(REVISED) STRUCTURAL ANALYSIS REPORT

For

CRAN_RCTB_A1CT_152

39 North Gate Road South Woodstock, CT 06267

Equipment Mounted on Proposed Utility Pole



Prepared for:





Dated: March 26, 2021(Rev. 1) February 3, 2021

Prepared by:



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SCOPE OF WORK:

Hudson Design Group LLC (HDG) has been authorized by AT&T to conduct a structural evaluation of the proposed wood pole supporting the proposed AT&T equipment.

This report represents this office's findings, conclusions and recommendations pertaining to the support of the proposed AT&T equipment listed below.

This office conducted an on-site visual survey of the above areas on June 24, 2020. Attendees included Patrick Barrett (HDG – Field Technician).

CONCLUSION SUMMARY:

Based on our evaluation, we have determined that the proposed pole <u>is in conformance</u> with the National Electric Safety Code 2017 (NESC). <u>The wood pole structure is rated at 86.0%</u>.

APPURTENANCES CONFIGURATION:

Appurtenances	Elev.	Mount	
(1) MBA3F-U3A Antenna	32'-0''	Pipe Mast	
(3) 4455 RRH's	32'-0'' 28'-0''	Pipe Mast	
(1) Demark Box	18'-0''	Side of Wood Pole	
(1) Disconnect Switch	7'-0''	Side of Wood Pole	
(1) Electric Meter 5'-0" Sid		Side of Wood Pole	

ANALYSIS RESULTS SUMMARY:

Component	Max. Stress Ratio	Elev. of Component (ft.)	Pass/Fail
SPY 2 (Proposed)	86.0%	0 - 34.0	PASS



DESIGN CRITERIA:

National Electric Safety Code 2017 (NESC) and the 2018 Connecticut State Building Code Amendments						
Wind						
City/Town:	South Woodstock					
County:	Windham					
NESC Rule	Rule 250B	NESC Section 25				
Construction Grade	С	NESC Section 25				
Wind Load:	39.53 mph	NESC Table 230-2				
Ice						
Loading District	Heavy	NESC Figure 250-1				
Radial Ice Thickness:	0.50 in	NESC Table 230-1				

1. Approximate height above grade to center of the proposed CCI antenna: 32'-0" +/-

*Calculations and referenced documents are attached.



PROPOSED STRUCTURE:

The proposed 34'-0" +/- wood pole is assumed to be Southern Yellow Pine Class 2 (fb = 8000 psi) with a 12.25" diameter base. If field conditions differ from what is assumed in this report, then the engineer of record is to be notified as soon as possible.

ANTENNA/RRH SUPPORT RECOMMENDATIONS:

The new antenna and RRH's are proposed to be installed on a proposed pipe mast secured to the wood pole using new chain mounts.

EQUIPMENT SUPPORT RECOMMENDATIONS:

The new equipment is proposed to be installed on the wood pole using the approved manufacturer's mounts.

Limitations and assumptions:

- 1. Reference the latest HDG construction drawings for all the equipment locations details.
- 2. Mount all equipment per manufacturer's specifications.
- 3. All structural members and their connections are assumed to be in good condition and are free from defects with no deterioration to its member capacities. Contractor to perform pre-inspection prior to construction.
- 4. All antennas and waveguide cables are assumed to be properly installed and supported as per the manufacturer requirements.
- 5. HDG is not responsible for any modifications completed prior to and hereafter which HDG was not directly involved.
- 6. If field conditions differ from what is assumed in this report, then the engineer of record is to be notified as soon as possible.
- 7. HDG did not perform any geotechnical analysis / or / investigation. Soil Information is unknown.



FIELD PHOTOS:



Photo 1: Sample photo illustrating the location of the new pole.



Calculations

PoleForeman - Pole Loading Analysis Report

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INSULATORS Insulator Spool Tangent	Attach 156"	Loading 62%	Angle 0°	
ARM / BRACKET DATA Arm/Bracket	Attach	Vert Loading	Horz Loading	
SPANS Span: 1 Span Lengt	h (ft): 88	Direction: 332°		
Secondary	100	0 450	450 700	
Joint Use Joint Use Cable 144CT Fiber ADSS DNA-31074	Ruling Span (ft) I 100	Diameter (in) Weight (lbs/ft) 0.80 0.23	Attach A (in) Offset (in) Attach B (in) 180 0 180	Tension (lbs) Description 902
EQUIPMENT Equipment User Defined Equipment User Defined Equipment	Weight (lbs) 67.0 3.0 17.0 15.0 22.0 22.0 41.6 67.0 67.0	Attach (in) 24 192 324 348 48 48 48 24 72 72	Direction 90° 90° 90° 270° 90° 270° 270° 270° 90°	
RISERS Riser L 2" Riser - Primary	ength (ft) Di 34	irection 130°		

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PoleForeman - Pole Loading Analysis Report

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Solid Model View

