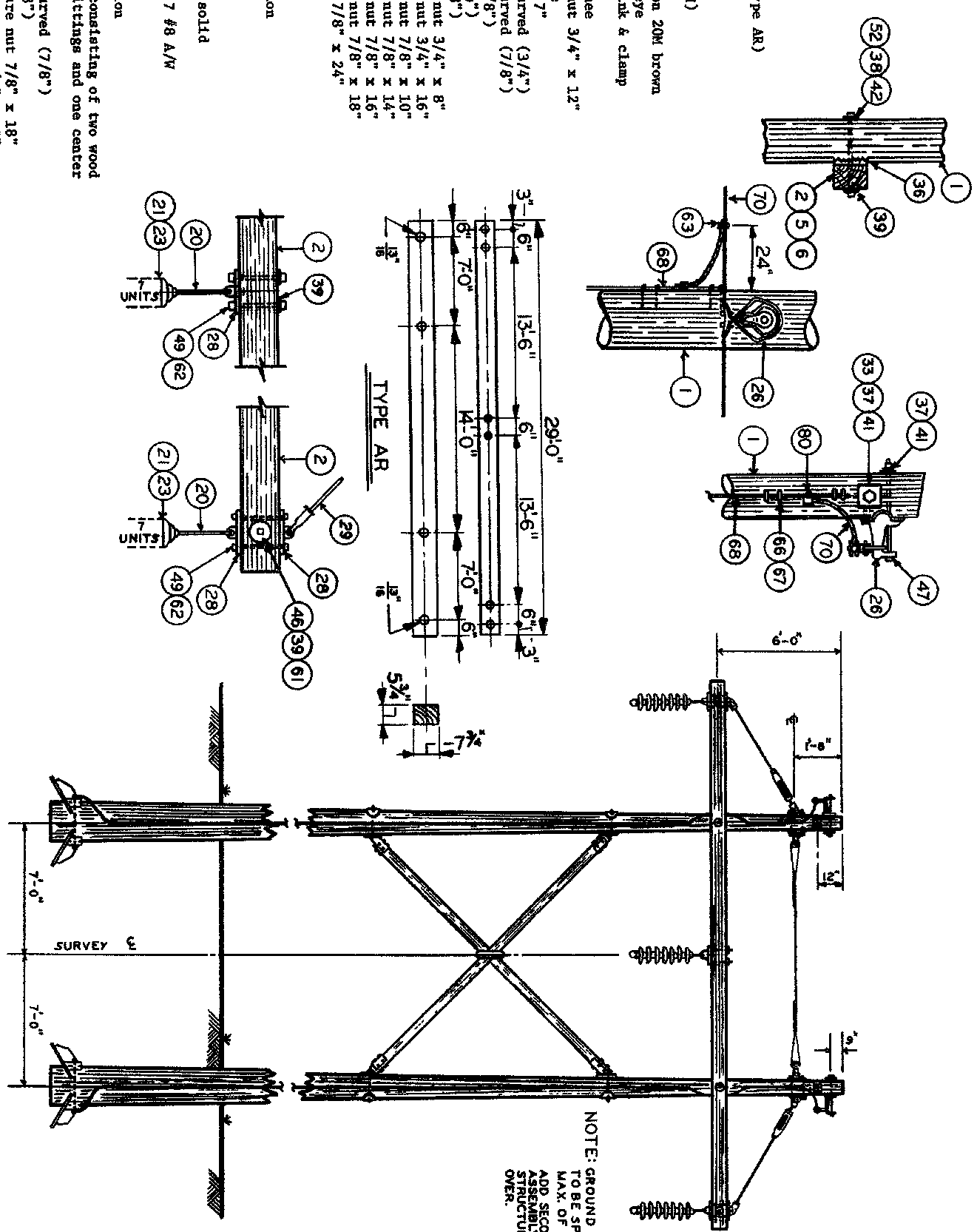


Item No.	Qty.	Description
1	2	Pole wood
2	1	Crossarm 29 ft. (Type AR)
8	1	X-brace assembly
9	4	Plate pole eye
15	2	Clevis thimble
16	2	Grip performed (20M)
20	3	Clevis ball-y
21	21	Insulator suspension 20M brown
23	3	AGS unit w/socket eye
26	2	Bracket aerial w/link & clamp
28	5	Tea dead end
29	2	brace fiberglass knee
33	2	Bolt machine w/sq. nut 3/4" x 12"
35	4	Gain grid 4" square
36	2	Washer 4" square
37	6	Washer 4" square curved (3/4")
38	6	Washer 4" round (7/8")
39	8	Washer helical (7/8")
41	4	Washer helical (3/4")
42	12	Bolt machine w/sq. nut 3/4" x 8"
46	2	Bolt machine w/sq. nut 3/4" x 16"
47	2	Bolt machine w/sq. nut 7/8" x 10"
49	6	Bolt machine w/sq. nut 7/8" x 14"
50	2	Bolt machine w/sq. nut 7/8" x 14"
51	4	Bolt machine w/sq. nut 7/8" x 16"
52	4	Bolt machine w/sq. nut 7/8" x 18"
55	2	Bolt stud w/3 nuts 7/8" x 24"
57	2	Bolt lag 1/2" x 4"
61	2	Nut pal (3/4")
62	6	Nut pal (7/8")
63	2	Connector compression
65	2	Clip bonding
66	2	Clip ground wire
67	100	Nail 16d C/W
68	100	Wire ground #2 C/W solid
69	12	Wire guy 20M A/W
70	10	Wire aerial ground 7 #8 A/W
71	2	Shackle anchor
78	4	Plate pole bearing
80	2	Connector compression
8	1	X-brace assembly, consisting of two wood members with end fittings and one center clamp
38	4	Washer 4" square curved (7/8")
42	4	Washer helical (7/8")
52	2	Bolt machine w/square nut 7/8" x 18"
53	2	Bolt machine w/square nut 7/8" x 20"



NOTE: GROUND WIRE CLIPS TO BE SPACED A MAX. OF 2FT. ADD SECOND X-BRACE ASSEMBLY TO STRUCTURES 75' AND OVER.

NO.	REVISION	DATE	BY	OK	P.E. No.	P.E. No.
A	ISSUED FOR REVIEW	11/9/03	SP	DPE	000	000

CLIENT APPROVAL	DESIGNED	DRAWN	CHECKED	APPROVED
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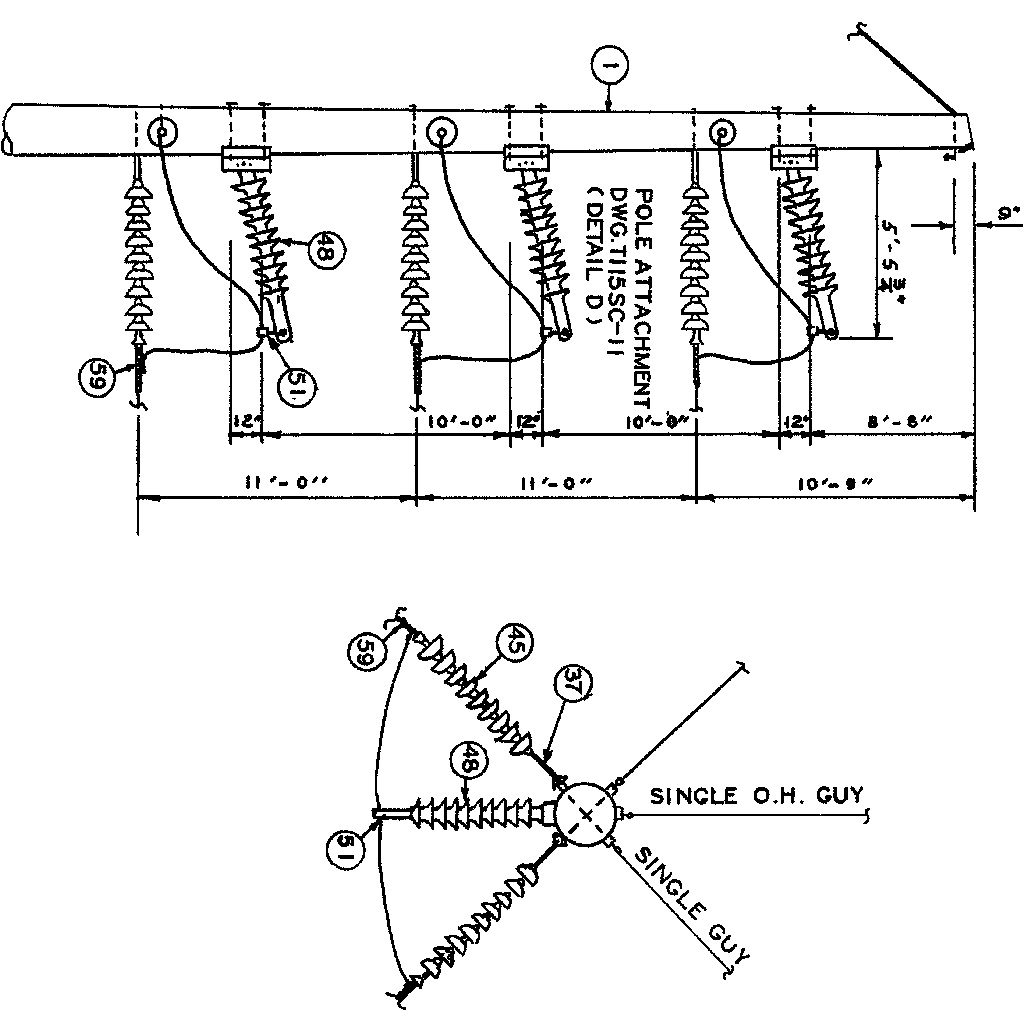
  

REVIEWED	DATE	SCALE
000	000	NONE

REDINGTON WIND FARM PROJECT	10166-E501	REV. A
AR STRUCTURE	SHEET #1	
115KV TRANSMISSION		
REDINGTON TOWNSHIP		
MAINE		

Item No.	Qty.	Description
1	1	Pole wood class H-2
7	1	Bolt machine w/sq. nut 7/8" x 14"
8	1	Bolt machine w/sq. nut 7/8" x 16"
9	2	Bolt machine w/sq. nut 7/8" x 18"
10	6	Bolt machine w/sq. nut 7/8" x 20"
11	2	Bolt machine w/sq. nut 7/8" x 22"
12	2	Bolt machine w/sq. nut 7/8" x 24"
21	1	Bracket swing link w/link & clamp
22	1	Bolt machine w/sq. nut 3/4" x 18"
23	1	Bolt lag 1/2" x 4"
25	1	Washer sq. curved 4" x 4"
28	1	Washer helical 3/4"
29	1	Washer helical 7/8"
36	13	Plate pole eye
37	6	Clevis ball y
40	7	Shackle chain
45	54	Insulator suspension 20M
48	3	Insulator line post w/gain base
51	3	Clamp jumper loop
59	6	Clamp strain w/socket eye
61	7	Clevis thimble
62	14	Gr-rip guy
64	550	Guy wire 20M A/W
65	7	Anchor log 4'
67	7	Rod guy 1 x 10' w/nut
68	7	Washer sq. flat 4" x 4" x 1/2"
70	7	Guard guy 8'
80	7	Ground wire #2 solid C/W
81	7	Connector ground rod



NO.	REVISION	DATE	BY	OK	P.E. No.	P.E. No.
A	ISSUED FOR REVIEW	11/9/03	SP	DPE	000	000

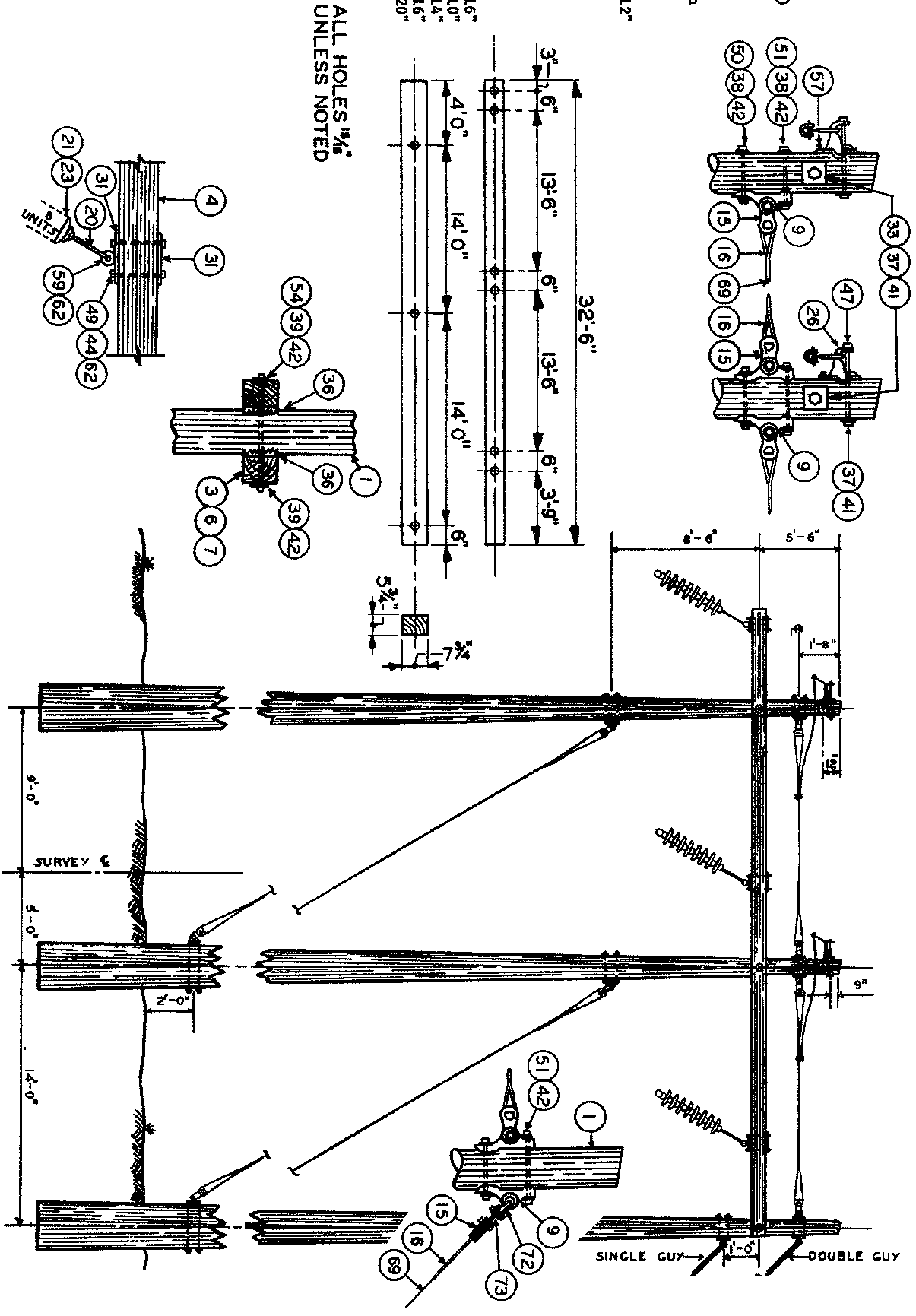
  

CLIENT APPROVAL	DESIGNED	REVIEWED
000 APPROVED BY DATE	SP DRAWN	000 CHECKED APPROVED

REDINGTON WIND FARM PROJECT SCDA STRUCTURE (45°-90°) 115KV TRANSMISSION REDINGTON TOWNSHIP MAINE	10166-E501 SHEET #12	REV. A
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Item No.	Qty.	Description
1	3	Pole wood
4	2	Crossarm 32 ft. 6 in. (Type BR)
9	10	Plate pole eye
15	11	Clevis thimble
16	14	Grip preformed (20M)
20	3	Clevis ball-y
21	24	Insulator suspension 20 M br. om
23	3	AGS unit w/socket eye
26	2	Bracket aerial w/link & clamp
31	6	Plate steel per dwg. T115R-37
33	2	Bolt machine w/sq. nut 3/4" x 12"
36	6	Gain grid 5 1/4" x 7"
37	6	Washer 4" square curved (3/4")
38	12	Washer 4" square curved (7/8")
39	6	Washer 4" round (7/8")
40	3	Washer 4" square flat (1")
41	4	Washer 4" square flat (3/4")
42	22	Washer helical (7/8")
44	12	Washer 2" round (7/8")
47	2	Bolt machine w/sq. nut 3/4" x 16"
49	12	Bolt machine w/sq. nut 7/8" x 10"
50	3	Bolt machine w/sq. nut 7/8" x 14"
51	9	Bolt machine w/sq. nut 7/8" x 16"
53	4	Bolt machine w/sq. nut 7/8" x 20"
54	3	Bolt stud w/3 nuts 7/8" x 26"
57	2	Bolt lag 1/2" x 4"
59	3	Bolt shoulder eye 7/8" x 2"
62	15	Nut pal (7/8")
63	2	Connector compression
64	2	Connector compression
65	2	Clip bonding
66	20	Clip ground wire
67	20	Nail 16d C/W
68	80	Wire ground #2 C/W solid
69	250	Wire guy 20 M A/W
70	10	Wire aerial ground 7 #8 A/W
72	3	Spackle chain
73	1	Plate yoke guy
74	3	Rod anchor w/sq. nut 1" x 10"
76	1	Log anchor 8 ft.
77	3	Guard guy yellow
79	3	Connector ground rod



NO.	REVISION	DATE	BY	OK	P.E. No.	P.E. No.
A	ISSUED FOR REVIEW	11/9/03	SP	DPE	000	000

CLIENT APPROVAL	DESIGNED	REVIEWED
000 APPROVED BY DATE	000 SP DATE	000 APPROVED DATE

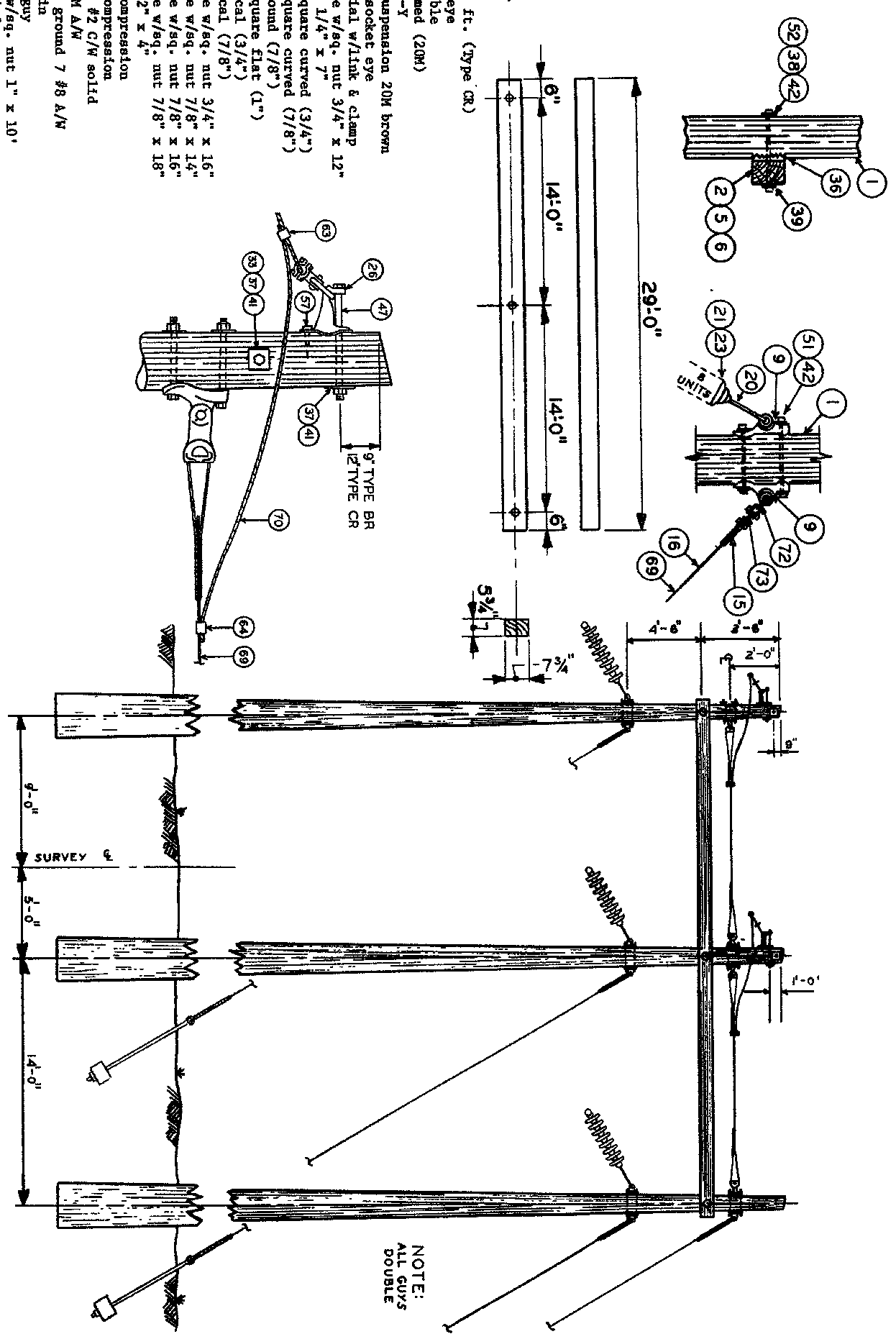
  

<b>E-PRO</b> Engineering & Environmental Consulting, LLC 249 Western Ave, Augusta, ME 04330 DATE 11/9/03	REDINGTON WIND FARM PROJECT BR STRUCTURE (0'-10') 115KV TRANSMISSION REDINGTON TOWNSHIP MAINE	10166-E501 SHEET #2 REV. A
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SCALE NONE

FILENAME:115KVTRANSMSH2.DWG

Item No.	Qty.	Description
1	3	Pole wood
5	1	Crossarm 29 ft. (Type CR)
9	11	Plate pole eye
15	12	Clevis thimble
16	20	Grip preformed (20M)
20	3	Clevis ball-Y
21	24	Insulator suspension 20M brown
23	3	AGS unit w/socket eye
26	2	Bracket aerial w/link & clamp
33	2	Bolt machine w/sq. nut 3/4" x 12"
36	3	Gain grid 5 1/4" x 7"
37	6	Washer 4" square curved (3/4")
38	5	Washer 4" square curved (7/8")
39	3	Washer 4" round (7/8")
40	8	Washer 4" square flat (1")
41	4	Washer helical (3/4")
42	15	Washer helical (7/8")
47	2	Bolt machine w/sq. nut 3/4" x 16"
50	3	Bolt machine w/sq. nut 7/8" x 14"
51	9	Bolt machine w/sq. nut 7/8" x 16"
52	3	Bolt machine w/sq. nut 7/8" x 18"
57	2	Bolt lag 1/2" x 4"
63	2	Connector compression
64	2	Connector compression
68	180	Wire ground #2 C/W solid
69	600	Wire aerial ground 7 #8 A/W
70	10	Shackle chain
72	8	Plate yoke guy
73	4	Rod anchor w/sq. nut 1" x 10"
74	8	Log anchor 4 ft.
75	4	Log anchor 8 ft.
76	2	Guard guy yellow
77	8	Connector ground rod
79	9	Connector ground rod



NO.	REVISION	DATE	BY	OK	P.E. No.	P.E. No.
A	ISSUED FOR REVIEW	11/9/03	SP	DPE	000	000

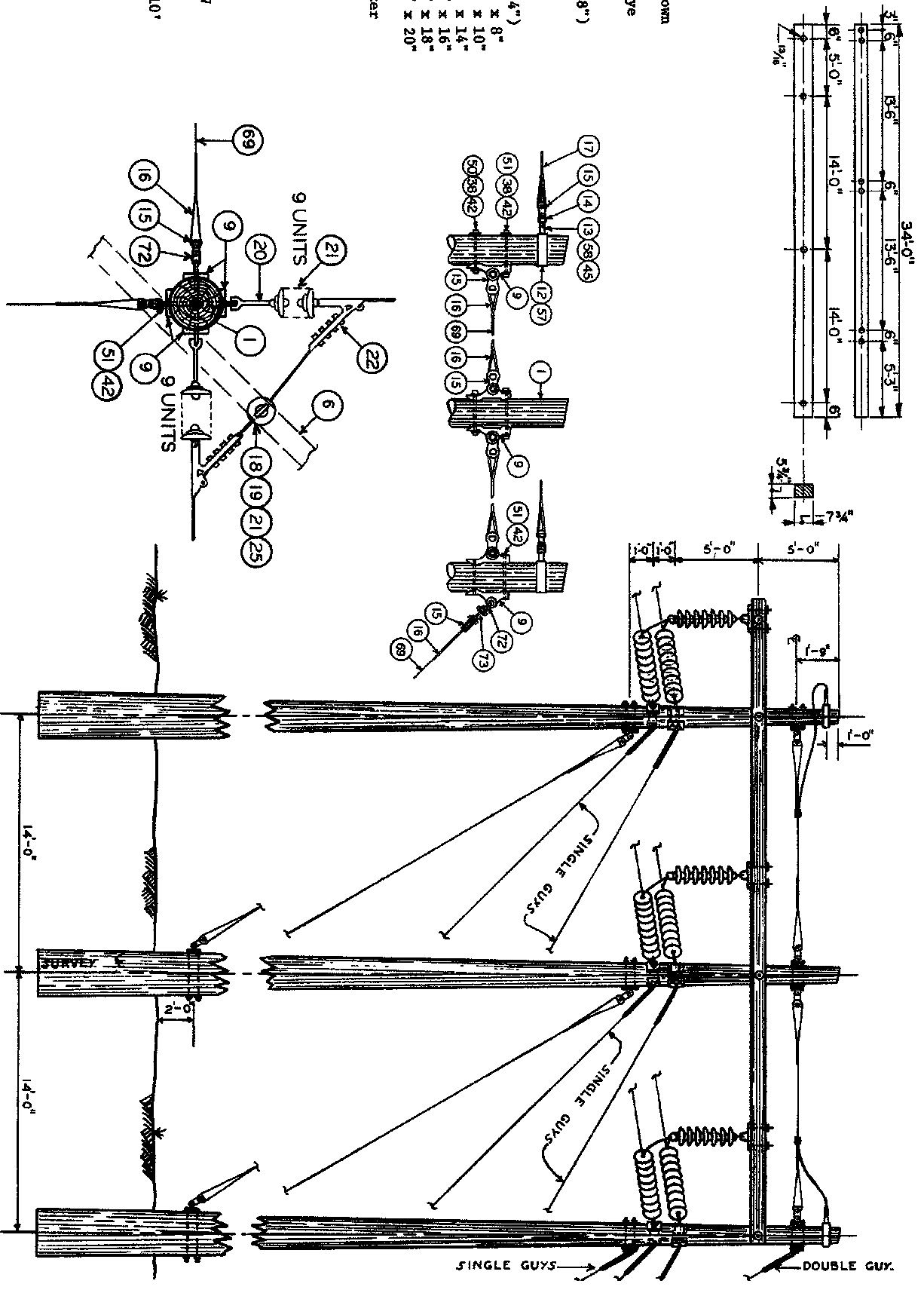
  

CLIENT APPROVAL	DPE DESIGNED
APPROVED BY	SP DRAWN
DATE	CHECKED
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REVIEWED	APPROVED
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<p>REDINGTON WIND FARM PROJECT                  CR STRUCTURE (10'-30')                  115KV TRANSMISSION                  REDINGTON TOWNSHIP                  MAINE</p>	<p>10166-E501                  SHEET #3                  REV. A</p>
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Item No.	Qty.	Description
1	3	Pole wood
6	1	Crossarm 3/4" (Type DAB)
9	22	Plate pole eye
12	2	Band pole small
13	2	Clevis dead end
14	4	Link chain
15	21	Clevis thimble
16	26	Grip preformed (20M)
17	4	Grip preformed (7 #8)
19	3	Clevis ball-Y
20	6	Insulator suspension 20M brown
21	6	Clamp strain w/socket eye
22	6	Clamp suspension w/socket eye
25	3	Tee dead end Hughes
26	3	Gain grid 5 1/4" x 7"
36	3	Washer 4" square curved (7/8")
38	10	Washer 4" round (7/8")
39	9	Washer 4" square flat (1")
40	9	Washer helical (7/8")
42	31	Masher 3" square curved (3/4")
45	2	Bolt machine w/sq. nut 3/4" x 8"
46	1	Bolt machine w/sq. nut 7/8" x 10"
49	6	Bolt machine w/sq. nut 7/8" x 14"
50	3	Bolt machine w/sq. nut 7/8" x 16"
51	15	Bolt machine w/sq. nut 7/8" x 18"
52	9	Bolt machine w/sq. nut 7/8" x 20"
53	4	Bolt leg 1/2" x 4"
57	2	Bolt cone head w/nut & cotter
58	2	Nut pal (3/4")
61	1	Nut pal 7/8"
62	6	Connector compression
63	4	Connector compression
64	4	Connector compression
65	2	Clip bonding
66	20	Clip ground wire
67	20	Nail 16d C/W
68	290	Wire ground #2 C/W sold
69	750	Wire guy 20M A/W
70	10	Wire serial ground 7 #8 A/W
72	9	Shackle chain
73	1	Plate yoke guy
74	1	Rod anchor w/sq. nut 1" x 10"
75	6	Log anchor 4 ft.
76	1	Log anchor 8 ft.
77	9	Guard guy yellow
79	10	Connector ground rod



NO.	REVISION	DATE	BY	OK	P.E.	P.E.
A	ISSUED FOR REVIEW	11/9/03	SP	DPE	000	000

CLIENT APPROVAL	DESIGNED	REVIEWED
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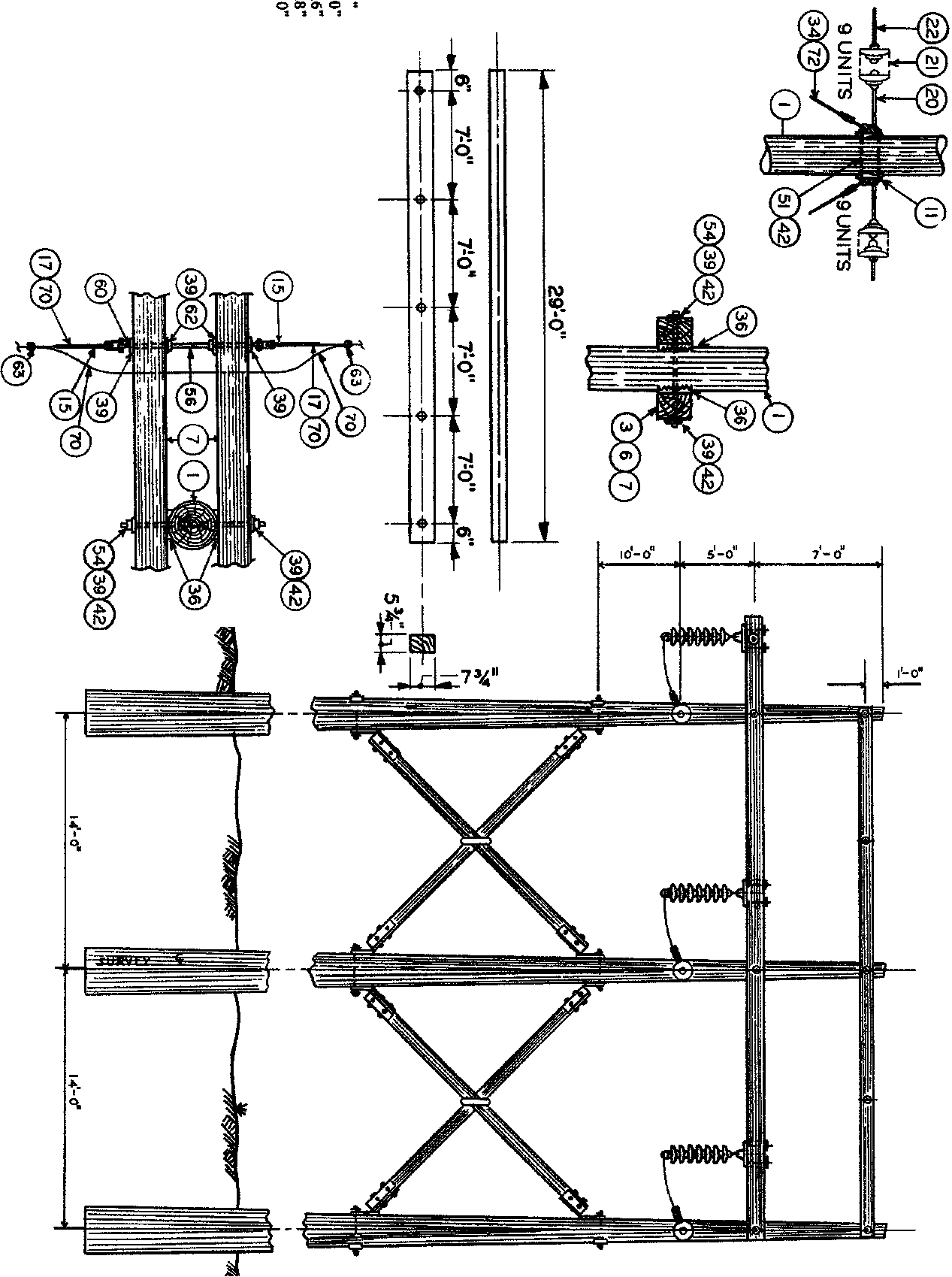
  

REDINGTON WIND FARM PROJECT	10166-E501	REV. A
DEAD END ANGLE STRUCTURE	SHEET #4	
115KV TRANSMISSION		
REDINGTON TOWNSHIP		
MAINE		

SCALE NONE DATE 11/9/03

FILENAME:115KVTRANSISH4.DWG

Item No.	Qty.	Description
1	3	Pole wood
6	1	Crossarm 34 ft. (Type DLR)
7	2	Crossarm 29 ft. (Type LDR)
8	2	X-brace assembly
11	6	Plate pole double eye
15	4	Clevis thimble
16	12	Grip preformed AMDE (20M)
17	4	Grip preformed AMDE (7 #8)
19	3	Clevis ball Y
20	6	Clevis ball Y
21	75	Insulator suspension 20M brown
22	6	Clamp strata w/socket eye
25	3	Clamp suspension w/socket eye
28	3	Yee dead end
34	3	Insulator fiberglass strata
36	9	Gain grid 5 1/4" x 7"
38	7	Washer 4" square curved (7/8")
39	25	Washer 4" round (7/8")
40	6	Washer 4" square flat (1")
42	21	Washer helical (7/8")
46	1	Bolt machine w/sq. nut 3/4" x 8"
49	6	Bolt machine w/sq. nut 7/8" x 10"
51	6	Bolt machine w/sq. nut 7/8" x 16"
52	6	Bolt machine w/sq. nut 7/8" x 18"
53	3	Bolt machine w/sq. nut 7/8" x 20"
54	3	Bolt stud w/2 nuts 7/8" x 26"
56	2	Bolt eye w/3 nuts 7/8" x 24"
60	2	Nut eye (7/8")
61	1	Nut pal (3/4")
62	10	Nut pal (7/8")
63	2	Connector Compression
69	450	Wire guy 20M A/W
72	6	Shackle chain
74	6	Rod anchor w/sq. nut 1" x 10"
75	6	Log anchor 4 ft.
77	6	Guard guy yellow



NO.	REVISION	DATE	BY	OK	P.E.	P.E.
A	ISSUED FOR REVIEW	11/5/03	SP	DPE	000	000

CLIENT APPROVAL	DESIGNED BY	REVIEWED
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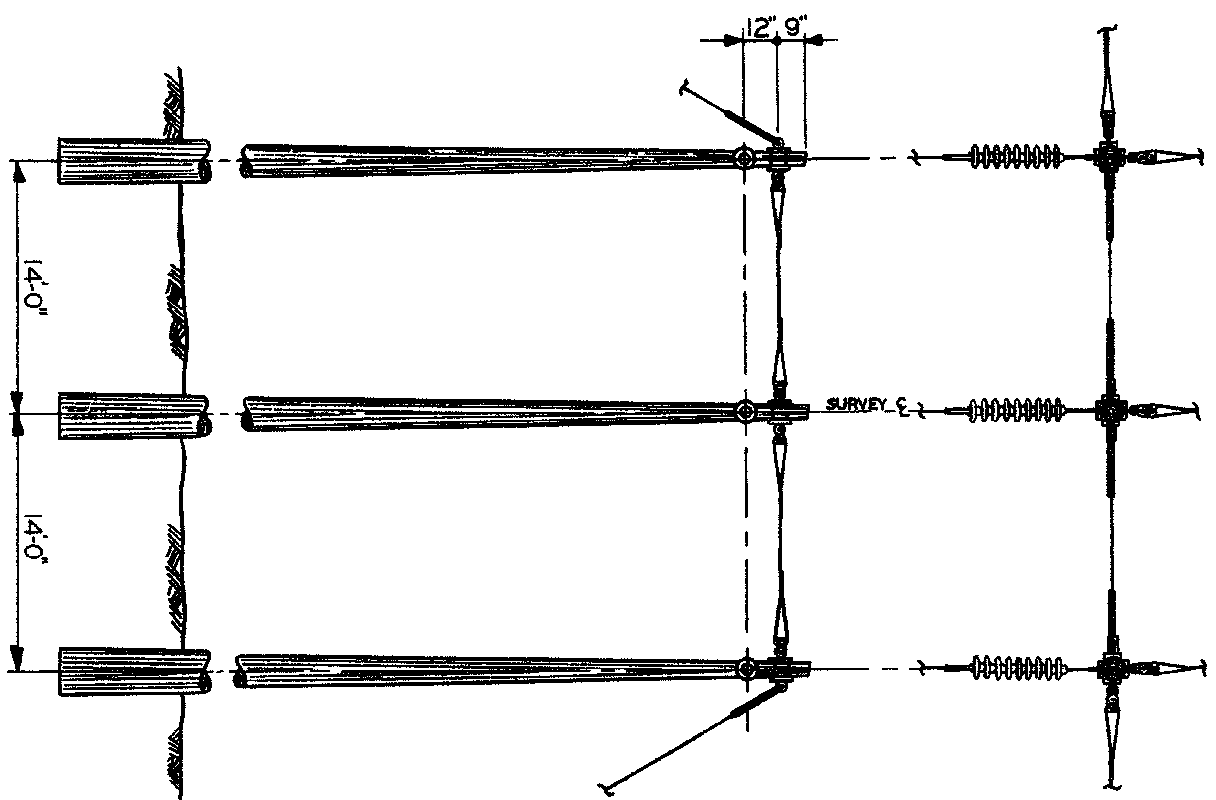
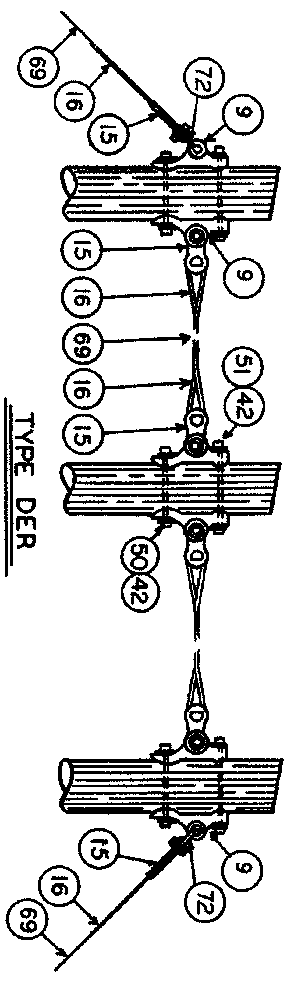
  

REDINGTON WIND FARM PROJECT	10166-E501	REV.
TANGENT DEADEND STRUCTURE	SHEET #5	A
115KV TRANSMISSION		
REDINGTON TOWNSHIP		
MAINE		

SCALE NONE

FILENAME:115KVTRANSMISSIONS.DWG

Item No.	Qty.	Description
1	3	Pole Wood
9	12	Plate pole eye
15	9	Clevis thimble
16	14	Grp preformed (20M)
20	3	Clevis ball Y
21	27	Insulator suspension 20M brown
22	3	Clamp strain w/socket eye
40	5	Washer 4" square flat (1")
42	12	Washer helical (7/8")
50	12	Bolt machine w/sq. nut 7/8" x 14"
68	190	Wire ground #2 C/W solid
69	280	Wire guy 20M A/W
72	5	Shackle chain
74	5	Rod anchor w/sq. nut 1" x 10"
75	5	Log anchor 4 ft.
77	5	Guard guy yellow
79	5	Connector ground rod



NO.	REVISION	DATE	BY	OK	P.E. No.	P.E. No.
A	ISSUED FOR REVIEW	11/5/03	SP	DPE	000	000

CLIENT APPROVAL	DPE DESIGNED	<b>REDINGTON WIND FARM PROJECT</b> DEADEND STRUCTURE 115KV TRANSMISSION REDINGTON TOWNSHIP MAINE
APPROVED BY	SP DRAWN	
DATE	CHECKED	
REVIEWED	APPROVED	Engineering & Environmental <b>E-PRO</b> Consulting, LLC 249 Western Ave Augusta, ME 04330 DATE 11/5/03
		10166-E501 SHEET #6 REV. A