



STATE OF CONNECTICUT  
*CONNECTICUT SITING COUNCIL*

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

E-Mail: [siting.council@ct.gov](mailto:siting.council@ct.gov)

Web Site: [portal.ct.gov/csc](http://portal.ct.gov/csc)

**VIA ELECTRONIC MAIL**

February 1, 2022

John Coleman  
Project Manager  
Centerline Communications LLC  
750 W. Center Street, Suite 301  
West Bridgewater, MA 02379  
[jcoleman@clinellc.com](mailto:jcoleman@clinellc.com)

RE: **EM-VER-031-210821** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 36 Toomey Road (a/k/a 36 Mohawk Mountain), Cornwall, Connecticut.

Dear Mr. Coleman:

The Connecticut Siting Council (Council) is in receipt of your correspondence of February 1, 2022 submitted in response to the Council's October 6, 2021 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman  
Executive Director

MAB/CMW/emr

**From:** John Coleman <[jcoleman@clinellc.com](mailto:jcoleman@clinellc.com)>  
**Sent:** Thursday, January 27, 2022 4:04 PM  
**To:** CSC-DL Siting Council <[Siting.Council@ct.gov](mailto:Siting.Council@ct.gov)>  
**Subject:** EM-VER-031-210819 / VZW Exempt Modification filing / CORNWALL CT (88009 /13686026) / MOHAWK MTN CT / 468041 / Correction Filing

CDC – DL Siting Council,

Please find attached the electronic copy in response to the Incomplete Memo with the original filing for Verizon Wireless' Exempt Modification at its 36 Toomey Road, Cornwall, CT tower facility Mohawk Mtn CT in Cornwall.

Attached

- EM-VER-031-210819
- Corrections filing with requested documents

Should you need any further information concerning this request, please reach out to me at any time. I appreciate your consideration.

John Coleman



**John Coleman** | Project Manager  
750 W Center St, Suite 301 | West Bridgewater, MA 02379  
Mobile: 240.615.7389  
[jcoleman@clinellc.com](mailto:jcoleman@clinellc.com) | [www.centerlinecommunications.com](http://www.centerlinecommunications.com)

John Coleman, Project Manager  
c/o Cellco Partnership d/b/a Verizon Wireless  
Centerline Communications, LLC  
750 West Center Street, Floor 3  
West Bridgewater, MA 02379  
Mobile: (240) 615 -7389  
[JColeman@clinellc.com](mailto:JColeman@clinellc.com)

January 27, 2022

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

**RE: EM-VER-031-210821** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 36 Toomey Road (a/k/a 36 Mohawk Mountain), Cornwall, CT.

Dear Ms. Bachman,

In response to the Council's Incomplete Letter to modify an existing telecommunications facility dated October 4, 2021 for the aforementioned site, please see the following attachments as outlined below per Councils request:

1. Original Facility Approval from the CSC Website was not available. I have obtained confirmation from the jurisdiction that no record of the Original Approval is available.
2. Proof of mailing and delivery confirmation to Chief Elected Official: First Selectman, Gordon Ridgway.
  - a. UPS Label: 1Z9Y45030313032624
  - b. Delivery Confirmation dated: 09/16/21 – 11:57 a.m.
3. Proof of mailing and delivery confirmation to Zoning Official: Karen Nelson.
  - a. UPS Label: Address is same location as Chief Elected Official.
  - b. Delivery Confirmation dated: 09/16/21 – 11:57 a.m.
4. Proof of mailing and delivery confirmation to Property Owner: State of Connecticut.
  - a. UPS Label: 1Z9Y45030334728530
  - b. Delivery Confirmation dated: 09/16/21 – 09:43 a.m.
5. The Original Filing sent to the CSC on 8/16/2021 – Notice of Exempt Modification // Site: MOHAWK MTN CT (ATC: 88009) Cellco Partnership d/b/a/ Verizon Wireless.

6. Cumulative Power Density Maximum Permissible Exposure (MPE) Report for all of the existing antenna on the tower including Verizon's proposed antenna.

This list completes the items listed in the afore mentioned Letter of Incompleteness. I appreciate your time and consideration.

Sincerely,

*John Coleman*

---

John Coleman, Project Manager  
c/o Cellco Partnership d/b/a Verizon Wireless  
Centerline Communications, LLC  
750 West Center Street, Floor 3  
West Bridgewater, MA 02379  
Mobile: (240) 615 -7389  
[JColeman@clinellc.com](mailto:JColeman@clinellc.com)



**From:** [Paul Prindle](#)  
**To:** [John Coleman](#)  
**Subject:** Re: CSC FILING REQUIREMENTS REQUEST / 36 TOOMEY ROAD, CORNWALL, CT  
**Date:** Thursday, January 27, 2022 8:47:15 AM

---

This will confirm that the Town of Cornwall Building Department has no record of the original date of operation of the tower at 36 Toomey Road .

Paul R. Prindle  
Building Official

Sent from my iPad

On Jan 26, 2022, at 9:19 AM, John Coleman <[jcoleman@clinellc.com](mailto:jcoleman@clinellc.com)> wrote:

Mr. Prindle,

Thank you for taking my call this morning. Attached and below is the information we spoke about. Please let me know if you have any questions or need any further information to complete this request.

Thank you and have a great day.

John

<image001.jpg>

**John Coleman** | Project Manager  
750 W Center St, Suite 301 | West Bridgewater, MA 02379  
Mobile: 240.615.7389  
[jcoleman@clinellc.com](mailto:jcoleman@clinellc.com) | [https://link.edgepilot.com/s/16a69120/V3BZh-B\\_WkuCdB2qri8s-Q?u=http://www.centerlinecommunications.com/](https://link.edgepilot.com/s/16a69120/V3BZh-B_WkuCdB2qri8s-Q?u=http://www.centerlinecommunications.com/)

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**From:** John Coleman  
**Sent:** Tuesday, January 11, 2022 2:17 PM  
**To:** [cwlanduse@optonline.net](mailto:cwlanduse@optonline.net)  
**Subject:** CSC FILING REQUIREMENTS REQUEST / 36 TOOMEY ROAD, CORNWALL, CT

Good Afternoon Mrs. Nelson,

Centerline Communications working on behalf of Verizon Wireless will be filing with the CSC to obtain their approval. I have accessed the CSC website and the original tower approval filing for this site is not available. I have attached our drawings as reference to the location of the tower and information on what we will be doing there once we have obtained CSC approval and associated permits.

Per CSC requirements for filing I need to either obtain a copy of the original tower approval from your department or obtain a reply to this e-mail that the City of Cornwall

no longer has a copy of this approval.

I would greatly appreciate a copy of the original approval if you have one or a response to this e-mail so that we can submit this correction. A copy of this filing has been sent to your offices. If you have any questions, please feel free to reach out to me at any time.

Thank you and have a nice day.

John

<image001.jpg>

**John Coleman** | Project Manager

750 W Center St, Suite 301 | West Bridgewater, MA 02379

Mobile: 240.615.7389

[jcoleman@clinellc.com](mailto:jcoleman@clinellc.com) | [https://link.edgepilot.com/s/16a69120/V3BZh-B\\_WkuCdB2qri8s-Q?u=http://www.centerlinecommunications.com/](https://link.edgepilot.com/s/16a69120/V3BZh-B_WkuCdB2qri8s-Q?u=http://www.centerlinecommunications.com/)

<VERIZON, 468041, ATC 88009 (13668803) AE(CD). REV0.pdf>

Links contained in this email have been replaced. If you click on a link in the email above, the link will be analyzed for known threats. If a known threat is found, you will not be able to proceed to the destination. If suspicious content is detected, you will see a warning.

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- 2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
- 3. **GETTING YOUR SHIPMENT TO UPS**  
**Customers with a Daily Pickup**  
 Your driver will pickup your shipment(s) as usual.

**Customers without a Daily Pickup**

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.


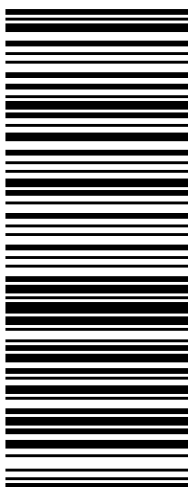

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NORTH EASTON ,MA 02356

UPS Access Point™  
TOWN LINE GENERAL STORE  
450 E CENTER ST  
WEST BRIDGEWATER ,MA 02379

FOLD HERE

<p style="text-align: right;"><b>1 OF 1</b></p> <p style="text-align: center;"><b>1 LBS</b></p> <p>MJ UMALT 9785667906 CENTERLINE COMMUNICATIONS, LLC 750 WEST CENTER STREET WEST BRIDGEWATER MA 02379</p> <p><b>SHIP TO:</b> GORDON RIDGWAY FIRST SELECTMAN OF CORNWALL, CT 26 PINE STREET CORNWALL TOWN HALL <b>CORNWALL CT 06753-1014</b></p>	<p style="font-size: 2em; font-weight: bold;">CT 067 9-02</p> 	<p style="font-size: 1.5em; font-weight: bold;">UPS GROUND</p> <p>TRACKING #: 1Z 9Y4 503 03 1303 2624</p> 	<p style="text-align: center;"><b>BILLING: P/P</b></p> <p style="font-size: 0.8em;">Reference # 1: 88009 Reference # 2: Cornwall CT CS522.0*18. WNTNV50 32.DA 08/2021*</p> 
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# Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

**Tracking Number**

1Z9Y45030313032624

**Weight**

1.00 LBS

**Service**

UPS Ground

**Shipped / Billed On**

08/13/2021

**Delivered On**

09/16/2021 11:57 A.M.

**Delivered To**

CORNWALL, CT, US

**Received By**

DINNEEN

**Left At**

Receiver

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 10/25/2021 12:50 P.M. EST

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- 3. GETTING YOUR SHIPMENT TO UPS**  
**Customers with a Daily Pickup**  
 Your driver will pickup your shipment(s) as usual.

**Customers without a Daily Pickup**

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.

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UPS Access Point™  
TOWN LINE GENERAL STORE  
450 E CENTER ST  
WEST BRIDGEWATER ,MA 02379

FOLD HERE

<p style="text-align: right;"><b>5 LBS</b></p> <p style="text-align: right;"><b>1 OF 1</b></p> <p><b>SHIP TO:</b>          LAND MANAGEMENT          7814287250          AMERICAN TOWER CORPORATION          10 PRESIDENTIAL WAY  <b>WOBURN MA 01801-1053</b></p>	<p style="font-size: 2em;"><b>MA 018 9-04</b></p> 	<p style="font-size: 1.5em;"><b>UPS GROUND</b></p> <p>TRACKING #: 1Z 9Y4 503 03 0742 7577</p> 	<p style="text-align: center;"><b>BILLING: P/P</b></p> <p style="text-align: center;">Reference # 1: ATC CSC Hard Copies</p> <p style="text-align: center; font-size: 0.8em;">CS 22.0.18. WNTNV50 32.0A 08/2021*</p>
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# Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

**Tracking Number**

1Z9Y45030307427577

**Weight**

5.00 LBS

**Service**

UPS Ground

**Shipped / Billed On**

08/13/2021

**Delivered On**

10/14/2021 11:19 A.M.

**Delivered To**

WOBURN, MA, US

**Received By**

ANCRI

**Left At**

Front Desk

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 10/25/2021 12:49 P.M. EST

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- 2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.
- 3. **GETTING YOUR SHIPMENT TO UPS**  
**Customers with a Daily Pickup**  
 Your driver will pickup your shipment(s) as usual.

**Customers without a Daily Pickup**

Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. Items sent via UPS Return Services(SM) (including via Ground) are also accepted at Drop Boxes. To find the location nearest you, please visit the Resources area of CampusShip and select UPS Locations.


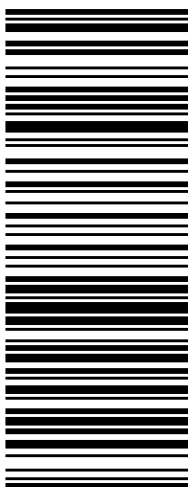

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450 E CENTER ST  
WEST BRIDGEWATER ,MA 02379

FOLD HERE

<p style="text-align: right;"><b>1 OF 1</b></p> <p style="text-align: right;"><b>1 LBS</b></p> <p>MJUMALT 9785687906 CENTERLINE COMMUNICATIONS, LLC 750 WEST CENTER STREET WEST BRIDGEWATER, MA 02379</p> <p><b>SHIP TO:</b> STATE OF CT 79 ELM STREET <b>HARTFORD CT 06106-1650</b></p>	<p><b>CT 061 9-03</b></p> 	<p><b>UPS GROUND</b></p> <p>TRACKING #: 1Z 9Y4 503 03 3472 8530</p> 	<p style="text-align: center;"><b>BILLING: P/P</b></p> <p>Reference # 1: 88009 Reference # 2: Cornwall CT <small>CS22.0*18. WNTNV50 33.0A 08/2021*</small></p> 
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# Proof of Delivery

Dear Customer,

This notice serves as proof of delivery for the shipment listed below.

**Tracking Number**

1Z9Y45030334728530

**Weight**

1.00 LBS

**Service**

UPS Ground

**Shipped / Billed On**

08/16/2021

**Delivered On**

09/16/2021 9:43 A.M.

**Delivered To**

HARTFORD, CT, US

**Received By**

FERRARI

**Left At**

Dock

Thank you for giving us this opportunity to serve you. Details are only available for shipments delivered within the last 120 days. Please print for your records if you require this information after 120 days.

Sincerely,

UPS

Tracking results provided by UPS: 10/25/2021 12:51 P.M. EST





# **NIER Study Report**

**SITE NAME:**

**88009 Cornwall CT**

**ATC Customer:**

**Verizon Wireless**

**LOCATION:**

**Cornwall, Connecticut**

**COMPANY:**

**American Tower  
Woburn, Massachusetts**

*January 7<sup>th</sup>, 2022*



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## Disclaimer Notice

This work is based upon our best interpretation of available information. However, these data and their interpretation are constantly changing. Therefore, we do not warrant that any undertaking based on this report will be successful, or that others will not require further research or actions in support of this proposal or future undertaking. In the event of errors, our liability is strictly limited to replacement of this document with a corrected one. Liability for consequential damages is specifically disclaimed. Any use of this document constitutes an agreement to hold Tower Engineering Professionals and its employees harmless and indemnify it for all liability, claims, demands, and litigation expenses and attorney's fees arising out of such use.

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KINSTON, NORTH CAROLINA



## **NIER STUDY REPORT**

### **88009 Cornwall CT**

*Cornwall, CT*

#### **INTRODUCTION**

Tower Engineering Professionals (TEP) of Raleigh, NC has been retained by American Tower (ATC) of Woburn, Massachusetts to evaluate the RF emissions of an existing tower at this location.

#### **SITE AND FACILITY CONSIDERATIONS**

Site Cornwall CT is located at 36 Toomey Rd in Cornwall, CT at coordinates 41.821303, -73.296442. The support structure is a 75' self-support tower. Verizon Wireless (VZW) is proposing to add new facilities at this location. All data used in this study was provided by one or more of the following sources:

1. ATC furnished data
2. Compiled from carrier and manufacturer standard configurations
3. Empirical data collected by TEP
4. Data obtained from the CT Siting Committee database

A satellite view of the study area is located in Appendix 1.



## POWER DENSITY CALCULATIONS

A chart showing the VZW cumulative MPE percentages along with the site cumulative MPE values, compared to FCC MPE general population limits, may be seen in Appendix 2. These limits are based upon the Information Relating to MPE Standards found in Appendix 3. Study methodology may be seen in Appendix 4 which describes the Non-Ionizing Radiation Prediction Models.

January 7<sup>th</sup>, 2022

### Prepared By:

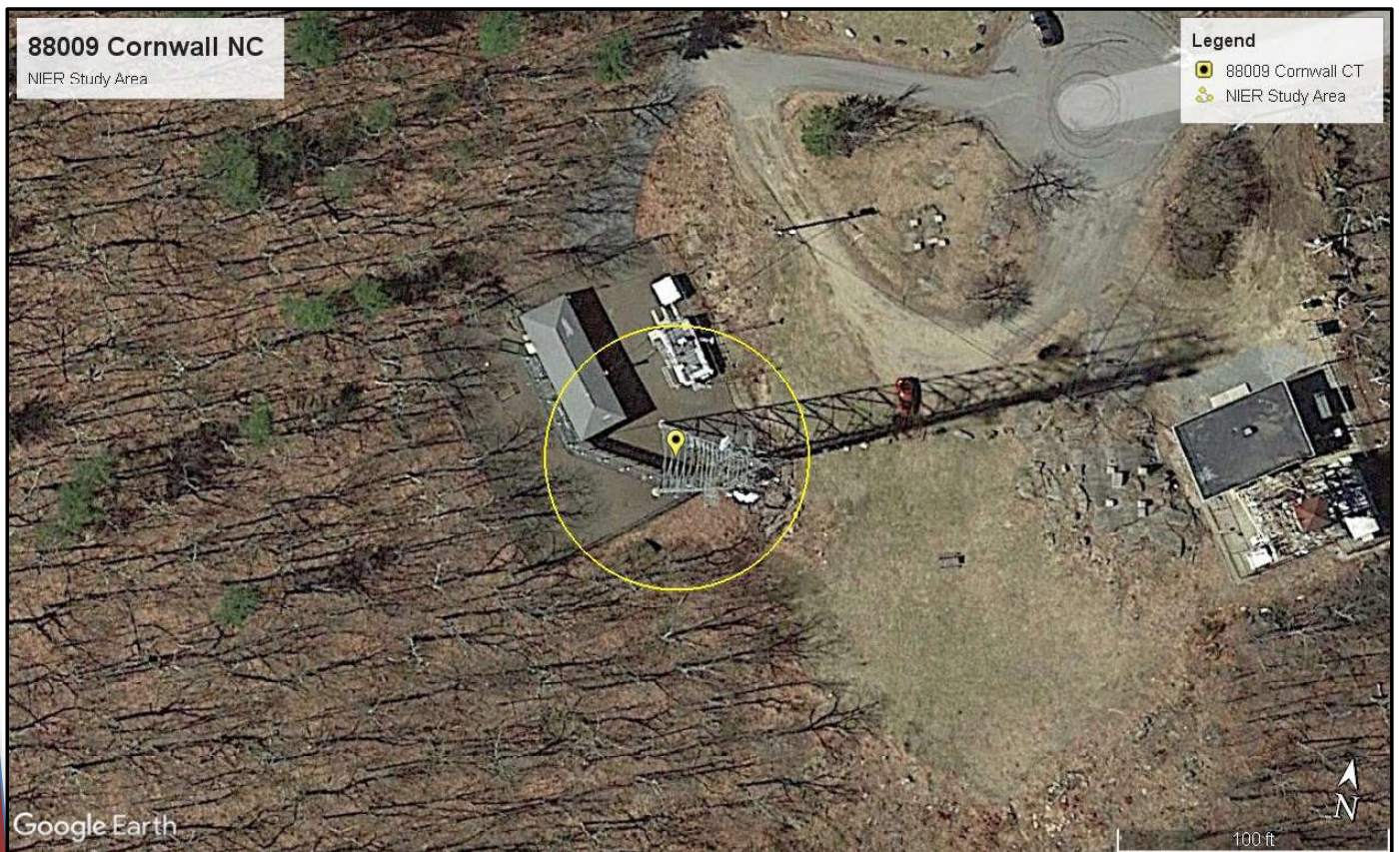
Michael W. Hayden NCE CPBE CBNT AMD  
Director: RF Designs and Services  
Tower Engineering Professionals

### Approved By:



01/07/2022

## APPENDIX 1 Satellite Photo







## APPENDIX 2 Cumulative MPE Charts

Carrier Maximum MPE Values							
Carrier	Technology	Frequency Band (MHz)	Maximum ERP <sup>1</sup> (W)	Antenna Centerline (ft)	Allowable Power Density (un-controlled access) (mW.cm <sup>2</sup> )*	Calculated Power Density (mW.cm <sup>2</sup> )	Calculated MPE (Allowable)
VZW	LTE 700	751	248.00	46.5	0.47	0.025	0.0536
VZW	CDMA 700	878.49	99.30	46.5	0.47	0.010	0.0215
VZW	Cellular 800	874	290.20	46.5	0.47	0.030	0.0628
VZW	PCS	1975	610.00	46.5	1.00	0.062	0.0619
VZW	AWS	2120	593.60	46.5	1.00	0.060	0.0602
VZW	C-Band	3730.08	1928.00	46.5	1.00	0.018	0.0182
						MPE Total:	0.2782
						<b>Compliance Status:</b>	<b>Compliant</b>

<sup>1</sup> ERP is based on data provided by ATC and includes -10dB off-beam pattern adjustment as described in CT 16-50j.

<sup>2</sup> Based on data contained in the Connecticut Siting Committee database

\* Calculated as described in FCC OET-65 Table 1 (B)

Site Composite MPE (%)	
T-Mobile <sup>2</sup> :	24.28
AT&T <sup>2</sup> :	18.47
Sprint <sup>2</sup> :	16.83
DHS <sup>2</sup> :	1.14
Verizon:	28.00
Site Total MPE:	<b>88.72</b>
Site Status:	<b>Compliant</b>



### APPENDIX 3 Information Pertaining to MPE Studies

In 1985, the FCC first adopted guidelines to be used for evaluating human exposure to RF emissions. The FCC revised and updated these guidelines on August 1, 1996, as a result of a rule-making proceeding initiated in 1993. The new guidelines incorporate limits for Maximum Permissible Exposure (MPE) in terms of electric and magnetic field strength and power density for transmitters operating at frequencies between 300 kHz and 100 GHz.

The FCC's MPE limits are based on exposure limits recommended by the National Council on Radiation Protection and Measurements (NCRP) and, over a wide range of frequencies, the exposure limits were developed by the Institute of Electrical and Electronics Engineers, Inc., (IEEE) and adopted by the American National Standards Institute (ANSI) to replace the 1982 ANSI guidelines. Limits for localized absorption are based on recommendations of both ANSI/IEEE and NCRP.

The FCC's limits, and the NCRP and ANSI/IEEE limits on which they are based, are derived from exposure criteria quantified in terms of specific absorption rate (SAR). The basis for these limits is a whole-body averaged SAR threshold level of 4 watts per kilogram (4 W/kg), as averaged over the entire mass of the body, above which expert organizations have determined that potentially hazardous exposures may occur. The MPE limits are derived by incorporating safety factors that lead, in some cases, to limits that are more conservative than the limits originally adopted by the FCC in 1985. Where more conservative limits exist, they do not arise from a fundamental change in the RF safety criteria for whole-body averaged SAR, but from a precautionary desire to protect subgroups of the general population who, potentially, may be more at risk.

The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other frequencies, whole-body absorption is less efficient, and consequently, the MPE limits are less restrictive.





MPE limits are defined in terms of power density (units of milliwatts per centimeter squared:  $\text{mW}/\text{cm}^2$ ), electric field strength (units of volts per meter:  $\text{V}/\text{m}$ ) and magnetic field strength (units of amperes per meter:  $\text{A}/\text{m}$ ). The far-field of a transmitting antenna is where the electric field vector (E), the magnetic field vector (H), and the direction of propagation can be considered to be all mutually orthogonal ("plane-wave" conditions).

**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.

**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. Additional details can be found in FCC OET 65.



## APPENDIX 4 MPE Standards Methodology

This study predicts RF field strength and power density levels that emanate from communications system antennae. It considers all transmitter power levels (less filter and line losses) delivered to each active transmitting antenna at the communications site. Calculations are performed to determine power density and MPE levels for each antenna as well as composite levels from all antennas. The calculated levels are based on where a human (Observer) would be standing at various locations at the site. The point of interest where the MPE level is predicted is based on the height of the Observer.

Compliance with the FCC limits on RF emissions are determined by spatially averaging a person's exposure over the projected area of an adult human body, that is approximately six-feet or two-meters, as defined in the ANSI/IEEE C95.1 standard. The MPE limits are specified as time-averaged exposure limits. This means that exposure is averaged over an identifiable time interval. It is 30 minutes for the general population/uncontrolled RF environment and 6 minutes for the occupational/controlled RF environment. However, in the case of the general public, time averaging should not be applied because the general public is typically not aware of RF exposure and they do not have control of their exposure time. Therefore, it should be assumed that any RF exposure to the general public will be continuous.

The FCC's limits for exposure at different frequencies are shown in the following Tables.

<b>Limits for Occupational/Controlled Exposure</b>				
<b>Frequency Range (MHz)</b>	<b>Electric Field Strength (E) (V/m)</b>	<b>Magnetic Field Strength (H) (A/m)</b>	<b>Power Density (S) (mW/cm<sup>2</sup>)</b>	<b>Averaging Time  E <sup>2</sup>,  H <sup>2</sup> or S (minutes)</b>
0.3 - 3.0	614	1.63	100*	6
3.0 - 30	1842/f	4.89/f	900/F <sup>2</sup>	6
30 - 300	61.4	0.163	1.0	6
300 - 1500	--	--	f/300	6
1500 - 100,000	--	--	5	6

f = frequency

\* = Plane-wave equivalent power density

RF Design & Services | Tower Engineering Professionals, Inc. ([www.tepgroup.net](http://www.tepgroup.net))

105 W Caswell Street | Kinston, NC 28501



Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm <sup>2</sup> )	Averaging Time  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes)
0.3 - 1.34	614	1.63	100*	30
1.34 - 30	824/f	2.19/f	180/F <sup>2</sup>	30
30 -300	27.5	0.073	0.2	30
300 -1500	--	--	f/1500	30
1500 -100,000	--	--	1.0	30

f = frequency

\* = Plane-wave equivalent power density

General population/uncontrolled exposures apply in situations in which the general public may be exposed or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

It is important to understand that these limits apply cumulatively to all sources of RF emissions affecting a given area. For example, if several different communications system antennas occupy a shared facility such as a tower or rooftop, then the total exposure from all systems at the facility must be within compliance of the FCC guidelines.

The field strength emanating from an antenna can be estimated based on the characteristics of an antenna radiating in free space. There are basically two field areas associated with a radiating antenna. When close to the antenna, the region is known as the Near Field. Within this region, the characteristics of the RF fields are very complex and the wave front is extremely curved. As you move further from the antenna, the wave front has less curvature and becomes planar. The wave front still has a curvature but it appears to occupy a flat plane in space (plane-wave radiation). This region is known as the Far Field.



Two models are utilized to predict Near and Far field power densities. They are based on the formulae in FCC OET 65. As this study is concerned only with Near Field calculations, we will only describe the model used for this study. For additional details, refer to FCC OET Bulletin 65.

### **Cylindrical Model (Near Field Predictions)**

Spatially averaged plane-wave equivalent power densities parallel to the antenna may be estimated by dividing the antenna input power by the surface area of an imaginary cylinder surrounding the length of the radiating antenna. While the actual power density will vary along the height of the antenna, the average value along its length will closely follow the relation given by the following equation:

$$S = P \div 2\pi RL$$

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

For directional-type antennas, power densities can be estimated by dividing the input power by that portion of a cylindrical surface area corresponding to the angular beam width of the antenna. For example, for the case of a 120-degree azimuthal beam width, the surface area should correspond to 1/3 that of a full cylinder. This would increase the power density near the antenna by a factor of three over that for a purely omni-directional antenna. Mathematically, this can be represented by the following formula:

$$S = (180 / \theta_{BW}) P \div \pi RL$$

Where:

S = Power Density

$\theta_{BW}$  = Beam width of antenna in degrees (3 dB half-power point)

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length

If the antenna is a 360-degree omni-directional antenna, this formula would be equivalent to the previous formula.



## Spherical Model (Far Field Predictions)

Spatially averaged plane-wave power densities in the Far Field of an antenna may be estimated by considering the additional factors of antenna gain and reflective waves that would contribute to exposure.

The radiation pattern of an antenna has developed in the Far Field region and the power gain needs to be considered in exposure predictions. Also, if the vertical radiation pattern of the antenna is considered, the exposure predictions would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential four-fold increase in power density.

These additional factors are considered and the Far Field prediction model is determined by the following equation:

$$S = EIRP \times Rc \div 4\pi R^2$$

Where:

S = Power Density

EIRP = Effective Radiated Power from antenna

Rc = Reflection Coefficient (2.56)

R = Distance from the antenna

The EIRP includes the antenna gain. If the antenna pattern is considered, the antenna gain is relative based on the horizontal and vertical pattern gain values at that particular location in space, on a rooftop or on the ground. However, it is recommended that the antenna radiation pattern characteristics not be considered to provide a conservative "worst case" prediction. This is the equation is utilized for the Far Field exposure predictions herein.

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MJ Umali, Site Acquisition Consultant  
c/o Cellco Partnership d/b/a Verizon Wireless  
Centerline Communications, LLC  
750 West Center Street, Floor 3  
West Bridgewater, MA 02379  
Mobile: (978) 568-7906  
[MUmali@centerlinecommunications.com](mailto:MUmali@centerlinecommunications.com)

August 16, 2021

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

**RE: Notice of Exempt Modification // Site: MOHAWK MTN CT (ATC: 88009)  
35 Toomey Road, Cornwall, CT 06759  
N 41.8213 // W 72.2964**

Dear Ms. Bachman:

Alltel Communications, LLC. d/b/a Verizon Wireless currently maintains 18 antennas at the 46-ft level on the existing 65-foot monopole tower, located at 35 Toomey Road, Cornwall, CT. The tower is owned by American Tower. The state of Connecticut and American Tower are the property owners. Verizon Wireless now intends to remove 8 antennas, install 3 new ones, and relocated 2 antennas for the LTE (3700 MHz) replacements for its 5G upgrade. Additionally, Verizon Wireless will remove 12 Remote Radio Heads (RRHs) and replace them with 6 new ones; install 4 Diplexers, relocate 5 Mount Pipes and 1 Dual Antenna Mounting bracket; altogether updating leased equipment rights, as reflected by the final configuration outlined in the structural analysis and proposed hereby.

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 Gordon Ridgway, First Selectman of Cornwall, CT., Karen Nelson, Zoning Enforcement Officer & Clerk, American Tower, the tower owner, and the State of Connecticut, the property 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). Enclosed to accommodate this filing are construction drawings dated July 29, 2021, by CLS Engineering, PLLC., a structural analysis dated May 3, 2021, by A. T. Engineering Service, PLLC., and a structural mount analysis by Maser Consulting Connecticut dated June 17, 2021, and radio frequency (RF) analysis table showing worst-case RF emission calculation by Verizon Wireless RF Design Engineering.

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the new antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis by A. T. Engineering Service, PLLC., dated May 3, 2021, and a structural mount analysis by Maser Consulting Connecticut, dated June 17, 2021, pursuant to certain conditions defined therein. Design and engineering are fully illustrated within final construction drawings, signed, and stamped dated July 29, 2021.

For the foregoing reasons, Verizon Wireless 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,

*MJ Umali*

---

MJ Umali, Site Acquisition Consultant  
c/o Cellco Partnership d/b/a Verizon Wireless  
Centerline Communications, LLC  
750 West Center Street, Floor 3  
West Bridgewater, MA 02379  
Mobile: (978) 568-7906  
[MUmali@centerlinecommunications.com](mailto:MUmali@centerlinecommunications.com)

Attachments

cc: Gordon Ridgway, First Selectman of Cornwall, CT - as chief elected official  
Karen Nelson, Zoning Enforcement Officer & Clerk - as P&Z official  
American Tower Corporation – as the tower owner  
State of CT – as the Property Owner



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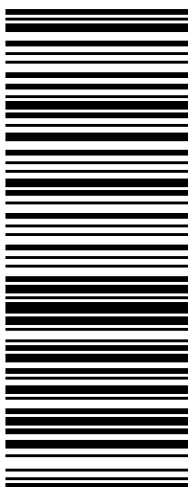

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<p style="text-align: right;"><b>1 OF 1</b></p> <p><b>1 LBS</b></p> <p>MJ UMALT 9785667906 CENTERLINE COMMUNICATIONS, LLC 750 WEST CENTER STREET WEST BRIDGEWATER MA 02379</p> <p><b>SHIP TO:</b> GORDON RIDGWAY FIRST SELECTMAN OF CORNWALL, CT 26 PINE STREET CORNWALL TOWN HALL <b>CORNWALL CT 06753-1014</b></p>	<p style="font-size: 2em;"><b>CT 067 9-02</b></p> 	<p style="font-size: 1.5em;"><b>UPS GROUND</b></p> <p>TRACKING #: 1Z 9Y4 503 03 1303 2624</p> 	<p style="text-align: center;"><b>BILLING: P/P</b></p> <p>Reference # 1: 88009 Reference # 2: Cornwall CT <small>CS22.0*18. WNTNV50 32.DA 08/2021*</small></p> 
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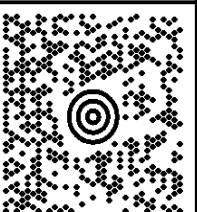
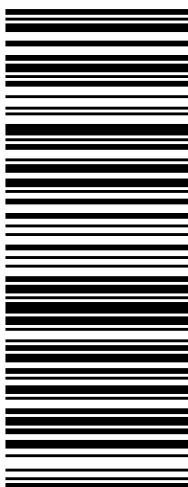

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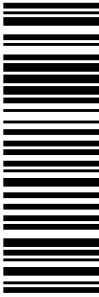
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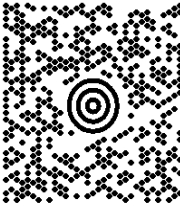


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**AMERICAN TOWER®**  
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## Structural Analysis Report

**Structure** : 65 ft Self Supported Tower  
**ATC Site Name** : CORNWALL CT, CT  
**ATC Asset Number** : 88009  
**Engineering Number** : 13668803\_C3\_01  
**Proposed Carrier** : ALLTEL COMMUNICATIONS, LLC  
**Carrier Site Name** : MOHAWK MTN CT  
**Carrier Site Number** : 468041  
**Site Location** : 36 Toomey Rd.  
Cornwall, CT 06759-4232  
41.821300,-73.296400  
**County** : Litchfield  
**Date** : May 3, 2021  
**Max Usage** : 68%  
**Result** : Pass



Prepared By:  
Lyle Morin  
Structural Engineer I

Reviewed By:

**COA: PEC.0001553**



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## Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 65 ft self supported tower to reflect the change in loading by ALLTEL COMMUNICATIONS, LLC.

## Supporting Documents

<b>Tower Drawings</b>	CSEI ATC Engineering #26472221, dated September 19, 2006
<b>Foundation Drawing</b>	TEP Project #74252-101870, dated November 22, 2016
<b>Geotechnical Report</b>	FDH Project #16PWAQ1600, dated November 30, 2016
<b>Modifications</b>	ATC Project #OAA687939_C6_07, dated November 6, 2017

## Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

<b>Basic Wind Speed:</b>	114 mph (3-Second Gust)
<b>Basic Wind Speed w/ Ice:</b>	40 mph (3-Second Gust) w/ 1" radial ice concurrent
<b>Code:</b>	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
<b>Exposure Category:</b>	B
<b>Risk Category:</b>	II
<b>Topographic Factor Procedure:</b>	Method 3
<b>Topographic Category:</b>	3
<b>Crest Height (H):</b>	214 ft
<b>Spectral Response:</b>	$S_s = 0.17$ , $S_1 = 0.05$
<b>Site Class:</b>	D - Stiff Soil

## 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](mailto: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**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
75.0	1	Generic 12' Dipole	Leg	-	OTHER
74.0	1	Generic 18' Omni	Leg	(1) 7/8" Coax	US DEPT OF HOMELAND SECURITY
72.0	1	Generic 6' Omni	Leg	-	OTHER
69.0	3	Alcatel-Lucent RRH2x50-08	Side Arm	(4) 1 1/4" Hybriflex Cable	SPRINT NEXTEL
	3	Commscope DT465B-2XR			
	3	Alcatel-Lucent 800 MHz RRH			
	3	Alcatel-Lucent TD-RRH8x20-25 w/ Solar Shield			
	3	RFS APXVSP18-C-A20			
	3	Alcatel-Lucent RRH2x40 (700)			
65.0	3	Ericsson RRUS 4449 B5, B12	Platform with Handrails	(2) 0.39" (10mm) Fiber Trunk (4) 0.78" (19.7mm) 8 AWG 6 (12) 1 1/4" Coax	AT&T MOBILITY
	3	Ericsson RRUS 4478 B14			
	1	Raycap DC6-48-60-18-8F			
	6	Powerwave Allgon TT19-08BP111-001			
	1	Andrew ABT-DFDM-ADB			
	3	Ericsson RRUS 32 (50.8 lbs)			
	4	CCI DMP65R-BU6DA			
	2	CCI DMP65R-BU4D			
	3	Powerwave Allgon 7770.00A			
	1	Raycap DC6-48-60-18			
63.0	1	Sinclair SV228-HF2SNM	Leg	(1) 7/8" Coax	US DEPT OF HOMELAND SECURITY
59.0	4	Generic 10' Dish w/ Radome	Platform with Handrails	-	OTHER
57.0	3	Ericsson RRUS 11 B4	Sector Frame	(3) 1 5/8" (1.63"-41.3mm) Fiber	T-MOBILE
	3	Ericsson Radio 4449 B12,B71			
	3	Ericsson RRUS 11 B2			
	3	RFS APX16DWV-16DWVS-E-A20			
	3	RFS APXVAARR24_43-U-NA20			
46.0	1	RFS DB-C1-12C-24AB-OZ	Platform with Handrails	(2) 1 5/8" (1.63"-41.3mm) Fiber (6) 1 5/8" Coax	ALLTEL COMMUNICATIONS, LLC
	6	Commscope JAHH-65B-R3B			
	4	Antel LPA-80063/6CF			

**Equipment to be Removed**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
46.0	3	Nokia B5 RRH4x40-850	-	-	ALLTEL COMMUNICATIONS, LLC
	3	Alcatel-Lucent B25 RRH4x30-4R			
	2	Antel LPA-80063/6CF			
	3	Alcatel-Lucent B66a RRH4x45 (AWS-3)			
	6	Andrew DB846F65ZAXY			
	3	Alcatel-Lucent B13 RRH4x30-4R			





**Proposed Equipment**

Elev. <sup>1</sup> (ft)	Qty	Antenna	Mount Type	Lines	Carrier
46.0	1	Commscope CHB726-01	Platform with Handrails	-	ALLTEL COMMUNICATIONS, LLC
	3	Commscope CBC78T-DS-43-2X			
	3	Samsung B5/B13 RRH-BR04C			
	3	Samsung B2/B66A RRH-BR049			
	1	RFS DB-C1-12C-24AB-OZ			
	3	Samsung MT6407-77A			

<sup>1</sup> Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

**Structure Usages**

Structural Component	Controlling Usage	Pass/Fail
Legs	41%	Pass
Diagonals	68%	Pass
Horizontals	27%	Pass

**Foundations**

Reaction Component	Analysis Reactions	% of Usage
Moment (Kip-Ft)	2,387.0	29%
Axial (Kips)	97.4	3%
Total Shear (Kips)	51.7	15%

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.

**Deflection, Twist and Sway\***

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Twist (°)	Sway (Rotation) (°)
63.0	Sinclair SV228-HF2SNM	US DEPT OF HOMELAND	0.253	1.495	0.565
59.0	Generic 10' Dish w/ Radome	Other	0.183	1.496	0.913
46.0	Commscope CHB726-01	ALLTEL COMMUNICATION	0.014	1.458	1.392
	Commscope CBC78T-DS-43-2X				
	Samsung B5/B13 RRH-BR04C				
	Samsung B2/B66A RRH-BR049				
	RFS DB-C1-12C-24AB-OZ				
	Samsung MT6407-77A				

\*Deflection, Twist and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H



## 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.

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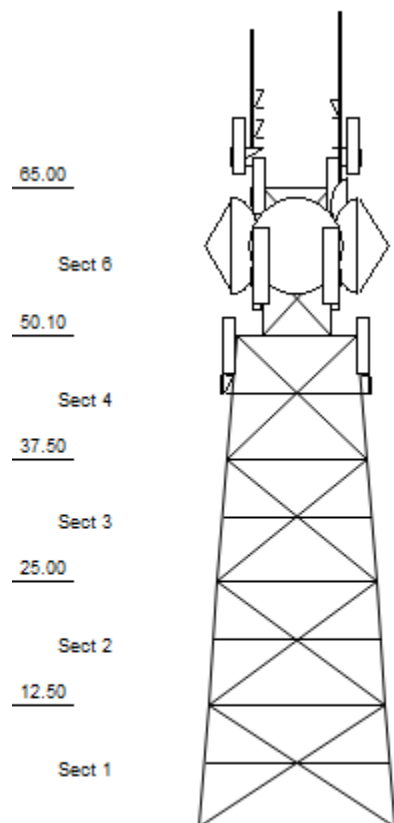
Loads: 114 mph no ice  
 40 mph w/ 1" radial ice  
 Site Class: D Ss: 0.17 S1: 0.05  
 60 mph Serviceability

Job Information			
Client : ALLTEL COMMUNICATIONS, LLC			
Tower : 88009	Location : CORNWALL CT,	Base Width : 20.00 ft	
Code : ANSI/TIA-222-H	Topo Method: Method 3	Top Width : 7.00 ft	
Risk Cat : II	Topo: 3	Tower Ht : 65.00 ft	
	Exposure : B	Shape : Square	

Sections Properties				
Section	Leg Members		Diagonal Members	Horizontal Members
1 - 2	SAE 33 ksi	6X6X0.625	SAU 36 ksi 4X3X0.25	DAL 36 ksi 3X2.5X0.25
3	SAE 33 ksi	6X6X0.5	SAU 36 ksi 3.5X3X0.25	DAL 36 ksi 3.5X3X0.3125
4	SAE 33 ksi	6X6X0.5	SAE 36 ksi 3.5x3.5x0.25	DAL 36 ksi 3.5X3X0.3125
5	SAE 33 ksi	6X6X0.5		
6	SAE 33 ksi	6X6X0.5	SAU 36 ksi 3X2X0.25	DAL 36 ksi 2.5X2X0.25

Redundant Secondary Bracing						
Section	Sub Diag 1	Sub Horiz 1	Sub Diag 2	Sub Horiz 2	Sub Diag 3	Sub Horiz 3
1 - 2	-	S3X2.5X0.25	-	-	-	-
3	-	CC6 x 8.2	-	-	-	-
4	-	S2.5X2X0.25	-	-	-	-
5 - 6	-	-	-	-	-	-

Discrete Appurtenance			
Elev (ft)	Type	Qty	Description
75.00	Whip	1	Generic 12' Dipole
74.00	Whip	1	Generic 18' Omni
72.00	Whip	1	Generic 6' Omni
69.00	Straight Arm	6	Generic Flat Side Arm
69.00	Panel	3	Commscope DT465B-2XR
69.00	Panel	3	RFS APXVSP18-C-A20
69.00		3	Alcatel-Lucent TD-RRH8x20-25 w
69.00		3	Alcatel-Lucent 800 MHz RRH
69.00		3	Alcatel-Lucent RRH2x40 (700)
69.00		3	Alcatel-Lucent RRH2x50-08
65.00	Other	1	Fire Warden Cabin
65.00	Panel	4	CCI DMP65R-BU6DA
65.00	Panel	2	CCI DMP65R-BU4D
65.00	Panel	3	Powerwave Allgon 7770.00A
65.00		1	Raycap DC6-48-60-18
65.00		3	Ericsson RRUS 32 (50.8 lbs)
65.00		3	Ericsson RRUS 4449 B5, B12
65.00		3	Ericsson RRUS 4478 B14
65.00		1	Raycap DC6-48-60-18-8F
65.00		6	Powerwave Allgon TT19-08BP111-
65.00		1	Andrew ABT-DFDM-ADB
63.00	Dish	1	Sinclair SV228-HF2SNM
62.00	Platform	1	Platform with Handrails
59.00	Dish	4	Generic 10' Dish w/ Radome
57.00	Panel	3	RFS APXVAARR24_43-U-NA20
57.00	Panel	3	RFS APX16DWV-16DWVS-E-A20
57.00		3	Ericsson RRUS 11 B2
57.00		3	Ericsson RRUS 11 B4
57.00		3	Ericsson Radio 4449 B12,B71
56.00	Mounting Frame	3	Site Pro TPF123XX
50.00	Platform	1	Platform w/ Handrails
46.00	Panel	4	Antel LPA-80063/6CF
46.00	Panel	6	Commscope JAHH-65B-R3B
46.00	Panel	3	Samsung MT6407-77A
46.00		1	RFS DB-C1-12C-24AB-0Z
46.00		1	RFS DB-C1-12C-24AB-0Z
46.00		3	Samsung B2/B66A RRH-BR049
46.00		3	Samsung B5/B13 RRH-BR04C
46.00		3	Commscope CBC78T-DS-43-2X



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Job Information		
Client : ALLTEL COMMUNICATIONS, LLC		
Tower : 88009	Location : CORNWALL CT,	Base Width : 20.00 ft
Code : ANSI/TIA-222-H	Topo Method: Method 3	Top Width : 7.00 ft
Risk Cat : II	Topo: 3	Tower Ht : 65.00 ft
	Exposure : B	Shape : Square

46.00	1	Commscope CHB726-01
37.50 Platform	1	Access Platform

Linear Appurtenance			
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Elev (ft)			
From	To	Qty	Description
0.00	74.00	1	7/8" Coax
0.00	69.00	4	1 1/4" Hybriflex Cab
0.00	67.00	1	Waveguide
0.00	67.00	1	Climbing Ladder
0.00	65.00	12	1 1/4" Coax
0.00	65.00	4	0.78" (19.7mm) 8 AWG
0.00	65.00	2	0.39" (10mm) Fiber T
0.00	63.00	1	7/8" Coax
0.00	57.00	3	1 5/8" (1.63"-41.3mm
0.00	56.00	1	Waveguide
0.00	46.00	6	1 5/8" Coax
0.00	46.00	2	1 5/8" (1.63"-41.3mm

Global Base Foundation Design Loads			
Load Case	Moment (k-ft)	Vertical (kip)	Horizontal (kip)
DL + WL	2,386.95	52.15	51.69
DL + WL + IL	552.13	114.31	11.51

Individual Base Foundation Design Loads		
Vertical (kip)	Uplift (kip)	Horizontal (kip)
97.44	74.54	21.67

Site Number: 88009

Code: ANSI/TIA-222-H

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Site Name: CORNWALL CT, CT

Engineering Number: 13668803\_C3\_01

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Customer: ALLTEL COMMUNICATIONS, LLC

### Analysis Parameters

Location:	Litchfield County, CT	Height (ft):	65
Code:	ANSI/TIA-222-H	Base Elevation (ft):	0.00
Shape:	Square	Bottom Face Width (ft):	20.00
Tower Manufacturer:	CSEI	Top Face Width (ft):	7.00
Tower Type:	Self Support	Anchor Bolt Detail Type	c
Kd:	0.85		
Ke:	0.94		

### Ice & Wind Parameters

Exposure Category:	B	Design Windspeed Without Ice:	114 mph
Risk Category:	II	Design Windspeed With Ice:	40 mph
Topographic Factor Procedure:	Method 3	Operational Windspeed:	60 mph
Topographic Category:	3	Design Ice Thickness:	1.00 in
Crest Height:	214 ft	HMSL:	1678.00 ft

### Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	0.61		
$T_L$ (sec):	6	p:	1.3
$S_S$ :	0.173	$S_1$ :	0.054
$F_a$ :	1.600	$F_V$ :	2.400
$S_{ds}$ :	0.185	$S_{d1}$ :	0.086
		$C_S$ :	0.047
		$C_S, Max$ :	0.047
		$C_S, Min$ :	0.030

### Load Cases

1.2D + 1.0W Normal	114 mph Normal with No Ice
1.2D + 1.0W 45 deg	114 mph 45 degree with No Ice
0.9D + 1.0W Normal	114 mph Normal with No Ice (Reduced DL)
0.9D + 1.0W 45 deg	114 mph 45 deg with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi Normal	40 mph Normal with 1.00 in Radial Ice
1.2D + 1.0Di + 1.0Wi 45 deg	40 mph 45 deg with 1.00 in Radial Ice
1.2D + 1.0Ev + 1.0Eh Normal	Seismic Normal
1.2D + 1.0Ev + 1.0Eh 45 deg	Seismic 45 deg
0.9D - 1.0Ev + 1.0Eh Normal	Seismic (Reduced DL) Normal
0.9D - 1.0Ev + 1.0Eh 45 deg	Seismic (Reduced DL) 45 deg
1.0D + 1.0W Service Normal	Serviceability - 60 mph Wind Normal
1.0D + 1.0W Service 45 deg	Serviceability - 60 mph Wind 45 deg

Site Number: 88009

Code:

ANSI/TIA-222-H

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Site Name: CORNWALL CT, CT

Engineering Number: 13668803\_C3\_01

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Customer: ALLTEL COMMUNICATIONS, LLC

### Tower Loading

#### Discrete Appurtenance Properties 1.2D + 1.0W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
75.00	Generic 12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	37.06	142	48
74.00	Generic 18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	37.05	170	66
72.00	Generic 6' Omni	1	25	1.8	6.0	3.0	3.0	1.00	1.00	0.0	0.0	37.03	55	30
69.00	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	36.99	64	190
69.00	Alcatel-Lucent	3	50	2.1	1.7	12.2	10.6	0.80	0.50	0.0	0.0	36.99	80	180
69.00	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	36.99	81	191
69.00	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	36.99	186	252
69.00	Generic Flat Side	6	188	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	36.99	796	1350
69.00	RFS APXVSP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	36.99	418	205
69.00	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	36.99	474	209
65.00	Andrew ABT-DFDM-	1	1	0.0	0.3	1.7	1.6	0.75	1.00	2.0	2.1	36.95	1	1
65.00	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.75	0.50	2.0	78.2	36.95	39	115
65.00	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.75	1.00	2.0	59.4	36.95	30	24
65.00	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.75	0.50	0.0	0.0	36.92	65	216
65.00	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.75	0.50	-4.0	277.3	36.82	69	256
65.00	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.75	0.50	2.0	190.3	36.95	95	183
65.00	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.75	1.00	0.0	0.0	36.92	90	36
65.00	Powerwave Allgon	3	27	5.6	4.6	11.0	4.9	0.75	0.65	2.0	510.4	36.95	255	97
65.00	CCI DMP65R-BU4D	2	68	8.3	4.0	20.7	7.7	0.75	0.72	0.0	0.0	36.92	281	163
65.00	CCI DMP65R-BU6DA	4	79	12.7	5.9	20.7	7.7	0.75	0.63	0.0	0.0	36.92	754	381
65.00	Fire Warden Cabin	1	2000	150.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	36.92	4707	2400
63.00	Sinclair SV228-	1	93	15.8	6.0	116.0	62.0	1.00	1.00	0.0	0.0	36.87	496	112
62.00	Platform with	1	2000	27.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	36.85	852	2400
59.00	Generic 10' Dish w/	4	400	67.8	10.0	120.0	0.0	1.00	1.00	0.0	0.0	36.77	8476	1920
57.00	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	36.70	61	266
57.00	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	104.4	36.67	104	183
57.00	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	104.4	36.67	104	183
57.00	RFS APX16DWV-	3	41	6.6	4.7	13.3	3.1	0.80	0.60	-1.0	295.6	36.67	296	147
57.00	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	36.70	955	460
56.00	Site Pro TPF123XX	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	36.67	677	1080
50.00	Platform w/	1	5000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	36.41	2166	6000
46.00	Commscope	1	10	0.4	0.6	7.1	3.4	0.75	1.00	0.0	0.0	36.18	10	12
46.00	Commscope	3	21	0.6	0.8	6.9	6.4	0.75	0.50	0.0	0.0	36.18	19	75
46.00	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.75	0.50	0.0	0.0	36.18	65	253
46.00	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.75	0.50	0.0	0.0	36.18	65	304
46.00	RFS DB-C1-12C-	1	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	93.7	36.24	94	38
46.00	RFS DB-C1-12C-	1	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	93.7	36.24	94	38
46.00	Samsung MT6407-	3	82	4.7	2.9	16.1	5.5	0.75	0.61	0.0	0.0	36.18	199	294
46.00	Commscope JAHH-	6	61	9.1	6.0	13.8	8.2	0.75	0.69	1.0	871.6	36.24	872	436
46.00	Antel LPA-80063/6CF	4	27	9.6	5.9	15.0	13.1	0.75	0.76	0.0	0.0	36.18	673	130
37.50	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	35.47	1357	6000
Totals		106	22436	1096.1									26485	26923

#### Discrete Appurtenance Properties 0.9D + 1.0W

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
75.00	Generic 12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	37.06	142	36
74.00	Generic 18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	37.05	170	50
72.00	Generic 6' Omni	1	25	1.8	6.0	3.0	3.0	1.00	1.00	0.0	0.0	37.03	55	23
69.00	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	36.99	64	143
69.00	Alcatel-Lucent	3	50	2.1	1.7	12.2	10.6	0.80	0.50	0.0	0.0	36.99	80	135

Site Number: 88009

Code: ANSI/TIA-222-H

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Site Name: CORNWALL CT, CT

Engineering Number: 13668803\_C3\_01

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Customer: ALLTEL COMMUNICATIONS, LLC

### Tower Loading

69.00	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	36.99	81	143
69.00	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	36.99	186	189
69.00	Generic Flat Side	6	188	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	36.99	796	1013
69.00	RFS APXVSPP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	36.99	418	154
69.00	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	36.99	474	157
65.00	Andrew ABT-DFDM-	1	1	0.0	0.3	1.7	1.6	0.75	1.00	2.0	2.1	36.95	1	1
65.00	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.75	0.50	2.0	78.2	36.95	39	86
65.00	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.75	1.00	2.0	59.4	36.95	30	18
65.00	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.75	0.50	0.0	0.0	36.92	65	162
65.00	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.75	0.50	-4.0	277.3	36.82	69	192
65.00	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.75	0.50	2.0	190.3	36.95	95	137
65.00	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.75	1.00	0.0	0.0	36.92	90	27
65.00	Powerwave Allgon	3	27	5.6	4.6	11.0	4.9	0.75	0.65	2.0	510.4	36.95	255	73
65.00	CCI DMP65R-BU4D	2	68	8.3	4.0	20.7	7.7	0.75	0.72	0.0	0.0	36.92	281	122
65.00	CCI DMP65R-BU6DA	4	79	12.7	5.9	20.7	7.7	0.75	0.63	0.0	0.0	36.92	754	286
65.00	Fire Warden Cabin	1	2000	150.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	36.92	4707	1800
63.00	Sinclair SV228-	1	93	15.8	6.0	116.0	62.0	1.00	1.00	0.0	0.0	36.87	496	84
62.00	Platform with	1	2000	27.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	36.85	852	1800
59.00	Generic 10' Dish w/	4	400	67.8	10.0	120.0	0.0	1.00	1.00	0.0	0.0	36.77	8476	1440
57.00	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	36.70	61	200
57.00	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	104.4	36.67	104	137
57.00	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	104.4	36.67	104	137
57.00	RFS APX16DWV-	3	41	6.6	4.7	13.3	3.1	0.80	0.60	-1.0	295.6	36.67	296	110
57.00	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	36.70	955	345
56.00	Site Pro TPF123XX	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	36.67	677	810
50.00	Platform w/	1	5000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	36.41	2166	4500
46.00	Commscope	1	10	0.4	0.6	7.1	3.4	0.75	1.00	0.0	0.0	36.18	10	9
46.00	Commscope	3	21	0.6	0.8	6.9	6.4	0.75	0.50	0.0	0.0	36.18	19	56
46.00	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.75	0.50	0.0	0.0	36.18	65	190
46.00	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.75	0.50	0.0	0.0	36.18	65	228
46.00	RFS DB-C1-12C-	1	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	93.7	36.24	94	29
46.00	RFS DB-C1-12C-	1	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	93.7	36.24	94	29
46.00	Samsung MT6407-	3	82	4.7	2.9	16.1	5.5	0.75	0.61	0.0	0.0	36.18	199	220
46.00	Commscope JAHH-	6	61	9.1	6.0	13.8	8.2	0.75	0.69	1.0	871.6	36.24	872	327
46.00	Antel LPA-80063/6CF	4	27	9.6	5.9	15.0	13.1	0.75	0.76	0.0	0.0	36.18	673	97
37.50	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	35.47	1357	4500
Totals		106	22436	1096.1									26485	20192

### Discrete Appurtenance Properties 1.2D + 1.0Di + 1.0Wi

Elevation (ft)	Description	Qty	Ice Wt (lb)	Ice EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
75.00	Generic 12' Dipole	1	137	9.7	12.0	3.0	3.0	1.00	1.00	0.0	0.0	4.56	38	145
74.00	Generic 18' Omni	1	154	10.1	18.0	3.0	3.0	1.00	1.00	0.0	0.0	4.56	39	165
72.00	Generic 6' Omni	1	59	2.7	6.0	3.0	3.0	1.00	1.00	0.0	0.0	4.56	10	64
69.00	Alcatel-Lucent	3	96	2.3	1.3	13.0	9.8	0.80	0.50	0.0	0.0	4.55	11	320
69.00	Alcatel-Lucent	3	104	2.8	1.7	12.2	10.6	0.80	0.50	0.0	0.0	4.55	13	341
69.00	Alcatel-Lucent 800	3	107	2.8	1.6	13.0	10.8	0.80	0.50	0.0	0.0	4.55	13	352
69.00	Alcatel-Lucent TD-	3	139	5.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	4.55	28	459
69.00	Generic Flat Side	6	285	8.6	0.0	0.0	0.0	1.00	0.67	0.0	0.0	4.55	133	1933
69.00	RFS APXVSPP18-C-	3	183	10.1	6.0	11.8	7.0	0.80	0.69	0.0	0.0	4.55	64	582
69.00	Commscope	3	205	11.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	4.55	71	651
65.00	Andrew ABT-DFDM-	1	3	0.2	0.3	1.7	1.6	0.75	1.00	2.0	1.0	4.55	0	3
65.00	Powerwave Allgon	6	31	0.9	0.8	6.7	5.4	0.75	0.50	2.0	16.1	4.55	8	204
65.00	Raycap DC6-48-60-	1	58	1.7	2.0	9.7	9.7	0.75	1.00	2.0	10.1	4.55	5	62
65.00	Ericsson RRUS 4478	3	100	2.5	1.4	13.4	7.7	0.75	0.50	0.0	0.0	4.54	11	337

### Tower Loading

65.00	Ericsson RRUS 4449	3	118	2.6	1.5	13.2	9.4	0.75	0.50	-4.0	45.9	4.53	11	397
65.00	Ericsson RRUS 32	3	103	3.5	2.2	12.1	6.7	0.75	0.50	2.0	30.8	4.55	15	339
65.00	Raycap DC6-48-60-	1	92	4.8	2.3	16.7	5.5	0.75	1.00	0.0	0.0	4.54	14	98
65.00	Powerwave Allgon	3	110	7.1	4.6	11.0	4.9	0.75	0.65	2.0	80.4	4.55	40	347
65.00	CCI DMP65R-BU4D	2	200	9.8	4.0	20.7	7.7	0.75	0.72	0.0	0.0	4.54	41	426
65.00	CCI DMP65R-BU6DA	4	267	14.7	5.9	20.7	7.7	0.75	0.63	0.0	0.0	4.54	108	1132
65.00	Fire Warden Cabin	1	5047	569.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.54	2198	5447
63.00	Sinclair SV228-	1	442	48.3	6.0	116.0	62.0	1.00	1.00	0.0	0.0	4.54	187	460
62.00	Platform with	1	2945	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.54	174	3345
59.00	Generic 10' Dish w/	4	1819	70.7	10.0	120.0	0.0	1.00	1.00	0.0	0.0	4.53	1088	7597
57.00	Ericsson Radio 4449	3	115	2.3	1.2	13.2	9.3	0.80	0.50	0.0	0.0	4.52	10	389
57.00	Ericsson RRUS 11 B4	3	103	3.6	1.6	17.0	7.2	0.80	0.50	-1.0	16.5	4.51	17	341
57.00	Ericsson RRUS 11 B2	3	103	3.6	1.6	17.0	7.2	0.80	0.50	-1.0	16.5	4.51	17	341
57.00	RFS APX16DWV-	3	126	8.2	4.7	13.3	3.1	0.80	0.60	-1.0	45.1	4.51	45	402
57.00	RFS	3	414	22.9	8.0	24.0	8.7	0.80	0.63	0.0	0.0	4.52	133	1319
56.00	Site Pro TPF123XX	3	568	26.5	0.0	0.0	0.0	0.75	0.67	0.0	0.0	4.51	153	1884
50.00	Platform w/	1	13912	248.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.48	946	14912
46.00	Commscope	1	20	0.7	0.6	7.1	3.4	0.75	1.00	0.0	0.0	4.45	2	22
46.00	Commscope	3	37	0.9	0.8	6.9	6.4	0.75	0.50	0.0	0.0	4.45	4	123
46.00	Samsung B5/B13	3	112	2.5	1.3	15.0	8.1	0.75	0.50	0.0	0.0	4.45	11	379
46.00	Samsung B2/B66A	3	131	2.5	1.3	15.0	10.0	0.75	0.50	0.0	0.0	4.45	11	444
46.00	RFS DB-C1-12C-	1	125	5.1	2.5	16.5	12.6	0.75	1.00	1.0	14.4	4.46	14	131
46.00	RFS DB-C1-12C-	1	125	5.1	2.5	16.5	12.6	0.75	1.00	1.0	14.4	4.46	14	131
46.00	Samsung MT6407-	3	156	5.8	2.9	16.1	5.5	0.75	0.61	0.0	0.0	4.45	30	517
46.00	Commscope JAHH-	6	208	11.1	6.0	13.8	8.2	0.75	0.69	1.0	131.2	4.46	131	1324
46.00	Antel LPA-80063/6CF	4	229	10.6	5.9	15.0	13.1	0.75	0.76	0.0	0.0	4.45	91	937
37.50	Access Platform	1	14064	158.3	0.0	0.0	0.0	1.00	1.00	0.0	0.0	4.37	588	15064
Totals		106	59378	2022.7									6539	63865

### Discrete Appurtenance Properties 1.0D + 1.0W Service

Elevation (ft)	Description	Qty	Wt. (lb)	EPA (sf)	Length (ft)	Width (in)	Depth (in)	K <sub>a</sub>	Orient. Factor	Vert. Ecc.(ft)	M <sub>u</sub> (lb-ft)	Q <sub>z</sub> (psf)	F <sub>a</sub> (WL) (lb)	P <sub>a</sub> (DL) (lb)
75.00	Generic 12' Dipole	1	40	4.5	12.0	3.0	3.0	1.00	1.00	0.0	0.0	10.26	39	40
74.00	Generic 18' Omni	1	55	5.4	18.0	3.0	3.0	1.00	1.00	0.0	0.0	10.26	47	55
72.00	Generic 6' Omni	1	25	1.8	6.0	3.0	3.0	1.00	1.00	0.0	0.0	10.26	15	25
69.00	Alcatel-Lucent	3	53	1.7	1.3	13.0	9.8	0.80	0.50	0.0	0.0	10.25	18	159
69.00	Alcatel-Lucent	3	50	2.1	1.7	12.2	10.6	0.80	0.50	0.0	0.0	10.25	22	150
69.00	Alcatel-Lucent 800	3	53	2.1	1.6	13.0	10.8	0.80	0.50	0.0	0.0	10.25	22	159
69.00	Alcatel-Lucent TD-	3	70	4.0	2.2	18.6	6.7	0.80	0.61	0.0	0.0	10.25	52	210
69.00	Generic Flat Side	6	188	6.3	0.0	0.0	0.0	1.00	0.67	0.0	0.0	10.25	221	1125
69.00	RFS APXVSP18-C-	3	57	8.0	6.0	11.8	7.0	0.80	0.69	0.0	0.0	10.25	116	171
69.00	Commscope	3	58	9.1	6.0	13.8	8.2	0.80	0.69	0.0	0.0	10.25	131	174
65.00	Andrew ABT-DFDM-	1	1	0.0	0.3	1.7	1.6	0.75	1.00	2.0	0.6	10.24	0	1
65.00	Powerwave Allgon	6	16	0.6	0.8	6.7	5.4	0.75	0.50	2.0	21.7	10.24	11	96
65.00	Raycap DC6-48-60-	1	20	1.3	2.0	9.7	9.7	0.75	1.00	2.0	16.4	10.24	8	20
65.00	Ericsson RRUS 4478	3	60	1.8	1.4	13.4	7.7	0.75	0.50	0.0	0.0	10.23	18	180
65.00	Ericsson RRUS 4449	3	71	2.0	1.5	13.2	9.4	0.75	0.50	-4.0	76.8	10.20	19	213
65.00	Ericsson RRUS 32	3	51	2.7	2.2	12.1	6.7	0.75	0.50	2.0	52.7	10.24	26	152
65.00	Raycap DC6-48-60-	1	30	3.8	2.3	16.7	5.5	0.75	1.00	0.0	0.0	10.23	25	30
65.00	Powerwave Allgon	3	27	5.6	4.6	11.0	4.9	0.75	0.65	2.0	141.4	10.24	71	81
65.00	CCI DMP65R-BU4D	2	68	8.3	4.0	20.7	7.7	0.75	0.72	0.0	0.0	10.23	78	136
65.00	CCI DMP65R-BU6DA	4	79	12.7	5.9	20.7	7.7	0.75	0.63	0.0	0.0	10.23	209	318
65.00	Fire Warden Cabin	1	2000	150.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.23	1304	2000
63.00	Sinclair SV228-	1	93	15.8	6.0	116.0	62.0	1.00	1.00	0.0	0.0	10.21	137	93
62.00	Platform with	1	2000	27.2	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.21	236	2000



Site Number: 88009

Code: ANSI/TIA-222-H

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Site Name: CORNWALL CT, CT

Engineering Number: 13668803\_C3\_01

5/3/2021 4:05:05 PM

Customer: ALLTEL COMMUNICATIONS, LLC

### Tower Loading

59.00	Generic 10' Dish w/	4	400	67.8	10.0	120.0	0.0	1.00	1.00	0.0	0.0	10.19	2348	1600
57.00	Ericsson Radio 4449	3	74	1.6	1.2	13.2	9.3	0.80	0.50	0.0	0.0	10.17	17	222
57.00	Ericsson RRUS 11 B4	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	28.9	10.16	29	152
57.00	Ericsson RRUS 11 B2	3	51	2.8	1.6	17.0	7.2	0.80	0.50	-1.0	28.9	10.16	29	152
57.00	RFS APX16DWW-	3	41	6.6	4.7	13.3	3.1	0.80	0.60	-1.0	81.9	10.16	82	122
57.00	RFS	3	128	20.2	8.0	24.0	8.7	0.80	0.63	0.0	0.0	10.17	265	384
56.00	Site Pro TPF123XX	3	300	14.4	0.0	0.0	0.0	0.75	0.67	0.0	0.0	10.16	187	900
50.00	Platfrom w/	1	5000	70.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	10.09	600	5000
46.00	Commscope	1	10	0.4	0.6	7.1	3.4	0.75	1.00	0.0	0.0	10.02	3	10
46.00	Commscope	3	21	0.6	0.8	6.9	6.4	0.75	0.50	0.0	0.0	10.02	5	62
46.00	Samsung B5/B13	3	70	1.9	1.3	15.0	8.1	0.75	0.50	0.0	0.0	10.02	18	211
46.00	Samsung B2/B66A	3	84	1.9	1.3	15.0	10.0	0.75	0.50	0.0	0.0	10.02	18	253
46.00	RFS DB-C1-12C-	1	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	26.0	10.04	26	32
46.00	RFS DB-C1-12C-	1	32	4.1	2.5	16.5	12.6	0.75	1.00	1.0	26.0	10.04	26	32
46.00	Samsung MT6407-	3	82	4.7	2.9	16.1	5.5	0.75	0.61	0.0	0.0	10.02	55	245
46.00	Commscope JAHH-	6	61	9.1	6.0	13.8	8.2	0.75	0.69	1.0	241.4	10.04	241	364
46.00	Antel LPA-80063/6CF	4	27	9.6	5.9	15.0	13.1	0.75	0.76	0.0	0.0	10.02	186	108
37.50	Access Platform	1	5000	45.0	0.0	0.0	0.0	1.00	1.00	0.0	0.0	9.83	376	5000
	Totals	106	22436	1096.1									7336	22436

Site Number: 88009

Code:

ANSI/TIA-222-H

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Site Name: CORNWALL CT, CT

Engineering Number: 13668803\_C3\_01

5/3/2021 4:05:05 PM

Customer: ALLTEL COMMUNICATIONS, LLC

### Tower Loading

#### Linear Appurtenance Properties

Elev From (ft)	Elev To (ft)	Description	Qty	Width (in)	Weight (lb/ft)	Pct In Block	Spread On Faces	Bundling Arrangement	Cluster Dia (in)	Out Of Zone	Spacing (in)	Orientation Factor	Ka Override
0.00	74.00	7/8" Coax	1	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	69.00	1 1/4" Hybriflex	4	1.54	1.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	67.00	Climbing Ladder	1	2.00	6.90	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	67.00	Waveguide	1	2.00	6.00	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	65.00	0.39" (10mm) Fiber	2	0.39	0.06	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	65.00	0.78" (19.7mm) 8	4	0.78	0.59	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	65.00	1 1/4" Coax	12	1.55	0.63	33	1	Block	0.00	N	1.00	1.00	0.00
0.00	63.00	7/8" Coax	1	1.09	0.33	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	57.00	1 5/8" (1.63")-	3	1.63	1.61	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	56.00	Waveguide	1	2.00	6.00	100	3	Individual	0.00	N	1.00	1.00	0.00
0.00	46.00	1 5/8" (1.63")-	2	1.63	1.61	100	1	Individual	0.00	N	1.00	1.00	0.00
0.00	46.00	1 5/8" Coax	6	1.98	0.82	67	1	Block	0.00	N	1.00	1.00	0.00

### Section Forces

LoadCase 1.2D + 1.0W Normal

114 mph Normal with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>bi</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)
6	57.55	36.72	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	3535	0	2536	944	3480
5	50.05	36.41	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	407	0	278	0	67
4	43.75	36.02	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4829	0	3004	1124	4128
3	31.25	34.70	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	5499	0	3444	1189	4634
2	18.75	36.53	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	5333	0	3670	1252	4923
1	6.25	39.17	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	5624	0	4205	1343	5548
														25227	0			22779

\*\* = Section Force Exceeds Solidity Ratio Criteria

LoadCase 1.2D + 1.0W 45 deg

114 mph 45 degree with No Ice

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>bi</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)
6	57.55	36.72	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	3535	0	3043	944	3988
5	50.05	36.41	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	407	0	334	0	67
4	43.75	36.02	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	4829	0	3421	1124	4544
3	31.25	34.70	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	5499	0	3954	1189	5144
2	18.75	36.53	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	5333	0	4145	1252	5397
1	6.25	39.17	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	5624	0	4724	1343	6067
														25227	0			25206

\*\* = Section Force Exceeds Solidity Ratio Criteria

LoadCase 0.9D + 1.0W Normal

114 mph Normal with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>bi</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)
6	57.55	36.72	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2651	0	2536	944	3480
5	50.05	36.41	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	305	0	278	0	67
4	43.75	36.02	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	3622	0	3004	1124	4128
3	31.25	34.70	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4124	0	3444	1189	4634
2	18.75	36.53	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4000	0	3670	1252	4923
1	6.25	39.17	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4218	0	4205	1343	5548
														18920	0			22779

\*\* = Section Force Exceeds Solidity Ratio Criteria

LoadCase 0.9D + 1.0W 45 deg

114 mph 45 deg with No Ice (Reduced DL)

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>bi</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)
6	57.55	36.72	30.064	0.000	0.000	0.269	2.70	1.20	1.20	0.0	36.08	97.49	0.00	2651	0	3043	944	3988

Site Number: 88009

Code:

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Site Name: CORNWALL CT, CT

Engineering Number: 13668803\_C3\_01

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Customer: ALLTEL COMMUNICATIONS, LLC

### Section Forces

5	50.05	36.41	4.279	0.000	0.000	1.000	2.10	1.20	1.20	0.0	5.14	10.78	0.00	305	0	334	0	67	**
4	43.75	36.02	32.213	0.000	0.000	0.185	3.05	1.14	1.14	0.0	36.68	111.72	0.00	3622	0	3421	1124	4544	
3	31.25	34.70	39.046	0.000	0.000	0.198	2.99	1.15	1.15	0.0	44.83	134.07	0.00	4124	0	3954	1189	5144	
2	18.75	36.53	38.105	0.000	0.000	0.172	3.10	1.13	1.13	0.0	43.03	133.48	0.00	4000	0	4145	1252	5397	
1	6.25	39.17	40.268	0.000	0.000	0.165	3.14	1.12	1.12	0.0	45.24	141.92	0.00	4218	0	4724	1343	6067	
														18920	0		25206		

\*\* = Section Force Exceeds Solidity Ratio Criteria

#### LoadCase 1.2D + 1.0Di + 1.0Wi Normal

40 mph Normal with 1.00 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor :1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>ai</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)		
6	57.55	4.52	30.064	19.713	19.71	0.433	2.19	1.00	1.00	1.3	49.78	109.25	19.71	7473	3939	420	262	682	
5	50.05	4.48	4.279	1.803	1.803	1.000	2.10	1.00	1.00	1.3	6.08	12.77	1.80	641	234	49	0	8	**
4	43.75	4.43	32.213	17.365	17.36	0.280	2.66	1.00	1.00	1.3	49.58	131.90	17.36	9938	5109	497	345	842	
3	31.25	4.27	39.046	18.255	18.25	0.286	2.64	1.00	1.00	1.3	57.30	151.24	18.26	11153	5654	549	352	901	
2	18.75	4.50	38.105	18.862	18.86	0.255	2.76	1.00	1.00	1.2	56.97	157.04	18.86	10844	5511	600	375	975	
1	6.25	4.82	40.268	16.902	16.90	0.232	2.85	1.00	1.00	1.0	57.17	162.79	16.90	10398	4774	667	375	1042	
														50448	25221		4451		

\*\* = Section Force Exceeds Solidity Ratio Criteria

#### LoadCase 1.2D + 1.0Di + 1.0Wi 45 deg

40 mph 45 deg with 1.00 in Radial Ice

Gust Response Factor (Gh): 0.85

Ice Dead Load Factor :1.00

Ice Importance Factor :1.00

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>ai</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)		
6	57.55	4.52	30.064	19.713	19.71	0.433	2.19	1.20	1.20	1.3	59.73	131.10	19.71	7473	3939	504	262	766	
5	50.05	4.48	4.279	1.803	1.803	1.000	2.10	1.20	1.20	1.3	7.30	15.33	1.80	641	234	58	0	8	**
4	43.75	4.43	32.213	17.365	17.36	0.280	2.66	1.20	1.20	1.3	59.49	158.28	17.36	9938	5109	597	345	942	
3	31.25	4.27	39.046	18.255	18.25	0.286	2.64	1.20	1.20	1.3	68.76	181.49	18.26	11153	5654	659	352	1011	
2	18.75	4.50	38.105	18.862	18.86	0.255	2.76	1.19	1.19	1.2	67.85	187.04	18.86	10844	5511	715	375	1090	
1	6.25	4.82	40.268	16.902	16.90	0.232	2.85	1.17	1.17	1.0	67.11	191.09	16.90	10398	4774	783	375	1158	
														50448	25221		4975		

\*\* = Section Force Exceeds Solidity Ratio Criteria

#### LoadCase 1.0D + 1.0W Service Normal

Serviceability - 60 mph Wind Normal

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>a</sub> (sf)	EPA <sub>ai</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)		
6	57.55	10.17	30.064	0.000	0.000	0.269	2.70	1.00	1.00	0.0	30.06	81.24	0.00	2946	0	702	262	964	
5	50.05	10.09	4.279	0.000	0.000	1.000	2.10	1.00	1.00	0.0	4.28	8.99	0.00	339	0	77	0	18	**
4	43.75	9.98	32.213	0.000	0.000	0.185	3.05	1.00	1.00	0.0	32.21	98.12	0.00	4024	0	832	311	1143	
3	31.25	9.61	39.046	0.000	0.000	0.198	2.99	1.00	1.00	0.0	39.05	116.77	0.00	4582	0	954	329	1284	
2	18.75	10.12	38.105	0.000	0.000	0.172	3.10	1.00	1.00	0.0	38.10	118.20	0.00	4444	0	1017	347	1364	
1	6.25	10.85	40.268	0.000	0.000	0.165	3.14	1.00	1.00	0.0	40.27	126.32	0.00	4687	0	1165	372	1537	
														21022	0		6310		

\*\* = Section Force Exceeds Solidity Ratio Criteria

Site Number: 88009

Code: ANSI/TIA-222-H

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Site Name: CORNWALL CT, CT

Engineering Number: 13668803\_C3\_01

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Customer: ALLTEL COMMUNICATIONS, LLC

### Section Forces

LoadCase 1.0D + 1.0W Service 45 deg

Serviceability - 60 mph Wind 45 deg

Gust Response Factor (Gh): 0.85

Wind Importance Factor (Iw) : 1.00

Section	Elev. (ft)	Q <sub>z</sub> (psf)	A <sub>f</sub> (sf)	A <sub>r</sub> (sf)	Ice (sf)	A <sub>r</sub> (sf)	e	C <sub>f</sub>	D <sub>f</sub>	D <sub>r</sub>	T <sub>iz</sub> (in)	A <sub>e</sub> (sf)	EPA <sub>o</sub> (sf)	EPA <sub>bi</sub> (sf)	Wt. (lb)	Ice Wt. (lb)	F <sub>st</sub> (lb)	F <sub>a</sub> (lb)	Force (lb)	
6	57.55	10.17	30.064	0.000	0.000	0.269	2.70	1.20	1.20	1.20	0.0	36.08	97.49	0.00	2946	0	843	262	1105	
5	50.05	10.09	4.279	0.000	0.000	1.000	2.10	1.20	1.20	1.20	0.0	5.14	10.78	0.00	339	0	92	0	18	**
4	43.75	9.98	32.213	0.000	0.000	0.185	3.05	1.14	1.14	1.14	0.0	36.68	111.72	0.00	4024	0	948	311	1259	
3	31.25	9.61	39.046	0.000	0.000	0.198	2.99	1.15	1.15	1.15	0.0	44.83	134.07	0.00	4582	0	1095	329	1425	
2	18.75	10.12	38.105	0.000	0.000	0.172	3.10	1.13	1.13	1.13	0.0	43.03	133.48	0.00	4444	0	1148	347	1495	
1	6.25	10.85	40.268	0.000	0.000	0.165	3.14	1.12	1.12	1.12	0.0	45.24	141.92	0.00	4687	0	1309	372	1681	
																21022	0			6982

\*\* = Section Force Exceeds Solidity Ratio Criteria

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Site Name: CORNWALL CT, CT

Engineering Number: 13668803\_C3\_01

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Customer: ALLTEL COMMUNICATIONS, LLC

### Equivalent Lateral Force Method

Spectral Response Acceleration for Short Period ( $S_s$ ):	0.17
Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.05
Long-Period Transition Period ( $T_L$ - Seconds):	6
Importance Factor ( $I_p$ ):	1.00
Site Coefficient $F_a$ :	1.60
Site Coefficient $F_v$ :	2.40
Response Modification Coefficient (R):	3.00
Design Spectral Response Acceleration at Short Period ( $S_{ds}$ ):	0.18
Design Spectral Response Acceleration at 1.0 Second Period ( $S_{d1}$ ):	0.09
Seismic Response Coefficient ( $C_s$ ):	0.05
Upper Limit $C_s$ :	0.05
Lower Limit $C_s$ :	0.03
Period based on Rayleigh Method (sec):	0.61
Redundancy Factor (p):	1.30
Seismic Force Distribution Exponent (k):	1.05
Total Unfactored Dead Load:	43.46 k
Seismic Base Shear (E):	2.67 k

#### LoadCase 1.2D + 1.0Ev + 1.0Eh

#### Seismic

Section	Height Above Base (ft)	Weight (lb)	$W_z$ (lb-ft)	$C_{vx}$	Horizontal Force (lb)	Vertical Force (lb)
6	57.55	2,946	211,825	0.095	253	3,643
5	50.05	339	21,062	0.009	25	420
4	43.75	4,024	216,700	0.097	259	4,977
3	31.25	4,582	173,031	0.077	207	5,668
2	18.75	4,444	97,902	0.044	117	5,497
1	6.25	4,687	32,398	0.015	39	5,797
Generic 12' Dipole	65.00	40	3,271	0.001	4	49
Generic 18' Omni	65.00	55	4,497	0.002	5	68
Generic 6' Omni	65.00	25	2,044	0.001	2	31
Alcatel-Lucent RRH2x50-08	65.00	159	12,977	0.006	16	196
Alcatel-Lucent RRH2x40 (700)	65.00	150	12,265	0.005	15	186
Alcatel-Lucent 800 MHz RRH	65.00	159	13,001	0.006	16	197
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	65.00	210	17,172	0.008	21	260
Generic Flat Side Arm	65.00	1,125	91,991	0.041	110	1,392
RFS APXVSP18-C-A20	65.00	171	13,983	0.006	17	212
Commscope DT465B-2XR	65.00	174	14,228	0.006	17	215
Andrew ABT-DFDM-ADB	65.00	1	90	0.000	0	1
Powerwave Allgon TT19-08BP111-001	65.00	96	7,850	0.004	9	119
Raycap DC6-48-60-18-8F	65.00	20	1,635	0.001	2	25
Ericsson RRUS 4478 B14	65.00	180	14,694	0.007	18	222
Ericsson RRUS 4449 B5, B12	65.00	213	17,417	0.008	21	263
Ericsson RRUS 32 (50.8 lbs)	65.00	152	12,462	0.006	15	189
Raycap DC6-48-60-18	65.00	30	2,453	0.001	3	37
Powerwave Allgon 7770.00A	65.00	81	6,623	0.003	8	100
CCI DMP65R-BU4D	65.00	136	11,104	0.005	13	168

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Site Name: CORNWALL CT, CT

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Customer: ALLTEL COMMUNICATIONS, LLC

### Equivalent Lateral Force Method

CCI DMP65R-BU6DA	65.00	318	25,970	0.012	31	393
Fire Warden Cabin	65.00	2,000	163,540	0.073	195	2,474
Sinclair SV228-HF2SNM	63.00	93	7,358	0.003	9	115
Platform with Handrails	62.00	2,000	155,587	0.070	186	2,474
Generic 10' Dish w/ Radome	59.00	1,600	118,124	0.053	141	1,979
Ericsson Radio 4449 B12,B71	57.00	222	15,804	0.007	19	275
Ericsson RRUS 11 B4	57.00	152	10,828	0.005	13	188
Ericsson RRUS 11 B2	57.00	152	10,828	0.005	13	188
RFS APX16DWV-16DWVS-E-A20	57.00	122	8,692	0.004	10	151
RFS APXVAARR24_43-U-NA20	57.00	384	27,316	0.012	33	475
Site Pro TPF123XX	56.00	900	62,886	0.028	75	1,113
Platform w/ Handrails	50.00	5,000	309,996	0.139	370	6,185
Commscope CHB726-01	46.00	10	562	0.000	1	12
Commscope CBC78T-DS-43-2X	46.00	62	3,526	0.002	4	77
Samsung B5/B13 RRH-BR04C	46.00	211	11,975	0.005	14	261
Samsung B2/B66A RRH-BR049	46.00	253	14,376	0.006	17	313
RFS DB-C1-12C-24AB-0Z	46.00	32	1,817	0.001	2	40
RFS DB-C1-12C-24AB-0Z	46.00	32	1,817	0.001	2	40
Samsung MT6407-77A	46.00	245	13,899	0.006	17	303
Commscope JAHH-65B-R3B	46.00	364	20,645	0.009	25	450
Antel LPA-80063/6CF	46.00	108	6,132	0.003	7	134
Access Platform	37.50	5,000	228,848	0.102	273	6,185
		43,458	2,233,202	1.000	2,667	53,753

### LoadCase 0.9D - 1.0Ev + 1.0Eh

### Seismic (Reduced DL)

Section	Height Above Base (ft)	Weight (lb)	W <sub>z</sub> (lb-ft)	C <sub>vx</sub>	Horizontal Force (lb)	Vertical Force (lb)
6	57.55	2,946	211,825	0.095	253	2,542
5	50.05	339	21,062	0.009	25	293
4	43.75	4,024	216,700	0.097	259	3,473
3	31.25	4,582	173,031	0.077	207	3,955
2	18.75	4,444	97,902	0.044	117	3,836
1	6.25	4,687	32,398	0.015	39	4,045
Generic 12' Dipole	65.00	40	3,271	0.001	4	35
Generic 18' Omni	65.00	55	4,497	0.002	5	47
Generic 6' Omni	65.00	25	2,044	0.001	2	22
Alcatel-Lucent RRH2x50-08	65.00	159	12,977	0.006	16	137
Alcatel-Lucent RRH2x40 (700)	65.00	150	12,265	0.005	15	129
Alcatel-Lucent 800 MHz RRH	65.00	159	13,001	0.006	16	137
Alcatel-Lucent TD-RRH8x20-25 w/ Solar	65.00	210	17,172	0.008	21	181
Generic Flat Side Arm	65.00	1,125	91,991	0.041	110	971
RFS APXVSP18-C-A20	65.00	171	13,983	0.006	17	148
Commscope DT465B-2XR	65.00	174	14,228	0.006	17	150
Andrew ABT-DFDM-ADB	65.00	1	90	0.000	0	1
Powerwave Allgon TT19-08BP111-001	65.00	96	7,850	0.004	9	83
Raycap DC6-48-60-18-8F	65.00	20	1,635	0.001	2	17
Ericsson RRUS 4478 B14	65.00	180	14,694	0.007	18	155
Ericsson RRUS 4449 B5, B12	65.00	213	17,417	0.008	21	184
Ericsson RRUS 32 (50.8 lbs)	65.00	152	12,462	0.006	15	132
Raycap DC6-48-60-18	65.00	30	2,453	0.001	3	26
Powerwave Allgon 7770.00A	65.00	81	6,623	0.003	8	70
CCI DMP65R-BU4D	65.00	136	11,104	0.005	13	117
CCI DMP65R-BU6DA	65.00	318	25,970	0.012	31	274

Site Number: 88009

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Site Name: CORNWALL CT, CT

Engineering Number: 13668803\_C3\_01

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Customer: ALLTEL COMMUNICATIONS, LLC

### Equivalent Lateral Force Method

Item	Height (ft)	Weight (lb)	Seismic Weight (lb)	Seismic Coef	Seismic Force (lb)	Seismic Moment (ft-lb)
Fire Warden Cabin	65.00	2,000	163,540	0.073	195	1,726
Sinclair SV228-HF2SNM	63.00	93	7,358	0.003	9	80
Platform with Handrails	62.00	2,000	155,587	0.070	186	1,726
Generic 10' Dish w/ Radome	59.00	1,600	118,124	0.053	141	1,381
Ericsson Radio 4449 B12,B71	57.00	222	15,804	0.007	19	192
Ericsson RRUS 11 B4	57.00	152	10,828	0.005	13	131
Ericsson RRUS 11 B2	57.00	152	10,828	0.005	13	131
RFS APX16DWV-16DWVS-E-A20	57.00	122	8,692	0.004	10	105
RFS APXVAARR24_43-U-NA20	57.00	384	27,316	0.012	33	331
Site Pro TPF123XX	56.00	900	62,886	0.028	75	777
Platform w/ Handrails	50.00	5,000	309,996	0.139	370	4,315
Commscope CHB726-01	46.00	10	562	0.000	1	9
Commscope CBC78T-DS-43-2X	46.00	62	3,526	0.002	4	54
Samsung B5/B13 RRH-BR04C	46.00	211	11,975	0.005	14	182
Samsung B2/B66A RRH-BR049	46.00	253	14,376	0.006	17	219
RFS DB-C1-12C-24AB-0Z	46.00	32	1,817	0.001	2	28
RFS DB-C1-12C-24AB-0Z	46.00	32	1,817	0.001	2	28
Samsung MT6407-77A	46.00	245	13,899	0.006	17	211
Commscope JAHH-65B-R3B	46.00	364	20,645	0.009	25	314
Antel LPA-80063/6CF	46.00	108	6,132	0.003	7	93
Access Platform	37.50	5,000	228,848	0.102	273	4,315
<b>TOTAL</b>		<b>43,458</b>	<b>2,233,202</b>	<b>1.000</b>	<b>2,667</b>	<b>37,508</b>

Section: 1 1 Bot Elev (ft): 0.00 Height (ft): 12.500

Member	Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	PhiC Pn Num (kip)	Pn Num Bolts	Pn Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phiT Pn (kip)	Use %	Controls
				X	Y	Z									
Max Compression Member															
LEG SAE - 6X6X0.625	-86.73	1.2D + 1.0W 45 deg	12.57	50	50	50	63.9	33.0	207.00	0	0	0.00	0.00	41	Member Z
HORIZ DAL - 3X2.5X0.25	-3.59	0.9D + 1.0W Normal	18.12	50	100	13	199.8	36.0	18.86	0	0	0.00	0.00	19	Member Y
DIAG SAU - 4X3X0.25	-10.34	1.2D + 1.0W Normal	22.81	47	47	47	179.2	36.0	15.06	0	0	0.00	0.00	68	Member Z

Member	Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	PhiT Pn Num (kip)	Pn Num Bolts	Pn Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phiT Pn (kip)	Use %	Controls
LEG SAE - 6X6X0.625	66.29	0.9D + 1.0W 45 deg	33	45	211.17	0	0	0.00	0.00		31	Member
HORIZ DAL - 3X2.5X0.25	4.75	1.2D + 1.0W Normal	36	58	85.21	0	0	0.00	0.00	0.00	5	Member
DIAG SAU - 4X3X0.25	8.91	1.2D + 1.0W Normal	36	58	54.76	0	0	0.00	0.00	0.00	16	Member

Member	Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Max Splice Forces						
Top Tension	59.48	0.9D + 1.0W 45 deg	0.00	0	0	
Top Compression	81.13	1.2D + 1.0W 45 deg	0.00	0		
Bot Tension	76.48	0.9D + 1.0W 45 deg	0.00	0		
Bot Compression	98.40	1.2D + 1.0W 45 deg	0.00	0		



### Force/Stress Summary

Section: 2		1		Bot Elev (ft): 12.50				Height (ft): 12.500							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	SAE - 6X6X0.625	-70.65	1.2D + 1.0W 45 deg	12.57	50	50	50	63.9	33.0	207.00	0	0	0.00	0.00	34 Member Z
HORIZ	DAL - 3X2.5X0.25	-2.18	1.2D + 1.0W Normal	16.25	50	50	17	106.7	36.0	60.78	0	0	0.00	0.00	3 Member Y
DIAG	SAU - 4X3X0.25	-10.81	1.2D + 1.0W Normal	21.27	47	47	47	169.0	36.0	16.93	0	0	0.00	0.00	63 Member Z
<b>Max Tension Member</b>															
		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls		
LEG	SAE - 6X6X0.625	51.44	0.9D + 1.0W 45 deg	33	45	211.17	0	0	0.00	0.00			24 Member		
HORIZ	DAL - 3X2.5X0.25	3.14	1.2D + 1.0W Normal	36	58	85.21	0	0	0.00	0.00	0.00		3 Member		
DIAG	SAU - 4X3X0.25	9.45	1.2D + 1.0W Normal	36	58	54.76	0	0	0.00	0.00	0.00		17 Member		
<b>Max Splice Forces</b>															
		Pu (kip)	Load Case			phiRnt (kip)	Use %	Num Bolts	Bolt Type						
Top Tension		43.21	0.9D + 1.0W 45 deg			0.00	0	0							
Top Compression		63.72	1.2D + 1.0W 45 deg			0.00	0								
Bot Tension		59.48	0.9D + 1.0W 45 deg			0.00	0								
Bot Compression		0.00				0.00	0								

Section: 3		1		Bot Elev (ft): 25.00				Height (ft): 12.500							
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
<b>Max Compression Member</b>															
LEG	SAE - 6X6X0.5	-51.13	1.2D + 1.0W 45 deg	12.57	50	50	50	63.9	33.0	167.41	0	0	0.00	0.00	30 Member Z
HORIZ	DAL - 3.5X3X0.3125	-3.61	0.9D + 1.0W Normal	14.37	50	100	17	136.1	36.0	59.82	0	0	0.00	0.00	6 Member Y
DIAG	SAU - 3.5X3X0.25	-11.00	1.2D + 1.0W Normal	19.78	47	47	47	163.4	36.0	16.73	0	0	0.00	0.00	65 Member Z
<b>Max Tension Member</b>															
		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit (kip)	Pn Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls		
LEG	SAE - 6X6X0.5	34.69	0.9D + 1.0W 45 deg	33	45	170.77	0	0	0.00	0.00			20 Member		
HORIZ	DAL - 3.5X3X0.3125	5.62	1.2D + 1.0W Normal	36	58	125.39	0	0	0.00	0.00	0.00		4 Member		
DIAG	SAU - 3.5X3X0.25	9.32	1.2D + 1.0W Normal	36	58	50.54	0	0	0.00	0.00	0.00		18 Member		
<b>Max Splice Forces</b>															
		Pu (kip)	Load Case			phiRnt (kip)	Use %	Num Bolts	Bolt Type						
Top Tension		25.79	0.9D + 1.0W 45 deg			0.00	0	0							
Top Compression		43.69	1.2D + 1.0W 45 deg			0.00	0								
Bot Tension		43.21	0.9D + 1.0W 45 deg			0.00	0								
Bot Compression		0.00				0.00	0								

Site Number: 88009

Code: ANSI/TIA-222-H

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Site Name: CORNWALL CT, CT

Engineering Number: 13668803\_C3\_01

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Customer: ALLTEL COMMUNICATIONS, LLC

### Force/Stress Summary

Section: 4		1		Bot Elev (ft): 37.50				Height (ft): 12.500							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	-31.08	1.2D + 1.0W 45 deg	12.57	50	50	50	63.9	33.0	167.41	0	0	0.00	0.00	18 Member Z
HORIZ	DAL - 3.5X3X0.3125	-7.28	1.2D + 1.0W 45 deg	12.50	100	100	17	136.4	36.0	59.56	0	0	0.00	0.00	12 Member X
DIAG	SAE - 3.5x3.5x0.25	-10.79	1.2D + 1.0W Normal	18.37	47	47	47	143.4	36.0	23.53	0	0	0.00	0.00	45 Member Z

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	20.33	0.9D + 1.0W 45 deg	33	45	170.77	0	0	0.00	0.00		11	Member
HORIZ	DAL - 3.5X3X0.3125	2.02	1.2D + 1.0W Normal	36	58	125.39	0	0	0.00	0.00	0.00	1	Member
DIAG	SAE - 3.5x3.5x0.25	8.56	1.2D + 1.0W Normal	36	58	54.76	0	0	0.00	0.00	0.00	15	Member

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		9.48	0.9D + 1.0W 45 deg	0.00	0	0	
Top Compression		25.35	1.2D + 1.0W 45 deg	0.00	0		
Bot Tension		25.79	0.9D + 1.0W 45 deg	0.00	0		
Bot Compression		0.00		0.00	0		

Section: 5		1		Bot Elev (ft): 50.00				Height (ft): 0.100							
Max Compression Member		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	-5.73	1.2D + 1.0Di + 1.0Wi	0.39	50	50	50	2.0	33.0	189.73	0	0	0.00	0.00	3 Member Z
HORIZ		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	0
DIAG		0.00		0.000	0	0	0	0.0	0.0	0.00	0	0	0.00	0.00	

Max Tension Member		Pu (kip)	Load Case	Fy (ksi)	Fu (ksi)	Phit Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phit Pn (kip)	Use %	Controls
LEG	SAE - 6X6X0.5	21.70	1.2D + 1.0W 45 deg	33	45	170.77	0	0	0.00	0.00		12	Member
HORIZ		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	
DIAG		0.00		0	0	0.00	0	0	0.00	0.00	0.00	0	

Max Splice Forces		Pu (kip)	Load Case	phiRnt (kip)	Use %	Num Bolts	Bolt Type
Top Tension		21.72	0.9D + 1.0W 45 deg	0.00	0	0	
Top Compression		5.96	1.2D + 1.0Di + 1.0Wi	0.00	0		
Bot Tension		9.48	0.9D + 1.0W 45 deg	0.00	0		
Bot Compression		0.00		0.00	0		

Site Number: 88009

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Site Name: CORNWALL CT, CT

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Customer: ALLTEL COMMUNICATIONS, LLC

### Force/Stress Summary

Section: 6		1		Bot Elev (ft): 50.10				Height (ft): 14.900									
		Pu (kip)	Load Case	Len (ft)	Bracing %			F'y (ksi)	Phic (kip)	Pn (kip)	Num Bolts	Num Holes	Shear phiRnv (kip)	Bear phiRn (kip)	Blk Shear phiT (kip)	Use %	Controls
<b>Max Compression Member</b>																	
LEG	SAE - 6X6X0.5	-29.64	1.2D + 1.0W 45 deg	7.45	100	100	100	75.8	33.0	158.36	0	0	0.00	0.00		18	Member Z
HORIZ	DAL - 2.5X2X0.25	-9.36	1.2D + 1.0W 45 deg	7.000	100	100	50	133.7	36.0	34.09	0	0	0.00	0.00		27	Member Y
DIAG	SAU - 3X2X0.25	-7.71	1.2D + 1.0W Normal	10.22	50	50	50	136.0	36.0	18.40	0	0	0.00	0.00		41	Member Z
<b>Max Tension Member</b>																	
LEG	SAE - 6X6X0.5	4.22	1.2D + 1.0W 45 deg	33	45	170.77	0	0	0.00	0.00	0	0	0.00	0.00		2	Member
HORIZ	DAL - 2.5X2X0.25	1.62	1.2D + 1.0W Normal	36	58	69.01	0	0	0.00	0.00	0	0	0.00	0.00		2	Member
DIAG	SAU - 3X2X0.25	17.18	1.2D + 1.0W 45 deg	36	58	38.56	0	0	0.00	0.00	0	0	0.00	0.00		44	Member
<b>Max Splice Forces</b>																	
		Pu (kip)	Load Case														
Top Tension		0.00															
Top Compression		6.07	1.2D + 1.0Di + 1.0Wi														
Bot Tension		21.72	0.9D + 1.0W 45 deg														
Bot Compression		0.00															

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Site Name: CORNWALL CT, CT

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Customer: ALLTEL COMMUNICATIONS, LLC

### Detailed Reactions

Load Case	Radius (ft)	Elevation (ft)	Azimuth (deg)	Node	FX (kip)	FY (kip)	FZ (kip)	(-) = Uplift (+) = Down
<b>1.2D + 1.0W Normal</b>	14.14	00.00	45	1	-7.52	70.81	-14.15	
	14.14	00.00	135	1a	4.60	-44.11	-11.20	
	14.14	00.00	225	1b	-5.36	-44.30	-10.55	
	14.14	00.00	315	1c	8.27	69.75	-13.36	
<b>1.2D + 1.0W 45 deg</b>	14.14	00.00	45	1	-14.78	97.44	-15.86	
	14.14	00.00	135	1a	-6.38	13.62	-3.38	
	14.14	00.00	225	1b	-12.92	-71.34	-12.00	
	14.14	00.00	315	1c	-2.47	12.42	-5.32	
<b>0.9D + 1.0W Normal</b>	14.14	00.00	45	1	-7.16	67.49	-13.77	
	14.14	00.00	135	1a	4.98	-47.47	-11.57	
	14.14	00.00	225	1b	-5.72	-47.52	-10.91	
	14.14	00.00	315	1c	7.91	66.61	-13.01	
<b>0.9D + 1.0W 45 deg</b>	14.14	00.00	45	1	-14.42	94.11	-15.47	
	14.14	00.00	135	1a	-6.01	10.21	-3.75	
	14.14	00.00	225	1b	-13.29	-74.54	-12.36	
	14.14	00.00	315	1c	-2.83	9.33	-4.97	
<b>1.2D + 1.0Di + 1.0Wi Normal</b>	14.14	00.00	45	1	-2.45	42.02	-4.08	
	14.14	00.00	135	1a	0.18	16.76	-1.59	
	14.14	00.00	225	1b	-0.37	15.39	-1.60	
	14.14	00.00	315	1c	2.64	40.14	-3.72	
<b>1.2D + 1.0Di + 1.0Wi 45 deg</b>	14.14	00.00	45	1	-4.05	48.13	-4.49	
	14.14	00.00	135	1a	-2.29	30.09	0.19	
	14.14	00.00	225	1b	-2.03	9.22	-1.96	
	14.14	00.00	315	1c	0.23	26.88	-1.89	
<b>1.2D + 1.0Ev + 1.0Eh Normal M1</b>	14.14	00.00	45	1	-1.89	16.15	-2.18	
	14.14	00.00	135	1a	-1.12	9.28	0.85	
	14.14	00.00	225	1b	1.12	9.28	0.85	
	14.14	00.00	315	1c	1.89	16.15	-2.18	
<b>1.2D + 1.0Ev + 1.0Eh 45 deg M1</b>	14.14	00.00	45	1	-2.25	17.58	-2.26	
	14.14	00.00	135	1a	-1.70	12.71	1.32	
	14.14	00.00	225	1b	0.76	7.85	0.77	
	14.14	00.00	315	1c	1.31	12.71	-1.71	
<b>0.9D - 1.0Ev + 1.0Eh Normal M1</b>	14.14	00.00	45	1	-1.44	12.31	-1.72	
	14.14	00.00	135	1a	-0.66	5.44	0.39	
	14.14	00.00	225	1b	0.66	5.44	0.39	
	14.14	00.00	315	1c	1.44	12.31	-1.72	
<b>0.9D - 1.0Ev + 1.0Eh 45 deg M1</b>	14.14	00.00	45	1	-1.79	13.73	-1.80	
	14.14	00.00	135	1a	-1.25	8.87	0.86	
	14.14	00.00	225	1b	0.31	4.01	0.31	
	14.14	00.00	315	1c	0.86	8.87	-1.25	
<b>1.0D + 1.0W Service Normal</b>	14.14	00.00	45	1	-2.85	26.88	-4.78	
	14.14	00.00	135	1a	0.42	-4.64	-2.28	
	14.14	00.00	225	1b	-0.67	-4.99	-2.10	
	14.14	00.00	315	1c	3.11	26.21	-4.48	
<b>1.0D + 1.0W Service 45 deg</b>	14.14	00.00	45	1	-4.86	34.27	-5.26	
	14.14	00.00	135	1a	-2.63	11.34	-0.13	
	14.14	00.00	225	1b	-2.77	-12.48	-2.49	
	14.14	00.00	315	1c	0.14	10.33	-2.24	

Site Number: 88009

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Max Uplift:	74.54 (kip)	Moment Ice:	552.13 (kip-ft)	Moment:	2,386.95 (kip-ft)	1.2D + 1.0W 45 deg
Max Down:	97.44 (kip)	Total Down Ice:	114.31 (kip)	Total Down:	52.15 (kip)	
Max Shear:	21.67 (kip)	Total Shear Ice:	11.51 (kip)	Total Shear:	51.69 (kip)	

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### Deflections and Rotations

Load Case	Elevation (ft)	Deflection (ft)	Twist (deg)	Sway (deg)	Resultant (deg)
114 mph Normal with No Ice	37.50	0.031	1.6057	0.8363	1.7563
114 mph Normal with No Ice	50.00	0.047	2.2316	2.7740	3.5602
114 mph Normal with No Ice	57.55	0.410	2.3988	2.3594	3.3647
114 mph Normal with No Ice	65.00	0.648	2.3735	1.7717	2.9519
114 mph 45 degree with No Ice	37.50	0.033	1.8250	1.0194	2.0625
114 mph 45 degree with No Ice	50.00	0.049	2.5473	3.3319	4.1941
114 mph 45 degree with No Ice	57.55	0.463	2.6342	2.7855	3.8338
114 mph 45 degree with No Ice	65.00	0.709	2.6240	1.8684	3.1647
114 mph Normal with No Ice (Reduced DL)	37.50	0.031	1.5730	0.7760	1.6821
114 mph Normal with No Ice (Reduced DL)	50.00	0.047	2.1559	2.5489	3.3384
114 mph Normal with No Ice (Reduced DL)	57.55	0.404	2.3147	2.3071	3.2681
114 mph Normal with No Ice (Reduced DL)	65.00	0.641	2.2913	1.7515	2.8834
114 mph 45 deg with No Ice (Reduced DL)	37.50	0.033	1.7959	0.9589	1.9996
114 mph 45 deg with No Ice (Reduced DL)	50.00	0.049	2.4907	3.1041	3.9798
114 mph 45 deg with No Ice (Reduced DL)	57.55	0.457	2.5765	2.7056	3.7361
114 mph 45 deg with No Ice (Reduced DL)	65.00	0.700	2.5667	1.8407	3.1021
40 mph Normal with 1.00 in Radial Ice	37.50	0.008	0.8661	0.6591	1.0865
40 mph Normal with 1.00 in Radial Ice	50.00	0.011	1.2339	2.3699	2.6719
40 mph Normal with 1.00 in Radial Ice	57.55	0.141	1.2769	0.9952	1.6190
40 mph Normal with 1.00 in Radial Ice	65.00	0.193	1.2736	0.4805	1.3273
40 mph 45 deg with 1.00 in Radial Ice	37.50	0.009	1.0018	0.7143	1.2291
40 mph 45 deg with 1.00 in Radial Ice	50.00	0.013	1.4156	2.5441	2.9114
40 mph 45 deg with 1.00 in Radial Ice	57.55	0.174	1.4438	1.2626	1.9180
40 mph 45 deg with 1.00 in Radial Ice	65.00	0.242	1.4442	0.7248	1.5570
Seismic Normal M1	37.50	0.002	0.0076	0.2473	0.2475
Seismic Normal M1	50.00	0.003	0.0017	0.9202	0.9202
Seismic Normal M1	57.55	0.015	0.0053	0.2485	0.2486
Seismic Normal M1	65.00	0.027	0.0049	0.1400	0.1400
Seismic 45 deg M1	37.50	0.002	0.0075	0.2604	0.2605
Seismic 45 deg M1	50.00	0.003	0.0011	0.9623	0.9623
Seismic 45 deg M1	57.55	0.016	0.0032	0.3056	0.3056
Seismic 45 deg M1	65.00	0.029	0.0031	0.1638	0.1638
Seismic (Reduced DL) Normal M1	37.50	0.002	0.0069	0.1796	0.1797
Seismic (Reduced DL) Normal M1	50.00	0.003	0.0007	0.6648	0.6648
Seismic (Reduced DL) Normal M1	57.55	0.015	0.0028	0.2008	0.2009
Seismic (Reduced DL) Normal M1	65.00	0.027	0.0025	0.1199	0.1199
Seismic (Reduced DL) 45 deg M1	37.50	0.002	0.0068	0.1925	0.1926
Seismic (Reduced DL) 45 deg M1	50.00	0.003	0.0003	0.7062	0.7062
Seismic (Reduced DL) 45 deg M1	57.55	0.016	0.0017	0.2535	0.2535
Seismic (Reduced DL) 45 deg M1	65.00	0.029	0.0016	0.1382	0.1382
Serviceability - 60 mph Wind Normal	37.50	0.009	0.8651	0.3648	0.9165
Serviceability - 60 mph Wind Normal	50.00	0.013	1.1928	1.2176	1.7045
Serviceability - 60 mph Wind Normal	57.55	0.148	1.2359	0.7451	1.4431
Serviceability - 60 mph Wind Normal	65.00	0.210	1.2331	0.5043	1.3166
Serviceability - 60 mph Wind 45 deg	37.50	0.009	1.0574	0.4236	1.1216
Serviceability - 60 mph Wind 45 deg	50.00	0.014	1.4583	1.3924	2.0163
Serviceability - 60 mph Wind 45 deg	57.55	0.183	1.4958	0.9129	1.7523
Serviceability - 60 mph Wind 45 deg	65.00	0.253	1.4951	0.5652	1.5748

### Maximum Reactions Summary

Anchor Group	Vertical (kip)				Horizontal (kip)		Moment (kip-ft)	
	DL+WL	DL+WL+IL	UpLift	Shear	DL+WL	DL+WL+IL	DL+WL	DL+WL+IL
Base	52.15	114.31	97.44	21.67	51.69	11.51	2386.95	552.13

Site Number: 88009

Code: ANSI/TIA-222-H

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Site Name: CORNWALL CT, CT

Engineering Number: 13668803\_C3\_01

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Customer: ALLTEL COMMUNICATIONS, LLC

**Site Name:** Cornwall, CT  
**Site Number:** 88009  
**Tower Type:** SST w/4 Legs  
**Design Loads (Factored) - Analysis per TIA-222-H Standards**

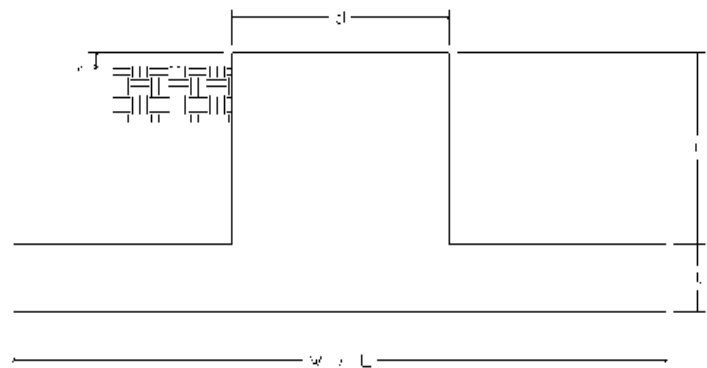
## Monolithic Mat & Pier Foundation Analysis

Foundation Analysis Parameters		
Design / Analysis / Mapping:	Mapping	-
Compression/Leg:	97.4	k
Uplift/Leg:	74.5	k
Total Shear:	51.7	k
Moment:	2,387.0	k-ft
Tower + Appurtenance Weight:	43.5	k
Depth to Base of Foundation (l + t - h):	4.92	ft
Diameter of Pier (d):	4	ft
Length of Pier (l):	2.5	ft
Height of Pier above Ground (h):	0.5	ft
Width of Pad (W):	30	ft
Length of Pad (L):	30	ft
Thickness of Pad (t):	2.92	ft
Tower Leg Center to Center:	20	ft
Number of Tower Legs:	4	-
Tower Center from Mat Center:	0	ft
Depth Below Ground Surface to Water Table:	99	ft
Unit Weight of Concrete:	150	pcf
Unit Weight of Soil Above Water Table:	125	pcf
Unit Weight of Water:	62.4	pcf
Unit Weight of Soil Below Water Table:	62.6	pcf
Friction Angle of Uplift:	35	°
Coefficient of Shear Friction:	0.5	-
Ultimate Compressive Bearing Pressure:	40,000	psf
Ultimate Passive Pressure on Pad Face:	1,914	psf
$f_{\text{Soil and Concrete Weight}}$ :	0.9	-
$f_{\text{Soil}}$ :	0.75	-

Overturning Moment Usage		
Design OTM:	2667.1	k-ft
OTM Resistance:	9299.4	k-ft
Design OTM / OTM Resistance:	29%	Pass

Soil Bearing Pressure Usage		
Net Bearing Pressure:	1035	psf
Factored Nominal Bearing Pressure:	30000	psf
Factored Nominal (Net) Bearing Pressure:	3%	Pass
Load Direction Controlling Design Bearing Pressure:	<i>Diagonal to Pad Edge</i>	

Sliding Factor of Safety		
Ultimate Friction Resistance:	330.8	k
Ultimate Passive Pressure Resistance:	125.7	k
Total Factored Sliding Resistance:	342.4	k
Sliding Design / Sliding Resistance:	15%	Pass







GPD Engineering and Architecture Professional Corporation  
 520 South Main Street, Suite 2531  
 Akron, OH 44311

Maser Consulting Contact:  
 peter.albano@colliersengineering.com

## Antenna Mount Analysis Report and PMI Requirements

### Mount Analysis

SMART Tool Project #: 10050479  
 GPD Project #: 2021740.468041.01  
 Maser Consulting Project #: 21777486  
 June 17, 2021

#### Site Information

Site ID: 468041-VZW/MOHAWK MTN CT  
 Site Name: MOHAWK MTN CT  
 Carrier Name: Verizon Wireless  
 Address: 36 MOHAWK MOUNTAIN RD.  
 CORNWALL, Connecticut 06753,  
 Litchfield County  
 Latitude: 41.821289°  
 Longitude: -73.296433°

#### Structure Information

Tower Type: 65-Ft Self Support  
 Mount Type: Pipe Mounts  
 FUZE ID #: 16271975

### Analysis Results

Pipe Mounts: 85.3% Pass

#### **\*\*\*Contractor PMI Requirements:**

**Included at the end of this MA report**  
**Available & Submitted via portal at <https://pmi.vzwsmart.com>**  
**Contractor - Please Review Specific Site PMI Requirements Upon Award**  
**Requirements also Noted on Mount Modification Drawings**  
**Requirements may also be Noted on A & E drawings**

Report Prepared By: Nick Andrews

Respectfully Submitted By:

Christopher J. Scheks, P.E.  
 Connecticut #: 0030026



6/17/2021

**Executive Summary:**

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

This analysis is inclusive of the mount structure only and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

**Sources of Information:**

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	Verizon RFDS Site ID: 324384, dated 3/16/2021
Desktop Mount Mapping	Mapping Form by Paul J. Ford & Company, PSLC #: 468041, dated 4/20/2021

**Analysis Criteria:**

Codes and Standards:	ANSI/TIA-222-H
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), $V_{ULT}$ : 114 mph Ice Wind Speed (3-sec. Gust): 40 mph Design Ice Thickness: 1.00 in Risk Category: II Exposure Category: B Topographic Factor: 1.572 Topographic Feature Considered: Hill Topographic Method: Method 2 Ground Elevation Factor, $K_e$ : 0.941
Seismic Parameters:	$S_s$ : 0.173 $S_1$ : 0.054
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Live Load, $L_v$ : N/A Maintenance Live Load, $L_m$ : N/A
Analysis Software:	RISA-3D (V17.0.2)

**Final Loading Configuration:**

The following equipment has been considered for the analysis of the mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
46.50	46.50	3	Samsung	MT6407-77A	Added
		3	Commscope	CBC78T-DS-43-2X	Added
		1	Commscope	CHB626-43-2X	Added
		3	Samsung	B2/B66A RRH-BR049	Added
		3	Samsung	B5/B13 RRH-BR04C	Added
		6	Commscope	JAHH-65B-R3B	Retained
		4	Antel	LPA-80063/6CF 5	Retained
		2	RFS	DB-C1-12C-24AB-0Z*	Retained

\* Equipment to be flush mounted directly to the Self Support. They are not mounted on Platform mounts and are not included in this mount analysis.

Any proposed antennas not currently installed should be mounted such that the centerline of the antennas does not exceed 6 inches vertically from the center of the antenna mounts.

The tower has existing OVP units. It is acceptable to install up to any three (3) of the OVP model numbers listed below as required at any location other than the mount face without affecting the structural capacity of the mount. If OVP units are installed on the mount face, a mount re-analysis may be required unless replacing an existing OVP.

Model Number	Ports	AKA
DB-CQ-12C-24AB-0Z	6	OVP-6
RVZDC-6627-PF-48	12	OVP-12

**Standard Conditions:**

1. All engineering services are performed on the basis that the information provided to GPD and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to GPD to verify deviation will not adversely impact the analysis.
2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.

Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped by GPD, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer’s specifications.

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.
6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. GPD is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
  - o Channel, Solid Round, Angle, Plate      ASTM A36 (Gr. 36)
  - o HSS (Rectangular)                              ASTM 500 (Gr. B-46)
  - o Pipe    ASTM A53 (Gr. B-35)
  - o Threaded Rod                                      F1554 (Gr. 36)
  - o Bolts    ASTM A325

**Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by GPD.**

**Analysis Results:**

Component	Utilization %	Pass/Fail
Mount Pipe P2.0 STD	84.0 %	Pass
Mount Pipe P2.5 STD	85.3 %	Pass
Pipe Mount Connections	61.4 %	Pass
<b>Structure Rating – (Controlling Utilization of all Components)</b>		<b>85.3%</b>

**Recommendation:**

The existing mounts are **SUFFICIENT** for the final loading configuration and do not require modifications.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

**Attachments:**

1. Mount Photos
2. Desktop Mount Mapping Report (for reference only)
3. Mount Geometry Verification
4. Analysis Calculations
5. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
6. Antenna Placement Diagrams





### Desktop Mount Mapping Form

Site Name:	MOHAWK MTN CT	Tower Type:	Self-Support Tower
Site ID:		Tower Owner:	
PSLC:	468041	Tower Height (Ft.):	
Customer:		Mount Elevation (Ft.):	
Colliers Project No.:	21777486	Date:	4/20/2021

The information contained herein is considered confidential in nature and is to be used only for the specific customer it was intended for. Reproduction, transmission, publication, modification or disclosure by any method is prohibited except by express written permission of PJF.

Document Type	Provided? (Yes/No)	Source Name	Project No.	Dated	Comments/Remarks
Previous Mount Mapping	No				
Previous Mapping Photos	No				
Previous Mount Analysis	Yes	MOHAWKMTNCT_AWSPCS850MOUN TSA_20180618	140308	6/18/2018	Provided and is a good source for relevant mount information.
Previous Mount Modifications	No				
Previous Structural Analysis	Yes	ATCColloPrj_OAA715460_Structural_2017-11-01	OAA715460_C3_01	10/31/2017	Provided but not necessary for MA. It may provide some information on the tower platform but it isn't clear at this time.
Construction Drawings	Yes	MOHAWK_MTN_CT_AWSPrelimCD's_20180118	12162881	11/2/2017	Provided and is a good source for relevant mount information.
Closeout Package	Yes	Mohawk Mtn COP		2/15/2017	Provided but not necessary for MA.
Closeout Photos	Yes				Provided but pictures weren't particularly helpful.
Handover Package	No				
New Build 445 Documentation	No				
Other	No				
Previous PMI	No				

The **desktop mount mapping** is based on the engineering review of the available site documents in FUZE, as listed above, in place of a full mount mapping. It is assumed that the information provided in the documents listed above, provide an accurate representation of the existing mount. EOR reserves the right and will typically require additional clarification and verification as will be included in the PMI requirements. During the Post Modification Inspection (PMI) process, the GC on site will be required to confirm all questions, confirmations, and validations as posed by the EOR. The engineering review for this desktop mount mapping was performed in accordance to the ANSI/TIA-222-H requirements and Verizon's NSTD446 standard.



Photo taken from: Closeout Package

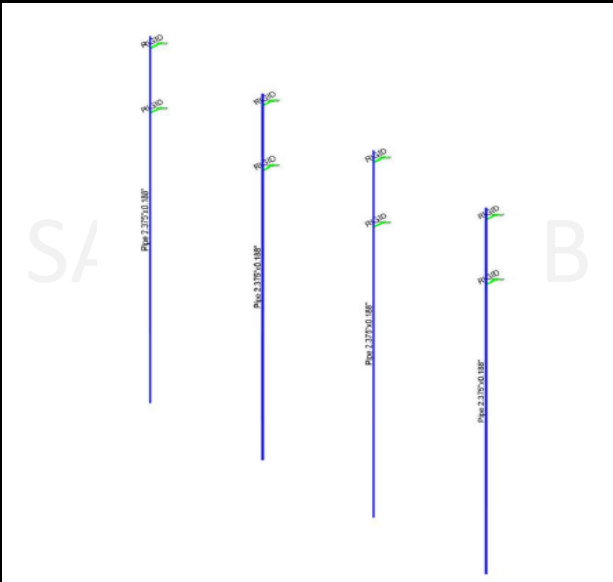
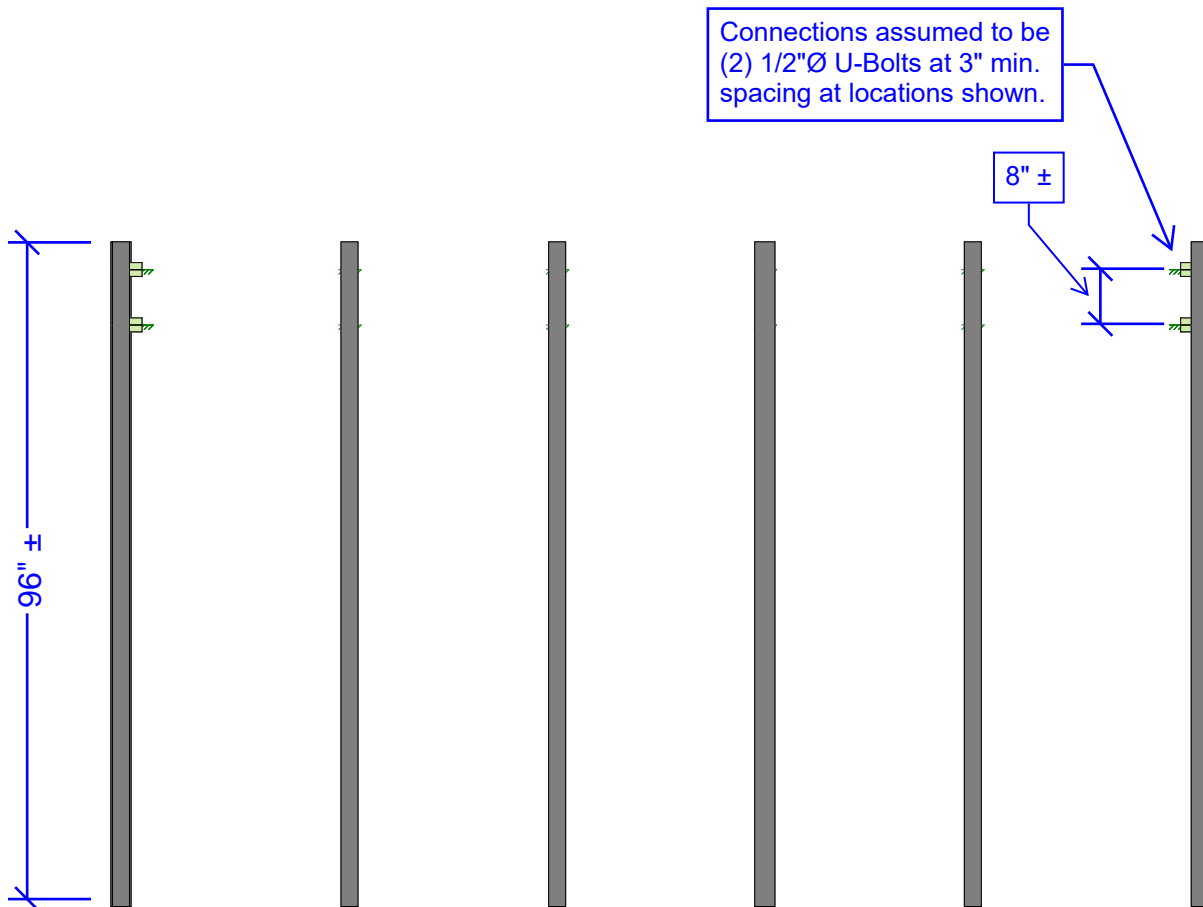


Photo taken from: Previous MA



## MOUNT FRONT VIEW

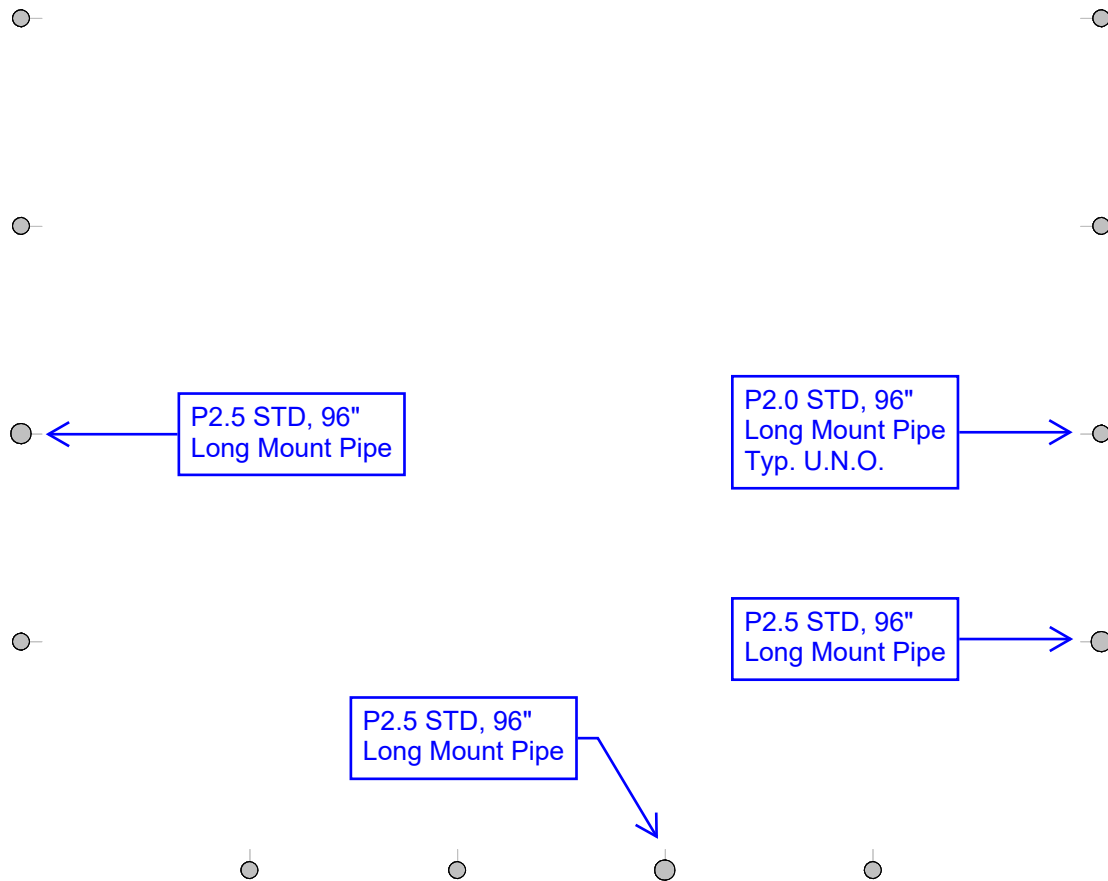


## MOUNT GEOMETRY VERIFICATION

**CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND MEMBER SIZES SHOWN IN THIS SKETCH. DOCUMENT ALL VARIATIONS OR DEVIATIONS VIA PHOTOS AND SKETCHES AND PROVIDE TO THE EOR FOR EVALUATION.**



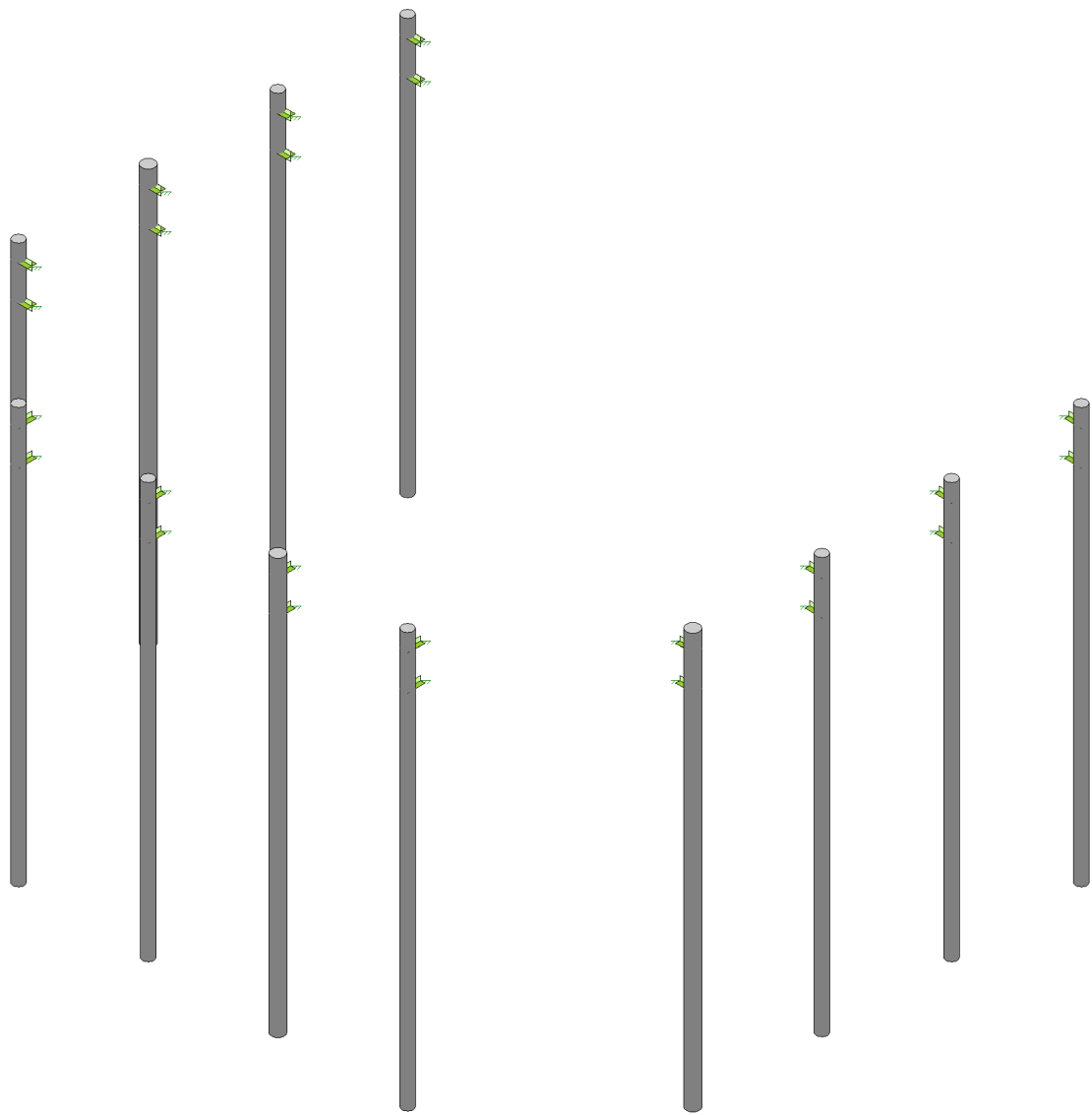
## MOUNT PLAN VIEW



## MOUNT GEOMETRY VERIFICATION

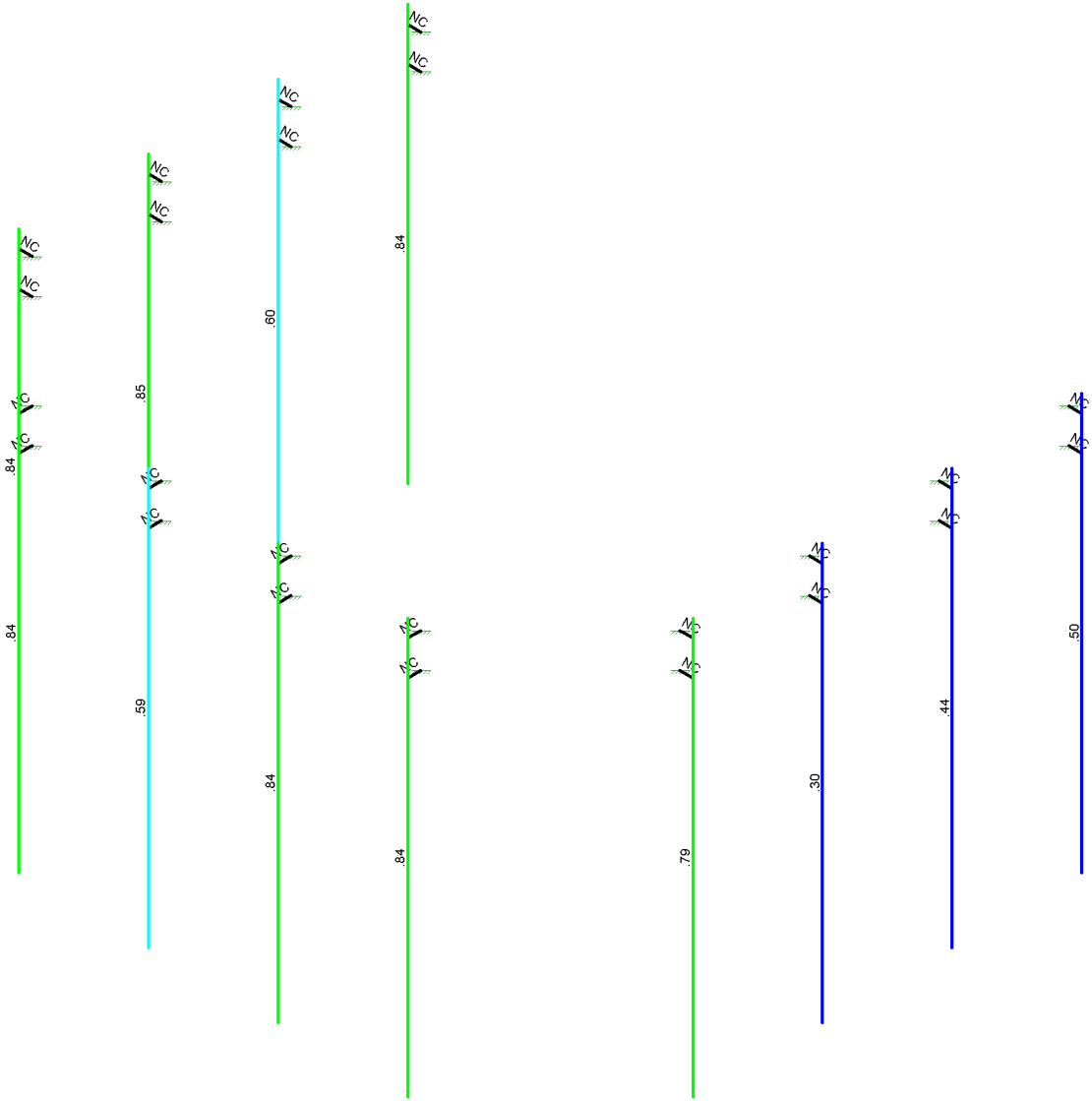
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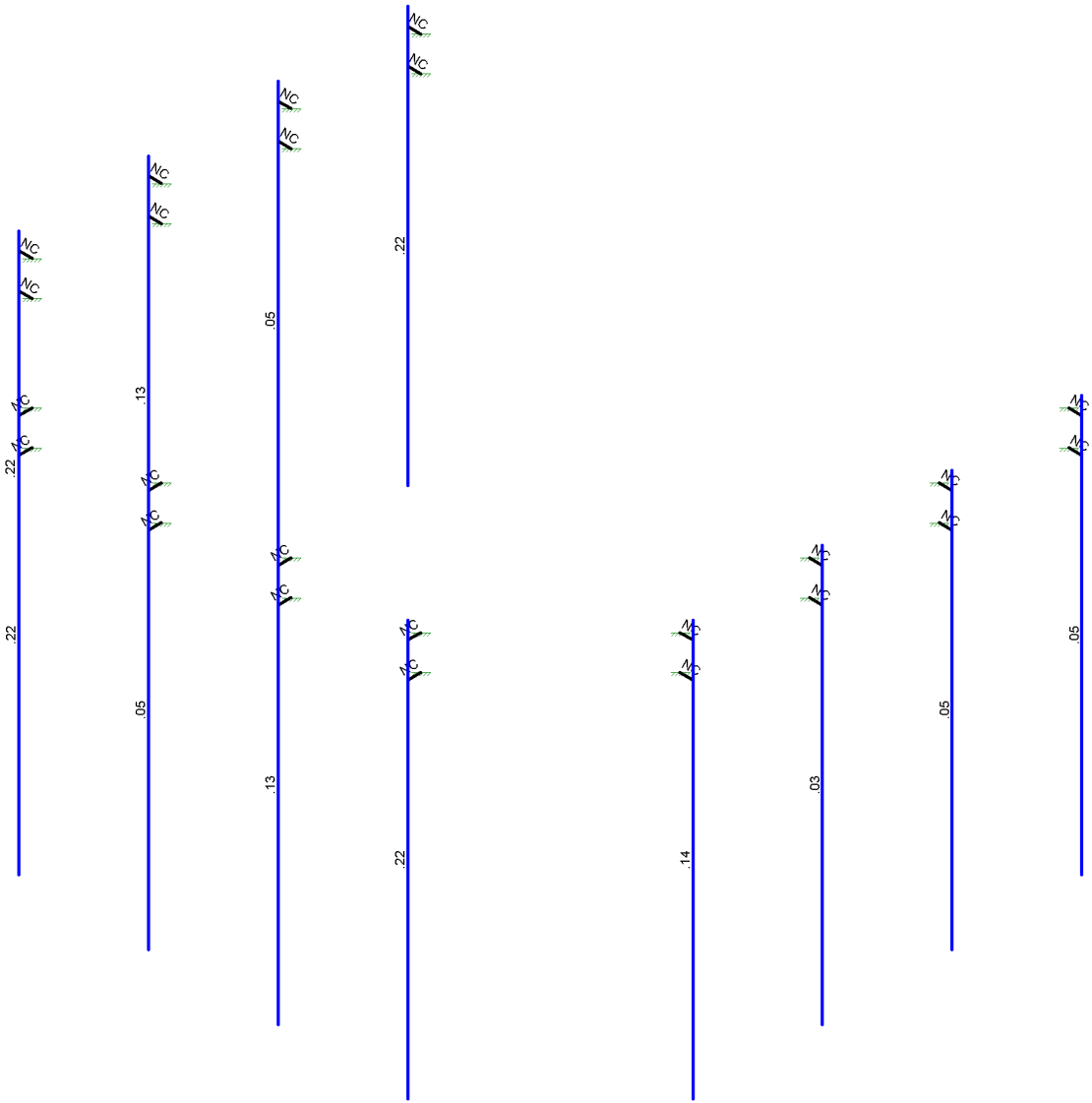


Code Check (Env)	
Black	No Calc
Red	> 1.0
Magenta	.90-1.0
Green	.75-90
Cyan	.50-.75
Blue	0-.50





Shear Check (Env)	
Black	No Calc
Red	> 1.0
Magenta	.90-1.0
Green	.75-90
Cyan	.50-.75
Blue	0-.50





























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FÎ	T ÚI Ó	Z	Í ÊH	Í ÊH	€	À FEE
FÏ	T ÚFÔ	Y	J&H H	J&H H	€	À FEE
FÌ	T ÚFÔ	Z	Í ÊH	Í ÊH	€	À FEE
FJ	T ÚGÔ	Y	J&H H	J&H H	€	À FEE
G€	T ÚGÔ	Z	Í ÊH	Í ÊH	€	À FEE
GF	T ÚHÔ	Y	J&H H	J&H H	€	À FEE
GG	T ÚHÔ	Z	Í ÊH	Í ÊH	€	À FEE
GH	T ÚI Ô	Y	FF&J J	FF&J J	€	À FEE
G	T ÚI Ô	Z	Í ÊÍ	Í ÊÍ	€	À FEE

**A Ya Vyf'8 jgfh]Vi hYX'@ UXg'f6 @' (\* : 'Gfi Wñ fy'K c'f'f \$'8 Y] H**

T^{ à^!Á&æ^}	Öá^&á}	Ú&éÁ æ} á à^Z&D(É) áÁ æ} á à^Z&D(É) Ú&éÁ} &æá} Z&Á á	Ú&éÁ æ} á à^Z&D(É) áÁ æ} á à^Z&D(É) Ú&éÁ} &æá} Z&Á á	Ú&éÁ æ} á à^Z&D(É) áÁ æ} á à^Z&D(É) Ú&éÁ} &æá} Z&Á á	Ú&éÁ æ} á à^Z&D(É) áÁ æ} á à^Z&D(É) Ú&éÁ} &æá} Z&Á á	Ú&éÁ æ} á à^Z&D(É) áÁ æ} á à^Z&D(É) Ú&éÁ} &æá} Z&Á á
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G	T ÚFOE	Z	J&H H	J&H H	€	À FEE



**A Ya Vyf'8 ]ghf]Vi hYX' @ UXg'f6 @' (, : 'Gfi Wi fy'K c''f& \$ 8 Y ]t**

	T ^ { à\Áæ ^ }	Öä ^ & çä }	ÚçæóÁ æ } á à ^ ŽaDæ(É) áÁ æ } á à ^ ŽaDæ(É) ÚçæóÁ æ } ŽdĀ á	Ó) á ÁĴ & æā } ŽdĀ á		
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H	T ÚGOE	Ý	Ě ĚĪ	Ě ĚĪ	€	Ā FEE
I	T ÚGOE	Z	FFĚĪ J	FFĚĪ J	€	Ā FEE
Í	T ÚHOE	Ý	Ě ĚĚ	Ě ĚĚ	€	Ā FEE
Ī	T ÚHOE	Z	JĚĚ H	JĚĚ H	€	Ā FEE
Ī	T ÚI OE	Ý	Ě ĚĚ	Ě ĚĚ	€	Ā FEE
Ì	T ÚI OE	Z	JĚĚ H	JĚĚ H	€	Ā FEE
J	T ÚFÓ	Ý	Ě ĚĚ	Ě ĚĚ	€	Ā FEE
F€	T ÚFÓ	Z	JĚĚ H	JĚĚ H	€	Ā FEE
FF	T ÚGÓ	Ý	Ě ĚĪ	Ě ĚĪ	€	Ā FEE
FG	T ÚGÓ	Z	FFĚĪ J	FFĚĪ J	€	Ā FEE
FH	T ÚHÓ	Ý	Ě ĚĚ	Ě ĚĚ	€	Ā FEE
FI	T ÚHÓ	Z	JĚĚ H	JĚĚ H	€	Ā FEE
FÍ	T ÚI Ó	Ý	Ě ĚĚ	Ě ĚĚ	€	Ā FEE
FĪ	T ÚI Ó	Z	JĚĚ H	JĚĚ H	€	Ā FEE
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FÌ	T ÚFÔ	Z	JĚĚ H	JĚĚ H	€	Ā FEE
FJ	T ÚGÔ	Ý	Ě ĚĚ	Ě ĚĚ	€	Ā FEE
G€	T ÚGÔ	Z	JĚĚ H	JĚĚ H	€	Ā FEE
GF	T ÚHÔ	Ý	Ě ĚĚ	Ě ĚĚ	€	Ā FEE
GG	T ÚHÔ	Z	JĚĚ H	JĚĚ H	€	Ā FEE
GH	T ÚI Ô	Ý	Ě ĚĪ	Ě ĚĪ	€	Ā FEE
G	T ÚI Ô	Z	FFĚĪ J	FFĚĪ J	€	Ā FEE

**A Ya Vyf'8 ]ghf]Vi hYX' @ UXg'f6 @' (- : 'Gfi Wi fy'K c''f& \$ 8 Y ]t**

	T ^ { à\Áæ ^ }	Öä ^ & çä }	ÚçæóÁ æ } á à ^ ŽaDæ(É) áÁ æ } á à ^ ŽaDæ(É) ÚçæóÁ æ } ŽdĀ á	Ó) á ÁĴ & æā } ŽdĀ á		
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G	T ÚFOE	Z	Ī ĚĚ	Ī ĚĚ	€	Ā FEE
H	T ÚGOE	Ý	ĚĚĚĪ J	ĚĚĚĪ J	€	Ā FEE
I	T ÚGOE	Z	Ī ĚĪ	Ī ĚĪ	€	Ā FEE
Í	T ÚHOE	Ý	Ě ĚĚ H	Ě ĚĚ H	€	Ā FEE
Ī	T ÚHOE	Z	Ī ĚĚ	Ī ĚĚ	€	Ā FEE
Ī	T ÚI OE	Ý	Ě ĚĚ H	Ě ĚĚ H	€	Ā FEE
Ì	T ÚI OE	Z	Ī ĚĚ	Ī ĚĚ	€	Ā FEE
J	T ÚFÓ	Ý	Ě ĚĚ H	Ě ĚĚ H	€	Ā FEE
F€	T ÚFÓ	Z	Ī ĚĚ	Ī ĚĚ	€	Ā FEE
FF	T ÚGÓ	Ý	ĚĚĚĪ J	ĚĚĚĪ J	€	Ā FEE
FG	T ÚGÓ	Z	Ī ĚĪ	Ī ĚĪ	€	Ā FEE
FH	T ÚHÓ	Ý	Ě ĚĚ H	Ě ĚĚ H	€	Ā FEE
FI	T ÚHÓ	Z	Ī ĚĚ	Ī ĚĚ	€	Ā FEE
FÍ	T ÚI Ó	Ý	Ě ĚĚ H	Ě ĚĚ H	€	Ā FEE
FĪ	T ÚI Ó	Z	Ī ĚĚ	Ī ĚĚ	€	Ā FEE
FĪ	T ÚFÔ	Ý	Ě ĚĚ H	Ě ĚĚ H	€	Ā FEE
FÌ	T ÚFÔ	Z	Ī ĚĚ	Ī ĚĚ	€	Ā FEE
FJ	T ÚGÔ	Ý	Ě ĚĚ H	Ě ĚĚ H	€	Ā FEE
G€	T ÚGÔ	Z	Ī ĚĚ	Ī ĚĚ	€	Ā FEE
GF	T ÚHÔ	Ý	Ě ĚĚ H	Ě ĚĚ H	€	Ā FEE
GG	T ÚHÔ	Z	Ī ĚĚ	Ī ĚĚ	€	Ā FEE
GH	T ÚI Ô	Ý	ĚĚĚĪ J	ĚĚĚĪ J	€	Ā FEE
G	T ÚI Ô	Z	Ī ĚĪ	Ī ĚĪ	€	Ā FEE







































**TIA-222-H CONNECTION CHECK**  
**Mount to Tower Connection - Typ. All Sectors**  
**2021740.468041.01**

Bolt Information		
Bolt Diameter (d)	0.5	in
Net Tensile Area (A <sub>n</sub> )	0.142	in <sup>2</sup>
# of Bolts Total (n)	4	
Bolt Distance Up-Down	3	in
Bolt Distance Left-Right	3	in
Bolt Grade	A325N	
Bolt Tensile Strength (F <sub>ub</sub> )	120	ksi

RISA 3D Reactions (Up-Down)		
Moment (M)	2.53	k-ft
Axial (T)	0.80	kips
Shear (V)	0.20	kips

RISA 3D Reactions (Left-Right)		
Moment (M)	0.45	k-ft
Axial (T)	0.32	kips
Shear (V)	0.59	kips

Bolt Capacity (Up-Down)		
Nominal Tensile Strength (R <sub>nt</sub> )	17.028	kips
Nominal Shear Strength (R <sub>nv</sub> )	11.78	kips
Bolt Tensile Force (T <sub>ub</sub> )	7.85	kips
Bolt Shear Force (V <sub>ub</sub> )	0.050	kips
$T_{ub}/\phi R_{nt}$	0.61431	
$V_{ub}/\phi R_{nv}$	0.00566	
$(V_{ub}/\phi R_{nv})^2 + (T_{ub}/\phi R_{nt})^2$	0.37741	
<b>Bolt Capacity =</b>	61.4%	OK

Bolt Capacity (Left-Right)		
Nominal Tensile Strength (R <sub>nt</sub> )	17.028	kips
Nominal Shear Strength (R <sub>nv</sub> )	11.78	kips
Bolt Tensile Force (T <sub>ub</sub> )	0.99	kips
Bolt Shear Force (V <sub>ub</sub> )	0.148	kips
$T_{ub}/\phi R_{nt}$	0.07722	
$V_{ub}/\phi R_{nv}$	0.01670	
$(V_{ub}/\phi R_{nv})^2 + (T_{ub}/\phi R_{nt})^2$	0.00624	
<b>Bolt Capacity =</b>	7.7%	OK

## Mount Desktop – Post Modification Inspection (PMI) Report Requirements

### Documents & Photos Required from Contractor – **Passing Mount Analysis**

---

**Purpose** – to provide GPD the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

#### **Base Requirements:**

- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed contact GPD immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded to <https://pmi.vzsmart.com> as depicted on the drawings


















#### **Photo Requirements:**

- Base and “During Installation Photos”
  - Base pictures include
    - Photo of Gate Signs showing the tower owner, site name, and number
    - Photo of carrier shelter showing the carrier site name and number if available
    - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
  - “During Installation Photos if provided - must be placed only in this folder
- Photos taken at ground level
  - Overall tower structure before and after installation of the equipment modifications
  - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed
- Photos taken at Mount Elevation
  - Photos showing each individual sector before and also after installation of equipment.

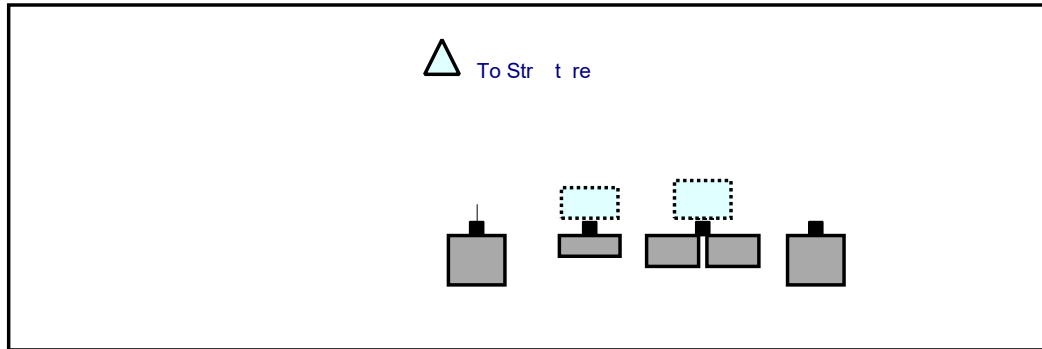




**Schedule A – Photo & Document File Structure**

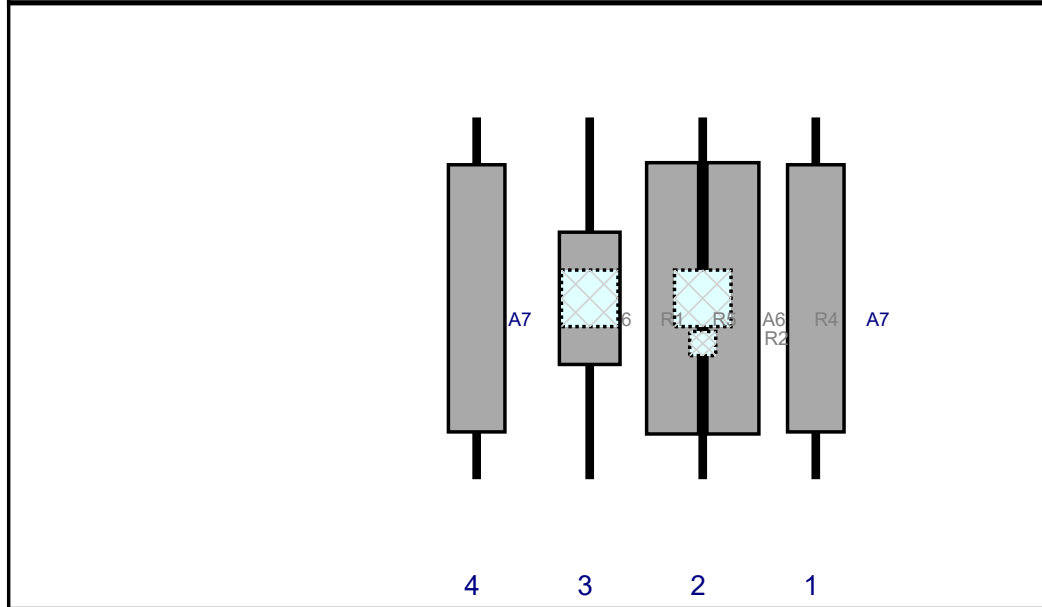
-  VzW Site Number / Name
  -  Base & “During Installation” Photos
  
  -  Pre-Installation Photos
    -  Alpha
    -  Beta
    -  Gamma
    -  Ground Level
    -  Tape Drop
  
  -  Post-Installation Photos
    -  Alpha
    -  Beta
    -  Gamma
    -  Ground Level
    -  Tape Drop
    -  Photos of climbing facility and safety climb – If Present
  
-  Certifications – Submission of this document including certifications
  
-  Specific Required Additional Photos

Plan View



Front View

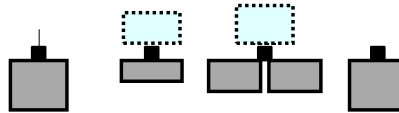
Looking at Structure



Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A7	LPA-80063/6CF 5	70.9	15	90	1		Fro t	48	0	Ret i ed	
A6	JAHH-65B-R3B	72	13.8	60	2		Fro t	48	8	Ret i ed	
A6	JAHH-65B-R3B	72	13.8	60	2		Fro t	48	-8	Ret i ed	
R2	CBC78T-DS-43-2X	6.4	6.9	60	2		Behi d	60	0	Added	
R4	B2/B66A RRH-BR049	15	15	60	2		Behi d	48	0	Added	
R1	MT6407-77A	35.1	16.1	30	3		Fro t	48	0	Added	
R5	B5/B13 RRH-BR04C	15	15	30	3		Behi d	48	0	Added	
A7	LPA-80063/6CF 5	70.9	15	0	4		Fro t	48	0	Ret i ed	

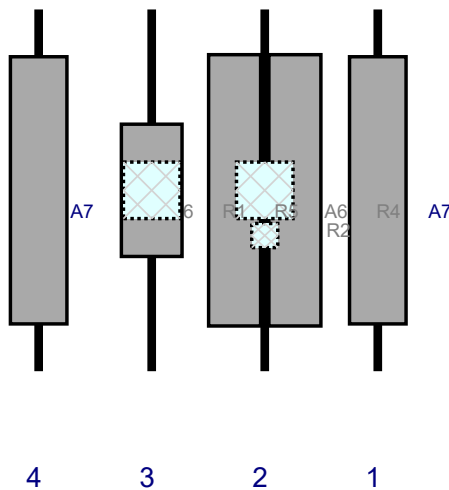
Plan View

△ To Str t re



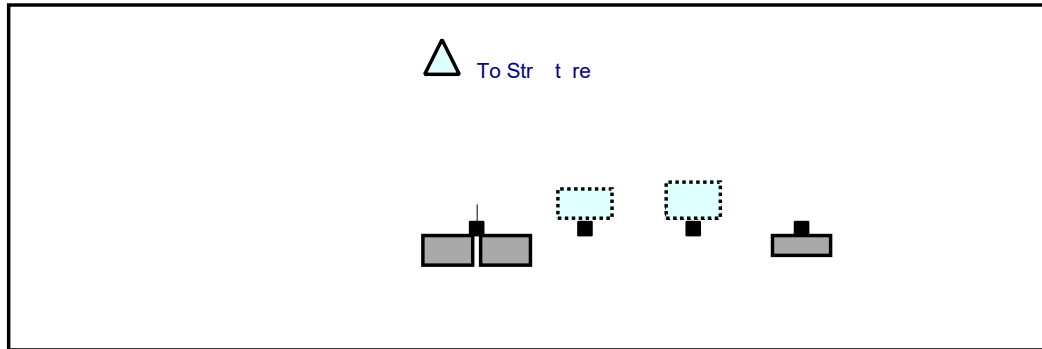
Front View

Lo o i g t Str t re



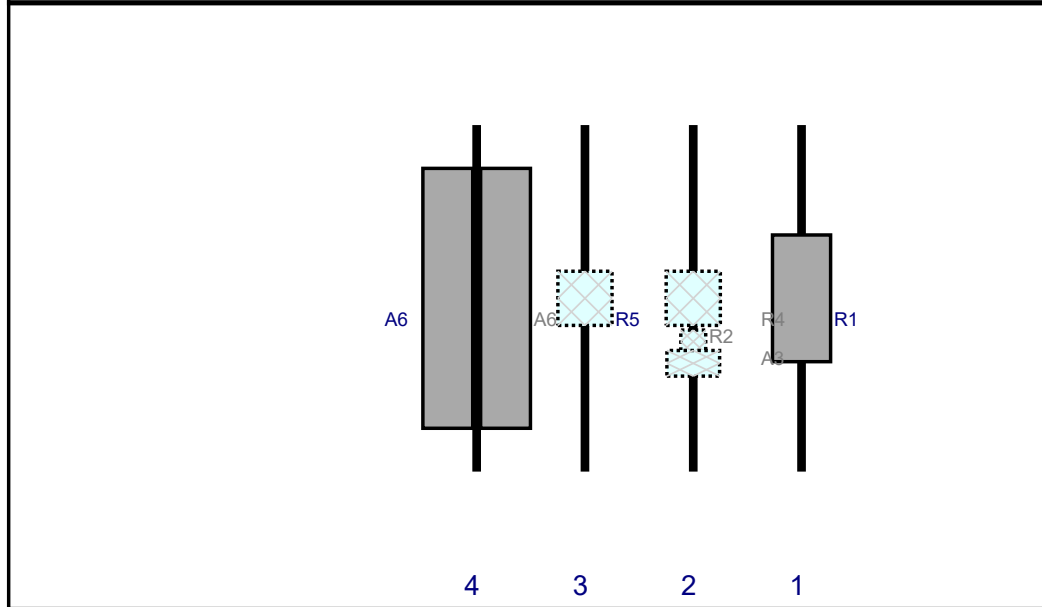
Re #	Model	Height (i )	Width (i )	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A7	LPA-80063/6CF 5	70.9	15	90	1		Fro t	48	0	Ret i ed	
A6	JAHH-65B-R3B	72	13.8	60	2		Fro t	48	8	Ret i ed	
A6	JAHH-65B-R3B	72	13.8	60	2		Fro t	48	-8	Ret i ed	
R2	CBC78T-DS-43-2X	6.4	6.9	60	2		Behi d	60	0	Added	
R4	B2/B66A RRH-BR049	15	15	60	2		Behi d	48	0	Added	
R1	MT6407-77A	35.1	16.1	30	3		Fro t	48	0	Added	
R5	B5/B13 RRH-BR04C	15	15	30	3		Behi d	48	0	Added	
A7	LPA-80063/6CF 5	70.9	15	0	4		Fro t	48	0	Ret i ed	

Plan View



Front View

Lo o i g t Str t re



Re #	Model	Height (i )	Width (i )	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
R1	MT6407-77A	35.1	16.1	90	1		Fro t	48	0	Added	
R2	CBC78T-DS-43-2X	6.4	6.9	60	2		Behi d	60	0	Added	
A3	CHB626-43-2X	7.1	14.6	60	2		Behi d	66	0	Added	
R4	B2/B66A RRR-BR049	15	15	60	2		Behi d	48	0	Added	
R5	B5/B13 RRR-BR04C	15	15	30	3		Behi d	48	0	Added	
A6	JAHH-65B-R3B	72	13.8	0	4		Fro t	48	8	Ret i ed	
A6	JAHH-65B-R3B	72	13.8	0	4		Fro t	48	-8	Ret i ed	

Site Name: **MOHAWK MTN CT**  
 Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm <sup>2</sup> )	(mW/cm <sup>2</sup> )	(%)
VZW 700	751	4	621	2483	46.5	0.0413	0.5007	8.25%
VZW CDMA	878.49	2	497	993	46.5	0.0165	0.5857	2.82%
VZW Cellular	874	4	725	2902	46.5	0.0483	0.5827	8.28%
VZW PCS	1975	4	1525	6100	46.5	0.1015	1.0000	10.15%
VZW AWS	2120	4	1484	5936	46.5	0.0987	1.0000	9.87%
VZW CBAND	3730.08	4	6531	26125	46.5	0.4345	1.0000	43.45%
<b>Total Percentage of Maximum Permissible Exposure</b>								<b>82.82%</b>

\*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Part 1 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

\*\*Calculation includes a -10 dB Off Beam Antenna Pattern Adjustment pursuant to Attachments B and C of the Siting Council's November 10, 2015 Memorandum for Exempt Modification filings

MHz = Megahertz

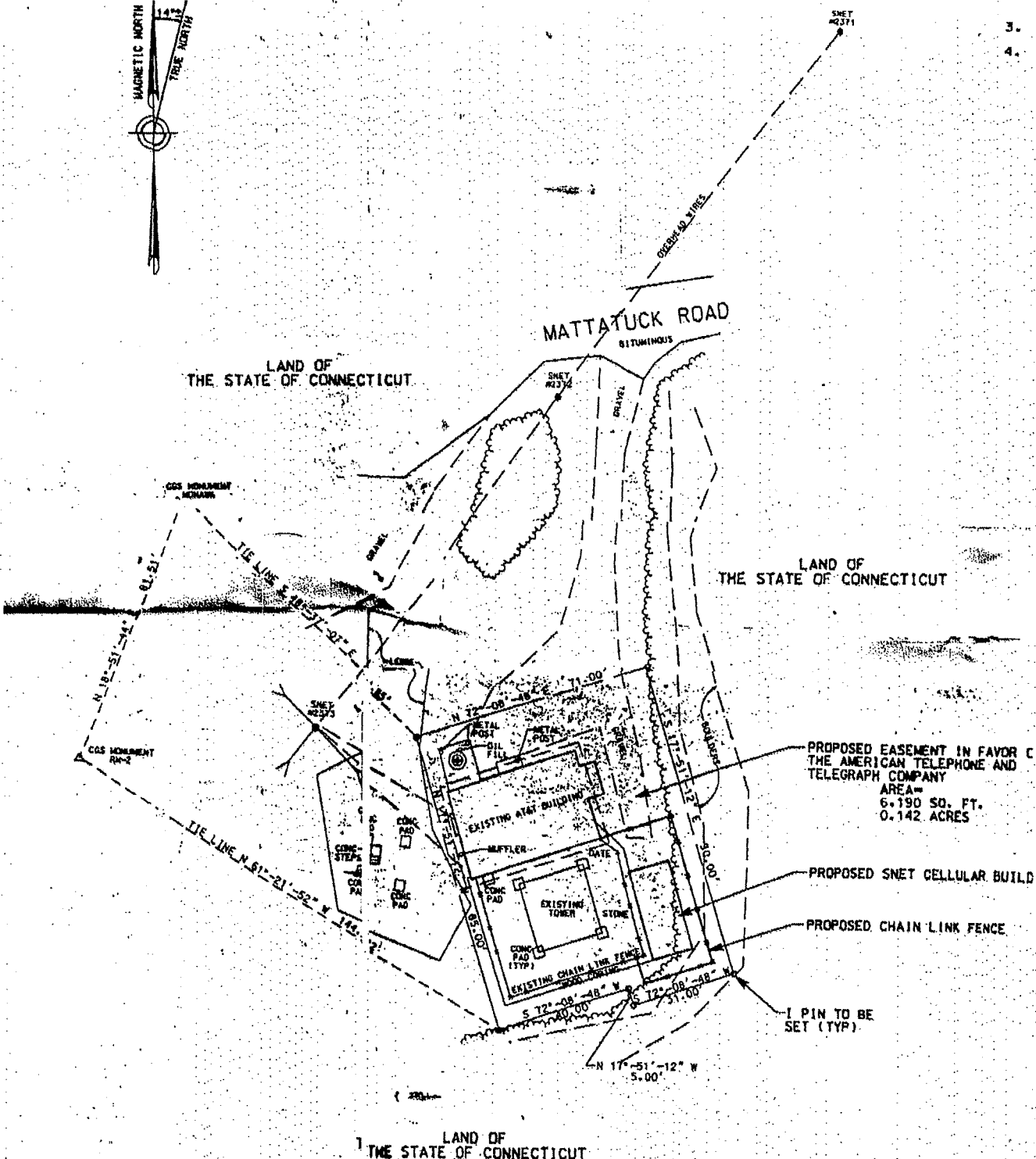
mW/cm<sup>2</sup> = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case maximum values used.



3.  
4.



LAND OF THE STATE OF CONNECTICUT

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TO THE BEST OF MY KNOWLEDGE AND BELIEF THIS MAP IS SUBSTANTIALLY CORRECT AS NOTED HEREON

MICHAEL G. WILMES LICENSE NO. 14201  
TRUE AND VALID COPIES OF THIS MAP OR PLAN MUST BEAR THE SIGNATURE AND EMBOSSED SEAL OF THE ABOVE NAMED LAND SURVEYOR



**TARGET PROPERTY**

**36 MOHAWK MOUNTAIN RD CORNWALL, CT 06753-**

**Owner Information**

**Owner Name:** AMERICAN TOWER MGMT INC  
**Mailing Address:** PO BOX 723597 ATLANTA GA 31139-0597 B006  
**Phone Number:**  
**Owner Occupied Indicator:** UNKNOWN  
**Corporate Owner:**  
**Vesting Codes:**  
**Pending Record Indicator:**

**Location Information**

**Legal Description:**  
**County:** LITCHFIELD **APN:** CORN-000004-000001-F000000  
**Census Tract / Block:** 2632.00 **Alternate APN:** 804122  
**Township-Range-Sect:** **Subdivision:**  
**Legal Book - Page:** **Map Reference:** /  
**Legal Lot:** **Tract #:**  
**Legal Block:** **School District:**  
**Market Area:** **Munic / Township:** CORNWALL  
**Neighbor Code:**

**Owner Transfer Information**

**Recording / Sale Date:** **Sale Price:**  
**Document #:** **Deed Type:**  
**Instrument #:** **1st Mtg Document #:**  
**Book - Page:**

**Last Market Sale Information**

**Recording / Sale Date:** / **1st Mtg Amount / Type:** /  
**Sale Price:** **1st Mtg Int. Rate / Type:** /  
**Sale Type:** **1st Mtg Term:**  
**Document #:** **1st Mtg Document #:**  
**Instrument #:** **1st Mtg Instrument #:**  
**Book - Page:** **1st Mtg Book - Page:**  
**Deed Type:** **2nd Mtg Amount / Type:** /  
**Transfer Document #:** **2nd Mtg Int. Rate / Type:** /  
**New Construction:** **2nd Mtg Term:**  
**Multi / Split Sale:** **Price per SqFt:**  
**Cash Down Payment:** **Stamps Amount:**  
**Title Company:**  
**Lender:**  
**Seller Name:**

**Prior Sale Information**

**Prior Rec / Sale Date:** / **Prior Deed Type:**  
**Prior Sale Price:** **Prior Lender:**  
**Prior Sale Type:** **Prior 1stMtg Amount/Type:** /  
**Prior Doc #:** **Prior 1stMtg Int. Rate/Type:** /  
**Prior Instrument #:** **Prior Stamps Amount:**  
**Prior Book - Page:**

**Site Information**

**Land Use:** COMMERCIAL BUILDING **Acres:** **County Use:**  
**Flood Zone:** **Lot Area:** 1 **State Use:** COMMERCIAL LAND  
**Flood Zone Map:** **Lot Width / Depth:** / **Site Influence:**  
**Flood Panel Date:** **Usable Lot:** **Sewer Type:**  
**Res / Comm Units:** **Lot Shape:** **Topography:**

<b># of Buildings:</b>	1	<b>Bldg Width / Depth:</b>	/	<b>Water Type:</b>		
<b>Zoning:</b>		<b>Building Class:</b>		<b>Water District:</b>		
<b>Tax Information</b>						
<b>Total Value:</b>	\$36,300.00	<b>Assessed Year:</b>	2016	<b>Property Tax:</b>	\$556.00	
<b>Land Value:</b>		<b>Improve %:</b>		<b>Tax Area:</b>	210	
<b>Improvement Value:</b>	\$36,300.00	<b>Dist:</b>		<b>Tax Year:</b>	2016	
<b>Total Taxable Value:</b>		<b>Fire Dist:</b>		<b>Tax Exemption:</b>		
<b>Market Value:</b>		<b>Garbage Dist:</b>		<b>Equal Rate:</b>		
		<b>Delinquent Date:</b>		<b>Equal Year:</b>		
<b>Property Characteristics</b>						
<b>Gross Area:</b>		<b>Parking Type:</b>		<b>Construction:</b>		
<b>Living Area:</b>		<b>Garage Area:</b>		<b>Heat Type:</b>		
<b>Tot Adj Area:</b>		<b>Garage 2 Area:</b>		<b>Heat Fuel:</b>		
<b>Above Grade:</b>		<b>Garage Capacity:</b>		<b>Parcel Fuel:</b>		
<b>Ground Floor Area:</b>		<b>Parking Spaces:</b>		<b>Exterior Wall:</b>		
<b>Base / Main Area:</b>	/	<b>Carport:</b>		<b>Interior Wall:</b>		
<b>Upper Area:</b>		<b>Basement Area:</b>		<b>Foundation:</b>		
<b>2nd Floor Area:</b>		<b>Finish Bsmnt Area:</b>		<b>Air Cond:</b>		
<b>3rd Floor Area:</b>		<b>Basement Type:</b>		<b>Roof Type:</b>		
<b>Rentable Area:</b>		<b>Attic Type:</b>		<b>Roof Shape:</b>		
<b>Additional Area:</b>		<b>Porch Type:</b>		<b>Roof Frame:</b>		
<b>Total Rooms:</b>		<b>Porch 1 Area:</b>		<b>Roof Material:</b>		
<b>Bedrooms:</b>		<b>Porch 2 Area:</b>		<b>Floor Type:</b>		
<b>Bath (F/H):</b>	/	<b>Patio Type:</b>		<b>Floor Cover:</b>		
<b>Total Baths / Fixtures:</b>	/	<b>Patio 1 Area:</b>		<b>Style:</b>		
<b>Year Built / Eff:</b>	/	<b>Pool:</b>		<b>Quality:</b>		
<b>Fireplace:</b>		<b>Pool Area:</b>		<b>Condition:</b>		
<b>Fireplace Description:</b>				<b># of Stories:</b>		
<b>Basement Description:</b>				<b>Other Rooms:</b>		
<b>Other Improvements:</b>						
<b>Bldg Comments:</b>						
<b>Parcel Comments:</b>						
<b>Extra Features</b>						
<b>Description:</b>	<b>Unit:</b>	<b>Size / Qty:</b>	<b>Width:</b>	<b>Depth:</b>	<b>Year Built:</b>	<b>Improvement Value:</b>
L						

NETRonline and its data supplier(s) do not guarantee nor include any warranty of any kind whether expressed or implied, about the validity of all information in this report since this information is retrieved as it is recorded from the various agencies that make it available.



Property Location: 036 TOOMEY RD

MAP ID: F04/ 01/ //

Bldg Name:

State Use: 2-1

Vision ID: 10

Account #98100011

Bldg #: 1 of 1

Sec #: 1 of 1 Card 1 of 1

Print Date: 02/17/2021 11:15

CURRENT OWNER		TOPO.	UTILITIES	STRT./ROAD	LOCATION	CURRENT ASSESSMENT			
AMERICAN TOWER MGMT INC						Description	Code	Appraised Value	Assessed Value
PO BOX 723597						COM OUTBL	2-5	76,800	53,800
ATLANTA, GA 31139		<b>SUPPLEMENTAL DATA</b>							
Additional Owners:									
Other ID: CENSUS TRAC 2632 SURVEY # 662									
GIS ID:		ASSOC PID#			Total		76,800	53,800	

6031  
CORNWALL, CT

**VISION**

RECORD OF OWNERSHIP		BK-VOL/PAGE	SALE DATE	q/u	v/i	SALE PRICE	V.C.	PREVIOUS ASSESSMENTS (HISTORY)								
AMERICAN TOWER MGMT INC		088/811	04/03/2000	Q		221,229	QC	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value	Yr.	Code	Assessed Value
								2020	2-5	53,800	2019	2-5	53,800	2018	2-5	53,800
								Total:		53,800	Total:		53,800	Total:		53,800

EXEMPTIONS				OTHER ASSESSMENTS				
Year	Type	Description	Amount	Code	Description	Number	Amount	Comm. Int.
Total:								

This signature acknowledges a visit by a Data Collector or Assessor

ASSESSING NEIGHBORHOOD				
NBHD/ SUB	NBHD Name	Street Index Name	Tracing	Batch
0001/A				

**APPRAISED VALUE SUMMARY**

Appraised Bldg. Value (Card)	0
Appraised XF (B) Value (Bldg)	0
Appraised OB (L) Value (Bldg)	76,800
Appraised Land Value (Bldg)	0
Special Land Value	0
Total Appraised Parcel Value	76,800
Valuation Method:	C
Adjustment:	0
<b>Net Total Appraised Parcel Value</b>	<b>76,800</b>

**NOTES**

BLDGS ONLY ON STATE LAND (E6-3-6)  
 POLE ON PERSONAL PROPERTY  
 2016 PRICE 2014 IMPROVEMENTS  
 2017 CHANGED ADDRESS TO TOOMEY RD  
 PREVIOUSLY MOHAWK MOUNTAIN RD

BUILDING PERMIT RECORD										VISIT/ CHANGE HISTORY					
Permit ID	Issue Date	Type	Description	Amount	Insp. Date	% Comp.	Date Comp.	Comments	Date	Type	IS	ID	Cd.	Purpose/Result	
11128	10/06/2014	RE	Remodel	25,000		0		UPGRADE EQUIPMEN							

LAND LINE VALUATION SECTION																					
B #	Use Code	Use Description	Zone	D	Front	Depth	Units	Unit Price	I. Factor	S.A.	Acre Disc	C. Factor	ST. Idx	Adj.	Notes- Adj	Special Pricing		S Adj Fact	Adj. Unit Price	Land Value	
																Spec Use	Spec Calc				
1	2-1V	COMM LND MDL-00					0 SF	0.00	1.0000	0	1.0000	1.00		0.00					.00		0

Total Card Land Units: 0.00 AC Parcel Total Land Area: 0 AC Total Land Value: 0

CONSTRUCTION DETAIL				CONSTRUCTION DETAIL (CONTINUED)			
Element	Cd.	Ch.	Description	Element	Cd.	Ch.	Description
Model	00		Vacant				
<b>MIXED USE</b>							
	<i>Code</i>		<i>Description</i>				<i>Percentage</i>
	2-1V		COMMLND MDL-00				100
<b>COST/MARKET VALUATION</b>							
	Adj. Base Rate:		0.00				
	Replace Cost		0				
	AYB						
	EYB		0				
	Dep Code						
	Remodel Rating						
	Year Remodeled						
	Dep %						
	Functional Obslnc						
	External Obslnc						
	Cost Trend Factor						
	Condition						
	% Complete						
	Overall % Cond						
	Apprais Val						
	Dep % Ovr		0				
	Dep Ovr Comment						
	Misc Imp Ovr		0				
	Misc Imp Ovr Comment						
	Cost to Cure Ovr		0				
	Cost to Cure Ovr Comment						

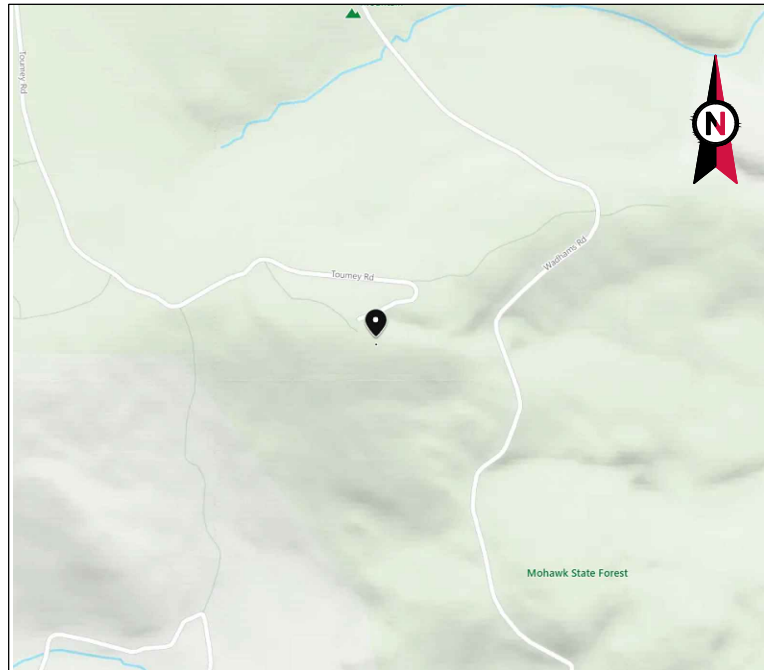
**OB-OUTBUILDING & YARD ITEMS(L) / XF-BUILDING EXTRA FEATURES(B)**

Code	Description	Sub	Sub Descript	L/B	Units	Unit Price	Yr	Gde	Dp Rt	Cnd	%Cnd	Apr Value
FGR1	GARAGE-AVE			L	946	25.00	0		0		100	23,700
SHP2	WORK SHOP			L	936	30.00	0		0		100	28,100
	TOWER EQUI			L	1	25,000.00	2015				Null	25,000

No Photo On Record

**BUILDING SUB-AREA SUMMARY SECTION**

Code	Description	Living Area	Gross Area	Eff. Area	Unit Cost	Undeprec. Value
<p><b>Ttl. Gross Liv/Lease Area:</b> 0 0</p>						

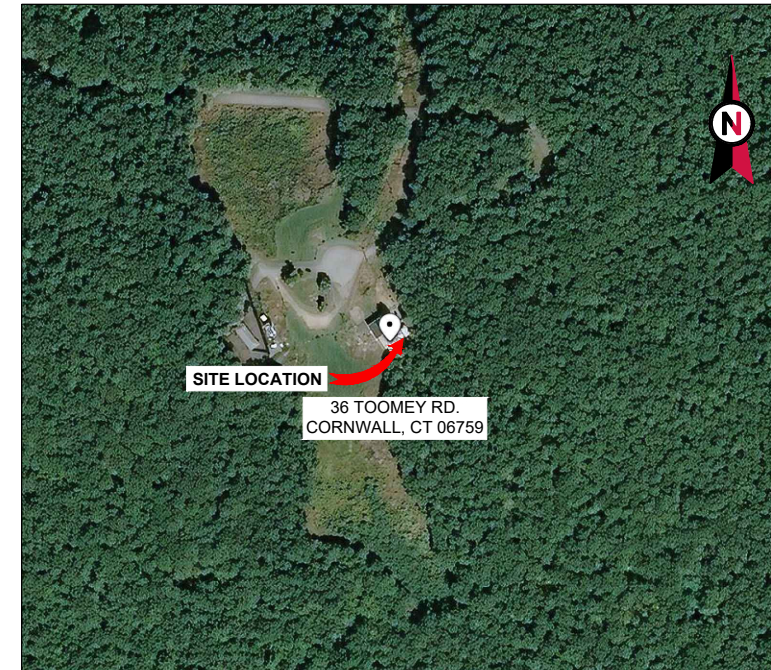


VICINITY MAP



**AMERICAN TOWER®**

ATC SITE NAME: CORNWALL CT  
 ATC SITE NUMBER: 88009  
 VERIZON SITE NAME: MOHAWK MTN CT  
 VERIZON SITE NUMBER: 468041  
 SITE ADDRESS: 36 TOOMEY RD.  
 CORNWALL, CT 06759



LOCATION MAP

**VERIZON  
 ANTENNA AMENDMENT DRAWINGS**

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. 2015 INTERNATIONAL BUILDING CODE (IBC) 2. 2017 NATIONAL ELECTRIC CODE (NEC) 3. 2018 CONNECTICUT STATE BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 36 TOOMEY RD. CORNWALL, CT 06759 COUNTY: LITCHFIELD  <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.82130278 LONGITUDE: -73.29644167 GROUND ELEVATION: 1678' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW:  REMOVE (8) ANTENNA(S), AND (12) RRR(S)  RELOCATE (5) MOUNT PIPE(S), (2) ANTENNA(S) (1) DUAL ANTENNA MOUNTING BRACKET  INSTALL (3) ANTENNA(S), (6) RRR(S), AND (4) DIPLEXER(S)  EXISTING (10) ANTENNA(S), (2) OVP(S), (6) 1-5/8" COAX CABLE(S), AND (2) 1-5/8" FIBER CABLE(S) TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u>  <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801  <u>ENGINEER:</u> CLS ENGINEERING, PLLC 319 CHAPANOKE RD, SUITE 118 RALEIGH, NC 27603 PH: (405) 348-5460 FAX: (405) 341-4625  <u>PROPERTY OWNER:</u> PN LL NO VENDOR 36 TOOMEY RD. CORNWALL, CT 06759	AC ELECTRICAL POWER DESIGN TO BE PERFORMED BY OTHERS					
<u>UTILITY COMPANIES</u>  POWER COMPANY: EVERSOURCE PHONE: (877) 659-6326  TELEPHONE COMPANY: FRONTIER COMMUNICATIONS PHONE: (800) 376-6843	<u>APPLICANT:</u> VERIZON WIRELESS	<u>PROJECT NOTES</u>  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.					
		<u>PROJECT LOCATION DIRECTIONS</u>  FROM HARTFORD, CT TAKE I-84 WEST TO RT 4 WEST. FOLLOW RT 4 TO GOSHEN, CT. GO PAST THE GOSHEN MOTEL AND TAKE A LEFT ONTO ALLYN ROAD. ALLYN ROAD WILL TURN INTO MOWHAWK MOUNTAIN ROAD WHERE THE STATE FOREST BEGINS. FOLLOW THIS TO THE TOP OF THE MOUNTAIN. ATC TOWER IS THE FIRST ONE ON THE LEFT AT THE TOP.					

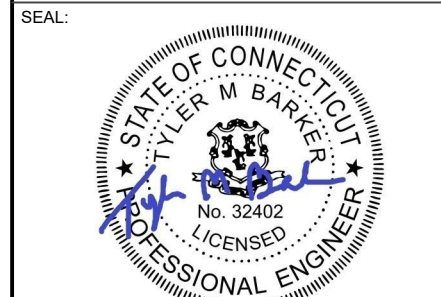


**CLS ENGINEERING PLLC**  
 319 CHAPANOKE ROAD, SUITE 118, RALEIGH, NC 27603  
 PH: (405)348-5460 FAX: (405)341-4625

COA# PEC.001833 EXP. 08/14/2021

REV.	DESCRIPTION	BY	DATE
A	PRELIM	MH	06/25/21
0	FOR CONSTRUCTION	BMB	07/29/21

ATC SITE NUMBER:  
88009  
  
 ATC SITE NAME:  
CORNWALL CT  
  
 VERIZON SITE NAME:  
MOHAWK MTN CT  
  
 SITE ADDRESS:  
36 TOOMEY RD.  
CORNWALL, CT 06759



SEAL:  
 Tyler M. Barker  
 CLS Engineering PLLC  
 PE # 32402 Exp. 1/31/2022  
 COA # PEC.001833 Exp. 8/14/2022  
  
 PE# 32402 EXP: 01/31/2022



DATE DRAWN:	07/29/21
ATC JOB NO:	13668803_D1
CUSTOMER ID:	MOHAWK MTN CT
CUSTOMER #:	468041

**TITLE SHEET**

SHEET NUMBER:  
**G-001**

REVISION:  
**0**

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**GENERAL CONSTRUCTION NOTES:**

1. OWNER FURNISHED MATERIALS, VERIZON "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
  - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
  - B. AC/TELCO INTERFACE BOX (PPC)
  - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
  - D. TOWERS, MONOPOLES
  - E. TOWER LIGHTING
  - F. GENERATORS & LIQUID PROPANE TANK
  - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
  - H. ANTENNAS (INSTALLED BY OTHERS)
  - I. TRANSMISSION LINE
  - J. TRANSMISSION LINE JUMPERS
  - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
  - L. TRANSMISSION LINE GROUND KITS
  - M. HANGERS
  - N. HOISTING GRIPS
  - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF VERIZON TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. 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.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH VERIZON AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON 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.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. 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.
27. CONTRACTOR SHALL NOTIFY VERIZON 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.
28. 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.
29. 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 NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE 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.
30. 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 VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. 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.
32. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. VERIZON OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO VERIZON OR THEIR ARCHITECT/ENGINEER.

**SPECIAL CONSTRUCTION**

**ANTENNA INSTALLATION NOTES:**

1. WORK INCLUDED:
  - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY VERIZON UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
  - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND VERIZON SPECIFICATIONS.
  - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
  - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
  - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
  - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
  - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.



**CLS ENGINEERING** PLLC  
 319 CHAPANOKE ROAD, SUITE 118, RALEIGH, NC 27603  
 PH: (405)348-5460 FAX: (405)341-4625

COA# PEC.001833 EXP. 08/14/2021

REV.	DESCRIPTION	BY	DATE
A	PRELIM	MH	06/25/21
0	FOR CONSTRUCTION	BMB	07/29/21

ATC SITE NUMBER:  
**88009**

ATC SITE NAME:  
**CORNWALL CT**

VERIZON SITE NAME:  
**MOHAWK MTN CT**

SITE ADDRESS:  
 36 TOOMEY RD.  
 CORNWALL, CT 06759



Tyler M. Barker  
 CLS Engineering PLLC  
 PE # 32402 Exp. 1/31/2022  
 COA # PEC.001833 Exp. 8/14/2022

PE# 32402 EXP: 01/31/2022



DATE DRAWN:	07/29/21
ATC JOB NO:	13668803_D1
CUSTOMER ID:	MOHAWK MTN CT
CUSTOMER #:	468041

**GENERAL NOTES**

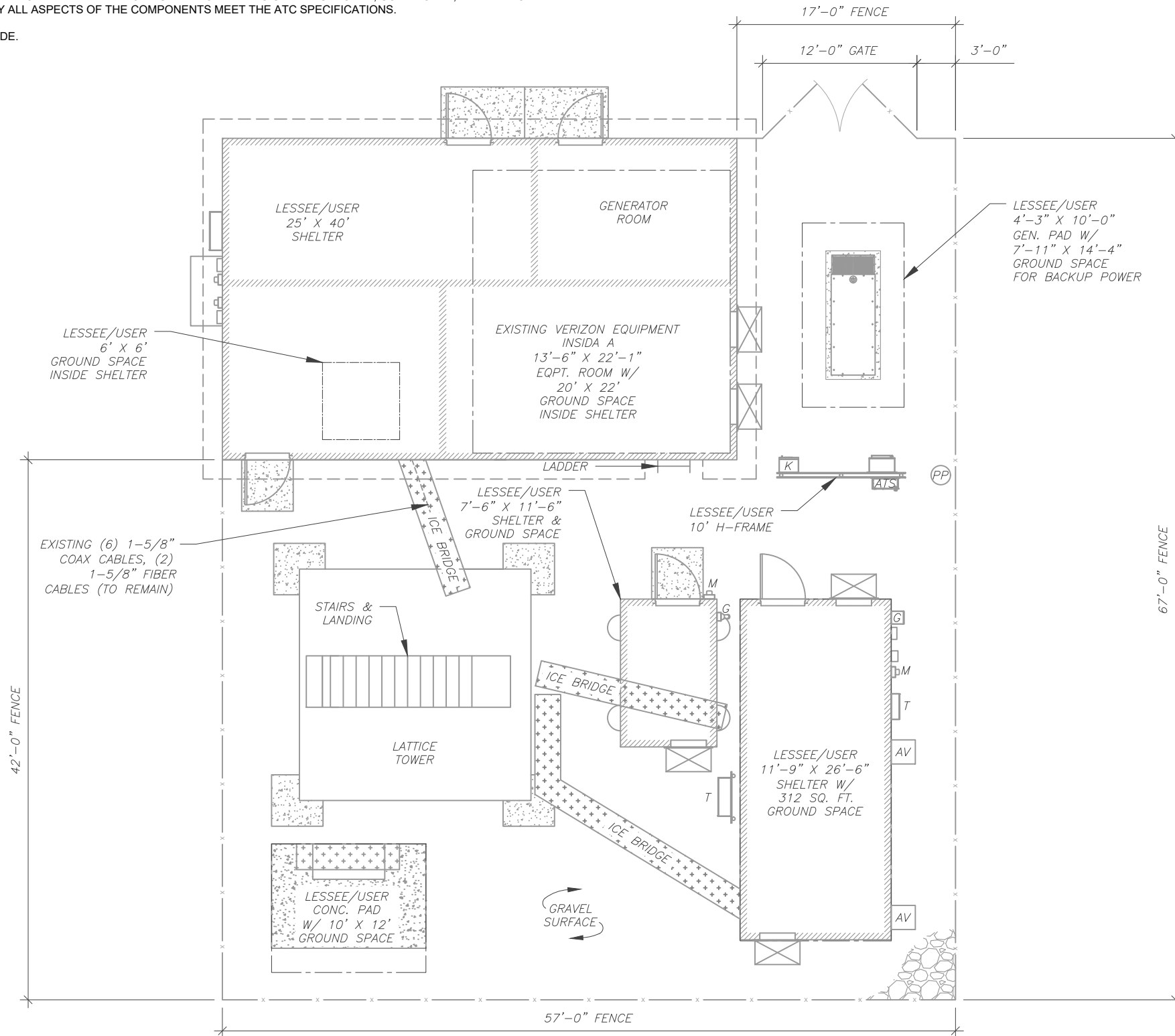
SHEET NUMBER: <b>G-002</b>	REVISION: <b>0</b>
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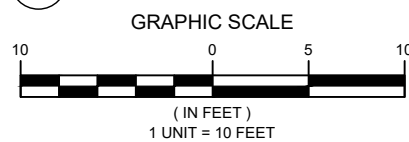
**SITE PLAN NOTES:**

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. THIS PROJECT INCLUDES NO INSTALL OR MODIFICATION AT GRADE.

LEGEND	
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
x	CHAINLINK FENCE



**1 DETAILED SITE PLAN**



**CLS ENGINEERING PLLC**  
 319 CHAPANOKE ROAD, SUITE 118, RALEIGH, NC 27603  
 PH: (405)348-5460 FAX: (405)341-4625

COA# PEC.001833 EXP. 08/14/2021

REV.	DESCRIPTION	BY	DATE
A	PRELIM	MH	06/25/21
0	FOR CONSTRUCTION	BMB	07/29/21

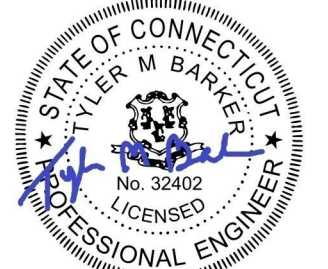
ATC SITE NUMBER:  
88009

ATC SITE NAME:  
CORNWALL CT

VERIZON SITE NAME:  
MOHAWK MTN CT

SITE ADDRESS:  
36 TOOMEY RD.  
CORNWALL, CT 06759

SEAL:



Tyler M. Barker  
 CLS Engineering PLLC  
 PE # 32402 Exp. 1/31/2022  
 COA # PEC.001833 Exp. 8/14/2022  
 07/29/2021

PE# 32402 EXP: 01/31/2022



DATE DRAWN:	07/29/21
ATC JOB NO:	13668803_D1
CUSTOMER ID:	MOHAWK MTN CT
CUSTOMER #:	468041

**DETAILED SITE PLAN**

SHEET NUMBER:  
**C-101**

REVISION:  
**0**

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TOP OF EXISTING  
HIGHEST APPURTENANCE  
ELEV. 83'

TOP OF EXISTING TOWER  
ELEV. 65'

EXISTING AND  
PROPOSED VERIZON  
EQUIPMENT

EXISTING (6) 1-5/8" COAX CABLES,  
(2) 1-5/8" FIBER CABLES (TO REMAIN)

EXISTING TOWER

EXISTING CARRIER ANTENNAS  
RAD CENTER @ 75'

EXISTING CARRIER ANTENNAS  
RAD CENTER @ 74'

EXISTING CARRIER ANTENNAS  
RAD CENTER @ 72'

EXISTING CARRIER ANTENNAS  
RAD CENTER @ 69'

EXISTING CARRIER ANTENNAS  
RAD CENTER @ 65'

EXISTING CARRIER ANTENNAS  
RAD CENTER @ 63'

EXISTING CARRIER ANTENNAS  
RAD CENTER @ 59'

EXISTING CARRIER ANTENNAS  
RAD CENTER @ 57'

PROPOSED VERIZON  
RAD CENTER @ 46'

PER MOUNT ANALYSIS COMPLETED BY GPD  
ENGINEERING AND ARCHITECTURE  
PROFESSIONAL CORPORATION, DATED JUNE 17,  
2021, THE EXISTING MOUNT CAN ADEQUATELY  
SUPPORT THE PROPOSED LOADING.



**CLS ENGINEERING**  
PLLC  
319 CHAPANOKE ROAD, SUITE 118, RALEIGH, NC 27603  
PH: (405)348-5460 FAX: (405)341-4625

COA# PEC.001833 EXP. 08/14/2021

REV.	DESCRIPTION	BY	DATE
A	PRELIM	MH	06/25/21
0	FOR CONSTRUCTION	BMB	07/29/21

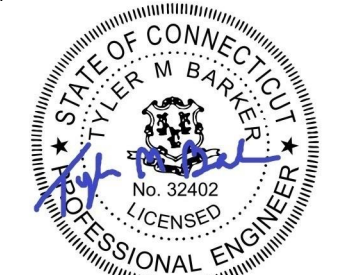
ATC SITE NUMBER:  
88009

ATC SITE NAME:  
CORNWALL CT

VERIZON SITE NAME:  
MOHAWK MTN CT

SITE ADDRESS:  
36 TOOMEY RD.  
CORNWALL, CT 06759

SEAL:



Tyler M. Barker  
CLS Engineering PLLC  
PE # 32402 Exp. 1/31/2022  
COA # PEC.001833 Exp. 8/14/2022  
07/29/2021

PE# 32402 EXP: 01/31/2022



DATE DRAWN:	07/29/21
ATC JOB NO:	13668803_D1
CUSTOMER ID:	MOHAWK MTN CT
CUSTOMER #:	468041

TOWER ELEVATION

SHEET NUMBER:  
**C-201**

REVISION:  
**0**

**1 TOWER ELEVATION**  
SCALE: N.T.S.

**TOWER NOTE:**

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT 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.
- WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
- TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)

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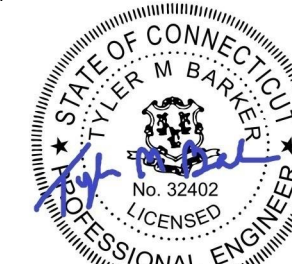
ATC SITE NUMBER:  
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07/29/2021

PE# 32402 EXP: 01/31/2022

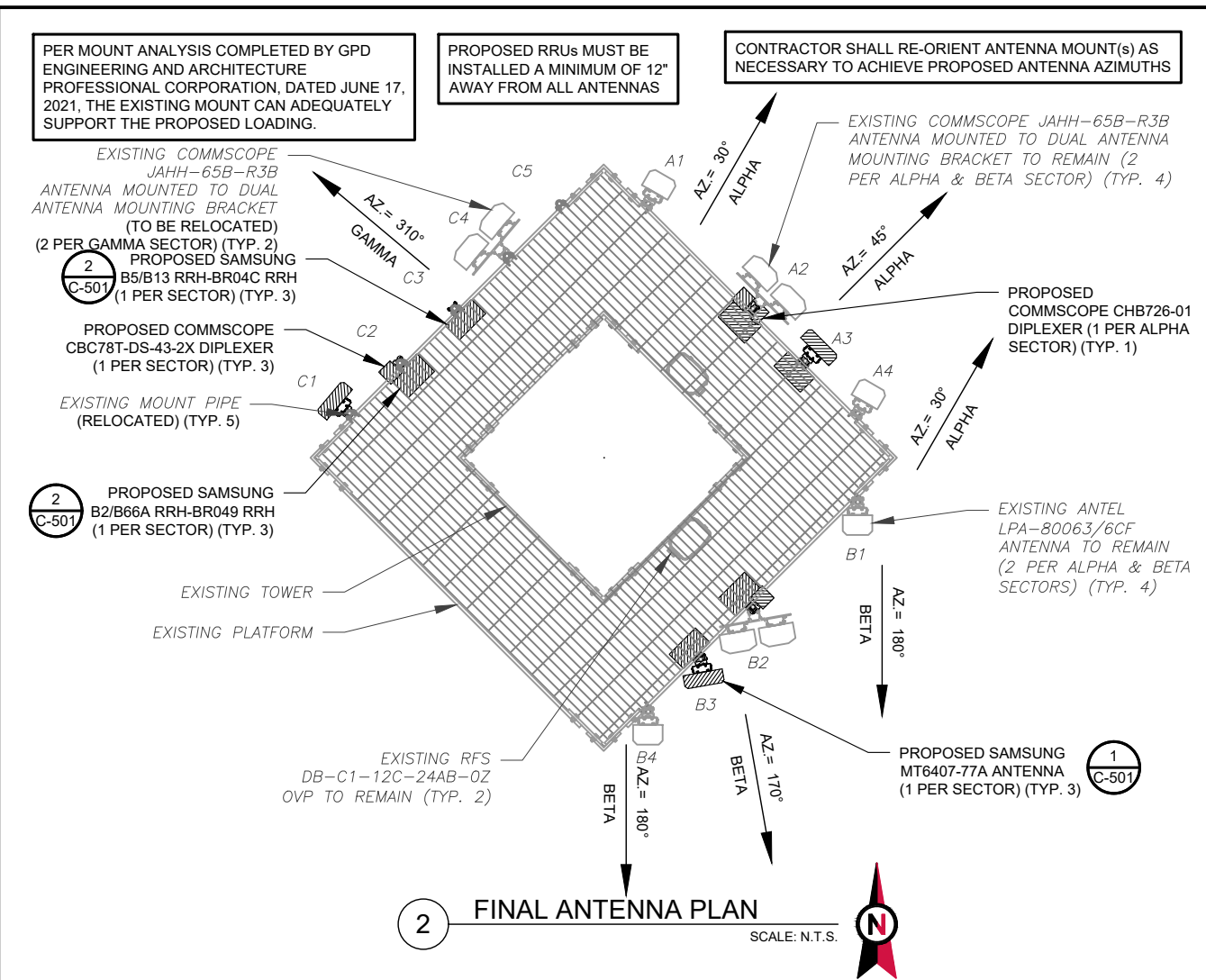
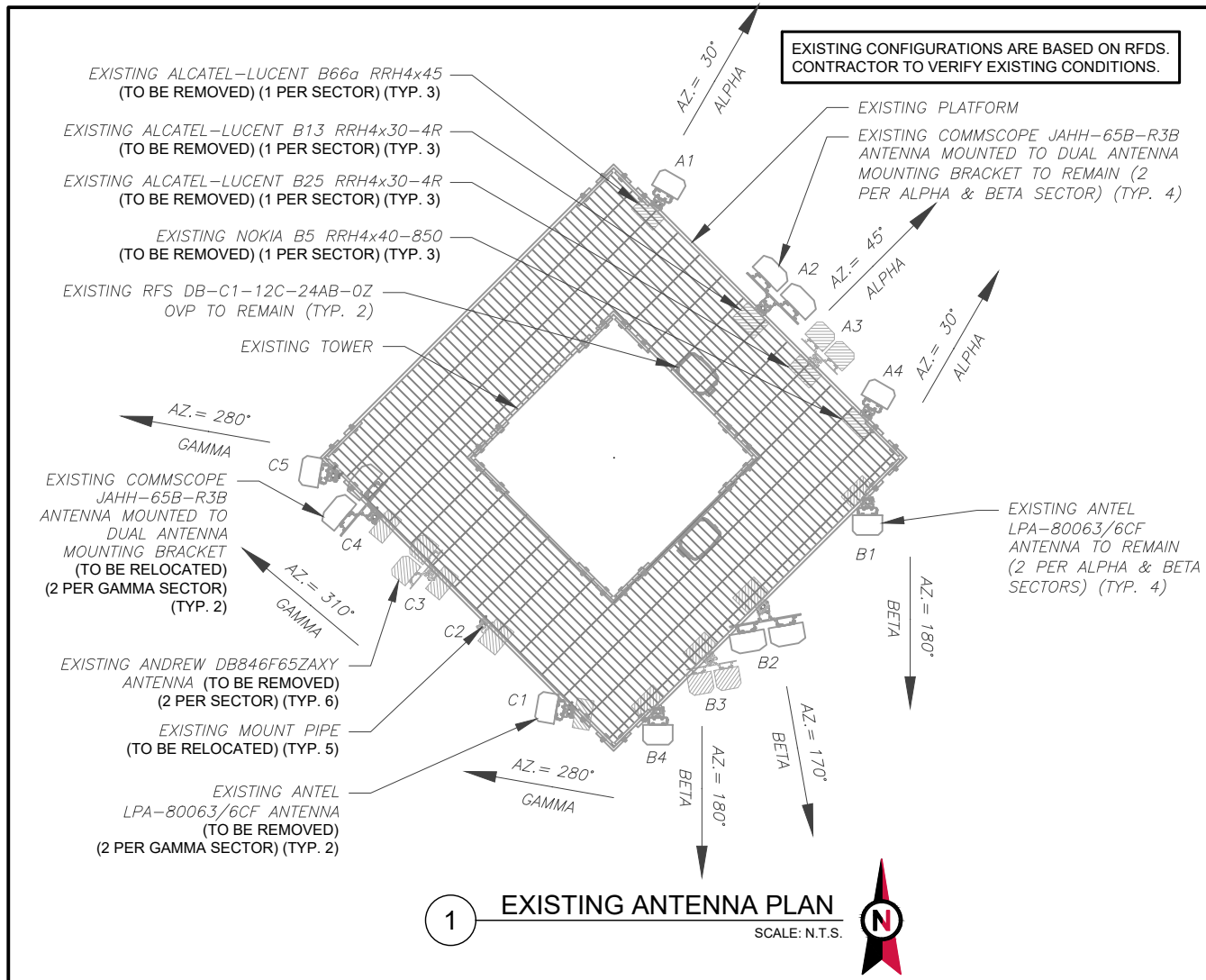


DATE DRAWN:	07/29/21
ATC JOB NO:	13668803_D1
CUSTOMER ID:	MOHAWK MTN CT
CUSTOMER #:	468041

**ANTENNA INFORMATION & SCHEDULE**

SHEET NUMBER:  
**C-401**

REVISION:  
**0**



EXISTING ANTENNA SCHEDULE									
LOCATION		ANTENNA SUMMARY					NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	46'	30°	A1	ANTEL LPA-80063/6CF	CDMA 850	6/5	RMN	ALCATEL-LUCENT B66A RRH4X45	RMV
		45°	A2	(2) COMMSCOPE JAHH-65B-R3B	LTE 700/LTE 850 LTE 1900/ LTE AWS	0/5 0/4 0/2	RMN	ALCATEL-LUCENT B25 RRH4X30-4R	RMV
		45°	A3	(2) ANDREW DB846F65ZAXY	-	-	RMV	ALCATEL-LUCENT B13 RRH4X30-4R	RMV
		30°	A4	ANTEL LPA-80063/6CF	CDMA 850	6/5	RMN	NOKIA B5 RRH4X40-850	RMV
BETA	46'	180°	B1	ANTEL LPA-80063/6CF	CDMA 850	6/5	RMN	ALCATEL-LUCENT B66A RRH4X45	RMV
		170°	B2	(2) COMMSCOPE JAHH-65B-R3B	LTE 700/LTE 850 LTE 1900/ LTE AWS	0/5 0/4 0/2	RMN	ALCATEL-LUCENT B25 RRH4X30-4R	RMV
		170°	B3	(2) ANDREW DB846F65ZAXY	-	-	RMV	ALCATEL-LUCENT B13 RRH4X30-4R	RMV
		180°	B4	ANTEL LPA-80063/6CF	CDMA 850	6/5	RMN	NOKIA B5 RRH4X40-850	RMV
GAMMA	46'	280°	C1	ANTEL LPA-80063/6CF	CDMA 850	6/5	RMV	ALCATEL-LUCENT B66A RRH4X45	RMV
		-	C2	-	-	-	-	-	-
		310°	C3	(2) ANDREW DB846F65ZAXY	-	-	RMV	ALCATEL-LUCENT B13 RRH4X30-4R	RMV
		310°	C4	(2) COMMSCOPE JAHH-65B-R3B	LTE 700/LTE 850 LTE 1900/ LTE AWS	0/6 0/2	RMN	ALCATEL-LUCENT B25 RRH4X30-4R	RMV
		280°	C5	ANTEL LPA-80063/6CF	CDMA 850	6/5	RMV	NOKIA B5 RRH4X40-850	RMV

**NOTES**

- CONFIRM WITH VERIZON REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

**STATUS ABBREVIATIONS**

RMV: TO BE REMOVED  
RMN: TO REMAIN  
REL: TO BE RELOCATED  
ADD: TO BE ADDED

**CABLE LENGTHS FOR JUMPERS**

JUNCTION BOX TO RRU: 15'  
RRU TO ANTENNA: 10'

FINAL ANTENNA SCHEDULE									
LOCATION		ANTENNA SUMMARY					NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	46'	30°	A1	ANTEL LPA-80063/6CF	CDMA 850	6/5	RMN	-	-
		45°	A2	(2) COMMSCOPE JAHH-65B-R3B	LTE 700/LTE 850 LTE 1900/ LTE AWS	0/6 0/5 0/2	RMN	COMMSCOPE CBC78T-DS-43-2X COMMSCOPE CHB726-01 SAMSUNG B2/B66A RRH-BR049	ADD
		45°	A3	SAMSUNG MT6407-77A	5G L-SUB 6	0/6	ADD	SAMSUNG B5/B13 RRH-BR04C	ADD
		30°	A4	ANTEL LPA-80063/6CF	CDMA 850	6/5	RMN	-	-
BETA	46'	180°	B1	ANTEL LPA-80063/6CF	CDMA 850	6/5	RMN	-	-
		170°	B2	(2) COMMSCOPE JAHH-65B-R3B	LTE 700/LTE 850 LTE 1900/ LTE AWS	0/6 0/5 0/2	RMN	COMMSCOPE CBC78T-DS-43-2X SAMSUNG B2/B66A RRH-BR049	ADD
		170°	B3	SAMSUNG MT6407-77A	5G L-SUB 6	0/6	ADD	SAMSUNG B5/B13 RRH-BR04C	ADD
		180°	B4	ANTEL LPA-80063/6CF	CDMA 850	6/5	RMN	-	-
GAMMA	46'	310°	C1	SAMSUNG MT6407-77A	5G L-SUB 6	0/6	ADD	-	-
		-	C2	-	-	-	-	COMMSCOPE CBC78T-DS-43-2X SAMSUNG B2/B66A RRH-BR049	ADD
		-	C3	-	-	-	-	SAMSUNG B5/B13 RRH-BR04C	ADD
		310°	C4	(2) COMMSCOPE JAHH-65B-R3B	LTE 700/LTE 850 LTE 1900/ LTE AWS	0/6 0/2	RMN	-	ADD
		280°	C5	-	-	-	-	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) RFS DB-C1-12C-24AB-0Z	RMN	(6) 1-5/8"	(2) 1-5/8" FIBER	RMN
-	-	-	-	-

**3 EQUIPMENT SCHEDULES**

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
(2) RFS DB-C1-12C-24AB-0Z	RMN	(6) 1-5/8"	(2) 1-5/8" FIBER	RMN
-	-	-	-	-

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0	FOR CONSTRUCTION	BMB	07/29/21

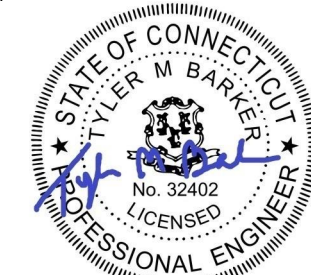
ATC SITE NUMBER:  
**88009**

ATC SITE NAME:  
**CORNWALL CT**

VERIZON SITE NAME:  
**MOHAWK MTN CT**

SITE ADDRESS:  
 36 TOOMEY RD.  
 CORNWALL, CT 06759

SEAL:



Tyler M. Barker  
 CLS Engineering PLLC  
 PE # 32402 Exp. 1/31/2022  
 COA # PEC.001833 Exp. 8/14/2022  
 07/29/2021

PE# 32402 EXP: 01/31/2022

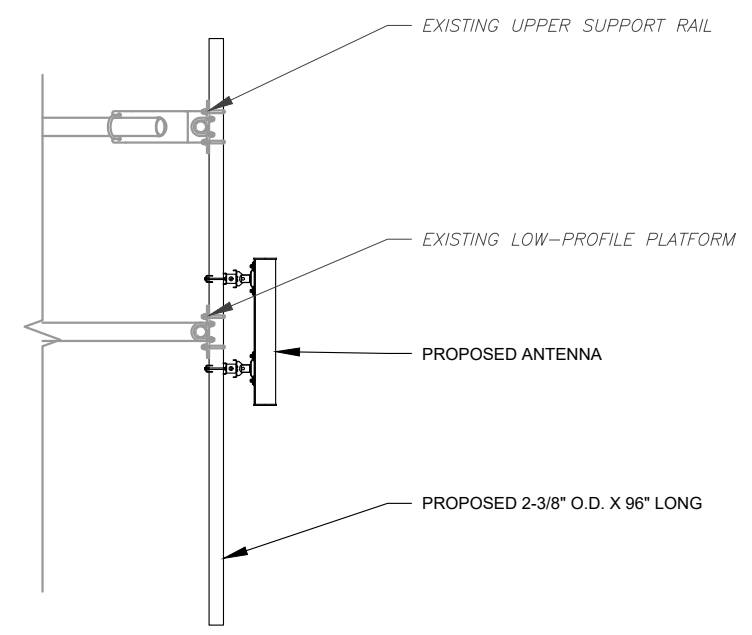


DATE DRAWN:	07/29/21
ATC JOB NO:	13668803_D1
CUSTOMER ID:	MOHAWK MTN CT
CUSTOMER #:	468041

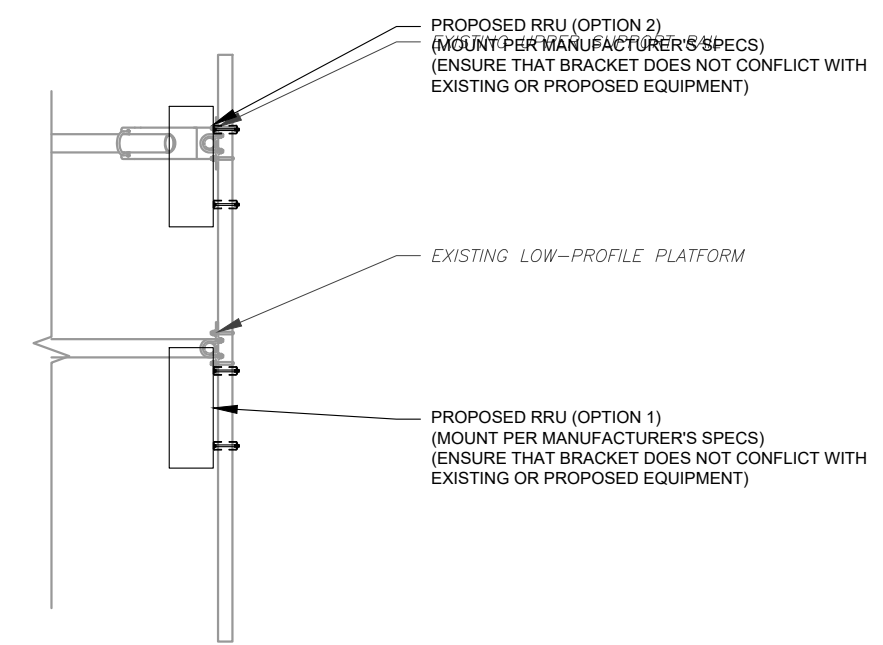
**CONSTRUCTION  
 DETAILS**

SHEET NUMBER:  
**C-501**

REVISION:  
**0**



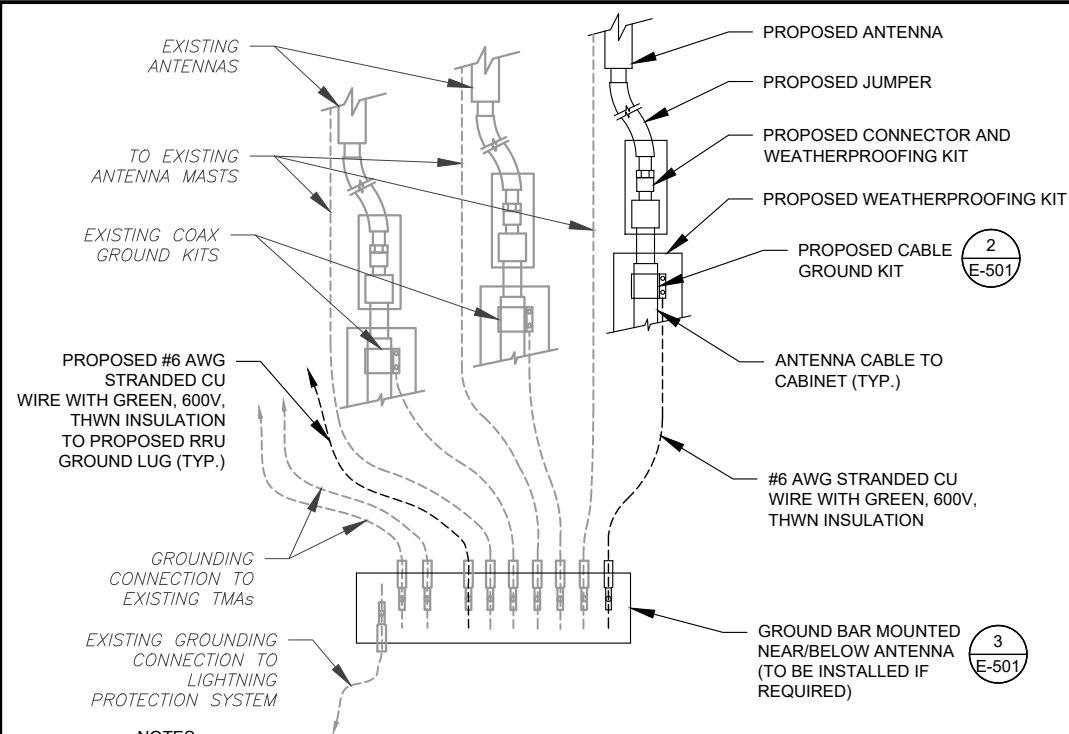
1 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL  
 SCALE: N.T.S.



2 PROPOSED RRU MOUNTING DETAIL - TYPICAL  
 SCALE: N.T.S.

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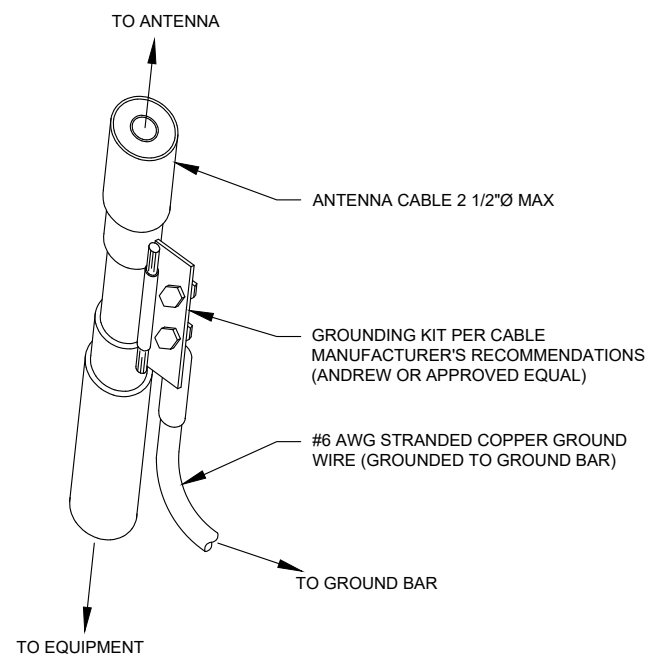




**NOTES:**

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 VERIZON GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

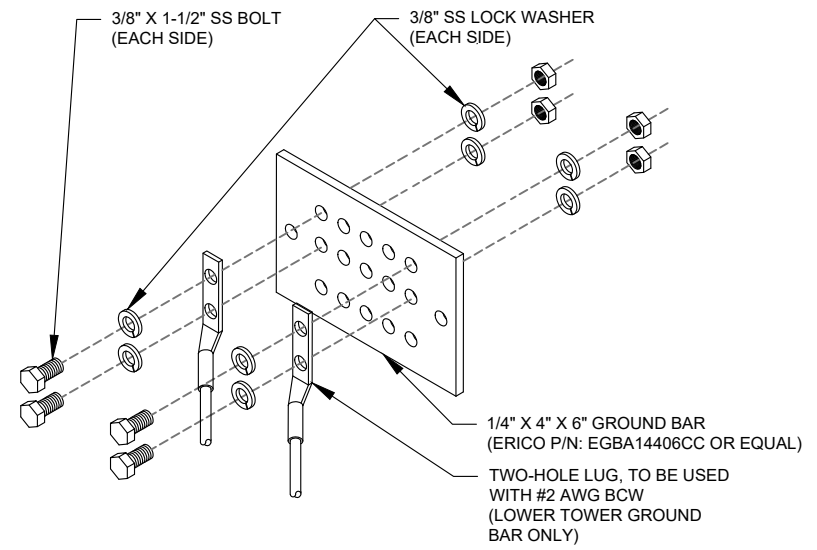
**1 TYPICAL ANTENNA GROUNDING DIAGRAM**  
SCALE: N.T.S.



**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: N.T.S.



**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: N.T.S.



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PE# 32402 EXP: 01/31/2022

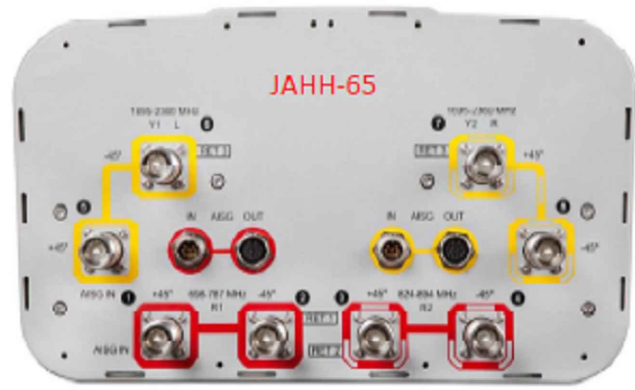


DATE DRAWN:	07/29/21
ATC JOB NO:	13668803_D1
CUSTOMER ID:	MOHAWK MTN CT
CUSTOMER #:	468041

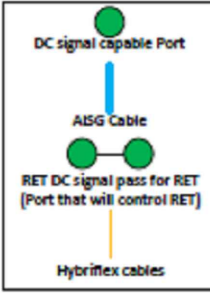
**GROUNDING DETAILS**

SHEET NUMBER:	REVISION:
<b>E-501</b>	<b>0</b>

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- Port 1 & 2 are for low band (698-787 MHz).
- Port 3 & 4 are for low band (824-894 MHz).
- Port 3,4,5, & 6 are for high band (1695-2360 MHz).
- Antenna Smart Bias Tee (SBT) is through port 1 for low band and port 5 for high band.
- AISG cable is only needed when drawn in the diagrams below, if it is not drawn then SBT is enough to control all RET motors.
- Not all SBT ports are needed to control RET, only green port connection to green port will control RET.



**Comments:**

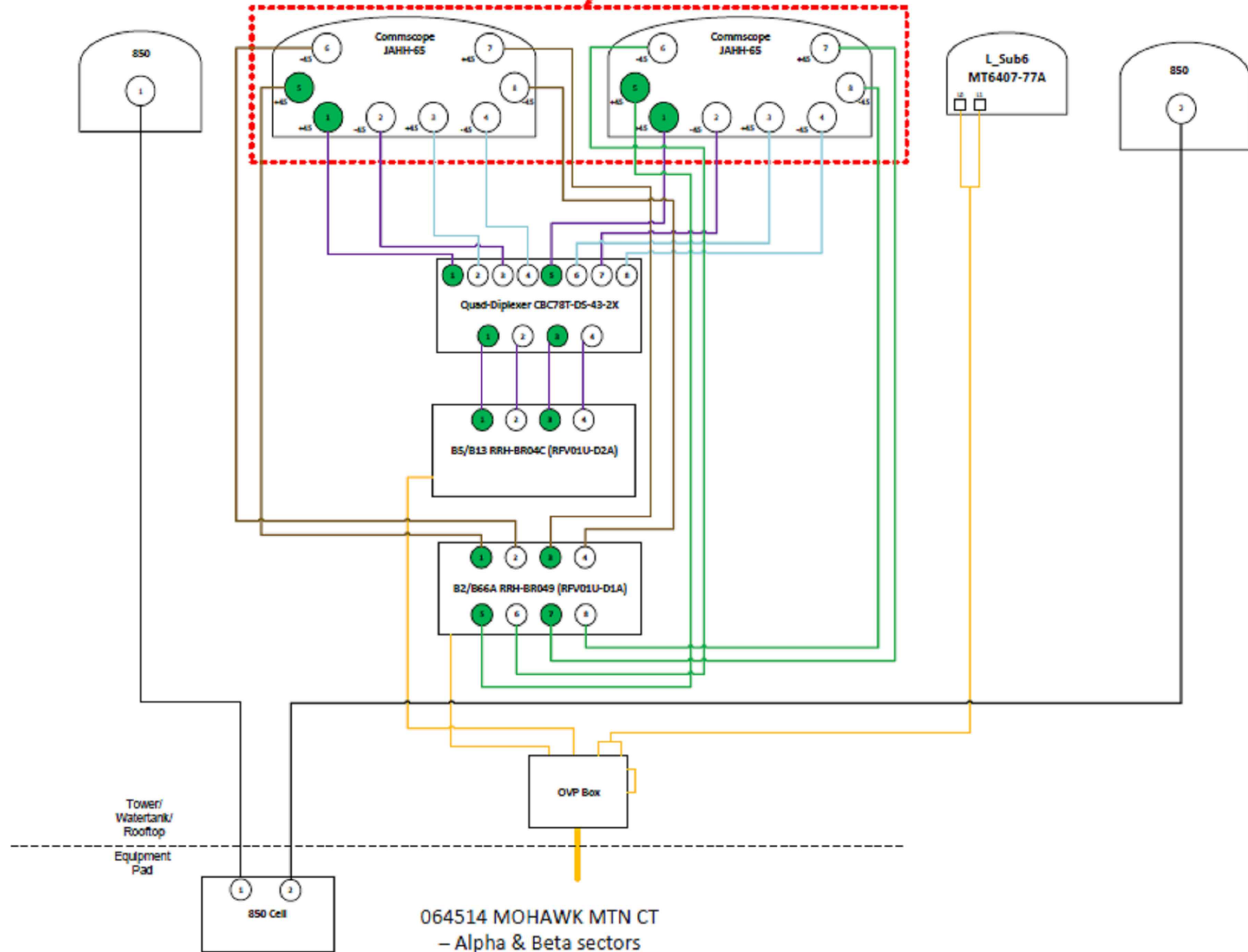
Diagram shows configuration as viewed from standing behind the antennas.

Antennas will be installed in that order from left to right.

Cap and weatherproof unused antenna ports.

All plumbing diagram colors are irrelevant except for AISG & Hybriflex cable. (For the coax colors follow Coax Colors guide above)

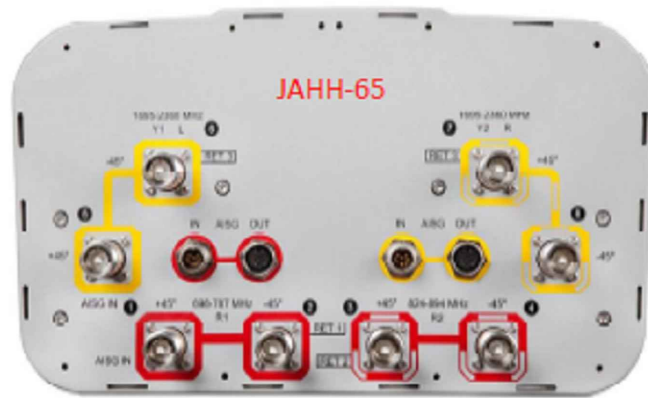
2" Side By Side Mount



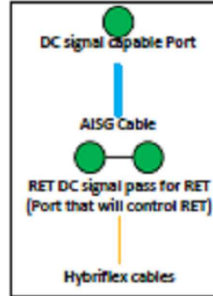
SUPPLEMENTAL

SHEET NUMBER:  
**R-601**

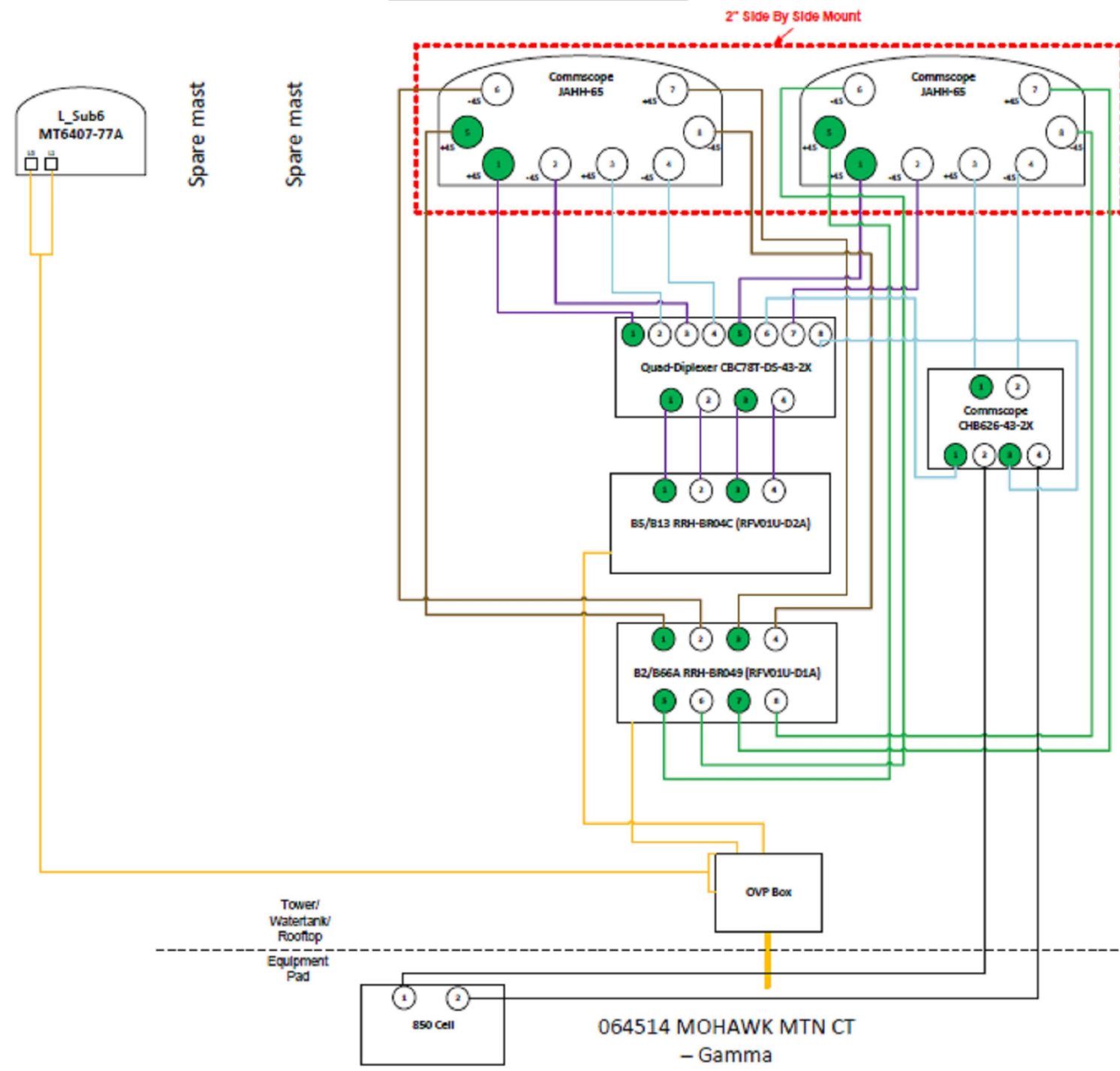
REVISION:  
-



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- Port 3 & 4 are for low band (824-894 MHz).
- Port 3,4,5, & 6 are for high band (1695-2360 MHz).
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- Not all SBT ports are needed to control RET, only green port connection to green port will control RET.



**Comments:**  
 Diagram shows configuration as viewed from standing behind the antennas.  
 Antennas will be installed in that order from left to right.  
 Cap and weatherproof unused antenna ports.  
 All plumbing diagram colors are irrelevant except for AISG & Hybriflex cable. (For the coax colors follow Coax Colors guide above)



SUPPLEMENTAL

SHEET NUMBER:  
**R-602**

REVISION:  
 -





GPD Engineering and Architecture Professional Corporation  
520 South Main Street, Suite 2531  
Akron, OH 44311

Maser Consulting Contact:  
peter.albano@colliersengineering.com



Mount Structural Analysis Report  
Pipe Mounts

June 17, 2021  
Site ID: 468041-VZW / MOHAWK MTN CT  
Page | 4

**Antenna Mount Analysis Report and PMI Requirements**

Mount Analysis

SMART Tool Project #: 10050479  
GPD Project #: 2021740.468041.01  
Maser Consulting Project #: 21777486  
June 17, 2021

Site Information

Site ID: 468041-VZW / MOHAWK MTN CT  
Site Name: MOHAWK MTN CT  
Carrier Name: Verizon Wireless  
Address: 36 MOHAWK MOUNTAIN RD.  
CORNWALL, Connecticut 06753,  
Litchfield County  
Latitude: 41.821289°  
Longitude: -73.296433°

Structure Information

Tower Type: 65-Ft Self Support  
Mount Type: Pipe Mounts  
FUZE ID #: 16271975

**Analysis Results**

Pipe Mounts: 85.3% Pass

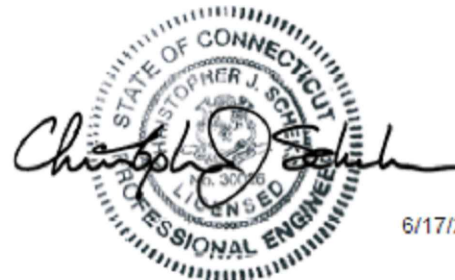
**\*\*\*Contractor PMI Requirements:**

Included at the end of this MA report  
Available & Submitted via portal at <https://pmi.vzwsmart.com>  
Contractor - Please Review Specific Site PMI Requirements Upon Award  
Requirements also Noted on Mount Modification Drawings  
Requirements may also be Noted on A & E drawings

Report Prepared By: Nick Andrews

Respectfully Submitted By:

Christopher J. Scheks, P.E.  
Connecticut #: 0030026



6/17/2021

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.
6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. GPD is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.
7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
  - o Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
  - o HSS (Rectangular) ASTM 500 (Gr. B-46)
  - o Pipe ASTM A53 (Gr. B-35)
  - o Threaded Rod F1554 (Gr. 36)
  - o Bolts ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by GPD.

**Analysis Results:**

Component	Utilization %	Pass/Fail
Mount Pipe P2.0 STD	84.0 %	Pass
Mount Pipe P2.5 STD	85.3 %	Pass
Pipe Mount Connections	61.4 %	Pass
<b>Structure Rating – (Controlling Utilization of all Components)</b>		<b>85.3%</b>

**Recommendation:**

The existing mounts are **SUFFICIENT** for the final loading configuration and do not require modifications.

ANSI/ASSP rigging plan review services compliant with the requirements of ANSI/TIA 322 are available for a Construction Class IV site or other, if required. Separate review fees will apply.

**Attachments:**

1. Mount Photos
2. Desktop Mount Mapping Report (for reference only)
3. Mount Geometry Verification
4. Analysis Calculations
5. **Contractor Required Post Installation Inspection (PMI) Report Deliverables**
6. Antenna Placement Diagrams

SUPPLEMENTAL

SHEET NUMBER: R-603  
REVISION: -