Transcend Wireless

10 Industrial Ave,
Suite 3
Mahwah NJ 07430

Phone: 201.684.0055
Fax: 201.684.0066

July 20, 2016

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

Notice of Exempt Modification
35 Wildwood Street, New Britain, CT 06051
Latitude- 41.66823900
Longitude- -72.75495500

Dear Ms. Bachman,

T-Mobile currently maintains (9) existing antennas at the 100' level of the existing 110' monopole at 35 Wildwood Street in New Britain. The tower is owned by AT&T Wireless. The property is owned by the City of New Britain. T-Mobile now intends to replace (3) of its existing antennas with (3) new 1900 MHz antennas. These antennas would be installed at the same 100' level of the tower. T-Mobile also intends to install (1) new hybrid fiber cable.

This facility was approved by the Council in Petition No. 850 on March 13, 2008. This approval did not include conditions that would be violated by this modification. This modification complies with the approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. 16-50j-72(b)(2). In accordance with R.C.S.A. 16-50j-73, a copy of this letter is being sent to Ms. Erin Stewart, Mayor of the City of New Britain, as well as the property owner and tower owner.

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

1. The proposed 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,

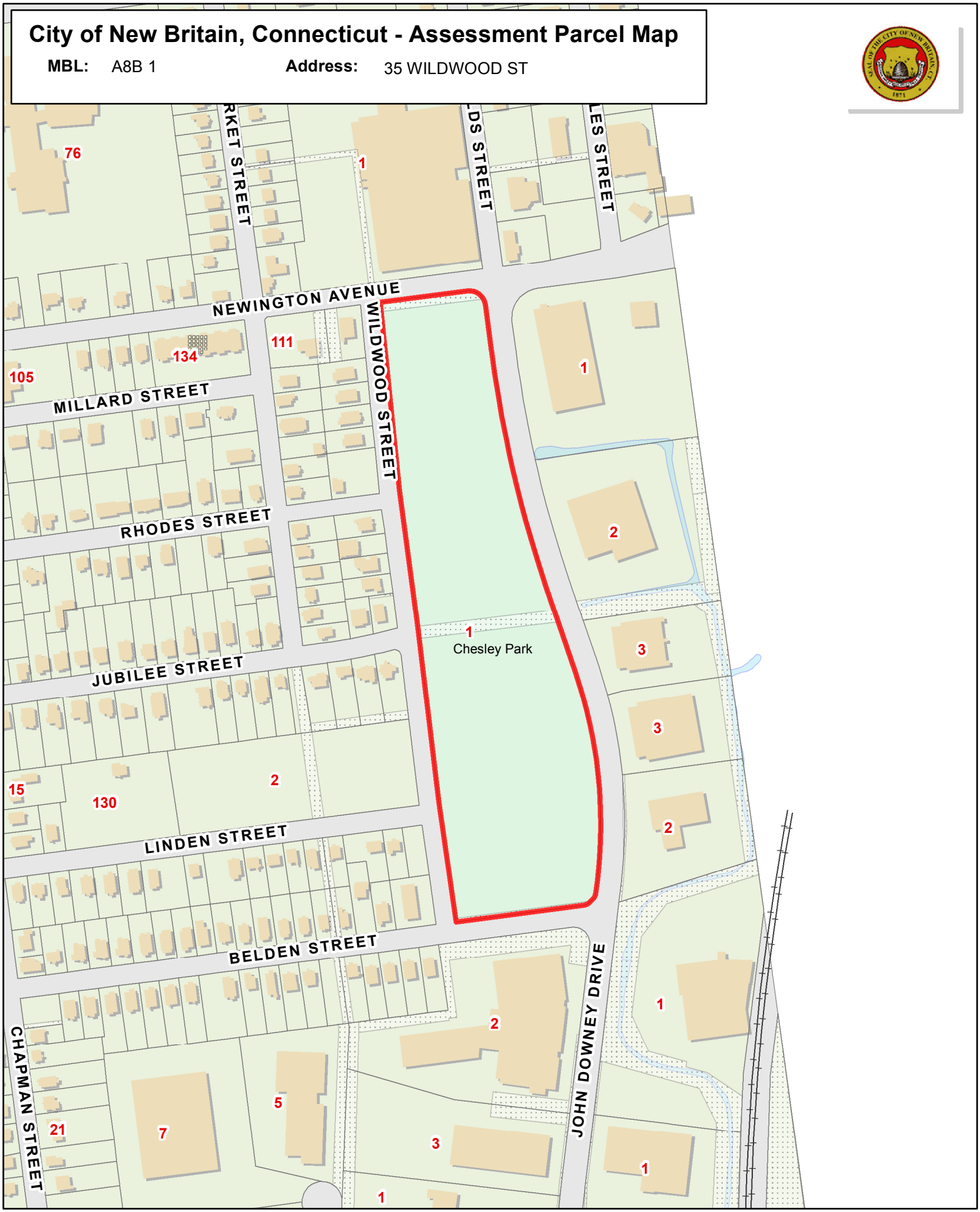
Kyle Richers

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

cc: Erin Stewart- as elected official
AT&T- as tower owner
City of New Britain- as property owner

City of New Britain, Connecticut - Assessment Parcel Map

MBL: A8B 1 **Address:** 35 WILDWOOD ST



Approximate Scale:

1 inch = 300 feet

Disclaimer:
This map is for informational purposes only.
All information is subject to verification by any user.
The City of New Britain and its mapping contractors
assume no legal responsibility for the information contained herein.

Map Produced January 2015

35 WILDWOOD ST

Location	35 WILDWOOD ST	**Mblu**	A8B/ 1/ / /
Acct#	91200035	**Owner**	NEW BRITAIN CITY OF - PARK
Assessment	$1,632,330	**Appraisal**	$2,331,900
PID	1830	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2012	$1,646,900	$685,000	$2,331,900
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2012	$1,152,830	$479,500	$1,632,330

Owner of Record

Owner	NEW BRITAIN CITY OF - PARK	**Sale Price**	$0
Co-Owner	CHESLEY PARK	**Certificate**	
Address	27 WEST MAIN ST NEW BRITAIN, CT 06051	**Book & Page**	
		Sale Date	01/01/1900

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
NEW BRITAIN CITY OF - PARK	$0			01/01/1900

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

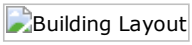
Building Attributes	
Field	**Description**

Style	Outbuildings
Model	
Grade	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Central Heat Sys	
AC Type	
Total Bedrooms	
Total Full Baths	
Total Half Baths	
Total Xtra Fixtrs	
Total Rooms	
Bath Style	
Kitchen Style	
Whirlpool Tub	
Fireplaces	
Rec Room Finish	
Rec Room Qual	
Bsmt Garages	
Bldg Nbhd	

Building Photo

(http://images.vgsi.com/photos/NewBritainCTPhotos//\00\02\1

Building Layout



Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	903A
Description	Mun Park MDL-00
Zone	T
Neighborhood	107

Land Line Valuation

Size (Acres)	11.85
Depth	
Assessed Value	$479,500
Appraised Value	$685,000

Alt Land Appr Category No

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
TEN1	Tennis Crt Asp			4 Units	$96,600	1
PAV1	Paving Asphalt			50000 S.F.	$48,000	1
FN5	Fence-10' Chai			888 L.F.	$13,600	1
TR2	RestRoom stone			2697 S.F.	$354,000	1
TR2	RestRoom stone			1875 S.F.	$246,100	1
FN1	Fence - Chain			4000 L.F.	$28,600	1
CAN4	Canopy rf/slb			800 S.F.	$9,600	1
CB3	PreCastConcCel			240 S.F.	$55,400	1
FN1	Fence - Chain			100 L.F.	$700	1
CB4	PreCastConcCel			360 S.F.	$74,300	1
SPL7	Pool			10000 S.F.	$720,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$1,646,900	$685,000	$2,331,900
2014	$1,646,900	$685,000	$2,331,900
2013	$1,646,900	$685,000	$2,331,900

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2015	$1,152,830	$479,500	$1,632,330
2014	$1,152,830	$479,500	$1,632,330
2013	$1,152,830	$479,500	$1,632,330

EBI Consulting
environmental | engineering | due diligence

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

T-Mobile Existing Facility

Site ID: CT11634C

CT634/Cing/ChesleyPark_ET
35 Wildwood Street
New Britain, CT 06051

July 13, 2016

EBI Project Number: 6216003229

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general public allowable limit:	15.57 %

21 B Street · Burlington, MA 01803 · Tel: (781) 273.2500 · Fax: (781) 273.3311

EBI Consulting
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July 13, 2016

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

Emissions Analysis for Site: **CT11634C – CT634/Cing/ChesleyPark_ET**

EBI Consulting was directed to analyze the proposed T-Mobile facility located at **35 Wildwood Street, New Britain, 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 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter (μW/cm2). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits, therefore it is necessary to report results and limits in terms of percent MPE rather than power density.

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

General population/uncontrolled exposure limits apply to situations in which the general public 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 public 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 ($\mu W/cm^2$). The general population exposure limit for the 700 MHz Band is approximately 467 $\mu W/cm^2$, and the general population exposure limit for the 1900 MHz (PCS) and 2100 MHz (AWS) bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

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

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed T-Mobile Wireless antenna facility located at **35 Wildwood Street, New Britain, 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, 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) 2 GSM channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

2) 2 UMTS channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

3) 2 UMTS channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 30 Watts per Channel.

4) 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.

5) 2 LTE channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 60 Watts per Channel

6) 1 LTE channel (700 MHz Band) was considered for each sector of the proposed installation. This channel has a transmit power of 30 Watts.

7) Since the 2100 MHz UMTS radios are ground mounted there are additional cabling losses accounted for. For each ground mounted 2100 MHz UMTS RF path an additional 1.57 dB of additional cable loss was calculated for all ground mounted 2100 MHz channels. This is based on manufacturers Specifications for 148 feet of 1-5/8" coax cable on each path.

8) 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.

9) 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 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.

10) The antennas used in this modeling are the **Ericsson AIR32 B66Aa/B2P** & **Ericsson AIR21 B2A/B4P** for 1900 MHz (PCS) and 2100 MHz (AWS) channels and the **Commscope LNX-6515DS-VTM** for 700 MHz channels. This is based on feedback from the carrier with regards to anticipated antenna selection. The **Ericsson AIR32 B66Aa/B2P** has a maximum gain of **15.9 dBd** at its main lobe at 1900 MHz and 2100 MHz. The **Ericsson AIR21 B2A/B4P** has a maximum gain of **15.9 dBd** at its main lobe at 1900 MHz and 2100 MHz. The **Commscope LNX-6515DS-VTM** has a maximum gain of **14.6 dBd** at its main lobe at 700 MHz. The maximum gain of the antenna per the antenna manufactures supplied specifications, minus 10 dB, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

11) The antenna mounting height centerline of the proposed antennas is **100 feet** above ground level (AGL).

12) 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.

13) All calculations were done with respect to uncontrolled / general public threshold limits.

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T-Mobile Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	**1**	Antenna #:	**1**	Antenna #:	**1**
Make / Model:	Ericsson AIR32 B66Aa/B2P	Make / Model:	Ericsson AIR32 B66Aa/B2P	Make / Model:	Ericsson AIR32 B66Aa/B2P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	100	Height (AGL):	100	Height (AGL):	100
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	4	Channel Count	4	Channel Count	4
Total TX Power(W):	240	Total TX Power(W):	240	Total TX Power(W):	240
ERP (W):	9,337.08	ERP (W):	9,337.08	ERP (W):	9,337.08
Antenna A1 MPE%	3.80	Antenna B1 MPE%	3.80	Antenna C1 MPE%	3.80
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	Ericsson AIR21 B2A/B4P	Make / Model:	Ericsson AIR21 B2A/B4P	Make / Model:	Ericsson AIR21 B2A/B4P
Gain:	15.9 dBd	Gain:	15.9 dBd	Gain:	15.9 dBd
Height (AGL):	100	Height (AGL):	100	Height (AGL):	100
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	6	Channel Count	6	Channel Count	6
Total TX Power(W):	180	Total TX Power(W):	180	Total TX Power(W):	180
ERP (W):	6,294.66	ERP (W):	6,294.66	ERP (W):	6,294.66
Antenna A2 MPE%	2.56	Antenna B2 MPE%	2.56	Antenna C2 MPE%	2.56
Antenna #:	**3**	Antenna #:	**3**	Antenna #:	**3**
Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM	Make / Model:	Commscope LNX-6515DS-VTM
Gain:	14.6 dBd	Gain:	14.6 dBd	Gain:	14.6 dBd
Height (AGL):	100	Height (AGL):	100	Height (AGL):	100
Frequency Bands	700 MHz	Frequency Bands	700 MHz	Frequency Bands	700 MHz
Channel Count	1	Channel Count	1	Channel Count	1
Total TX Power(W):	30	Total TX Power(W):	30	Total TX Power(W):	30
ERP (W):	865.21	ERP (W):	865.21	ERP (W):	865.21
Antenna A3 MPE%	0.75	Antenna B3 MPE%	0.75	Antenna C3 MPE%	0.75

Site Composite MPE%	
Carrier	**MPE%**
T-Mobile (Per Sector Max)	**7.11 %**
AT&T	2.77 %
Clearwire	0.22 %
Clearwire MW dishes	0.46 %
Verizon Wireless	5.01 %
Site Total MPE %:	**15.57 %**

T-Mobile Sector A Total:	7.11 %
T-Mobile Sector B Total:	7.11 %
T-Mobile Sector C Total:	7.11 %
Site Total:	15.57 %

T-Mobile _per sector	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
T-Mobile AWS - 2100 MHz LTE	2	2,334.27	100	18.99	AWS - 2100 MHz	1000	1.90 %
T-Mobile PCS - 1900 MHz LTE	2	2,334.27	100	18.99	PCS - 1900 MHz	1000	1.90 %
T-Mobile AWS - 2100 MHz UMTS	2	813.06	100	6.62	AWS - 2100 MHz	1000	0.66 %
T-Mobile PCS - 1950 MHz UMTS	2	1,167.14	100	9.50	PCS - 1950 MHz	1000	0.95 %
T-Mobile PCS - 1950 MHz GSM	2	1,167.14	100	9.50	PCS - 1950 MHz	1000	0.95 %
T-Mobile 700 MHz LTE	1	865.21	100	3.52	700 MHz	467	0.75 %
						Total:	**7.11 %**

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general public 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 public exposure to RF Emissions are shown here:

T-Mobile Sector	Power Density Value (%)
Sector A:	7.11 %
Sector B:	7.11 %
Sector C:	7.11 %
T-Mobile Per Sector Maximum:	7.11 %
Site Total:	15.57 %
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **15.57%** of the allowable FCC established general public 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.

Ms. Deborah Krenc
AT&T Towers
2300 Northlake Center Drive, Suite 405
Tucker, GA 30084-4032
(404) 532-5837

Morrison Hershfield
1455 Lincoln Parkway, Suite 500
Atlanta, GA 30346
(770) 379-8500

Date: June 30, 2016

Subject: **Structural Analysis Report**

AT&T Designation:
Site USID: 88241-A
Site FA: 10050945
Site Name: NEW BRITAIN WILDWOOD STREET

Carrier: T-Mobile
Carrier Site Number: CT11634C
Carrier Site Name: CT634/Cing/Chesley Park_ET

Site Address: Wildwood Street, New Britain, Hartford County, CT 06051
Site Coordinates: Latitude: 41° 40' 5.47" N, Longitude: 72° 45' 18.72" W
Tower Description: 110 ft – Monopole Tower

Morrison Hershfield Project Number: ATT-664 / 7160003

Dear Ms. Krenc,

Morrison Hershfield has carried out a structural analysis of the above referenced structure for the existing and proposed antenna and equipment noted. This analysis has been performed in accordance with the TIA/EIA-222-F *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures* using a fastest mile wind speed of 80 mph, meeting the requirements of 2005 CT State Building Code with 2009 Amendment. This analysis is subject to the assumptions noted.

Our analysis demonstrates that the existing tower and foundation **ARE in conformance (tower at 99.7% and foundation at 76.1%)** with the requirements of the above noted standards under the effects of loading described**.**

We at *Morrison Hershfield* appreciate the opportunity of providing our continuing professional services to you and AT&T Towers. If you have any questions or need further assistance on this or any other projects, please give us a call.

Respectfully Submitted by:
Morrison Hershfield

STATE OF CONNECTICUT
G. LANCE COOKE
No. 28133
LICENSED
PROFESSIONAL ENGINEER

G. Lance Cooke, P.E. (CT License No. PEN.0028133)
Senior Engineer

INTRODUCTION

This tower is a 110 ft monopole, and the original drawings are not available. The tower geometry and member sizes have been obtained from the structural analysis completed by B+T Group, Project #: 84498.003.01a, dated 03/04/2015 and are considered to be accurate. Yield strengths of 65-ksi for the monopole shaft, 50-ksi for the base plate and 75-ksi anchor bolts have been assumed based on experience with similar towers.

This structural analysis was performed in accordance with the requirements of 2005 CT State Building Code with 2009 Amendment and the TIA/EIA-222-F Structural Standards for Steel Antenna Towers and Antenna Supporting Structures using a fastest mile wind speed of 80 mph with no radial ice, 38 mph with 1" radial ice thickness and 50 mph under service conditions.

The structural analysis was based on the following documentation:

Documentation

Document	Description	Source
Previous Structural Analysis	B+T Group, Project #: 84498.003.01a, dated 03/04/2015	Siterra
Previous Structural Analysis	B+T Group, Project #: 85026.001, dated 08/23/2012	Siterra
Previous Structural Analysis	GPD Associates, Project #: 2009285.35, dated 11/09/2009	Siterra
Site Lease Application	T-Mobile, Site #: CT11634C, dated 04/27/2016	Siterra

1.0 ANALYSIS LOADING

The existing and proposed antennas, transmission lines, and other equipment considered in this analysis were provided by the client and are noted in the attachments.

ANALYSIS PROCEDURE

tnxTower Version 7.0.6.2, a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is attached at the end of this report.

2.0 ASSUMPTIONS

The analysis provided by Morrison Hershfield is based on the theoretical capacity of the structure and is not a condition assessment of the tower. Morrison Hershfield has not performed an engineering inspection of the tower and the analysis was completed based on information supplied by the client. Morrison Hershfield has not made any independent determination of the accuracy of the information provided.

1) Tower and structures were built in accordance with the manufacturer's specifications and the applicable ANSI/TIA/EIA standard.
2) The tower and structures have been maintained in accordance with the manufacturer's specification.
3) The tower is assumed to be in good condition and capable of supporting its full design capacity.
4) The foundation was properly designed and constructed for the original design loads.
5) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in the attached Tower Analysis Summary Form.
6) All existing/proposed antennas and antenna mounts are assumed to be adequate for the existing/proposed loads. Analysis of these antennas and antenna mounts is considered to be outside of the scope of this analysis. Morrison Hershfield has not performed an analysis of the existing/proposed antennas or antenna mounts.
7) Existing and proposed loading for T-Mobile is per their Site Lease Application, Site #: CT11634C, dated 04/27/2016, and is considered to be correct
8) The remaining existing loading is taken from the previous structural analysis completed by B+T Group, Project #: 84498.003.01a, dated 03/04/2015, and is considered to be correct.

9) Future loading for AT&T Mobility is per Generic AT&T Reserve Loading Requirements, and is considered to be correct.
10) Original tower and foundation drawings were not available. The tower geometry and foundation details has been taken from the previous structural analysis completed by B+T Group, Project #: 4498.003.01a, dated 03/04/2015.

If any assumptions are not valid or have been made in error, this analysis is invalid. Morrison Hershfield should be notified to determine the effect on the structural integrity of the tower.

3.0 SUMMARY OF RESULTS

The following tables summarize the location and utilized percentage of available capacity for each component of the tower. With consideration to the appropriate safety factors, 100% represents the full capacity of the component. Percentages below 100% indicate available capacity and conformance of the component. Percentages above 100% indicate an overstressed situation requiring structural modification to ensure conformance with the applicable codes and standards.

Based on our analysis results, the **tower and foundation ARE within capacity** to support the loads under the current loading scenario.

Tower Section Capacity

Section No.	*Elevation ft*	*Component Type*	*Size*	*% Capacity*	*Pass Fail*
L1	110 - 88.75	Pole	TP24.83x21x0.19	38.6	Pass
L2	88.75 - 47	Pole	TP31.99x23.87x0.25	87.0	Pass
L3	47 - 0	Pole	TP39.93x30.77x0.31	99.7	Pass
				Summary	
				99.7	Pass
				99.7	**Pass**

Capacity of Additional Components

Component	***% Capacity***	***Pass/Fail***
Anchor Bolts	72.2	Pass
Base Plate	86.5	Pass
Spread Footing Bearing	50.4	Pass
Spread Footing Overturning	76.1	Pass

4.0 RECOMMENDATIONS

1. All assumptions made in this analysis should be carefully reviewed. Morrison Hershfield should be contacted for any discrepancies so that a full assessment may be made to validate the results of this analysis.

ATTACHMENTS: Tower Loading, Tower Profile, Program Output, Coax Sketch, Additional Calculations and Site Lease Application Form

Tower Analysis Summary Form

General Info

Site Name	NEW BRITAIN WILDWOOD STREET
Site Number	88241-A
FA Number	10050945
Date of Analysis	06/30/2016
Company Performing Analysis	Morrison Hershfield

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

Tower Info	Description	Date
Tower Type (G, SST, MP)	MP	
Tower Height (top of steel AGL)	110 ft	
Tower Manufacturer	N/A	
Tower Model	N/A	
Tower Design	N/A	
Foundation Design	N/A	
Geotechnical Report	N/A	
Tower Mapping	N/A	
Previous Structural Analysis	B+T Group, Project #: 84498.003.01a	3/4/2015
Previous Structural Analysis	B+T Group, Project #: 85026.001	8/23/2012
Previous Structural Analysis	GPD Associates, Project #: 2009285.35	11/9/2009
Previous Structural Analysis	N/A	
Foundation Mapping	N/A	

Design Parameters

Design Code Used	TIA/EIA-222-F 2006 IBC / ASCE 7-05
Location of Tower (County, State)	Hartford, CT
Basic Wind Speed (mph)	80
Ice Thickness (in)	1

Analysis Results (% Maximum Usage)

Existing/Reserved + Future + Proposed Condition	
Pole (%)	99.7%
Anchor Bolts (%) / Base Plate (%)	72.2% / 86.5%
Foundation (%)	76.1%
Foundation Adequate?	YES

Steel Yield Strength (ksi)

Pole	65
Base Plate	50
Anchor Rods	75

*Assumed based on experience with similar towers.

1) Existing and proposed loading for T-Mobile is per their Site Lease Application, Site #: CT11634C, dated 04/27/2016, and is considered to be correct
2) The remaining existing loading is taken from the previous structural analysis completed by B+T Group, Project #: 84498.003.01a, dated 03/04/2015, and is considered to be correct.
3) Future loading for AT&T Mobility is per Generic AT&T Reserve Loading Requirements, and is considered to be correct.

Existing / Reserved Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face
AT&T Mobility	110	114	6	Panel	Powewave	7770	0 / 120 / 240	1	Unknown	14' Low Profile Platform	12	Unknown	1-5/8"	Internal
AT&T Mobility	110	114	3	Panel	KMW	AM-X-CD-16-65-00T	0 / 120 / 240				3	Unknown	1/2"	External
AT&T Mobility	110	114	6	TMA	Powewave	LGP 21401								
AT&T Mobility	110	112	6	RRH	Ericsson	RBS6601								
AT&T Mobility	110	112	1	Surge Arrestor	Raycap	DC6-48-60-18-8F								
T-Mobile*	100	100	3	Panel	Ericsson	AIR 21 B4A B2P	60 / 160 / 310	1	Unknown	12.5' Platform w/ Handrails	15	Unknown	1-5/8"	Internal/External
T-Mobile	100	100	3	Panel	Eicsson	AIR 21 B2A B4P	60 / 160 / 310				1	Hybrid Cable	1-5/8"	Internal
T-Mobile*	100	100	3	Panel	Commscope	LNX-6515DS-A1M	60 / 160 / 310				1	Unknown	3/8"	Internal
T-Mobile*	100	100	3	TMA	RFS	1412D-1S20				Behind Antennas	3	Unknown	1/4"	Internal
T-Mobile	100	100	3	RRU	Ericsson	RRUS11-B12				Behind Antennas				
Verizon Wireless	90	90	3	Panel	Antel	BXA-80063/4CF	60 / 180 / 300	3	Unknown	10' T-Arm Mount	12	Unknown	1-5/8"	Internal
Verizon Wireless	90	90	3	Panel	Antel	BXA-171063/8BF					6	Unknown	1-5/8"	External
Verizon Wireless	90	90	3	Panel	Antel	BXA-70063-6CF_2								
Town	60	60	10	Lights	-	Stadium Lights	-	1	Unknown	Stadium Light Mount	-	-	-	-

*Note: Existing (3) Ericsson AIR 21 B4A B2P panels, (2) 1-5/8", (1) 3/8" and (3) 1/4" feedlines at 100' elevation are to be removed. The remaining existing loading to be reused.

Proposed Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face
T-Mobile	100	100	3	Panel	Ericsson	AIR 32 B66AaB2a	60 / 160 / 310	-	-	Same as existing	1	Hybrid Cable	7/8"	Internal

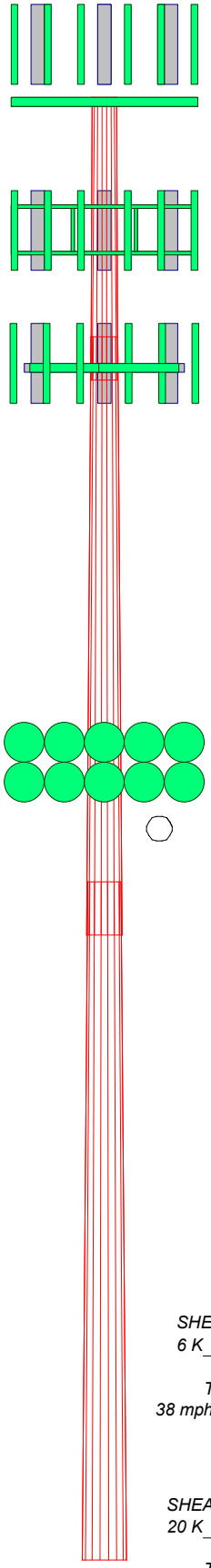
Note: The proposed loading is in addition to the remaining existing loading at 100 ft elevation.

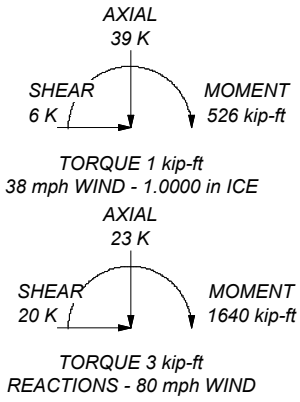
Future Loading

Antenna								Mount			Transmission Line			
Antenna Owner	Mount Height (ft)	Antenna CL (ft)	Quantity	Type	Manufacturer	Model	Azimuth	Quantity	Manufacturer	Type	Quantity	Model	Size	Attachment Leg/Face
AT&T Mobility	110	114	3	Panel	KMW	AM-X-CD-16-65-00T	0 / 120 / 240	-	-	Same as existing	6	Unknown	1-5/8"	Internal

Note: The future loading is in addition to the existing loading at 110 ft elevation.

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	21.25	18	0.1875	3.25	21.0000	24.8250	A572-65	1.0
2	45.00	18	0.2500	4.00	23.8650	31.9880		3.4
3	51.00	18	0.3125		30.7660	39.9300		6.0
								10.4





DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
(2) 7770.00 w/ pipe mount (E)	114	1412D-1S20 (E-Behind Antennas)	100
(2) 7770.00 w/ pipe mount (E)	114	RRUS 11 B12 (E-Behind Antennas)	100
(2) 7770.00 w/ pipe mount (E)	114	RRUS 11 B12 (E-Behind Antennas)	100
AM-X-CD-16-65-00T w/ pipe mount (E)	114	RRUS 11 B12 (E-Behind Antennas)	100
AM-X-CD-16-65-00T w/ pipe mount (E)	114	12.5' Platform w/Handrails (E)	100
AM-X-CD-16-65-00T w/ pipe mount (E)	114	AIR 32 B66AaB2a w/pipe mount (P)	100
(2) LGP21401 (E)	114	AIR 32 B66AaB2a w/pipe mount (P)	100
(2) LGP21401 (E)	114	AIR 32 B66AaB2a w/pipe mount (P)	100
(2) LGP21401 (E)	114	BXA-80063/4CF w/ pipe mount (E)	90
AM-X-CD-16-65-00T w/ pipe mount (F-Generic)	114	BXA-80063/4CF w/ pipe mount (E)	90
		BXA-80063/4CF w/ pipe mount (E)	90
AM-X-CD-16-65-00T w/ pipe mount (F-Generic)	114	BXA-171063/8BF w/ pipe mount (E)	90
		BXA-171063/8BF w/ pipe mount (E)	90
AM-X-CD-16-65-00T w/ pipe mount (F-Generic)	114	BXA-171063/8BF w/ pipe mount (E)	90
DC6-48-60-18-8F (E)	112	BXA-70063-6CF-2 w/ pipe mount (E)	90
(2) RBD 6601 (E)	112	BXA-70063-6CF-2 w/ pipe mount (E)	90
(2) RBD 6601 (E)	112	BXA-70063-6CF-2 w/ pipe mount (E)	90
(2) RBD 6601 (E)	112	10' T-Arm Mount (E)	90
6' x 2" Mount Pipe (E-Photos)	110	10' T-Arm Mount (E)	90
14' Low Profile Platform (E)	110	10' T-Arm Mount (E)	90
6' x 2" Mount Pipe (E-Photos)	110	Stadium Light (E)	61.5
6' x 2" Mount Pipe (E-Photos)	110	Stadium Light (E)	61.5
AIR 21 B2A B4P w/ pipe mount (E)	100	Stadium Light (E)	61.5
AIR 21 B2A B4P w/ pipe mount (E)	100	Stadium Light (E)	61.5
AIR 21 B2A B4P w/ pipe mount (E)	100	Stadium Light (E)	61.5
LNX-6515DS-A1M w/ pipe mount (E)	100	Stadium Light Mount (E)	60
LNX-6515DS-A1M w/ pipe mount (E)	100	Stadium Light (E)	58.5
LNX-6515DS-A1M w/ pipe mount (E)	100	Stadium Light (E)	58.5
1412D-1S20 (E-Behind Antennas)	100	Stadium Light (E)	58.5
1412D-1S20 (E-Behind Antennas)	100	Stadium Light (E)	58.5
		Stadium Light (E)	58.5

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford County, Connecticut.
2. Tower designed for a 80 mph basic wind in accordance with the TIA/EIA-222-F Standard.
3. Tower is also designed for a 38 mph basic wind with 1.00 in ice. Ice is considered to increase in thickness with height.
4. Deflections are based upon a 50 mph wind.
5. TOWER RATING: 99.7%

Morrison Hershfield
Consulting Engineers
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Atlanta, GA 30346
Phone: (770) 379-8500
FAX: (770) 379-8501

Job: ATT-664 / 7160003			
Project: 88241-A / NEW BRITAIN WILDWOOD STREET			
Client: AT&T Towers	Drawn by: MK	App'd:	
Code: TIA/EIA-222-F	Date: 06/28/16	Scale: NTS	
Path: C:\Projects\ATT-664 - 88241-A New Britain Wildwood Street\ATT-664 SA\Analysis\ATT-664.eri		Dwg No. E-1	

Tower Input Data

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

Tower is located in Hartford County, Connecticut.
Basic wind speed of 80 mph.
Nominal ice thickness of 1.0000 in.
Ice thickness is considered to increase with height.
Ice density of 56.00 pcf.
A wind speed of 38 mph is used in combination with ice.
Temperature drop of 50.000 °F.
Deflections calculated using a wind speed of 50 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.333.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

Tapered Pole Section Geometry

Section	*Elevation*	*Section Length*	*Splice Length*	*Number of Sides*	*Top Diameter*	*Bottom Diameter*	*Wall Thickness*	*Bend Radius*	*Pole Grade*
	ft	*ft*	*ft*		*in*	*in*	*in*	*in*	
L1	110.00-88.75	21.25	3.25	18	21.0000	24.8250	0.1875	0.7500	A572-65 (65 ksi)
L2	88.75-47.00	45.00	4.00	18	23.8650	31.9880	0.2500	1.0000	A572-65 (65 ksi)
L3	47.00-0.00	51.00		18	30.7660	39.9300	0.3125	1.2500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	21.3240	12.3860	677.8263	7.3884	10.6680	63.5383	1356.5444	6.1942	3.3660	17.952
	25.2080	14.6624	1124.4381	8.7463	12.6111	89.1626	2250.3558	7.3326	4.0392	21.542
L2	24.8289	18.7385	1320.2258	8.3833	12.1234	108.8988	2642.1889	9.3710	3.7602	15.041
	32.4815	25.1841	3204.9632	11.2670	16.2499	197.2297	6414.1436	12.5944	5.1899	20.76
L3	31.9704	30.2060	3539.1921	10.8110	15.6291	226.4488	7083.0411	15.1059	4.8648	15.567
	40.5460	39.2956	7792.1193	14.0642	20.2844	384.1427	15594.4917	19.6515	6.4777	20.729

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 110.00-88.75				1	1	1			
L2 88.75-47.00				1	1	1			
L3 47.00-0.00				1	1	1			

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
*** AT&T Mobility ***								
1-5/8" (12E+6F)	A	No	Inside Pole	110.00 - 6.00	18	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
						2" Ice	0.00	0.82
						4" Ice	0.00	0.82
1/2" (E)	A	No	CaAa (Out Of Face)	110.00 - 6.00	1	No Ice	0.06	0.15
						1/2" Ice	0.16	0.84
						1" Ice	0.26	2.14
						2" Ice	0.46	6.58
						4" Ice	0.86	22.78
1/2" (E (Shielded))	A	No	CaAa (Out Of Face)	110.00 - 6.00	2	No Ice	0.00	0.15
						1/2" Ice	0.00	0.84
						1" Ice	0.00	2.14
						2" Ice	0.00	6.58
						4" Ice	0.00	22.78
*** T-Mobile ***								
1-5/8" (E)	B	No	Inside Pole	100.00 - 6.00	13	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
						2" Ice	0.00	0.82
						4" Ice	0.00	0.82
7/8" (P)	B	No	Inside Pole	100.00 - 6.00	1	No Ice	0.00	0.33
						1/2" Ice	0.00	0.33
						1" Ice	0.00	0.33
						2" Ice	0.00	0.33
						4" Ice	0.00	0.33
*** Verizon Wireless ***								
1-5/8" (E)	C	No	CaAa (Out Of Face)	90.00 - 6.00	1	No Ice	0.20	0.82
						1/2" Ice	0.30	2.33
						1" Ice	0.40	4.46
						2" Ice	0.60	10.54

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
						4" Ice	1.00	30.04
1-5/8" (E (Shielded))	C	No	CaAa (Out Of Face)	90.00 - 6.00	5	No Ice	0.00	0.82
						1/2" Ice	0.00	2.33
						1" Ice	0.00	4.46
						2" Ice	0.00	10.54
						4" Ice	0.00	30.04
1-5/8" (E)	C	No	Inside Pole	90.00 - 2.00	12	No Ice	0.00	0.82
						1/2" Ice	0.00	0.82
						1" Ice	0.00	0.82
						2" Ice	0.00	0.82
						4" Ice	0.00	0.82
*** Tower Hardware ***								
Safety Line 3/8" (Tower)	B	No	CaAa (Out Of Face)	110.00 - 6.00	1	No Ice	0.04	0.22
						1/2" Ice	0.14	0.75
						1" Ice	0.24	1.28
						2" Ice	0.44	2.34
						4" Ice	0.84	4.46
Climbing Pegs (Tower)	B	No	CaAa (Out Of Face)	110.00 - 6.00	1	No Ice	0.07	1.80
						1/2" Ice	0.17	2.54
						1" Ice	0.27	3.89
						2" Ice	0.47	8.41
						4" Ice	0.87	24.80

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
*** AT&T Mobility ***									
(2) 7770.00 w/ pipe mount (E)	A	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.22 6.77 7.30 8.38 10.69	4.35 5.20 5.92 7.41 10.76	0 0 0 0 1
(2) 7770.00 w/ pipe mount (E)	B	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.22 6.77 7.30 8.38 10.69	4.35 5.20 5.92 7.41 10.76	0 0 0 0 1
(2) 7770.00 w/ pipe mount (E)	C	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.22 6.77 7.30 8.38 10.69	4.35 5.20 5.92 7.41 10.76	0 0 0 0 1
AM-X-CD-16-65-00T w/ pipe mount (E)	A	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.30 7.48 8.37 10.18 14.02	0 0 0 0 1
AM-X-CD-16-65-00T w/ pipe mount (E)	B	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.30 7.48 8.37 10.18 14.02	0 0 0 0 1

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
AM-X-CD-16-65-00T w/ pipe mount (E)	C	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.30 7.48 8.37 10.18 14.02	0 0 0 0 1
(2) LGP21401 (E)	A	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.29 1.45 1.61 1.97 2.79	0.23 0.31 0.40 0.61 1.12	0 0 0 0 0
(2) LGP21401 (E)	B	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.29 1.45 1.61 1.97 2.79	0.23 0.31 0.40 0.61 1.12	0 0 0 0 0
(2) LGP21401 (E)	C	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.29 1.45 1.61 1.97 2.79	0.23 0.31 0.40 0.61 1.12	0 0 0 0 0
(2) RBD 6601 (E)	A	From Leg	4.00 0.00 0.00	0.00	112.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.48 0.63 0.77 1.11 1.88	0.35 0.46 0.58 0.84 1.47	0 0 0 0 0
(2) RBD 6601 (E)	B	From Leg	4.00 0.00 0.00	0.00	112.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.48 0.63 0.77 1.11 1.88	0.35 0.46 0.58 0.84 1.47	0 0 0 0 0
(2) RBD 6601 (E)	C	From Leg	4.00 0.00 0.00	0.00	112.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.48 0.63 0.77 1.11 1.88	0.35 0.46 0.58 0.84 1.47	0 0 0 0 0
DC6-48-60-18-8F (E)	A	From Leg	1.00 0.00 0.00	0.00	112.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.60 1.81 2.02 2.49 3.56	1.60 1.81 2.02 2.49 3.56	0 0 0 0 0
14' Low Profile Platform (E)	C	None		0.00	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	23.10 26.80 30.50 37.90 52.70	23.10 26.80 30.50 37.90 52.70	2 3 3 4 5
6' x 2" Mount Pipe (E-Photos)	A	From Leg	4.00 0.00 0.00	0.00	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.43 1.92 2.29 3.06 4.70	1.43 1.92 2.29 3.06 4.70	0 0 0 0 0
6' x 2" Mount Pipe (E-Photos)	B	From Leg	4.00 0.00 0.00	0.00	110.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	1.43 1.92 2.29 3.06 4.70	1.43 1.92 2.29 3.06 4.70	0 0 0 0 0
6' x 2" Mount Pipe (E-Photos)	C	From Leg	4.00 0.00	0.00	110.00	No Ice 1/2" Ice	1.43 1.92	1.43 1.92	0 0

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1" Ice	2.29	2.29	0
						2" Ice	3.06	3.06	0
						4" Ice	4.70	4.70	0
***									
AM-X-CD-16-65-00T w/ pipe mount (F-Generic)	A	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.30 7.48 8.37 10.18 14.02	0 0 0 0 1
AM-X-CD-16-65-00T w/ pipe mount (F-Generic)	B	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.30 7.48 8.37 10.18 14.02	0 0 0 0 1
AM-X-CD-16-65-00T w/ pipe mount (F-Generic)	C	From Leg	4.00 0.00 0.00	0.00	114.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	8.50 9.15 9.77 11.03 13.68	6.30 7.48 8.37 10.18 14.02	0 0 0 0 1
*** T-Mobile ***									
AIR 21 B2A B4P w/ pipe mount (E)	A	From Leg	4.00 0.00 0.00	0.00	100.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.90 7.46 8.00 9.10 11.44	5.74 6.64 7.44 9.09 12.59	0 0 0 0 1
AIR 21 B2A B4P w/ pipe mount (E)	B	From Leg	4.00 0.00 0.00	0.00	100.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.90 7.46 8.00 9.10 11.44	5.74 6.64 7.44 9.09 12.59	0 0 0 0 1
AIR 21 B2A B4P w/ pipe mount (E)	C	From Leg	4.00 0.00 0.00	0.00	100.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	6.90 7.46 8.00 9.10 11.44	5.74 6.64 7.44 9.09 12.59	0 0 0 0 1
LNX-6515DS-A1M w/ pipe mount (E)	A	From Leg	4.00 0.00 0.00	0.00	100.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	11.72 12.44 13.15 14.61 17.87	10.28 11.81 13.16 15.49 20.37	0 0 0 1 1
LNX-6515DS-A1M w/ pipe mount (E)	B	From Leg	4.00 0.00 0.00	0.00	100.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	11.72 12.44 13.15 14.61 17.87	10.28 11.81 13.16 15.49 20.37	0 0 0 1 1
LNX-6515DS-A1M w/ pipe mount (E)	C	From Leg	4.00 0.00 0.00	0.00	100.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	11.72 12.44 13.15 14.61 17.87	10.28 11.81 13.16 15.49 20.37	0 0 0 1 1
1412D-1S20 (E-Behind Antennas)	A	From Leg	4.00 0.00 0.00	0.00	100.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	0.71 0.83 0.97 1.26 1.95	0.41 0.52 0.64 0.90 1.54	0 0 0 0 0
1412D-1S20 (E-Behind Antennas)	B	From Leg	4.00 0.00	0.00	100.00	No Ice 1/2" Ice	0.71 0.83	0.41 0.52	0 0

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1" Ice	0.97	0.64	0
						2" Ice	1.26	0.90	0
						4" Ice	1.95	1.54	0
1412D-1S20	C	From Leg	4.00	0.00	100.00	No Ice	0.71	0.41	0
(E-Behind Antennas)			0.00			1/2" Ice	0.83	0.52	0
			0.00			1" Ice	0.97	0.64	0
						2" Ice	1.26	0.90	0
						4" Ice	1.95	1.54	0
RRUS 11 B12	A	From Leg	4.00	0.00	100.00	No Ice	3.31	1.36	0
(E-Behind Antennas)			0.00			1/2" Ice	3.55	1.54	0
			0.00			1" Ice	3.80	1.73	0
						2" Ice	4.33	2.13	0
						4" Ice	5.50	3.04	0
RRUS 11 B12	B	From Leg	4.00	0.00	100.00	No Ice	3.31	1.36	0
(E-Behind Antennas)			0.00			1/2" Ice	3.55	1.54	0
			0.00			1" Ice	3.80	1.73	0
						2" Ice	4.33	2.13	0
						4" Ice	5.50	3.04	0
RRUS 11 B12	C	From Leg	4.00	0.00	100.00	No Ice	3.31	1.36	0
(E-Behind Antennas)			0.00			1/2" Ice	3.55	1.54	0
			0.00			1" Ice	3.80	1.73	0
						2" Ice	4.33	2.13	0
						4" Ice	5.50	3.04	0
12.5' Platform w/Handrails	C	None		0.00	100.00	No Ice	19.46	19.46	1
(E)						1/2" Ice	25.57	25.57	2
						1" Ice	31.68	31.68	2
						2" Ice	43.90	43.90	3
						4" Ice	68.34	68.34	4
***									
AIR 32 B66AaB2a w/pipe	A	From Leg	4.00	0.00	100.00	No Ice	7.09	4.78	0
mount			0.00			1/2" Ice	7.54	5.21	0
(P)			0.00			1" Ice	8.00	5.64	0
						2" Ice	8.95	6.54	0
						4" Ice	10.96	8.44	1
AIR 32 B66AaB2a w/pipe	B	From Leg	4.00	0.00	100.00	No Ice	7.09	4.78	0
mount			0.00			1/2" Ice	7.54	5.21	0
(P)			0.00			1" Ice	8.00	5.64	0
						2" Ice	8.95	6.54	0
						4" Ice	10.96	8.44	1
AIR 32 B66AaB2a w/pipe	C	From Leg	4.00	0.00	100.00	No Ice	7.09	4.78	0
mount			0.00			1/2" Ice	7.54	5.21	0
(P)			0.00			1" Ice	8.00	5.64	0
						2" Ice	8.95	6.54	0
						4" Ice	10.96	8.44	1
*** Verizon Wireless ***									
BXA-80063/4CF w/ pipe	A	From Leg	4.00	0.00	90.00	No Ice	5.65	3.87	0
mount			0.00			1/2" Ice	6.20	4.67	0
(E)			0.00			1" Ice	6.72	5.34	0
						2" Ice	7.80	6.79	0
						4" Ice	10.08	10.00	1
BXA-80063/4CF w/ pipe	B	From Leg	4.00	0.00	90.00	No Ice	5.65	3.87	0
mount			0.00			1/2" Ice	6.20	4.67	0
(E)			0.00			1" Ice	6.72	5.34	0
						2" Ice	7.80	6.79	0
						4" Ice	10.08	10.00	1
BXA-80063/4CF w/ pipe	C	From Leg	4.00	0.00	90.00	No Ice	5.65	3.87	0
mount			0.00			1/2" Ice	6.20	4.67	0

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
(E)			0.00			1" Ice	6.72	5.34	0
						2" Ice	7.80	6.79	0
						4" Ice	10.08	10.00	1
BXA-171063/8BF w/ pipe mount	A	From Leg	4.00 0.00	0.00	90.00	No Ice 1/2" Ice	3.37 3.84	3.74 4.54	0 0
(E)			0.00			1" Ice	4.30	5.22	0
						2" Ice	5.31	6.64	0
						4" Ice	7.47	9.85	1
BXA-171063/8BF w/ pipe mount	B	From Leg	4.00 0.00	0.00	90.00	No Ice 1/2" Ice	3.37 3.84	3.74 4.54	0 0
(E)			0.00			1" Ice	4.30	5.22	0
						2" Ice	5.31	6.64	0
						4" Ice	7.47	9.85	1
BXA-171063/8BF w/ pipe mount	C	From Leg	4.00 0.00	0.00	90.00	No Ice 1/2" Ice	3.37 3.84	3.74 4.54	0 0
(E)			0.00			1" Ice	4.30	5.22	0
						2" Ice	5.31	6.64	0
						4" Ice	7.47	9.85	1
BXA-70063-6CF-2 w/ pipe mount	A	From Leg	4.00 0.00	0.00	90.00	No Ice 1/2" Ice	7.97 8.61	5.80 6.95	0 0
(E)			0.00			1" Ice	9.22	7.82	0
						2" Ice	10.46	9.60	0
						4" Ice	13.07	13.37	1
BXA-70063-6CF-2 w/ pipe mount	B	From Leg	4.00 0.00	0.00	90.00	No Ice 1/2" Ice	7.97 8.61	5.80 6.95	0 0
(E)			0.00			1" Ice	9.22	7.82	0
						2" Ice	10.46	9.60	0
						4" Ice	13.07	13.37	1
BXA-70063-6CF-2 w/ pipe mount	C	From Leg	4.00 0.00	0.00	90.00	No Ice 1/2" Ice	7.97 8.61	5.80 6.95	0 0
(E)			0.00			1" Ice	9.22	7.82	0
						2" Ice	10.46	9.60	0
						4" Ice	13.07	13.37	1
10' T-Arm Mount	A	From Leg	2.00	0.00	90.00	No Ice	6.67	3.02	0
(E)			0.00 0.00			1/2" Ice 1" Ice	8.82 10.97	4.20 5.38	0 0
						2" Ice	15.27	7.74	1
						4" Ice	23.87	12.46	1
10' T-Arm Mount	B	From Leg	2.00	0.00	90.00	No Ice	6.67	3.02	0
(E)			0.00 0.00			1/2" Ice 1" Ice	8.82 10.97	4.20 5.38	0 0
						2" Ice	15.27	7.74	1
						4" Ice	23.87	12.46	1
10' T-Arm Mount	C	From Leg	2.00	0.00	90.00	No Ice	6.67	3.02	0
(E)			0.00 0.00			1/2" Ice 1" Ice	8.82 10.97	4.20 5.38	0 0
						2" Ice	15.27	7.74	1
						4" Ice	23.87	12.46	1
*** Town ***									
Stadium Light Mount	C	From Leg	0.50	0.00	60.00	No Ice	16.40	10.28	0
(E)			0.00 0.00			1/2" Ice 1" Ice	21.70 27.00	14.27 18.26	0 1
						2" Ice	37.60	26.24	1
						4" Ice	58.80	42.20	2

Dishes

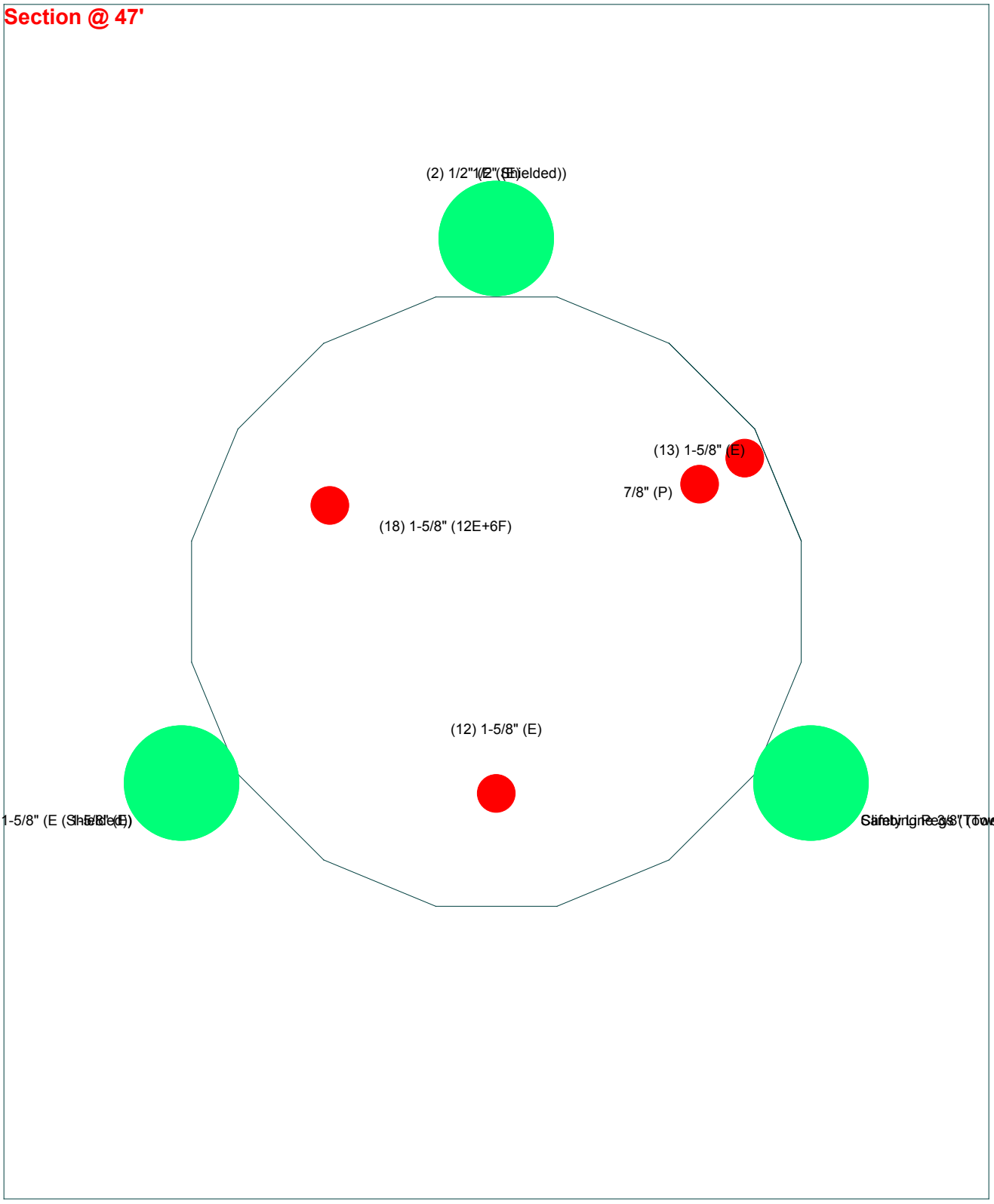
Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral / Vert (ft)	Azimuth Adjustment (°)	3 dB Beam Width (°)	Elevation (ft)	Outside Diameter (ft)		Aperture Area (ft^2)	Weight (K)
*** Town ***											
Stadium Light (E)	C	Paraboloid w/Radome	From Face	1.00 -6.00 0.00	0.00		61.50	3.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.07 7.47 7.87 8.66 10.25	0 0 0 0 0
Stadium Light (E)	C	Paraboloid w/Radome	From Face	1.00 -3.00 0.00	0.00		61.50	3.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.07 7.47 7.87 8.66 10.25	0 0 0 0 0
Stadium Light (E)	C	Paraboloid w/Radome	From Face	1.00 0.00 0.00	0.00		61.50	3.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.07 7.47 7.87 8.66 10.25	0 0 0 0 0
Stadium Light (E)	C	Paraboloid w/Radome	From Face	1.00 3.00 0.00	0.00		61.50	3.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.07 7.47 7.87 8.66 10.25	0 0 0 0 0
Stadium Light (E)	C	Paraboloid w/Radome	From Face	1.00 6.00 0.00	0.00		61.50	3.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.07 7.47 7.87 8.66 10.25	0 0 0 0 0
Stadium Light (E)	C	Paraboloid w/Radome	From Face	1.00 -6.00 0.00	0.00		58.50	3.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.07 7.47 7.87 8.66 10.25	0 0 0 0 0
Stadium Light (E)	C	Paraboloid w/Radome	From Face	1.00 -3.00 0.00	0.00		58.50	3.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.07 7.47 7.87 8.66 10.25	0 0 0 0 0
Stadium Light (E)	C	Paraboloid w/Radome	From Face	1.00 0.00 0.00	0.00		58.50	3.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.07 7.47 7.87 8.66 10.25	0 0 0 0 0
Stadium Light (E)	C	Paraboloid w/Radome	From Face	1.00 3.00 0.00	0.00		58.50	3.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.07 7.47 7.87 8.66 10.25	0 0 0 0 0
Stadium Light (E)	C	Paraboloid w/Radome	From Face	1.00 6.00 0.00	0.00		58.50	3.00	No Ice 1/2" Ice 1" Ice 2" Ice 4" Ice	7.07 7.47 7.87 8.66 10.25	0 0 0 0 0

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	$SF*P_{allow}$ K	% Capacity	Pass Fail
L1	110 - 88.75	Pole	TP24.825x21x0.1875	1	-6	744	38.6	Pass
L2	88.75 - 47	Pole	TP31.988x23.865x0.25	2	-14	1279	87.0	Pass
L3	47 - 0	Pole	TP39.93x30.766x0.3125	3	-23	2043	99.7	Pass
							Summary	
						Pole (L3)	99.7	Pass
						RATING =	**99.7**	**Pass**

Feed Line Plan
47'

Round Flat App In Face App Out Face



Morrison Hershfield
Consulting Engineers
1455 Lincoln Parkway, Suite 500
Atlanta, GA 30346
Phone: (770) 379-8500
FAX: (770) 379-8501

Job: ATT-664 / 7160003		
Project: 88241-A / NEW BRITAIN WILDWOOD STREET		
Client: AT&T Towers	Drawn by: MK	App'd:
Code: TIA/EIA-222-F	Date: 06/28/16	Scale: NTS
Path: C:\Projects\ATT-664 - 88241-A New Britain Wildwood Street\ATT-664 SA\Analysis\ATT-664.eri		Dwg No. E-7

MORRISON HERSHFIELD

Project:	ATT-664 / 7160003	Client:	AT&T Towers
Site Name:	NEW BRITAIN WILDWOOD STREET	Site ID:	88241-A
Des. By:	MK	Ck. By:	GLC
Date:	6/28/2016	page:	1 OF 1

Base Plate & Anchor Rod Analysis Summary

Base Reactions:			
	Mu:	1640	*ft-kips*
	Axial, Pu:	23	*kips*
	Shear, Vu:	20	*kips*
	Eta Factor, η	0.5	*TIA G (Fig. 4-4)*
Anchor Rod Data:			
	Number of Anchor Rods:	12	*EA*
	Anchor Rod Diam:	2.25	*in*
	Anchor Strength (Fu):	100	*ksi*
	Anchor Yield (Fy):	75	*ksi*
	Bolt Circle:	46	*in*
Base Plate Data:			
	Base Plate Diam:	45	*in*
	Base Plate Thickness:	2.5	*in*
	Base Plate Grade (Fy):	50	*ksi*
Stiffener Data:			
	Is Stiffened?	NO	
	Stiffener Configuration:	N/A	
	Stiffener Height:		*in*
	Stiffener Width:		*in*
	Notch:		*in*
	Stiffener Grade:		*ksi*
	Weld Type:		
	Weld Electrode:		
	Grrove Depth:		*in*
	Groove Angle:		*in*
	Horz. Fillet Weld Size:		*in*
	Vert. Fillet Weld Size:		*in*
Pole Data:			
	Pole Base Diameter:	39.93	*in*
	Pole Shell Thickness:	0.3125	*in*
	Pole Number of Sides:	18	
	Pole Grade (Fy):	65	*ksi*
	Pole Strength (Fu):	80	*Ksi*

Analysis Results:		
Anchor Rod Capacity	**72.2%**	**PASS**
Base Plate Capacity	**86.5%**	**PASS**
Stiffener Weld Capacity	**0.0%**	**PASS**
Stiffener Structural Capacity	**0.0%**	**PASS**

MORRISON HERSHFIELD

Project:	ATT-664 / 7160003	Client:	AT&T Towers
Site Name:	NEW BRITAIN WILDWOOD STREET	Site ID:	88241-A
Des. By:	MK	Ck. By:	GLC
Date:	6/28/2016	page:	1 OF 1

Pad & Pier Analysis Summary

Base Reactions:		
TIA Revision :	F	
Unfactored DL Axial, PD:	23	*kips*
Unfactored WL Axial, PW:	0	*kips*
Unfactored WL Shear, V:	20	*kips*
Unfactored WL Moment, M:	1640	*ft-kips*
Pad and Pier Data:		
Base PL Dist. Above Pier:	0	*in*
Pier Dist. Above Grade:	6	*in*
Pad Bearing Depth, D:	6	*ft*
Pad Thickness, T:	3	*ft*
Pad Width/Length, L:	21.5	*ft*
Pier Cross Section Shape:	Square	
Enter Pier Side Width:	6	*ft*
Concrete Density:	150	*pcf*
Pier Cross Section Area:	36.00	ft^2
Pier Height:	3.5	*ft*
Soil (above pad) Height:	3	*ft*
Soil Parameters:		
Unit Weight, γ:	100	*pcf*
Ultimate Bearing Capacity, qn:	6	*ksf*
Strength Reduct. factor, φ:	0.75	
Angle of Friction, Φ:	0	*degrees*
Undrained Shear Strength, Cu:	0	*ksf*
*Design Bearing: φ*qn:*	4.5	*ksf*
Passive Pres. Coeff., Kp:	1.00	

Bearing Results:		
Orthogonal Direction =	42.9%	***Pass***
Diagonal Direction =	50.4%	***Pass***
Overturning Stability Results:		
Moment Orthogonal =	76.1%	***Pass***
Moment Diagonal =	76.1%	***Pass***

AT&T Site Lease Application

rev 10.1

Please e-mail completed application to corresponding Account Manager - CLICK HERE for CONTACTS MAP

	Account Manager	States / Areas Covered	Email Address
Select One	Nicholas Carkin	ME, VT, NH, MA, CT, RI, NY, NJ, DE, MD, OH, PA, MI, IN, & Washington DC	nc734y@att.com
Select One	Julie Overman	AL, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV, Puerto Rico, & US Virgin Islands (USVI)	jo4976@att.com
Select One	Kimberly Buggeln	IA, IL, MN, ND, NE, SD, WI, AR, KS, OH, OK, MO, TX, AZ, NM, UT, CO, CA, OR, WA, MT, NV, WY, HI, & AK	kh744y@att.com
Select One	Alan Campbell	*ALL ROOFTOP SITES NATIONWIDE*	ac5154@att.com

NOTE: Upon review/approval of your Site Lease Application, your AT&T Towers / Rooftop representative will send a Preliminary Approval Letter with detailed instructions regarding the next steps in the process. AT&T Towers requires a structural analysis of it's tower foundations and all the expenses in connection therewith are paid by the applicant.

>>>>Please Select Lease Type>>>> Lease Amendment

NOTE: Revised Applications May Require Additional Processing Time

(AT&T USE ONLY) USID#:		FA#:	
Required file name:	T-Mobile-Lease Amendment-USID--FA-.xls		

APPLICANT INFORMATION

Application Date:	4/27/2016	**Applicant Site Name:**	CT634/Cing/Chesley Park_ET	**Applicant Site Number:**	CT11634C
Company Name:	T-Mobile	**Legal Entity Name:**	T-Mobile Northeast LLC		
State of Incorporation:	DE	**Type of Corporation - [Corp, Part, LLC, Non-Prof]:**	LLC		

Applicant Address for Notices - Billing - Other

	NOTICE:	BILLING (A/P):	COPY TO:
COMPANY NAME	T-Mobile USA Inc.	T-Mobile USA Inc.	Omnipoint Facilities Network 2 LLC
ADDRESS	12920 SE 38th Street	12920 SE 38th Street	4 Sylvan Way
CITY, STATE, ZIP	Bellevue, WA 98006	Bellevue, WA 98006	Parsippany, NJ 07054
Attention:	PCS Lease Administrator	Billing	Lease Administration Manager
Telephone:	425-378-4000	425-378-4000	425-378-4000

Applicant Contacts

	Name & Title	Phone	E-mail Address
Site Acquisition Contractor:	Kyle Richers (Transcend Wireless)	908-447-4716	krichers@transcendwireless.com
Carrier Site Development Manager:	Mark Richard	860-692-7143	mark.richard64@t-mobile.com
RF Engineer Contact:	Mike Lucey	860 849 1616	michael.lucey@t-mobile.com
Installation Contractor:			
Lessee Signatory:			
24 Hour Emergency Contact (NOC):	T-Mobile NOC	1-888-214-6668	
Other [indicate type]:			
Email Address for Invoices/PO requests associated with Pre-Construction Services (i.e. Structural Analysis) >>>>			

Commencement & Terms

Desired Construction Commencement Date:							
Initial Term (in years):		**Number of Extended Terms (#):**		**Duration of Each Extended Term (yrs):**			

AT&T Site Identification Information (from AT&T Towers Web Site: www.att.com/towers)

AT&T Site Name:	New Britain Wildwood Street	**Coordinates (NAD 83)**	**LAT**	41	40	5.5200	**Existing Tower Height:**	
AT&T Site ID #:	88241-A		**LON**	72	45	18.6700	**Tower Type:**	Select One
Site Address:	35 Wildwood Street							
City:	New Britain		**State:**	CT	**Zip Code:**	06051	**County:**	

ANTENNA EQUIPMENT DETAIL (All equipment attached to the structure MUST be listed in this application).

AT&T Towers requires a structural analysis of the structure and its foundation and the all expenses in connection therewith are paid to AT&T by the applicant.

>>> Does your equipment installation require a Tower Extension or Tower Replacement? **Select One**

If you need additional space to list all equipment attached to the structure, please use row 90 below.

FINAL INSTALL CONFIGURATION (ALL EQUIPMENT)					EXISTING EQUIPMENT CONFIGURATION (IF ANY)				
ANTENNA DESCRIPTION	**SECTOR 1**	**SECTOR 2**	**SECTOR 3**	**SECTOR 4**	**ANTENNA DESCRIPTION**	**SECTOR 1**	**SECTOR 2**	**SECTOR 3**	**SECTOR 4**
Manufacturer	Ericsson/Commscope	Ericsson/Commscope	Ericsson/Commscope		**Manufacturer**	Ericsson/Commscope	Ericsson/Commscope	Ericsson/Commscope	
Model Number	AIR 32 B66AaB2a/AIR 21 B2A B4P/ LNX 6515DS-A1M	AIR 32 B66AaB2a/AIR 21 B2A B4P/ LNX 6515DS-A1M	AIR 32 B66AaB2a/AIR 21 B2A B4P/ LNX 6515DS-A1M		**Model Number**	AIR 21 B4A B2P/ AIR 21 B2A B4P/ LNX 6515DS-A1M	AIR 21 B4A B2P/ AIR 21 B2A B4P/ LNX 6515DS-A1M	AIR 21 B4A B2P/ AIR 21 B2A B4P/ LNX 6515DS-A1M	
Antenna Quantity Per Sector	3	3	3		**Antenna Quantity Per Sector**	3	3	3	
Antenna Type	Panel	Panel	Panel		**Antenna Type**	Panel	Panel	Panel	
Antenna Dimensions (HxWxD) show dimensions in "inches"	56.5" X 12.9" X 8.7"/ 54.3" X 12" X 7.9/ 96.6" X 11.9" X 7.1"	56.5" X 12.9" X 8.7"/ 54.3" X 12" X 7.9/ 96.6" X 11.9" X 7.1"	56.5" X 12.9" X 8.7"/ 54.3" X 12" X 7.9/ 96.6" X 11.9" X 7.1"		**Antenna Dimensions** (HxWxD) show dimensions in "inches"	54.3" X 12" X 7.9" (AIR)/ 96.6" X 11.9" X 7.1" (Commscope)	54.3" X 12" X 7.9" (AIR)/ 96.6" X 11.9" X 7.1" (Commscope)	54.3" X 12" X 7.9" (AIR)/ 96.6" X 11.9" X 7.1" (Commscope)	
Weight (lbs)	132.2/ 80/ 85.1	132.2/ 80/ 85.1	132.2/ 80/ 85.1		**Weight** (lbs)	80/85.1	80/85.1	80/85.1	
Number of Coax Feed Lines per Sector and Diameter					**Number of Coax Feed Lines per Sector and Diameter**				
Number of Fiber Lines per Sector and Diameter	(4) 1-5/8",	(4) 1-5/8"	(4) 1-5/8"		**Number of Fiber Lines per Sector and Diameter**	(5) 1-5/8", (1) 1/4", (1) 3/8"	(5) 1-5/8", (1) 1/4"	(5) 1-5/8", (1) 1/4"	
Number of Hybrid Lines per Sector and Diameter (include DC and RET cables in any)	(1) 1-5/8", (1) 7/8"				**Number of Hybrid Lines per Sector and Diameter** (include DC and RET cables if any)	(1) 1-5/8"			
Number of OTHER Lines per Sector and Diameter					**Number of OTHER Lines per Sector and Diameter**				
Antenna Center Line - (in feet AGL)	100.00	100.00	100.00		**Antenna Center Line** (in feet AGL)	100.00	100.00	100.00	
Mount Height (in feet AGL)	100.00	100	100		**Mount Height** (in feet AGL)	100	100	100	
Mount Type & Model					**Mount Type & Model**				
Mount Face/Leg (If Rooftop, then indicate Parapet, Penthouse, Platform, or attachment)	Select One	Select One	Select One	Select One	**Mount Face/Leg (If Rooftop, then indicate Parapet, Penthouse, Platform, or attachment)**	Select One	Select One	Select One	Select One
Antenna Gain (in dB)					**Antenna Gain** (in dB)				
Dual/Multi-Mode/Band:					**Dual/Multi-Mode/Band:**				
Orientation or Azimuth (in degrees)	60	160	310		**Orientation or Azimuth (in degrees)**	60	160	310	
Down Tilt Type	Electrical	Electrical	Electrical	Select One	**Down Tilt Type**	Electrical	Electrical	Electrical	Select One
Down Tilt Degrees					**Down Tilt Degrees**				

ALL Other Structure Mounted Equipment Detail **(BTS, TMA, TTA, MHA, GPS, NEMA, ODU, RRU, Diplexers, etc., use row 90 if you need additional space)**

OTHER EQUIPMENT DESCRIPTION	SECTOR 1	SECTOR 2	SECTOR 3	SECTOR 4	OTHER EQUIPMENT DESCRIPTION	SECTOR 1	SECTOR 2	SECTOR 3	SECTOR 4
Type (Amplifiers, Diplexers, BTS, GPS, ODU, RRU, etc)	TMA/RRU	TMA/RRU	TMA/RRU		**Type** (Amplifiers, Diplexers, BTS, GPS, ODU, RRU, etc)	TMA/RRU	TMA/RRU	TMA/RRU	
Manufacturer	(1)RFS/(1) Ericsson	(1)RFS/ (1)Ericsson	(1)RFS/ (1)Ericsson		**Manufacturer**	RFS/ Ericsson	RFS/ Ericsson	RFS/ Ericsson	
Model Number	1412D-1S20/RRUS11-B12	1412D-1S20/RRUS11-B12	1412D-1S20/RRUS11-B12		**Model Number**	1412D-1S20/RRUS11-B12	1412D-1S20/RRUS11-B12	1412D-1S20/RRUS11-B12	
Quantity	2	2	2		**Quantity**	2	2	2	
Dimensions (HxWxD) and Weight (lbs) show dimensions in "inches"	13.2" X 5.5" X 3.2", 13 lbs/ 20" X 17" X 7", 50 lbs	13.2" X 5.5" X 3.2", 13 lbs/ 20" X 17" X 7", 50 lbs	13.2" X 5.5" X 3.2", 13 lbs/ 20" X 17" X 7", 50 lbs		**Dimensions (HxWxD) and Weight (lbs)** show dimensions in "inches"	13.2" X 5.5" X 3.2", 13 lbs/ 20" X 17" X 7", 50 lbs	13.2" X 5.5" X 3.2", 13 lbs/ 20" X 17" X 7", 50 lbs	13.2" X 5.5" X 3.2", 13 lbs/ 20" X 17" X 7", 50 lbs	
Mount Height and Mount Location	100	100	100		**Mount Height and Mount Location**	100	100	100	

Microwave (MW) Equipment

FINAL INSTALL CONFIGURATION (ALL EQUIPMENT)					EXISTING EQUIPMENT CONFIGURATION (IF ANY)				
MICROWAVE DESCRIPTION	**SECTOR 1**	**SECTOR 2**	**SECTOR 3**	**SECTOR 4**	**MICROWAVE DESCRIPTION**	**SECTOR 1**	**SECTOR 2**	**SECTOR 3**	**SECTOR 4**
Manufacturer					**Manufacturer**				
Model Number					**Model Number**				
Antenna Quantity Per Sector					**Antenna Quantity Per Sector**				
Antenna Dimensions (HxWxD) show dimensions in "inches"					**Antenna Dimensions** (HxWxD) show dimensions in "inches"				
Weight (lbs)					**Weight** (lbs)				
Feed Line Diameter					**Feed Line Diameter**				
Number of Feed Lines per MW					**Number of Feed Lines per MW**				
MW Center Line - (in feet AGL)					**Rad Center Line** (in feet AGL)				
Mount Height (in feet AGL)					**Mount Height** (in feet AGL)				
Mount Face/Leg (If Rooftop, then indicate Parapet, Penthouse, Platform, or attachment)	Select One	Select One	Select One	Select One	**Mount Face/Leg (If Rooftop, then indicate Parapet, Penthouse, Platform, or attachment)**	Select One	Select One	Select One	Select One
Orientation or Azimuth (in degrees)					**Orientation or Azimuth** (in degrees)				

EQUIPMENT NOTES: Use this space for notes or to detail other structure mounted equipment. If you intend to install any type of tower CONDUIT or INNERDUCT for your transmission cables you MUST indicate the quantity, diameter, and type in this space.

Describe overall project scope of work and technology involved, including all equipment to be installed at this site. All existing and proposed configuration changes should be called out. (include: Manufacturer/Model, Dimensions, Weight, and Location on the Tower) Please include any equipment to be removed as well.	Removal and replacement of (3) existing antennas with (3) new antennas. Addition of (1) 7/8" hybrid line.
Applicant Project Type: (examples: 2.5, L700, AWS, UMTS 3C, LTE 2C, Modernization, etc.)	

Transmitter Equipment - Final Install (ALL EQUIPMENT)

Frequency Filings (Notice of Change or Alteration to the FAA) : AT&T Towers will arrange for any frequency filing using the "Acceptable FAA Blanket Frequency Bands" in addition to Applicants indicated microwave frequencies and power levels, if any.

DESCRIPTION	Transmitter 1	Transmitter 2	Transmitter 3	Transmitter 4	Transmitter 5 /OTHER
Type of Service: (REQUIRED)	Voice & Data	Select One	Select One	Select One	Select One
Call Sign(s) (if applicable)**: (REQUIRED)**	WQGA731, WQGB373, WQKF358, WQPZ696				
Tx Frequency (MHz): (REQUIRED)	1710-1780, 2110-2180, 1850-1910, 1930-1990, 2110-2155, 698-906, 806-896				
Rx Frequency (MHz): (REQUIRED)	1710-1780, 2110-2180, 1850-1910, 1930-1990, 2110-2155, 806-896, 698-806				
Max Tx Output Power: (in watts)					
Max Power Output / Radio: (in watts) **(REQUIRED)**	60				
Max ERP: (in watts) **(REQUIRED)**	2000				
Is this unlicensed spectrum?	No	Select One	Select One	Select One	Select One
Filtering Information:					

Ground or Equipment Space - Power & Telco Requirements (you must complete row 105)

Equipment/Ground Space Requirements:	Existing Tower Site - No Additional Ground Space	Adding Generator?	No	Equipment Detail	Cabinets	Inside Lessor Building?:	Select One
	Building or Equipment Dimensions (HxWxL):	Equipment Pad Dimensions (WxL):		Leased Area Total Width	Leased Area Total Length	Subtotal Square Feet	Total Square Feet
Equipment Space 1:				10.00	20.00	200	200
Generator Space 2:						0	
Other Space 3:						0	
Power (Volts/Amps) (Only if provided by AT&T)		Telco Requirements: (Only if provided by AT&T)		Select One		Number of *New* Exterior Cabinet(s) (REQUIRED)	0

Notes for All Equipment Above (Rows 104-110)

Notes	Removal and replacement of (3) existing antennas with (3) new antennas. Removal of (6) 1-5/8" lines. Addition of (1) HCS 6x12 7/8" line.
Equipment To Be Removed (if any)	

Do you require a PAL (Programmatic Agreement Letter)?	Select One	

SITE NUMBER: CT11634C

35 WILDWOOD STREET
NEW BRITAIN, CT 06051
HARTFORD COUNTY

SITE NAME: CT634/CING/CHESLEY PARK_ET

RF DESIGN GUIDELINE: 792DB

T-MOBILE TECHNICIAN SITE SAFETY NOTES	
LOCATION	SPECIAL RESTRICTIONS
SECTOR A: ANTENNA/TMA/RRH	ACCESS NOT PERMITTED
SECTOR B: ANTENNA/TMA/RRH	ACCESS NOT PERMITTED
SECTOR C: ANTENNA/TMA/RRH	ACCESS NOT PERMITTED
GPS/LMU:	UNRESTRICTED
RADIO CABINETS:	UNRESTRICTED
PPC DISCONNECT:	UNRESTRICTED
MAIN CIRCUIT D/C:	UNRESTRICTED
NIU/T DEMARC:	UNRESTRICTED
OTHER/SPECIAL:	NONE

GENERAL NOTES

THIS DOCUMENT IS THE CREATION, DESIGN, PROPERTY AND COPYRIGHTED WORK OF T–MOBILE. ANY DUPLICATION OR USE WITHOUT EXPRESS WRITTEN CONSENT IS STRICTLY PROHIBITED. DUPLICATION AND USE BY GOVERNMENT AGENCIES FOR THE PURPOSES OF CONDUCTING THEIR LAWFULLY AUTHORIZED REGULATORY AND ADMINISTRATIVE FUNCTIONS IS SPECIFICALLY ALLOWED.

THE FACILITY IS AN UNMANNED PRIVATE AND SECURED EQUIPMENT INSTALLATION. IT IS ONLY ACCESSED BY TRAINED TECHNICIANS FOR PERIODIC ROUTINE MAINTENANCE AND THEREFORE DOES NOT REQUIRE ANY WATER OR SANITARY SEWER SERVICE. THE FACILITY IS NOT GOVERNED BY REGULATIONS REQUIRING PUBLIC ACCESS PER ADA REQUIREMENTS.

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE T–MOBILE NORTHEAST, LLC REPRESENTATIVE IN WRITING OF DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

SPECIAL STRUCTURAL NOTES

TOWER OWNER SHALL PROVIDE GLOBAL STRUCTURAL STABILITY ANALYSIS OF EXISTING ANTENNA SUPPORT STRUCTURE. GENERAL CONTRACTOR SCOPE OF WORK SHALL INCLUDE ALL REQUIRED STRUCTURAL MODIFICATIONS, RE–BUNDLING OF COAXIAL CABLES OR OTHER SPECIAL MODIFICATIONS AS OUTLINED THEREIN.

STRUCTURAL DESIGNS AND DETAILS FOR ANTENNA MOUNTS COMPLETED BY HUDSON DESIGN ON BEHALF OF T–MOBILE ARE INCLUSIVE OF THE ENTIRE ANTENNA SUPPORT STRUCTURE (GLOBAL STRUCTURAL STABILITY ANALYSIS BY OTHERS), EXISTING TOWER PLATFORM, EXISTING ANTENNA MOUNTS AND ALL OTHER ASPECTS OF THE STRUCTURE THAT WILL SUPPORT THE T–MOBILE MODERNIZATION EQUIPMENT DEPLOYMENT AS DEPICTED HEREIN.

HUDSON DESIGN ASSUMES THAT THE TOWER IS PROPERLY CONSTRUCTED AND MAINTAINED. ALL STRUCTURAL MEMBERS AND THEIR CONNECTION ARE ASSUMED TO BE IN GOOD CONDITION AND ARE FREE FROM DEFECTS WITH NO DETERIORATION TO ITS MEMBER CAPACITIES

PROJECT SUMMARY

SCOPE OF WORK:	UNMANNED TELECOMMUNICATIONS FACILITY T–MOBILE EQUIPMENT INSTALLATION
ZONING JURISDICTION: (CITY OF NEW BRITAIN)	BASED ON INFORMATION PROVIDED BY T–MOBILE, THIS TELECOMMUNICATIONS EQUIPMENT DEPLOYMENT IS AN ELIGIBLE FACILITY UNDER THE TAX RELIEF ACT OF 2012, 47 USC 1455(A), AND IS SUBJECT TO AN EXPEDITED ELIGIBLE FACILITIES REQUEST/REVIEW AND ZONING PRE–EMPTION FOR LOCAL DISCRETIONARY PERMITS (VARIANCE, SPECIAL PERMIT, SITE PLAN REVIEW).
SITE ADDRESS:	35 WILDWOOD STREET NEW BRITAIN, CT 06051
LATITUDE:	41° 40' 05.66" N
LONGITUDE:	72° 45' 17.84" W
JURISDICTION:	NATIONAL, STATE & LOCAL CODES OR ORDINANCES
CURRENT USE:	TELECOMMUNICATIONS FACILITY
PROPOSED USE:	TELECOMMUNICATIONS FACILITY

APPROVALS

PROJECT MANAGER	DATE
CONSTRUCTION	DATE
RF ENGINEERING	DATE
ZONING / SITE ACQ.	DATE
OPERATIONS	DATE
TOWER OWNER	DATE

DRIVING DIRECTIONS:

HEAD NORTHEAST ON GRIFFIN RD S AND TURN RIGHT ONTO DAY HILL RD. USE THE RAMP TO MERGE ONTO I–91 S. CONTINUE ON I–91 S FOR 9.6 MILES THEN TAKE EXIT 28 TO MERGE ONTO CT–15 S/US–5 S. CONTINUE ONTO CT–15 S FOR 1.4 MILES THEN TURN RIGHT ONTO E ROBBINS AVE. TURN LEFT ONTO WILLARD AVE. TURN RIGHT ONTO NEW BRITAIN AVE. CONTINUE ONTO NEWINGTON AVE. TURN LEFT ONTO WILDWOOD ST. DESTINATION WILL BE ON THE LEFT.

ARRIVE AT 35 WILDWOOD STREET NEW BRITAIN, CT 06051.

CALL BEFORE YOU DIG
CALL TOLL FREE 1–800–922–4455 OR CALL 811
UNDERGROUND SERVICE ALERT

DRAWING INDEX

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A–2	ANTENNA LAYOUT & ELEVATION	1
A–3	DETAILS	1
E–1	GROUNDING DIAGRAM	1

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BLOOMFIELD, CT 06002
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TRANSCEND WIRELESS
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MAHWAH, NJ 07430
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Hudson Design Group LLC
1600 OSGOOD STREET
BUILDING 20 NORTH, SUITE 3090
N. ANDOVER, MA 01845
TEL: (978) 557-5553
FAX: (978) 336-5586

STATE OF CONNECTICUT
DEREK J. CREASER
LICENSED PROFESSIONAL ENGINEER

CHECKED BY: DR

APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	07/20/16	ISSUED FOR CONSTRUCTION	VP
0	04/22/16	ISSUED FOR REVIEW	VP

SITE NUMBER:
CT11634C
SITE NAME:
CT634/CING/
CHESLEY PARK_ET
SITE ADDRESS:
35 WILDWOOD STREET
NEW BRITAIN, CT 06051
HARTFORD COUNTY

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

GROUNDING NOTES

1. THE SUBCONTRACTOR SHALL REVIEW AND INSPECT THE EXISTING FACILITY GROUNDING SYSTEM AND LIGHTNING PROTECTION SYSTEM (AS DESIGNED AND INSTALLED) FOR STRICT COMPLIANCE WITH THE NEC (AS ADOPTED BY THE AHJ), THE SITE-SPECIFIC (UL, LPI, OR NFPA) LIGHTING PROTECTION CODE, AND GENERAL COMPLIANCE WITH TELCORDIA AND TIA GROUNDING STANDARDS. THE SUBCONTRACTOR SHALL REPORT ANY VIOLATIONS OR ADVERSE FINDINGS TO THE CONTRACTOR FOR RESOLUTION.

2. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION, AND AC POWER GES'S) SHALL BE BONDED TOGETHER, AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.

3. THE SUBCONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR NEW GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.

4. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.

5. EACH BTS CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, 6 AWG STRANDED COPPER OR LARGER FOR INDOOR BTS 2 AWG STRANDED COPPER FOR OUTDOOR BTS.

6. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.

7. APPROVED ANTIOXIDANT COATINGS (I.E., CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.

8. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO GROUND BAR.

9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.

10. MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.

11. METAL CONDUIT SHALL BE MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH 6 AWS COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.

12. ALL NEW STRUCTURES WITH A FOUNDATION AND/OR FOOTING HAVING 20 FT. OR MORE OF 1/2 IN. OR GREATER ELECTRICALLY CONDUCTIVE REINFORCING STEEL MUST HAVE IT BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD CONNECTION USING #2 AWG SOLID BARE TINNED COPPER GROUND WIRE, PER NEC 250.50

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:

   CONTRACTOR – TRANSCEND WIRELESS
   SUBCONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – T-MOBILE

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

4. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

6. "KITTING LIST" SUPPLIED WITH THE BID PACKAGE IDENTIFIES ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE BILL OF MATERIALS AND KITTING LIST SHALL BE SUPPLIED BY THE SUBCONTRACTOR.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

11. SUBCONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

13. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH AMERICAN CONCRETE INSTITUTE (ACI) 301.

14. ANY NEW CONCRETE NEEDED FOR THE CONSTRUCTION SHALL BE AIR-ENTRAINED AND SHALL HAVE 4000 PSI STRENGTH AT 28 DAYS. ALL CONCRETE WORK SHALL BE DONE IN ACCORDANCE WITH ACI 318 CODE REQUIREMENTS.

15. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (Fy = 36 ksi) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (Fy = 36 ksi). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCHUP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.

16. CONSTRUCTION SHALL COMPLY WITH SPECIFICATIONS AND "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T-MOBILE SITES."

17. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THE DRAWINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.

18. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

19. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

20. APPLICABLE BUILDING CODES:
    SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.
    BUILDING CODE: 2003 IBC WITH 2005 CT SUPPLEMENT, + 2009 & 2013 CT AMENDMENTS
    ELECTRICAL CODE: REFER TO ELECTRICAL DRAWINGS
    LIGHTENING CODE: REFER TO ELECTRICAL DRAWINGS

    SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

    AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE;

    AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

    MANUAL OF STEEL CONSTRUCTION, ASD, FOURTEENTH EDITION;

    TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-F, STRUCTURAL STANDARDS FOR STEEL

    EQUIPMENT AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS.

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

ABBREVIATIONS

AGL	ABOVE GRADE LEVEL	EQ	EQUAL	REQ	REQUIRED
AWG	AMERICAN WIRE GAUGE	GC	GENERAL CONTRACTOR	RF	RADIO FREQUENCY
BBU	BATTERY BACKUP UNIT	GRC	GALVANIZED RIGID CONDUIT	TBD	TO BE DETERMINED
BTCW	BARE TINNED SOLID COPPER WIRE	MGB	MASTER GROUND BAR	TBR	TO BE REMOVED
BGR	BURIED GROUND RING	MIN	MINIMUM	TBRR	TO BE REMOVED AND REPLACED
BTS	BASE TRANSCEIVER STATION	P	PROPOSED	TYP	TYPICAL
E	EXISTING	NTS	NOT TO SCALE	UG	UNDER GROUND
EGB	EQUIPMENT GROUND BAR	RAD	RADIATION CENTER LINE (ANTENNA)	VIF	VERIFY IN FIELD
EGR	EQUIPMENT GROUND RING	REF	REFERENCE		

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TEL: (978) 557-5553
FAX: (978) 336-5586

STATE OF CONNECTICUT
DEREK J. CREASER
No. 29554
LICENSED PROFESSIONAL ENGINEER

CHECKED BY: DR

APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	07/20/16	ISSUED FOR CONSTRUCTION	VP
0	04/22/16	ISSUED FOR REVIEW	VP

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SITE ADDRESS:
35 WILDWOOD STREET
NEW BRITAIN, CT 06051
HARTFORD COUNTY

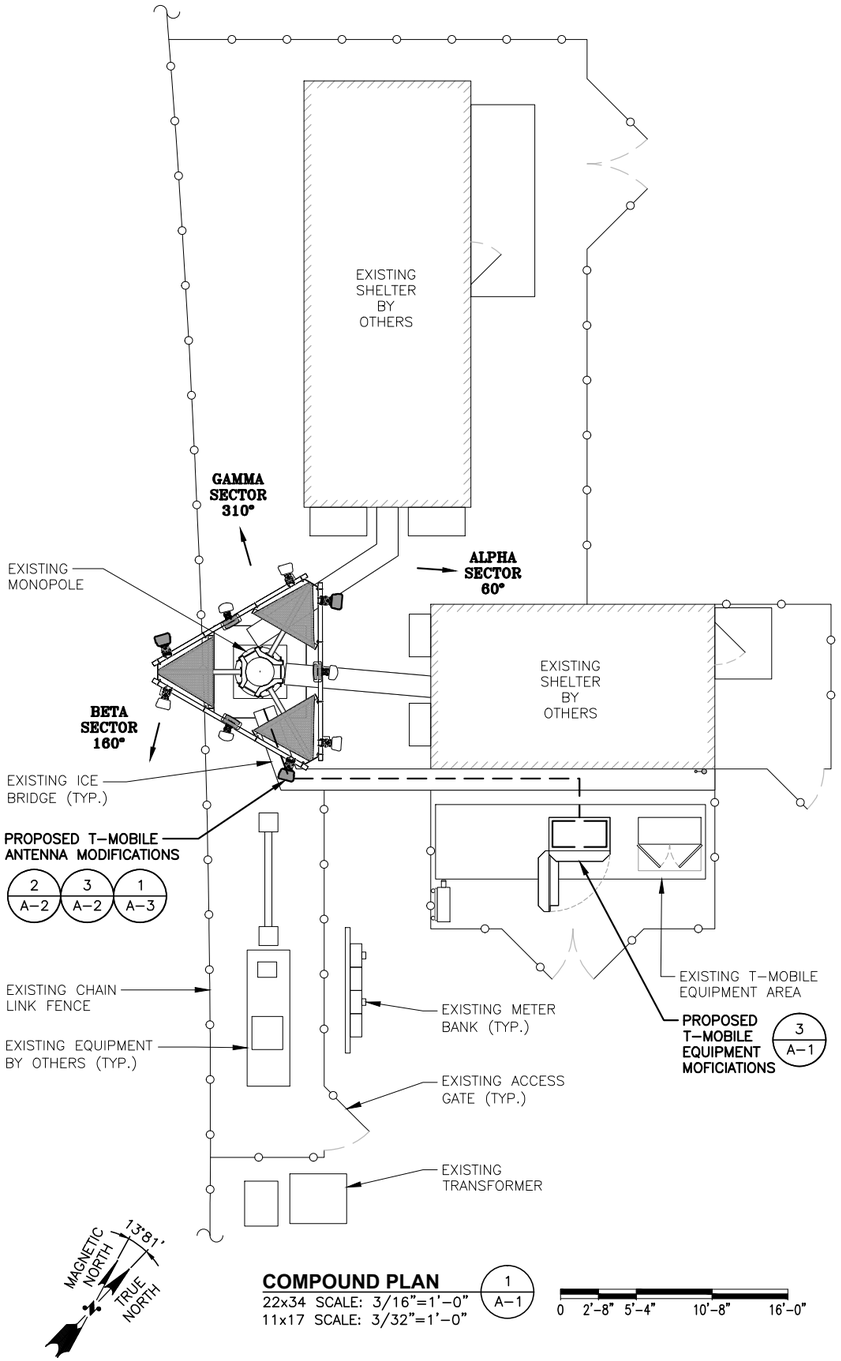
SHEET TITLE
GENERAL NOTES

SHEET NUMBER
GN-1

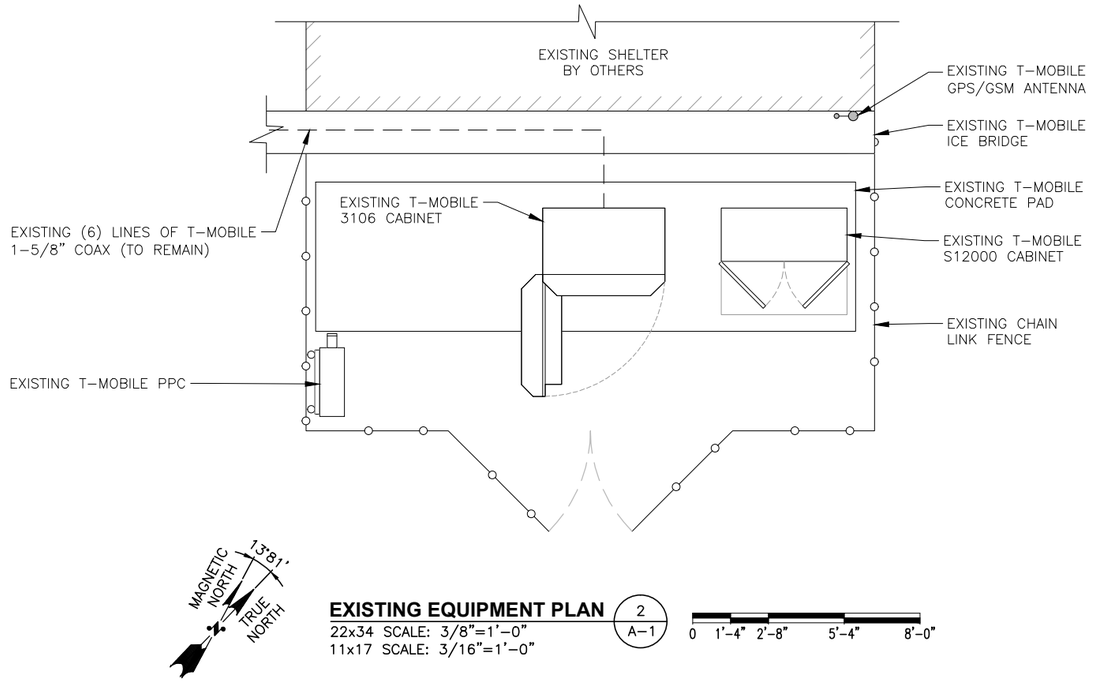
STRUCTURAL NOTES:
PRIOR TO COMMENCING CONSTRUCTION, GC SHALL REFER TO STRUCTURAL ANALYSIS PROVIDED BY MORRISON HERSHFIELD, DATED: JUNE 30, 2016 TO DETERMINE IF THERE ANY SUPPLEMENTAL OR SPECIAL INSTALLATION REQUIREMENTS, OR RELOCATION ARRANGEMENTS.

NOTE:

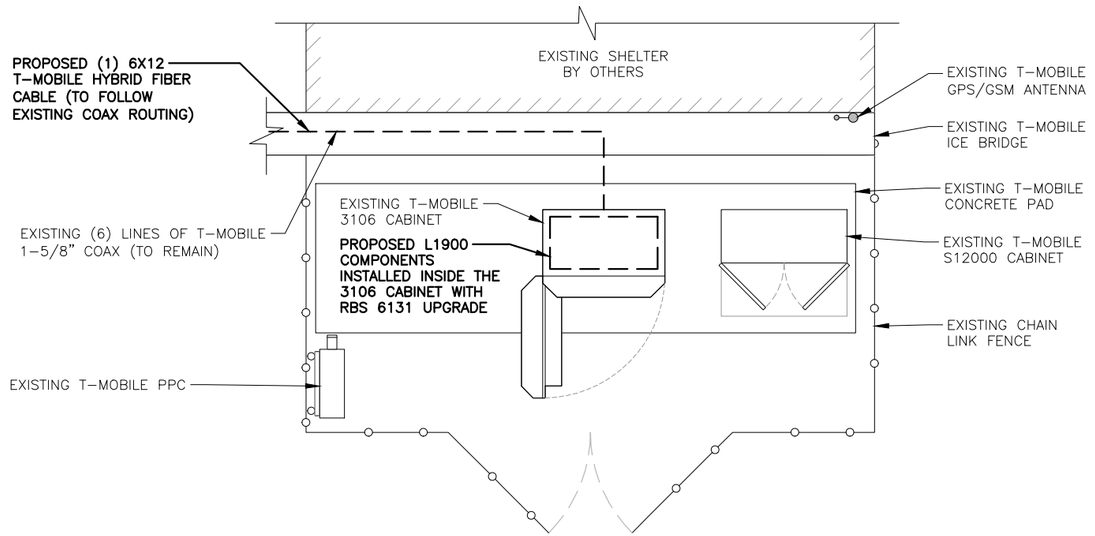
*RF DATA BASED ON PRELIMINARY INFORMATION. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



COMPOUND PLAN 1 A-1
22x34 SCALE: 3/16"=1'-0"
11x17 SCALE: 3/32"=1'-0"
0 2'-8" 5'-4" 10'-8" 16'-0"



EXISTING EQUIPMENT PLAN 2 A-1
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"
0 1'-4" 2'-8" 5'-4" 8'-0"



PROPOSED EQUIPMENT PLAN 3 A-1
22x34 SCALE: 3/8"=1'-0"
11x17 SCALE: 3/16"=1'-0"
0 1'-4" 2'-8" 5'-4" 8'-0"

T-MOBILE NORTHEAST LLC
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STATE OF CONNECTICUT
DEREK J. CREASER
No. 25554
LICENSED PROFESSIONAL ENGINEER

CHECKED BY: DR

APPROVED BY: DJC

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
1	07/20/16	ISSUED FOR CONSTRUCTION	VP
0	04/22/16	ISSUED FOR REVIEW	VP

SITE NUMBER:
CT11634C
SITE NAME:
CT634/CING/
CHESLEY PARK_ET
SITE ADDRESS:
35 WILDWOOD STREET
NEW BRITAIN, CT 06051
HARTFORD COUNTY

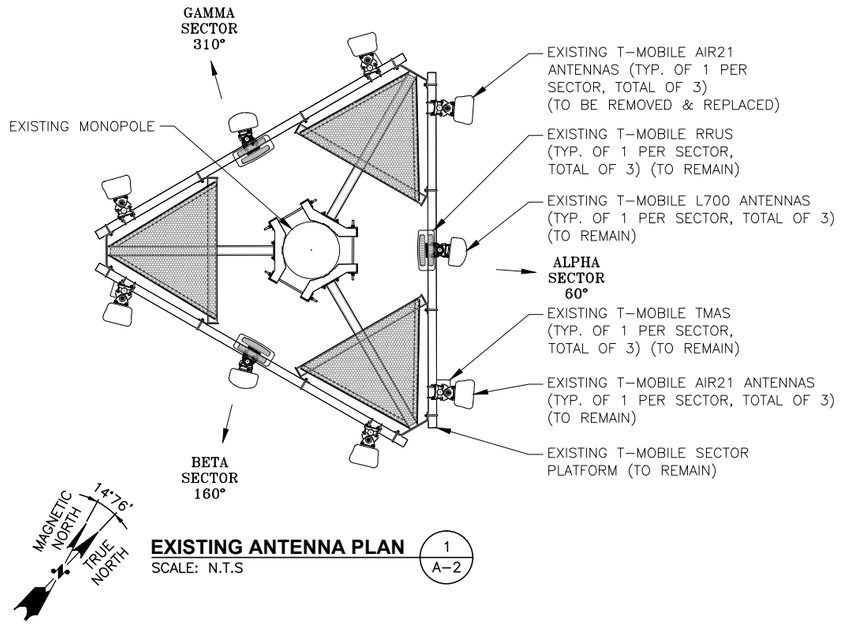
SHEET TITLE
COMPOUND & EQUIPMENT PLAN

SHEET NUMBER
A-1

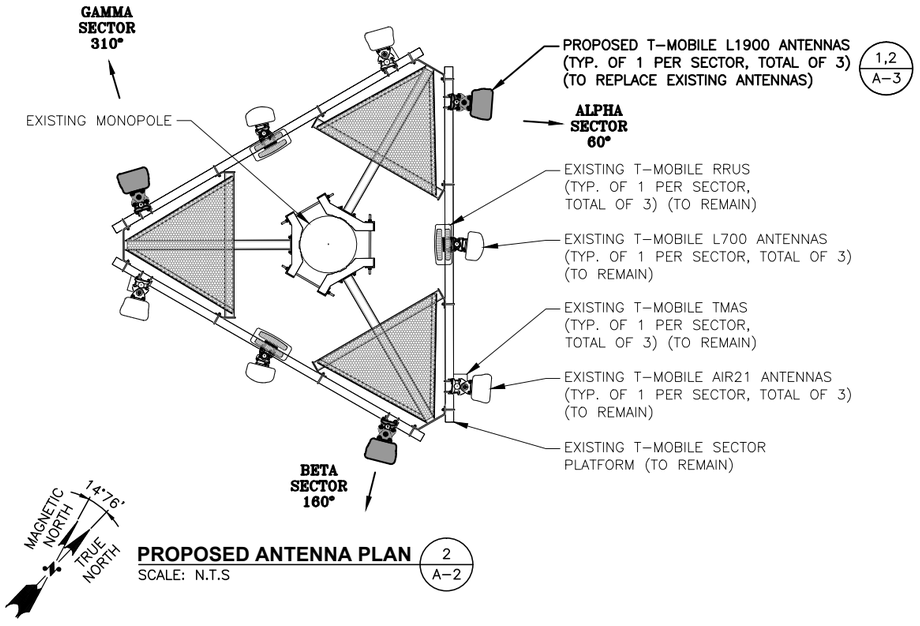
STRUCTURAL NOTES:
PRIOR TO COMMENCING CONSTRUCTION, GC SHALL REFER TO STRUCTURAL ANALYSIS PROVIDED BY MORRISON HERSHFIELD, DATED: JUNE 30, 2016 TO DETERMINE IF THERE ANY SUPPLEMENTAL OR SPECIAL INSTALLATION REQUIREMENTS, OR RELOCATION ARRANGEMENTS.

NOTE:

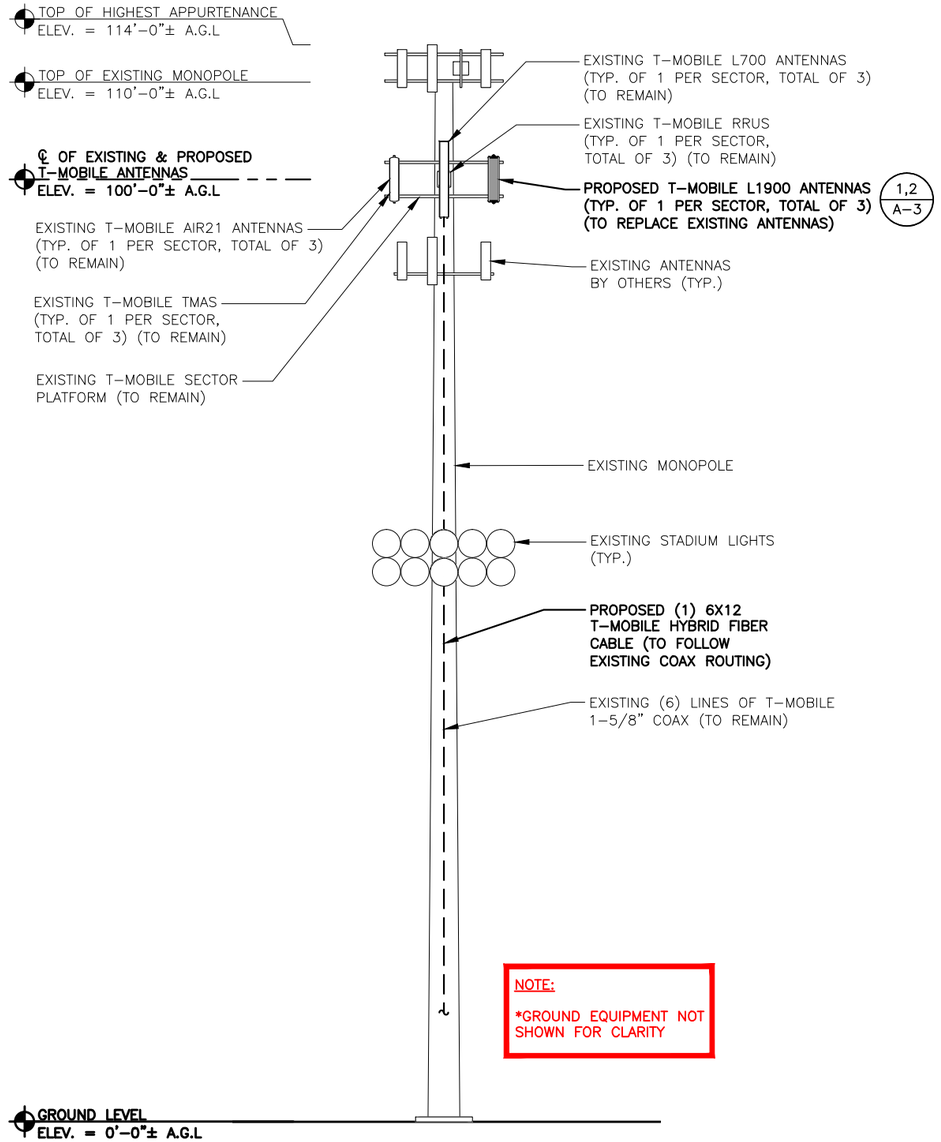
*RF DATA BASED ON PRELIMINARY INFORMATION. REFER TO THE FINAL RF DATA SHEET FOR FINAL ANTENNA SETTINGS.



EXISTING ANTENNA PLAN 1 / A-2
SCALE: N.T.S



PROPOSED ANTENNA PLAN 2 / A-2
SCALE: N.T.S



NOTE:

*GROUND EQUIPMENT NOT SHOWN FOR CLARITY

TOWER ELEVATION 3 / A-2
22x34 SCALE: 1/8"=1'-0"
11x17 SCALE: 1/16"=1'-0"

0 4'-0" 8'-0" 16'-0" 24'-0"

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STATE OF CONNECTICUT
DEREK J. CREASER
No. 28554
LICENSED PROFESSIONAL ENGINEER

CHECKED BY: DR

APPROVED BY: DJC

SUBMITTALS

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CHESLEY PARK_ET
SITE ADDRESS:
35 WILDWOOD STREET
NEW BRITAIN, CT 06051
HARTFORD COUNTY

SHEET TITLE
ANTENNA LAYOUT & ELEVATION

SHEET NUMBER
A-2

STRUCTURAL NOTES:
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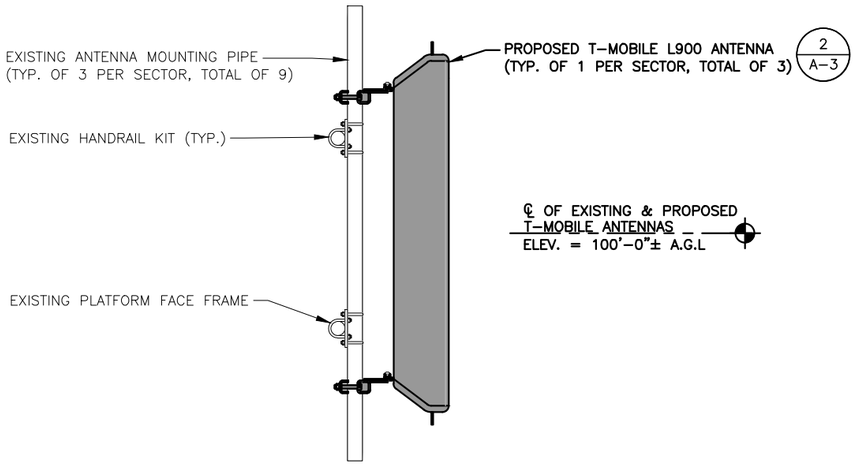
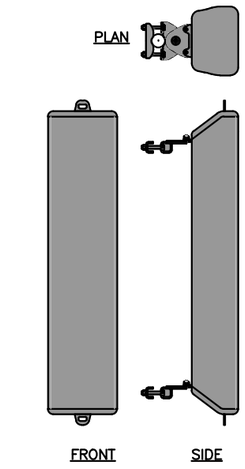


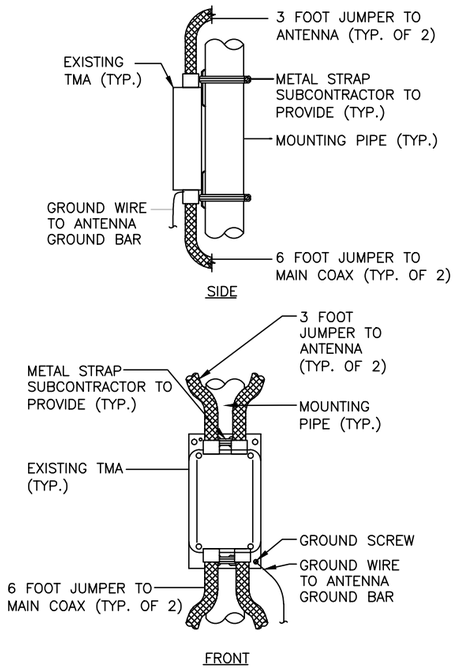
PROPOSED L1900 ANTENNA MOUNT 1 / A-3
22x34 SCALE: 1"=1'-0"
11x17 SCALE: 1/2"=1'-0"

0 0'-6" 1'-0" 2'-0" 3'-0"

L1900 ANTENNA DIMENSIONS	
MODEL #	**AIR 32 B66Aa/B2a**
MANUF.	ERICSSON
WIDTH	12.9"
DEPTH	8.7"
HEIGHT	56.6"
WEIGHT	132.2 LBS



L1900 ANTENNA DETAIL 2 / A-3
SCALE: N.T.S



TMA MOUNTING DETAIL 3 / A-3
SCALE: N.T.S

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STATE OF CONNECTICUT
DEREK J. CREASER
No. 23554
LICENSED PROFESSIONAL ENGINEER

CHECKED BY: DR

APPROVED BY: DJC

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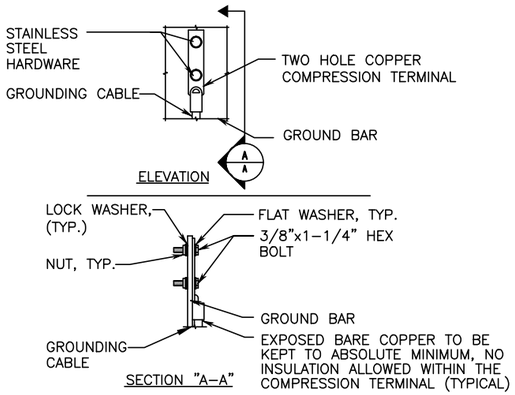
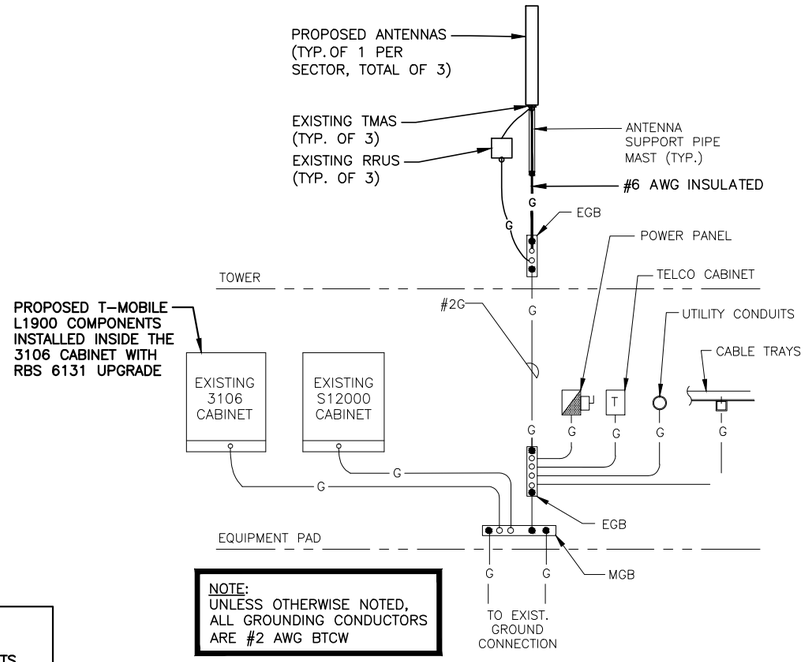
SHEET TITLE
DETAILS

SHEET NUMBER
A-3



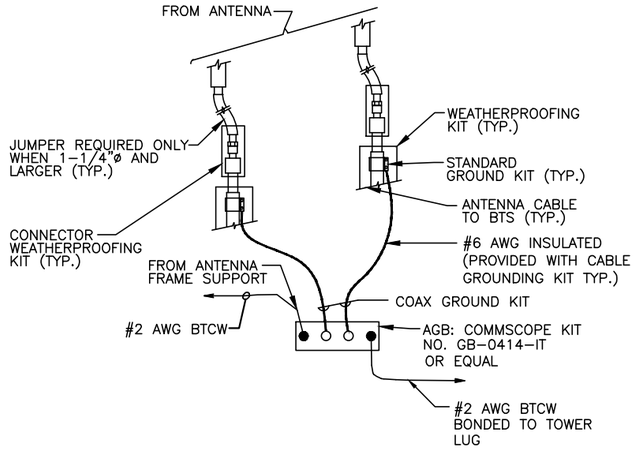
NOTE:
1. "DOUBLING UP" OR "STACKING " OF CONNECTION IS NOT PERMITTED.
2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.
3. CADWELD DOWNLEADS FROM UPPER AGB/EGB, LOWER EGB, AND MGB.

TYPICAL GROUND BAR CONNECTION DETAIL 1 / E-1
SCALE: N.T.S



NOTE:
UNLESS OTHERWISE NOTED, ALL GROUNDING CONDUCTORS ARE #2 AWG BTCW

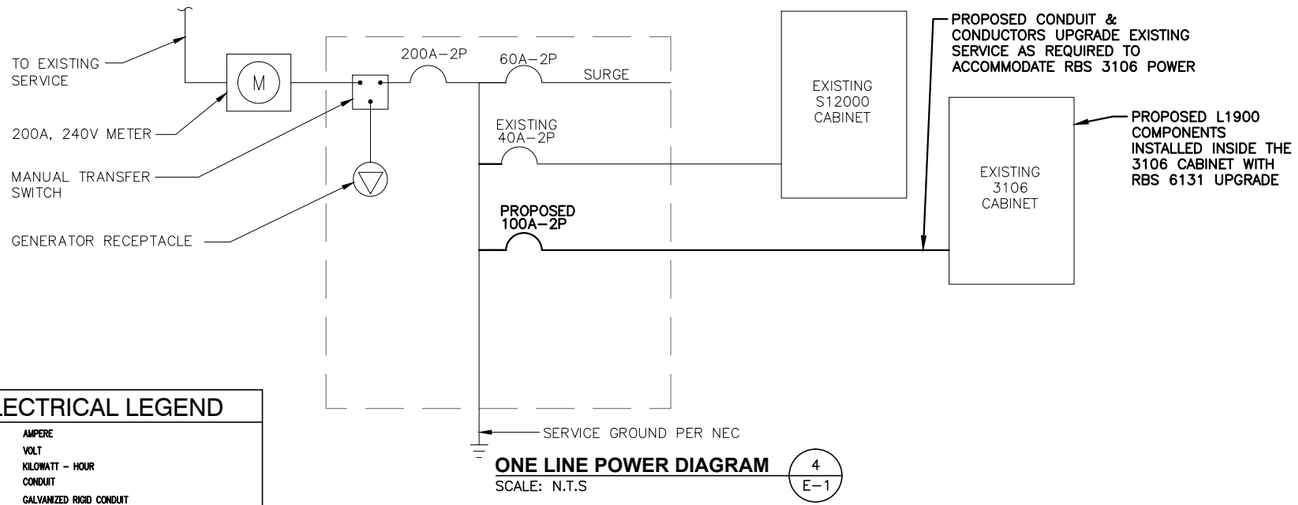
GROUNDING RISER DIAGRAM 2 / E-1
SCALE: N.T.S



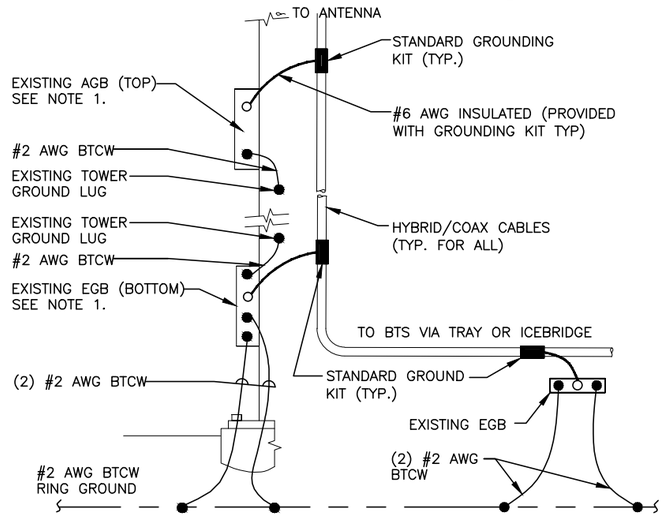
NOTE:
INSTALL CABLE GROUND KIT ABOVE HORIZONTAL BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO AGB/EGB.

TOWER TOP CABLE GROUNDING DETAIL 3 / E-1
SCALE: N.T.S

NOTE:
G.C. TO VERIFY THAT THE EXISTING CONDUITS AND WIRE SIZES ARE ADEQUATE FOR THE PROPOSED LOADING AND INCLUDE ELECTRICAL UPGRADES IN THE SCOPE OF WORK AS REQUIRED.



ONE LINE POWER DIAGRAM 4 / E-1
SCALE: N.T.S



NOTE:
1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF TOWER. ANTENNA LOCATION AND CONNECTION ORIENTATION. PROVIDE ADDITIONAL AGB/EGB AS REQUIRED.
2. A SEPARATE GROUND BAR TO BE USED FOR GPS ANTENNA IF REQUIRED.

TOWER BOTTOM CABLE GROUNDING DETAIL 5 / E-1
SCALE: N.T.S

ELECTRICAL LEGEND

A	AMPERE
V	VOLT
KWH	KILOWATT - HOUR
C	CONDUIT
GRC	GALVANIZED RIGID CONDUIT
BTCW	BARE TINNED (SOLID) COPPER WIRE (#2 AWG, UNLESS NOTES OTHERWISE)
G	GROUND
⏚	GROUND
MGB	MASTER GROUND BAR — ○ MECHANICAL CONNECTION ● CADWELD CONNECTION
AGB/EGB	EQUIPMENT GROUND BAR/ANTENNA GROUND BAR
— G —	GROUND COPPER WIRE, SIZE AS NOTED
	EXPOSED WIRING
	INSULATED GROUNDING CONDUCTOR(#6 AWG STRANDED, UNLESS NOTED OTHERWISE)
⊙	5/8"x8' COPPER CLAD STAINLESS STEEL GROUND ROD
●—●—	● EXOTHERMIC (CAD WELD) OR ○ MECHANICAL (COMPRESSION TYPE) CONNECTION
PPC	POWER PROTECTION CABINET
⊠	OMNI-DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALL

ELECTRICAL & GROUNDING NOTES:

ELECTRICAL & GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THIN INSULATION.
8. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL ROOM AND PROPOSED CELL SITE POWER PEDESTAL AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
9. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROPOSED CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON DRAWING A-1. PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
10. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
11. GROUNDING SHALL COMPLY WITH NEC ART. 250.
12. GROUND COAXIAL CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS COAX CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
13. USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
14. ALL GROUND CONNECTIONS TO BE BURNDY HYGROUND COMPRESSION TYPE CONNECTORS OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
15. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
16. CONNECTIONS TO MGB SHALL BE ARRANGED IN THREE MAIN GROUPS: SURGE PRODUCERS (COAXIAL CABLE GROUND KITS, TELCO AND POWER PANEL GROUND); (GROUNDING ELECTRODE RING OR BUILDING STEEL); NON-SURGING OBJECTS (EGB GROUND IN BTS UNIT).
17. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
18. APPLY OXIDE INHIBITING COMPOUND TO ALL COMPRESSION TYPE GROUND CONNECTIONS.
19. BOND ANTENNA MOUNTING BRACKETS, COAXIAL CABLE GROUND KITS, AND ALNA TO EGB PLACED NEAR THE ANTENNA LOCATION.
20. BOND ANTENNA EGB'S AND MGB TO WATER MAIN.
21. TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION.
22. BOND ANY METAL OBJECTS WITHIN 7 FEET OF PROPOSED EQUIPMENT OR CABINET TO MASTER GROUND BAR.
23. VERIFY PROPOSED SERVICE UPGRADE WITH LOCAL UTILITY COMPANY PRIOR TO CONSTRUCTION.

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STATE OF CONNECTICUT — DEREK J. CREASER — No. 23554 — LICENSED PROFESSIONAL ENGINEER

CHECKED BY: DR

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HARTFORD COUNTY

SHEET TITLE
GROUNDING DIAGRAM

SHEET NUMBER
E-1