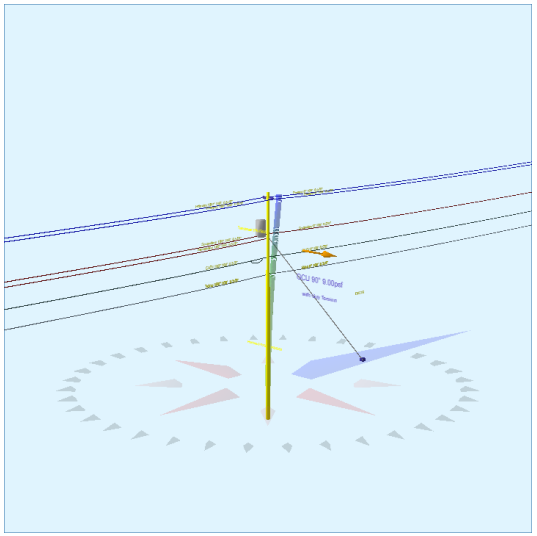
Pole Num:	**P.R1020_116858701**	Pole Length / Class:	**40 / 5**	Code:	**NESC**	Structure Type:	**Guyed Tangent**
Aux Data 1	**Unset**	Species:	**SOUTHERN PINE**	NESC Rule:	**Rule 250B**	Status	**Guy Wires Adequate**
Aux Data 2	**Unset**	Setting Depth (ft):	**6.00**	Construction Grade:	**C**	Pole Strength Factor:	**0.85**
Aux Data 3	**Unset**	G/L Circumference (in):	**31.00**	Loading District:	**Light**	Transverse Wind LF:	**1.75**
Aux Data 4	**Unset**	G/L Fiber Stress (psi):	**8,000**	Ice Thickness (in):	**0.00**	Wire Tension LF:	**1.30**
Aux Data 5	**Unset**	Allowable Stress (psi):	**6,800**	Wind Speed (mph):	**59.29**	Vertical LF:	**1.90**
Aux Data 6	**Unset**	Fiber Stress Ht. Reduc:	**No**	Wind Pressure (psf):	**9.00**		
Latitude:	**0.000000 Deg**	Longitude:		**0.000000 Deg**		Elevation:	**0 Feet**



Pole Capacity Utilization (%)		**Height (ft)**	**Wind Angle (deg)**
Maximum	**41.5**	0.0	90.0
Groundline	**41.5**	0.0	90.0
Vertical	**5.1**	23.9	180.0

Pole Moments (ft-lb)		**Load Angle (deg)**	**Wind Angle (deg)**
Max Cap Util	**21,659**	89.9	90.0
Groundline	**21,659**	89.9	90.0
GL Allowable	**53,452**		

Guy System Component Summary				**Load From Worst Wind Angle on Pole**		**Individual Maximum Load**	
Description	**Lead Length (ft)**	**Lead Angle (deg)**	**Height (ft)**	**Nominal Capacity (%)**	**Wind Angle (deg)**	**Max Load Capacity (%)**	**Wind Angle (deg)**
Single Helix Anchor	25.0	0.0		**11.5**	90.0	**13.4**	180.0
EHS 3/8 (Down)			26.0	**16.6**	90.0	**21.3**	180.0
			System Capacity Summary:	**Adequate**		**Adequate**	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 89.9°

	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	259	27.0	**7,884**	36.4	**14.8**	**1,003**	399	5	**1,008**	**14.8**
Comms	226	23.5	**4,899**	22.6	**9.2**	**623**	342	4	**628**	**9.2**
GuyBraces	11	1.2	**295**	1.4	**0.6**	**38**	2,504	33	**70**	**1.0**
PowerEquipments	82	8.5	**2,289**	10.6	**4.3**	**291**	636	8	**300**	**4.4**
Pole	355	37.0	**5,554**	25.6	**10.4**	**707**	1,364	18	**724**	**10.7**
Insulators	27	2.8	**739**	3.4	**1.4**	**94**	40	1	**94**	**1.4**
Pole Load	960	100.0	**21,659**	100.0	**40.5**	**2,755**	5,286	69	**2,824**	**41.5**
Pole Reserve Capacity			**31,793**		**59.5**	**4,045**			**3,976**	**58.5**

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 89.9°

	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 (%)
FPL	615	64.0	**13,438**	62.0	**25.1**	**1,710**	1,763	23	**1,733**	**25.5**
CATV	76	7.9	**1,800**	8.3	**3.4**	**229**	114	1	**231**	**3.4**
AT&T	150	15.6	**3,098**	14.3	**5.8**	**394**	228	3	**397**	**5.8**
<Undefined>	120	12.5	**3,323**	15.3	**6.2**	**423**	3,180	42	**464**	**6.8**
Totals:	960	100.0	**21,659**	100.0	**40.5**	**2,755**	5,286	69	**2,824**	**41.5**

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)
Primary	FPL	FPL	32.97	15.83	0.5700	1.19	0.600	100.0	0.0	100.0	1,200	81	15	1,233	1,329
Primary	FPL	FPL	32.97	15.83	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-81	15	1,233	1,167
Primary	FPL	FPL	32.97	15.83	0.5700	1.19	0.600	100.0	0.0	100.0	1,200	81	-15	1,233	1,299
Primary	FPL	FPL	32.97	15.83	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-81	-15	1,233	1,138
Secondary	FPL	FPL	26.97	5.42	0.5700	1.19	0.600	100.0	0.0	100.0	1,200	66	26	1,009	1,101
Secondary	FPL	FPL	26.97	5.42	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-66	26	1,009	968
Secondary	FPL	FPL	25.97	5.47	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-64	-26	971	882
											Totals:	**-64**	**25**	**7,922**	**7,884**

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)
CATV	CATV	CATV	22.97	5.64	0.5700	1.19	0.600	100.0	0.0	100.0	1,200	56	27	859	942
CATV	CATV	CATV	22.97	5.64	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-56	27	888	858
Telco	AT&T	AT&T	19.97	5.81	0.5700	1.19	0.600	100.0	0.0	100.0	1,200	49	28	747	824
Telco	AT&T	AT&T	19.97	5.81	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-49	28	747	726
Telco	AT&T	AT&T	19.97	5.81	0.5700	1.19	0.600	100.0	0.0	100.0	1,200	49	28	747	824
Telco	AT&T	AT&T	19.97	5.81	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-49	28	747	726
											Totals:	**0**	**164**	**4,734**	**4,898**

PowerEquipment		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)
Transformer	1PH-15KVA		28.00	20.36	180.0	180.0	335.00	34.00	--	22.00	--	-2	2,291	2,289
											Totals:	**-2**	**2,291**	**2,289**

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)
Deadend	Deadend 12.75"		33.00	0.00	90.0	90.0	3.00	3.80	12.75	8	175	182
Deadend	Deadend 12.75"		33.00	0.00	270.0	270.0	3.00	3.80	12.75	-8	175	167
Bolt	Deadend 12.75"		27.00	0.00	90.0	90.0	3.00	2.00	15.00	3	89	91
Bolt	Deadend 12.75"		26.00	0.00	270.0	270.0	3.00	2.00	15.00	-3	85	83
Bolt	Deadend 12.75"		23.00	0.00	90.0	90.0	3.00	2.00	15.00	3	75	78
Bolt	Deadend 12.75"		20.00	0.00	90.0	90.0	3.00	2.00	15.00	3	66	68
Bolt	Deadend 12.75"		20.00	0.00	90.0	90.0	3.00	2.00	15.00	3	66	68
									Totals:	**8**	**730**	**739**

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		26.00	0.00	25.00	0.375	75.00	0.0	46.0	0.273	34.37	0.50

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 Tension² (lbs)	Applied Tension³ (lbs)	Vertical Load (lbs)	Shear Load In Guy Dir (lbs)	Shear Load At Report Angle (lbs)	Moment at GL³ (ft-lb)
EHS 3/8	Down	2.30e+7	15,400	0.90	13,860	700	2,951	2,683	2,297	1,652	1,596	3	295
									Totals:	**1,652**	**1,596**	**3**	**295**

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 Load² (lbs)	Load at Pole MCU³ (lbs)	Max Required Capacity² (%)
Single Helix Anchor		18.00	25.00	0.0	20,000	1.00	20,000	2,683	2,297	13.4

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	23.90	34.08	8.95	10.60	6.05	9.87	1.60e+6	60.00	57.00	34.00	102,875	**1036.44**	**19.61**

Notes

Date	Author	Description
1/27/2021		Power Company Request
Power company load data has been requested. Email sent to Elmer Pole		
1/27/2021		General Description
General Statement: Non-AT&T facilities may not be accurately identified pending attachment information from attaching party.		