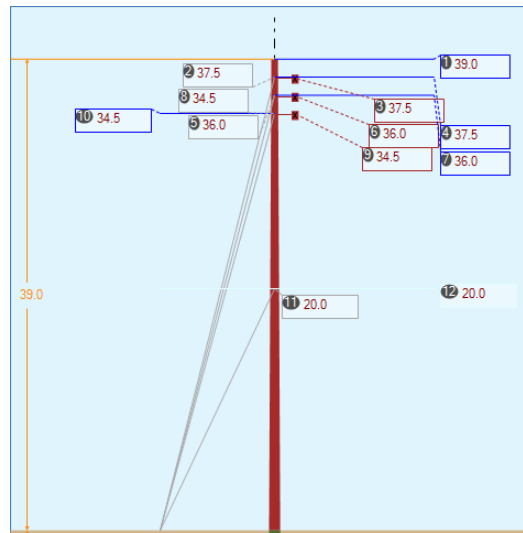
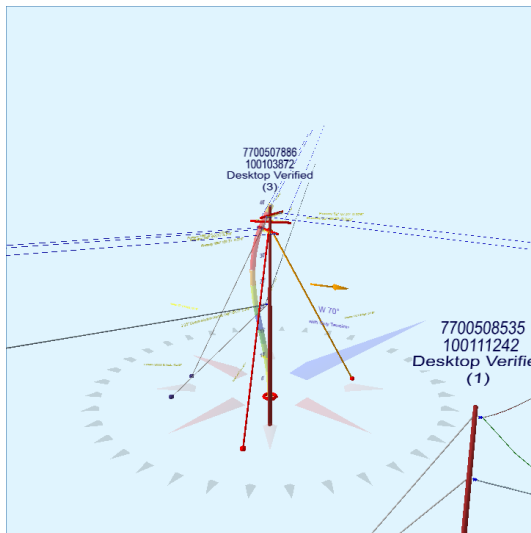


SAP Equip ID:	100103872	Pole Length / Class:	45 / 4	Code:	GO 95	Structure Type:	Guyed Tangent
PM Order Number	Unset	Species:	DOUGLAS FIR	GO 95 Rule:	At Replace (Existing)	Pole Strength Factor:	0.38
Estimator LAN ID	Unset	Setting Depth (ft):	6.0	Construction Grade:	A	Transverse Wind LF:	1.00
Sketch Location	Unset	G/L Circumference (in):	35.00	Loading District:	Heavy	Wire Tension LF:	1.00
Joint Pole Number	Unset	G/L Fiber Stress (psi):	8,000	Ice Thickness (in):	0.50	Vertical LF:	1.00
Notification	Unset	Allowable Stress (psi):	2,894	Wind Speed (mph):	48.41	Pole Factor of Safety:	1.06
Aux Data 6	Unset	Fiber Stress Ht. Reduc:	No	Wind Pressure (psf):	6.00	Vertical Factor of Safety:	4.44
Latitude:	39.17356	Longitude:	-121.02924	Elevation:	2647.86'	Bending Factor of Safety:	1.13



Pole Capacity Utilization (%)		Height (ft)	Wind Angle (deg)
Crossarm allowance 300 lbs			
Maximum	252.0	34.3	70.0
Groundline	85.4	0.0	246.3
Vertical	60.1	34.4	46.2

Pole Moments (ft-lb)		Load Angle (deg)	Wind Angle (deg)
Crossarm allowance 300 lbs			
Max Cap Util	18,616	2.5	70.0
Groundline	23,069	217.9	246.3
GL Allowable	32,739		
Overturn	24,500		

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)
Anchor	20.0	256.2		0.0	70.0	0.0	0.0
(Down)			37.5	0.0	70.0	0.0	0.0
Anchor	20.0	148.5		115.9	70.0	139.0	270.0
(Down)			36.0	86.2	70.0	103.4	270.0
Anchor	20.0	17.7		83.3	70.0	111.2	246.3
(Down)			34.5	61.9	70.0	82.7	246.3
Anchor	20.0	226.2		0.0	70.0	0.0	0.0
(Down)			20.0	0.0	70.0	0.0	0.0
System Capacity Summary:				Inadequate		Inadequate	

Groundline Load Summary - Reporting Angle Mode: Load - Reporting Angle: 217.9°										
	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	2,637	161.2	58,843	255.1	179.7	6,573	-549	-6	6,568	226.9
Comms	1,132	69.2	18,488	80.1	56.5	2,065	386	4	2,069	71.5
GuyBraces	-1,940	-118.6	-50,693	-219.8	-154.8	-5,663	17,518	180	-5,483	-189.5
Pole	-147	-9.0	-2,259	-9.8	-6.9	-252	1,035	11	-242	-8.4
Crossarms	-38	-2.3	-1,101	-4.8	-3.4	-123	150	2	-121	-4.2
Insulators	-8	-0.5	-208	-0.9	-0.6	-23	81	1	-22	-0.8
Pole Load	1,636	100.0	23,069	100.0	70.5	2,577	18,620	191	2,768	95.6
Pole Reserve Capacity			9,670		29.5	317			126	4.4

Load Summary by Owner - Reporting Angle Mode: Load - Reporting Angle: 217.9°										
	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 (%)
PG&E	652	39.8	6,854	29.7	20.9	766	17,191	176	942	32.6
Comm	1,132	69.2	18,474	80.1	56.4	2,064	395	4	2,068	71.5
Pole	-147	-9.0	-2,259	-9.8	-6.9	-252	1,035	11	-242	-8.4
<Undefined>	0	0.0	0	0.0	0.0	0	0	0	0	0.0
Totals:	1,636	100.0	23,069	100.0	70.5	2,577	18,620	191	2,768	95.6

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	2 (7/1) ACSR (SPARATE) HVY	PG&E	37.50	32.31	0.3250	0.05	0.107	69.8	54.7	69.8	1,690	-14,958	3	16	-14,939
Primary	2 (7/1) ACSR (SPARATE) HVY	PG&E	37.50	32.31	0.3250	0.05	0.107	67.2	52.4	67.2	1,690	-15,121	-11	16	-15,116
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	36.00	32.34	0.7240	1.12	0.373	162.9	322.2	162.9	3,440	-7,538	10	-577	-8,105
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	36.00	32.34	0.7240	1.12	0.373	162.9	322.2	162.9	3,440	-7,538	-7	-577	-8,122
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	34.50	23.43	0.7240	0.96	0.373	151.8	185.7	151.8	3,440	24,766	-10	-269	24,487
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	34.50	42.64	0.7240	0.96	0.373	151.8	185.7	151.8	3,440	24,766	-7	-269	24,489
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	34.50	42.64	0.7240	0.96	0.373	151.8	185.7	151.8	3,440	24,766	0	-269	24,497
Primary	397 AAC (CANNA) HVY 400/600 RS	PG&E	39.00	8.00	0.7240	1.12	0.373	162.9	322.2	162.9	3,440	-8,166	3	-626	-8,788
											Totals:	20,976	-19	-2,555	18,403

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	2.25" Communication Bundle	Comm	20.00	12.43	0.3060	4.20	0.165	162.9	322.2	162.9	2,200	-2,680	22	-396	-3,054
Telco	CU CABLE	Comm	19.91	12.43	2.0000		2.300	162.9	322.2	162.9			67	-209	-141
Overlashed Bundle	2.25" Communication Bundle	Comm	20.00	12.43	0.3060	3.66	0.165	151.8	185.7	151.8	2,200	9,188	20	-192	9,016
Telco	CU CABLE	Comm	19.91	12.43	2.0000		2.300	151.8	185.7	151.8			63	-101	-38
											Totals:	6,508	172	-898	5,782

O-Calc® Pro Analysis - GO 95

Tuesday, March 15, 2022 10:45 AM

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	Crossarm	PG&E	37.50	5.18	76.2	76.2	50.00	4.50	3.50	96.00	-4	-209	-213
Normal	Crossarm	PG&E	36.00	5.26	328.5	328.5	50.00	4.50	3.50	96.00	-2	9	7
Normal	Crossarm	PG&E	34.50	5.35	197.7	197.7	50.00	4.50	3.50	96.00	5	-144	-138
Totals:											-1	-343	-344

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	Insulator	PG&E	37.50	29.50	156.2	0.0	8.99	3.00	8.00	0	-8	-8
Deadend	Insulator	PG&E	37.50	-29.50	356.2	0.0	8.99	3.00	8.00	0	-8	-8
Deadend	Insulator	PG&E	36.00	29.50	48.4	0.0	8.99	3.00	8.00	0	-8	-8
Deadend	Insulator	PG&E	36.00	-29.50	248.6	0.0	8.99	3.00	8.00	0	-8	-8
Deadend	Insulator	PG&E	34.50	19.25	272.2	0.0	8.99	3.00	8.00	0	-7	-7
Deadend	Insulator	PG&E	34.50	40.50	280.2	0.0	8.99	3.00	8.00	0	-7	-7
Deadend	Insulator	PG&E	34.50	-40.50	115.2	0.0	8.99	3.00	8.00	0	-7	-7
Deadend	Insulator	PG&E	39.00	0.00	0.0	328.5	8.99	3.00	8.00	0	-8	-8
Post	Insulator	Comm	20.00	0.00	200.8	200.8	8.99	3.00	8.00	0	-4	-4
Totals:									0	-65	-65	

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)
	Down	PG&E	37.50	0.00	20.00	0.5	100.00	256.2	61.7	0.409	45.26	0.00
	Down	PG&E	36.00	0.00	20.00	0.5	100.00	148.5	60.7	0.409	43.89	1.20
	Down	PG&E	34.50	0.00	20.00	0.5	100.00	17.7	59.7	0.409	42.54	0.83
	Down	PG&E	20.00	0.00	20.00	0.5	100.00	226.2	44.9	0.409	30.08	0.00

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)
	Down	2.60e+7	26,900	0.50	13,450	700	0	0	0	0	0	0	-15
	Down	2.60e+7	26,900	0.50	13,450	700	13,901	13,901	11,591	10,112	5,666	1,989	69,791
	Down	2.60e+7	26,900	0.50	13,450	700	11,119	11,119	8,329	7,191	4,203	-3,943	-133,873
	Down	2.60e+7	26,900	0.50	13,450	700	0	0	0	0	0	0	34
Totals:										17,303	9,869	-1,954	-64,063

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 (%)
Anchor		30.00	20.00	256.2	20,000	0.50	10,000	0	0	0.0
Anchor		30.00	20.00	148.5	20,000	0.50	10,000	13,901	11,591	139.0
Anchor		30.00	20.00	17.7	20,000	0.50	10,000	11,119	8,329	111.2
Anchor		30.00	20.00	226.2	20,000	0.50	10,000	0	0	0.0

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	34.36	35.29	9.76	9.84	6.69	11.15	1.60e+6	60.00	57.00	39.00	30,554	309.82	1.66