



10 INDUSTRIAL AVE,
SUITE 3
MAHWAH NJ 07430

PHONE: 201.684.0055
FAX: 201.684.0066

September 18, 2018

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

Notice of Exempt Modification
168 Catoona Lane, Stamford, CT 06902
Latitude- 41.05283800
Longitude- -73.56314400

Dear Ms. Bachman,

T-Mobile currently maintains (9) existing antennas 265' level of the existing 301' self-support tower at 168 Catoona Lane in Stamford, Connecticut. The tower and property are owned by American Tower Corporation. T-Mobile now intends to remove (6) of the existing antennas and add (6) new 600/700/1900/2100 MHz antennas. These antennas would be installed at the same 265' level of the tower. T-Mobile also intends to remove and replace (3) remote radio heads and add (2) hybrid cables.

This facility was not originally approved by the Connecticut Siting Council, and the City of Stamford has indicated the city does not retain records for the original approval of this tower.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. 16-50j-72(b)(2). In accordance with R.C.S.A. 16-50j-73, a copy of this letter is being sent to David Martin, Mayor of the City of Stamford, Ralph Blessing, Land Use Bureau Chief of the City of Stamford, as well as the owner.

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

1. The proposed modification will not result in an increase in the height of the existing structure
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.

5. The proposed modification will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading.

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

Sincerely,

Kyle Richers

Kyle Richers
Transcend Wireless
10 Industrial Ave., Suite 3
Mahwah, New Jersey 07430
908-447-4716
krichers@transcendwireless.com

cc: David Martin- as elected official
Ralph Blessing- as zoning official
American Tower- as owner

168 CATOONA LANE

Location 168 CATOONA LANE

Mblu 000/ 0370/ / /

Acct# 000-0370

Owner AMERICAN TOWERS INC

Assessment \$3,252,940

Appraisal \$4,647,040

PID 116

Building Count 2

Current Value

Appraisal			
Valuation Year	Improvements	Land	Total
2015	\$1,109,510	\$3,537,530	\$4,647,040
Assessment			
Valuation Year	Improvements	Land	Total
2015	\$776,670	\$2,476,270	\$3,252,940

Owner of Record

Owner	AMERICAN TOWERS INC	Sale Price	\$1,040,050
Co-Owner		Certificate	
Address	PO BOX 723597	Book & Page	5456/ 339
	ATLANTA, GA 31139	Sale Date	02/17/2000

Ownership History

Ownership History				
Owner	Sale Price	Certificate	Book & Page	Sale Date
AMERICAN TOWERS INC	\$1,040,050		5456/ 339	02/17/2000
AMERICAN T & T CO	\$0		1128/ 268	03/15/1968

Building Information

Building 1 : Section 1

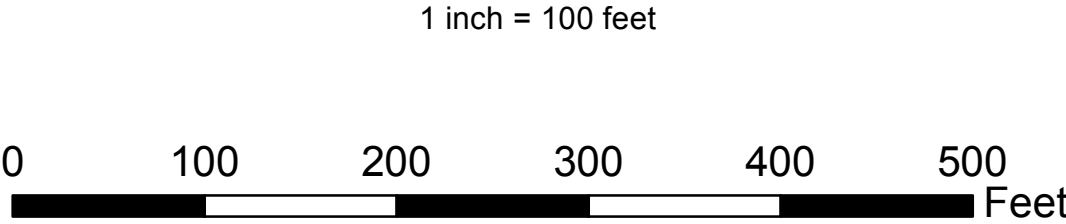
Year Built: 1968
Living Area: 3249

Building Attributes	
Field	Description
STYLE	Telephone Bldg
Stories:	1
Occupancy	1

Adjoining Map:

Map: 125

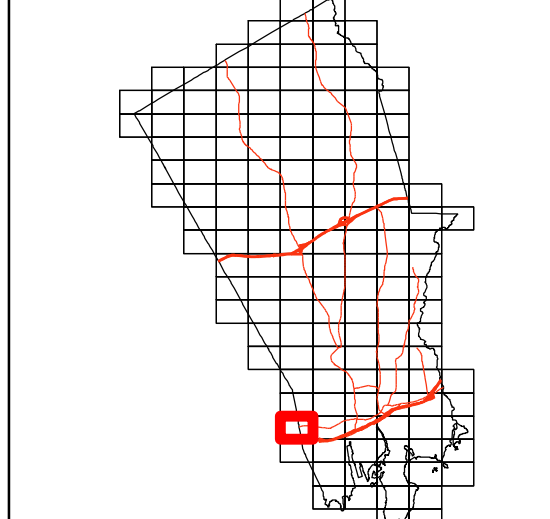
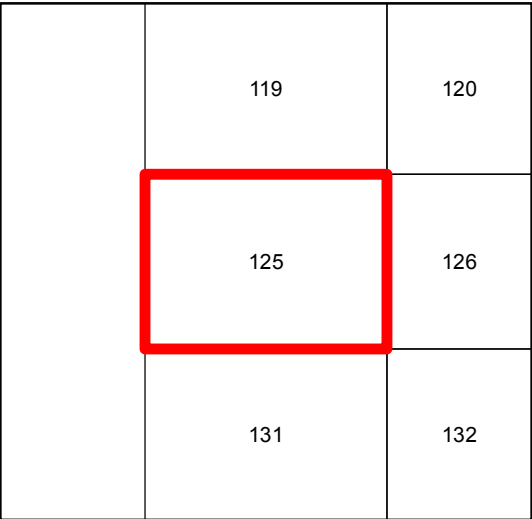
Disclaimer:
This map is for informational purposes only. All information is subject to verification by user. The City of Stamford assume no legal responsibility for the information contained herein.
This map is not intended to represent survey accuracy.
This map is formatted for 42" x 36" paper size only. Printing these maps on smaller paper will render the map scale (1"=100') inaccurate.
Map Produced October 2014



City of Stamford, Connecticut Assessment Parcel Map

Parcel data current as of October 2014.
Assessment Data displayed on this map as of October 2014 grand list.
Building and Paved Roads based on aerial flight from March 2011.
Map Coordinates based on NAD 83 Connecticut State Plane Feet.

- 111 216 84 Map Block Lot
- 13 Address
- 003-6569 Parcel Id
- Parcels
- City Boundaries
- Water Bodies
- Streams and Rivers
- Paved Roads
- Buildings
- Parks
- Railroad



Map: 125



RADIO FREQUENCY EMISSIONS ANALYSIS REPORT EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

T-Mobile Existing Facility

Site ID: CT11007A

Stamford AT&T
168 Catoona Lane
Stamford, CT 06902

August 18, 2018

EBI Project Number: 6218005632

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	16.58 %



August 18, 2018

T-Mobile USA
Attn: Jason Overbey, RF Manager
35 Griffin Road South
Bloomfield, CT 06002

Emissions Analysis for Site: **CT11007A – Stamford AT&T**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **168 Catoona Lane, Stamford, CT**, for the purpose of determining whether the emissions from the Proposed T-Mobile 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 97-01 and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The number of $\mu\text{W}/\text{cm}^2$ 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.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu\text{W}/\text{cm}^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately $400 \mu\text{W}/\text{cm}^2$ and $467 \mu\text{W}/\text{cm}^2$ respectively. The general population exposure limit for the 1900 MHz (PCS) and 2100 MHz (AWS) frequency bands is $1000 \mu\text{W}/\text{cm}^2$. 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 done for the proposed T-Mobile Wireless antenna facility located at **168 Catoona Lane, Stamford, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since T-Mobile 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 for directional panel antennas, 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.

For all calculations, all equipment was calculated using the following assumptions:

- 1) 1 GSM channels (PCS Band - 1900 MHz) was considered for each sector of the proposed installation. These Channels have a transmit power of 15 Watts per Channel.
- 2) 1 UMTS channel (AWS Band – 2100 MHz) was considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 3) 2 LTE channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel.
- 4) 4 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 5) 2 LTE channels (600 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.
- 6) 2 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 20 Watts per Channel.



- 7) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. 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. This is rarely the case, and if so, is never continuous.
- 8) For the following calculations the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.
- 9) The antennas used in this modeling are the **Ericsson AIR 3246 B66**, **Ericsson AIR32 B2A/B66AA** and the **RFS APXVAARR24_43-U-NA20** for 2100 MHz (Aws), 1900 MHz (PCS), 600 MHz and 700 MHz channels. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB for directional panel antennas, 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.
- 10) The antenna mounting height centerline of the proposed antennas is **265 feet** above ground level (AGL).
- 11) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.
- 12) All calculations were done with respect to uncontrolled / general population threshold limits.



T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Ericsson AIR 3246 B66	Make / Model:	Ericsson AIR 3246 B66	Make / Model:	Ericsson AIR 3246 B66
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	265 feet	Height (AGL):	265 feet	Height (AGL):	265 feet
Frequency Bands	2100 MHz (AWS)	Frequency Bands	2100 MHz (AWS)	Frequency Bands	2100 MHz (AWS)
Channel Count	4	Channel Count	4	Channel Count	4
Total TX Power(W):	160	Total TX Power(W):	160	Total TX Power(W):	160
ERP (W):	6,224.72	ERP (W):	6,224.72	ERP (W):	6,224.72
Antenna A1 MPE%	0.33	Antenna B1 MPE%	0.33	Antenna C1 MPE%	0.33
Antenna #:	2	Antenna #:	2	Antenna #:	2
Make / Model:	Ericsson AIR32 B2A/B66AA	Make / Model:	Ericsson AIR32 B2A/B66AA	Make / Model:	Ericsson AIR32 B2A/B66AA
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	265 feet	Height (AGL):	265 feet	Height (AGL):	265 feet
Frequency Bands	1900 MHz (PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz (PCS) / 2100 MHz (AWS)	Frequency Bands	1900 MHz (PCS) / 2100 MHz (AWS)
Channel Count	3	Channel Count	3	Channel Count	3
Total TX Power(W):	95	Total TX Power(W):	95	Total TX Power(W):	95
ERP (W):	3,695.93	ERP (W):	3,695.93	ERP (W):	3,695.93
Antenna A2 MPE%	0.20	Antenna B2 MPE%	0.20	Antenna C2 MPE%	0.20
Antenna #:	3	Antenna #:	3	Antenna #:	3
Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20	Make / Model:	RFS APXVAARR24_43-U-NA20
Gain:	16.35 / 12.95 / 13.35 dBd	Gain:	16.35 / 12.95 / 13.35 dBd	Gain:	16.35 / 12.95 / 13.35 dBd
Height (AGL):	265 feet	Height (AGL):	265 feet	Height (AGL):	265 feet
Frequency Bands	2100 MHz (AWS) / 600 MHz / 700 MHz	Frequency Bands	2100 MHz (AWS) / 600 MHz / 700 MHz	Frequency Bands	2100 MHz (AWS) / 600 MHz / 700 MHz
Channel Count	5	Channel Count	5	Channel Count	5
Total TX Power(W):	160	Total TX Power(W):	160	Total TX Power(W):	160
ERP (W):	4,169.10	ERP (W):	4,169.10	ERP (W):	4,169.10
Antenna A3 MPE%	0.40	Antenna B3 MPE%	0.40	Antenna C3 MPE%	0.40



Site Summary Tables

Site Composite MPE %	
Carrier	MPE %
T-Mobile (Per Sector Max)	0.93 %
Verizon Wireless	6.08 %
Sirius XM Sat Radio	0.11 %
Bell Industries	0.07 %
Lojack	0.04 %
US Treasury	0.06 %
USA Mobility	0.20 %
Sensus (CL&P)	0.06 %
MediaFLO	4.20 %
SNET Paging	0.18 %
Skytel (Receive Only)	0.00 %
Rescue 21	0.44 %
Marcus	0.47 %
AT&T	1.77 %
Nextel	0.16 %
Clearwire	0.05 %
Sprint	0.98 %
MetroPCS	0.78 %
Site Total MPE %:	16.58 %

T-Mobile Sector A Total:	0.93 %
T-Mobile Sector B Total:	0.93 %
T-Mobile Sector C Total:	0.93 %
Site Total:	16.58 %

T-Mobile Maximum MPE Power Values (Per Sector)

T-Mobile _Frequency Band / Technology (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu\text{W}/\text{cm}^2$)	Frequency (MHz)	Allowable MPE ($\mu\text{W}/\text{cm}^2$)	Calculated % MPE
T-Mobile AWS - 2100 MHz LTE	4	1,556.18	265	3.34	AWS - 2100 MHz	1000.00	0.33%
T-Mobile PCS - 1900 MHz LTE	2	1,556.18	265	1.67	PCS - 1900 MHz	1000.00	0.17%
T-Mobile PCS - 1900 MHz GSM	1	583.57	265	0.31	PCS - 1900 MHz	1000.00	0.03%
T-Mobile AWS - 2100 MHz UMTS	1	1,726.08	265	0.93	AWS - 2100 MHz	1000.00	0.09%
T-Mobile 600 MHz LTE	2	788.97	265	0.85	600 MHz	400.00	0.21%
T-Mobile 700 MHz LTE	2	432.54	265	0.46	700 MHz	467.00	0.10%
						Total:	0.93%



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 T-Mobile 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:

T-Mobile Sector	Power Density Value (%)
Sector A:	0.93 %
Sector B:	0.93 %
Sector C:	0.93 %
T-Mobile Maximum MPE % (Per Sector):	0.93 %
Site Total:	16.58 %
Site Compliance Status:	COMPLIANT

The anticipated composite MPE value for this site assuming all carriers present is **16.58%** 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.



AMERICAN TOWER®
C O R P O R A T I O N

Structural Analysis Report

Structure : 300 ft Self Supported AT&T TAG Tower
ATC Site Name : Stamford (Katoona), CT
ATC Site Number : 88018
Engineering Number : OAA735662_C3_02
Proposed Carrier : T-Mobile
Carrier Site Name : Stamford AT&T
Carrier Site Number : CT11007A
Site Location : Catoona Lane
Stamford, CT 06902-4573
41.052800,-73.563000
County : Fairfield
Date : August 2, 2018
Max Usage : 93%
Result : Pass

Prepared By:
Robert D. Barrett, E.I.
Structural Engineer II

Robert D. Barrett

Reviewed By:

COA: PEC.0001553



Table of Contents

Introduction	1
Supporting Documents	1
Analysis	1
Conclusion.....	1
Existing and Reserved Equipment.....	2-3
Equipment to be Removed.....	3
Proposed Equipment	4
Structure Usages	4
Foundations	4
Standard Conditions	5
Calculations	Attached



Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 300 ft self supported AT&T tag tower to reflect the change in loading by T-Mobile.

Supporting Documents

Tower Drawings	CSEI Analysis, ATC Eng. #73123451, dated September 28, 2005
Foundation Drawing	Rose, Chulkoff, and Rose Job #C67229, dated August 9, 1967
Geotechnical Report	Rose, Chulkoff, and Rose Job #C67229, dated August 9, 1967
Modifications	ATC Eng. #42439132, dated September 26, 2008 ATC Eng. #44209632, dated December 2, 2009

Analysis

The tower was analyzed using Power Line Systems, Inc. tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	93 mph (3-Second Gust, V_{asd}) / 120 mph (3-Second Gust, V_{ult})
Basic Wind Speed w/ Ice:	50 mph (3-Second Gust) w/ 3/4" radial ice concurrent
Code:	ANSI/TIA-222-G / 2012 IBC / 2016 Connecticut State Building Code
Structure Class:	II
Exposure Category:	B
Topographic Category:	1
Crest Height:	0 ft

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Existing and Reserved Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
300.0	338.0	1	TX RX Systems 101-68-10-X-03N	Platform w/ Handrails	(1) 1 1/4" Coax	Marcus Comm.
	324.0	1	15' Omni-Grid		(1) 1 5/8" Coax	
	320.0	1	12' Omni		-	Other
	311.0	1	Radio/ODU		(1) 7/8" Coax	Marcus Comm.
		1	4' Std. Dish			
	307.0	1	Radio/ODU		(1) 1/2" Coax	Other
		1	3' HP Dish			
	303.0	3	DragonWave Horizon Compact		(5) 7/8" Coax	Clearwire
		3	DragonWave A-ANT-18G-2-C			
275.0	275.0	1	Rohde & Schwarz ADD090	Side Arm	(2) 7/8" Coax	US Dept Of Homeland Security
270.0	270.0	1	Dielectric TLP-08M-2E	Side Arms	-	Other
		2	Til-Tek TA-2350-DAB		(1) 1 5/8" Coax	Sirius XM Radio
265.0	265.0	3	RFS ATMAA1412D-1A20	Sector Frames	(12) 1 5/8" Coax	T-Mobile
		3	Ericsson AIR-32 B2A/B66Aa			
260.0	260.0	-	-	-	(1) EW20	Sirius XM Radio
250.0	250.0	1	Sinclair SC281-L	Side Arm	(1) 7/8" Coax	US Dept Of
246.0	246.0	1	Sinclair SC381-HL	Side Arm	(1) 7/8" Coax	Homeland Security
235.0	235.0	6	CCI TPX-070821	Sector Frames	(12) 1 5/8" Coax (4) 0.74" 8 AWG 7 (2) 0.78" 8 AWG 6 (2) 0.39" Fiber Trunk	AT&T Mobility
		6	Powerwave TT19-08BP111-001			
		2	Raycap DC2-48-60-0-9E			
		1	Raycap DC6-48-60-18-8F			
		3	Ericsson RRUS 4426 B66			
		3	Ericsson RRUS 4478 B14			
		6	Ericsson RRUS A2			
		3	Ericsson RRUS-11 800 MHz			
		3	Ericsson RRUS 32			
		3	Ericsson RRUS 32 B2			
		3	Ericsson RRUS E2 B29			
		3	Ericsson RRUS-11			
		3	Powerwave 7770.00			
		3	Andrew SBNHH-1D65A			
		3	CCI OPA-65R-LCUU-H4			
		3	KMW EPBQ-654L8H6-L2			
222.0	222.0	12	Decibel DB844H90E-XY	Sector Frames	(15) 1 5/8" Coax	Sprint Nextel
207.0	207.0	1	Sinclair SC281-L	Side Arm	(1) 7/8" Coax	US Dept Of Homeland Security
200.0	200.0	2	TX RX Systems 101-68-10-X-03N	Side Arms	(2) 1 1/4" Coax	Marcus Comm.
193.0	193.0	2	Antel BCD-87010 ____	Side Arms	(3) 7/8" Coax	Spok Holdings
		1	30" x 30" Reflector	Leg		
175.0	175.0	1	12" x 12" Junction Box	Leg	-	Clearwire
171.0	171.0	3	NextNet BTS-2500	T-Arms	(6) 5/16" Coax (2) 2" Conduit	

Existing and Reserved Equipment (Continued)

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
165.0	165.0	15	RCU	Leg	(12) 1 5/8" Coax (1) 3/8" RET Control Cable (1) 3/8" Coax	Metro PCS
		6	Kathrein 800 10504			
150.0	150.0	3	Alcatel-Lucent ALU 800MHz External Notch Filter	Sector Frames	(3) 1 1/4" Hybriflex Cable (1) 1.7" Hybrid	Sprint Nextel
		3	RFS IBC1900HB-2			
		3	Alcatel-Lucent 800 MHz RRH			
		6	Alcatel-Lucent 1900MHz RRH			
		3	RFS APXVSP18-C-A20			
		3	Nokia 2.5G MAA - AAHC(64T64R)			
139.0	139.0	1	Antel BCD-87010 ____ 4°	Side Arm	(1) 7/8" Coax	Sensus USA
135.0	135.0	1	L-com HG908U-PRO	Stand-Off	(1) 0.38" Cat 5e (1) 1/2" Coax	Senet
130.0	130.0	1	Tycon ENC-DC	Side Arm	-	
120.0	120.0	1	Channel Master Type 120	Stand-Off	(1) 1/2" Coax	Spok Holdings
107.0	107.0	1	TX RX Systems 101-68-10-X-03N	Side Arm	(1) 1 1/4" Coax	Marcus Comm.
92.0	92.0	3	Alcatel-Lucent RRH2X60-1900A-4R	Sector Frames	(3) 1 1/4" Hybriflex	Verizon
		3	Alcatel-Lucent RRH2x60 700			
		3	Alcatel-Lucent RRH4x45-B66 w/o Solar Shield			
		3	RFS DB-T1-6Z-8AB-0Z			
		6	Andrew SBNHH-1D65B			
		6	72" x 14" Panel			
22.0	22.0	1	Til-Tek TA-2324-LHCP	Leg	(1) 7/8" Coax	Sirius XM Radio
6.0	6.0	1	Trimble Acutime 2000	Leg	(1) 1/2" Coax	Spok Holdings
		1	Channel Master Type 120		(1) 1/4" Coax	

Equipment to be Removed

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
265.0	265.0	3	Ericsson AIR 21, 1.3 M, B2A B4P	-	(3) 1 5/8" Coax (3) 7/8" Fiber	T-Mobile
		3	Andrew LNX-6515DS-VTM			
		3	Ericsson RRUS 11 B12			



Proposed Equipment

Elevation ¹ (ft)		Qty	Antenna	Mount Type	Lines	Carrier
Mount	RAD					
265.0	265.0	3	Ericsson Air 3246 B66	Sector Frames	(2) 1 1/4" Fiber (1) 1 5/8" Fiber	T-Mobile
		3	RFS APXVAARR24_43-U-NA20			
		3	Ericsson Radio 4449 B12,B71			

¹Mount elevation is defined as height above bottom of steel structure to the bottom of mount, RAD elevation is defined as center of antenna above ground level (AGL).

Install proposed coax stacked on top of existing T-Mobile coax.

Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Legs	75%	Pass
Diagonals	85%	Pass
Truss Diagonals	91%	Pass
Horizontals	79%	Pass
Truss Horizontals	93%	Pass
Anchor Bolts	50%	Pass

Foundations

Reaction Component	Analysis Reactions	% of Usage
Uplift (Kips)	332.4	86%
Axial (Kips)	469.3	5%

The structure base reactions resulting from this analysis were found to be acceptable through analysis based on geotechnical and foundation information, therefore no modification or reinforcement of the foundation will be required.



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

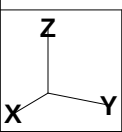
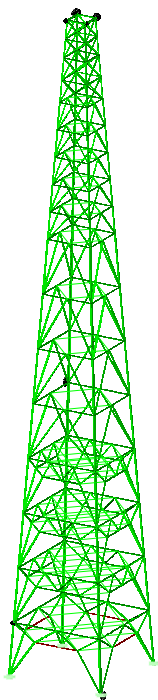
- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.



Project Name : 88818 - Stamford (Katoona), CT
Project Notes: OAA735662_C3_02 - T-Mobile
Project File : N:\L2 - ATC\88818\2018.08.02 - T-Mobile - OAA735662_C3_02.tow
Date run : 2:03:47 PM Thursday, August 02, 2018
by : Tower Version 15.02
Licensed to : American Tower Corp.

Successfully performed nonlinear analysis

The model has 0 warnings.

Member check option: ANSI/TIA 222-G-1
Connection rupture check: Not Checked
Crossing diagonal check: Fixed
Included angle check: None
Climbing load check: None
Redundant members checked with: Actual Force
Loads from file: n:\l2 - atc\88818\2018.08.02 - t-mobile - oaa735662_c3_02\2018.08.02 - t-mobile - oaa735662_c3_02.eia

*** Analysis Results:

Maximum element usage is 93.28% for Angle "LH 3X" in load case "W -45"

Summary of Joint Support Reactions For All Load Cases:

Load Case	Joint Label	Long. Force (kips)	Tran. Force (kips)	Vert. Force (kips)	Shear Force (kips)	Long. Moment (ft-k)	Tran. Moment (ft-k)	Bending Moment (ft-k)	Vert. Moment (ft-k)	Usage %
W 0	OP	-45.07	-21.83	-348.03	50.08	-0.90	-5.23	5.31	-2.08	0.00
W 0	OX	-43.20	-22.27	-329.78	48.69	0.56	-4.94	4.97	2.28	0.00
W 0	0XY	-33.64	-14.55	203.97	36.65	0.51	-5.48	5.51	2.02	0.00
W 0	0Y	-34.62	13.58	209.08	37.19	-0.35	-5.79	5.80	-1.98	0.00
W 180	OP	34.71	13.33	197.08	37.18	-0.33	5.06	5.07	1.98	0.00
W 180	OX	33.52	-14.08	197.37	36.36	0.51	5.59	5.61	-2.03	0.00
W 180	0XY	43.31	22.15	-326.89	48.64	0.55	5.04	5.07	-2.21	0.00
W 180	0Y	44.77	-21.36	-333.32	49.61	-0.90	5.31	5.38	2.21	0.00
W 45	OP	-46.25	-20.83	-469.28	65.88	3.39	-3.36	4.77	0.13	0.00
W 45	OX	-19.80	-11.36	-63.88	22.83	4.53	-3.56	5.76	3.06	0.00
W 45	0XY	-38.39	-38.48	332.36	54.35	4.32	-4.39	6.10	-0.00	0.00
W 45	0Y	-11.19	19.97	-64.96	22.09	-4.50	5.75	-3.06	0.00	0.00
W -45	OP	-21.14	12.16	-70.24	24.39	-4.78	-3.79	6.10	-3.12	0.00
W -45	OX	-45.06	46.83	-460.99	64.99	-3.64	-3.15	4.81	0.01	0.00
W -45	0XY	-18.42	19.33	-62.83	21.96	-3.47	-4.28	5.51	3.09	0.00
W -45	0Y	-38.07	37.68	-328.29	54.20	-4.20	4.52	6.17	0.03	0.00
W 90	OP	-21.78	-45.36	-340.25	50.32	5.26	0.92	5.34	2.20	0.00
W 90	OX	13.60	-34.77	209.61	37.34	5.82	0.34	5.83	1.98	0.00
W 90	0XY	14.56	33.67	-303.86	36.68	5.49	0.51	5.52	2.02	0.00
W 90	0Y	22.34	-43.25	-329.99	48.67	4.95	-0.54	4.98	-2.21	0.00
W -90	OP	13.33	35.09	197.55	37.54	-5.88	0.32	5.89	-2.00	0.00
W -90	OX	-21.35	44.34	-469.28	49.73	-5.32	0.33	5.40	-2.21	0.00
W -90	0XY	22.22	43.27	-326.94	48.64	-5.03	-0.53	5.06	2.22	0.00
W -90	0Y	-14.16	33.51	197.90	36.38	-5.57	-0.52	5.60	2.04	0.00
W 0 Ice	OP	-20.11	-13.96	-196.12	24.48	-1.50	-0.11	1.50	-0.56	0.00
W 0 Ice	OX	-19.34	14.03	-199.27	23.90	0.02	1.35	0.57	0.00	0.00
W 0 Ice	0XY	-1.81	3.33	-40.25	3.79	1.39	-2.77	3.10	0.56	0.00
W 0 Ice	0Y	-1.82	-3.51	-44.50	3.96	-1.43	-2.85	3.19	-0.54	0.00
W 180 Ice	OP	1.83	-3.91	-47.17	4.30	-1.41	2.34	3.26	0.54	0.00
W 180 Ice	OX	1.83	3.68	-45.61	4.11	1.40	2.89	3.21	-0.58	0.00
W 180 Ice	0XY	19.41	13.81	-185.69	23.82	1.33	0.15	1.34	-0.58	0.00
W 180 Ice	0Y	20.00	-13.58	-198.07	24.17	-1.50	0.20	1.52	0.59	0.00
W 45 Ice	OP	-21.02	-43.07	-333.33	29.78	0.32	0.33	0.45	0.02	0.00
W 45 Ice	OX	-12.78	4.69	-117.34	13.62	2.48	0.35	2.50	0.83	0.00
W 45 Ice	0XY	-3.32	-3.32	-3.36	4.72	2.46	-2.45	3.48	-0.00	0.00
W 45 Ice	0Y	4.72	-12.00	-117.12	13.64	-0.34	2.47	2.49	0.83	0.00
W -45 Ice	OP	-13.40	-4.56	-122.33	14.16	-2.60	0.28	2.62	-0.86	0.00
W -45 Ice	OX	-20.42	21.08	-227.93	29.35	0.19	0.39	0.43	-0.01	0.00
W -45 Ice	0XY	4.73	12.69	-113.21	13.54	0.28	-2.40	2.41	0.85	0.00
W -45 Ice	0Y	-3.25	3.21	-7.68	4.57	-2.52	2.52	3.56	0.02	0.00
W 90 Ice	OP	-13.94	-20.19	-196.18	24.53	0.12	1.50	1.51	0.58	0.00
W 90 Ice	OX	-3.53	-1.84	-44.82	3.98	2.86	1.44	3.20	0.54	0.00
W 90 Ice	0XY	3.34	-1.83	-40.29	3.81	2.77	1.39	2.10	0.56	0.00
W 90 Ice	0Y	14.04	-19.33	-189.86	23.89	0.03	-1.34	1.34	-0.57	0.00
W -90 Ice	OP	-3.89	1.86	-49.06	4.31	-2.94	1.42	3.26	-0.56	0.00
W -90 Ice	OX	-13.59	20.05	-191.33	24.22	-0.20	1.52	1.53	-0.59	0.00
W -90 Ice	0XY	13.84	19.38	-185.69	23.81	0.14	-1.32	1.32	0.58	0.00
W -90 Ice	0Y	3.65	1.84	-45.07	4.09	-2.88	-1.40	3.20	0.58	0.00

Summary of Joint Support Reactions For All Load Cases in Direction of Leg:

Load Case	Support	Origin	Joint	Member	Leg Dir.	Force (kips)	Residual Shear (kips)	Residual Horizontal To Leg - Res. (kips)	Residual Horizontal To Leg - Long. (kips)	Residual Horizontal To Leg - Tran. (kips)	Total Long. Force (kips)	Total Tran. Force (kips)	Total Vert. Force (kips)
							(kips)	To Leg - Res. (kips)	To Leg - Long. (kips)	To Leg - Tran. (kips)			
W 0	OP	1P	L 1P	342.859			24.072	24.121	24.106	0.858	-45.07	-21.83	-348.03
W 0	OX	1X	L 1X	199.546			22.893	22.943	22.862	-1.934	-43.20	-22.27	-329.78
W 0	0XY	1XY	L 1XY	-206.154			21.103	21.151	21.058	1.973	-33.64	-14.55	203.97
W 0	0Y	1Y	L 1Y	-262.288			22.271	22.317	22.283	-1.237	-34.62	13.58	209.08
W 180	OP	1P	L 1P	199.546			22.539	22.586	22.556	-1.173	34.71	13.33	197.08
W 180	OX	1X	L 1X	-199.546			21.384	21.432	-21.347	1.911	33.52	-14.08	197.37
W 180	0XY	1XY	L 1XY	329.678			23.184	23.236	-23.150	-1.992	43.31	22.15	-326.89
W 180	0Y	1Y	L 1Y	336.124			24.182	24.231	-24.217	0.896	44.77	-21.36	-333.32
W 45	OP	1P	L 1P	473.233			24.872	24.967	24.953	17.715	-46.53	-46.05	-469.28
W 45	OX	1X	L 1X	64.162			22.043	22.043	15.864	15.304	-19.80	-11.36	-63.88
W 45	0XY	1XY	L 1XY	-335.821			25.272	25.368	17.891	17.984	-38.39	-38.48	332.36
W 45	0Y	1Y	L 1Y	251.251			22.038	22.038	15.926	15.965	-11.19	-19.97	-64.96
W -45	OP	1P	L 1P	70.528			23.545	23.545	16.808	-16.489	-21.14	12.16	-70.24
W -45	OX	1X	L 1X	464.889			24.710	24.804	16.634	-18.400	-45.06	46.83	-460.99
W -45	0XY	1XY	L 1XY	63.139			21.056	21.057	14.299	-15.457	-18.42	19.33	-62.83
W -45	0Y	1Y	L 1Y	-331.767			25.483	25.588	18.721	15.457	-38.07	37.68	-328.29
W 90	OP	1P	L 1P	343.088			24.342	24.391	0.802	24.378	-21.78	-45.36	-340.25
W 90	OX	1X	L 1X	-262.825			22.388	22.435	-1.224	22.402	13.60	-34.77	209.61
W 90	0XY	1XY	L 1XY	-262.047			21.143	21.190	1.987	21.097	-14.56	-33.67	203.86
W 90	0Y	1Y	L 1Y	332.767			22.933	22.984	-1.987	22.898	22.34	-43.25	-329.99
W -90	OP	1P	L 1P	-199.781			22.893	22.941	-1.147	-22.912	13.33	35.09	197.55
W -90	OX	1X	L 1X	337.087			24.260	24.309	0.741	-24.298	-21.35	44.91	-334.28
W -90	0XY	1XY	L 1XY	329.724			23.148	23.200	-2.050	-23.188	22.22	43.27	-326.94
W -90	0Y	1Y	L 1Y	-200.076			21.346	21.394	1.953	-21.304	-14.16	33.51	197.90
W 0 Ice	OP	1P	L 1P	197.471			8.206	8.229	8.014	1.868	-20.11	-13.96	-196.12
W 0 Ice	OX	1X	L 1X	113.055			7.924	7.948	7.607	-2.301	-19.34	14.03	-199.27
W 0 Ice	0XY	1XY	L 1XY	40.192			4.374	4.379	4.296	-0.847	-1.81	3.33	-40.25
W 0 Ice	0Y	1Y	L 1Y	44.438			4.621	4.627	4.562	0.769	-1.82	-3.51	-44.50
W 180 Ice	OP	1P	L 1P	49.113			4.902	4.908	-4.829	0.877	1.80	-3.91	-49.17
W 180 Ice	OX	1X	L 1X	187.030			4.717	4.723	-4.642	-0.871	1.83	3.68	-45.61
W 180 Ice	0XY	1XY	L 1XY	187.030			8.279	8.304	-7.962	-2.358	19.41	13.81	-185.69
W 180 Ice	0Y	1Y	L 1Y	192.013			8.414	8.436	-8.238	1.818	20.00	-13.58	-198.07
W 45 Ice	OP	1P	L 1P	550.66			9.378	9.413	9.634	6.078	-21.02	-21.07	-233.33
W 45 Ice	OX	1X	L 1X	117.968			6.100	6.103	5.546	2.547	-12.78	4.69	-117.34
W 45 Ice	0XY	1XY	L 1XY	2.934			4.991	5.010	3.527	3.558	-3.32	-3.35	-3.36
W 45 Ice	0Y	1Y	L 1Y	117.754			6.107	6.110	2.505	5.573	-4.72	-12.00	-117.12
W -45 Ice	OP	1P	L 1P	122.973			6.573	6.575	5.859	-2.983	13.40	-4.56	-122.33
W -45 Ice	OX	1X	L 1X	229.614			9.446	9.482	6.369	-7.025	-20.42	21.08	-227.93
W -45 Ice	0XY	1XY	L 1XY	113.854			6.129	6.132	2.250	-5.705	4.73	12.69	-113.21
W -45 Ice	0Y	1Y	L 1Y	7.250			5.217	5.237	3.721	3.686	-3.25	3.21	-7.68
W 90 Ice	OP	1P	L 1P	197.533			8.272	8.294	1.839	8.088	-13.94	-20.19	-196.18
W 90 Ice	OX	1X	L 1X	44.756			4.658	4.664	0.764	4.601	-3.53	-1.84	-44.82
W 90 Ice	0XY	1XY	L 1XY	40.227			4.396	4.401	-0.858	4.317	3.34	-1.83	-40.29
W 90 Ice	0Y	1Y	L 1Y	191.195			4.981	4.986	-4.876	4.844	-13.23	13.23	-191.19
W -90 Ice	OP	1P	L 1P	48.995			4.952	4.958	0.868	-4.881	-3.89	1.86	-48.99
W -90 Ice	OX	1X	L 1X	192.674			8.418	8.421	1.787	-8.249	13.59	20.05	-191.33
W -90 Ice	0XY	1XY	L 1XY	192.686			7.928	7.934	19.999	7.928	-13.64	19.999	-191.33
W -90 Ice	0Y	1Y	L 1Y	45.013			4.696	4.701	-0.869	-4.620	3.55	1.84	-45.01

262.5-272.7	272.667	262.500	12	24	12.37	13.63	132.15	1.2030	1.2030	1.444
250.0-262.5	262.500	250.000	12	24	13.13	15.17	179.95	1.2010	1.2010	1.441
237.5-250.0	250.000	237.500	16	24	15.17	16.71	199.22	1.2070	1.2070	1.449
225.0-237.5	237.500	225.000	16	24	16.71	18.25	218.49	1.2130	1.2130	1.456
212.5-225.0	225.000	212.500	16	24	18.25	19.79	237.76	1.2190	1.2190	1.463
200.0-212.5	212.500	200.000	16	24	19.79	21.33	257.03	1.2250	1.2250	1.470
175.0-200.0	200.000	175.000	16	24	21.33	24.42	271.87	1.2320	1.2320	1.479
150.0-175.0	175.000	150.000	16	24	24.42	27.50	286.96	1.2570	1.2570	1.509
125.0-150.0	150.000	125.000	16	24	27.50	30.58	302.14	1.2660	1.2660	1.519
100.0-125.0	125.000	100.000	20	32	30.58	33.67	318.13	1.2790	1.2790	1.535
75.0-100.0	100.000	75.000	36	76	33.67	36.75	334.12	1.2920	1.2920	1.551
50.0-75.0	75.000	50.000	36	76	36.75	39.83	350.11	1.2990	1.2990	1.558
25.0-50.0	50.000	25.000	32	68	39.83	42.92	366.10	1.3060	1.3060	1.565
0.000-25.0	25.000	0.000	20	40	42.92	46.00	382.09	1.3120	1.3120	1.568

Printed capacities do not include the strength factor entered for each load case.
The Group Summary reports on the member and load case that resulted in maximum usage which may not necessarily be the same as that which produces maximum force.

Group Summary (Compression Portion):

Group Label	Group Desc.	Angle Type	Angle Size	Steel Strength	Max Usage	Max Usage Control	Max Use Control	Comp. In Member	Comp. Force	Comp. Control	Comp. Capacity	L/r	Comp. Connect.	Comp. Connect.	Comp. RLX	RLY	RLZ	L/r	KL/r	Length	Curve	No. Of Bolts
				(ksi)	%			%	(kips)		(kips)		Shear Capacity (kips)	Bearing Capacity (kips)					(ft)			
Leg S1	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	74.93	Comp	74.93	1	1P	-412.610	W	45	464.114	0.000	0.000	0.281	0.281	0.281	54.30	54.30	25.095	1
Leg S2	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	76.68	Comp	76.68	1	2P	-351.078	W	45	464.114	0.000	0.000	0.281	0.281	0.281	54.30	54.30	25.095	1
Leg S3	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	65.43	Comp	65.43	1	3P	-303.653	W	45	464.114	0.000	0.000	0.281	0.281	0.281	54.30	54.30	25.095	1
Leg S4	L 8" x 8" x 1.125"	SAE	8X8X1.13	36.0	61.09	Comp	61.09	1	4P	-254.228	W	45	416.121	0.000	0.000	0.281	0.281	0.281	54.30	54.30	25.095	1
Leg S5	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	78.35	Comp	78.35	1	5P	-243.185	W	45	345.671	0.000	0.000	0.333	0.333	0.333	63.93	63.93	25.095	1
Leg S6	L 8" x 8" x 0.875"	SAE	8X8X0.88	36.0	78.35	Comp	78.35	1	5P	-243.185	W	45	345.671	0.000	0.000	0.333	0.333	0.333	63.93	63.93	25.095	1
Leg S7	L 8" x 8" x 0.75"	SAE	8X8X0.75	36.0	53.73	Comp	53.73	1	7P	-161.053	W	45	299.714	0.000	0.000	0.333	0.333	0.333	63.93	63.93	25.095	1
Leg S8	L 8" x 8" x 0.625"	SAE	8X8X0.63	36.0	49.01	Comp	49.01	1	8P	-123.381	W	45	251.771	0.000	0.000	0.333	0.333	0.333	63.93	63.93	25.095	1
Leg S9	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	47.31	Comp	47.31	1	9P	-184.841	W	45	219.900	0.000	0.000	0.500	0.500	0.500	64.35	64.35	12.547	1
Leg S10	L 6" x 6" x 0.75"	SAE	6X6X0.75	36.0	38.24	Comp	38.24	1	10P	-84.083	W	45	219.900	0.000	0.000	0.500	0.500	0.500	64.35	64.35	12.547	1
Leg S11	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	39.91	Comp	39.91	1	11P	-67.112	W	45	168.148	0.000	0.000	0.500	0.500	0.500	63.80	63.80	12.547	1
Leg S12	L 6" x 6" x 0.5625"	SAE	6X6X0.56	36.0	39.94	Comp	39.94	1	12P	-51.049	W	45	168.148	0.000	0.000	0.500	0.500	0.500	63.80	63.80	12.547	1
Leg S13	L 6" x 6" x 0.4375"	SAE	6X6X0.44	36.0	26.58	Comp	26.58	1	13P	-35.304	W	45	118.797	0.000	0.000	0.500	0.500	0.500	62.26	62.26	12.547	1
Leg S14	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	24.29	Comp	24.29	1	14P	-26.855	W	45	110.546	0.000	0.000	0.500	0.500	0.500	62.10	62.10	10.206	1
Leg S15	L 5" x 5" x 0.4375"	SAE	5X5X0.44	36.0	15.98	Comp	15.98	1	15P	-17.663	W	45	110.546	0.000	0.000	0.500	0.500	0.500	62.10	62.10	10.206	1
Leg S16	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	10.85	Comp	10.85	1	16P	-9.212	W	45	84.920	0.000	0.000	0.500	0.500	0.500	52.01	52.01	8.616	1
Leg S17	L 5" x 5" x 0.3125"	SAE	5X5X0.31	36.0	5.63	Comp	5.63	1	17P	-4.781	W	45	84.920	0.000	0.000	0.500	0.500	0.500	52.01	52.01	8.616	1
Diag S1	B/B L3"x4"x0.3125"	DAS	4X3X0.31	36.0	76.97	Comp	76.97	2	2X	-47.102	W	-90	61.196	0.000	0.000	0.310	0.310	0.310	124.62	124.62	11.786	6
Diag S2	B/B L3"x3"x0.25"	DAS	3.5X3X0.25	36.0	82.95	Comp	82.95	2	4X	-52.078	W	-90	63.493	0.000	0.000	0.310	0.310	0.310	94.31	94.31	20.916	1
Diag S3	B/B L2.5"x3"x0.25"	DAS	3.5X2.5X0.25	36.0	85.24	Comp	85.24	2	4X	-52.078	W	-90	63.493	0.000	0.000	0.310	0.310	0.310	94.31	94.31	20.916	1
Diag S4	B/B L2.5"x3"x0.25"	DAS	3.5X2.5X0.25	36.0	84.75	Comp	84.75	2	6X	-52.632	W	-90	49.384	0.000	0.000	0.333	0.333	0.333	109.94	109.94	20.204	1
Diag S5	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	71.40	Comp	71.40	2	8X	-32.539	W	-90	45.574	0.000	0.000	0.333	0.333	0.333	134.71	129.05	30.178	6
Diag S6	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	67.95	Comp	67.95	2	8X	-32.539	W	-90	45.574	0.000	0.000	0.333	0.333	0.333	134.71	129.05	30.178	6
Diag S7	B/B L3"x4"x0.25"	DAS	4X3X0.25	36.0	61.06	Comp	61.06	2	13X	-29.514	W	-90	48.336	0.000	0.000	0.333	0.333	0.333	127.55	124.64	28.573	6
Diag S8	B/B L3"x3"x0.25"	DAS	3.5X3.5X0.25	36.0	64.43	Comp	64.43	2	15X	-28.039	W	-90	43.593	0.000	0.000	0.333	0.333	0.333	149.20	132.43	27.864	6
Diag S9	B/B L2.5"x2"x0.25"	DAS	2.5X2.5X0.25	36.0	34.68	Comp	34.68	2	18X	-16.148	W	-90	46.470	0.000	0.000	0.320	0.320	0.320	97.87	97.87	16.451	6
Diag S10	B/B L2.5"x2"x0.25"	DAS	2.5X2.5X0.25	36.0	57.81	Comp	57.81	2	28P	-14.745	W	0	25.957	0.000	0.000	0.480	0.960	0.480	190.92	163.61	15.495	6
Diag S11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	76.19	Comp	76.19	2	22P	-13.696	W	0	17.975	0.000	0.000	0.480	0.960	0.480	190.92	163.61	15.495	6
Diag S12	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	66.67	Comp	66.67	2	22P	-11.780	W	0	17.975	0.000	0.000	0.480	0.960	0.480	190.92	163.61	15.495	6
Diag S13	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	61.23	Comp	61.23	2	22P	-11.780	W	0	17.975	0.000	0.000	0.480	0.960	0.480	190.92	163.61	15.495	6
Diag S14	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	31.88	Comp	31.88	2	28X	-6.058	W	-90	19.093	0.000	0.000	0.520	0.520	0.520	148.48	141.74	16.514	5
Diag S15	L 3.5" x 3.5" x 0.25"	SAE	3.5X3.5X0.25	36.0	21.51	Comp	21.51	2	29X	-4.409	W	-90	20.914	0.000	0.000	0.520	0.520	0.520	139.78	135.11	15.546	5
Diag S16	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	16.96	Comp	16.96	2	31P	-2.899	W	-90	17.944	0.000	0.000	0.520	0.520	0.520	122.12	130.16	13.640	9
Diag S17	L 3" x 3" x 0.25"	SAE	3X3X0.25	36.0	12.92	Comp	12.92	3	33P	-2.418	W	0	18.723	0.000	0.000	0.520	0.520	0.520	135.30	131.69	12.836	5
Horiz 1	B/B L3"x2"x0.25"	DAL	3.5X2.5X0.25	36.0	79.28	Comp	79.28	2	11P	-37.593	W	-90	47.419	0.000	0.000	0.480	0.480	0.480	113.39	113.39	21.458	1
Horiz 2	B/B L3"x2"x0.25"	DAL	3.5X2.5X0.25	36.0	54.77	Comp	54.77	2	11P	-38.578	W	-90	70.437	0.000	0.000	0.500	0.500	0.500	73.09	73.09	11.278	1
Horiz 3	B/B L3"x2"x0.25"	DAL	3.5X2.5X0.25	36.0	76.10	Comp	76.10	2	11P	-38.578	W	-90	70.437	0.000	0.000	0.500	0.500	0.500	73.09	73.09	11.278	1
Horiz 4	B/B L3"x2"x0.25"	DAL	3.5X2.5X0.25	36.0	76.10	Comp	76.10	2	11P	-38.578	W	-90	70.437	0.000	0.000	0.500	0.500	0.500	73.09	73.09	11.278	1
Horiz 5	B/B L3"x2"x0.25"	DAL	3.5X2.5X0.25	36.0	73.44	Comp	73.44	2	11P	-15.997	W	-90	21.660	0.000	0.000	1.000	1.000	1.000	194.18	165.62	15.292	6
Horiz 6	B/B L3"x2"x0.25"	DAL	3.5X2.5X0.25	36.0	61.39	Comp	61.39	2	11P	-11.102	W	-90	24.360	0.000	0.000	1.000	1.000	1.000	166.45	148.57	10.667	6
Horiz 7	B/B L2.5"x2"x0.25"	DAS	2.5X2.5X0.25	36.0	35.38	Comp	35.38	2	18P	-9.795	W	-90	26.980	0.000	0.000	1.000	1.000	1.000	154.42	141.17	9.896	6
Horiz 8	B/B L2.5"x2"x0.25"	DAS	2.5X2.5X0.25	36.0	45.58	Comp	45.58	2	18P	-9.795	W	-90	26.980	0.000	0.000	1.000	1.000	1.000	154.42	141.17	9.896	6
Horiz 9	B/B L2.5"x2"x0.25"	DAS	2.5X2.5X0.25	36.0	22.33	Comp	22.33	2	22P	-7.428	W	0	33.265	0.000	0.000	1.000	1.000	1.000	130.36	126.37	8.354	6
Horiz 10	B/B L2.5"x2"x0.25"	DAS	2.5X2.5X0.25	36.0	22.33	Comp	22.33	2	22P	-7.428	W	0	33.265	0.000	0.000	1.000	1.000	1.000	130.36	126.37	8.354	6
Horiz 11	B/B L2.5"x2"x0.25"	DAS	2.5X2.5X0.25	36.0	17.36	Comp	17.36	2	23P	-6.485	W	-90	36.894	0.000	0.000	1.000	1.000	1.000	118.34	118.34	7.583	1
Horiz 12	B/B L2.5"x2"x0.25"	DAS	2.5X2.5X0.25	36.0	17.36	Comp	17.36	2	23P	-6.485	W	-90	36.894	0.000	0.000	1.000	1.000	1.000	118.34	118.34	7.583	1
Horiz 13	B/B L2.5"x2"x0.25"	DAS	2.5X2.5X0.25	36.0	17.36	Comp	17.36	2	23P	-6.485	W	-90	36.894	0.000	0.000	1.000	1.000	1.000	118.34	118.34	7.583	1
Horiz 14	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	5.92	Tens	5.52	2	27Y	-0.511	W	0	9.254	0.000	0.000	0.500	1.000	0.500	197.15	178.83	12.371	5
Horiz 15	B/B L3"x2"x0.25"	DAL	3.5X2.5X0.25	36.0	1.68	Tens	0.60	2	29Y	-0.245	W	0	40.911	0.000	0.000	0.500	1.000	0.500	118.06	118.06	11.171	1
Horiz 16	L 3" x 2.5" x 0.25"	SAU	3X2.5X0.25	36.0	1.68	Tens	0.60	2	29Y	-0.245	W	0	40.911	0.000	0.000	0.500	1.000	0.500	118.06	118.06	11.171	1
LD 1	B/B L3"x2"x0.25"	CHN	CHX11.5	36.0	1.06	Comp	1.06	1	33P	-0.316	W	-90	29.726	0.000	0.000	1.000	1.000	0.000	172.80	160.27	9.000	5
LD 2	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	65.74	Comp	65.74	1	14X	-18.950	W	-90	29.827	0.000	0.000	0.850	0.850	0.850	46.95	36.57	12.636	5
LD 3	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	75.83	Comp	75.83	1	33P	-0.316	W	-90	29.726	0.000	0.000	1.000	1.000	0.000	172.80	160.27	9.000	5
LD 4	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	99.79	Comp	99.79	1	14X	-24.959	W	-90	24.372	0.000	0.000	0.870	0.870	0.870	153.35	140.51	11.516	6
LD 5	B/B L2.5"x2"x0.25"	DAL	2.5X2																			

LD 8	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	83.93	Comp	43.19	LD 15P	29.807	W -90	69.012	0.000	0.000	0.000	8.044	0 0.000	0
LD 9	B/B L3"x2"x0.25"	DAL	3X2X0.25	36.0	82.54	Comp	48.42	LD 17X	37.337	W -90	77.112	0.000	0.000	0.000	9.336	0 0.000	0
LD 10	B/B L3"x3"x0.25"	DAE	3X3X0.25	36.0	54.73	Comp	23.08	LD 26Y	21.535	W -45	93.312	0.000	0.000	0.000	10.387	0 0.000	0
LD 11	B/B L2.5"x2"x0.25"	DAL	2.5X2X0.25	36.0	82.48	Comp	42.63	LD 21P	29.417	W -90	69.012	0.000	0.000	0.000	7.909	0 0.000	0
LD 12	B/B L2.5"x2.5"x0.375"	DAE	2.5X2.5X0.38	36.0	68.57	Comp	32.41	LD 23X	36.435	W -90	112.428	0.000	0.000	0.000	9.008	0 0.000	0
LH 1	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	11.52	Tens	11.52	LH 2X	9.817	W 90	85.212	0.000	0.000	0.000	21.458	0 0.000	0
LH 2	B/B L2.5"x3"x0.25"	DAS	3X2.5X0.25	36.0	93.28	Comp	28.63	LH 3P	24.397	W -90	85.212	0.000	0.000	0.000	10.808	0 0.000	0
LH 3	B/B L2.5"x3"x0.375"	DAS	3X2.5X0.38	36.0	67.76	Comp	18.76	LH 6Y	23.342	W -45	124.416	0.000	0.000	0.000	10.005	0 0.000	0
LH 4	B/B L3.5"x3.5"x0.25"	DAE	3.5X3.5X0.25	36.0	61.31	Comp	20.39	LH 6Y	22.335	W -45	109.512	0.000	0.000	0.000	9.202	0 0.000	0
DUM 1	Dummy Bracing Member	DUM	0.1X0.1X1	36.0	0.00		0.00	BR 11X	0.928	W -45	0.324	0.000	0.000	0.000	19.445	0 0.000	0

*** Maximum Stress Summary for Each Load Case

Summary of Maximum Usages by Load Case:

Load Case	Maximum Usage %	Element Label	Element Type
W 0	90.62	LH 4P	Angle
W 180	91.05	LH 4Y	Angle
W 45	90.11	LH 3P	Angle
W -45	93.28	LH 3X	Angle
W 90	91.03	LH 3P	Angle
W -90	91.38	LH 3X	Angle
W 0 Ice	34.25	LH 4P	Angle
W 180 Ice	35.15	LH 4Y	Angle
W 45 Ice	38.21	L 1P	Angle
W -45 Ice	37.23	L 1X	Angle
W 90 Ice	34.42	LH 3P	Angle
W -90 Ice	35.22	LH 3X	Angle

*** Weight of structure (lbs):
 Weight of Angles*Section DLF: 146562.4
 Weight of Equipment: 1189.0
 Total: 147671.4

*** End of Report

Site #: 88018		Engineer: RDB		Windspeed: No Ice: 93 mph		Ice: 50 mph		Taper: -0.123333		Taper Change: 300 ft									
Name: Stamford (Katoona), CT		Date: 08/02/18		Carrier: T-Mobile				FW @ Base: 46.00 ft		FW @ Top: 9 ft									
Joint Label	Symmetry Code	X Coord. (ft)	Y Coord. (ft)	Z Coord. (ft)	X Disp. Rest.	Y Disp. Rest.	Z Disp. Rest.	X Rot. Rest.	Y Rot. Rest.	Z Rot. Rest.	Drop Sub-Brace (Y or Blank)	Spreadsheet Version Last Updated: 11/12/2014							
												# Vert	Drop (ft)	Height (ft)	Type	Count	Z-Elev. (ft)	FW (ft)	# Sub-Brace
0	XY-Symmetry	23	23	0	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed		3	7.033	25	1	1	0	46	3
1	XY-Symmetry	21.45833333	21.45833333	25	Free	Free	Free	Free	Free	Free		2	7.033	25	2	2	25	42.91666667	3
2	XY-Symmetry	19.91666667	19.91666667	50	Free	Free	Free	Free	Free	Free		2	7.033	25	2	3	50	39.83333333	3
3	XY-Symmetry	18.375	18.375	75	Free	Free	Free	Free	Free	Free		2	7.033	25	2	4	75	36.75	3
4	XY-Symmetry	16.83333333	16.83333333	100	Free	Free	Free	Free	Free	Free				25	A	5	100	33.66666667	2
5	XY-Symmetry	15.29166667	15.29166667	125	Free	Free	Free	Free	Free	Free				25	A	6	125	30.58333333	2
6	XY-Symmetry	13.75	13.75	150	Free	Free	Free	Free	Free	Free				25	A	7	150	27.5	2
7	XY-Symmetry	12.20833333	12.20833333	175	Free	Free	Free	Free	Free	Free				25	A	8	175	24.41666667	2
8	XY-Symmetry	10.66666667	10.66666667	200	Free	Free	Free	Free	Free	Free				12.5	A	9	200	21.33333333	1
9	XY-Symmetry	9.895833333	9.895833333	212.5	Free	Free	Free	Free	Free	Free				12.5	A	10	212.5	19.79166667	1
10	XY-Symmetry	9.125	9.125	225	Free	Free	Free	Free	Free	Free				12.5	A	11	225	18.25	1
11	XY-Symmetry	8.354166667	8.354166667	237.5	Free	Free	Free	Free	Free	Free				12.5	A	12	237.5	16.70833333	1
12	XY-Symmetry	7.583333333	7.583333333	250	Free	Free	Free	Free	Free	Free				12.5	A	13	250	15.16666667	1
13	XY-Symmetry	6.8125	6.8125	262.5	Free	Free	Free	Free	Free	Free		1		10.167	X	14	262.5	13.625	1
14	XY-Symmetry	6.185535	6.185535	272.667	Free	Free	Free	Free	Free	Free		1		10.167	X	15	272.667	12.37107	1
15	XY-Symmetry	5.55857	5.55857	282.834	Free	Free	Free	Free	Free	Free		1		8.583	X	16	282.834	11.11714	1
16	XY-Symmetry	5.029285	5.029285	291.417	Free	Free	Free	Free	Free	Free				8.583	X	17	291.417	10.05857	1
17	XY-Symmetry	4.5	4.5	300	Free	Free	Free	Free	Free	Free						18	300	9	
A1	Y-Symmetry	21.45833333	0	25	Free	Free	Free	Free	Free	Free									
A2	X-Symmetry	0	21.45833333	25	Free	Free	Free	Free	Free	Free									
A3	XY-Symmetry	19.91666667	6.638888889	50	Free	Free	Free	Free	Free	Free									
A4	XY-Symmetry	6.638888889	19.91666667	50	Free	Free	Free	Free	Free	Free									
A5	XY-Symmetry	18.375	6.125	75	Free	Free	Free	Free	Free	Free									
A6	XY-Symmetry	6.125	18.375	75	Free	Free	Free	Free	Free	Free									
A7	XY-Symmetry	16.83333333	5.611111111	100	Free	Free	Free	Free	Free	Free									
A8	XY-Symmetry	5.611111111	16.83333333	100	Free	Free	Free	Free	Free	Free									
A9	Y-Symmetry	15.29166667	0	125	Free	Free	Free	Free	Free	Free									
A10	X-Symmetry	0	15.29166667	125	Free	Free	Free	Free	Free	Free									
A11	Y-Symmetry	13.75	0	150	Free	Free	Free	Free	Free	Free									
A12	X-Symmetry	0	13.75	150	Free	Free	Free	Free	Free	Free									
A13	Y-Symmetry	12.20833333	0	175	Free	Free	Free	Free	Free	Free									
A14	X-Symmetry	0	12.20833333	175	Free	Free	Free	Free	Free	Free									
A15	Y-Symmetry	10.66666667	0	200	Free	Free	Free	Free	Free	Free									
A16	X-Symmetry	0	10.66666667	200	Free	Free	Free	Free	Free	Free									
A17	Y-Symmetry	9.895833333	0	212.5	Free	Free	Free	Free	Free	Free									
A18	X-Symmetry	0	9.895833333	212.5	Free	Free	Free	Free	Free	Free									
A19	Y-Symmetry	9.125	0	225	Free	Free	Free	Free	Free	Free									
A20	X-Symmetry	0	9.125	225	Free	Free	Free	Free	Free	Free									
A21	Y-Symmetry	8.354166667	0	237.5	Free	Free	Free	Free	Free	Free									
A22	X-Symmetry	0	8.354166667	237.5	Free	Free	Free	Free	Free	Free									
A23	Y-Symmetry	7.583333333	0	250	Free	Free	Free	Free	Free	Free									
A24	X-Symmetry	0	7.583333333	250	Free	Free	Free	Free	Free	Free									
A25	Y-Symmetry	6.8125	0	262.5	Free	Free	Free	Free	Free	Free									
A26	X-Symmetry	0	6.8125	262.5	Free	Free	Free	Free	Free	Free									
H1	XY-Symmetry	21.892035	10.72916667	17.967	Free	Free	Free	Free	Free	Free									
H2	XY-Symmetry	10.72916667	21.892035	17.967	Free	Free	Free	Free	Free	Free									
H5	XY-Symmetry	20.35036833	10.807895	42.967	Free	Free	Free	Free	Free	Free									
H6	XY-Symmetry	10.807895	20.35036833	42.967	Free	Free	Free	Free	Free	Free									
H7	Y-Symmetry	20.35036833	0	42.967	Free	Free	Free	Free	Free	Free									
H8	X-Symmetry	0	20.35036833	42.967	Free	Free	Free	Free	Free	Free									
H9	XY-Symmetry	18.80870167	10.00487167	67.967	Free	Free	Free	Free	Free	Free									
H10	XY-Symmetry	10.00487167	18.80870167	67.967	Free	Free	Free	Free	Free	Free									
H11	Y-Symmetry	18.80870167	0	67.967	Free	Free	Free	Free	Free	Free									
H12	X-Symmetry	0	18.80870167	67.967	Free	Free	Free	Free	Free	Free									
H13	XY-Symmetry	17.267035	9.201848333	92.967	Free	Free	Free	Free	Free	Free									
H14	XY-Symmetry	9.201848333	17.267035	92.967	Free	Free	Free	Free	Free	Free									
H15	Y-Symmetry	17.267035	0	92.967	Free	Free	Free	Free	Free	Free									
H16	X-Symmetry	0	17.267035	92.967	Free	Free	Free	Free	Free	Free									

NOTES

Types:

1: Built up Horiz. w/ A

2: Built up Horiz. w/ M

A: Typical A brace

X: Typical X brace

Drop: Use only for types 1 & 2

Sections: 17

NOTES

Types:

1: Built up Horiz. w/ A

2: Built up Horiz. w/ M

A: Typical A brace

X: Typical X brace

Drop: Use only for types 1 & 2

Sections: 17

Legs

Site No.:	88018
Engineer:	RDB
Date:	08/02/2018
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter or Length (in)	Thickness ^[2] (in)	F _y (ksi)
1	0.000-25.00	L	8	1.125	36
2	25.00-50.00	L	8	1.125	36
3	50.00-75.00	L	8	1.125	36
4	75.00-100.0	L	8	1	36
5	100.0-125.0	L	8	0.875	36
6	125.0-150.0	L	8	0.875	36
7	150.0-175.0	L	8	0.75	36
8	175.0-200.0	L	8	0.625	36
9	200.0-212.5	L	6	0.75	36
10	212.5-225.0	L	6	0.75	36
11	225.0-237.5	L	6	0.5625	36
12	237.5-250.0	L	6	0.5625	36
13	250.0-262.5	L	6	0.4375	36
14	262.5-272.7	L	5	0.4375	36
15	272.7-282.8	L	5	0.4375	36
16	282.8-291.4	L	5	0.3125	36
17	291.4-300.0	L	5	0.3125	36

Notes:

^[1] Type of Leg Shape: **R** = Round or **P** = Bent Plate or **S** = Schifflerized Angle. **L** = Even Leg

^[2] For Solid Round Leg Shapes Thickness Equals Zero.

^[3] Adjust for Bent Plate Leg Shapes.

Diagonals

Site No.:	88018
Engineer:	RDB
Date:	08/02/2018
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	Is Diag. Tension Only? (Y/N)
1	0.000-25.00	2L		3	4	0.3125	36	
2	25.00-50.00	2L		3	3.5	0.25	36	
3	50.00-75.00	2L		2.5	3.5	0.25	36	
4	75.00-100.0	2L		2.5	3.5	0.25	36	
5	100.0-125.0	2L		3	4	0.25	36	
6	125.0-150.0	2L		3	4	0.25	36	
7	150.0-175.0	2L		3	4	0.25	36	
8	175.0-200.0	2L		3.5	3.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2.5	0.25	36	
11	225.0-237.5	2L		2.5	2	0.25	36	
12	237.5-250.0	2L		2.5	2	0.25	36	
13	250.0-262.5	2L		2.5	2	0.25	36	
14	262.5-272.7	L		3.5	3.5	0.25	36	
15	272.7-282.8	L		3.5	3.5	0.25	36	
16	282.8-291.4	L		3	3	0.25	36	
17	291.4-300.0	L		3	3	0.25	36	

Notes:

^[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Horizontals

Site No.:	88018
Engineer:	RDB
Date:	08/02/2018
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Tower Section #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)	
1	0.000-25.00	2L		3.5	2.5	0.25	36	
2	25.00-50.00	2L		3.5	2.5	0.25	36	
3	50.00-75.00	2L		3.5	2.5	0.25	36	
4	75.00-100.0	2L		3	2.5	0.25	36	
5	100.0-125.0	2L		3	2.5	0.25	36	
6	125.0-150.0	2L		3	2.5	0.25	36	
7	150.0-175.0	2L		2.5	2.5	0.25	36	
8	175.0-200.0	2L		2.5	2.5	0.25	36	
9	200.0-212.5	2L		2.5	2.5	0.25	36	
10	212.5-225.0	2L		2.5	2.5	0.25	36	
11	225.0-237.5	2L		2.5	2.5	0.25	36	
12	237.5-250.0	2L		2.5	2.5	0.25	36	
13	250.0-262.5	2L		2.5	2.5	0.25	36	
14	262.5-272.7	L		3	2.5	0.25	36	
15	272.7-282.8	2L		3	2.5	0.25	36	
16	282.8-291.4	L		3	2.5	0.25	36	
17	291.4-300.0	C		8	11.5		36	

Notes:

^[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle, **2L** = Double-Angle, **C** = Channel, **W** = W Shape

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Diagonals

Site No.:	88018
Engineer:	RDB
Date:	08/02/2018
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

Input diags. from left to center & from base section upward.

Tower Built-up Diag. #	Section Elevations (ft)	Type of Shape ^[1]	Diameter ^[2] (in)	Web Length ^[3] (in)	Flange Length ^[3] (in)	Thickness (in)	F _y (ksi)
1	0.000-25.00	2L		3	2	0.25	36
2	0.000-25.00	2L		4	3	0.25	36
3	25.00-50.00	2L		2.5	2	0.25	36
4	25.00-50.00	2L		2.5	2	0.25	36
5	25.00-50.00	2L		3	3	0.25	36
6	50.00-75.00	2L		3	3	0.25	36
7	50.00-75.00	2L		2.5	2	0.25	36
8	50.00-75.00	2L		3	2	0.25	36
9	75.00-100.0	2L		3	3	0.25	36
10	75.00-100.0	2L		2.5	2	0.25	36
11	75.00-100.0	2L		2.5	2.5	0.375	36

Notes:

^[1] Type of Diagonal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Built-up Horizontals

Site No.:	88018
Engineer:	RDB
Date:	08/02/2018
Carrier:	T-Mobile

When inputting thickness values, include all decimal places.

[illegible]

Notes:

^[1] Type of Horizontal Shape: **R** = Round, **L** = Single-Angle or **2L** = Double-Angle.

^[2] Applies to Pipes and Solid Round Shapes only. For Solid Round Shapes Thickness Equals Zero.

^[3] Applies to Single-Angle and Double-Angle Shapes only.

^[4] Applies to Double-Angle Shapes only.

^[5] Applies to Single-Angle Shapes only.

Site No.:	88018
Engineer:	RDB
Date:	08/02/18
Carrier:	T-Mobile

Description	From	To	Quantity	Shape	Width or Diameter	Perimeter	Unit Weight	Part of Face Solidity Ratio	Include in Wind Load
	(ft)	(ft)			(in)	(in)	(lb/ft)	(Yes/No)	(Yes/No)
1 Ladder	0	300	1	Flat	1.5	6.0	6	Yes	Yes
2 Short Ladder	8.3333	33.3333	2	Flat	1.5	6.0	6	Yes	Yes
3 Short Ladder	8.3333	33.3333	2	Flat	1.5	6.0	6	Yes	Yes
5 WG	5	300	1	Flat	1.5	6.0	6	Yes	Yes
6 WG	5	272	1	Flat	1.5	6.0	6	Yes	Yes
7 WG	5	235	1	Flat	1.5	6.0	6	Yes	Yes
8 WG	5	223	1	Flat	1.5	6.0	6	Yes	Yes
9 WG	5	160	1	Flat	1.5	6.0	6	Yes	Yes
10 Marcus Communications LLC	5	300	1	Round	1.55	4.9	0.63	Yes	Yes
11 Marcus Communications LLC	5	300	1	Round	1.98	6.2	0.82	Yes	Yes
12 Marcus Communications LLC	5	300	1	Round	1.09	3.4	0.33	Yes	Yes
13 Other	5	300	1	Round	0.63	2.0	0.15	Yes	Yes
14 Clearwire Corporation	5	300	5	Round	1.09	3.4	0.33	Yes	Yes
15 US Dept Of Homeland Security	5	275	2	Round	1.09	3.4	0.33	Yes	Yes
16 Sirius XM Radio Inc.	5	270	1	Round	1.98	6.2	0.82	Yes	Yes
17 T-Mobile	5	265	1	Flat	7.065	37.7	9.84	Yes	Yes
18 T-Mobile	5	265	2	Round	1.25	3.9	1.05	Yes	Yes
19 T-Mobile	5	265	1	Round	1.63	5.1	1.61	No	No
20 Sirius XM Radio Inc.	5	260	1	Round	5.02	15.8	1.85	No	No
21 US Dept Of Homeland Security	5	250	1	Round	1.09	3.4	0.33	Yes	Yes
22 US Dept Of Homeland Security	5	246	1	Round	1.09	3.4	0.33	Yes	Yes
23 AT&T Mobility	5	235	1	Flat	7.065	37.7	9.84	Yes	Yes
24 AT&T Mobility	5	235	1	Round	0.585	2.0	0.34	No	No
25 AT&T Mobility	5	235	2	Round	0.78	2.5	0.59	Yes	Yes
26 AT&T Mobility	5	235	1	Round	1.85	6.8	1.96	No	No
27 Sprint Nextel	5	222	1	Flat	7.065	37.7	12.3	Yes	Yes
28 US Dept Of Homeland Security	5	207	1	Round	1.09	3.4	0.33	Yes	Yes
29 Marcus Communications LLC	5	200	2	Round	1.55	4.9	0.63	Yes	Yes
30 Spok Holdings, Inc.	5	193	2	Round	1.09	3.4	0.33	Yes	Yes
31 Spok Holdings, Inc.	5	193	1	Round	1.09	3.4	0.33	Yes	Yes
32 Clearwire Corporation	5	171	2	Round	2.38	7.5	3.65	Yes	Yes
33 Clearwire Corporation	5	171	6	Round	0.31	1.0	0.05	Yes	Yes
34 Metro PCS Inc	5	165	1	Flat	7.065	37.7	9.84	Yes	Yes
35 Metro PCS Inc	5	165	1	Round	0.38	1.2	0.23	Yes	Yes
36 Metro PCS Inc	5	165	1	Round	0.44	1.4	0.08	Yes	Yes
37 Sprint Nextel	5	150	3	Round	1.54	4.8	1	Yes	Yes
38 Sprint Nextel	5	150	1	Round	1.7	5.3	1.78	Yes	Yes
39 Sensus USA Inc.	5	139	1	Round	1.09	3.4	0.33	Yes	Yes
40 Senet, Inc.	5	135	1	Round	0.38	1.2	0.2	Yes	Yes
41 Senet, Inc.	5	135	1	Round	0.63	2.0	0.2	Yes	Yes
42 Spok Holdings, Inc.	5	120	1	Round	0.63	2.0	0.2	Yes	Yes
43 Marcus Communications LLC	5	107	1	Round	1.55	4.9	0.6	Yes	Yes
44 Verizon Wireless	5	92	3	Round	1.54	4.8	1.0	Yes	Yes
45 Sirius XM Radio Inc.	5	22	1	Round	1.09	3.4	0.3	Yes	Yes
46 Spok Holdings, Inc.	0	6	1	Round	0.63	2.0	0.2	Yes	Yes
47 Spok Holdings, Inc.	0	6	1	Round	0.34	1.1	0.1	Yes	Yes

α	$7\ k_{z\max}$	2.01
z_g	$1200\ k_{z\min}$	0.7
K_z	$0.9\ K_z$	

Description	From	To	Quantity	Face # (1-4, A-D)	Coax Width (in)	Coax Shape (Block / Flat / Ind)	% Exposed	Spacing (in)	Shape (Round/Flat)	Block Width (# coax)	Block Depth (# coax)	Perimeter (in)	Unit Weight (lb/ft)	In Face Zone (Yes/No)	Include in Wind Load (Yes/No)
Ladder	0	300	1	B	1.50	Flat	100	1	Flat	1	1	6.0	6	Yes	Yes
Short Ladder	8.3333	33.3333	2	1	1.50	Flat	100	1	Flat	2	1	6.0	6	Yes	Yes
Short Ladder	8.3333	33.3333	2	3	1.50	Flat	100	1	Flat	2	1	6.0	6	Yes	Yes
								1						No	No
WG	5	300	1	2	1.50	Flat	100	1	Flat	1	1	6.0	6	Yes	Yes
WG	5	272	1	3	1.50	Flat	100	1	Flat	1	1	6.0	6	Yes	Yes
WG	5	235	1	1	1.50	Flat	100	1	Flat	1	1	6.0	6	Yes	Yes
WG	5	223	1	2	1.50	Flat	100	1	Flat	1	1	6.0	6	Yes	Yes
WG	5	160	1	1	1.50	Flat	100	1	Flat	1	1	6.0	6	Yes	Yes
Marcus Communications LLC	5	300	1	B	1.55	Ind	100	1	Round	1	1	4.9	0.63	Yes	Yes
Marcus Communications LLC	5	300	1	B	1.98	Ind	100	1	Round	1	1	6.2	0.82	Yes	Yes
Marcus Communications LLC	5	300	1	B	1.09	Ind	100	1	Round	1	1	3.4	0.33	Yes	Yes
Other	5	300	1	B	0.63	Ind	100	1	Round	1	1	2.0	0.15	Yes	Yes
Clearwire Corporation	5	300	5	2	1.09	Ind	100	1	Round	5	1	3.4	0.33	Yes	Yes
US Dept Of Homeland Security	5	275	2	2	1.09	Ind	100	1	Round	2	1	3.4	0.33	Yes	Yes
Sirius XM Radio Inc.	5	270	1	4	1.98	Ind	100	1	Round	1	1	6.2	0.82	Yes	Yes
T-Mobile	5	265	12	4	1.98	Block	41	0.5	Flat	5	3	37.7	9.84	Yes	Yes
T-Mobile	5	265	2	4	1.25	Ind	100	1	Round	2	1	3.9	1.05	Yes	Yes
T-Mobile	5	265	1	4	1.63	Ind	0	1	Round	1	1	5.1	1.61	No	No
Sirius XM Radio Inc.	5	260	1	4	5.02	Ind	0	1	Round	1	1	15.8	1.85	No	No
US Dept Of Homeland Security	5	250	1	2	1.09	Ind	100	1	Round	1	1	3.4	0.33	Yes	Yes
US Dept Of Homeland Security	5	246	1	2	1.09	Ind	100	1	Round	1	1	3.4	0.33	Yes	Yes
AT&T Mobility	5	235	12	1	1.98	Block	50	0.5	Flat	6	2	37.7	9.84	Yes	Yes
AT&T Mobility	5	235	2	1	0.39	Ind	0	1	Round	1	2	2.0	0.34	No	No
AT&T Mobility	5	235	2	1	0.78	Ind	100	1	Round	2	1	2.5	0.59	Yes	Yes
AT&T Mobility	5	235	4	1	0.74	Ind	0	1	Round	1	4	6.8	1.96	No	No
Sprint Nextel	5	222	15	2	1.98	Block	33	0.5	Flat	5	3	37.7	12.3	Yes	Yes
US Dept Of Homeland Security	5	207	1	2	1.09	Ind	100	1	Round	1	1	3.4	0.33	Yes	Yes
Marcus Communications LLC	5	200	2	B	1.55	Ind	100	1	Round	2	1	4.9	0.63	Yes	Yes
Spok Holdings, Inc.	5	193	2	B	1.09	Ind	100	1	Round	2	1	3.4	0.33	Yes	Yes
Spok Holdings, Inc.	5	193	1	B	1.09	Ind	100	1	Round	1	1	3.4	0.33	Yes	Yes
Clearwire Corporation	5	171	2	2	2.38	Ind	100	1	Round	2	1	7.5	3.65	Yes	Yes
Clearwire Corporation	5	171	6	2	0.31	Ind	100	1	Round	6	1	1.0	0.05	Yes	Yes
Metro PCS Inc	5	165	12	1	1.98	Block	50	0.5	Flat	6	2	37.7	9.84	Yes	Yes
Metro PCS Inc	5	165	1	1	0.38	Ind	100	1	Round	1	1	1.2	0.23	Yes	Yes
Metro PCS Inc	5	165	1	1	0.44	Ind	100	1	Round	1	1	1.4	0.08	Yes	Yes
Sprint Nextel	5	150	3	2	1.54	Ind	100	1	Round	3	1	4.8	1	Yes	Yes
Sprint Nextel	5	150	1	2	1.70	Ind	100	1	Round	1	1	5.3	1.78	Yes	Yes
Sensus USA Inc.	5	139	1	B	1.09	Ind	100	1	Round	1	1	3.4	0.33	Yes	Yes
Senet, Inc.	5	135	1	3	0.38	Ind	100	1	Round	1	1	1.2	0.23	Yes	Yes
Senet, Inc.	5	135	1	3	0.63	Ind	100	1	Round	1	1	2.0	0.15	Yes	Yes
Spok Holdings, Inc.	5	120	1	B	0.63	Ind	100	1	Round	1	1	2.0	0.15	Yes	Yes
Marcus Communications LLC	5	107	1	B	1.55	Ind	100	1	Round	1	1	4.9	0.63	Yes	Yes
Verizon Wireless	5	92	3	4	1.54	Ind	100	1	Round	3	1	4.8	1	Yes	Yes
Sirius XM Radio Inc.	5	22	1	4	1.09	Ind	100	1	Round	1	1	3.4	0.33	Yes	Yes
Spok Holdings, Inc.	0	6	1	B	0.63	Ind	100	1	Round	1	1	2.0	0.15	Yes	Yes
Spok Holdings, Inc.	0	6	1	B	0.34	Ind	100	1	Round	1	1	1.1	0.06	Yes	Yes
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No
								1						No	No

Dishes

Dish Types	
S	Standard
R	Standard w/ Radome
H	High Performance
G	Grid

Dish Number	Dish Elevation (ft)	Dish Dia. (ft)	Dish Angle (deg)	Dish Type	Joint Orientation	Equipment Staus
1	311	4	51.4	S	XY	
2	307	3	0	H	Y	
3	303	2	90	H	XY	
4	303	2	180	H	X	
5	303	2	270	H	P	
6	120	4	90	S	XY	
7	22	2	197	R	X	
8	6	4	270	S	P	
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						
36						
37						
38						
39						
40						
41						
42						
43						
44						
45						
46						
47						
48						
49						
50						

Site No.:	88018
Engineer:	RDB
Date:	08/02/18
Carrier:	T-Mobile

Equipment Label	Attach Label	Equipment Property Set	EIA Antenna Orientation Angle (deg)
4' STD 1 @ 311'	17XY	4 ft STD Dish	51.4
3' HP 2 @ 307'	17Y	3 ft HP Dish	0
2' HP 3 @ 303'	17XY	2 ft HP Dish	90
2' HP 4 @ 303'	17X	2 ft HP Dish	180
2' HP 5 @ 303'	17P	2 ft HP Dish	270
4' STD 6 @ 120'	5XY	4 ft STD Dish	90
2' RAD 7 @ 22'	1X	2 ft RAD Dish	197
4' STD 8 @ 6'	0P	4 ft STD Dish	270

Joint Orientation	
XY	Y
90°	
X	P

Site #:	88018
Name:	T-Mobile

Engineer:	RDB
Date:	08/02/18

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ	
L 1	Leg S1		XY-Symmetry	0P	1P		1	4	0.28132	0.28132	0.28132
L 2	Leg S2		XY-Symmetry	1P	2P		1	4	0.28132	0.28132	0.28132
L 3	Leg S3		XY-Symmetry	2P	3P		1	4	0.28132	0.28132	0.28132
L 4	Leg S4		XY-Symmetry	3P	4P		1	4	0.28132	0.28132	0.28132
L 5	Leg S5		XY-Symmetry	4P	5P		1	4	0.33333333	0.33333333	0.33333333
L 6	Leg S6		XY-Symmetry	5P	6P		1	4	0.33333333	0.33333333	0.33333333
L 7	Leg S7		XY-Symmetry	6P	7P		1	4	0.33333333	0.33333333	0.33333333
L 8	Leg S8		XY-Symmetry	7P	8P		1	4	0.33333333	0.33333333	0.33333333
L 9	Leg S9		XY-Symmetry	8P	9P		1	4	0.5	0.5	0.5
L 10	Leg S10		XY-Symmetry	9P	10P		1	4	0.5	0.5	0.5
L 11	Leg S11		XY-Symmetry	10P	11P		1	4	0.5	0.5	0.5
L 12	Leg S12		XY-Symmetry	11P	12P		1	4	0.5	0.5	0.5
L 13	Leg S13		XY-Symmetry	12P	13P		1	4	0.5	0.5	0.5
L 14	Leg S14		XY-Symmetry	13P	14P		1	4	0.5	0.5	0.5
L 15	Leg S15		XY-Symmetry	14P	15P		1	4	0.5	0.5	0.5
L 16	Leg S16		XY-Symmetry	15P	16P		1	4	0.5	0.5	0.5
L 17	Leg S17		XY-Symmetry	16P	17P		1	4	0.5	0.5	0.5
D 1	Diag S1		XY-Symmetry	0P	H2P		1	6	0.31	0.92	0.31
D 2	Diag S1		XY-Symmetry	0P	H1P		1	6	0.31	0.92	0.31
D 3	Diag S2		XY-Symmetry	1P	H6P		1	6	0.31	0.62	0.31
D 4	Diag S2		XY-Symmetry	1P	H5P		1	6	0.31	0.62	0.31
D 5	Diag S3		XY-Symmetry	2P	H10P		1	6	0.33333333	0.66666667	0.33333333
D 6	Diag S3		XY-Symmetry	2P	H9P		1	6	0.33333333	0.66666667	0.33333333
D 7	Diag S4		XY-Symmetry	3P	H14P		1	6	0.33333333	0.66666667	0.33333333
D 8	Diag S4		XY-Symmetry	3P	H13P		1	6	0.33333333	0.66666667	0.33333333
D 9	Diag S5		XY-Symmetry	4P	A9P		1	6	0.33333333	0.66666667	0.33333333
D 10	Diag S5		XY-Symmetry	4P	A10P		1	6	0.33333333	0.66666667	0.33333333
D 11	Diag S6		XY-Symmetry	5P	A11P		1	6	0.33333333	0.66666667	0.33333333
D 12	Diag S6		XY-Symmetry	5P	A12P		1	6	0.33333333	0.66666667	0.33333333
D 13	Diag S7		XY-Symmetry	6P	A13P		1	6	0.33333333	0.66666667	0.33333333
D 14	Diag S7		XY-Symmetry	6P	A14P		1	6	0.33333333	0.66666667	0.33333333
D 15	Diag S8		XY-Symmetry	7P	A15P		1	6	0.33333333	0.66666667	0.33333333
D 16	Diag S8		XY-Symmetry	7P	A16P		1	6	0.33333333	0.66666667	0.33333333
D 17	Diag S9		XY-Symmetry	8P	A17P		1	6	0.32	0.59	0.32
D 18	Diag S9		XY-Symmetry	8P	A18P		1	6	0.32	0.59	0.32
D 19	Diag S10		XY-Symmetry	9P	A19P		1	6	0.5	1	0.5
D 20	Diag S10		XY-Symmetry	9P	A20P		1	6	0.5	1	0.5
D 21	Diag S11		XY-Symmetry	10P	A21P		1	6	0.48	0.96	0.48
D 22	Diag S11		XY-Symmetry	10P	A22P		1	6	0.48	0.96	0.48
D 23	Diag S12		XY-Symmetry	11P	A23P		1	6	0.5	1	0.5
D 24	Diag S12		XY-Symmetry	11P	A24P		1	6	0.5	1	0.5
D 25	Diag S13		XY-Symmetry	12P	A25P		1	6	0.5	1	0.5
D 26	Diag S13		XY-Symmetry	12P	A26P		1	6	0.5	1	0.5
D 27	Diag S14		XY-Symmetry	13P	14Y		2	5	0.52	0.52	0.52
D 28	Diag S14		XY-Symmetry	13P	14X		2	5	0.52	0.52	0.52
D 29	Diag S15		XY-Symmetry	14P	15Y		2	5	0.52	0.52	0.52
D 30	Diag S15		XY-Symmetry	14P	15X		2	5	0.52	0.52	0.52
D 31	Diag S16		XY-Symmetry	15P	16Y		2	5	0.52	0.52	0.52
D 32	Diag S16		XY-Symmetry	15P	16X		2	5	0.52	0.52	0.52
D 33	Diag S17		XY-Symmetry	16P	17Y		2	5	0.52	0.52	0.52
D 34	Diag S17		XY-Symmetry	16P	17X		2	5	0.52	0.52	0.52
H 1	Horiz 1		XY-Symmetry	1P	A1P		1	6	0.48	0.48	0.48
H 2	Horiz 1		XY-Symmetry	1P	A2P		1	6	0.48	0.48	0.48
H 3	Horiz 2		XY-Symmetry	2P	A3P		1	6	0.5	0.5	0.5
H 4	Horiz 2		XY-Symmetry	2P	A4P		1	6	0.5	0.5	0.5
H 5	Horiz 3		XY-Symmetry	3P	A5P		1	6	0.5	0.5	0.5
H 6	Horiz 3		XY-Symmetry	3P	A6P		1	6	0.5	0.5	0.5
H 7	Horiz 4		XY-Symmetry	4P	A7P		1	6	0.47	0.94	0.47
H 8	Horiz 4		XY-Symmetry	4P	A8P		1	6	0.47	0.94	0.47
H 9	Horiz 5		XY-Symmetry	5P	A9P		1	6	1	1	1
H 10	Horiz 5		XY-Symmetry	5P	A10P		1	6	1	1	1
H 11	Horiz 6		XY-Symmetry	6P	A11P		1	6	1	1	1

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
H 12	Horiz 6		XY-Symmetry	6P	A12P		1 6	1	1	1
H 13	Horiz 7		XY-Symmetry	7P	A13P		1 6	1	1	1
H 14	Horiz 7		XY-Symmetry	7P	A14P		1 6	1	1	1
H 15	Horiz 8		XY-Symmetry	8P	A15P		1 6	1	1	1
H 16	Horiz 8		XY-Symmetry	8P	A16P		1 6	1	1	1
H 17	Horiz 9		XY-Symmetry	9P	A17P		1 6	1	1	1
H 18	Horiz 9		XY-Symmetry	9P	A18P		1 6	1	1	1
H 19	Horiz 10		XY-Symmetry	10P	A19P		1 6	1	1	1
H 20	Horiz 10		XY-Symmetry	10P	A20P		1 6	1	1	1
H 21	Horiz 11		XY-Symmetry	11P	A21P		1 6	1	1	1
H 22	Horiz 11		XY-Symmetry	11P	A22P		1 6	1	1	1
H 23	Horiz 12		XY-Symmetry	12P	A23P		1 6	1	1	1
H 24	Horiz 12		XY-Symmetry	12P	A24P		1 6	1	1	1
H 25	Horiz 13		XY-Symmetry	13P	A25P		1 6	1	1	1
H 26	Horiz 13		XY-Symmetry	13P	A26P		1 6	1	1	1
H 27	Horiz 14		Y-Symmetry	14P	14X		3 5	0.5	1	0.5
H 28	Horiz 14		X-Symmetry	14P	14Y		3 5	0.5	1	0.5
H 29	Horiz 15		Y-Symmetry	15P	15X		1 6	0.5	1	0.5
H 30	Horiz 15		X-Symmetry	15P	15Y		1 6	0.5	1	0.5
H 31	Horiz 16		Y-Symmetry	16P	16X		3 5	0.5	1	0.5
H 32	Horiz 16		X-Symmetry	16P	16Y		3 5	0.5	1	0.5
H 33	Horiz 17		Y-Symmetry	17P	17X		3 5	1	1	1
H 34	Horiz 17		X-Symmetry	17P	17Y		3 5	1	1	1
H 37	Horiz 2		Y-Symmetry	A3P	A3X		1 6	0.5	1	0.5
H 38	Horiz 2		X-Symmetry	A4P	A4Y		1 6	0.5	1	0.5
H 39	Horiz 3		Y-Symmetry	A5P	A5X		1 6	0.5	1	0.5
H 40	Horiz 3		X-Symmetry	A6P	A6Y		1 6	0.5	1	0.5
H 41	Horiz 4		Y-Symmetry	A7P	A7X		1 6	0.5	1	0.5
H 42	Horiz 4		X-Symmetry	A8P	A8Y		1 6	0.5	1	0.5
LH 1	LH 1		Y-Symmetry	H1P	H1X		1 6	100	100	100
LH 2	LH 1		X-Symmetry	H2P	H2Y		1 6	100	100	100
LH 3	LH 2		XY-Symmetry	H5P	H7P		1 6	1	2	1
LH 4	LH 2		XY-Symmetry	H6P	H8P		1 6	1	2	1
LH 5	LH 3		XY-Symmetry	H9P	H11P		1 6	1	2	1
LH 6	LH 3		XY-Symmetry	H10P	H12P		1 6	1	2	1
LH 7	LH 4		XY-Symmetry	H13P	H15P		1 6	0.998	1.995	0.998
LH 8	LH 4		XY-Symmetry	H14P	H16P		1 6	0.998	1.995	0.998
LD 1	LD 1		XY-Symmetry	H1P	1P		1 6	0.85	0.85	0.85
LD 2	LD 1		XY-Symmetry	H2P	1P		1 6	0.85	0.85	0.85
LD 3	LD 2		XY-Symmetry	H1P	A1P		1 6	0.82	0.82	0.82
LD 4	LD 2		XY-Symmetry	H2P	A2P		1 6	0.82	0.82	0.82
LD 7	LD 4		XY-Symmetry	H5P	2P		1 6	0.87	0.87	0.87
LD 8	LD 4		XY-Symmetry	H6P	2P		1 6	0.87	0.87	0.87
LD 9	LD 5		XY-Symmetry	H5P	A3P		1 6	0.8	0.8	0.8
LD 10	LD 5		XY-Symmetry	H6P	A4P		1 6	0.8	0.8	0.8
LD 11	LD 6		XY-Symmetry	A3P	H7P		1 6	0.84	0.84	0.84
LD 12	LD 6		XY-Symmetry	A4P	H8P		1 6	0.84	0.84	0.84
LD 13	LD 7		XY-Symmetry	H9P	3P		1 6	0.865	0.865	0.865
LD 14	LD 7		XY-Symmetry	H10P	3P		1 6	0.865	0.865	0.865
LD 15	LD 8		XY-Symmetry	H9P	A5P		1 6	0.82	0.82	0.82
LD 16	LD 8		XY-Symmetry	H10P	A6P		1 6	0.82	0.82	0.82
LD 17	LD 9		XY-Symmetry	A5P	H11P		1 6	0.82	0.82	0.82
LD 18	LD 9		XY-Symmetry	A6P	H12P		1 6	0.82	0.82	0.82
LD 19	LD 10		XY-Symmetry	H13P	4P		1 6	0.86	0.86	0.86
LD 20	LD 10		XY-Symmetry	H14P	4P		1 6	0.86	0.86	0.86
LD 21	LD 11		XY-Symmetry	H13P	A7P		1 6	0.82	0.82	0.82
LD 22	LD 11		XY-Symmetry	H14P	A8P		1 6	0.82	0.82	0.82
LD 23	LD 12		XY-Symmetry	A7P	H15P		1 6	0.85	0.85	0.85
LD 24	LD 12		XY-Symmetry	A8P	H16P		1 6	0.85	0.85	0.85
BR 1	DUM 1		XY-Symmetry	A1P	A2P		1 4	1	1	1

Member Label	Group Label	Section Label	Symmetry Code	Origin Joint	End Joint	Ecc. Code	Rest. Code	Ratio RLX	Ratio RLY	Ratio RLZ
BR 3	DUM 1		XY-Symmetry	A3P	A4P	1	4	1	1	1
BR 4	DUM 1		XY-Symmetry	A3P	A4XY	1	4	1	1	1
BR 5	DUM 1		XY-Symmetry	A5P	A6P	1	4	1	1	1
BR 6	DUM 1		XY-Symmetry	A5P	A6XY	1	4	1	1	1
BR 7	DUM 1		XY-Symmetry	A7P	A8P	1	4	1	1	1
BR 8	DUM 1		XY-Symmetry	A7P	A8XY	1	4	1	1	1
BR 9	DUM 1		XY-Symmetry	A9P	A10P	1	4	1	1	1
BR 11	DUM 1		XY-Symmetry	A11P	A12P	1	4	1	1	1
BR 13	DUM 1		XY-Symmetry	A13P	A14P	1	4	1	1	1
BR 15	DUM 1		XY-Symmetry	A15P	A16P	1	4	1	1	1
BR 17	DUM 1		XY-Symmetry	A17P	A18P	1	4	1	1	1
BR 19	DUM 1		XY-Symmetry	A19P	A20P	1	4	1	1	1
BR 21	DUM 1		XY-Symmetry	A21P	A22P	1	4	1	1	1
BR 23	DUM 1		XY-Symmetry	A23P	A24P	1	4	1	1	1
BR 25	DUM 1		XY-Symmetry	A25P	A26P	1	4	1	1	1
BR 61	DUM 1		XY-Symmetry	H1P	H2P	1	4	1	1	1
BR 62	DUM 1		XY-Symmetry	H1P	H2XY	1	4	1	1	1
BR 64	DUM 1		XY-Symmetry	H5P	H6P	1	4	1	1	1
BR 65	DUM 1		XY-Symmetry	H5P	H6XY	1	4	1	1	1
BR 66	DUM 1		XY-Symmetry	H7P	H8P	1	4	1	1	1
BR 67	DUM 1		XY-Symmetry	H9P	H10P	1	4	1	1	1
BR 68	DUM 1		XY-Symmetry	H9P	H10XY	1	4	1	1	1
BR 69	DUM 1		XY-Symmetry	H11P	H12P	1	4	1	1	1
BR 70	DUM 1		XY-Symmetry	H13P	H14P	1	4	1	1	1
BR 71	DUM 1		XY-Symmetry	H13P	H14XY	1	4	1	1	1
BR 72	DUM 1		XY-Symmetry	H15P	H16P	1	4	1	1	1

No.	Elevation	C _u A _c	C _u A _c (Ice)	Force	Force (Ice)	Weight	Weight (Ice)	60 Azi	Force	F (Ice)	Height	Sum of Forces (No	
	(ft)	(ft ²)	(ft ²)	(lb)	(lb)	(lb)	(lb)	Mult.	mean	mean		Flag	60 Azi.
1	300	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00	Flag		
	300	80.00	108.00	2766.817	675.492	10800	14040	1.00	1521.75	371.52		1.5033333	2766.817067
2	283	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5033343	
	283	70.00	94.50	2380.948	581.286	9600	12480	1.00	1309.52	319.71		1.5035336	2380.948376
3	212.5	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5035346	
	212.5	45.00	60.75	1410.307	344.313	6000	7800	1.00	775.67	189.37		1.5047059	1410.307249
4	100	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5047069	
	100	45.00	60.75	1137.058	277.602	6000	7800	1.00	625.38	152.68		1.5100000	1137.05799
5								1.00				1.5100010	
								1.00					
6	338	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00			
	338	5.53	7.47	197.886	48.312	84	109	1.00	108.84	26.57		1.5029586	197.8856442
7	324	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5029596	
	324	13.41	18.10	474.099	115.747	90	117	1.00	260.75	63.66		1.5030864	474.0988274
8	320	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5030874	
	320	3.60	4.86	126.824	30.963	48	62	1.00	69.75	17.03		1.5031250	126.8239182
9	311	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5031260	
	311	0.80	1.08	27.954	6.825	36	47	1.00	15.37	3.75		1.5032154	27.95430955
10	307	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5032164	
	307	0.80	1.08	27.851	6.800	36	47	1.00	15.32	3.74		1.5032573	27.85110819
11	303	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5032583	
	303	0.22	0.29	7.457	1.821	13	17	1.00	4.10	1.00		1.5033003	7.456990624
12	275	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5033013	
	275	5.20	7.02	175.427	42.829	180	234	1.00	96.48	23.56		1.5033013	175.4272562
13	275	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5033023	
	275	20.76	28.03	700.360	170.986	106	138	1.00	385.20	94.04		1.5036364	875.7868408
14	270	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5036374	
	270	22.75	30.71	763.481	186.397	156	203	1.00	419.91	102.52		1.5037037	763.4811011
15	270	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5037047	
	270	5.20	7.02	174.510	42.605	180	234	1.00	95.98	23.43		1.5037037	937.9910671
16	270	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5037047	
	270	2.68	3.62	89.940	21.958	36	47	1.00	49.47	12.08		1.5037037	1027.930819
17	270	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5037047	
	270	9.36	12.64	282.706	69.020	360	468	1.00	155.49	37.96		1.5037037	1310.636964
18	265	1.20	1.81	40.057	10.934	47	90	1.00	22.03	6.01		1.5037047	
	265	2.46	3.32	65.694	16.038	266	346	1.00	36.13	8.82		1.5037736	105.7505576
19	265	13.15	16.50	438.882	99.633	648	1042	1.00	241.38	54.80		1.5037746	
	265	13.87	18.72	370.295	90.404	476	619	1.00	203.66	49.72		1.5037736	914.9274941
20	265	30.61	36.51	1021.681	220.404	460	1145	1.00	561.92	121.22		1.5037746	
	265	35.98	48.57	900.757	219.911	1440	1872	1.00	495.42	120.95		1.5037736	2837.366302
21	250	10.46	13.68	343.344	81.202	95	615	1.00	188.84	44.66		1.5037746	
	250	5.20	7.02	170.715	41.678	180	234	1.00	93.89	22.92		1.5040000	514.0587784
22	246	5.56	7.49	181.735	44.237	56	340	1.00	99.95	24.33		1.5040010	
	246	5.20	7.02	169.930	41.487	180	234	1.00	93.46	22.82		1.5040650	351.6645299
23	235	8.59	10.71	277.170	62.480	126	322	1.00	152.44	34.36		1.5040660	
	235	12.01	16.21	309.797	75.634	147	191	1.00	170.39	41.60		1.5042553	586.967591
24	235	9.64	12.43	310.785	72.479	205	443	1.00	170.93	39.86		1.5042563	
	235	37.46	50.57	966.601	235.987	1726	2243	1.00	531.63	129.79		1.5042553	1864.353462
25	235	19.38	23.86	625.052	139.169	262	701	1.00	343.78	76.54		1.5042563	
	235	35.98	48.57	870.362	212.491	1440	1872	1.00	478.70	116.87		1.5042553	3359.7675
26	222	26.52	32.48	841.643	186.394	202	371	1.00	462.90	102.52		1.5042563	
	222	35.98	48.57	856.325	209.064	1440	1872	1.00	470.98	114.98		1.5045045	1697.967451
27	207	10.46	13.68	325.319	76.939	95	604	1.00	178.93	42.32		1.5045055	
	207	5.20	7.02	161.752	39.490	180	234	1.00	88.96	21.72		1.5048309	487.0716767
28	200	11.06	15.93	340.670	88.708	168	482	1.00	187.37	48.79		1.5048319	
	200	9.36	12.64	259.476	63.349	360	468	1.00	142.71	34.84		1.5050000	600.1458282
29	193	5.81	9.26	177.045	51.055	64	236	1.00	97.38	28.08		1.5050010	
	193	9.36	12.64	256.848	62.707	360	468	1.00	141.27	34.49		1.5051813	433.8935049
30	193	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5051823	
	193	7.50	10.13	228.675	55.829	36	47	1.00	125.77	30.71		1.5051813	662.5687569
31	175	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5051823	
	175	1.20	1.62	35.579	8.686	12	16	1.00	19.57	4.78		1.5057143	35.57875845
32	171	2.18	3.11	64.236	16.545	126	210	1.00	35.33	9.10		1.5057153	
	171	8.11	10.95	191.051	46.643	103	134	1.00	105.08	25.65		1.5058480	255.2867387
33	171	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5058490	
	171	25.93	35.00	572.779	139.839	900	1170	1.00	315.03	76.91		1.5058480	828.066216
34	150	6.46	8.58	183.146	44.020	373	577	1.00	100.73	24.21		1.5058490	
	150	15.84	21.38	359.523	87.774	683	888	1.00	197.74	48.28		1.5066667	542.6695676
35	150	13.29	15.74	377.014	80.752	205	484	1.00	207.36	44.41		1.5066677	
	150	40.28	54.37	856.996	209.227	1440	1872	1.00	471.35	115.08		1.5066667	1776.679138
36	139	2.90	4.63	80.599	23.242	32	192	1.00	44.33	12.78		1.5066677	
	139	5.20	7.02	144.356	35.243	180	234	1.00	79.40	19.38		1.5071942	224.9547542
37	135	0.79	1.51	21.680	7.508	5	57	1.00	11.92	4.13		1.5071952	
	135	5.20	7.02	143.157	34.950	180	234	1.00	78.74	19.22		1.5074074	164.8366753
38	130	0.78	1.22	21.221	5.986	5	31	1.00	11.67	3.29		1.5074084	
	130	2.50	3.38	68.087	16.623	96	125	1.00	37.45	9.14		1.5076923	89.30768555
39	107	5.53	7.96	142.459	37.095	84	360	1.00	78.35	20.40		1.5076933	
	107	5.20	7.02	133.958	32.705	180	234	1.00	73.68	17.99		1.5093458	276.4172789
40	92	27.07	32.02	667.887	142.855	365	667	1.00	367.34	78.57		1.5093468	
	92	16.94	22.86	334.271	81.609	756	983	1.00	183.85	44.89		1.5108696	1002.158293
41	92	29.66	35.62	731.771	158.939	324	642	1.00	402.47	87.42		1.5108706	
	92	35.98	48.57	665.785	162.545	1440	1872	1.00	366.18	89.40		1.5108696	2399.71479
42	42	0.00	0.00	0.000	0.000	0	0	1.00	0.00	0.00		1.5108706	
	42	24.00	32.40	473.302	115.552	720	936	1.00	260.32	63.55		1.5238095	473.30

Foundation

Design Loads (Factored)

Compression/Leg:	469.28	k
Uplift/Leg:	332.36	k
Shear/Leg	65.89	k

Face Width @ Top of Pier (d ₁):	4.00	ft
Face Width @ Bottom of Pier (d ₂):	8.00	ft
Total Length of Pier (l):	8.00	ft
Height of Pedestal Above Ground (h):	0.50	ft
Width of Pad (W):	18.00	ft
Length of Pad (L):	18.00	ft
Thickness of Pad (t):	3.00	ft
Water Table Depth (w):	99.00	ft
Unit Weight of Concrete:	150.0	pcf
Unit Weight of Soil (Above Water Table):	100.0	pcf
Unit Weight of Soil (Below Water Table):	37.6	pcf
Friction Angle of Uplift (A):	20	°
Ultimate Compressive Bearing Pressure:	40000	psf
Ultimate Skin Friction:	197	psf

Volume Pier (Total):	298.67	ft ³
Volume Pad (Total):	972.00	ft ³
Volume Soil (Total):	2935.41	ft ³
Volume Pier (Buoyant):	0.00	ft ³
Volume Pad (Buoyant):	0.00	ft ³
Volume Soil (Buoyant):	0.00	ft ³
Weight Pier:	44.80	k
Weight Pad:	145.80	k
Weight Soil:	293.54	k
Uplift Skin Friction:	31.91	k

Uplift Check

φs Uplift Resistance (k)	Ratio	Result
387.04	0.86	OK

Axial Check

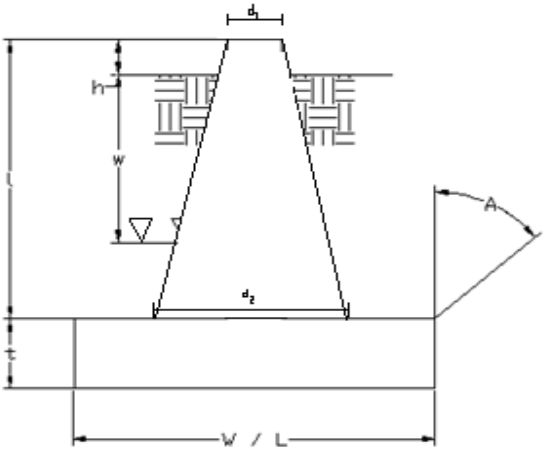
φs Axial Resistance (k)	Ratio	Result
9720.00	0.05	OK

Anchor Bolt Check

Bolt Diameter (in)	2.25
# of Bolts	6
Steel Grade	A36
Steel Fy	36
Steel Fu	58
Detail Type	C

Usage Ratio	Result
0.50	OK

Site No.:	88018
Engineer:	RDB
Date:	08/02/18
Carrier:	T-Mobile





VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: STAMFORD (KATOONA)
ATC SITE NUMBER: 88018
T-MOBILE SITE ID: CT11007A
SITE ADDRESS: CATOONA LANE
STAMFORD, CT 06902



LOCATION MAP

T-MOBILE ANTENNA AMENDMENT
67D92M CONFIGURATION

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. INTERNATIONAL BUILDING CODE (IBC) 2. NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> CATOONA LANE STAMFORD, CT 06902 COUNTY: FAIRFIELD <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.052825 LONGITUDE: -73.56304722 GROUND ELEVATION: 50' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
		REMOVE (6) PANELS AND (3) RRUs	G-001	TITLE SHEET	1	09/07/18	AMM
		INSTALL (6) NEW PANELS, (3) RRUs, AND (2) 1-1/4" HYBRID CABLES	G-002	GENERAL NOTES	0	08/29/18	NW
		EXISTING (3) PANELS, (3) TTAs, (12) 1-5/8" COAX CABLES, AND (1) 1-5/8" HYBRID CABLES TO REMAIN	C-101	DETAILED SITE PLAN & TOWER ELEVATION	1	09/07/18	AMM
		PROJECT NOTES 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED.	C-501	ANTENNA INFORMATION & SCHEDULE	1	09/07/18	AMM
			E-501	GROUNDING DETAILS	1	09/07/18	AMM
			R-601	SUPPLEMENTAL			
UTILITY COMPANIES POWER COMPANY: EVERSOURCE PHONE: (800) 286-2000 TELEPHONE COMPANY: FRONTIER COMMUNICATIONS PHONE: (877) 870-4601	PROJECT TEAM <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> ATC TOWER SERVICES, LLC 3500 REGENCY PKWY STE 100 CARY, NC 27518 <u>PROPERTY OWNER:</u> AMERICAN TOWER 116 HUNTINGTON AVE BOSTON, MA 02116	PROJECT LOCATION DIRECTIONS FROM STAMFORD, CT: TAKE I-95 TO EXIT 6. TURN RIGHT ONTO WEST AVE. TURN LEFT AT FIRST LIGHT ONTO W. MAIN ST. TURN RIGHT AT FIRST LIGHT AND FOLLOW ROAD TO END.					



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
△	FOR CONSTRUCTION	NW	08/29/18
△	REV ANT POS/BREAKER UPGRAD	AMM	09/07/18
△			
△			
△			

ATC SITE NUMBER:
88018

ATC SITE NAME:
STAMFORD (KATOONA)

SITE ADDRESS:
CATOONA LANE
STAMFORD, CT 06902

SEAL:



DRAWN BY:	NW
APPROVED BY:	PPB
DATE DRAWN:	08/29/18
ATC JOB NO:	12607170

TITLE SHEET

SHEET NUMBER:
G-001

REVISION:
1

GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC MASTER SPECIFICATIONS.
2. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
4. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
5. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
6. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
7. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
9. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
10. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE T-MOBILE WIRELESS REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE T-MOBILE WIRELESS REP PRIOR TO PROCEEDING.
11. EACH CONTRACTOR SHALL COOPERATE WITH THE T-MOBILE WIRELESS REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
12. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE T-MOBILE WIRELESS CONSTRUCTION MANAGER.
13. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
14. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE T-MOBILE WIRELESS REP IMMEDIATELY.
15. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
16. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
17. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
18. CONTRACTOR SHALL FURNISH T-MOBILE WIRELESS WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
19. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE WIRELESS REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.
20. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH T-MOBILE WIRELESS REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY T-MOBILE WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
21. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH T-MOBILE WIRELESS SPECIFICATIONS AND REQUIREMENTS.
22. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO T-MOBILE WIRELESS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
23. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO T-MOBILE WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
24. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
25. CONTRACTOR SHALL NOTIFY T-MOBILE WIRELESS REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
26. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.

27. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLECT ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
28. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE T-MOBILE WIRELESS REP. ANY WORK FOUND BY THE T-MOBILE WIRELESS REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
29. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:

A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE

B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.

C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)

D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS

E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123. EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:

A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.

B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.

C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.

D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.

E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.

F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.

G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING ½" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	08/29/18

ATC SITE NUMBER:
88018

ATC SITE NAME:
STAMFORD (KATOONA)

SITE ADDRESS:
CATOONA LANE
STAMFORD, CT 06902

SEAL:



DRAWN BY:	NW
APPROVED BY:	PPB
DATE DRAWN:	08/29/18
ATC JOB NO:	12607170

GENERAL NOTES

SHEET NUMBER: G-002	REVISION: 0
-------------------------------	-----------------------

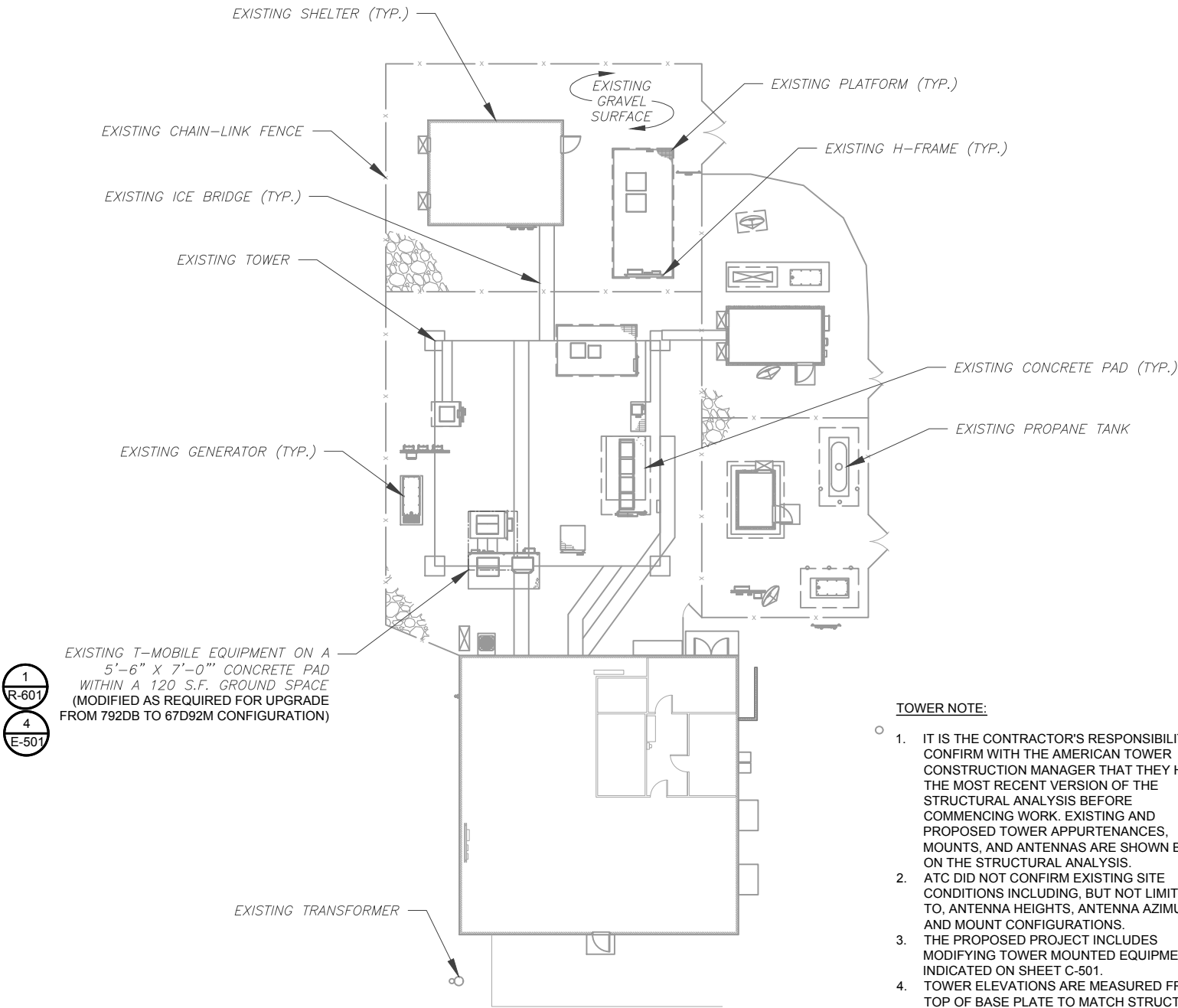
SITE PLAN NOTES:

1.

THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2.

ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.



TOWER NOTE:

1.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE AMERICAN TOWER CONSTRUCTION MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2.

ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA HEIGHTS, ANTENNA AZIMUTHS AND MOUNT CONFIGURATIONS.
3.

THE PROPOSED PROJECT INCLUDES MODIFYING TOWER MOUNTED EQUIPMENT AS INDICATED ON SHEET C-501.
4.

TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

TOP OF EXISTING
HIGHEST APPURTENANCE
ELEV. 345' A.G.L.

TOP OF EXISTING TOWER
ELEV. 301' A.G.L.

EXISTING CARRIER ANTENNAS
RAD CENTER @ 338' A.G.L.

EXISTING CARRIER ANTENNAS
RAD CENTER @ 324' A.G.L.

EXISTING CARRIER ANTENNAS
RAD CENTER @ 311' A.G.L.
EXISTING CARRIER ANTENNAS
RAD CENTER @ 303' A.G.L.

EXISTING CARRIER ANTENNAS
RAD CENTER @ 275' A.G.L.

PROPOSED ANTENNA
RAD CENTER @ 265' A.G.L.

EXISTING CARRIER ANTENNAS
RAD CENTER @ 250' A.G.L.
EXISTING CARRIER ANTENNAS
RAD CENTER @ 246' A.G.L.

EXISTING CARRIER ANTENNAS
RAD CENTER @ 235' A.G.L.

EXISTING CARRIER ANTENNAS
RAD CENTER @ 207' A.G.L.
EXISTING CARRIER ANTENNAS
RAD CENTER @ 200' A.G.L.
EXISTING CARRIER ANTENNAS
RAD CENTER @ 193' A.G.L.

EXISTING CARRIER ANTENNAS
RAD CENTER @ 171' A.G.L.
EXISTING CARRIER ANTENNAS
RAD CENTER @ 165' A.G.L.

EXISTING CARRIER ANTENNAS
RAD CENTER @ 155' A.G.L.

EXISTING CARRIER ANTENNAS
RAD CENTER @ 92' A.G.L.

EXISTING CARRIER ANTENNAS
RAD CENTER @ 22' A.G.L.

EXISTING TOWER

EXISTING SHELTER

EXISTING TOP
OF BASE PLATE

TOWER ELEVATION

SCALE: NOT TO SCALE



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
△	FOR CONSTRUCTION	NW	08/29/18
△	REV ANT POS/BREAKER UPGRADE	MM	09/07/18
△			
△			
△			

ATC SITE NUMBER:
88018

ATC SITE NAME:
STAMFORD (KATOONA)

SITE ADDRESS:
CATOONA LANE
STAMFORD, CT 06902

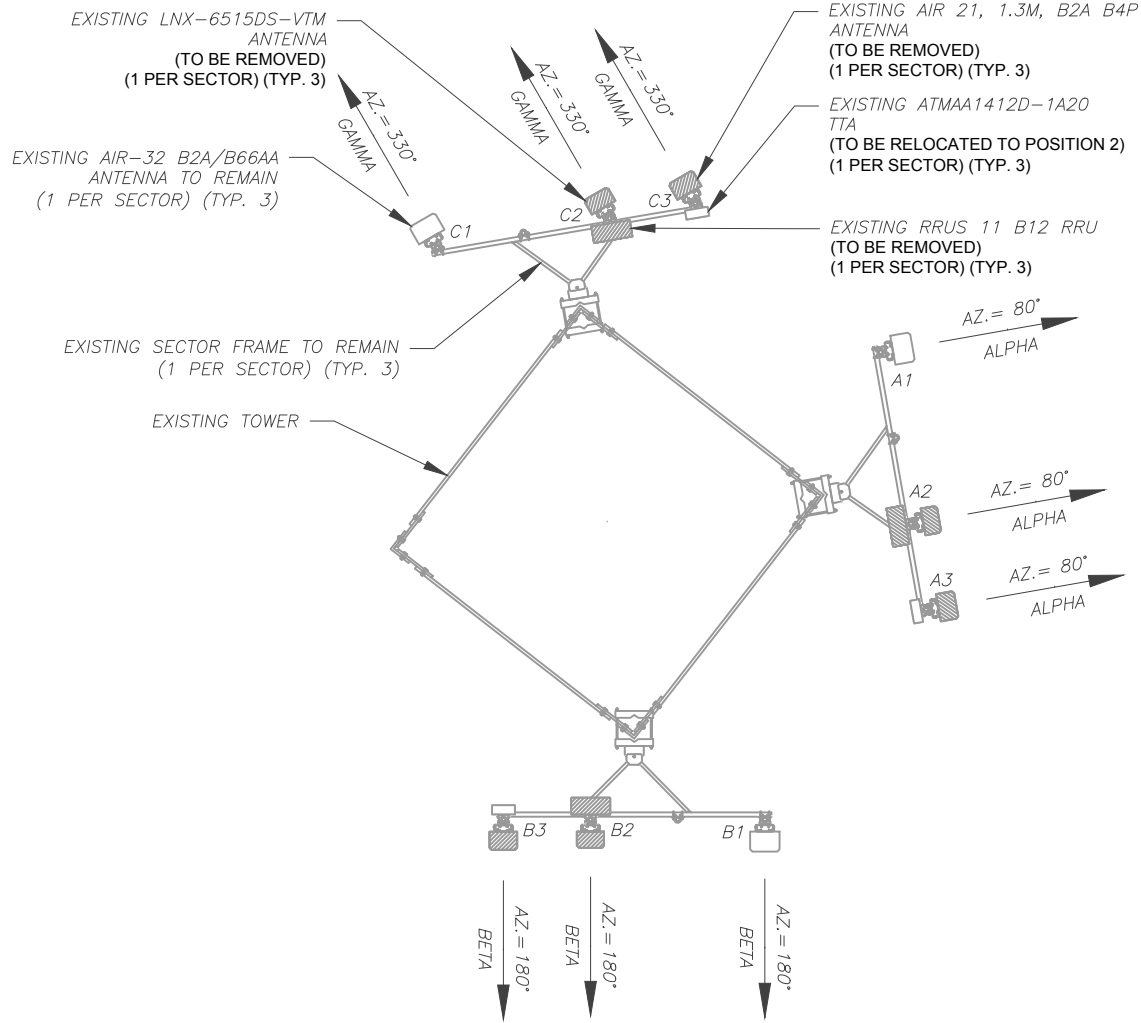
SEAL:

T-Mobile

DRAWN BY:	NW
APPROVED BY:	PPB
DATE DRAWN:	08/29/18
ATC JOB NO:	12607170

DETAILED SITE PLAN &
TOWER ELEVATION

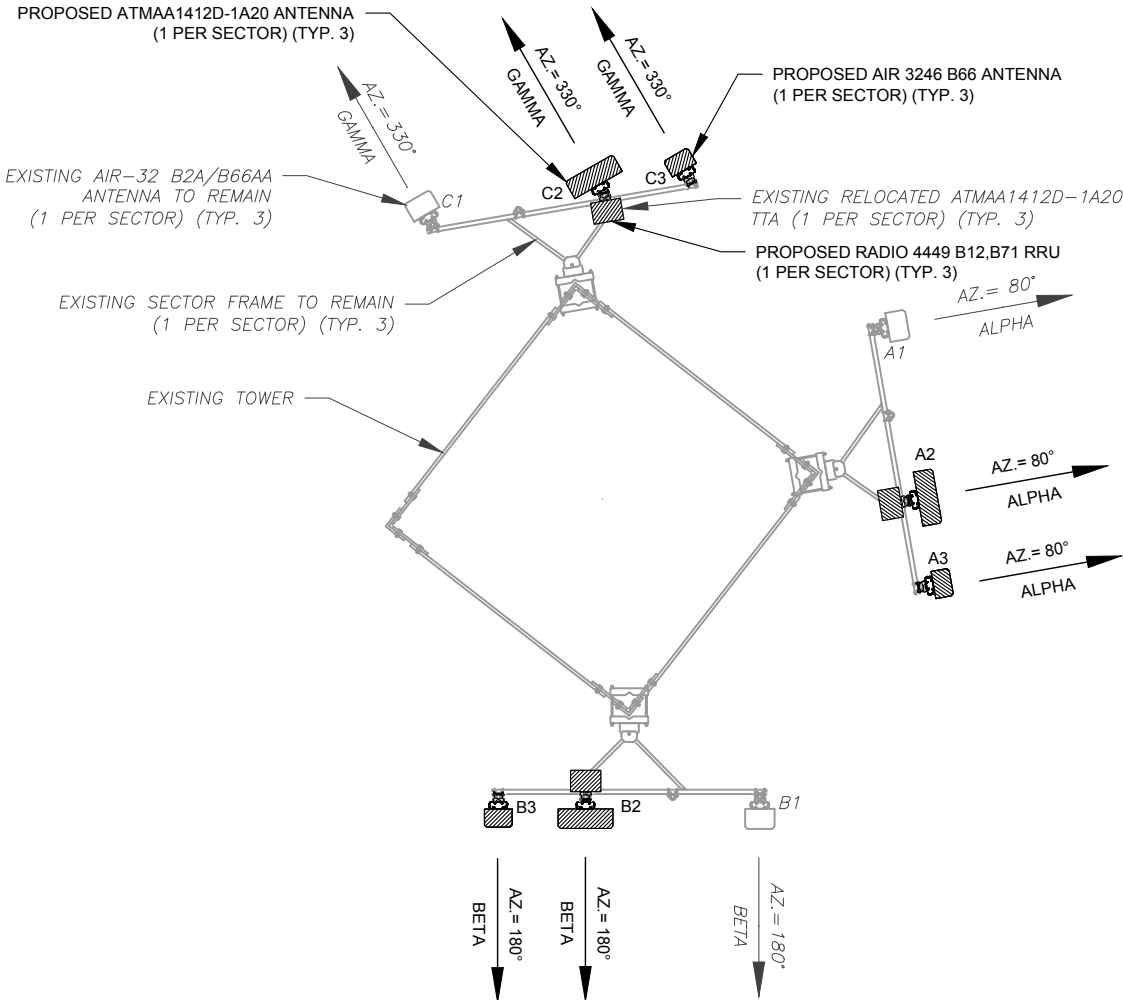
SHEET NUMBER: C-101	REVISION: 1
-------------------------------	-----------------------



1 EXISTING ANTENNA PLAN

NOTES:

- ATC HAS NOT YET VERIFIED ANY EXISTING ANTENNA CONFIGURATION OR MOUNT CONFIGURATION. CONTRACTOR TO VERIFY MOUNT CONFIGURATION HAS SUFFICIENT SPACE FOR PROPOSED LESSEE EQUIPMENT (I.E. CLEARANCES, MOUNT PIPE OR SUFFICIENT LENGTH, ETC.) ATC DID NOT ANALYZE ANTENNA MOUNT TO DETERMINE ADEQUATE STRUCTURAL CAPACITY FOR ANY LESSEE LOADING.



2 FINAL ANTENNA PLAN

NOTES:

- ALL PROPOSED EQUIPMENT INCLUDING ANTENNAS, COAX, ETC. SHALL BE MOUNTED IN ACCORDANCE WITH THE TOWER STRUCTURAL ANALYSIS ON FILE WITH THE ATC CM.
- SPACING OF PROPOSED EQUIPMENT SHALL BE CONFIRMED FOR TOWER CONFLICTS AND PROPOSED MOUNTS SHALL NOT IMPEDE TOWER CLIMBING PEGS.

EXISTING ANTENNA/ COAX SCHEDULE								
SECTOR	ANT.	MANUFACTURER (MODEL #)	RAD CENTER	AZIMUTH (TN)	MECH. D-TILT	ELEC. D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT	ANTENNA COAX DESCRIPTION
ALPHA	A1	AIR-32 B2A/B66AA	265'-0"	80°	2°	4°	—	(12) 1-5/8" (1) 1-5/8" HYBRID CABLE
ALPHA	A2	LNx-6515DS-VTM	265'-0"	80°	2°	2°	RRUS 11 B12	
ALPHA	A3	AIR 21, 1.3 M, B2A B4P	265'-0"	80°	2°	2°	ATMAA1412D-1A20	
BETA	B1	AIR-32 B2A/B66AA	265'-0"	180°	2°	4°	—	
BETA	B2	LNx-6515DS-VTM	265'-0"	180°	2°	2°	RRUS 11 B12	
BETA	B3	AIR 21, 1.3 M, B2A B4P	265'-0"	180°	2°	2°	ATMAA1412D-1A20	
GAMMA	C1	AIR-32 B2A/B66AA	265'-0"	330°	0°	2°	—	
GAMMA	C2	LNx-6515DS-VTM	265'-0"	330°	0°	2°	RRUS 11 B12	
GAMMA	C3	AIR 21, 1.3 M, B2A B4P	265'-0"	330°	0°	2°	ATMAA1412D-1A20	

3 ANTENNA SCHEDULE

FINAL ANTENNA/ COAX SCHEDULE								
SECTOR	ANT.	MANUFACTURER (MODEL #)	RAD CENTER	AZIMUTH (TN)	MECH. D-TILT	ELEC. D-TILT	ADDITIONAL TOWER MOUNTED EQUIPMENT	ANTENNA COAX DESCRIPTION
ALPHA	A1	AIR-32 B2A/B66AA	265'-0"	80°	2°	4°	—	(12) 1-5/8" (1) 1-5/8" HYBRID CABLE
ALPHA	A2	APXVAARR24_43-U-NA20	265'-0"	80°	2°	-	RADIO 4449 B12,B71 ATMAA1412D-1A20	
ALPHA	A3	AIR 3246 B66	265'-0"	80°	2°	-	—	
BETA	B1	AIR-32 B2A/B66AA	265'-0"	180°	2°	4°	—	
BETA	B2	APXVAARR24_43-U-NA20	265'-0"	180°	2°	-	RADIO 4449 B12,B71 ATMAA1412D-1A20	
BETA	B3	AIR 3246 B66	265'-0"	180°	2°	-	—	
GAMMA	C1	AIR-32 B2A/B66AA	265'-0"	330°	0°	2°	—	
GAMMA	C2	APXVAARR24_43-U-NA20	265'-0"	330°	0°	-	RADIO 4449 B12,B71 ATMAA1412D-1A20	
GAMMA	C3	AIR 3246 B66	265'-0"	330°	0°	-	—	

- BASED ON APPROVED ATC APPLICATION 12605170, DATED 08-15-2018. CONFIRM WITH T-MOBILE REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS.
- (2) PROPOSED 1-1/4" HYBRID CABLES (200' ±)



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: PEC.0001553

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	NW	08/29/18
1	REV ANT POS/BREAKER UPGRAD	MM	09/07/18

ATC SITE NUMBER:
88018

ATC SITE NAME:
STAMFORD (KATOONA)

SITE ADDRESS:
KATOONA LANE
STAMFORD, CT 06902

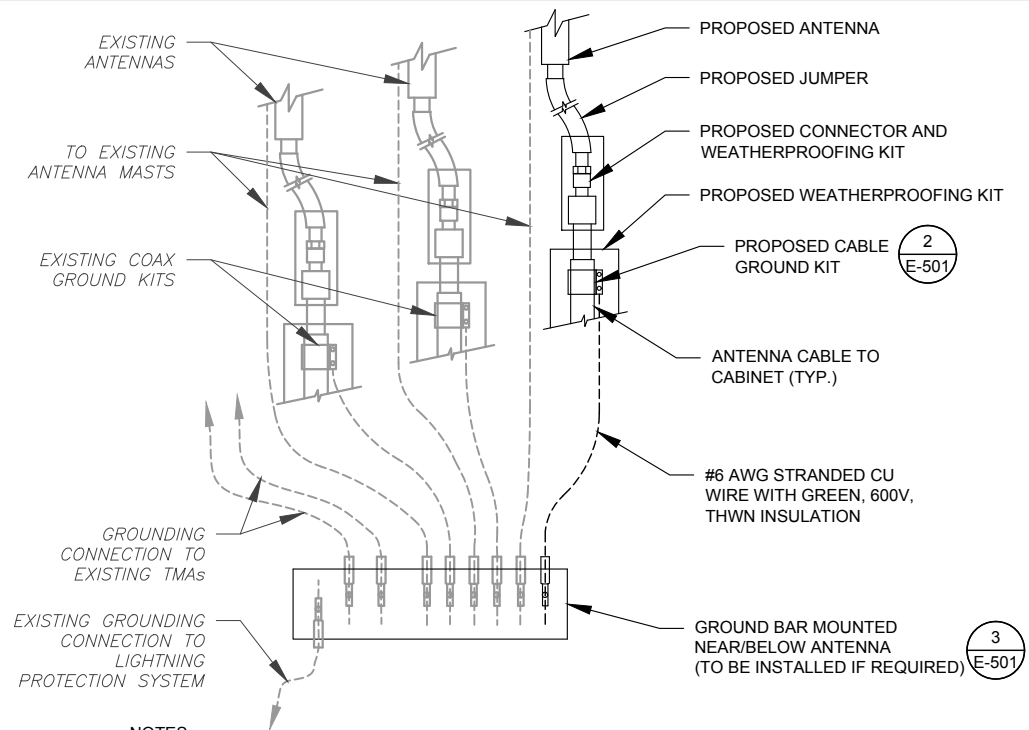
SEAL:

T-Mobile

DRAWN BY:	NW
APPROVED BY:	PPB
DATE DRAWN:	08/29/18
ATC JOB NO:	12607170

ANTENNA INFORMATION
& SCHEDULE

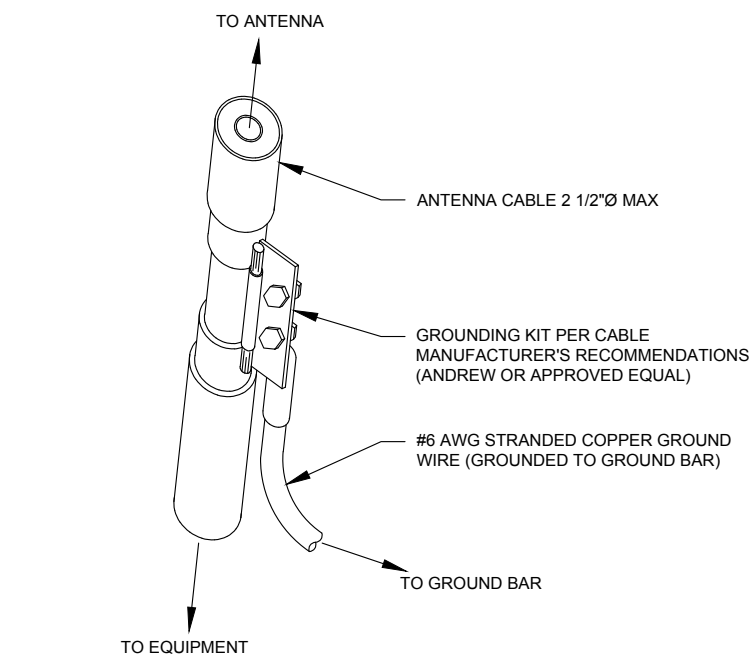
SHEET NUMBER: C-501	REVISION: 1
-------------------------------	-----------------------



NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH T-MOBILE GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH T-MOBILE GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

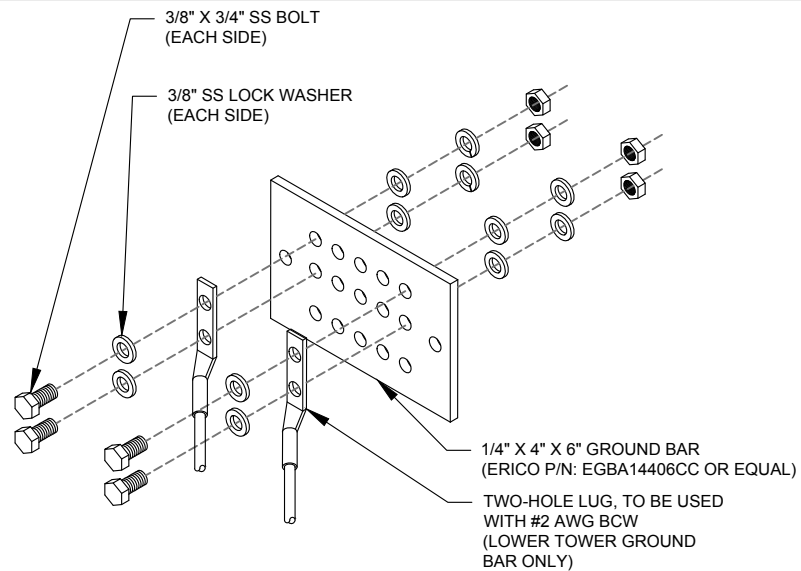
1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: NOT TO SCALE



GROUND KIT NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: NOT TO SCALE



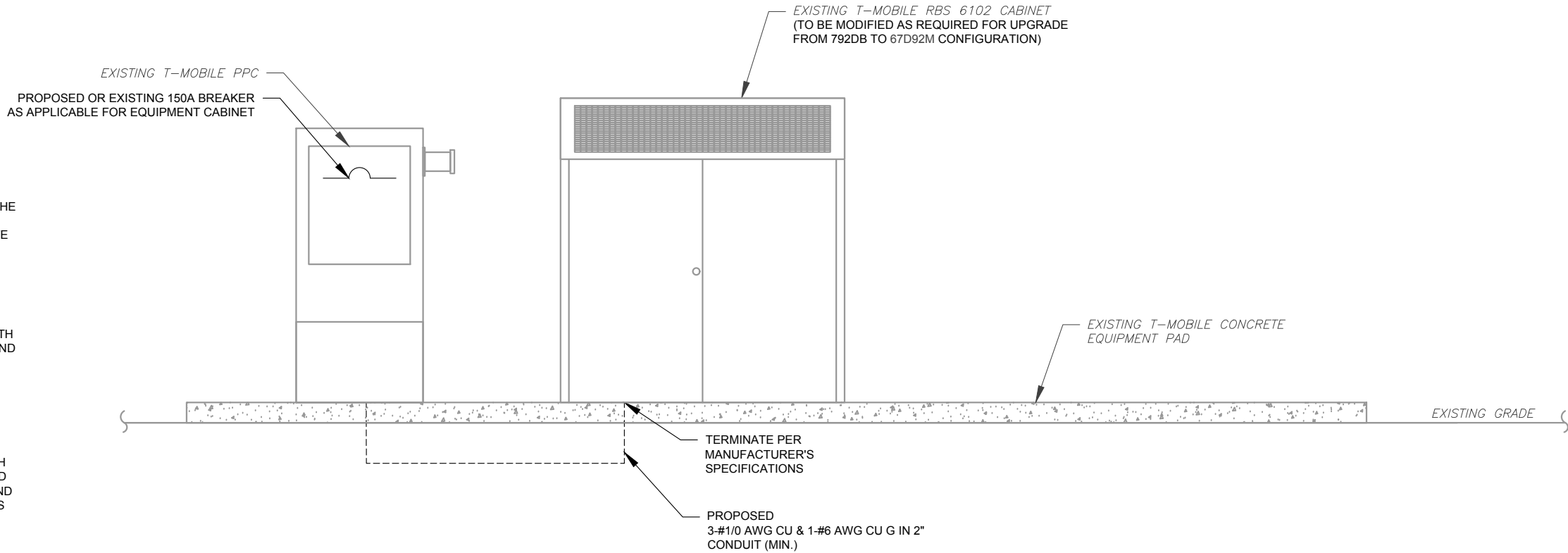
GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL
SCALE: NOT TO SCALE

ELECTRICAL NOTES:

1. THIS DIAGRAM REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE T-MOBILE REPRESENTATIVE AND LOCAL UTILITY COMPANY FOR THE INSTALLATION OF CONDUITS, CONDUCTORS, BREAKERS, DISCONNECTS, OR ANY OTHER EQUIPMENT REQUIRED FOR ELECTRICAL SERVICE. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE STATE AND NATIONAL CODES, ORDINANCES AND REGULATIONS APPLICABLE TO THIS PROJECT.
3. ATC HAS NOT YET VERIFIED ANY EXISTING T-MOBILE GROUND EQUIPMENT OR ELECTRICAL LOADING. PROPOSED WORK BASED ON INSTALLATION CONFIGURATION PROVIDED BY T-MOBILE. CONTRACTOR TO VERIFY EXISTING T-MOBILE PANEL HAS SUFFICIENT SPACE FOR PROPOSED BREAKER.



4 ELECTRICAL UPGRADE DIAGRAM
SCALE: NOT TO SCALE

THESE DRAWINGS AND/OR THE ACCOMPANYING SPECIFICATION AS INSTRUMENTS OR SERVICE ARE THE EXCLUSIVE PROPERTY OF AMERICAN TOWER. THEIR USE AND PUBLICATION SHALL BE RESTRICTED TO THE ORIGINAL SITE FOR WHICH THEY ARE PREPARED. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO AMERICAN TOWER OR THE SPECIFIED CARRIER IS STRICTLY PROHIBITED. TITLE TO THESE DOCUMENTS SHALL REMAIN THE PROPERTY OF AMERICAN TOWER WHETHER OR NOT THE PROJECT IS EXECUTED. NEITHER THE ARCHITECT NOR THE ENGINEER WILL BE PROVIDING ON-SITE CONSTRUCTION REVIEW OF THIS PROJECT. CONTRACTOR(S) MUST VERIFY ALL DIMENSIONS AND ADVISE AMERICAN TOWER OF ANY DISCREPANCIES. ANY PRIOR ISSUANCE OF THIS DRAWING IS SUPERSEDED BY THE LATEST VERSION ON FILE WITH AMERICAN TOWER.

REV.	DESCRIPTION	BY	DATE
△	FOR CONSTRUCTION	NW	08/29/18
△	REV ANT POS/BREAKER UPGRADE	MM	09/07/18
△			
△			
△			

ATC SITE NUMBER:
88018

ATC SITE NAME:
STAMFORD (KATOONA)

SITE ADDRESS:
CATOONA LANE
STAMFORD, CT 06902

SEAL:

T-Mobile

DRAWN BY:	NW
APPROVED BY:	PPB
DATE DRAWN:	08/29/18
ATC JOB NO:	12607170

GROUNDING DETAILS

SHEET NUMBER: E-501	REVISION: 1
-------------------------------	-----------------------

Existing RAN Equipment		
Template: 792DB Outdoor		
Enclosure	1	2
Enclosure Type	RBS 3106	Ancillary Equipment
Baseband	DUS41 (L2100) DUS41 (L1900) DUW30 (U2100) DUM30 (U1900 (DECOMMISSIONED)) DUG20 (G1900)	
Hybrid Cable System		Ericsson 9x18 HCS *Select Length* Ericsson 6x12 HCS *Select Length & AWG*
Multiplexer	XMU (L700)	
Radio	RU22 (x6)	

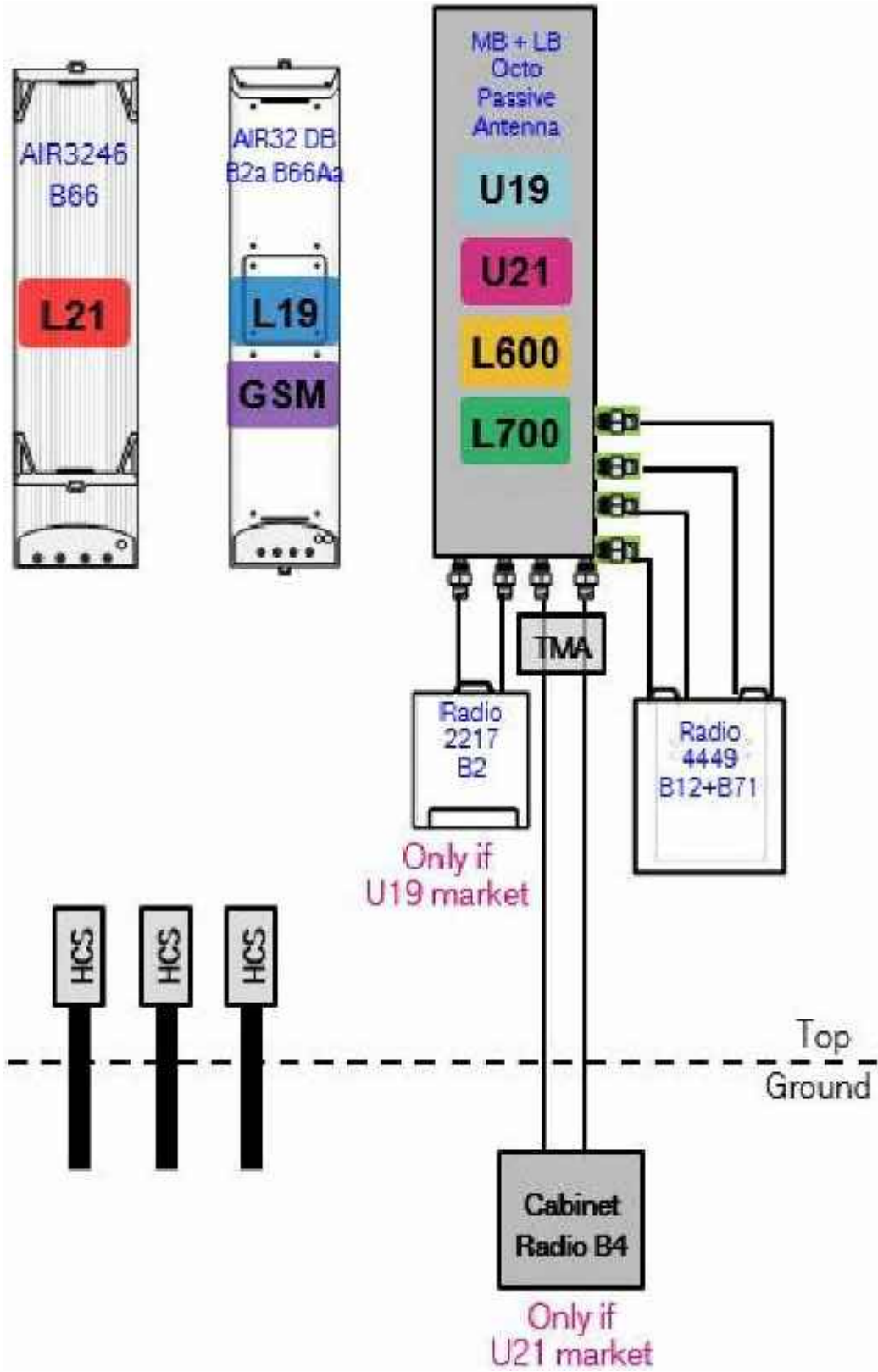
Proposed RAN Equipment		
Template: 67D92M Outdoor		
Enclosure	1	2
Enclosure Type	RBS 6131	Ancillary Equipment
Baseband	BB 5216 (L1900, L700, L600) BB 6630 (L2100) DUW30 (U1900) DUM30 (U2100) DUG20 (G1900)	
Hybrid Cable System		Ericsson 9x18 HCS *Select Length* Ericsson 6x12 HCS *Select Length & AWG* (x2)
Multiplexer	XMU (L1900, L700, L600)	
Radio	RU22 (x6) (U2100)	

RAN Scope of Work:

1

CABINET CONFIGURATION

SCALE: NOT TO SCALE



2

ANTENNA CONFIGURATION

SCALE: NOT TO SCALE

NOTE: THIS SHEET CREATED BY OTHERS AND PROVIDED BY REQUEST OF CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER:

R-601

REVISION:

0

Kyle Richers

From: UPS Quantum View <pkginfo@ups.com>
Sent: Thursday, September 20, 2018 12:20 PM
To: krichers@transcendwireless.com
Subject: UPS Delivery Notification, Reference Number 1: CT11007A CSC to Zoning



Your package has been delivered.

Delivery Date: Thursday, 09/20/2018
Delivery Time: 12:13 PM

At the request of TRANSCEND WIRELESS this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	<u>1ZV257424292655791</u>
Ship To:	Ralph Blessing City of Stamford 888 WASHINGTON BLVD STAMFORD, CT 06901 US
UPS Service:	UPS GROUND
Number of Packages:	1
Weight:	1.0 LBS
Delivery Location:	MAIL ROOM GUTEIRREZ
Signature Required:	A signature is required for package delivery
Reference Number 1:	CT11007A CSC to Zoning



[Download the UPS mobile app](#)

Kyle Richers

From: UPS Quantum View <pkginfo@ups.com>
Sent: Thursday, September 20, 2018 12:20 PM
To: krichers@transcendwireless.com
Subject: UPS Delivery Notification, Reference Number 1: CT11007A to mayor



Your package has been delivered.

Delivery Date: Thursday, 09/20/2018
Delivery Time: 12:13 PM

At the request of TRANSCEND WIRELESS this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	<u>1ZV257424294977805</u>
Ship To:	David Martin City of Stamford 888 WASHINGTON BLVD STAMFORD, CT 06901 US
UPS Service:	UPS GROUND
Number of Packages:	1
Weight:	1.0 LBS
Delivery Location:	MAIL ROOM GUTEIRREZ
Signature Required:	A signature is required for package delivery
Reference Number 1:	CT11007A to mayor



[Download the UPS mobile app](#)

Kyle Richers

From: UPS Quantum View <pkginfo@ups.com>
Sent: Monday, September 24, 2018 11:37 AM
To: krichers@transcendwireless.com
Subject: UPS Delivery Notification, Reference Number 1: CT11007A to owner



Your package has been delivered.

Delivery Date: Monday, 09/24/2018
Delivery Time: 11:33 AM

At the request of TRANSCEND WIRELESS this notice alerts you that the status of the shipment listed below has changed.

Shipment Detail

Tracking Number:	<u>1ZV257424292537785</u>
Ship To:	American Tower Corporation 10 PRESIDENTIAL WAY WOBURN, MA 01801 US
UPS Service:	UPS GROUND
Number of Packages:	1
Weight:	1.0 LBS
Delivery Location:	OFFICE LONG
Signature Required:	A signature is required for package delivery
Reference Number 1:	CT11007A to owner



[Download the UPS mobile app](#)