Centek Engineering, Inc.
3-2 North Branford Road
Branford, Connecticut 06405
Phone: (203) 488-0580
Fax: (203) 488-8587

Steven L. Levine
Real Estate Consultant

HAND DELIVERED

January 8, 2014

Attorney Melanie Bachman
Acting Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, Connecticut 06051

Re: New Cingular Wireless PCS, LLC notice of intent to modify an existing telecommunications facility located at 376 Butlertown Road, Montville (owner, Wireless Solutions, LLC)

Dear Ms. Bachman:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") and/or Long Term Evolution ("LTE") capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") plans to modify the equipment configurations at many of its existing cell sites. Please accept this letter and attachments as notification, pursuant to R.C.S.A. Section 16-50j-73, of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2). In compliance with R.C.S.A. Section 16-50j-73, a copy of this letter and attachments is being sent to the chief elected official of the municipality in which the affected cell site is located.

UMTS technology offers services to mobile computer and phone users anywhere in the world. Based on the Global System for Mobile ("GSM") communication standard, UMTS is the planned worldwide standard for mobile users. UMTS, fully implemented, gives computer and phone users high-speed access to the Internet as they travel. They have the same capabilities even when they roam, through both terrestrial wireless and satellite transmissions.

LTE is a high-performance air interface for cellular mobile communications. It is designed to increase the capacity and speed of mobile telephone networks.

Attached is a summary of the planned modifications, including power density calculations reflecting the change in AT&T's operations at the site. Also included is documentation of the structural sufficiency of the tower to accommodate the revised antenna configuration.

The changes to the facility do not constitute modifications as defined in Connecticut General Statutes ("C.G.S.") Section 16-50i(d) because the general physical characteristics of the facility will not be significantly changed or altered. Rather, the planned changes to the facility fall squarely within those activities explicitly provided for in R.C.S.A. Section 16-50j-72(b)(2).

1. The height of the overall structure will be unaffected.

2. The proposed changes will not extend the site boundaries. There will be no effect on the site compound other than some enlarged equipment pads as may be noted in the attachments.

3. The proposed changes will not increase the noise level at the existing facility by six decibels or more.

4. Radio frequency power density may increase due to use of one or more GSM channel for UMTS transmissions. Moreover, LTE will utilize additional radio frequencies newly-licensed by the FCC for cellular mobile communications. However, the changes will not increase the calculated "worst case" power density for the combined operations at the site to a level at or above the applicable standard for uncontrolled environments as calculated for a mixed frequency site.

For the foregoing reasons, AT&T respectfully submits that the proposed changes at the referenced site constitute exempt modifications under R.C.S.A. Section 16-50j-72(b)(2).

Please feel free to call me at (860) 830-0380 with questions concerning this matter. Thank you for your consideration.

Sincerely,

Steven L. Levine
Real Estate Consultant

cc: Ronald McDaniel, Jr, Mayor, Town of Montville

Attachments

NEW CINGULAR WIRELESS
Equipment Modification

376 Butlertown Road, Montville
Site Number 2055
Exempt Modifications approved 10/00, 8/02, and 1/09

Tower Owner/Manager: Wireless Solutions LLC

Equipment Configuration: Guyed Lattice Tower

Current and/or Approved:
Six Powerwave 7770 panel antennas @ 161 ft agl
Six TMA's and six diplexers @ 161 ft
Twelve lines 1 5/8 inch coax
Equipment Shelter

Planned Modifications:
Remove all existing antennas and associated equipment.
Remove all existing antenna mounts.
Remove 6 lines of 1 5/8 inch coax.
Install three new sector mounts @ 161 ft.
Re-install three Powerwave 7770 antennas @ 161 ft.
Install six CCI HPA-65R-BUU-H6 antennas @ 161 ft c.l.
Install three Andrews SBNHH-1065A antennas @ 161 ft c.l.
Install three TMA's @ 161 ft.
Install 18 remote radio heads and six associated A2 modules @ 161 ft.
Install three surge arrestors @ 161 ft.
Install 6 dc power lines and one fiber line to 161 ft.

Power Density:

Worst-case calculations for existing wireless operations at the site indicate a radio frequency electromagnetic radiation power density, measured at ground level beside the tower, of approximately 6.8 % of the standard adopted by the FCC. As depicted in the second table below, the total radio frequency electromagnetic radiation power density following proposed modifications would be approximately 7.6 % of the standard.

Existing

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Other Users *							1.67
AT&T UMTS *	161	880 - 894	1	500	0.0069	0.5867	1.18
AT&T GSM *	161	1900 Band	2	427	0.0118	1.0000	1.18
AT&T GSM *	161	880 - 894	4	296	0.0164	0.5867	2.80
Total							**6.8%**

* Per CSC records

Proposed

Company	Centerline Ht (feet)	Frequency (MHz)	Number of Channels	Power Per Channel (Watts)	Power Density (mW/cm^2)	Standard Limits (mW/cm^2)	Percent of Limit
Other Users *							1.67
AT&T LTE	161	700 Band	1	500	0.0069	0.4667	1.49
AT&T LTE	161	1900 Band	1	500	0.0069	1.0000	0.69
AT&T LTE	161	2300 Band	1	500	0.0069	1.0000	0.69
AT&T UMTS	161	880 - 894	2	500	0.0139	0.5867	2.36
AT&T UMTS	161	1900 Band	1	500	0.0069	1.0000	0.69
Total							**7.6%**

* Per CSC records .

Structural information:

The attached structural analysis demonstrates that the tower has adequate structural capacity to accommodate the proposed modifications. (GPD Associates, 12/10/13)

PROJECT INFORMATION

SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS FACILITY MODIFICATIONS		
SITE ADDRESS:	376 BUTLERTOWN ROAD MONTVILLE, CT 06370		
PROPERTY OWNER:	IACONIELLO ANTONIO J. 536 ROUTE 161 OAKDALE, CT 06370		
TOWER OWNER:	NEW CINGULAR WIRELESS, PCS, LLC. DBA AT&T MOBILITY 550 COCHITUATE ROAD FRAMINGHAM, MA 01701 (508) 820-9696	APPLICANT:	NEW CINGULAR WIRELESS, PCS, LLC. DBA AT&T MOBILITY 550 COCHITUATE ROAD FRAMINGHAM, MA 01701 (508) 820-9696
ZONING CLASSIFICATION:	LI		
LATITUDE:	41.4216 N	41° 25' 17.75" N	
LONGITUDE:	-72.2126 W	-72° 12' 45.35" W	
JURISDICTION:	TOWN OF MONTVILLE		
CURRENT USE:	TELECOMMUNICATIONS FACILITY		
PROPOSED USE:	TELECOMMUNICATIONS FACILITY		
NOC#	866-915-5600		

SITE NUMBER: CT2055
SITE NAME: MONTVILLE-BUTLERTOWN ROAD

DRAWING INDEX

		REV
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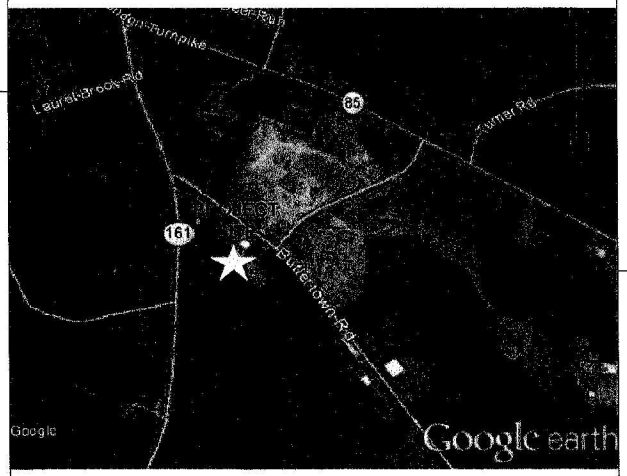
S-1	ANTENNA & RRH MOUNTING DETAILS	1
G-1	PLUMBING DIAGRAM & GROUNDING DETAILS	1

VICINITY MAP

DIRECTIONS TO SITE:
START OUT GOING WEST ON COCHITUATE RD/RT-30 W TOWARD BURR ST. CONTINUE TO FOLLOW RT-30 W. 2.1 MI. STAY STRAIGHT TO GO ONTO RT-9 W/WORCESTER RD. 2.4 MI. MERGE ONTO I-90 W/MASSACHUSETTS TURNPIKE/MASS PIKE TOWARD SPRINGFIELD/WORCESTER (PORTIONS TOLL). 22.0 MI. TAKE THE I-395 S/I-290 E EXIT, EXIT 10, TOWARD US-20/WORCESTER/WORCESTER AIRPORT. 1.1 MI. MERGE ONTO I-395 S TOWARD NORWICH CT (CROSSING INTO CONNECTICUT). 64.2 MI. TAKE THE CT-85 EXIT, EXIT 77, TOWARD WATERFORD/CHESTERFIELD. 0.2 MI. TURN RIGHT ONTO HARTFORD TURNPIKE/CT-85/HARTFORD RD. CONTINUE TO FOLLOW CT-85. 2.9 MI. TURN LEFT ONTO SACHATELLO INDUSTRIAL DR. 0.3 MI. TURN RIGHT ONTO BUTLERTOWN RD.0.03 MI. 376 BUTLERTOWN RD IS ON THE LEFT.



GENERAL NOTES

1. THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF AT&T. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.
2. THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.
3. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE AT&T REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL
BEFORE YOU DIG
CALL TOLL FREE 800-922-4455
UNDERGROUND SERVICE ALERT

Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3060
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

SAI
27 NORTHWESTERN DR.
SALEM, NH 03079

SITE NUMBER: CT2055
SITE NAME: MONTVILLE-BUTLERTOWN ROAD
376 BUTLERTOWN ROAD
MONTVILLE, CT 06370
NEW LONDON COUNTY

at&t
550 COCHITUATE RD.
FRAMINGHAM, MA, 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	01/06/14	ISSUED FOR CONSTRUCTION	SG	AT	DPH
A	12/10/13	ISSUED FOR REVIEW	SG	AT	DPH

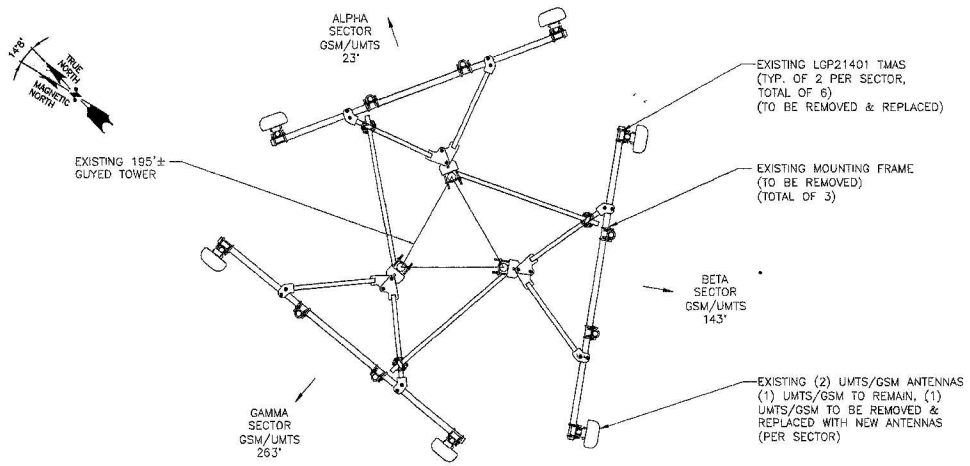
SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SG

Daniel P. Hannon
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

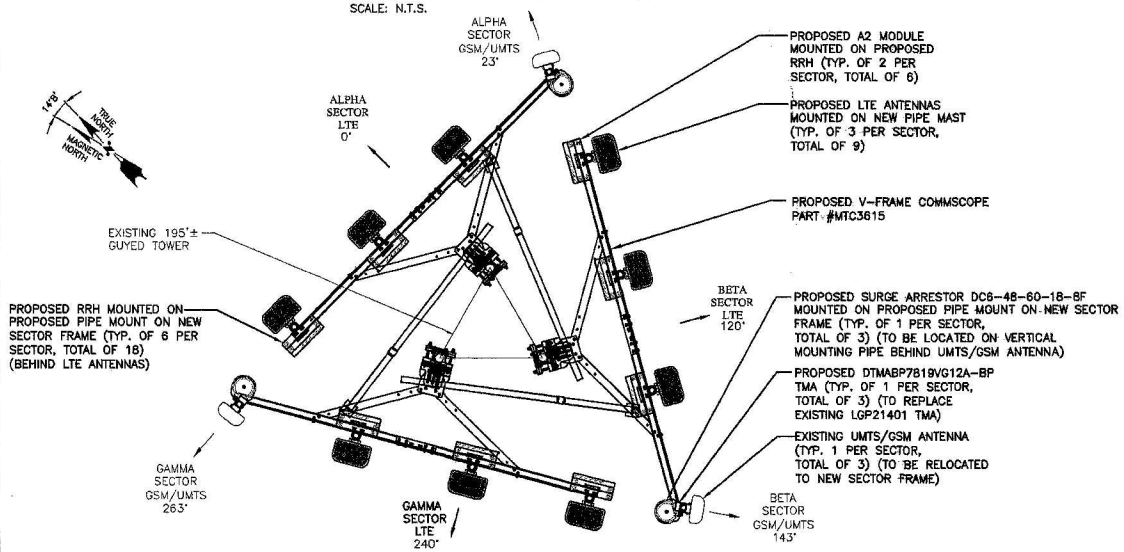
TITLE SHEET
(LTE)

JOB NUMBER	DRAWING NUMBER	REV
2055.01	T-1	1



EXISTING ANTENNA LAYOUT

SCALE: N.T.S.



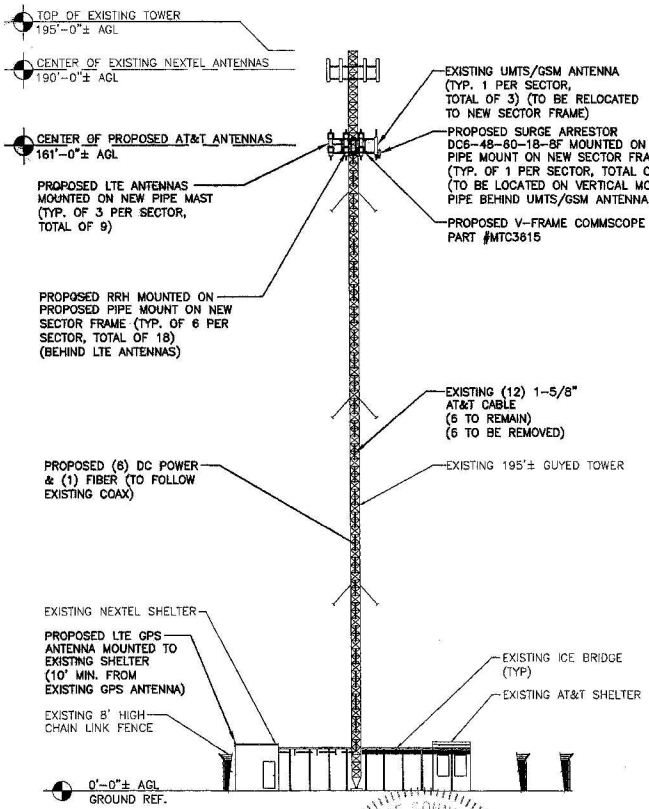
PROPOSED ANTENNA LAYOUT

SCALE: N.T.S.

NOTE:
CONTRACTOR SHALL ADJUST MOUNTING LOCATION OF SURGE ARRESTOR & RRH'S AS REQUIRED TO AVOID OBSTRUCTING EXISTING CLIMBING LADDER/PEGS.

NOTE:
REFER TO STRUCTURAL ANALYSIS BY: GPD GROUP DATED: DECEMBER 10, 2013, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE:*
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



NORTHEAST ELEVATION

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

0' 8'-0" 16'-0" 32'-0" 48'-0"

Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 20N2
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

SAI
27 NORTHWESTERN DR.
SALEM, NH 03079

SITE NUMBER: CT2055
SITE NAME: MONTVILLE-BUTLERTOWN ROAD
376 BUTLERTOWN ROAD
MONTVILLE, CT 06370
NEW LONDON COUNTY

at&t
550 COCHITUATE RD.
FRAMINGHAM, MA, 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
1	01/08/14	ISSUED FOR CONSTRUCTION	SG	AT	DPH
A	12/10/13	ISSUED FOR REVIEW	SG	AT	DPH

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SG

Daniel P. Hamm
No. 24178
LICENSED PROFESSIONAL ENGINEER

AT&T

ANTENNA LAYOUT AND ELEVATION (LTE)

JOB NUMBER	DRAWING NUMBER	REV
2055.01	A-2	1

SAI Communications
27 Northwestern Drive
Salem, NH 03079
(603) 560-7049

GPD GROUP
Glaus, Pyle, Schomer, Burns & DeHaven, Inc.
Kevin Clements
520 South Main Street, Suite 2531
Akron, OH 44311
(678) 781-5061
kclements@gpdgroup.com

GPD# 2013723.13.65066.01
December 10, 2013

RIGOROUS STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	**Site USID:**	**65066**
	Site FA:	**10035374**
	Client #:	**CT2055**
	Site Name:	**MONTVILLE BUTLER TOWN RD**
	AT&T Project:	**MOD: LTE Add9/23/2013**
ANALYSIS CRITERIA:	**Codes:**	**TIA/EIA-222-F, 2006 IBC, ASCE7-05 & 2005 CTBC**
		95-mph (fastest-mile) with 0" ice
		38-mph (fastest-mile) with 0.75" ice
SITE DATA:		**376 Butlertown Road, Montville, CT 06353, New London County**
		Latitude 41° 25' 17.771" N, Longitude 72° 12' 45.396" W
		Market: New England
		195' Rohn Guyed

Mr. Edward Onessimo,

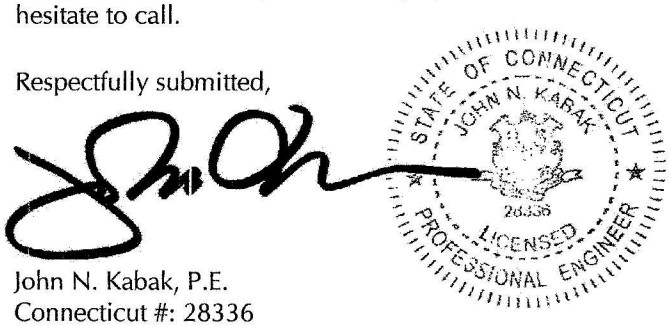
GPD is pleased to submit this Rigorous Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of the analysis is to determine the suitability of the tower with the existing and proposed loading configuration detailed in the analysis report.

Analysis Results

Tower Stress Level with Proposed Equipment:	86.8%	Pass
Foundation Ratio with Proposed Equipment:	49.2%	Pass

We at GPD appreciate the opportunity of providing our continuing professional services to you and SAI Communications. If you have any questions or need further assistance on this or any other projects please do not hesitate to call.

Respectfully submitted,



John N. Kabak, P.E.
Connecticut #: 28336

SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by AT&T Mobility to SAI Communications. This report was commissioned by Mr. Edward Onessimo of SAI Communications.

The proposed coax shall be placed on Face B next to the existing coax to 161' in a three on four configuration in order for the analysis results to be valid.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Leg	86.8%	Pass
Diagonal	73.8%	Pass
Top Girt	20.9%	Pass
Bottom Girt	68.4%	Pass
Guy Wires	80.4%	Pass
Top Guy Pull-Off	42.0%	Pass
Torque Arm Top	57.8%	Pass
Bolt Checks	73.8%	Pass
Guy Anchor Foundation	31.5%	Pass
Tower Base Foundation	49.2%	Pass

ANALYSIS METHOD

tnxTower (Version 6.1.3.1), a commercially available software program, was used to create a three-dimensional model of the tower and calculate primary member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix B. The following table details the information provided to complete this structural analysis. This analysis is solely based on this information and is being completed without the benefit of a detailed site visit.

DOCUMENTS PROVIDED

Document	Remarks	Source
SOW Summary Form	AT&T Internal Loading Document, dated 12/03/2013	SAI
Construction Drawings	Hudson Design Group Job #: 2055.01, dated 10/17/2013	SAI
Tower Design	Rohn File #: 42591AE001, dated 04/26/2000	SAI
Foundation Design	Rohn Drawing #: A000847-1, dated 04/26/2000	Siterra
Geotechnical Report	Dr. Clarence Welti Geotechnical Engineering, dated 03/10/2009	Siterra
Previous Structural Analysis	GPD Project #: 2008147.27, dated 03/18/2009	Siterra

ASSUMPTIONS

This rigorous structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The tower member sizes and shapes are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations.
6. Foundations are properly designed and constructed to resist the original design loads indicated in the documents provided.
7. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
8. All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
9. All prior structural modifications are assumed to be as per data supplied/available and to have been properly installed.
10. Loading interpreted from photos is accurate to $\pm 5'$ AGL, antenna size accurate to ± 3.3 sf, and coax equal to the number of existing antennas without reserve.
11. All existing loading was obtained from site photos, the provided SOW Summary Form, previous structural analysis, and Construction drawings and is assumed to be accurate.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD Group should be allowed to review any new information to determine its effect on the structural integrity of the tower.

DISCLAIMER OF WARRANTIES

GPD GROUP has not performed a site visit to the tower to verify the member sizes or antenna/coax loading. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD GROUP in connection with this Rigorous Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

GPD GROUP does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD GROUP provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the feasibility of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the specified code recommended amount, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD GROUP, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

GPD GROUP makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD GROUP will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD GROUP pursuant to this report will be limited to the total fee received for preparation of this report.

Tower Analysis Summary Form

General Info

Site Name	MONTVILLE BUTLER TOWN RD
Site Number	65056
FA Number	10035374
Date of Analysis	December 10, 2013
Company Performing Analysis	GPD

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

Tower Info	Description	Date
Tower Type (G, SST, MP)	G	
Tower Height (top of steel AGL)	195'	
Tower Manufacturer	Rohn	
Tower Model	80	
Tower Design	Rohn File #: 42591AE001	4/26/2000
Foundation Design	Rohn Drawing #: A000847-1	04/26/2000
Geotech Report	Dr. Clarence Welti Geotechnical Engineering	03/10/2009
Tower Mapping	n/a	
Previous Structural Analysis	GPD Project #: 2008147.27	03/18/2009
Foundation Mapping	n/a	

Design Parameters	
Design Code Used	TIA/EIA-222-F, 2006 IBC
	ASCE7-05 & 2005 CTBC
Location of Tower (County, State)	New London, CT
Basic Wind Speed (mph)	95 (fastest-mile)
Ice Thickness (in)	0.75
Structure Classification (I, II, III)	
Exposure Category (B, C, D)	
Topographic Category (1 to 5)	

Analysis Results (% Maximum Usage)

Existing/Reserved + Future + Proposed Condition	
Tower (%)	86.8%
Guy Wires (%)	80.4%
Foundation (%)	49.2%
Foundation Adequate?	Yes

Steel Yield Strength (ksi)

Legs	50
Diagonals	36
Bolts	A325X
Guy Wires	EHS

Existing / Reserved Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Face/Leg
Unknown	194							3	Unknown	10' Boom Gate				
Nextel	183	183	12	Panel	Decibel	DB844H90		3	Unknown	12' Boom Gate	12	Unknown	1-5/8"	Face "A"
AT&T Mobility	161	161	6	Panel	Powerwave	7770.00	23/143/263	3	Unknown	12' Boom Gate	12	Unknown	1-5/8"	Face "B"
AT&T Mobility	161	161	6	TMA	Powerwave	LGP21401				on same mount				
AT&T Mobility	161	161	6	Diplexer	Powerwave	LGP21901				on same mount				

Note: (3) 7770.00 Antennas, (6) LGP 21401 TMA's, (6) LGP21901 diplexers, (6) 1-5/8" coax, and (3) 12' Boom Gates at 161' shall be removed prior to the installation of the proposed loading. The remaining equipment shall be reused.

Proposed Loading

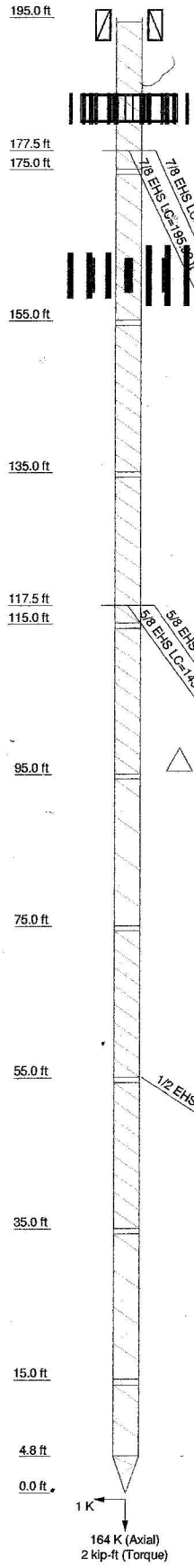
Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Face/Leg
AT&T Mobility	161	161	3	Panel	CCI	HPA-65R-BUU-H8	143	3	SitePro	MTC3615 AD Sector Mount	6	Power cable	15.4 mm	Face "B"
AT&T Mobility	161	161	3	Panel	CCI	HPA-65R-BUU-H6	263			on same mount	1	Fiber cable	10 mm	Face "B"
AT&T Mobility	161	161	3	Panel	Andrew	SBNHH-1D65A	23			on same mount				
AT&T Mobility	161	161	3	TMA	CCI	DTMABP7819VG12A-BP				on same mount				
AT&T Mobility	161	161	6	RRU	Ericsson	RRUS-11				on same mount				
AT&T Mobility	161	161	6	RRU	Ericsson	RRUS-12				on same mount				
AT&T Mobility	161	161	3	RRU	Ericsson	RRUS-E2				on same mount				
AT&T Mobility	161	161	3	RRU	Ericsson	RRUS-32				on same mount				
AT&T Mobility	161	161	6	RRU	Ericsson	A2 Module				on same mount				
AT&T Mobility	161	161	3	Surge	Raycap	DC6-48-60-18-8F				on same mount				

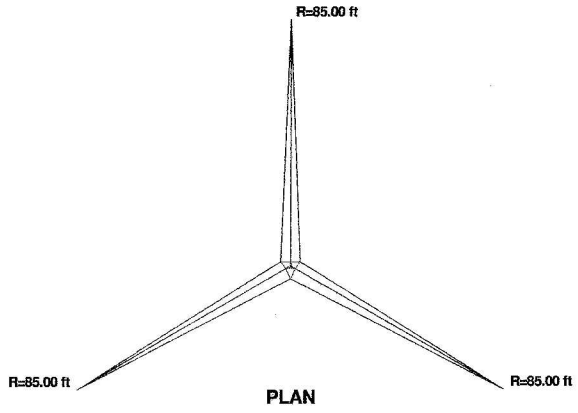
Note: The proposed loading shall be in addition to the remaining loading at the same elevation. The proposed coax shall be placed on Face B next to the existing coax to 161' in a three on four configuration in order for the analysis results to be valid.

Future Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Face/Leg

Section	T11	T10	T9	T8	T7	T6	T5	T4	T3	T2	T1
Legs					ROHN 3 EH					ROHN 2.5 EH	
Leg Grade						A572-50					
Diagonals						Rohn Tube 1.5					
Diagonal Grade						A36					
Top Girts	N.A.					Rohn Tube 1.5					
Bottom Girts	N.A.		Rohn Tube 1.5		N.A.		Rohn Tube 1.5				
Top Guy Pull-Offs			N.A.		SR 1 1/4		N.A.	SR 1 1/4	N.A.	SR 1 1/4	3.416
Face Width (ft)							72 @ 2.40885				
# Panels @ (ft)	A	4 @ 2.36328									
Weight (K)	10.9	0.2	0.4	0.8	1.0	0.8	1.0	1.8	1.0	0.9	1.8





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
MTS Vancomm 11' Stand-Off Sector Frame	194	DTMABP7819VG12A	161
MTS Vancomm 11' Stand-Off Sector Frame	194	(2) RRUS 11	161
MTS Vancomm 11' Stand-Off Sector Frame	194	(2) RRUS 11	161
Rohn 12' Boom Gate	183	(2) RRUS 11	161
Rohn 12' Boom Gate	183	(2) RRUS 12	161
Rohn 12' Boom Gate	183	(2) RRUS 12	161
(4) DB844H90 w/ Mount Pipe	183	(2) RRUS 12	161
(4) DB844H90 w/ Mount Pipe	183	RRUS E2	161
(4) DB844H90 w/ Mount Pipe	183	RRUS E2	161
Commscope MTC3615 Sector Mount	161	RRUS E2	161
Commscope MTC3615 Sector Mount	161	RRUS-32	161
Commscope MTC3615 Sector Mount	161	RRUS-32	161
7770.00 w/Mount Pipe	161	RRUS-32	161
7770.00 w/Mount Pipe	161	(2) A2 Module	161
7770.00 w/Mount Pipe	161	(2) A2 Module	161
(3) HPA-65R-BUU-H8 w/ Mount Pipe	161	(2) A2 Module	161
(3) HPA-65R-BUU-H6 w/ Mount Pipe	161	DC6-48-60-18-8F Surge Suppression Unit	161
(3) SBNHH-1D65A w/ Mount Pipe	161	DC6-48-60-18-8F Surge Suppression Unit	161
DTMABP7819VG12A	161	DC6-48-60-18-8F Surge Suppression Unit	161
DTMABP7819VG12A	161		

SYMBOL LIST

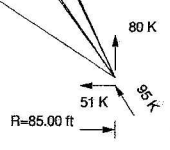
MARK	SIZE	MARK	SIZE
A	4 @ 1.20443		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

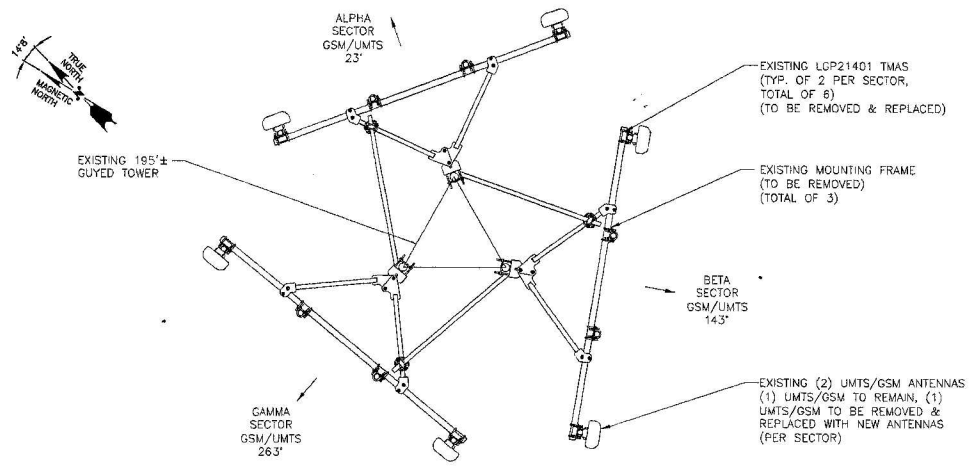
TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for a 95 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 0.75 in ice.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 86.8%



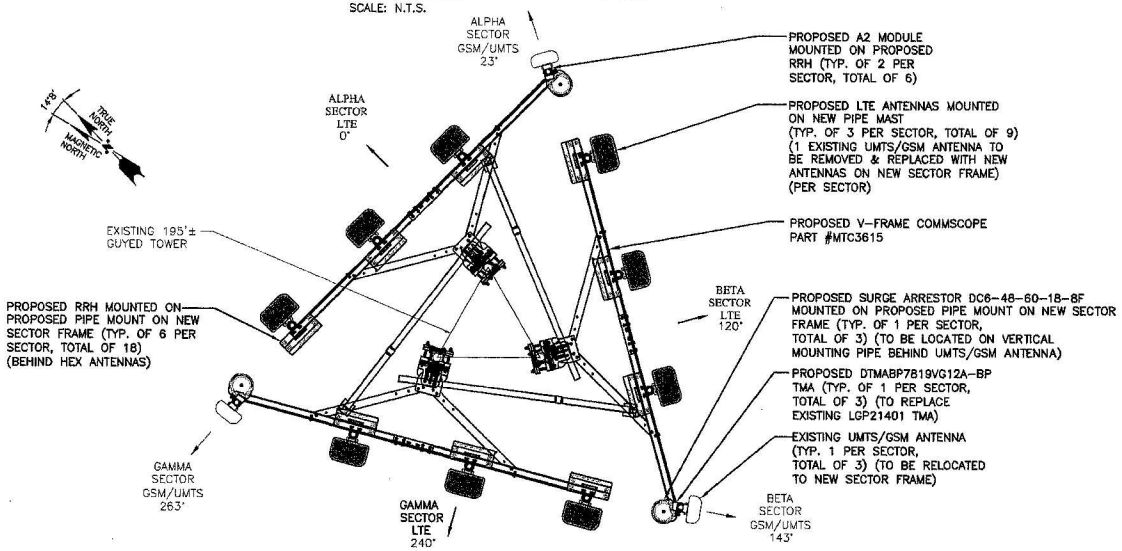
GPD GROUP
520 S. Main St., Suite 2531
Akron, OH 44311
Phone: (614) 210-0751
FAX: (614) 210-0752

Job: 65066 (CT2055) MONTVILLE BUTLER TOWN RD		
Project: 2013723.13.65066.01		
Client: SAI Communications	Drawn by: kdavis	App'd:
Code: TIA/EIA-222-F	Date: 12/10/13	Scale: NTS
Path: \\AKRN03\Data\2011\ATandT\65066\02 2013723.13 65066.01 SAI SAITN\X\CT2055.eri		Dwg No. E-1



EXISTING ANTENNA LAYOUT

SCALE: N.T.S.



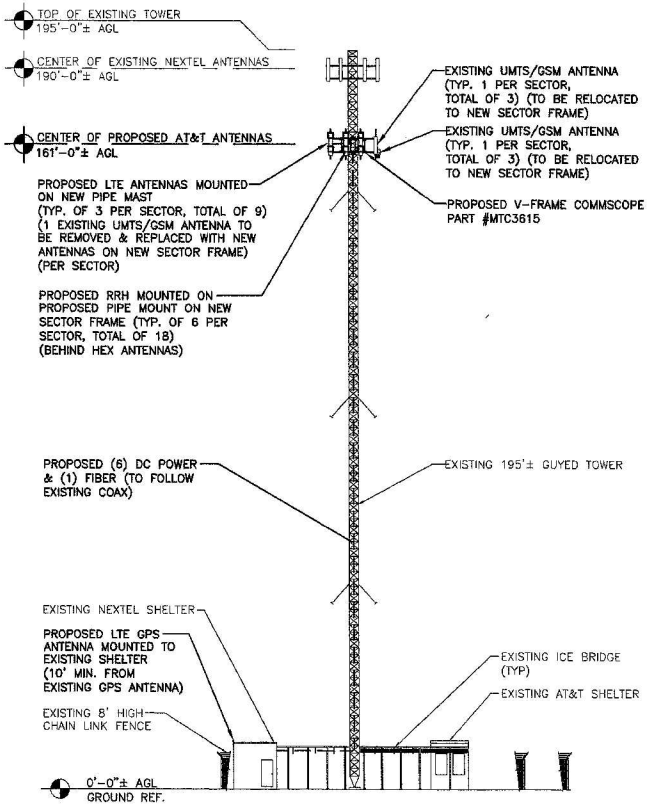
PROPOSED ANTENNA LAYOUT

SCALE: N.T.S.

NOTE:
CONTRACTOR SHALL ADJUST MOUNTING LOCATION OF SURGE ARRESTOR & RRH'S AS REQUIRED TO AVOID OBSTRUCTING EXISTING CLIMBING LADDER/PEGS.

NOTE:
REFER TO STRUCTURAL ANALYSIS BY: GPD GROUP DATED: DECEMBER 10, 2013, FOR THE CAPACITY OF THE EXISTING STRUCTURES TO SUPPORT THE PROPOSED EQUIPMENT.

NOTE: *
REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



NORTHEAST ELEVATION

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

0 8'-0" 16'-0" 32'-0" 48'-0"

Hudson Design Group LLC
1600 OSGOOD STREET BUILDING 20 NORTH, SUITE 2002S N. ANDOVER, MA 01845
TEL: (978) 557-5553 FAX: (978) 336-5586

SAI
27 NORTHWESTERN DR.
SALEM, NH 03079

SITE NUMBER: CT2055
SITE NAME: MONTVILLE-BUTLERTOWN ROAD
376 BUTLERTOWN ROAD
MONTVILLE, CT 06370
NEW LONDON COUNTY

at&t
550 COCHITUATE RD.
FRAMINGHAM, MA, 01701

NO.	DATE	REVISIONS	BY	CHK	APP'D
A	12/10/13	ISSUED FOR REVIEW	SG	AT	DPH

SCALE: AS SHOWN | DESIGNED BY: AT | DRAWN BY: SG

AT&T

ANTENNA LAYOUT AND ELEVATION (LTE)

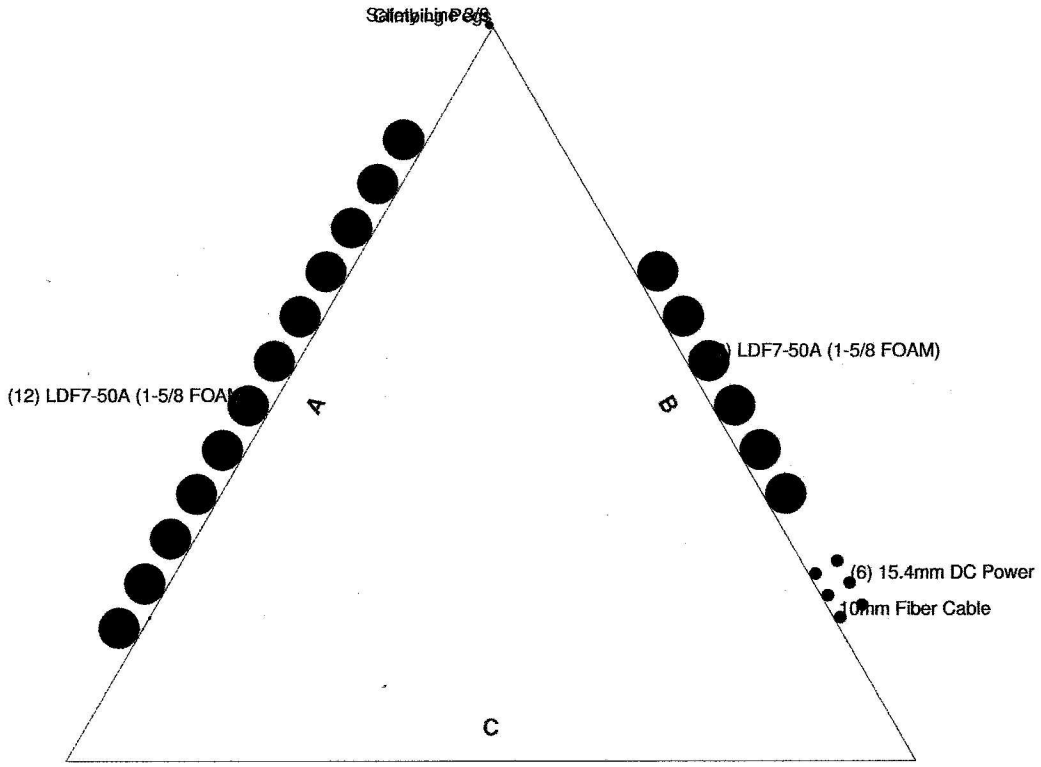
JOB NUMBER	DRAWING NUMBER	REV
2055.01	A-2	A

Feed Line Plan

15'

_____ Round _____ Flat _____ App In Face _____ App Out Face

Section @ 15'



GPD GROUP
520 S. Main St., Suite 2531
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Project: 2013723.13.65066.01			
Client: SAI Communications	Drawn by: kdavis	App'd:	
Code: TIA/EIA-222-F	Date: 12/09/13	Scale: NTS	
Path: \\AKRN03\Data\2011\ATandT\65066\02 2013723 13.65066 01 SAI SAITNX\CoaxCT2055.ert		Dwg No. E-7	

Centek Engineering, Inc.
3-2 North Branford Road
Branford, Connecticut 06405
Phone: (203) 488-0580
Fax: (203) 488-8587

Steven L. Levine
Real Estate Consultant

January 8, 2014

Mayor Ronald McDaniel, Jr.
Town of Montville
Town Hall 310 Norwich-New London Tpke.
Uncasville, CT 06382

Re: Telecommunications Facility – 376 Butlertown Road

Dear Mayor McDaniel:

In order to accommodate technological changes, implement Uniform Mobile Telecommunications System ("UMTS") and Long Term Evolution ("LTE") capabilities, and enhance system performance in the State of Connecticut, New Cingular Wireless PCS, LLC ("AT&T") will be changing its equipment configuration at certain cell sites.

As required by Regulations of Connecticut State Agencies ("R.C.S.A.") Section 16-50j-73, the Connecticut Siting Council has been notified of the changes and will review AT&T's proposal. Please accept this letter as notification under Section 16-50j-73 of construction which constitutes an exempt modification pursuant to R.C.S.A. Section 16-50j-72(b)(2).

The enclosed Notice fully sets forth the AT&T proposal. However, if you have any questions or require any further information on the plans for the site or the Siting Council's procedures, please contact the undersigned at 860-830-0380 or Ms. Melanie Bachman, Acting Executive Director, Connecticut Siting Council at (860) 827-2935.

Sincerely,

Steven L. Levine
Real Estate Consultant

Enclosure

SAI Communications
27 Northwestern Drive
Salem, NH 03079
(603) 560-7049

Kevin Clements
520 South Main Street, Suite 2531
Akron, OH 44311
(678) 781-5061
kclements@gpdgroup.com

GPD# 2013723.13.65066.01
December 10, 2013

RIGOROUS STRUCTURAL ANALYSIS REPORT

AT&T DESIGNATION:	**Site USID:**	**65066**
	Site FA:	**10035374**
	Client #:	**CT2055**
	Site Name:	**MONTVILLE BUTLER TOWN RD**
	AT&T Project:	**MOD: LTE Add9/23/2013**
ANALYSIS CRITERIA:	**Codes:**	**TIA/EIA-222-F, 2006 IBC, ASCE7-05 & 2005 CTBC** **95-mph (fastest-mile) with 0" ice** **38-mph (fastest-mile) with 0.75" ice**
SITE DATA:		**376 Butlertown Road, Montville, CT 06353, New London County** **Latitude 41° 25' 17.771" N, Longitude 72° 12' 45.396" W** **Market: New England** **195' Rohn Guyed**

Mr. Edward Onessimo,

GPD is pleased to submit this Rigorous Structural Analysis Report to determine the structural integrity of the aforementioned tower. The purpose of the analysis is to determine the suitability of the tower with the existing and proposed loading configuration detailed in the analysis report.

Analysis Results

Tower Stress Level with Proposed Equipment:	86.8%	Pass
Foundation Ratio with Proposed Equipment:	49.2%	Pass

We at GPD appreciate the opportunity of providing our continuing professional services to you and SAI Communications. If you have any questions or need further assistance on this or any other projects please do not hesitate to call.

Respectfully submitted,

John N. Kabak, P.E.
Connecticut #: 28336

SUMMARY & RESULTS

The purpose of this analysis was to verify whether the existing structure is capable of carrying the proposed loading configuration as specified by AT&T Mobility to SAI Communications. This report was commissioned by Mr. Edward Onessimo of SAI Communications.

The proposed coax shall be placed on Face B next to the existing coax to 161' in a three on four configuration in order for the analysis results to be valid.

TOWER SUMMARY AND RESULTS

Member	Capacity	Results
Leg	86.8%	Pass
Diagonal	73.8%	Pass
Top Girt	20.9%	Pass
Bottom Girt	68.4%	Pass
Guy Wires	80.4%	Pass
Top Guy Pull-Off	42.0%	Pass
Torque Arm Top	57.8%	Pass
Bolt Checks	73.8%	Pass
Guy Anchor Foundation	31.5%	Pass
Tower Base Foundation	49.2%	Pass

ANALYSIS METHOD

tnxTower (Version 6.1.3.1), a commercially available software program, was used to create a three-dimensional model of the tower and calculate primary member stresses for various dead, live, wind, and ice load cases. Selected output from the analysis is included in Appendix B. The following table details the information provided to complete this structural analysis. This analysis is solely based on this information and is being completed without the benefit of a detailed site visit.

DOCUMENTS PROVIDED

Document	Remarks	Source
SOW Summary Form	AT&T Internal Loading Document, dated 12/03/2013	SAI
Construction Drawings	Hudson Design Group Job #: 2055.01, dated 10/17/2013	SAI
Tower Design	Rohn File #: 42591AE001, dated 04/26/2000	SAI
Foundation Design	Rohn Drawing #: A000847-1, dated 04/26/2000	Siterra
Geotechnical Report	Dr. Clarence Welti Geotechnical Engineering, dated 03/10/2009	Siterra
Previous Structural Analysis	GPD Project #: 2008147.27, dated 03/18/2009	Siterra

ASSUMPTIONS

This rigorous structural analysis is based on the theoretical capacity of the members and is not a condition assessment of the tower. This analysis is from information supplied, and therefore, its results are based on and are as accurate as that supplied data. GPD has made no independent determination, nor is it required to, of its accuracy. The following assumptions were made for this structural analysis.

1. The tower member sizes and shapes are considered accurate as supplied. The material grade is as per data supplied and/or as assumed and as stated in the materials section.
2. The antenna configuration is as supplied and/or as modeled in the analysis. It is assumed to be complete and accurate. All antennas, mounts, coax and waveguides are assumed to be properly installed and supported as per manufacturer requirements.
3. Some assumptions are made regarding antennas and mount sizes and their projected areas based on best interpretation of data supplied and of best knowledge of antenna type and industry practice.
4. All mounts, if applicable, are considered adequate to support the loading. No actual analysis of the mount(s) is performed. This analysis is limited to analyzing the tower only.
5. The soil parameters are as per data supplied or as assumed and stated in the calculations.
6. Foundations are properly designed and constructed to resist the original design loads indicated in the documents provided.
7. The tower and structures have been properly maintained in accordance with TIA Standards and/or with manufacturer's specifications.
8. All welds and connections are assumed to develop at least the member capacity unless determined otherwise and explicitly stated in this report.
9. All prior structural modifications are assumed to be as per data supplied/available and to have been properly installed.
10. Loading interpreted from photos is accurate to $\pm 5'$ AGL, antenna size accurate to ± 3.3 sf, and coax equal to the number of existing antennas without reserve.
11. All existing loading was obtained from site photos, the provided SOW Summary Form, previous structural analysis, and Construction drawings and is assumed to be accurate.

If any of these assumptions are not valid or have been made in error, this analysis may be affected, and GPD Group should be allowed to review any new information to determine its effect on the structural integrity of the tower.

DISCLAIMER OF WARRANTIES

GPD GROUP has not performed a site visit to the tower to verify the member sizes or antenna/coax loading. If the existing conditions are not as represented on the tower elevation contained in this report, we should be contacted immediately to evaluate the significance of the discrepancy. This is not a condition assessment of the tower or foundation. This report does not replace a full tower inspection. The tower and foundations are assumed to have been properly fabricated, erected, maintained, in good condition, twist free, and plumb.

The engineering services rendered by GPD GROUP in connection with this Rigorous Structural Analysis are limited to a computer analysis of the tower structure and theoretical capacity of its main structural members. All tower components have been assumed to only resist dead loads when no other loads are applied. No allowance was made for any damaged, bent, missing, loose, or rusted members (above and below ground). No allowance was made for loose bolts or cracked welds.

GPD GROUP does not analyze the fabrication of the structure (including welding). It is not possible to have all the very detailed information needed to perform a thorough analysis of every structural sub-component and connection of an existing tower. GPD GROUP provides a limited scope of service in that we cannot verify the adequacy of every weld, plate connection detail, etc. The purpose of this report is to assess the feasibility of adding appurtenances usually accompanied by transmission lines to the structure.

It is the owner's responsibility to determine the amount of ice accumulation in excess of the specified code recommended amount, if any, that should be considered in the structural analysis.

The attached sketches are a schematic representation of the analyzed tower. If any material is fabricated from these sketches, the contractor shall be responsible for field verifying the existing conditions, proper fit, and clearance in the field. Any mentions of structural modifications are reasonable estimates and should not be used as a precise construction document. Precise modification drawings are obtainable from GPD GROUP, but are beyond the scope of this report.

Miscellaneous items such as antenna mounts, etc., have not been designed or detailed as a part of our work. We recommend that material of adequate size and strength be purchased from a reputable tower manufacturer.

GPD GROUP makes no warranties, expressed and/or implied, in connection with this report and disclaims any liability arising from material, fabrication, and erection of this tower. GPD GROUP will not be responsible whatsoever for, or on account of, consequential or incidental damages sustained by any person, firm, or organization as a result of any data or conclusions contained in this report. The maximum liability of GPD GROUP pursuant to this report will be limited to the total fee received for preparation of this report.

APPENDIX A

Tower Analysis Summary Form

Tower Analysis Summary Form

General Info

Site Name	MONTVILLE BUTLER TOWN RD
Site Number	65066
FA Number	10035374
Date of Analysis	December 10, 2013
Company Performing Analysis	GPD

The information contained in this summary report is not to be used independently from the PE stamped tower analysis.

Tower Info	Description	Date
Tower Type (G, SST, MP)	G	
Tower Height (top of steel AGL)	195'	
Tower Manufacturer	Rohn	
Tower Model	80	
Tower Design	Rohn File #: 42591AE001	4/26/2000
Foundation Design	Rohn Drawing #: A000847-1	04/26/2000
Geotech Report	Dr. Clarence Welti Geotechnical Engineering	03/10/2009
Tower Mapping	n/a	
Previous Structural Analysis	GPD Project #: 2008147.27	03/18/2009
Foundation Mapping	n/a	

Design Parameters	
Design Code Used	TIA/EIA-222-F, 2006 IBC
	ASCE7-05 & 2005 CTBC
Location of Tower (County, State)	New London, CT
Basic Wind Speed (mph)	95 (fastest-mile)
Ice Thickness (in)	0.75
Structure Classification (I, II, III)	
Exposure Category (B, C, D)	
Topographic Category (1 to 5)	

Analysis Results (% Maximum Usage)

Existing/Reserved + Future + Proposed Condition	
Tower (%)	86.8%
Guy Wires (%)	80.4%
Foundation (%)	49.2%
Foundation Adequate?	Yes

Steel Yield Strength (ksi)

Legs	50
Diagonals	36
Bolts	A325X
Guy Wires	EHS

Existing / Reserved Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Face/Leg
Unknown	194							3	Unknown	10' Boom Gate				
Nextel	183	183	12	Panel	Decibel	DB844H90		3	Unknown	12' Boom Gate	12	Unknown	1-5/8"	Face "A"
AT&T Mobility	161	161	6	Panel	Powerwave	7770.00	23/143/263	3	Unknown	12' Boom Gate	12	Unknown	1-5/8"	Face "B"
AT&T Mobility	161	161	6	TMA	Powerwave	LGP21401				on same mount				
AT&T Mobility	161	161	6	Diplexer	Powerwave	LGP21901				on same mount				

Note: (3) 7770.00 Antennas, (6) LGP 21401 TMA's, (6) LGP21901 diplexers, (6) 1-5/8" coax, and (3) 12' Boom Gates at 161' shall be removed prior to the installation of the proposed loading. The remaining equipment shall be reused.

Proposed Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Face/Leg
AT&T Mobility	161	161	3	Panel	CCI	HPA-65R-BUU-H8	143	3	SitePro	MTC3615 AD Sector Mount	6	Power cable	15.4 mm	Face "B"
AT&T Mobility	161	161	3	Panel	CCI	HPA-65R-BUU-H6	263			on same mount	1	Fiber cable	10 mm	Face "B"
AT&T Mobility	161	161	3	Panel	Andrew	SBNHH-1D65A	23			on same mount				
AT&T Mobility	161	161	3	TMA	CCI	DTMABP7819VG12A-BP				on same mount				
AT&T Mobility	161	161	6	RRU	Ericsson	RRUS-11				on same mount				
AT&T Mobility	161	161	6	RRU	Ericsson	RRUS-12				on same mount				
AT&T Mobility	161	161	3	RRU	Ericsson	RRUS-E2				on same mount				
AT&T Mobility	161	161	3	RRU	Ericsson	RRUS-32				on same mount				
AT&T Mobility	161	161	6	RRU	Ericsson	A2 Module				on same mount				
AT&T Mobility	161	161	3	Surge	Raycap	DC6-48-60-18-8F				on same mount				

Note: The proposed loading shall be in addition to the remaining loading at the same elevation. The proposed coax shall be placed on Face B next to the existing coax to 161' in a three on four configuration in order for the analysis results to be valid.

Future Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Face/Leg

APPENDIX B

tnxTower Output File

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 195.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 3.42 ft at the top and tapered at the base.
This tower is designed using the TIA/EIA-222-F standard.
The following design criteria apply:

Tower is located in New London County, Connecticut.
Basic wind speed of 95 mph.
Nominal ice thickness of 0.7500 in.
Ice density of 56 pcf.
A wind speed of 38 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 50 mph.
Pressures are calculated at each section.
Safety factor used in guy design is 2.
Stress ratio used in tower member design is 1.333.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight klf
Climbing Pegs	A	Yes	Ar (CfAe)	195.00 - 5.00	0.0000	0.5	1	1	0.2500	0.1500		0.00
Safety Line 3/8	A	Yes	Ar (CfAe)	195.00 - 5.00	0.0000	0.5	1	1	0.3750	0.3750		0.00
LDF7-50A (1-5/8 FOAM)	A	Yes	Ar (CfAe)	183.00 - 8.00	0.0000	0	12	12	0.5000	1.9800		0.00
LDF7-50A (1-5/8 FOAM)	B	Yes	Ar (CfAe)	161.00 - 8.00	0.0000	0	6	6	0.5000	1.9800		0.00
15.4mm DC Power	B	Yes	Ar (CfAe)	161.00 - 8.00	0.0000	0.28	6	3	0.6060	0.6060		0.00
10mm Fiber Cable	B	Yes	Ar (CfAe)	161.00 - 8.00	0.0000	0.31	1	1	0.3940	0.3940		0.00

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
MTS Vancomm 11'	A	From Leg	2.00	0.0000	194.00	No Ice	10.88	8.98	0.1
Stand-Off Sector Frame			0.00			1/2" Ice	15.34	12.84	0.3
			0.00			1" Ice	19.80	16.70	0.4
MTS Vancomm 11'	B	From Leg	2.00	0.0000	194.00	No Ice	10.88	8.98	0.1
Stand-Off Sector Frame			0.00			1/2" Ice	15.34	12.84	0.3
			0.00			1" Ice	19.80	16.70	0.4
MTS Vancomm 11'	C	From Leg	2.00	0.0000	194.00	No Ice	10.88	8.98	0.1
Stand-Off Sector Frame			0.00			1/2" Ice	15.34	12.84	0.3
			0.00			1" Ice	19.80	16.70	0.4
Rohn 12' Boom Gate	A	From Leg	2.00	0.0000	183.00	No Ice	15.35	14.00	0.6

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 K
			0.00			1/2" Ice	21.29	20.81	0.7
			0.00			1" Ice	27.23	27.62	0.9
Rohn 12' Boom Gate	B	From Leg	2.00	0.0000	183.00	No Ice	15.35	14.00	0.6
			0.00			1/2" Ice	21.29	20.81	0.7
			0.00			1" Ice	27.23	27.62	0.9
Rohn 12' Boom Gate	C	From Leg	2.00	0.0000	183.00	No Ice	15.35	14.00	0.6
			0.00			1/2" Ice	21.29	20.81	0.7
			0.00			1" Ice	27.23	27.62	0.9
(4) DB844H90 w/ Mount Pipe	A	From Leg	4.00	0.0000	183.00	No Ice	3.30	4.92	0.0
			0.00			1/2" Ice	3.69	5.60	0.1
			0.00			1" Ice	4.12	6.28	0.1
(4) DB844H90 w/ Mount Pipe	B	From Leg	4.00	0.0000	183.00	No Ice	3.30	4.92	0.0
			0.00			1/2" Ice	3.69	5.60	0.1
			0.00			1" Ice	4.12	6.28	0.1
(4) DB844H90 w/ Mount Pipe	C	From Leg	4.00	0.0000	183.00	No Ice	3.30	4.92	0.0
			0.00			1/2" Ice	3.69	5.60	0.1
			0.00			1" Ice	4.12	6.28	0.1
Commscope MTC3615 Sector Mount	A	From Leg	2.00	0.0000	161.00	No Ice	18.81	10.62	0.5
			0.00			1/2" Ice	24.75	15.16	0.7
			0.00			1" Ice	30.69	19.70	0.9
Commscope MTC3615 Sector Mount	B	From Leg	2.00	0.0000	161.00	No Ice	18.81	10.62	0.5
			0.00			1/2" Ice	24.75	15.16	0.7
			0.00			1" Ice	30.69	19.70	0.9
Commscope MTC3615 Sector Mount	C	From Leg	2.00	0.0000	161.00	No Ice	18.81	10.62	0.5
			0.00			1/2" Ice	24.75	15.16	0.7
			0.00			1" Ice	30.69	19.70	0.9
7770.00 w/Mount Pipe	A	From Leg	4.00	0.0000	161.00	No Ice	5.88	4.10	0.1
			0.00			1/2" Ice	6.31	4.73	0.1
			0.00			1" Ice	6.75	5.37	0.2
7770.00 w/Mount Pipe	B	From Leg	4.00	0.0000	161.00	No Ice	5.88	4.10	0.1
			0.00			1/2" Ice	6.31	4.73	0.1
			0.00			1" Ice	6.75	5.37	0.2
7770.00 w/Mount Pipe	C	From Leg	4.00	0.0000	161.00	No Ice	5.88	4.10	0.1
			0.00			1/2" Ice	6.31	4.73	0.1
			0.00			1" Ice	6.75	5.37	0.2
(3) HPA-65R-BUU-H8 w/ Mount Pipe	B	From Leg	4.00	0.0000	161.00	No Ice	13.81	9.79	0.1
			0.00			1/2" Ice	14.54	11.21	0.2
			0.00			1" Ice	15.27	12.48	0.3
(3) HPA-65R-BUU-H6 w/ Mount Pipe	C	From Leg	4.00	0.0000	161.00	No Ice	10.60	8.11	0.1
			0.00			1/2" Ice	11.27	9.30	0.2
			0.00			1" Ice	11.91	10.21	0.2
(3) SBNHH-1D65A w/ Mount Pipe	A	From Leg	4.00	0.0000	161.00	No Ice	6.57	5.19	0.1
			0.00			1/2" Ice	7.09	5.96	0.1
			0.00			1" Ice	7.59	6.70	0.2
DTMABP7819VG12A	A	From Leg	4.00	0.0000	161.00	No Ice	1.17	0.44	0.0
			0.00			1/2" Ice	1.32	0.56	0.0
			0.00			1" Ice	1.48	0.69	0.0
DTMABP7819VG12A	B	From Leg	4.00	0.0000	161.00	No Ice	1.17	0.44	0.0
			0.00			1/2" Ice	1.32	0.56	0.0
			0.00			1" Ice	1.48	0.69	0.0
DTMABP7819VG12A	C	From Leg	4.00	0.0000	161.00	No Ice	1.17	0.44	0.0
			0.00			1/2" Ice	1.32	0.56	0.0
			0.00			1" Ice	1.48	0.69	0.0
(2) RRUS 11	A	From Leg	1.00	0.0000	161.00	No Ice	2.94	1.19	0.1
			0.00			1/2" Ice	3.17	1.35	0.1
			0.00			1" Ice	3.41	1.52	0.1
(2) RRUS 11	B	From Leg	1.00	0.0000	161.00	No Ice	2.94	1.19	0.1

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 K
			0.00			1/2" Ice	3.17	1.35	0.1
			0.00			1" Ice	3.41	1.52	0.1
(2) RRUS 11	C	From Leg	1.00	0.0000	161.00	No Ice	2.94	1.19	0.1
			0.00			1/2" Ice	3.17	1.35	0.1
			0.00			1" Ice	3.41	1.52	0.1
(2) RRUS 12	A	From Leg	1.00	0.0000	161.00	No Ice	3.67	1.48	0.0
			0.00			1/2" Ice	3.92	1.67	0.1
			0.00			1" Ice	4.19	1.86	0.1
(2) RRUS 12	B	From Leg	1.00	0.0000	161.00	No Ice	3.67	1.48	0.0
			0.00			1/2" Ice	3.92	1.67	0.1
			0.00			1" Ice	4.19	1.86	0.1
(2) RRUS 12	C	From Leg	1.00	0.0000	161.00	No Ice	3.67	1.48	0.0
			0.00			1/2" Ice	3.92	1.67	0.1
			0.00			1" Ice	4.19	1.86	0.1
RRUS E2	A	From Leg	1.00	0.0000	161.00	No Ice	2.94	1.19	0.1
			0.00			1/2" Ice	3.17	1.35	0.1
			0.00			1" Ice	3.41	1.52	0.1
RRUS E2	B	From Leg	1.00	0.0000	161.00	No Ice	2.94	1.19	0.1
			0.00			1/2" Ice	3.17	1.35	0.1
			0.00			1" Ice	3.41	1.52	0.1
RRUS E2	C	From Leg	1.00	0.0000	161.00	No Ice	2.94	1.19	0.1
			0.00			1/2" Ice	3.17	1.35	0.1
			0.00			1" Ice	3.41	1.52	0.1
RRUS-32	A	From Leg	1.00	0.0000	161.00	No Ice	3.87	2.76	0.1
			0.00			1/2" Ice	4.15	3.02	0.1
			0.00			1" Ice	4.44	3.29	0.1
RRUS-32	B	From Leg	1.00	0.0000	161.00	No Ice	3.87	2.76	0.1
			0.00			1/2" Ice	4.15	3.02	0.1
			0.00			1" Ice	4.44	3.29	0.1
RRUS-32	C	From Leg	1.00	0.0000	161.00	No Ice	3.87	2.76	0.1
			0.00			1/2" Ice	4.15	3.02	0.1
			0.00			1" Ice	4.44	3.29	0.1
(2) A2 Module	A	From Leg	1.00	0.0000	161.00	No Ice	1.87	0.42	0.0
			0.00			1/2" Ice	2.05	0.53	0.0
			0.00			1" Ice	2.24	0.65	0.0
(2) A2 Module	B	From Leg	1.00	0.0000	161.00	No Ice	1.87	0.42	0.0
			0.00			1/2" Ice	2.05	0.53	0.0
			0.00			1" Ice	2.24	0.65	0.0
(2) A2 Module	C	From Leg	1.00	0.0000	161.00	No Ice	1.87	0.42	0.0
			0.00			1/2" Ice	2.05	0.53	0.0
			0.00			1" Ice	2.24	0.65	0.0
DC6-48-60-18-8F Surge Suppression Unit	A	From Leg	1.00	0.0000	161.00	No Ice	1.47	1.47	0.0
			0.00			1/2" Ice	1.67	1.67	0.0
			0.00			1" Ice	1.88	1.88	0.1
DC6-48-60-18-8F Surge Suppression Unit	B	From Leg	1.00	0.0000	161.00	No Ice	1.47	1.47	0.0
			0.00			1/2" Ice	1.67	1.67	0.0
			0.00			1" Ice	1.88	1.88	0.1
DC6-48-60-18-8F Surge Suppression Unit	C	From Leg	1.00	0.0000	161.00	No Ice	1.47	1.47	0.0
			0.00			1/2" Ice	1.67	1.67	0.0
			0.00			1" Ice	1.88	1.88	0.1

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
194.00	MTS Vancomm 11' Stand-Off Sector Frame	37	2.524	0.0037	0.0188	Inf
183.00	Rohn 12' Boom Gate	37	2.525	0.0024	0.0182	880188
177.52	Guy	37	2.525	0.0075	0.0182	454617
161.00	Commscope MTC3615 Sector Mount	37	2.493	0.0512	0.0196	12727
117.52	Guy	37	1.565	0.0875	0.0449	17929
55.11	Guy	27	0.729	0.0563	0.1085	49614

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	195	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	5.8	5.9	0.983 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	0.2	4.9	0.033 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	2.4	4.9	0.485 ✔	1.333	Member Bearing
T2	175	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	4.3	5.9	0.723 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	1.2	4.9	0.247 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.6	4.9	0.130 ✔	1.333	Member Bearing
T3	155	Leg	A325X	0.7500	4	2.3	19.4	0.121 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	4.1	5.9	0.695 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	1.3	4.9	0.260 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.8	4.9	0.168 ✔	1.333	Member Bearing
T4	135	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	4.2	4.9	0.871 ✔	1.333	Member Bearing
		Top Girt	A325X	0.5000	1	1.0	4.9	0.215 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	1.6	4.9	0.323 ✔	1.333	Member Bearing
T5	115	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	3.1	5.9	0.530 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	1.4	4.9	0.278 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.8	4.9	0.168 ✔	1.333	Member Bearing
T6	95	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	2.0	5.9	0.343 ✔	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	0.9	4.9	0.179 ✔	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.6	4.9	0.114 ✔	1.333	Member Bearing
T7	75	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✔	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	1.7	4.9	0.341 ✔	1.333	Member Bearing
		Top Girt	A325X	0.5000	1	0.8	4.9	0.158 ✔	1.333	Member Bearing

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load K	Ratio Load / Allowable	Allowable Ratio	Criteria
T8	55	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	2.4	5.9	0.401 ✓	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	1.0	4.9	0.211 ✓	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.9	4.9	0.187 ✓	1.333	Member Bearing
T9	35	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	1.6	5.9	0.274 ✓	1.333	Bolt Shear
		Top Girt	A325X	0.5000	1	0.7	4.9	0.149 ✓	1.333	Member Bearing
		Bottom Girt	A325X	0.5000	1	0.5	4.9	0.105 ✓	1.333	Member Bearing
T10	15	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	2.4	4.9	0.486 ✓	1.333	Member Bearing
		Top Girt	A325X	0.5000	1	0.7	4.9	0.151 ✓	1.333	Member Bearing
T11	4.8177	Leg	A325X	0.7500	4	0.0	19.4	0.000 ✓	1.333	Bolt Tension
		Diagonal	A325X	0.5000	1	2.8	4.9	0.585 ✓	1.333	Member Bearing

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
T1	195 - 175	Leg	ROHN 2.5 EH	2	-38.6	81.1	47.7	Pass
T2	175 - 155	Leg	ROHN 2.5 EH	59	-69.2	79.7	86.8	Pass
T3	155 - 135	Leg	ROHN 3 EH	116	-64.1	108.4	59.1	Pass
T4	135 - 115	Leg	ROHN 3 EH	173	-72.0	107.5	67.0	Pass
T5	115 - 95	Leg	ROHN 3 EH	230	-72.1	107.1	67.3	Pass
T6	95 - 75	Leg	ROHN 3 EH	287	-51.3	97.3	52.7	Pass
T7	75 - 55	Leg	ROHN 3 EH	320	-65.5	106.2	61.6	Pass
T8	55 - 35	Leg	ROHN 3 EH	377	-65.5	107.8	60.8	Pass
T9	35 - 15	Leg	ROHN 3 EH	435	-58.6	97.3	60.2	Pass
T10	15 - 4.8177	Leg	ROHN 3 EH	468	-57.9	97.9	59.1	Pass
T11	4.8177 - 0	Leg	ROHN 3 EH	488	-61.3	106.6	57.5	Pass
T1	195 - 175	Diagonal	Rohn Tube 1.5	11	-5.8	13.3	43.5 73.8 (b)	Pass
T2	175 - 155	Diagonal	Rohn Tube 1.5	110	-4.3	13.3	32.0 54.3 (b)	Pass
T3	155 - 135	Diagonal	Rohn Tube 1.5	125	-4.1	13.4	30.6 52.1 (b)	Pass
T4	135 - 115	Diagonal	Rohn Tube 1.5	186	-4.6	13.4	34.6 65.4 (b)	Pass
T5	115 - 95	Diagonal	Rohn Tube 1.5	285	-3.1	13.4	23.3 39.7 (b)	Pass
T6	95 - 75	Diagonal	Rohn Tube 1.5	318	-2.0	9.9	20.5 25.7 (b)	Pass
T7	75 - 55	Diagonal	Rohn Tube 1.5	333	-1.7	13.4	12.7 25.5 (b)	Pass
T8	55 - 35	Diagonal	Rohn Tube 1.5	428	-2.4	13.4	17.6 30.0 (b)	Pass
T9	35 - 15	Diagonal	Rohn Tube 1.5	463	-1.6	9.9	16.4 20.6 (b)	Pass
T10	15 - 4.8177	Diagonal	Rohn Tube 1.5	486	-1.8	9.9	18.1 36.4 (b)	Pass
T11	4.8177 - 0	Diagonal	Rohn Tube 1.5	491	-2.8	14.1	19.7	Pass

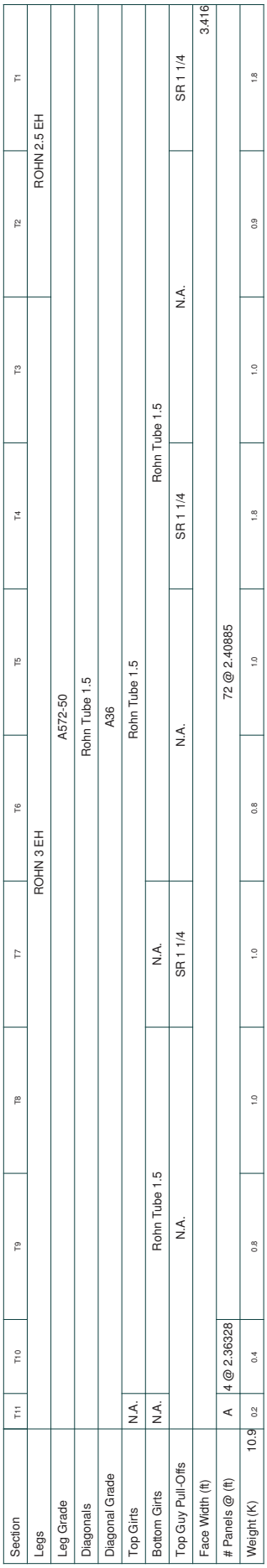
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	SF*P_{allow} K	% Capacity	Pass Fail
T1	195 - 175	Top Girt	Rohn Tube 1.5	4	-0.2	11.2	43.9 (b) 1.4	Pass
T2	175 - 155	Top Girt	Rohn Tube 1.5	63	1.2	15.5	2.5 (b) 7.8	Pass
T3	155 - 135	Top Girt	Rohn Tube 1.5	120	1.3	15.5	18.6 (b) 8.2	Pass
T4	135 - 115	Top Girt	Rohn Tube 1.5	177	1.0	15.5	19.5 (b) 6.8	Pass
T5	115 - 95	Top Girt	Rohn Tube 1.5	233	1.4	15.5	16.2 (b) 8.7	Pass
T6	95 - 75	Top Girt	Rohn Tube 1.5	291	0.9	15.5	20.9 (b) 5.6	Pass
T7	75 - 55	Top Girt	Rohn Tube 1.5	323	0.8	15.5	13.4 (b) 5.0	Pass
T8	55 - 35	Top Girt	Rohn Tube 1.5	380	1.0	15.5	11.8 (b) 6.6	Pass
T9	35 - 15	Top Girt	Rohn Tube 1.5	436	0.7	15.5	15.8 (b) 4.7	Pass
T10	15 - 4.8177	Top Girt	Rohn Tube 1.5	471	0.7	15.5	11.2 (b) 4.7	Pass
T1	195 - 175	Bottom Girt	Rohn Tube 1.5	9	2.4	15.5	11.3 (b) 15.2	Pass
T2	175 - 155	Bottom Girt	Rohn Tube 1.5	66	0.6	15.5	36.4 (b) 4.1	Pass
T3	155 - 135	Bottom Girt	Rohn Tube 1.5	123	0.8	15.5	9.8 (b) 5.3	Pass
T4	135 - 115	Bottom Girt	Rohn Tube 1.5	180	1.6	15.5	12.6 (b) 10.1	Pass
T5	115 - 95	Bottom Girt	Rohn Tube 1.5	237	0.8	15.5	24.2 (b) 5.3	Pass
T6	95 - 75	Bottom Girt	Rohn Tube 1.5	292	0.6	15.5	12.6 (b) 3.6	Pass
T8	55 - 35	Bottom Girt	Rohn Tube 1.5	383	0.9	15.5	8.6 (b) 5.9	Pass
T9	35 - 15	Bottom Girt	Rohn Tube 1.5	441	0.5	15.5	14.0 (b) 3.3	Pass
T10	15 - 4.8177	Bottom Girt	Rohn Tube 1.5	474	10.6	15.5	7.9 (b) 68.4	Pass
T1	195 - 175	Guy A@177.523	7/8	511	26.7	39.9	67.0	Pass
T4	135 - 115	Guy A@117.523	5/8	526	16.9	21.2	79.5	Pass
T7	75 - 55	Guy A@55.1146	1/2	531	10.4	13.4	77.4	Pass
T1	195 - 175	Guy B@177.523	7/8	506	26.8	39.9	67.2	Pass
T4	135 - 115	Guy B@117.523	5/8	522	17.0	21.2	80.3	Pass
T7	75 - 55	Guy B@55.1146	1/2	530	10.4	13.4	77.3	Pass
T1	195 - 175	Guy C@177.523	7/8	500	26.8	39.9	67.2	Pass
T4	135 - 115	Guy C@117.523	5/8	514	17.1	21.2	80.4	Pass
T7	75 - 55	Guy C@55.1146	1/2	529	10.4	13.4	77.3	Pass
T1	195 - 175	Top Guy Pull-Off@177.523	1 1/4	505	-6.9	16.4	42.0	Pass
T4	135 - 115	Top Guy Pull-Off@117.523	1 1/4	520	-5.7	17.0	33.6	Pass
T7	75 - 55	Top Guy Pull-Off@55.1146	1 1/4	327	4.6	49.1	9.4	Pass
T1	195 - 175	Torque Arm Top@177.523	MC18x42.7	508	-6.1	180.1	57.8	Pass
T4	135 - 115	Torque Arm Top@117.523	C15x33.9	516	-5.7	144.0	50.9	Pass

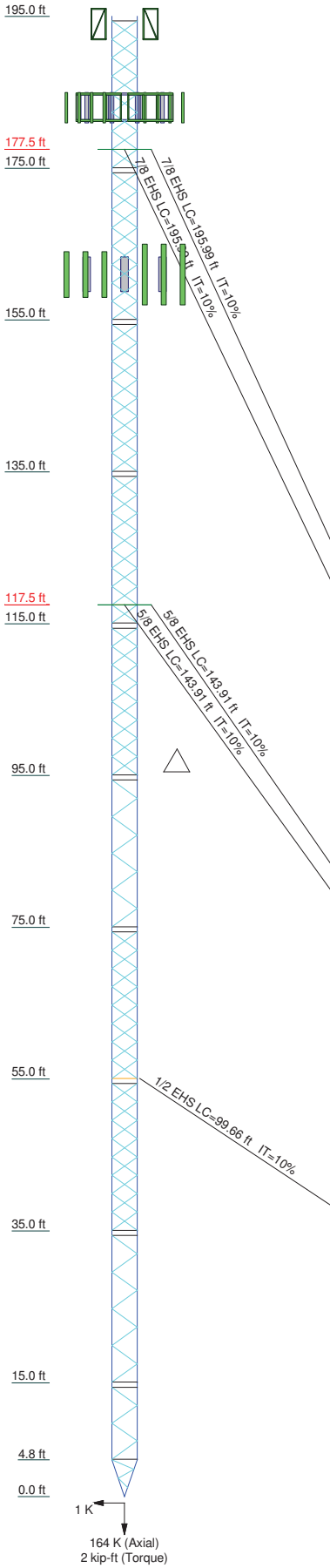
Summary ELC: Existing + Proposed + Future

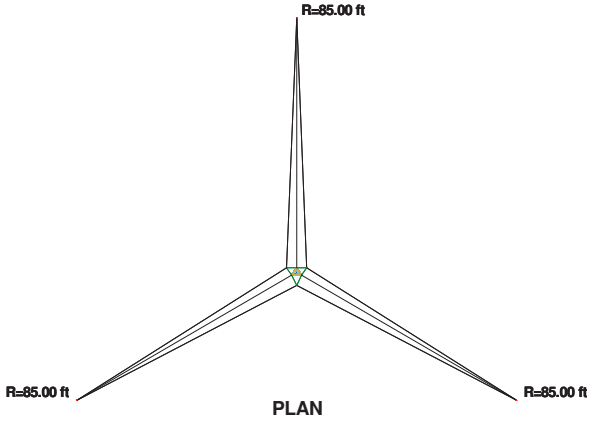
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
						Leg (T2)	86.8	Pass
						Diagonal (T1)	73.8	Pass
						Top Girt (T5)	20.9	Pass
						Bottom Girt (T10)	68.4	Pass
						Guy A (T4)	79.5	Pass
						Guy B (T4)	80.3	Pass
						Guy C (T4)	80.4	Pass
						Top Guy Pull-Off (T1)	42.0	Pass
						Torque Arm Top (T1)	57.8	Pass
						Bolt Checks	73.8	Pass
						Rating =	86.8	Pass

APPENDIX C

Tower Elevation Drawings







DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
MTS Vancomm 11' Stand-Off Sector Frame	194	DTMABP7819VG12A	161
MTS Vancomm 11' Stand-Off Sector Frame	194	(2) RRUS 11	161
MTS Vancomm 11' Stand-Off Sector Frame	194	(2) RRUS 11	161
Rohn 12' Boom Gate	183	(2) RRUS 11	161
Rohn 12' Boom Gate	183	(2) RRUS 12	161
Rohn 12' Boom Gate	183	(2) RRUS 12	161
(4) DB844H90 w/ Mount Pipe	183	(2) RRUS 12	161
(4) DB844H90 w/ Mount Pipe	183	RRUS E2	161
(4) DB844H90 w/ Mount Pipe	183	RRUS E2	161
Commscope MTC3615 Sector Mount	161	RRUS E2	161
Commscope MTC3615 Sector Mount	161	RRUS-32	161
Commscope MTC3615 Sector Mount	161	RRUS-32	161
7770.00 w/Mount Pipe	161	RRUS-32	161
7770.00 w/Mount Pipe	161	(2) A2 Module	161
7770.00 w/Mount Pipe	161	(2) A2 Module	161
(3) HPA-65R-BUU-H8 w/ Mount Pipe	161	(2) A2 Module	161
(3) HPA-65R-BUU-H6 w/ Mount Pipe	161	DC6-48-60-18-8F Surge Suppression Unit	161
(3) SBNHH-1D65A w/ Mount Pipe	161	DC6-48-60-18-8F Surge Suppression Unit	161
DTMABP7819VG12A	161	DC6-48-60-18-8F Surge Suppression Unit	161
DTMABP7819VG12A	161		

SYMBOL LIST

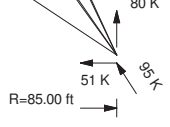
MARK	SIZE	MARK	SIZE
A	4 @ 1.20443		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for a 95 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 0.75 in ice.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 86.8%



GPD GROUP
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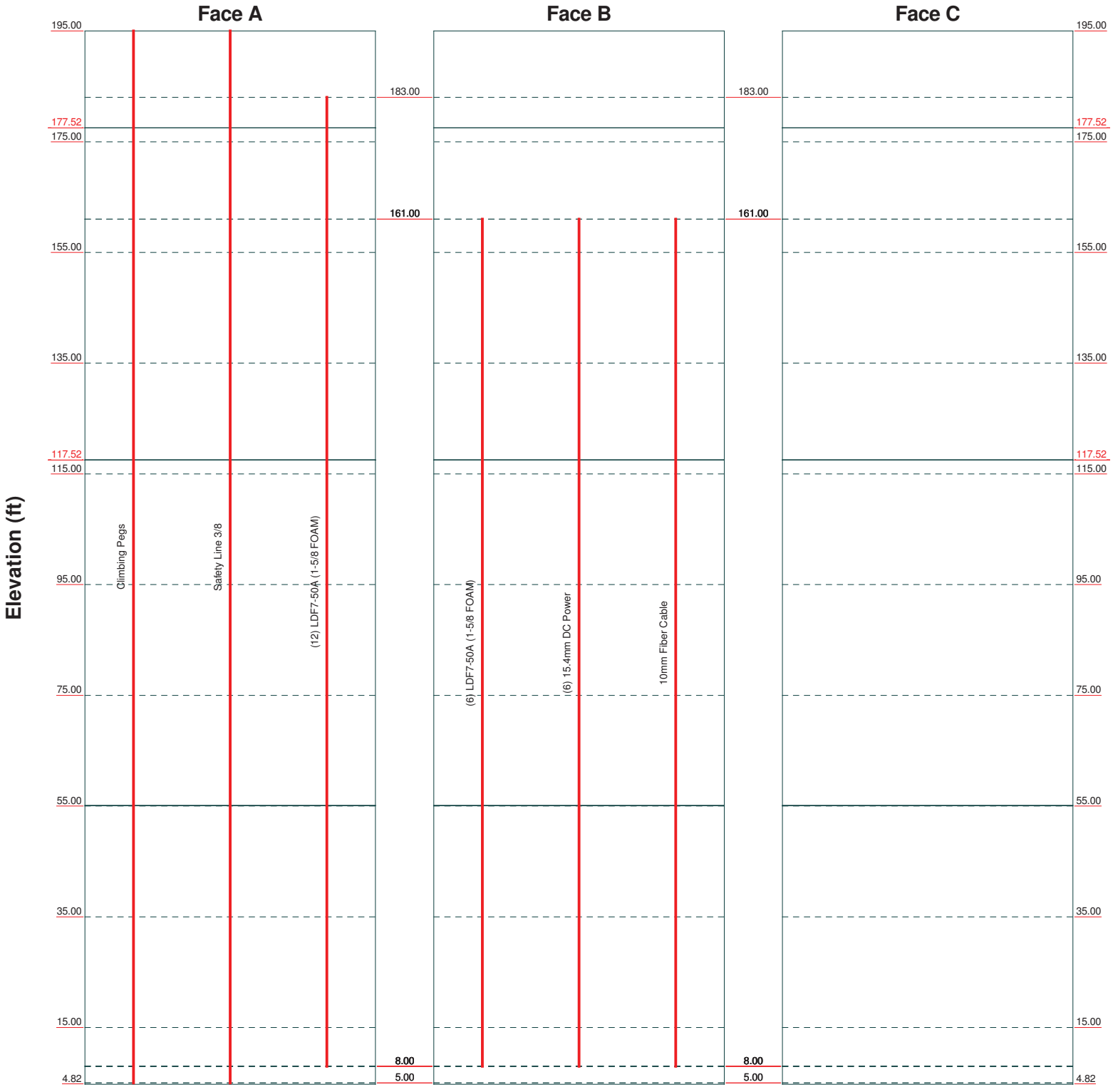
Phone: (614) 210-0751
FAX: (614) 210-0752

Job: 65066 (CT2055) MONTVILLE BUTLER TOWN RD			
Project: 2013723.13.65066.01			
Client: SAI Communications	Drawn by: kdavis	App'd:	
Code: TIA/EIA-222-F	Date: 12/10/13	Scale: NTS	
Path: \\AKRN03\Data\2011\ATandT\65066\02 2013723.13 65066.01 SAI SA\TNX\CT2055.er		Dwg No. E-1	

Feed Line Distribution Chart
4'9-27/32" - 195'

Round | Flat | App In Face | App Out Face | Truss Leg



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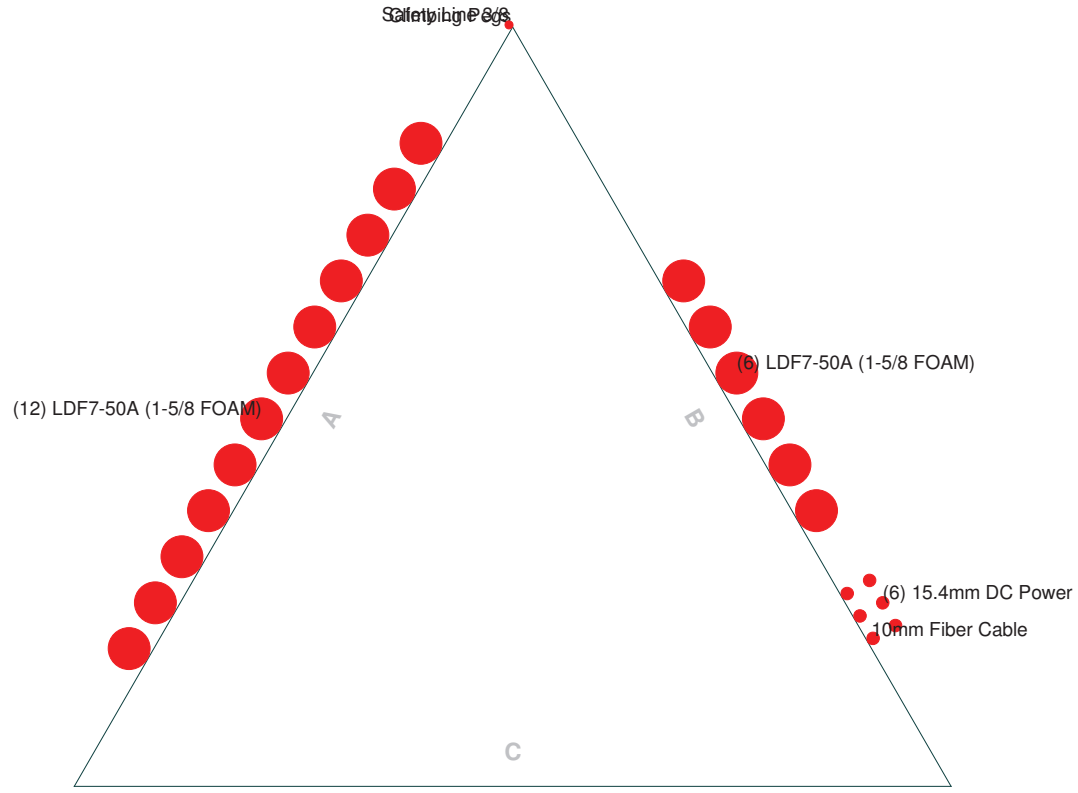
Code: TIA/EIA-222-F	Date: 12/10/13	Scale: NTS	
Path: \\AKRN03\Data\2011\ATandT\65066\02 2013723.13 65066.01 SAI SA\TNX\CT2055.er		Dwg No. E-7	

Feed Line Plan
15'

Round Flat App In Face App Out Face

Section @ 15'



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Client: SAI Communications	Drawn by: kdavis	App'd:	
Code: TIA/EIA-222-F	Date: 12/09/13	Scale: NTS	
Path: \\AKRN03\Data\2011\ATandT\65066\02 2013723.13 65066.01 SAI SA\TNX\Coax\CT2055.er		Dwg No. E-7	

APPENDIX D

Foundation Analysis

Guyed Tower Base Foundation
65066 (CT2055) MONTVILLE BUTLER TOWN RD
2013723.13.65066.01

Tower Reactions		
Axial	164	k
Shear	1	k
Pad & Pier Geometry		
Height	5	ft
Height above Grade	0.5	ft
Pad Width	11.5	ft
Pad Thickness	2	ft
Pier Shape	Round	
Round Pier Diameter	3	ft

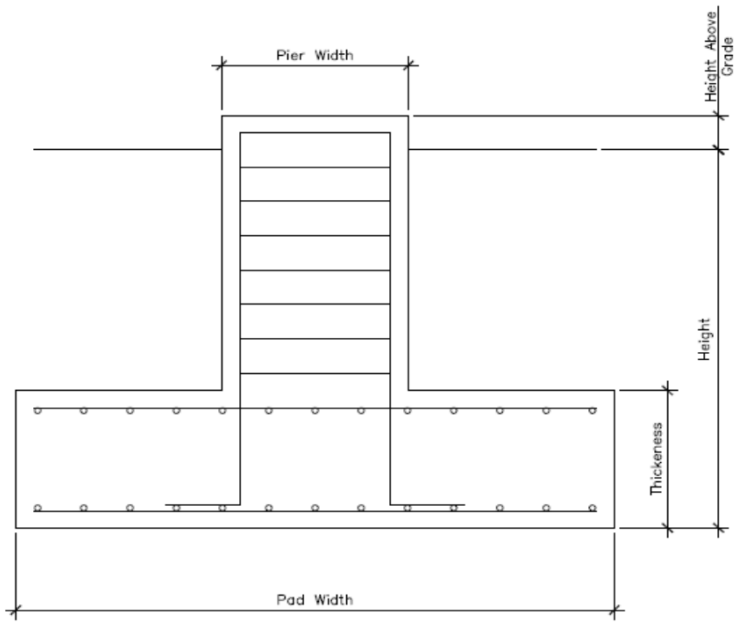
Pad & Pier Reinforcing		
F_c'	3	ksi
Clear Cover	3	in
Rebar Fy	60	ksi
Pad Rebar Size	# 7	
Pad Rebar Quantity	13	
Pier Rebar Size	# 7	
Pier Rebar Quantity	12	

Soil Properties		
Concrete Unit Weight	150	pcf
Soil Unit Weight	130	pcf
Bearing Type	Gross	
Allowable Bearing	4	ksf
Water Table Depth	3	ft

Bearing Capacity Calculations		
Vs	375.54	ft^3
Vc	289.24	ft^3
Ws	48.82	k
Wc	43.39	k
Q_{max}	1.96	ksf
Q_{max} @ 45°	1.97	ksf

Reinforcing Calculations		
Pad Moment Capacity		
Mu=	15.20	k-ft
∅Mn=	58.06	k-ft
Moment Capacity	26.2%	**OK**
Punching Shear		
Vu=	213.20	k
ØVc=	565.95	k
Shear Capacity	37.7%	**OK**
Pier Compression		
Pu=	229.6	k
øPn=	1662.60	k
Compression Capacity	13.8%	**OK**

Overall Capacities		
Bearing Capacity	49.2%	**OK**
Reinforcement Capacity	37.7%	**OK**
Controlling Capacity	**49.2%**	**OK**



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Guyed Tower Anchor Foundation TIA/EIA-222-F
65066 (CT2055) MONTVILLE BUTLER TOWN RD
2013723.13.65066

Guy Anchor Location	
Azimuth/Leg	*0*
Radius	*85*
Tower Height (ft)	*195*

Tower Reactions		
Vertical	80	k
Horizontal	51	k

Anchor Block Geometry		
Width	4	ft
Height	3.5	ft
Length	25	ft
Depth	14	ft

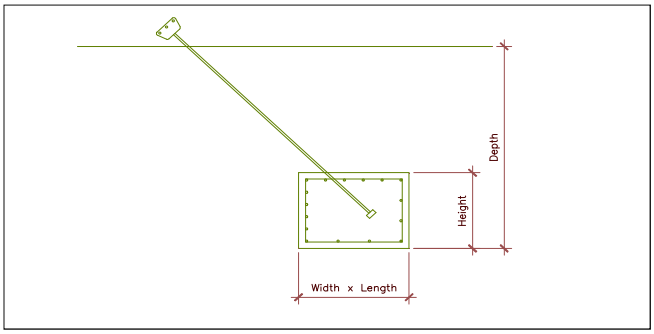
Soil Capacity Calcualtions		
W_s	324.01	k
W_c	30.66	k
$(W_s+W_c)/1.5$	236.45	k
$(W_s/2)+(W_c/1.25)$	186.53	k
Uplift Resistance	274.51	k
Horizontal Resistance	181.36	k
Uplift Capacity=	29.1%	**OK**
Horizontal Capacity=	28.1%	**OK**

Anchor Block Reinformement	
Is Reinforcement Known?	yes
Fc'	3 ksi
Fy	60 ksi
Clear Cover	3 in
Top Bar Size	# 10
Top Bar Quantity	5
Front Bar Size	# 10
Front Bar Quantity	3
Back & Bottom Bar Size	# 10
Back & Bottom Bar Quantity	0

Reinforcement Capacity Calculations		
Moment Check		
M_u=	325.00	k-ft
ϕM_n=	1033.31	k-ft
Moment Capacity	31.5%	**OK**
Minimum Reinforcment		
A_{smin} Requirements Met?	**Yes**	

Capacity Summary		
Soil Capacity=	29.1%	**OK**
Reinforcing Capacity=	31.5%	**OK**
Controlling Capacity=	**31.5%**	**OK**

Soil Properties					
Layer	C, psf	ϕ, degrees	γ_{soil}, pcf	$\gamma_{concrete}$, pcf	d, ft
1	0	0	130	150	10
2	0	36	135	150	10
3	0	0	0	0	0
4					
Ignored Depth	3.33	ft	Consider soil for uplift		
Water Table	3	ft	Granular		



GPD Guyed Tower Anchor Foundation Analysis (Rev F) - V1.03

APPENDIX E

SOW Summary Form

Site Information

Scope Date	12/3/2013
UTRAN ID	CTL02055
Site Number	CT2055
Polygon	LTE W6
Stucture Type	Guyed
AT&T CL	161
Equipment Location	Indoor
ProjectCode	2051319679
FA Code	10035374
Scoping Notes:	

Defined SOW Summary

ANT QTY:	12
Surge Type:	SQUID
Surge QTY:	3
A2 QTY:	6
RRH QTY:	18
TMA QTY:	3
Fiber Trunk QTY:	1
DC Trunk QTY:	6
Power:	Galaxy +24V
Node Type:	Indoor RBS6601
RAN Area:	1
RRH Location:	TOP

Existing Configuration

		Alpha	Beta	Gamma
UMTS/GSM Existing Configuration				
COAX (UMTS/GSM)	Coax MFG	Commscope	Commscope	Commscope
	Coax QTY	4	4	4
	Coax Diameter	1 5/8	1 5/8	1 5/8
Antenna (UMTS/GSM)	Antenna Count	2	2	2
	Antenna Type	7770	7770	7770
	AZ	143	263	23
TMA (UMTS/GSM)	TMA Type	LGP21401	LGP21401	LGP21401
	TMA Count	2	2	2
Diplexer (BTS)	Diplexer Type	LGP21901	LGP21901	LGP21901
	Diplexer Count	4 / (2)	4 / (2)	4 / (2)
RETS	QTY	6		
Current UMTS RRH Location 1900	Top/Bottom	Bottom		
Current UMTS RRH Location 850	Top/Bottom	Bottom		
LTE Existing Configuration				
Antenna (LTE)	Antenna Count			
	Antenna Type			
	AZ			
Existing Fiber Pairs	12 or 18	0		
TMA (LTE)	TMA Type			
	TMA Count			
Diplexer (BTS)	Diplexer Type			
	Diplexer Count			
CCI Existing Configuration				
Auxillary Equipment	Booster	0		
	RxAIT	0		
	LLC	0		

Final Configuration

		Alpha	Beta	Gamma
Integrated Antenna Schedule (ANT)	ANT 1 Type	HPA-65R-BUU-H8 - (8' HEX)	HPA-65R-BUU-H6 - (6' HEX)	SBNHH-1D65A - (4' HEX)
	ANT 1 AZ	0	120	240
	ANT 2 Type	HPA-65R-BUU-H8 - (8' HEX)	HPA-65R-BUU-H6 - (6' HEX)	SBNHH-1D65A - (4' HEX)
	ANT 2 AZ	0	120	240
	ANT 3 Type	HPA-65R-BUU-H8 - (8' HEX)	HPA-65R-BUU-H6 - (6' HEX)	SBNHH-1D65A - (4' HEX)
	ANT 3 AZ	0	120	240
	ANT 4 Type	7770	7770	7770
	ANT 4 AZ	143	263	23
	RAD	161	161	161
RRH (TOP)	RRH Model 1 QTY	2	2	2
	RRH Model 1 Type	RRUS-11	RRUS-11	RRUS-11
	RRH Model 2 QTY	2	2	2
	RRH Model 2 Type	RRUS-12	RRUS-12	RRUS-12
	RRH Model 3 QTY	1	1	1
	RRH Model 3 Type	RRUS-E2	RRUS-E2	RRUS-E2
	RRH Model 4 QTY	1	1	1
	RRH Model 4 Type	RRUS-32	RRUS-32	RRUS-32
	UMTS RRH 1900 QTY	0	0	0
	UMTS RRH 1900 Type	RRUS-11	RRUS-11	RRUS-11
	UMTS RRH 850 QTY	0	0	0
	UMTS RRH 850 Type	RRUS-11	RRUS-11	RRUS-11
A2 Module (TOP)	QTY	2	2	2
TMA (ANT)	TMA Count	1	1	1
	TMA Type	DTMABP7819VG12A-BP	DTMABP7819VG12A-BP	DTMABP7819VG12A-BP
Surge Protection Device (ANT)	Surge Type	SQUID		
	Surge QTY	1	1	1
Fiber & DC	Fiber Trunk QTY	1		
	New 18 Pair Req'd?	Need to Verify Pairs		
	DC Trunk QTY	6		
Triplexer (BTS)	Tri/Quadplexer Count	n/a	n/a	n/a
	Tri/Quadplexer Type	n/a	n/a	n/a
Diplexer (BTS)	Diplexer Count	2	2	2
	Diplexer Type	LGP21901	LGP21901	LGP21901
CCI Gear (BTS)	RxAIT	850		
	Booster	n/a		
	LLC	n/a		

End Of Form