August 29, 2025

AT&T Mobility Corp.
492 Old Connecticut Path Suite #210
Framingham, MA 01701

Subject: Structural Analysis Report
AT&T Site ID: CRAN_RCTB_00073_665
Node FA #: 16278664
USID: 330492
Site Address: 15 Walnut Rd.
South Hamilton, MA 01982

To Whom It May Concern:

Centerline Communications completed a structural analysis to determine the structural integrity of the utility pole at the site referenced above.

Based on our analysis, Centerline Communications has determined the existing pole stress level to be *adequate* to support the existing and proposed equipment. This analysis assumes wire type and estimates wire diameter using photos of the existing pole.

Proposed Equipment:

(1) Cantenna (Weight= 25.6 lbs.)
(1) Power Meter (Weight= 16.3 lbs.)
(1) AC Panel (Weight= 7.0 lbs.)
(1) Demarc (Weight= 2.0 lbs.)
(1) Ericsson Cabinet (Weight= 75.0 lbs.)
(1) 4890 RRU (Weight= 68.0 lbs.)
(1) 4490 RRU (Weight= 68.0 lbs.)
(1) Ericsson PSU 6308 (Weight= 33.0 lbs.)
(1) Fiber Line
(1) Secondary Line

Analysis Results:	%	Result	Comments
Pole Stress Level with Existing and Proposed Equipment:	**39.0**	**PASS**	N/A

750 W Center St, Suite 301
West Bridgewater, MA 02379
781-713-4725

Analysis Results Based Upon the Following Pole Conditions:

Existing Pole Height Above Grade	Existing Pole Length/Class	New Pole Length/Class	New Pole Embedment	New Pole Height Above Grade	New Guy Wires Required
27.5’	35/4	-	-	-	No

This evaluation was conducted in accordance with the 2023 National Electric Safety Code (NESC) construction standards and the Massachusetts State Building Code, 10th Edition (Amendments to the IBC 2021).

Assumptions and Limitations:

- The utility pole and associated accessories are constructed in conformance with all applicable state and local building codes.
- The utility pole has been maintained in accordance with the manufacturer’s specifications.
- The foundation/soil is acceptable.

All Equipment proposed in this report shall be installed in accordance with the latest Centerline Communications Drawings.

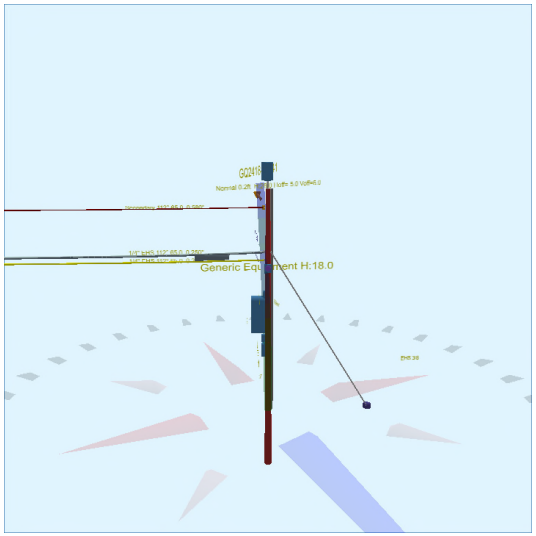
Should you have any questions, please do not hesitate to contact us.

Sincerely,

Derek Creaser, PE
Director - A&E Services

750 W Center St, Suite 301
West Bridgewater, MA 02379
781-713-4725

Pole Num:	**7 1/2**	Pole Length / Class:	**35 / 4**	Code:	**NESC**	Structure Type:	**Deadend**
By	**AP**	Species:	**SOUTHERN PINE**	NESC Rule:	**Rule 250B**	Status	**Guy Wires Adequate**
Checked By	**DC**	Setting Depth (ft):	**7.5**	Construction Grade:	**C**	Pole Strength Factor:	**0.85**
Aux Data 3	**Unset**	G/L Circumference (in):	**30.96**	Loading District:	**Heavy**	Transverse Wind LF:	**1.75**
Aux Data 4	**Unset**	G/L Fiber Stress (psi):	**8,000**	Ice Thickness (in):	**0.50**	Wire Tension LF:	**1.30**
Aux Data 5	**Unset**	Allowable Stress (psi):	**6,800**	Wind Speed (mph):	**39.53**	Vertical LF:	**1.90**
Aux Data 6	**Unset**	Fiber Stress Ht. Reduc:	**No**	Wind Pressure (psf):	**4.00**		
Latitude:	**0**	Longitude:			**0**	Elevation:	**0M**



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Pole Capacity Utilization (%)		Height (ft)	Wind Angle (deg)
Maximum	**21.0**	0.0	197.9
Groundline	**21.0**	0.0	198.6
Vertical	**4.5**	18.8	110.0

Pole Moments (ft-lb)		Load Angle (deg)	Wind Angle (deg)
Max Cap Util	**10,344**	184.9	197.9
Groundline	**10,344**	184.9	198.6
GL Allowable	**53,229**		

Guy System Component Summary				Load From Worst Wind Angle on Pole		Individual Maximum Load With Overload Applied	
Description	**Lead Length (ft)**	**Lead Angle (deg)**	**Height (ft)**	**Nominal Capacity (%)**	**Wind Angle (deg)**	**Max* Load Capacity (%)**	**Wind Angle (deg)**
▸ Expanding - 10" 8-Way - Soil Class 4	12.5	290.0		**25.4**	197.9	**30.0**	110.0
• EHS 3/8 (Down)			20.2	**33.0**	197.9	**39.0**	110.0
			System Capacity Summary:	**Adequate**		**Adequate**	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 184.9°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Powers	165	27.3	**3,899**	37.7	**7.3**	**536**	48	1	**537**	**7.9**
Comms	722	119.6	**13,261**	128.2	**24.9**	**1,823**	218	3	**1,825**	**26.8**
GuyBraces	-603	-99.9	**-11,324**	-109.5	**-21.3**	**-1,556**	5,888	77	**-1,479**	**-21.8**
GenericEquipments	113	18.8	**1,753**	17.0	**3.3**	**241**	570	7	**248**	**3.7**
Pole	129	21.4	**1,732**	16.7	**3.3**	**238**	1,184	16	**253**	**3.7**
Crossarms	77	12.7	**1,010**	9.8	**1.9**	**139**	81	1	**140**	**2.1**
Insulators	1	0.1	**12**	0.1	**0.0**	**2**	32	0	**2**	**0.0**
Pole Load	604	100.0	**10,344**	100.0	**19.4**	**1,422**	8,020	105	**1,527**	**22.5**
Pole Reserve Capacity			**42,885**		**80.6**	**5,378**			**5,273**	**77.5**

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 184.9°

	Shear Load* (lbs)	Applied Load (%)	Bending Moment (ft-lb)	Applied Moment (%)	Pole Capacity (%)	Bending Stress (+/- psi)	Vertical Load (lbs)	Vertical Stress (psi)	Total Stress (psi)	Pole Capacity (%)
Proposed	165	27.4	**3,910**	37.8	**7.4**	**537**	52	1	**538**	**7.9**
Existing	-215	-35.6	**-4,029**	-39.0	**-7.6**	**-554**	6,046	79	**-474**	**-7.0**
AT&T	524	86.7	**8,731**	84.4	**16.4**	**1,200**	739	10	**1,210**	**17.8**
Pole	129	21.4	**1,732**	16.7	**3.3**	**238**	1,184	16	**253**	**3.7**
Totals:	604	100.0	**10,344**	100.0	**19.4**	**1,422**	8,020	105	**1,527**	**22.5**

Detailed Load Components:

Power		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Secondary	TRIPLEX 6 AWG	Proposed	25.40	5.96	0.5800	0.80	0.113	65.0	112.0	65.0	357	1,537	3	322	1,862
											Totals:	**1,537**	**3**	**322**	**1,862**

Comm		Owner	Height (ft)	Horiz. Offset (in)	Cable Diameter (in)	Sag at Max Temp (ft)	Cable Weight (lbs/ft)	Lead/Span Length (ft)	Span Angle (deg)	Wire Length (ft)	Tension (lbs)	Tension Moment* (ft-lb)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Overlashed Bundle	1/4" EHS	Existing	20.20	6.26	0.2500	0.88	0.121	65.0	112.0	65.0	800	2,738	2	247	2,988
Telco	26 GA 50 PR (0.58)	Existing	20.16	6.26	0.5800		0.180	65.0	112.0	65.0			2	85	88
Telco	26 GA 50 PR (0.58)	Existing	20.11	6.26	0.5800		0.180	65.0	112.0	65.0			2	85	87

Telco	26 GA 50 PR (0.58)	Existing	20.06	6.26	0.5800		0.180	65.0	112.0	65.0			2	243	246
Overlashed Bundle	1/4" EHS	AT&T	19.20	6.32	0.2500	0.62	0.121	65.0	112.0	65.0	800	2,603	3	234	2,840
Telco	BELOPTIX DT144 - 144 FIBERS - DIELECTRIC (0.756)	AT&T	19.16	6.32	0.7560		0.208	65.0	112.0	65.0			3	80	83
											Totals:	**5,341**	**15**	**975**	**6,331**

GenericEquipment		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Box	Generic Equipment	Existing	18.00	5.89	200.0	0.0	5.00	12.00	4.00	--	10.00	2	72	74
Box	Demarc	AT&T	15.00	5.41	112.0	0.0	2.00	9.60	2.70	--	7.00	0	14	14
Cylinder	GQ2418-B6941	AT&T	29.50	0.79	0.0	0.0	25.60	24.00	--	16.00	--	1	226	227
Box	Meter	AT&T	8.00	6.87	112.0	0.0	16.25	18.50	4.80	--	10.00	2	24	27
Box	Cabinet w/ RRU	AT&T	12.50	14.21	112.0	0.0	244.00	48.00	20.00	--	24.00	72	405	477
Box	AC Distribution Panel	AT&T	9.50	7.03	112.0	0.0	7.00	10.20	5.30	--	6.10	1	17	18
											Totals:	**78**	**759**	**837**

Crossarm		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Height (in)	Unit Depth (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Normal	Riser	AT&T	13.75	5.63	270.0	270.0	37.40	330.00	3.00	3.00	1	458	459
Normal	MK-06679 Mounting Bracket	AT&T	28.00	-0.66	0.0	0.0	5.14	12.00	2.00	2.04	0	23	23
										Totals:	**2**	**481**	**482**

Insulator		Owner	Height (ft)	Horiz. Offset (in)	Offset Angle (deg)	Rotate Angle (deg)	Unit Weight (lbs)	Unit Diameter (in)	Unit Length (in)	Offset Moment* (ft-lb)	Wind Moment* (ft-lb)	Moment at GL* (ft-lb)
Spool	Spool 3"	Proposed	25.40	0.00	112.0	112.0	2.00	3.00	3.19	0	5	5
Bolt	Single Bolt	Existing	20.20	0.00	112.0	112.0	5.00	3.00	0.10	0	0	0
Extension	Single Bolt	AT&T	28.50	3.34	152.5	0.0	5.00	3.00	0.10	0	0	0
Bolt	Single Bolt	AT&T	19.20	0.00	112.0	112.0	5.00	3.00	0.10	0	0	0
									Totals:	**0**	**6**	**6**

Guy Wire and Brace		Owner	Attach Height (ft)	End Height (ft)	Lead/Span Length (ft)	Wire Diameter (in)	Percent Solid (%)	Lead Angle (deg)	Incline Angle (deg)	Wire Weight (lbs/ft)	Rest Length (ft)	Stretch Length (in)
EHS 3/8	Down	Existing	20.20	0.00	12.50	0.375	75.00	290.0	58.1	0.273	29.76	0.86

Guy Wire and Brace (Loads and Reactions)		Elastic Modulus (psi)	Rated Tensile Strength (lbs)	Guy Strength Factor	Allowable Tension (lbs)	Initial Tension (lbs)	Loaded Tension*[2] (lbs)	Maximum Tension[2] (lbs)	Applied Tension[3] (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Proportional Moment at GL[3] (ft-lb)
EHS 3/8	Down	2.30e+7	15,400	0.90	13,860	700	5,404	4,913	4,572	3,879	2,419	-629	-11,324
									Totals:	**3,879**	**2,419**	**-629**	**-11,324**

Anchor/Rod Load Summary	Owner	Rod Length AGL (in)	Lead Length (ft)	Lead Angle (deg)	Strength of Assembly (lbs)	Anchor/Rod Strength Factor	Allowable Load (lbs)	Max Load[2] (lbs)	Load at Pole MCU[3] (lbs)	Max Required Capacity[2] (%)
Expanding - 10" 8-Way - Soil Class 4	Existing	6.00	12.50	290.0	18,000	1.00	18,000	5,404	4,572	30.0

Pole Buckling

Buckling Constant	Buckling Column Height* (ft)	Buckling Section Height (% Buckling Col. Hgt.)	Buckling Section Diameter (in)	Minimum Buckling Diameter at GL (in)	Diameter at Tip (in)	Diameter at GL (in)	Modulus of Elasticity (psi)	Pole Density (pcf)	Ice Density (pcf)	Pole Tip Height (ft)	Buckling Load Capacity at Height (lbs)	Buckling Load Applied at Height (lbs)	Buckling Load Factor of Safety
0.71	18.84	33.30	9.13	4.53	6.69	9.86	1.60e+6	60.00	56.00	27.50	179,279	**1782.25**	**22.22**