - 95.83 (4)	TP30.39x29.4068x0.4727	22157	1613400	0.014	1049	3813867	0.000
L5	95.83 - 93.5 (5)	TP30.284x28.79x0.5305	22723	1861160	0.012	1049	4515742	0.000
L6	93.5 - 86.5 (6)	TP31.8542x30.284x0.6766	23275	2487090	0.009	1048	6299341	0.000
L7	86.5 - 85 (7)	TP32.1907x31.8542x0.5152	23394	1924160	0.012	1048	4977842	0.000
L8	85 - 80 (8)	TP33.3123x32.1907x0.5072	23735	1961710	0.012	1047	5260133	0.000
L9	80 - 77.21 (9)	TP33.9381x33.3123x0.503	23930	1982800	0.012	1047	5421017	0.000
L10	77.21 - 75.33 (10)	TP34.3599x33.9381x0.5002	24065	1997060	0.012	1047	5530783	0.000
L11	75.33 - 55 (11)	TP38.9203x34.3599x0.5563	25437	2516480	0.010	1045	7898558	0.000
L12	55 - 53 (12)	TP39.3689x38.9203x0.5531	25566	2531420	0.010	1045	8041008	0.000
L13	53 - 47.2 (13)	TP40.67x39.3689x0.5536	25569	2536670	0.010	1045	8067900	0.000
L14	47.2 - 39.25 (14)	TP41.6951x38.66x0.5671	26504	2749810	0.010	1044	9259333	0.000
L15	39.25 - 37.83 (15)	TP42.0137x41.6951x0.6409	26590	3126150	0.009	1044	10408000	0.000
L16	37.83 - 21.25 (16)	TP45.733x42.0137x0.5478	26637	2693310	0.010	1044	9097750	0.000
L17	21.25 - 20 (17)	TP46.0135x45.733x0.5507	27435	2952110	0.009	1044	10870167	0.000
L18	20 - 17 (18)	TP46.6864x46.0135x0.6249	27480	3360490	0.008	1044	12426667	0.000
L19	17 - 0 (19)	TP50.5x46.6864x0.586	27633	3200580	0.009	1044	12034333	0.000

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876401 TOWER ID: C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

Mod #	Modification Type	Termination Length (ft)	Bot. Elevation (ft)	Top Elevation (ft)	Termination Length (ft)	Modification Location (° or Flat/Point #)	Location (F/P)	Lateral Offset (in)
1	(Aero) MP303	0.00	0.00	40.50		6 12 18	Flats	0.00
2	(Aero) MP303		36.58	76.58		1 7 13	Flats	0.00
3	CCI-WSFP-085125	0.00	0.00	20.00	0.00	10 15	Flats	0.00
4	CCI-WSFP-085125	0.00	0.00	25.00		2	Flats	0.00
5a	CCI-SFP-060100	0.00	20.00	55.00		10	Flats	0.00
5b	CCI-SFP-060100	0.00	20.00	55.00	0.00	15	Flats	0.00
6	CCI-SFP-060100	0.00	55.00	85.00	0.00	15	Flats	0.00
7	CCI-SFP-060100	0.00	85.00	105.00		15	Flats	0.00
8	CCI-SFP-060100		47.21	77.21	0.00	9	Flats	0.00
9	CCI-SFP-060100	0.00	77.21	102.21		9	Flats	0.00
10	CCI-SFP-060100		15.00	50.00	0.00	3	Flats	0.00
11	CCI-SFP-060100	0.00	50.00	80.00	0.00	3	Flats	0.00
12	CCI-SFP-060100	0.00	80.00	105.00		3	Flats	0.00
13	CCI-SFP-045100		85.00	95.00		1 7 13	Flats	0.00

MODIFICATION PROPERTIES

#	Modification	Default Termination (ft)	Stitch (in)	k	Drill Hole (in)	Bolt/Weld Capacity (k)	A_G (in^2)	F_Y (ksi)	F_U (ksi)
1	(Aero) MP303	1.25	18.00	0.80	1.2188	36.0	2.92	65.0	80.0
3	CCI-WSFP-085125	3.75	17.00	0.80	1.1875	36.0	10.63	65.0	80.0
5	CCI-SFP-060100	2.00	16.00	0.80	1.1875	36.0	6.00	65.0	80.0
13	CCI-SFP-045100	1.50	20.00	0.80	1.1875	36.0	4.50	65.0	80.0

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Section No.	Elevation (ft)	Type	Size	Critical Element	Pu (lb)	φPn (lb)	% Capacity	Pass/Fail
L1	160.00-119.12	Pole	TP25.66×16.50×0.1875	1	Note 1	Note 1	92.5	Pass
L2	122.87-95.83	Pole	TP30.39×24.32×0.2500	2	Note 1	Note 1	94.4	Pass
L3	100.16-47.20	Pole	TP40.67×28.79×0.3125	3	Note 1	Note 1	57.2	Pass
L4	52.78-0.00	Pole	TP50.50×38.66×0.3750	4	Note 1	Note 1	59.6	Pass
M1	40.50-0.00	Mod (Ex)	(Aero) MP303	1	Note 1	Note 1	81.4	Pass
M2	76.58-36.58	Mod (Ex)	(Aero) MP303	2	Note 1	Note 1	80.6	Pass
M3	20.00-0.00	Mod (Ex)	CCI-WSFP-085125	3	Note 1	Note 1	69.4	Pass
M4	25.00-0.00	Mod (Ex)	CCI-WSFP-085125	4	Note 1	Note 1	62.9	Pass
M5b	55.00-20.00	Mod (Ex)	CCI-SFP-060100	5	Note 1	Note 1	82.1	Pass
M6	85.00-55.00	Mod (Ex)	CCI-SFP-060100	6	Note 1	Note 1	86.7	Pass
M7	105.00-85.00	Mod (Ex)	CCI-SFP-060100	7	Note 1	Note 1	81.9	Pass
M8	77.21-47.21	Mod (Ex)	CCI-SFP-060100	8	Note 1	Note 1	86.7	Pass
M9	102.21-77.21	Mod (Ex)	CCI-SFP-060100	9	Note 1	Note 1	85.8	Pass
M10	50.00-15.00	Mod (Ex)	CCI-SFP-060100	10	Note 1	Note 1	78.1	Pass
M11	80.00-50.00	Mod (Ex)	CCI-SFP-060100	11	Note 1	Note 1	86.7	Pass
M12	105.00-80.00	Mod (Ex)	CCI-SFP-060100	12	Note 1	Note 1	84.5	Pass
M13	95.00-85.00	Mod (Ex)	CCI-SFP-045100	13	Note 1	Note 1	70.0	Pass

	Summary	
Pole (L2)	94.4	Pass
Mod (M8)	86.7	Pass
RATING =	**94.4**	**Pass**

*Note 1: See additional documentation in following sheets for details.

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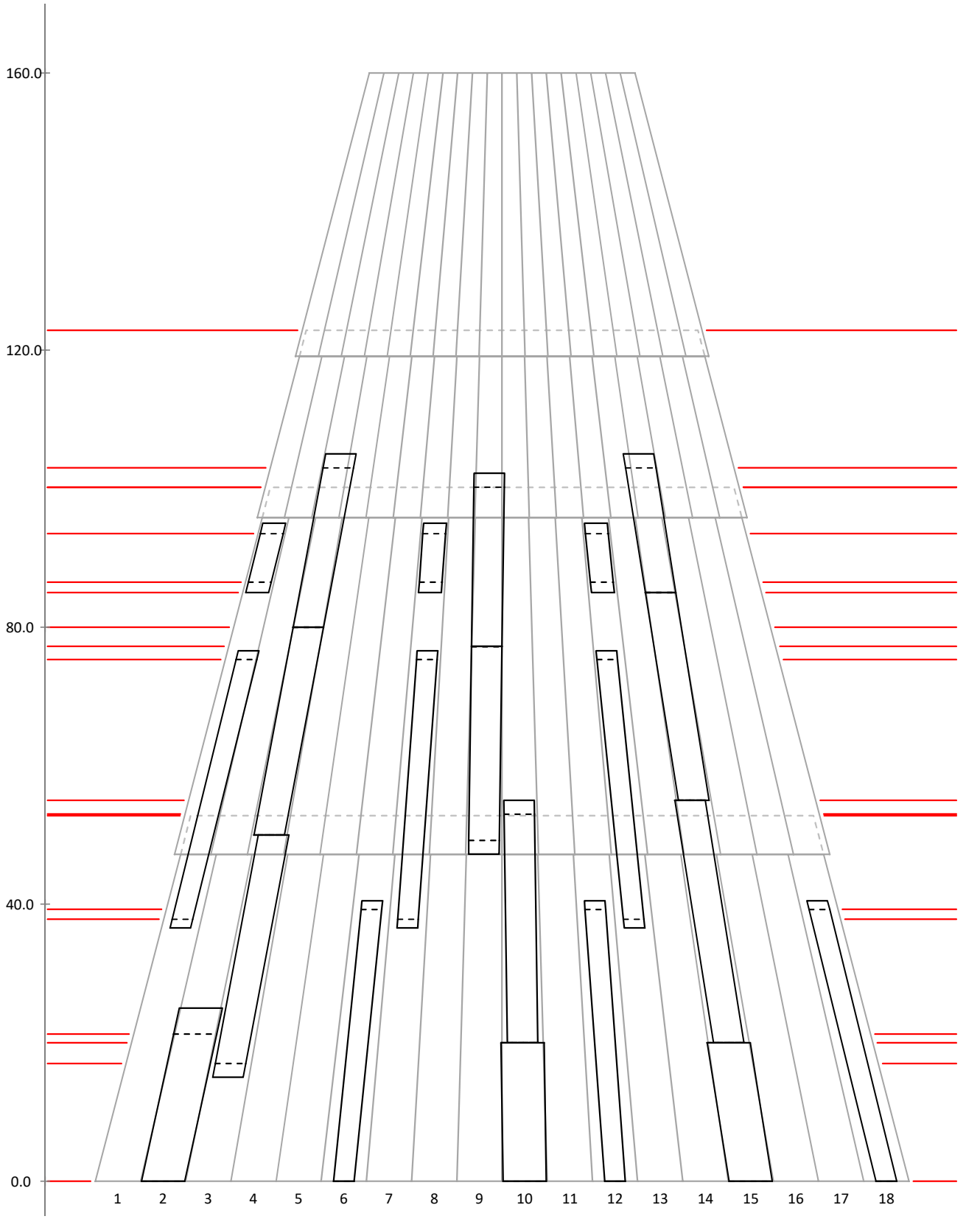
Reinforcement Layout



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Elevation: 0.00-ft

Loads	
Axial:	62.2 k
Moment:	3,520.7 k·ft
Shear:	28.4 k
Torsion:	1.0 k·ft

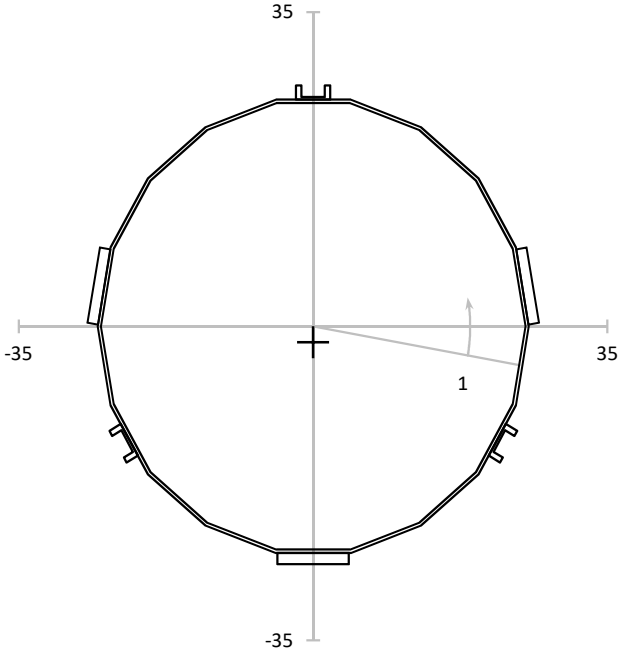
Pole Info	
OD:	50.50 in
t:	0.3750 in
Pole A_G:	59.66 in^2
Pole I_G:	18,938.2 in^4

Equivalent Loads to Pole	
Axial:	37.0 k
Moment:	2,276.0 k·ft
Shear:	16.9 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**100.00°**
I_{CONT}:	29,220.7 in^4
A_G:	100.30 in^2

Shear Flow	
Controlling Mod:	3
q:	0.249 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	144.71 in
Stitch:	17.00 in
Capacity:	**11.7%**

Minimum	
Angle:	**100.00°**
I_{MIN}:	29,220.7 in^4
t_{EFF}:	0.5860 in



Pole Segment: L4, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
286.50	27.38	29304.3	0.620	39.479	0.283	0.008	68.034	68.034	34.017	68.034	**58.9%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
1	1	**100.00**	27.63	29220.7	0.620	39.947	0.283	53.615	49.540	29.250	**79.4%**
1	2	**227.10**	24.56	33369.4	0.620	31.098	0.283	53.615	49.540	29.250	**61.5%**
1	3	**332.90**	24.56	33369.4	0.620	31.098	0.283	53.615	49.540	29.250	**61.5%**
3	1	**169.05**	26.04	34908.6	0.620	31.519	0.283	51.111	51.111	29.250	**62.9%**
3	2	**280.00**	24.09	29220.7	0.620	34.824	0.283	51.111	51.111	29.250	**69.4%**
4	1	**30.95**	26.04	34908.6	0.620	31.519	0.283	51.111	51.111	29.250	**62.9%**

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Elevation: 17.00-ft

Loads	
Axial:	53.1 k
Moment:	3,043.6 k·ft
Shear:	27.6 k
Torsion:	1.0 k·ft

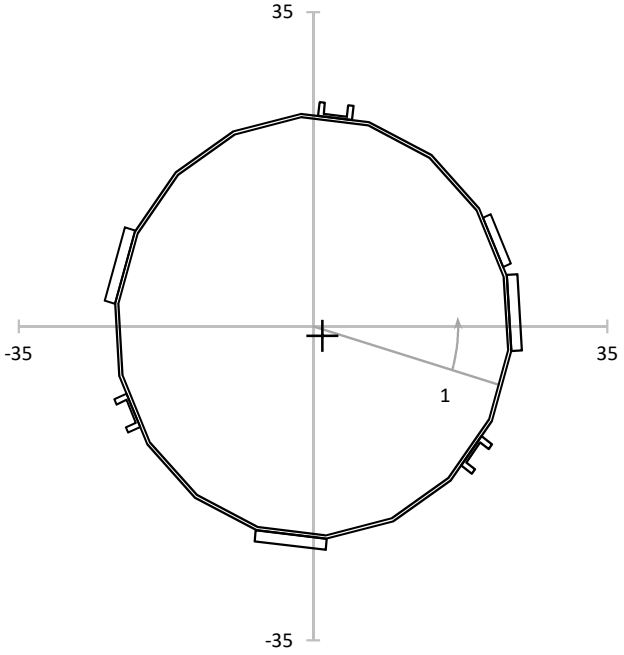
Pole Info	
OD:	46.69 in
t:	0.3750 in
Pole A_G:	55.12 in^2
Pole I_G:	14,936.2 in^4

Equivalent Loads to Pole	
Axial:	28.8 k
Moment:	1,869.1 k·ft
Shear:	14.9 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**106.40°**
I_G:	24,566.9 in^4
A_G:	101.76 in^2

Shear Flow	
Controlling Mod:	3
q:	0.272 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	132.17 in
Stitch:	17.00 in
Capacity:	**12.9%**

Minimum	
Angle:	**112.25°**
I_{MIN}:	24,487.2 in^4
t_{EFF}:	0.6249 in



Pole Segment: L4, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
112.35	24.87	24487.2	0.522	37.088	0.271	0.010	69.929	69.929	34.964	69.929	**53.8%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
1	1	**106.40**	24.84	24566.9	0.522	36.936	0.271	53.615	49.540	29.250	**73.5%**
1	2	**227.55**	24.12	30729.4	0.522	28.672	0.271	53.615	49.540	29.250	**56.8%**
1	3	**325.80**	21.68	26817.8	0.522	29.526	0.271	53.615	49.540	29.250	**58.6%**
3	1	**164.15**	24.56	29213.9	0.522	30.702	0.271	51.111	51.111	29.250	**61.1%**
3	2	**282.75**	22.95	24695.7	0.522	33.945	0.271	51.111	51.111	29.250	**67.4%**
4	1	**23.30**	22.96	32120.1	0.522	26.104	0.271	51.111	51.111	29.250	**52.1%**
10	1	**57.05**	22.65	29637.2	0.522	27.908	0.271	48.528	47.500	29.250	**58.6%**

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Elevation: 20.00-ft

Loads	
Axial:	51.5 k
Moment:	2,960.7 k·ft
Shear:	27.4 k
Torsion:	1.0 k·ft

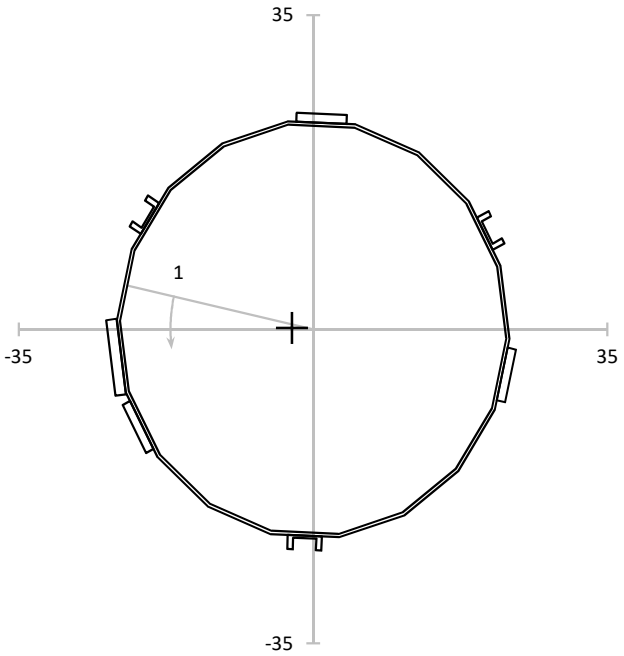
Pole Info	
OD:	46.01 in
t:	0.3750 in
Pole A_G:	54.32 in^2
Pole I_G:	14,294.5 in^4

Equivalent Loads to Pole	
Axial:	30.5 k
Moment:	2,056.5 k·ft
Shear:	16.3 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**282.45°**
I_G:	21,112.5 in^4
A_G:	91.71 in^2

Shear Flow	
Controlling Mod:	4
q:	0.220 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	163.87 in
Stitch:	17.00 in
Capacity:	**10.4%**

Minimum	
Angle:	**115.20°**
I_{MIN}:	20,751.6 in^4
t_{EFF}:	0.5507 in



Pole Segment: L4, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
127.00	24.51	21061.2	0.561	41.343	0.299	0.010	70.263	70.263	35.132	70.263	**59.6%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
1	1	**109.85**	23.70	20816.0	0.561	40.460	0.299	53.615	49.540	29.250	**80.5%**
1	2	**228.40**	25.30	27008.7	0.561	33.277	0.299	53.615	49.540	29.250	**66.0%**
1	3	**321.80**	20.72	22236.2	0.561	33.108	0.299	53.615	49.540	29.250	**65.7%**
4	1	**16.95**	21.11	28005.2	0.561	26.776	0.299	51.111	51.111	29.250	**53.5%**
5a	1	**164.60**	24.94	25020.9	0.561	35.421	0.299	48.528	47.500	29.250	**74.2%**
5b	1	**282.45**	23.35	21112.5	0.561	39.296	0.299	48.528	47.500	29.250	**82.1%**
10	1	**57.95**	20.70	25990.6	0.561	28.295	0.299	48.528	47.500	29.250	**59.5%**

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Elevation: 21.25-ft

Loads	
Axial:	50.8 k
Moment:	2,926.4 k·ft
Shear:	27.4 k
Torsion:	1.0 k·ft

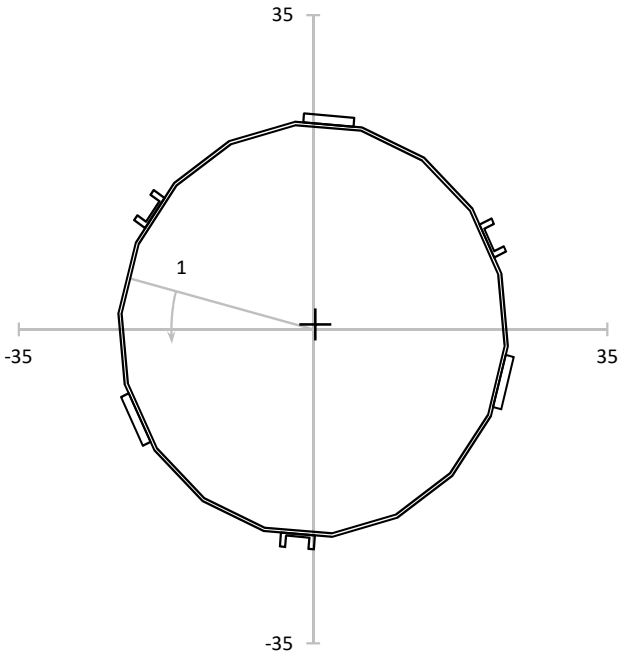
Pole Info	
OD:	45.73 in
t:	0.3750 in
Pole A_G:	53.99 in^2
Pole I_G:	14,032.6 in^4

Equivalent Loads to Pole	
Axial:	34.0 k
Moment:	2,025.6 k·ft
Shear:	18.3 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**284.55°**
I_G:	20,528.4 in^4
A_G:	80.75 in^2

Shear Flow	
Controlling Mod:	6
q:	0.182 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	197.85 in
Stitch:	16.00 in
Capacity:	**8.1%**

Minimum	
Angle:	**124.60°**
I_{MIN}:	20,265.8 in^4
t_{EFF}:	0.5478 in



Pole Segment: L4, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
308.10	23.62	20274.0	0.630	40.916	0.339	0.010	70.403	70.403	35.201	70.403	**59.0%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
1	1	**103.65**	23.96	20551.4	0.630	40.943	0.339	53.615	49.540	29.250	**81.4%**
1	2	**220.10**	22.99	22474.6	0.630	35.928	0.339	53.615	49.540	29.250	**71.3%**
1	3	**336.05**	23.26	20871.9	0.630	39.127	0.339	53.615	49.540	29.250	**77.7%**
5a	1	**172.65**	23.15	21498.0	0.630	37.809	0.339	48.528	47.500	29.250	**79.2%**
5b	1	**284.55**	22.74	20528.4	0.630	38.907	0.339	48.528	47.500	29.250	**81.5%**
10	1	**42.45**	23.82	22453.6	0.630	37.258	0.339	48.528	47.500	29.250	**78.1%**

Loads	
Axial:	43.1 k
Moment:	2,477.4 k·ft
Shear:	26.6 k
Torsion:	1.0 k·ft

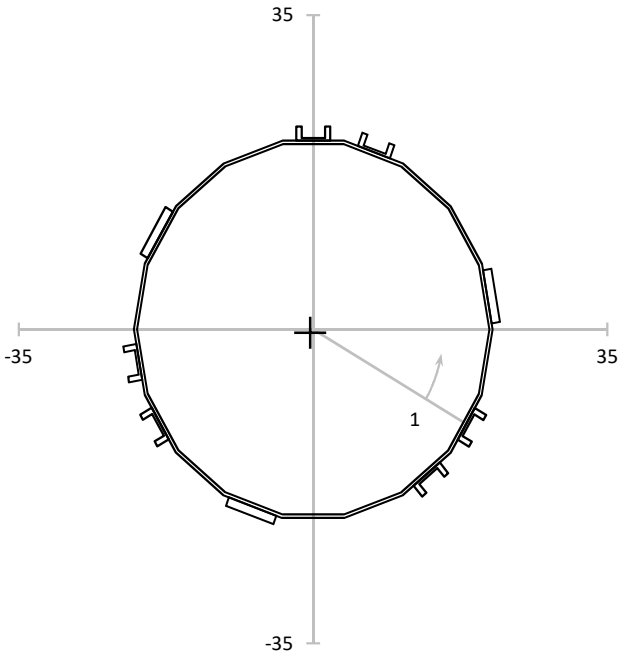
Equivalent Loads to Pole	
Axial:	25.1 k
Moment:	1,477.3 k·ft
Shear:	15.5 k
Torsion:	1.0 k·ft

Shear Flow	
Controlling Mod:	6
q:	0.182 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	198.32 in
Stitch:	16.00 in
Capacity:	**8.1%**

Pole Info	
OD:	42.01 in
t:	0.3750 in
Pole A_G:	49.56 in^2
Pole I_G:	10,855.9 in^4

Controlling	
Angle:	**120.05°**
I_G:	18,211.1 in^4
A_G:	85.08 in^2

Minimum	
Angle:	**124.65°**
I_{MIN}:	18,199.1 in^4
t_{EFF}:	0.6409 in



Pole Segment: L4, F_Y = 65 ksi

POLE CAPACITY											
Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
128.20	21.68	18206.3	0.507	35.407	0.313	0.012	72.250	72.250	36.125	72.250	**49.7%**

MODIFICATION CAPACITIES											
Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
1	1	**103.45**	22.04	18445.6	0.507	35.524	0.313	53.615	49.540	29.250	**70.7%**
1	2	**220.10**	21.19	20068.6	0.507	31.395	0.313	53.615	49.540	29.250	**62.4%**
1	3	**336.25**	21.43	18717.3	0.507	34.031	0.313	53.615	49.540	29.250	**67.7%**
2	1	**355.95**	21.60	19348.4	0.507	33.185	0.313	53.615	49.540	29.250	**66.0%**
2	2	**120.05**	22.00	18211.1	0.507	35.915	0.313	53.615	49.540	29.250	**71.5%**
2	3	**244.25**	21.03	19625.1	0.507	31.858	0.313	53.615	49.540	29.250	**63.3%**
5a	1	**173.05**	21.32	19254.3	0.507	32.920	0.313	48.528	47.500	29.250	**68.9%**
5b	1	**284.30**	20.97	18427.0	0.507	33.826	0.313	48.528	47.500	29.250	**70.8%**
10	1	**42.30**	21.91	20052.1	0.507	32.478	0.313	48.528	47.500	29.250	**68.0%**

Elevation: 39.25-ft

Loads	
Axial:	42.4 k
Moment:	2,439.6 k·ft
Shear:	26.5 k
Torsion:	1.0 k·ft

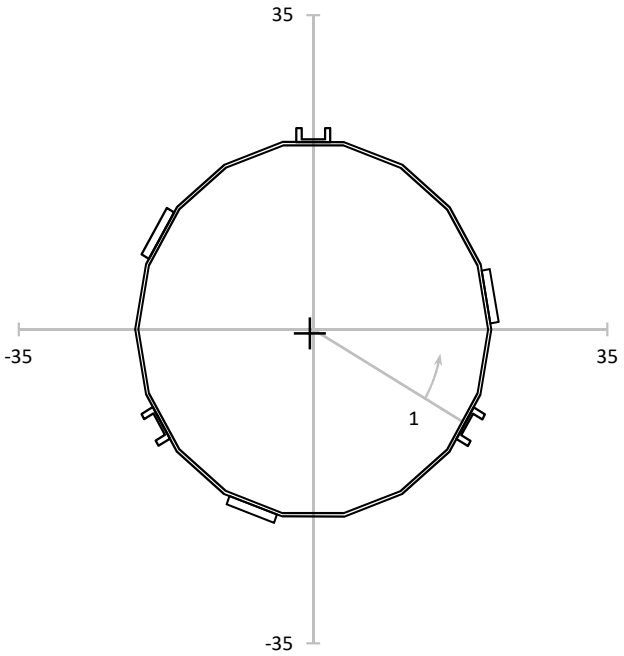
Pole Info	
OD:	41.70 in
t:	0.3750 in
Pole A_G:	49.18 in^2
Pole I_G:	10,608.7 in^4

Equivalent Loads to Pole	
Axial:	27.5 k
Moment:	1,635.4 k·ft
Shear:	17.2 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**120.05°**
I_G:	15,831.0 in^4
A_G:	75.94 in^2

Shear Flow	
Controlling Mod:	6
q:	0.206 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	174.99 in
Stitch:	16.00 in
Capacity:	**9.1%**

Minimum	
Angle:	**124.60°**
I_{MIN}:	15,819.3 in^4
t_{EFF}:	0.5671 in



Pole Segment: L4, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
128.00	21.56	15825.9	0.559	39.883	0.349	0.013	72.409	72.409	36.204	72.409	**55.9%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
2	1	**355.40**	21.42	16935.5	0.559	37.034	0.349	53.615	49.540	29.250	**73.6%**
2	2	**120.05**	21.89	15831.0	0.559	40.473	0.349	53.615	49.540	29.250	**80.6%**
2	3	**244.80**	20.80	17207.6	0.559	35.382	0.349	53.615	49.540	29.250	**70.3%**
5a	1	**172.15**	21.13	16831.3	0.559	36.745	0.349	48.528	47.500	29.250	**76.9%**
5b	1	**284.80**	20.74	16032.6	0.559	37.873	0.349	48.528	47.500	29.250	**79.2%**
10	1	**42.65**	21.79	17641.5	0.559	36.160	0.349	48.528	47.500	29.250	**75.7%**

Loads	
Axial:	35.5 k
Moment:	2,085.5 k·ft
Shear:	25.6 k
Torsion:	1.0 k·ft

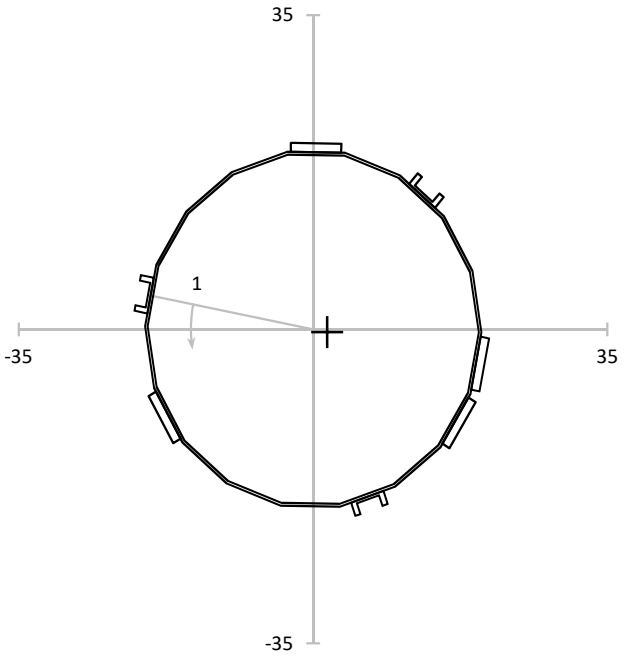
Pole Info	
OD:	39.42 in
t:	0.3125 in
Pole A_G:	38.79 in^2
Pole I_G:	7,494.1 in^4

Equivalent Loads to Pole	
Axial:	19.3 k
Moment:	1,196.4 k·ft
Shear:	13.9 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**281.00°**
I_G:	13,112.3 in^4
A_G:	71.55 in^2

Shear Flow	
Controlling Mod:	6
q:	0.240 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	149.88 in
Stitch:	16.00 in
Capacity:	**10.7%**

Minimum	
Angle:	**90.00°**
I_{MIN}:	13,031.2 in^4
t_{EFF}:	0.5536 in



Pole Segment: L3, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
108.60	20.56	13257.8	0.497	38.808	0.357	0.017	69.623	69.623	34.812	69.623	**56.5%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
2	1	**360.00**	21.99	15258.6	0.497	36.073	0.357	53.615	49.540	29.250	**71.8%**
2	2	**109.65**	19.40	13283.0	0.497	36.549	0.357	53.615	49.540	29.250	**72.8%**
2	3	**250.35**	19.40	13283.0	0.497	36.549	0.357	53.615	49.540	29.250	**72.8%**
5a	1	**180.00**	18.51	15258.6	0.497	30.366	0.357	48.528	47.500	29.250	**63.6%**
5b	1	**281.00**	20.53	13112.3	0.497	39.182	0.357	48.528	47.500	29.250	**81.8%**
8	1	**150.90**	18.47	14731.8	0.497	31.383	0.357	48.528	47.500	29.250	**65.7%**
11	1	**46.05**	21.27	14104.1	0.497	37.746	0.357	48.528	47.500	29.250	**78.8%**

Elevation: 53.00-ft

Loads	
Axial:	35.4 k
Moment:	2,079.8 k·ft
Shear:	25.6 k
Torsion:	1.0 k·ft

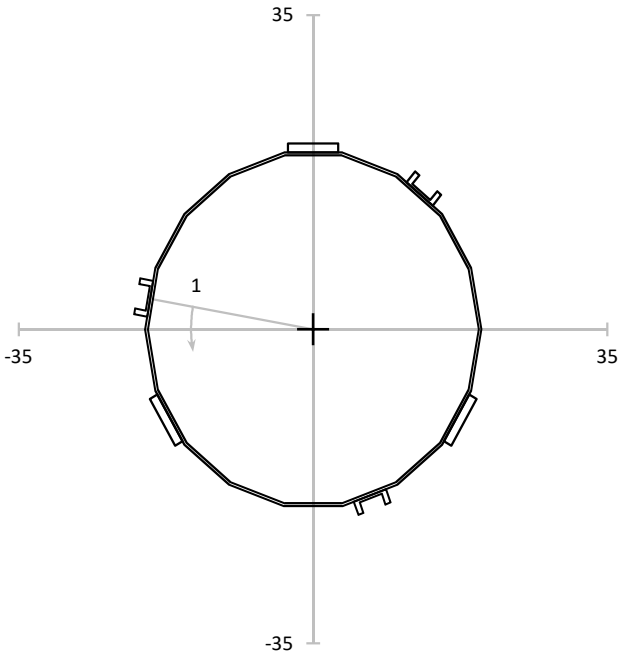
Pole Info	
OD:	39.37 in
t:	0.3125 in
Pole A_G:	38.74 in^2
Pole I_G:	7,465.7 in^4

Equivalent Loads to Pole	
Axial:	21.0 k
Moment:	1,197.1 k·ft
Shear:	15.1 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**280.00°**
I_G:	12,971.5 in^4
A_G:	65.50 in^2

Shear Flow	
Controlling Mod:	9
q:	0.239 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	150.82 in
Stitch:	16.00 in
Capacity:	**10.6%**

Minimum	
Angle:	**140.20°**
I_{MIN}:	12,971.5 in^4
t_{EFF}:	0.5531 in



Pole Segment: L3, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
130.00	20.00	12971.5	0.541	38.481	0.390	0.017	69.653	69.653	34.826	69.653	**56.0%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
2	1	**360.00**	20.27	12971.5	0.541	39.010	0.390	53.615	49.540	29.250	**77.7%**
2	2	**120.00**	20.27	12971.5	0.541	39.010	0.390	53.615	49.540	29.250	**77.7%**
2	3	**240.00**	20.27	12971.5	0.541	39.010	0.390	53.615	49.540	29.250	**77.7%**
5b	1	**280.00**	20.18	12971.5	0.541	38.837	0.390	48.528	47.500	29.250	**81.2%**
8	1	**160.00**	20.18	12971.5	0.541	38.837	0.390	48.528	47.500	29.250	**81.2%**
11	1	**40.00**	20.18	12971.5	0.541	38.837	0.390	48.528	47.500	29.250	**81.2%**

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Elevation: 55.00-ft

Loads	
Axial:	34.6 k
Moment:	2,028.7 k·ft
Shear:	25.4 k
Torsion:	1.0 k·ft

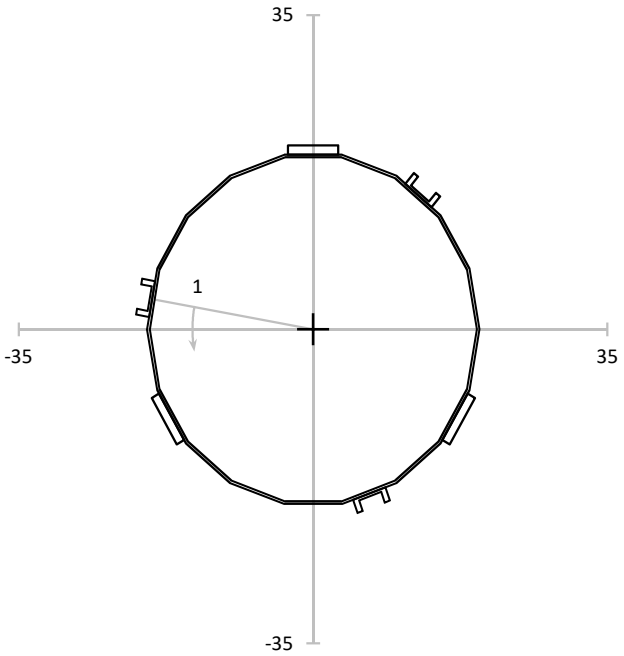
Pole Info	
OD:	38.92 in
t:	0.3125 in
Pole A_G:	38.29 in^2
Pole I_G:	7,211.4 in^4

Equivalent Loads to Pole	
Axial:	20.4 k
Moment:	1,161.4 k·ft
Shear:	15.0 k
Torsion:	1.0 k·ft

Controlling	
Angle:	280.00°
I_G:	12,596.5 in^4
A_G:	65.05 in^2

Shear Flow	
Controlling Mod:	7
q:	0.242 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	148.86 in
Stitch:	16.00 in
Capacity:	10.7%

Minimum	
Angle:	136.80°
I_{MIN}:	12,596.5 in^4
t_{EFF}:	0.5563 in



Pole Segment: L3, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
150.00	19.77	12596.5	0.532	38.211	0.391	0.017	69.920	69.920	34.960	69.920	**55.4%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
2	1	**360.00**	20.05	12596.5	0.532	38.749	0.391	53.615	49.540	29.250	**77.2%**
2	2	**120.00**	20.05	12596.5	0.532	38.749	0.391	53.615	49.540	29.250	**77.2%**
2	3	**240.00**	20.05	12596.5	0.532	38.749	0.391	53.615	49.540	29.250	**77.2%**
6	1	**280.00**	19.96	12596.5	0.532	38.575	0.391	48.528	47.500	29.250	**80.6%**
8	1	**160.00**	19.96	12596.5	0.532	38.575	0.391	48.528	47.500	29.250	**80.6%**
11	1	**40.00**	19.96	12596.5	0.532	38.575	0.391	48.528	47.500	29.250	**80.6%**

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Elevation: 75.33-ft

Loads	
Axial:	26.7 k
Moment:	1,524.6 k·ft
Shear:	24.1 k
Torsion:	1.0 k·ft

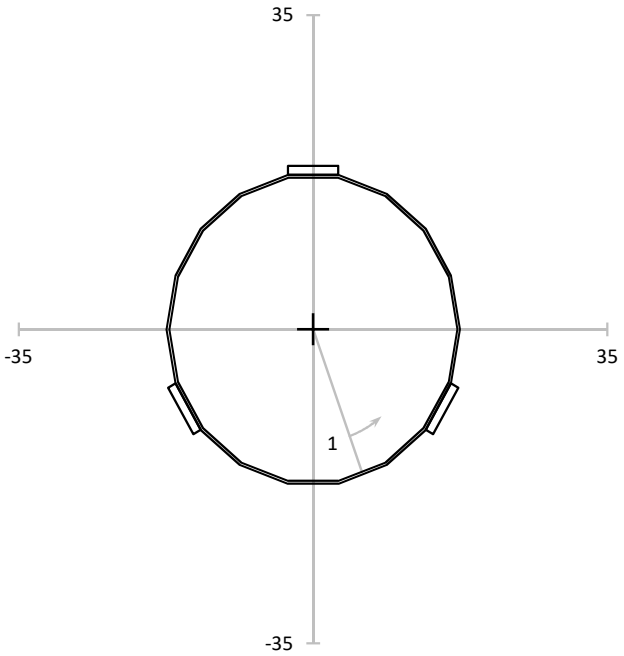
Pole Info	
OD:	34.36 in
t:	0.3125 in
Pole A_G:	33.77 in^2
Pole I_G:	4,945.9 in^4

Equivalent Loads to Pole	
Axial:	17.4 k
Moment:	968.4 k·ft
Shear:	15.7 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**160.00°**
I_G:	7,786.9 in^4
A_G:	51.77 in^2

Shear Flow	
Controlling Mod:	9
q:	0.328 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	109.81 in
Stitch:	16.00 in
Capacity:	**14.6%**

Minimum	
Angle:	**152.60°**
I_{MIN}:	7,786.9 in^4
t_{EFF}:	0.5002 in



Pole Segment: L3, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
330.00	17.45	7786.9	0.515	41.010	0.465	0.022	72.639	72.639	36.319	72.639	**57.2%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
6	1	**280.00**	17.68	7786.9	0.515	41.539	0.465	48.528	47.500	29.250	**86.7%**
8	1	**160.00**	17.68	7786.9	0.515	41.539	0.465	48.528	47.500	29.250	**86.7%**
11	1	**40.00**	17.68	7786.9	0.515	41.539	0.465	48.528	47.500	29.250	**86.7%**

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Elevation: 77.21-ft

Loads	
Axial:	26.0 k
Moment:	1,479.4 k·ft
Shear:	23.9 k
Torsion:	1.0 k·ft

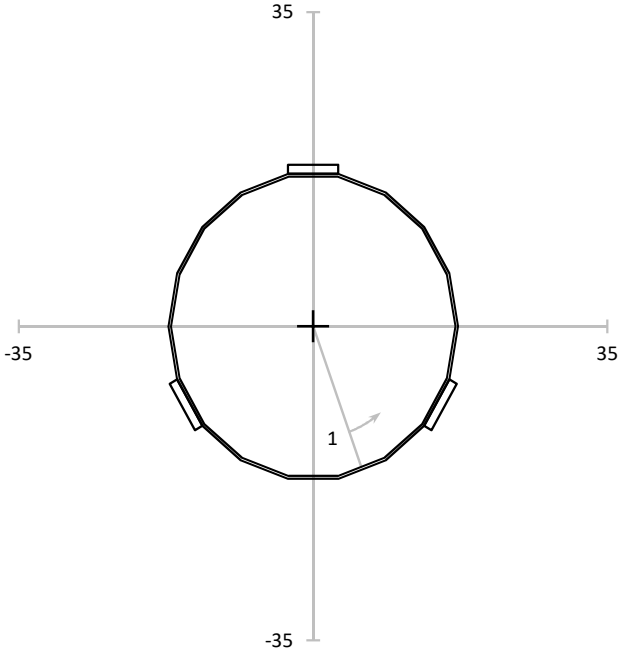
Pole Info	
OD:	33.94 in
t:	0.3125 in
Pole A_G:	33.35 in^2
Pole I_G:	4,764.4 in^4

Equivalent Loads to Pole	
Axial:	16.9 k
Moment:	935.0 k·ft
Shear:	15.5 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**160.00°**
I_G:	7,538.6 in^4
A_G:	51.35 in^2

Shear Flow	
Controlling Mod:	10
q:	0.333 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	108.20 in
Stitch:	16.00 in
Capacity:	**14.8%**

Minimum	
Angle:	**149.80°**
I_{MIN}:	7,538.6 in^4
t_{EFF}:	0.5030 in



Pole Segment: L3, F_Y = 65 ksi

POLE CAPACITY											
Angle (°)	**y_{CONT} (in)**	**I (in^4)**	**σ_A (ksi)**	**σ_B (ksi)**	**σ_V (ksi)**	**σ_T (ksi)**	**ϕF_A (ksi)**	**ϕF_B (ksi)**	**ϕF_V (ksi)**	**ϕF_T (ksi)**	**Capacity**
150.00	17.24	7538.6	0.506	40.601	0.466	0.023	72.890	72.890	36.445	72.890	**56.4%**

MODIFICATION CAPACITIES											
Mod Number	**#**	**Angle (°)**	**$\bar{y}_{CONT}$ (in)**	**I (in^4)**	**σ_A (ksi)**	**σ_B (ksi)**	**σ_V (ksi)**	**ϕF_A (ksi)**	**ϕF_B (ksi)**	**ϕF_V (ksi)**	**Capacity**
6	1	**280.00**	17.47	7538.6	0.506	41.139	0.466	48.528	47.500	29.250	**85.8%**
9	1	**160.00**	17.47	7538.6	0.506	41.139	0.466	48.528	47.500	29.250	**85.8%**
11	1	**40.00**	17.47	7538.6	0.506	41.139	0.466	48.528	47.500	29.250	**85.8%**

Elevation: 80.00-ft

Loads	
Axial:	25.1 k
Moment:	1,412.9 k·ft
Shear:	23.7 k
Torsion:	1.0 k·ft

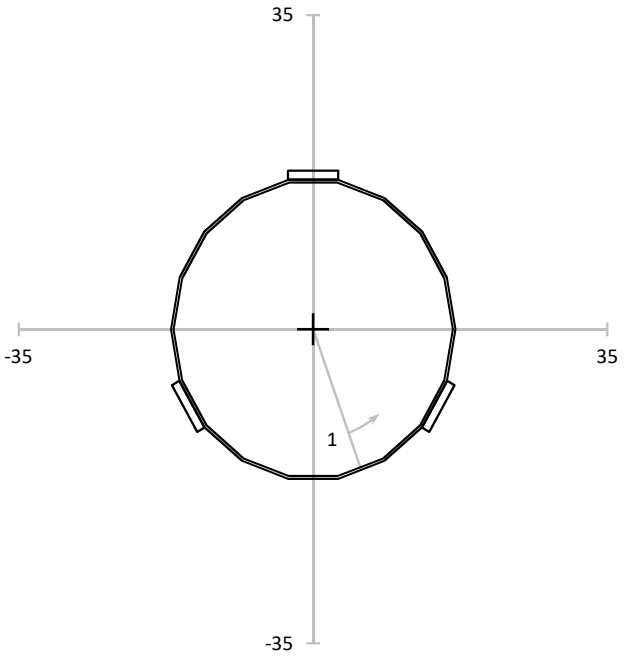
Pole Info	
OD:	33.31 in
t:	0.3125 in
Pole A_G:	32.73 in^2
Pole I_G:	4,503.3 in^4

Equivalent Loads to Pole	
Axial:	16.2 k
Moment:	886.2 k·ft
Shear:	15.3 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**160.00°**
I_G:	7,180.0 in^4
A_G:	50.73 in^2

Shear Flow	
Controlling Mod:	10
q:	0.340 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	105.80 in
Stitch:	16.00 in
Capacity:	**15.1%**

Minimum	
Angle:	**148.80°**
I_{MIN}:	7,180.0 in^4
t_{EFF}:	0.5072 in



Pole Segment: L3, F_Y = 65 ksi

POLE CAPACITY											
Angle (°)	**y_{CONT} (in)**	**I (in^4)**	**σ_A (ksi)**	**σ_B (ksi)**	**σ_V (ksi)**	**σ_T (ksi)**	**ϕF_A (ksi)**	**ϕF_B (ksi)**	**ϕF_V (ksi)**	**ϕF_T (ksi)**	**Capacity**
150.00	16.92	7180.0	0.494	39.960	0.468	0.024	73.263	73.263	36.632	73.263	**55.2%**

MODIFICATION CAPACITIES											
Mod Number	**#**	**Angle (°)**	**$\bar{y}_{CONT}$ (in)**	**I (in^4)**	**σ_A (ksi)**	**σ_B (ksi)**	**σ_V (ksi)**	**ϕF_A (ksi)**	**ϕF_B (ksi)**	**ϕF_V (ksi)**	**Capacity**
6	1	**280.00**	17.16	7180.0	0.494	40.512	0.468	48.528	47.500	29.250	**84.5%**
9	1	**160.00**	17.16	7180.0	0.494	40.512	0.468	48.528	47.500	29.250	**84.5%**
12	1	**40.00**	17.16	7180.0	0.494	40.512	0.468	48.528	47.500	29.250	**84.5%**

Elevation: 85.00-ft

Loads	
Axial:	23.4 k
Moment:	1,294.9 k·ft
Shear:	23.4 k
Torsion:	1.0 k·ft

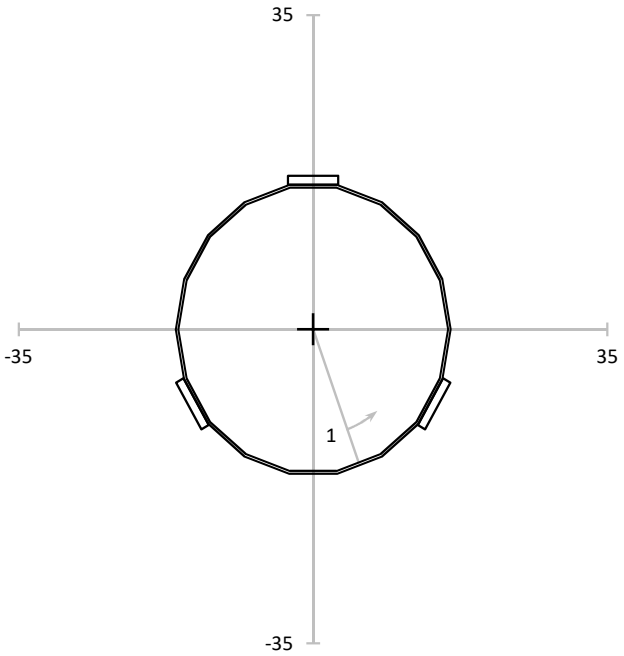
Pole Info	
OD:	32.19 in
t:	0.3125 in
Pole A_G:	31.62 in^2
Pole I_G:	4,059.5 in^4

Equivalent Loads to Pole	
Axial:	14.9 k
Moment:	800.6 k·ft
Shear:	14.9 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**160.00°**
I_G:	6,565.9 in^4
A_G:	49.62 in^2

Shear Flow	
Controlling Mod:	10
q:	0.355 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	101.47 in
Stitch:	16.00 in
Capacity:	**15.8%**

Minimum	
Angle:	**149.00°**
I_{MIN}:	6,565.9 in^4
t_{EFF}:	0.5152 in



Pole Segment: L3, F_Y = 65 ksi

POLE CAPACITY											
Angle (°)	**y_{CONT} (in)**	**I (in^4)**	**σ_A (ksi)**	**σ_B (ksi)**	**σ_V (ksi)**	**σ_T (ksi)**	**ϕF_A (ksi)**	**ϕF_B (ksi)**	**ϕF_V (ksi)**	**ϕF_T (ksi)**	**Capacity**
150.00	16.35	6565.9	0.471	38.702	0.471	0.025	73.932	73.932	36.966	73.932	**53.0%**

MODIFICATION CAPACITIES											
Mod Number	**#**	**Angle (°)**	**$\bar{y}_{CONT}$ (in)**	**I (in^4)**	**σ_A (ksi)**	**σ_B (ksi)**	**σ_V (ksi)**	**ϕF_A (ksi)**	**ϕF_B (ksi)**	**ϕF_V (ksi)**	**Capacity**
7	1	**280.00**	16.60	6565.9	0.471	39.276	0.471	48.528	47.500	29.250	**81.9%**
9	1	**160.00**	16.60	6565.9	0.471	39.276	0.471	48.528	47.500	29.250	**81.9%**
12	1	**40.00**	16.60	6565.9	0.471	39.276	0.471	48.528	47.500	29.250	**81.9%**

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Elevation: 86.50-ft

Loads	
Axial:	22.8 k
Moment:	1,259.9 k·ft
Shear:	23.3 k
Torsion:	1.0 k·ft

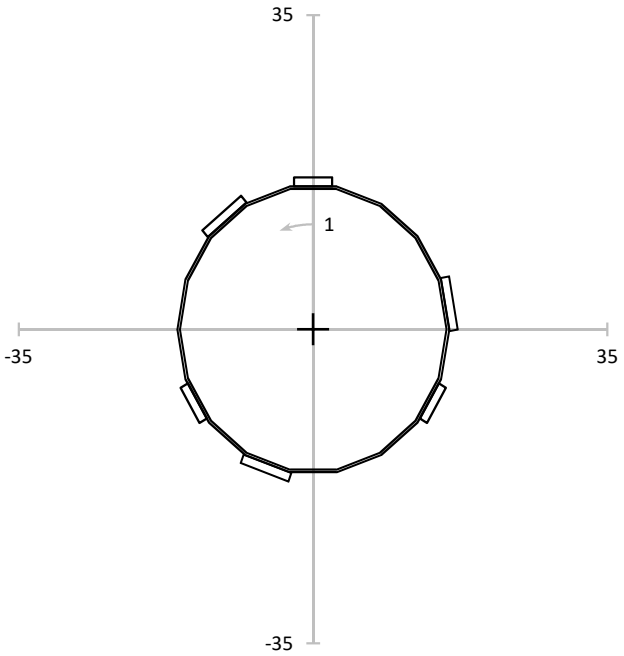
Pole Info	
OD:	31.85 in
t:	0.3125 in
Pole A_G:	31.29 in^2
Pole I_G:	3,932.3 in^4

Equivalent Loads to Pole	
Axial:	11.4 k
Moment:	602.6 k·ft
Shear:	11.6 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**0.00°**
I_G:	8,222.2 in^4
A_G:	62.79 in^2

Shear Flow	
Controlling Mod:	8
q:	0.279 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	129.03 in
Stitch:	16.00 in
Capacity:	**12.4%**

Minimum	
Angle:	**141.20°**
I_{MIN}:	8,222.2 in^4
t_{EFF}:	0.6766 in



Pole Segment: L3, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
130.00	16.18	8222.2	0.363	29.755	0.371	0.026	74.133	74.133	37.066	74.133	**40.6%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
7	1	**280.00**	16.43	8222.2	0.363	30.206	0.371	48.528	47.500	29.250	**63.0%**
9	1	**160.00**	16.43	8222.2	0.363	30.206	0.371	48.528	47.500	29.250	**63.0%**
12	1	**40.00**	16.43	8222.2	0.363	30.206	0.371	48.528	47.500	29.250	**63.0%**
13	1	**0.00**	16.43	8222.2	0.363	30.206	0.371	43.686	43.333	29.250	**70.0%**
13	2	**120.00**	16.43	8222.2	0.363	30.206	0.371	43.686	43.333	29.250	**70.0%**
13	3	**240.00**	16.43	8222.2	0.363	30.206	0.371	43.686	43.333	29.250	**70.0%**

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Elevation: 93.50-ft

Loads	
Axial:	20.2 k
Moment:	1,098.8 k·ft
Shear:	22.7 k
Torsion:	1.0 k·ft

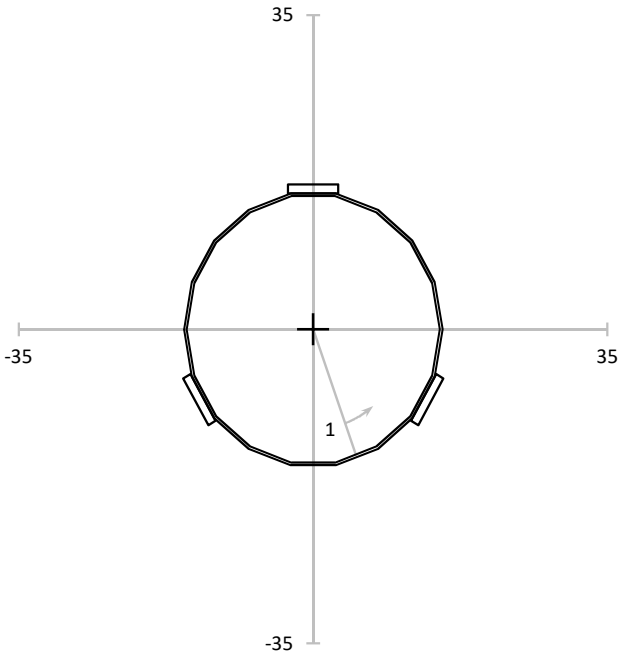
Pole Info	
OD:	30.28 in
t:	0.3125 in
Pole A_G:	29.73 in^2
Pole I_G:	3,373.8 in^4

Equivalent Loads to Pole	
Axial:	12.6 k
Moment:	661.6 k·ft
Shear:	14.2 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**160.00°**
I_G:	5,603.6 in^4
A_G:	47.73 in^2

Shear Flow	
Controlling Mod:	10
q:	0.381 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	94.59 in
Stitch:	16.00 in
Capacity:	**16.9%**

Minimum	
Angle:	**144.40°**
I_{MIN}:	5,603.6 in^4
t_{EFF}:	0.5305 in



Pole Segment: L3, F_Y = 65 ksi

POLE CAPACITY											
Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
150.00	15.38	5603.6	0.423	36.200	0.476	0.029	74.295	74.295	37.148	74.295	**49.3%**

MODIFICATION CAPACITIES											
Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
7	1	**280.00**	15.64	5603.6	0.423	36.806	0.476	48.528	47.500	29.250	**76.7%**
9	1	**160.00**	15.64	5603.6	0.423	36.806	0.476	48.528	47.500	29.250	**76.7%**
12	1	**40.00**	15.64	5603.6	0.423	36.806	0.476	48.528	47.500	29.250	**76.7%**

Elevation: 100.16-ft

Loads	
Axial:	17.7 k
Moment:	949.2 k·ft
Shear:	22.2 k
Torsion:	1.0 k·ft

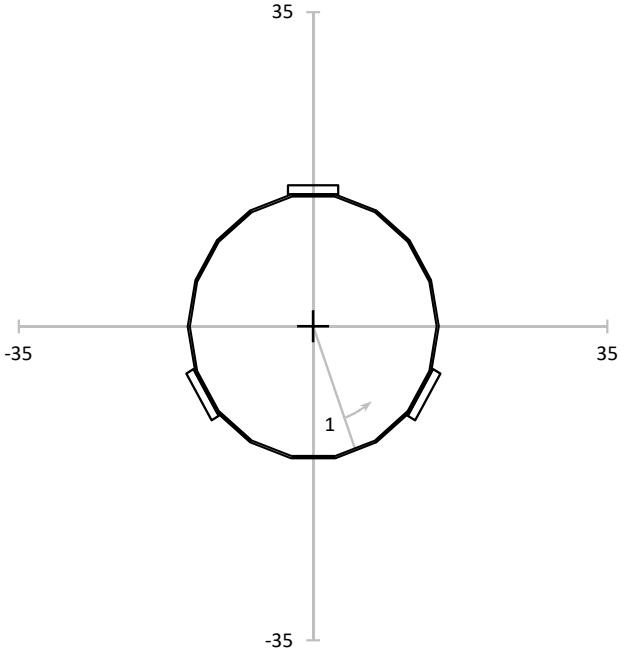
Pole Info	
OD:	29.42 in
t:	0.2500 in
Pole A_G:	23.14 in^2
Pole I_G:	2,487.7 in^4

Equivalent Loads to Pole	
Axial:	10.0 k
Moment:	513.6 k·ft
Shear:	12.5 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**160.00°**
I_G:	4,597.3 in^4
A_G:	41.14 in^2

Shear Flow	
Controlling Mod:	10
q:	0.440 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	81.85 in
Stitch:	16.00 in
Capacity:	**19.5%**

Minimum	
Angle:	**159.40°**
I_{MIN}:	4,597.3 in^4
t_{EFF}:	0.4727 in



Pole Segment: L2, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
330.00	14.94	4597.3	0.430	37.025	0.539	0.038	71.201	71.201	35.600	71.201	**52.6%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
7	1	**280.00**	15.21	4597.3	0.430	37.681	0.539	48.528	47.500	29.250	**78.6%**
9	1	**160.00**	15.21	4597.3	0.430	37.681	0.539	48.528	47.500	29.250	**78.6%**
12	1	**40.00**	15.21	4597.3	0.430	37.681	0.539	48.528	47.500	29.250	**78.6%**

Elevation: 100.21-ft

Loads	
Axial:	17.7 k
Moment:	948.1 k·ft
Shear:	22.2 k
Torsion:	1.0 k·ft

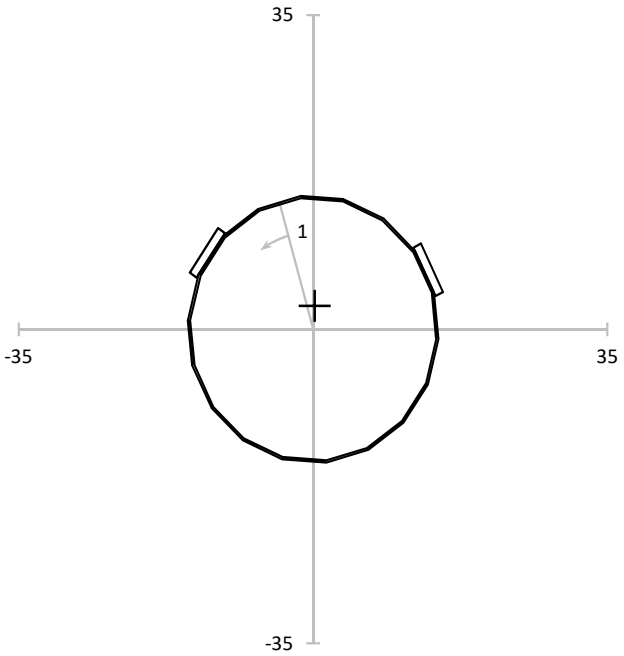
Pole Info	
OD:	29.41 in
t:	0.2500 in
Pole A_G:	23.14 in^2
Pole I_G:	2,484.9 in^4

Equivalent Loads to Pole	
Axial:	11.6 k
Moment:	835.2 k·ft
Shear:	14.6 k
Torsion:	1.0 k·ft

Controlling	
Angle:	**344.10°**
I_G:	2,976.9 in^4
A_G:	35.14 in^2

Shear Flow	
Controlling Mod:	13
q:	0.453 k/in
Bolt/Weld Cap:	36.0 k/bolt
Max Spacing:	79.43 in
Stitch:	16.00 in
Capacity:	**20.1%**

Minimum	
Angle:	**340.00°**
I_{MIN}:	2,968.7 in^4
t_{EFF}:	0.3002 in



Pole Segment: L2, F_Y = 65 ksi

POLE CAPACITY

Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
344.10	17.45	2976.9	0.503	66.684	0.631	0.038	71.209	71.209	35.604	71.209	**94.4%**

MODIFICATION CAPACITIES

Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity
7	1	**293.65**	12.98	3809.6	0.503	38.768	0.631	48.528	47.500	29.250	**81.0%**
12	1	**26.35**	12.98	3809.6	0.503	38.768	0.631	48.528	47.500	29.250	**81.0%**

Tower Engineering Professionals, Inc.
326 Tryon Road|Raleigh, NC 27603-3530|Office: (919) 661-6351|Fax: (919) 661-6350|www.tepgroup.net

Elevation: 103.00-ft

Loads	
Axial:	16.9 k
Moment:	886.4 k·ft
Shear:	22.0 k
Torsion:	1.0 k·ft

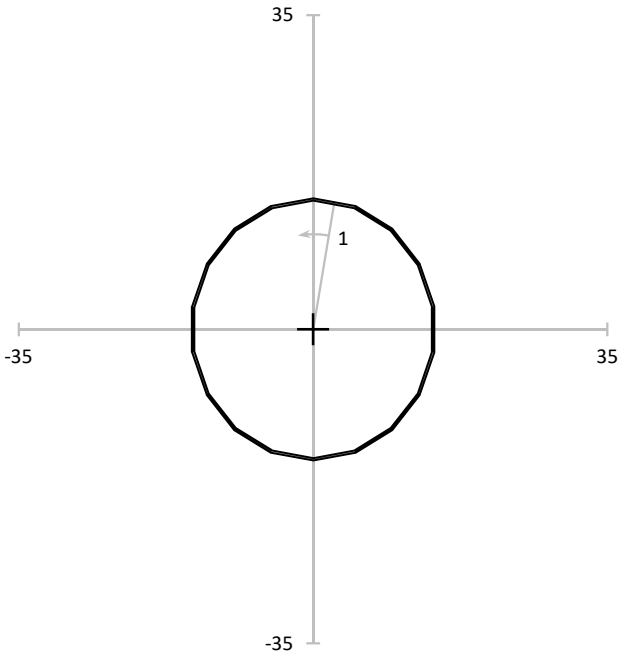
Equivalent Loads to Pole	
Axial:	16.9 k
Moment:	886.4 k·ft
Shear:	22.0 k
Torsion:	1.0 k·ft

Shear Flow N/A

Pole Info	
OD:	28.78 in
t:	0.2500 in
Pole A_G:	22.64 in^2
Pole I_G:	2,328.1 in^4

Controlling	
Angle:	**10.00°**
I_G:	2,328.1 in^4
A_G:	22.64 in^2

Minimum	
Angle:	**0.00°**
I_{MIN}:	2,328.1 in^4
t_{EFF}:	0.2500 in



Pole Segment: L2, F_Y = 65 ksi

POLE CAPACITY											
Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
10.00	14.62	2328.1	0.745	66.801	0.971	0.040	71.676	71.676	35.838	71.676	**94.3%**

MODIFICATION CAPACITIES											
Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity

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Elevation: 122.87-ft

Loads	
Axial:	12.4 k
Moment:	462.9 k·ft
Shear:	20.6 k
Torsion:	0.1 k·ft

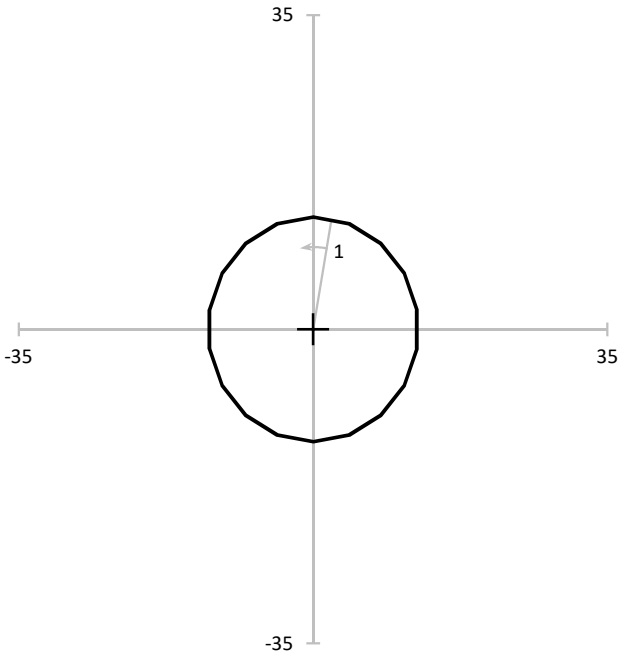
Equivalent Loads to Pole	
Axial:	12.4 k
Moment:	462.9 k·ft
Shear:	20.6 k
Torsion:	0.1 k·ft

Shear Flow N/A

Pole Info	
OD:	24.82 in
t:	0.1875 in
Pole A_G:	14.66 in^2
Pole I_G:	1,123.7 in^4

Controlling	
Angle:	**10.00°**
I_G:	1,123.7 in^4
A_G:	14.66 in^2

Minimum	
Angle:	**0.00°**
I_{MIN}:	1,123.7 in^4
t_{EFF}:	0.1875 in



Pole Segment: L1, F_Y = 65 ksi

POLE CAPACITY											
Angle (°)	y_{CONT} (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	σ_T (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	ϕF_T (ksi)	Capacity
10.00	12.61	1123.7	0.845	62.332	1.405	0.010	68.462	68.462	34.231	68.462	**92.5%**

MODIFICATION CAPACITIES											
Mod Number	#	Angle (°)	$\bar{y}_{CONT}$ (in)	I (in^4)	σ_A (ksi)	σ_B (ksi)	σ_V (ksi)	ϕF_A (ksi)	ϕF_B (ksi)	ϕF_V (ksi)	Capacity

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TOWER ENGINEERING PROFESSIONALS

Capacity: 46.2% PASS

Town of Plainfield/SSUSA (BU 876401)
TEP #: 25670.128938
Analysis: MTW 8/25/2017
Check: IVV 8/25/2017

Custom Anchor Rod Capacity Check_v0.0

Factored Tower Base Reactions

	LC1	LC2	
Moment:	3,520.7	966.3	kip-ft
Axial (Download):	62.2	96.5	kip
Shear:	28.4	7.5	kip
Axial (Uplift):			kip

Load Centroid

X:	0.00	in
Y:	0.00	in

Code Revision
(●) TIA-222-G
( ) TIA-222-F

Pole/Base Plate Geometry

Pole Shape:	18	
Pole OD:	50.500	in
Pole Thickness:	0.375	in
Plate Shape:	Round	
Plate Diameter:	65.00	in
Plate Thickness:	1.75	in
	3.00	

Anchor Size	A_{NET} (in^2)	F_Y (ksi)	F_U (ksi)	Config.	T/C	Qty.	Bolt Circle (in)	Spacing (in)	l_{ar} (in)	Bolt One Angle (Round) or Locations (Custom) (°)
2-1/4" (A615-J) (F)	3.248	75.0	100.0	Round	T/C	14	59.000		1.000	20
2"	2.498	105.0	125.0	Custom	T/C	3	62.500		1.000	10 130 240
2-1/4"	3.248	75.0	100.0	Custom	T/C	9	71.500		1.000	30 60 104 150 188 235 263 32

Bolt Group	A_{NET} (in^2)	Y_{CONT} (in)	T_U (k)	C_U (k)	M_U (k-ft)	V_U (k)	ϕR_{NT} (k)	ϕR_{NM} (k-ft)	ϕR_{NV} (k)	Orientation (°)	Capacity (%)
1	3.248	-29.485	97.75	101.57	0.14	2.39	259.81	7.88	149.47	239.0	40.4%
2	2.498	-31.250	76.62	79.54	0.08	1.43	249.82	7.45	132.54	50.0	33.0%
3	**3.248**	**-35.554**	**113.39**	**116.43**	**0.14**	**2.42**	**259.81**	**7.88**	**134.19**	**226.0**	**46.2%**

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Stiffened or Unstiffened, Ungrouted, Circular Base Plate - Any Rod Material

TIA Rev G Assumption: Clear space between bottom of leveling nut and top of concrete **not** exceeding (1)*(Rod Diameter)

Site Data

BU#:	*876401*
Site Name:	*Town of Plainfield/SSUSA*
App #:	*403360 Rev. 4*
Pole Manufacturer:	*Other*

Reactions		
Mu:	1747.8504	ft-kips
Axial, Pu:	0	kips
Shear, Vu:	0	kips
Eta Factor, η	0.55	TIA G (Fig. 4-4)

Anchor Rod Data		
Qty:	14	
Diam:	2.25	in
Rod Material:	A615-J	
Strength (Fu):	100	ksi
Yield (Fy):	75	ksi
Bolt Circle:	59	in

If No stiffeners, Criteria: AISC LRFD <-Only Applcable to Unstiffened Cases

Anchor Rod Results

Max Rod (Cu+ Vu/ń): 101.6 Kips

Non-Rigid | AISC LRFD | φ*Tn

Plate Data		
Diam:	65	in
Thick:	1.75	in
Grade:	60	ksi
Single-Rod B-eff:	11.45	in

Base Plate Results Flexural Check

Base Plate Stress:	29.8	ksi
Allowable Plate Stress:	54.0	ksi
Base Plate Stress Ratio:	55.1%	**Pass**

Non-Rigid | AISC LRFD | φ*Fy | Y.L. Length: 30.51

Stiffener Data (Welding at both sides)		
Config:	0	*
Weld Type:		
Groove Depth:		in **
Groove Angle:		degrees
Fillet H. Weld:		<-- Disregard
Fillet V. Weld:		in
Width:		in
Height:		in
Thick:		in
Notch:		in
Grade:		ksi
Weld str.:		ksi

n/a

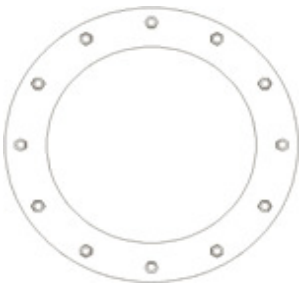
Stiffener Results

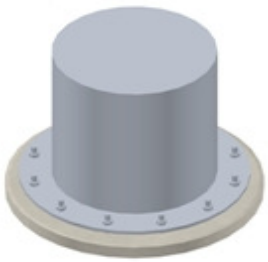
Horizontal Weld :	n/a
Vertical Weld:	n/a
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	n/a
Plate Tension+Shear, ft/Ft+(fv/Fv)^2	n/a
Plate Comp. (AISC Bracket):	n/a

Pole Results

Pole Punching Shear Check: n/a

Pole Data		
Diam:	50.5	in
Thick:	0.375	in
Grade:	65	ksi
# of Sides:	18	"0" IF Round
Fu	80	ksi
Reinf. Fillet Weld	0	"0" if None





* 0 = none, 1 = every bolt, 2 = every 2 bolts, 3 = 2 per bolt

** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

	PASS	PASS			
Results Summary:	**LC1**	**LC2**	**Town of Plainfield/SSUSA (BU 876401)**		
Soil Interaction:	**27.7%**	**7.6%**	**TEP #:**	25670.128938	
Foundation Structural:	**75.9%**	**20.4%**	**Analysis:**	MTW	8/25/2017
Drilled Caisson Tool - Input			**Check:**	IVV	8/25/2017

Code Revisions: TIA-222-G ACI 318-11 **Tower Type:** Monopole

	LC1	LC2	
Moment:	3,520.68	966.26	kip-ft
Axial (download):	62.22	96.48	kip
Shear:	28.39	7.49	kip
Axial (uplift):			kip

Shaft Information		
Diameter:	7.00	ft
Projection:	1.00	ft
Caisson Length:	27.00	ft
f'c:	4.000	ksi
Max εc:	0.003	in/in

Cage 1 Reinforcement		
Tie Bar Size:	5	*(fy = 60.0 ksi)*
Clear Cover to Tie:	4.17	*in (Cage Ø = 73.00in)*
Tie Bar Spacing:	12.00	in
Vertical Bar Size:	11	
Vertical Bar Quantity:	18	*(ρ =0.507%)*
fy:	60.0	ksi
E:	29,000	ksi

Cage 2 Reinforcement			
Cage Diameter:	71.50	in	
Offset Angle:	0.0	degrees	
Vertical Bar Size:	Other	**→ Anet =**	3.25
Vertical Bar Qty:	9	*(ρ =0.527%)*	
Cage 2 resists compression?	Yes		
Effective Cage Depth:	11	ft	
fy:	75	ksi	
E:	29,000	ksi	

Design Parameters

Soil Layer	Soil Type	Depth (ft)		Eff. Unit Weight (pcf)	Cohesion (psf)	Friction Angle ϕ (°)	All. Skin Friction (psf)	
		from	to				Download	Uplift
1	Clay	0.00	3.50	115.0	0			
2	Sand	3.50	6.00	115.0		32.0		
3	Sand	6.00	10.00	120.0		38.0		
4	Sand	10.00	34.00	125.0		43.0		

Notes: 1) Neglect lateral soil strength to a depth of:

i) **1/2 Pier Ø = 7.00ft / 2 = 3.50ft**

ii) ~~Frost Depth = 40.0in / (12in/ft) = 3.33ft~~

iii) ~~Geotech Recommendation = none~~

2) Groundwater = N/A

TOWER ENGINEERING PROFESSIONALS

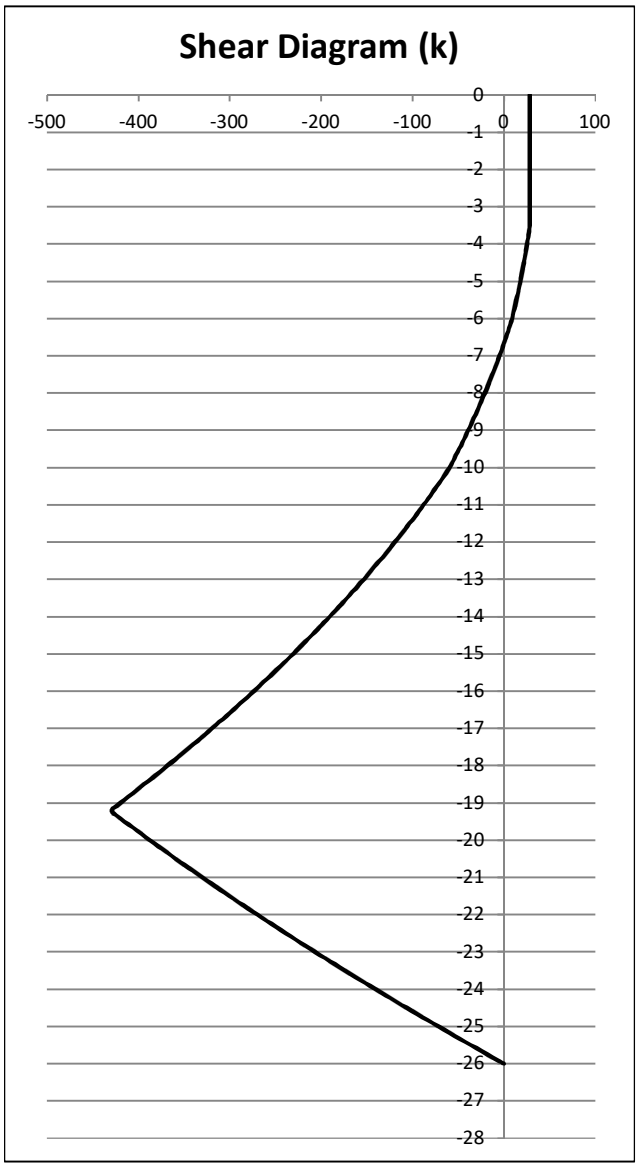
Town of Plainfield/SSUSA (BU 876401)

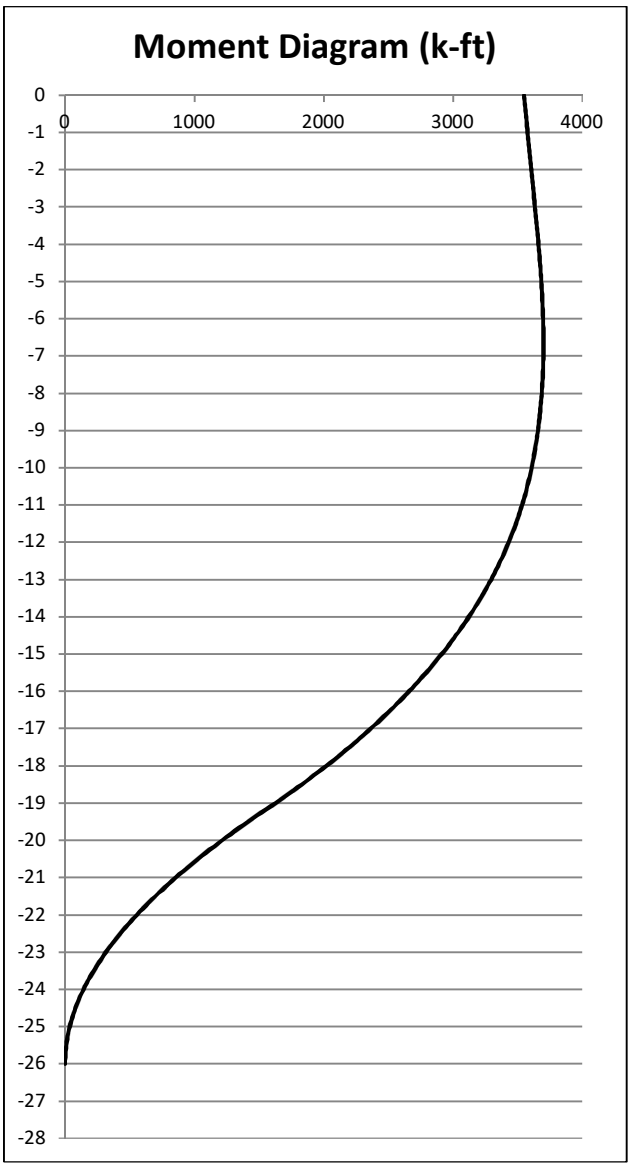
TEP #: 25670.128938

Analysis: MTW 8/25/2017

Check: IVV 8/25/2017

Soil Interaction: LC1





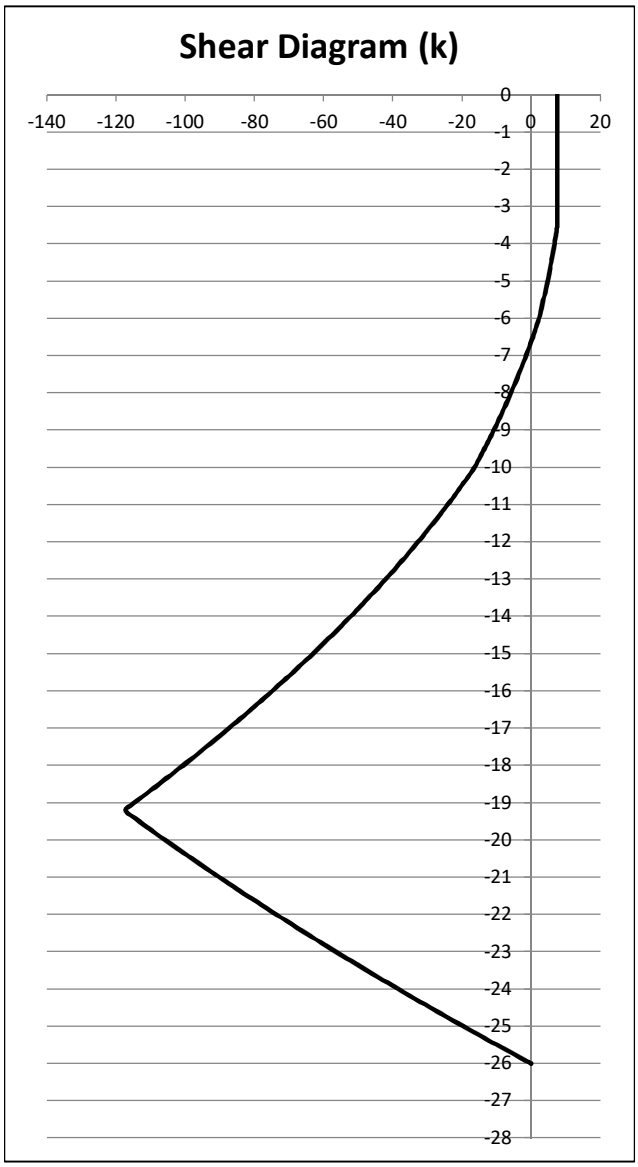
Max Unfactored Moment: **3700.3** **kip-ft**

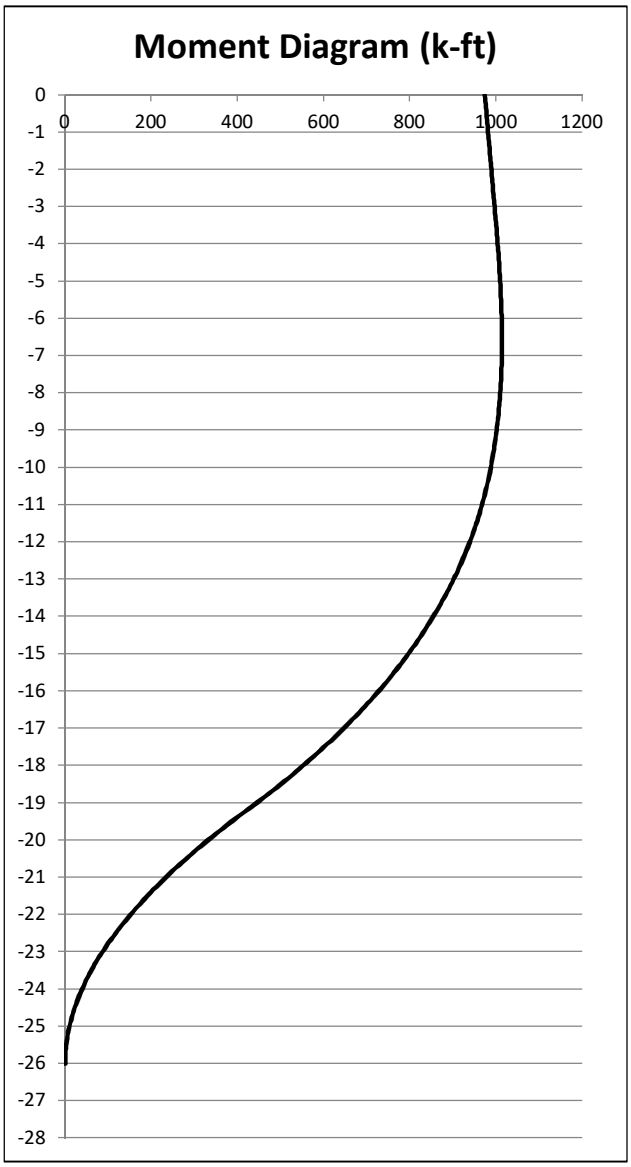
@ **6.67** **ft below grade**

Additional Factor of Safety: **4.81**

Capacity = **27.7%** **PASS**

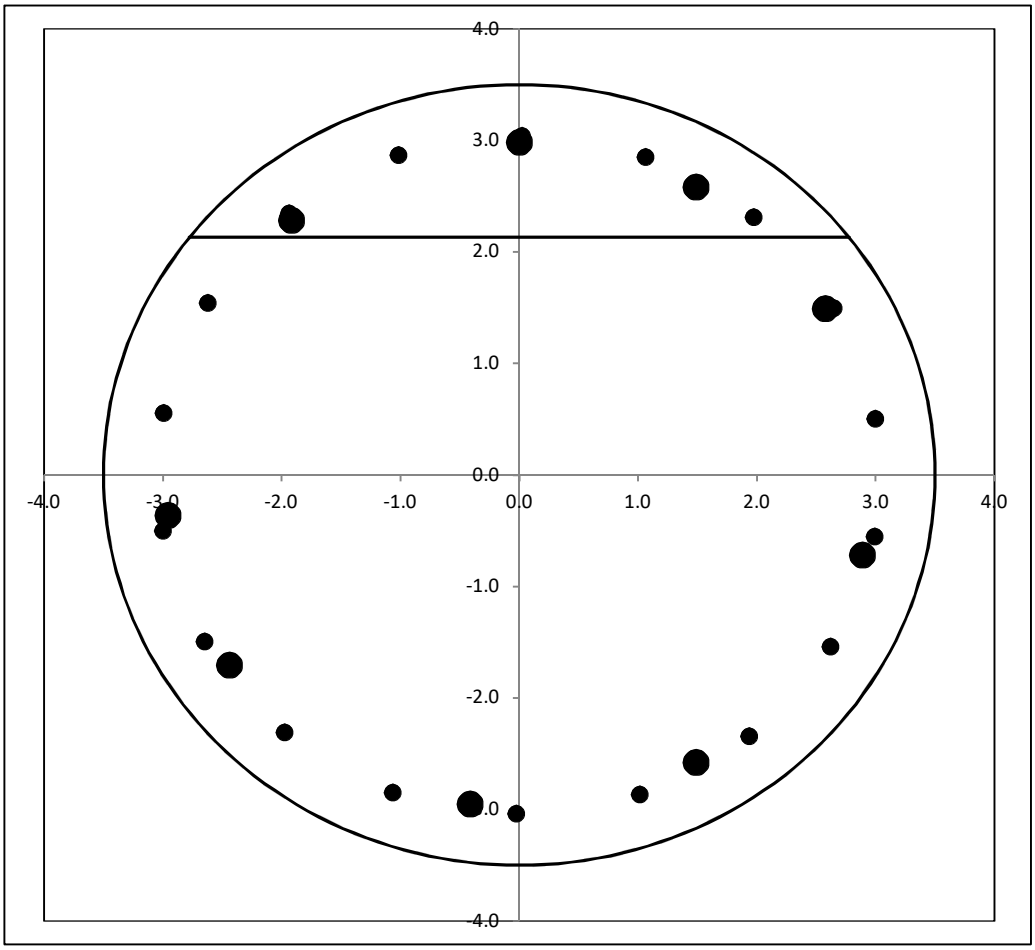
Soil Interaction: LC2





Max Unfactored Moment: **1013.3** **kip-ft**
@ **6.60** **ft below grade**
Additional Factor of Safety: **17.60**
Capacity = **7.6%** **PASS**

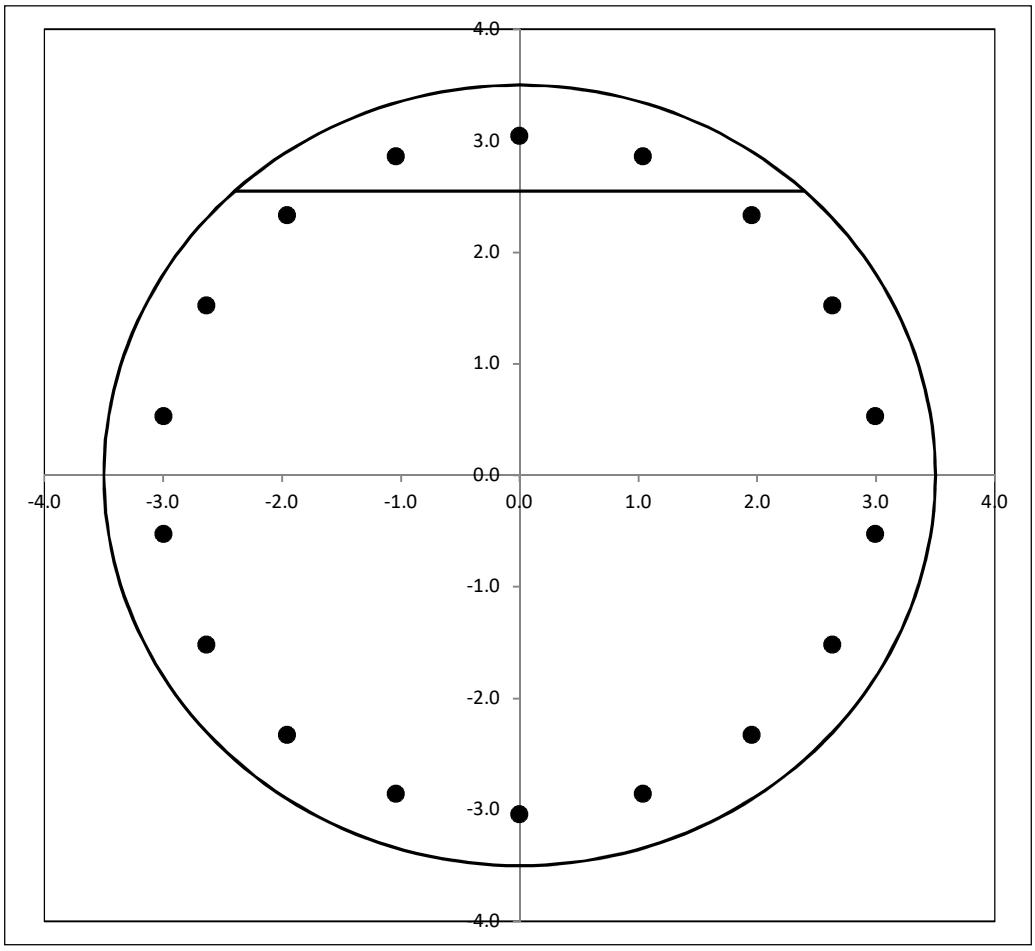
Reinforcement Capacity



		LC1	LC2	
	Vu =	430.9	117.8	kip
	Vc =	704.9	707.1	kip
fy,tie = 60.0	Vs =	241.6	241.6	kip
	ϕVn =	709.9	711.5	kip
	Capacity =	60.7%	16.6%	
		PASS	PASS	

	LC1	LC2	
Mu =	3700.3	1013.3	kip-ft
ϕMn =	9376.2	9452.3	kip-ft
Capacity =	39.5%	10.7%	
	PASS	PASS	

Reinforcement Capacity, continued



	LC1	LC2	
Mu =	3534.8	967.0	kip-ft
ϕMn =	4654.2	4745.3	kip-ft
Capacity =	**75.9%**	**20.4%**	
	PASS	**PASS**	

Exhibit 4

Radio Frequency Emissions Analysis Report

AT&T Existing Facility

Site ID: CT5461

Plainfield N Central
47-51 Unity Street
Moosup, CT 6374

September 14, 2017

Centerline Communications Project Number: 950006-070

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**9.12 %**

September 14, 2017

AT&T Mobility – New England
Attn: John Benedetto, RF Manager
550 Cochituate Road
Suite 550 – 13&14
Framingham, MA 06040

Emissions Analysis for Site: **CT5461 – Plainfield N Central**

Centerline Communications, LLC ("Centerline") was directed to analyze the proposed AT&T facility located at **47-51 Unity Street, Moosup, CT**, for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Population exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 700 and 850 MHz Bands are approximately 467 $\mu W/cm^2$ and 567 $\mu W/cm^2$ respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 2300 MHz (WCS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure. Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were performed for the proposed AT&T Wireless antenna facility located at **47-51 Unity Street, Moosup, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was focused at the base of the tower. For this report the sample point is the top of a 6-foot person standing at the base of the tower.

Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. All power values expressed and analyzed are maximum power levels expected to be used on all radios.

All emissions values for additional carriers were taken from the Connecticut Siting Council (CSC) active MPE database. Values in this database are provided by the individual carriers themselves

For each sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
LTE	700 MHz	2	60
LTE	1900 MHz (PCS)	2	60
UMTS	850 MHz	2	30
UMTS	1900 MHz (PCS)	2	30
GSM	850 MHz	Decommissioned	Decommissioned

Table 1: Channel Data Table

The following antennas listed in *Table 2* were used in the modeling for transmission in the 700 MHz, 850 MHz and 1900 MHz (PCS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	CCI HPA-65R-BUU-H8	150
A	2	Powerwave 7770	150
A	3	Powerwave 7770	150
B	1	CCI HPA-65R-BUU-H8	150
B	2	Powerwave 7770	150
B	3	Powerwave 7770	150
C	1	CCI HPA-65R-BUU-H8	150
C	2	Powerwave 7770	150
C	3	Powerwave 7770	150

Table 2: Antenna Data

All calculations were done with respect to uncontrolled / general population threshold limits.

RESULTS

Per the calculations completed for the proposed AT&T configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	CCI HPA-65R-BUU-H8	700 MHz / 1900 MHz (PCS)	13.15 / 14.95	4	240	6,229.75	1.57
Antenna A2	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	4	120	2,140.89	0.48
Antenna A3	Powerwave 7770	Decommissioned 850 MHz GSM	NA	NA	NA	NA	0.00
						Sector A Composite MPE%	**2.05**
Antenna B1	CCI HPA-65R-BUU-H8	700 MHz / 1900 MHz (PCS)	13.15 / 14.95	4	240	6,229.75	1.57
Antenna B2	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	4	120	2,140.89	0.48
Antenna B3	Powerwave 7770	Decommissioned 850 MHz GSM	NA	NA	NA	NA	0.00
						Sector B Composite MPE%	**2.05**
Antenna C1	CCI HPA-65R-BUU-H8	700 MHz / 1900 MHz (PCS)	13.15 / 14.95	4	240	6,229.75	1.57
Antenna C2	Powerwave 7770	850 MHz / 1900 MHz (PCS)	11.4 / 13.4	4	120	2,140.89	0.48
Antenna C3	Powerwave 7770	Decommissioned 850 MHz GSM	NA	NA	NA	NA	0.00
						Sector C Composite MPE%	**2.05**

Table 3: AT&T Emissions Levels

The Following table (*table 4*) shows all additional carriers on site and their MPE% as recorded in the CSC active MPE database for this facility along with the newly calculated maximum AT&T MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three sectors have the same configuration yielding the same results on all three sectors. *Table 5* below shows a summary for each AT&T Sector as well as the composite MPE value for the site.

Site Composite MPE%	
Carrier	**MPE%**
AT&T – Max Sector Value	**2.05 %**
Sprint	0.32 %
MetroPCS	0.49 %
Town	0.28 %
T-Mobile	2.53 %
Verizon Wireless	3.45 %
Site Total MPE %:	**9.12 %**

Table 4: All Carrier MPE Contributions

AT&T Sector A Total:	2.05 %
AT&T Sector B Total:	2.05 %
AT&T Sector C Total:	2.05 %
Site Total:	9.12 %

Table 5: Site MPE Summary

FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. *Table 6* below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated AT&T sector(s). For this site, all three sectors have the same configuration yielding the same results on all three sectors.

AT&T _ Frequency Band / Technology (All Sectors)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
AT&T 700 MHz LTE	2	1,239.23	150	4.30	700 MHz	467	0.92%
AT&T 1900 MHz (PCS) LTE	2	1,875.65	150	6.50	1900 MHz (PCS)	1000	0.65%
AT&T 850 MHz UMTS	2	414.12	150	1.44	850 MHz	567	0.25%
AT&T 1900 MHz (PCS) UMTS	2	656.33	150	2.28	1900 MHz (PCS)	1000	0.23%
						Total:	

Table 6: AT&T Maximum Sector MPE Power Values

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	2.05 %
Sector B:	2.05 %
Sector C:	2.05 %
AT&T Maximum Total (per sector):	2.05 %
Site Total:	9.12 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **9.12 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

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