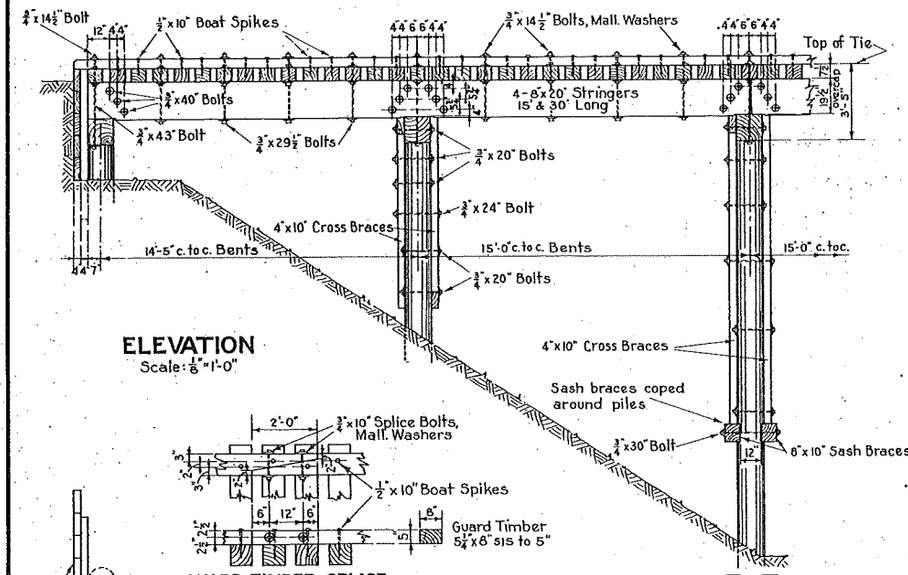
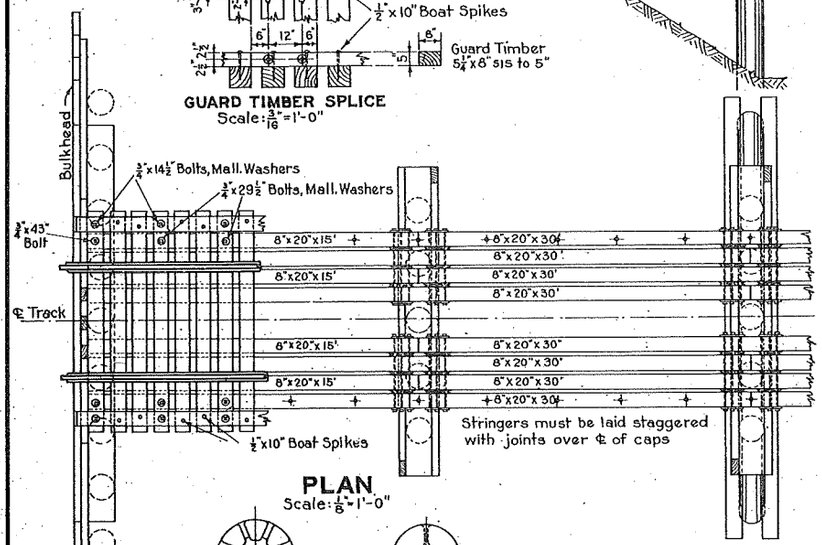
C.E.
S-103

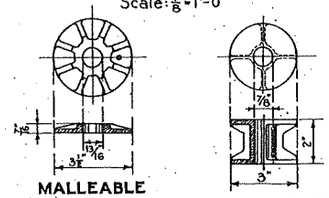


ELEVATION
Scale: ⅛"=1'-0"

GUARD TIMBER SPLICE
Scale: 3/16"=1'-0"



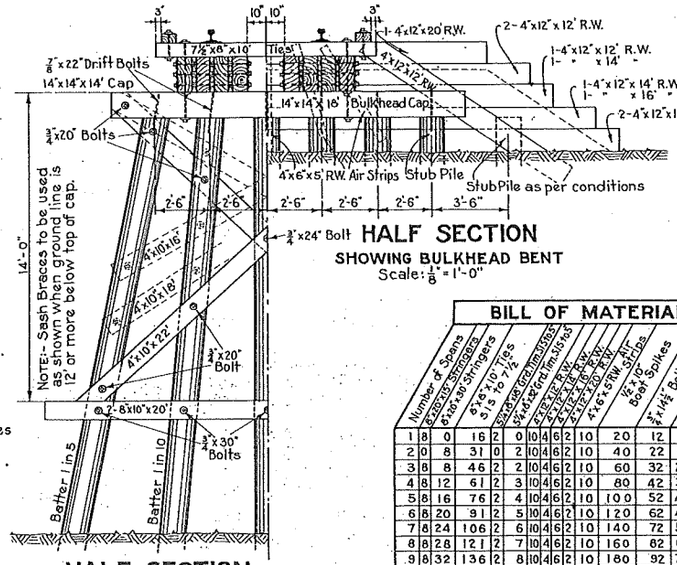
PLAN
Scale: ⅛"=1'-0"



MALLEABLE WASHER
Wt. 047* ea.

MALLEABLE SEPARATOR SPOOL
Wt. 19* ea.

ALLIGATOR NUT LOCK
Wt. 021* ea.



HALF SECTION
SHOWING BULKHEAD BENT
Scale: ⅛"=1'-0"

HALF SECTION
SHOWING INTERMEDIATE BENT
Scale: ⅛"=1'-0"

BILL OF MATERIAL BENTS 0 TO 20 FT.

Height of Bent	Stub Piles No. Piles	14"x14"x18" Blk. Bent.	14"x14"x14" Inter. Bent.	4"x10"x16" Braces.	4"x10"x18" Braces.	4"x10"x20" Sash Brs.	¾"x24" Bolt & Nut	¾"x30" Bolt & Nut	¾"x43" Bolt & Nut	⅞"x22" Drift Bolt	⅞"x22" Drift Bolt Inf. Bent	Malleable Washer	Alligator Nut Lock
0' to 7'	2	5	1	1				0	0	2	7	5	4	2
6' to 10'	2	5	1	1	2			1	0	1	2	7	5	26	13
11' to 13'	2	5	1	1		2	2	1	0	1	2	7	5	36	18
14' to 16'	2	5	1	1			2	2	1	0	1	2	7	5	36	18
17' to 18'	2	5	1	1			2	2	1	0	1	2	7	5	36	18
19' to 20'	2	5	1	1			2	2	1	0	1	2	7	5	36	18

Bolts in this list to be threaded 3" minimun

BILL OF MATERIAL FOR DECKS (Caps not incl.)

Number of Spans	6"x10"x16' Stringers	6"x10"x18' Stringers	6"x16"x18' Stringers	6"x10" Ties 5'-3" to 7'-½"	6"x8"x8' Grd. Timbers	6"x8"x10' Grd. Timbers	6"x8"x12' Grd. Timbers	4"x10"x16' R.W.	4"x10"x18' R.W.	4"x10"x20' R.W.	4"x6"x5' R.W. Air Strips	½"x10" Boat Spikes	¾"x14½" Bolt & Nut	¾"x29½" Bolt & Nut	¾"x40" Bolt & Nut	Malleable Washers	¾" Alligator Nut Lock	Separator Spools	¾"x9½"x6½" Grid Bolts	¾"x9½" Splice Bolts	Mall. Washers	Wood Preserving	Fire Resisting Paint - Gal.	Boat Nails	20d Nails	½"x12" Boat Spikes
1	8	0	16	2	0	10	4	6	2	10	20	12	8	12	64	32	36	0	0	4	11	9	3	60		
2	0	8	31	0	2	10	4	6	2	10	40	22	16	24	124	62	72	0	0	7	22	9	6	60		
3	8	8	46	2	2	10	4	6	2	10	60	32	24	36	184	92	108	4	8	10	33	9	9	60		
4	8	12	61	2	3	10	4	6	2	10	80	42	32	48	244	122	144	6	12	13	44	9	12	60		
5	8	16	76	2	4	10	4	6	2	10	100	52	40	60	304	152	180	8	16	15	55	9	15	60		
6	8	20	91	2	5	10	4	6	2	10	120	62	48	72	364	182	216	10	20	18	66	9	18	60		
7	8	24	106	2	6	10	4	6	2	10	140	72	56	84	424	212	252	12	24	21	77	9	21	60		
8	8	28	121	2	7	10	4	6	2	10	160	82	64	96	484	242	288	14	28	24	88	9	24	60		
9	8	32	136	2	8	10	4	6	2	10	180	92	72	108	544	272	324	16	32	26	99	9	27	60		
10	8	36	151	2	9	10	4	6	2	10	200	102	80	120	604	302	360	18	36	29	110	9	30	60		
11	8	40	166	2	10	10	4	6	2	10	220	112	88	132	664	332	396	20	40	32	121	9	33	60		
12	8	44	181	2	11	10	4	6	2	10	240	122	96	144	724	362	432	22	44	35	132	9	36	60		
13	8	48	196	2	12	10	4	6	2	10	260	132	104	156	784	392	468	24	48	37	143	9	39	60		
14	8	52	211	2	13	10	4	6	2	10	280	142	112	168	844	422	504	26	52	40	154	9	42	60		
15	8	56	226	2	14	10	4	6	2	10	300	152	120	180	904	452	540	28	56	43	165	9	45	60		

NOTES:-

The center line of piles produced should intersect at a point 25 feet above cut off.
All bents over 7 feet in height must be cross braced.
All bolts to be set tight and held with Alligator Nut Locks.
Bents to have sash braces as shown when ground line is 12 feet or more below top of cap.
When caps and stringers are dapped daps shall be true and level.
All piling shall be creosoted as per W.P. Spec. *103.
Wood bearing on wood shall have bearing surfaces painted with Standard Wood Preserving Paint.
Ties, guard timbers, tops of caps and stringers shall be given one coat of Standard Fire Resisting Paint before placing and tops of ties, guard timbers, caps and stringers shall have a second coat after placing ~~and sprinkled with fine sand while paint is still wet.~~
Super-elevation on curves to be provided for in cutoffs, with top of lower rail maintained at established grade.
All timber to be Douglas Fir except as noted.
When ordering timber be governed by West Coast Lumbermen's Association Standard Grading and Dressing Rules No.10, effective July 1, 1934:-

Stringers to be Select Structural Grade, see paragraph 218
Cross Braces to be " " " " " " 214
Ties, Caps, Sashes to be " " " " " " 210
Guard Rail to be No.1 Dimension, " " " 195

APPROVED: J. M. Williams
CHIEF ENGINEER.

APPROVED: E. V. Mason
VICE PRESIDENT AND GENERAL MANAGER.

THE WESTERN PACIFIC RAILROAD CO.

STANDARD

PILE TRESTLE FOR MAIN LINE

15' SPAN - 8"x20" STRINGERS - 5 PILE BENTS

Scales as noted

Adopted June 1, 1932.
Revised Apr. 1, 1933 - May 22, 1933
" Mar. 24, 1936 - Apr. 28, 1938