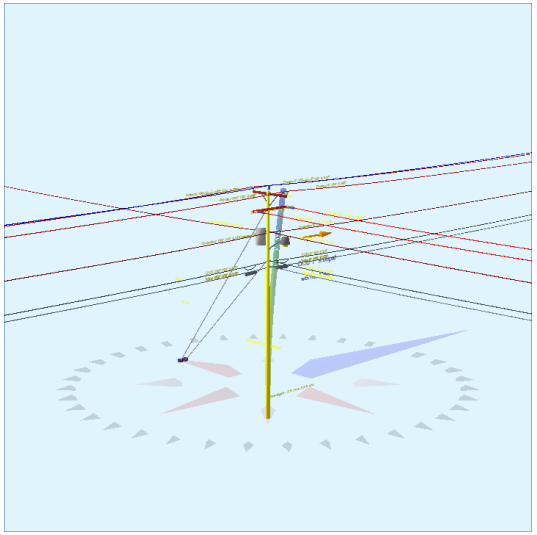
Pole Num:	**P.F1117 _116855024**	Pole Length / Class:	**40 / 5**	Code:	**NESC**	Structure Type:	**Junction**
Aux Data 1	**Unset**	Species:	**SOUTHERN PINE**	NESC Rule:	**Rule 250B**	Status	**Guy Wires Adequate**
Aux Data 2	**Unset**	Setting Depth (ft):	**6.00**	Construction Grade:	**C**	Pole Strength 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	**54.9**	0.0	1.3
Groundline	**54.9**	0.0	1.3
Vertical	**32.1**	27.4	91.5

Pole Moments (ft-lb)		**Load Angle (deg)**	**Wind Angle (deg)**
Max Cap Util	**26,951**	12.6	1.3
Groundline	**26,951**	12.6	1.3
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	23.0	270.0		**53.5**	1.3	**56.1**	70.0
EHS 3/8 (Down)			31.0	**77.2**	1.3	**89.1**	70.0
Single Helix Anchor	23.0	273.0		**33.6**	1.3	**40.2**	110.0
EHS 3/8 (Down)			22.0	**48.5**	1.3	**63.8**	110.0
			System Capacity Summary:	**Adequate**		**Adequate**	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 12.6°

	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	1,643	135.1	**50,752**	188.3	**95.0**	**6,457**	466	6	**6,463**	**95.0**
Comms	1,134	93.2	**24,268**	90.1	**45.4**	**3,087**	513	7	**3,094**	**45.5**
GuyBraces	-2,170	-178.4	**-60,834**	-225.7	**-113.8**	**-7,739**	19,971	261	**-7,478**	**-110.0**
PowerEquipments	80	6.6	**1,848**	6.9	**3.5**	**235**	636	8	**243**	**3.6**
Pole	348	28.6	**5,445**	20.2	**10.2**	**693**	1,364	18	**711**	**10.4**
Crossarms	77	6.3	**2,612**	9.7	**4.9**	**332**	190	2	**335**	**4.9**
Streetlights	44	3.6	**1,101**	4.1	**2.1**	**140**	86	1	**141**	**2.1**
Insulators	61	5.0	**1,758**	6.5	**3.3**	**224**	123	2	**225**	**3.3**
Pole Load	1,216	100.0	**26,951**	100.0	**50.4**	**3,429**	23,350	305	**3,734**	**54.9**
Pole Reserve Capacity			**26,501**		**49.6**	**3,371**			**3,066**	**45.1**

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 12.6°

	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	422	34.7	**7,518**	27.9	**14.1**	**956**	1,706	22	**979**	**14.4**
<Undefined>	-340	-27.9	**-4,836**	-17.9	**-9.1**	**-615**	21,131	276	**-339**	**-5.0**
CATV	379	31.1	**8,357**	31.0	**15.6**	**1,063**	171	2	**1,065**	**15.7**
AT&T	755	62.1	**15,911**	59.0	**29.8**	**2,024**	342	4	**2,029**	**29.8**
Totals:	1,216	100.0	**26,951**	100.0	**50.4**	**3,429**	23,350	305	**3,734**	**54.9**

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	35.03	3.02	0.5700	1.19	0.600	100.0	0.0	100.0	1,200	53,330	3	6	53,339
Primary	FPL	FPL	35.03	3.02	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-53,330	3	6	-53,320
Primary	ACSR 1/0 AWG 6/1 RAVEN		34.35	48.24	0.3980	0.23	0.145	150.0	0.0	150.0	2,628	114,591	26	6	114,624
Primary	ACSR 1/0 AWG 6/1 RAVEN		34.35	48.24	0.3980	0.23	0.145	150.0	180.0	150.0	2,628	-114,591	26	6	-114,558
Primary	ACSR 1/0 AWG 6/1 RAVEN		34.35	48.24	0.3980	0.23	0.145	150.0	0.0	150.0	2,628	114,591	-10	6	114,587
Primary	ACSR 1/0 AWG 6/1 RAVEN		34.35	48.24	0.3980	0.23	0.145	150.0	180.0	150.0	2,628	-114,591	-10	6	-114,595

Primary	ACSR 1/0 AWG 6/1 RAVEN		31.00	56.19	0.3980	0.23	0.145	150.0	90.0	150.0	2,628	23,125	-3	1,185	24,306
Primary	ACSR 1/0 AWG 6/1 RAVEN		31.00	56.19	0.3980	0.23	0.145	150.0	90.0	150.0	2,628	23,125	5	1,185	24,314
Secondary	FPL	FPL	26.97	5.42	0.5700	1.19	0.600	100.0	92.0	100.0	1,200	7,748	25	991	8,764
Secondary	FPL	FPL	26.97	5.42	0.5700	1.19	0.600	100.0	272.0	100.0	1,200	-7,748	25	991	-6,731
Secondary	FPL	FPL	26.97	5.42	0.5700	1.19	0.600	100.0	0.0	100.0	1,200	41,056	6	5	41,066
Secondary	FPL	FPL	26.97	5.42	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-41,056	6	5	-41,045
											Totals:	**46,249**	**102**	**4,401**	**50,751**

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	21.97	5.70	0.5700	1.19	0.600	100.0	90.0	100.0	1,200	7,483	26	828	8,337
CATV	CATV	CATV	21.97	5.70	0.5700	1.19	0.600	100.0	0.0	100.0	1,200	33,444	6	4	33,454
CATV	CATV	CATV	21.97	5.70	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-33,444	6	4	-33,434
Telco	AT&T	AT&T	20.97	5.75	0.5700	1.19	0.600	100.0	90.0	100.0	1,200	7,142	27	765	7,934
Telco	AT&T	AT&T	20.97	5.75	0.5700	1.19	0.600	100.0	90.0	100.0	1,200	7,142	27	765	7,934
Telco	AT&T	AT&T	20.97	5.75	0.5700	1.19	0.600	100.0	0.0	100.0	1,200	31,921	6	4	31,931
Telco	AT&T	AT&T	20.97	5.75	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-31,921	6	4	-31,912
Telco	AT&T	AT&T	20.97	5.75	0.5700	1.19	0.600	100.0	0.0	100.0	1,200	31,921	6	6	31,933
Telco	AT&T	AT&T	20.97	5.75	0.5700	1.19	0.600	100.0	180.0	100.0	1,200	-31,921	6	6	-31,910
											Totals:	**21,767**	**115**	**2,386**	**24,268**

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		26.00	20.47	270.0	270.0	335.00	34.00	--	22.00	--	-237	2,085	1,848
											Totals:	**-237**	**2,085**	**1,848**

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	4' x 3.5" x 4.5" SP - 2 Pin		33.50	4.80	0.0	0.0	50.00	4.50	3.50	96.00	37	2,471	2,508
Normal	8' x 3.5" x 4.5" SP - 3 Deadend		31.00	4.94	90.0	90.0	50.00	4.50	3.50	96.00	9	95	103
										Totals:	**46**	**2,566**	**2,612**

Streetlight		**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)**
General	Streetlight - 3 ft. Arm		24.00	3.59	90.0	90.0	45.00	24.00	20.00	3.00	36.00	51	1,050	1,101
											Totals:	**51**	**1,050**	**1,101**

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"	34.00	0.00	90.0	90.0	3.00	3.80	12.75	0	177	177
Pin	15 kV Pin Insulator 6" Dia x 8"	33.69	48.00	84.3	0.0	10.00	6.00	8.00	24	174	198
Pin	15 kV Pin Insulator 6" Dia x 8"	33.69	-48.00	275.7	0.0	10.00	6.00	8.00	-9	174	165
Deadend	Deadend Insulator	31.00	44.00	173.6	0.0	8.99	3.00	30.00	-50	299	249
Deadend	Deadend Insulator	31.00	-44.00	6.4	0.0	8.99	3.00	30.00	72	299	371
Bolt	Deadend 12.75"	27.00	0.00	2.0	2.0	3.00	2.00	15.00	3	87	89
Bolt	Deadend 12.75"	27.00	0.00	90.0	90.0	3.00	2.00	15.00	1	87	87
Bolt	Deadend 12.75"	22.00	0.00	0.0	0.0	3.00	2.00	15.00	3	71	73
Bolt	Deadend 12.75"	22.00	0.00	90.0	90.0	3.00	2.00	15.00	1	71	71
Bolt	Deadend 12.75"	21.00	0.00	0.0	0.0	3.00	2.00	15.00	3	68	70
Bolt	Deadend 12.75"	21.00	0.00	0.0	0.0	3.00	2.00	15.00	3	68	70
Bolt	Deadend 12.75"	21.00	0.00	90.0	90.0	3.00	2.00	15.00	1	68	68
Bolt	Deadend 12.75"	21.00	0.00	90.0	90.0	3.00	2.00	15.00	1	68	68
								Totals:	**50**	**1,709**	**1,758**

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		31.00	0.00	23.00	0.375	75.00	270.0	53.3	0.273	36.94	2.49
EHS 3/8	Down		22.00	0.00	23.00	0.375	75.00	273.0	43.6	0.273	30.11	1.28

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	12,346	11,224	10,695	8,570	6,398	-1,397	-43,025
EHS 3/8	Down	2.30e+7	15,400	0.90	13,860	700	8,841	8,037	6,725	4,638	4,870	-813	-17,809
									Totals:	**13,208**	**11,269**	**-2,210**	**-60,834**

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	23.00	270.0	20,000	1.00	20,000	11,224	10,695	56.1
Single Helix Anchor		18.00	23.00	273.0	20,000	1.00	20,000	8,037	6,725	40.2

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	27.44	34.69	8.80	23.67	6.05	9.87	1.60e+6	60.00	57.00	34.00	72,834	**727.41**	**3.12**

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.		