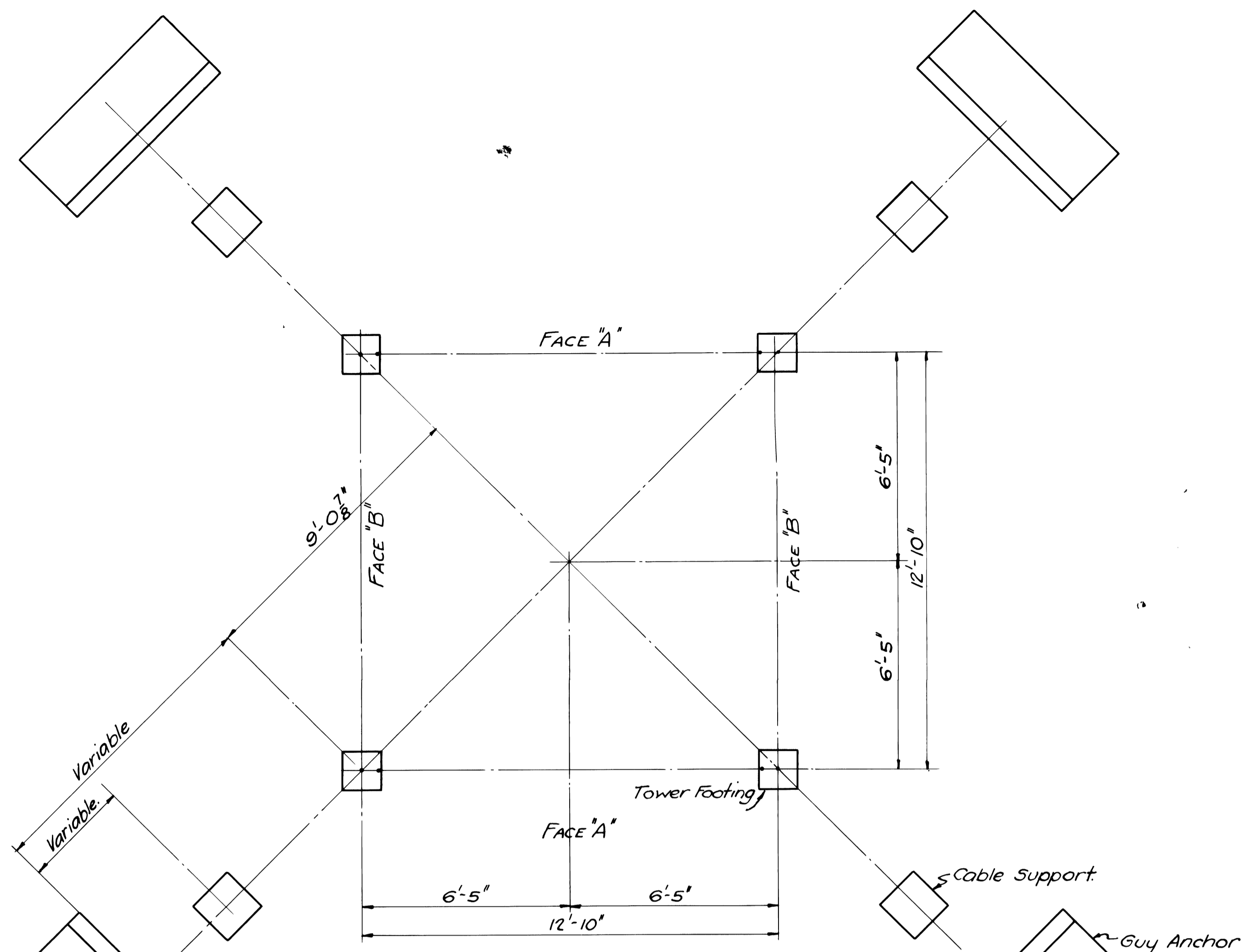


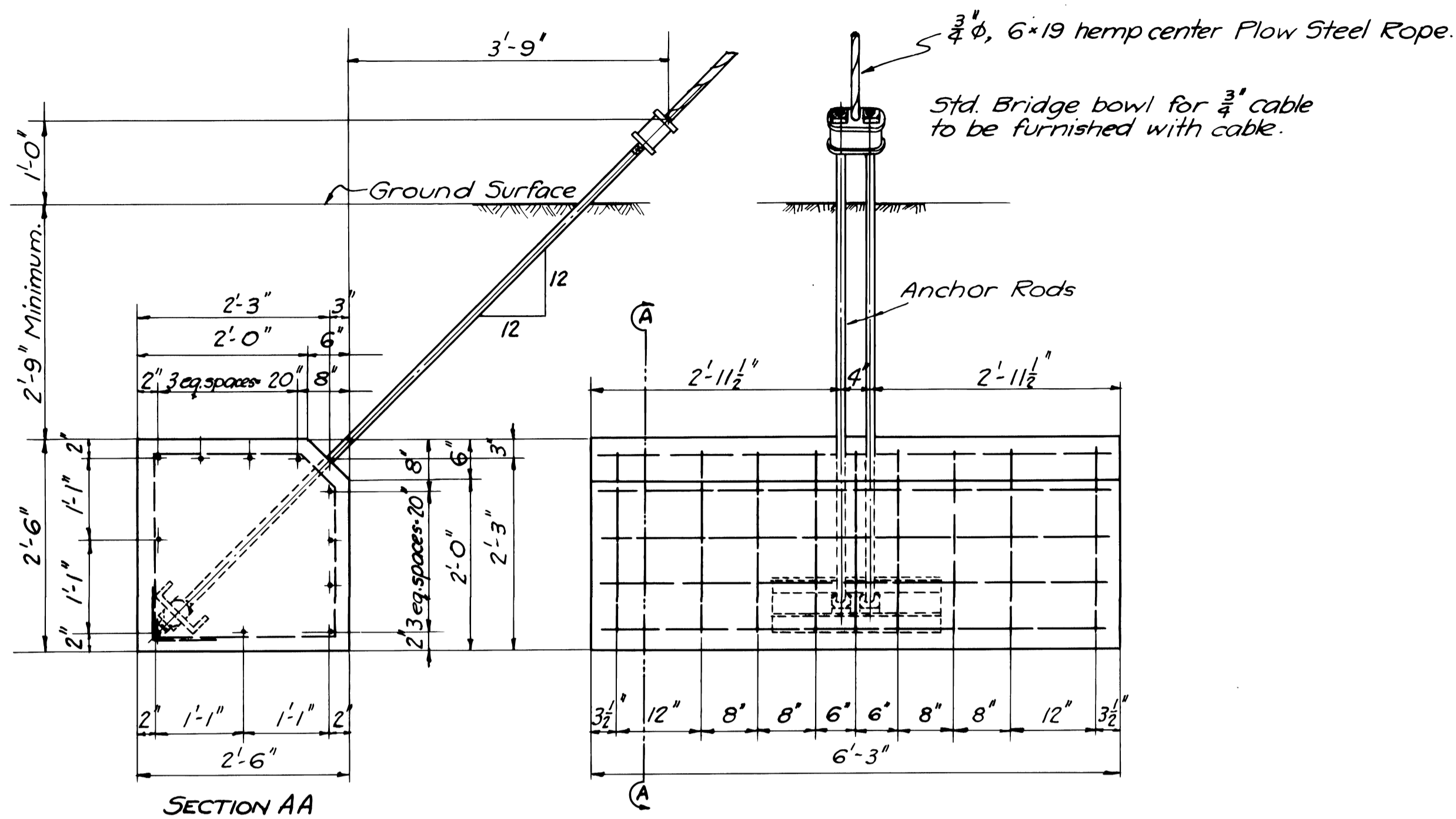
Notes
 + = Tension.
 These diagrams may be applied simultaneously - except that starting off of unloaded cable would reduce compression in loaded leg by an indeterminate amount.

U. S. DEPARTMENT OF AGRICULTURE FOREST SERVICE		
REGION SIX	J. FRANKLAND, REGIONAL ENGINEER	
STANDARD LOOKOUT TOWER		
53 FOOT - TYPE CT2		
STRESS DIAGRAM		
DESIGNED B.C.O.	DRAWN B.C.O.	TRACED W.R.H.
SCALE 1" = 1000'	CHECKED	DATE NOV. 3, 1938
APPROVED	ASSISTANT REGIONAL FORESTER	

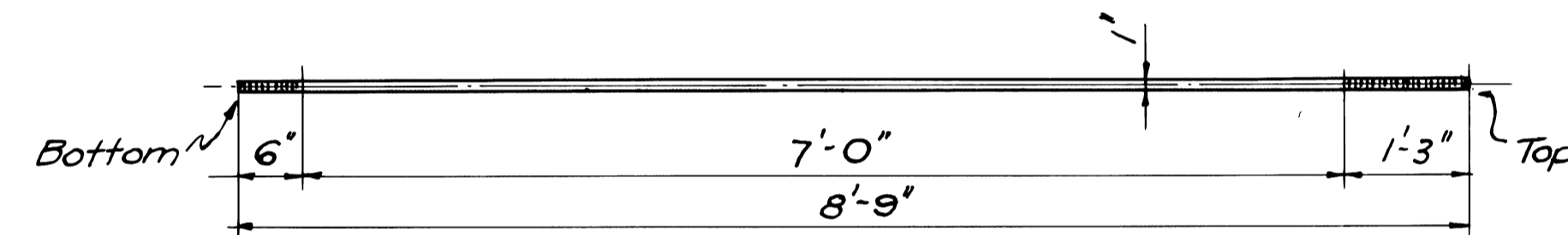
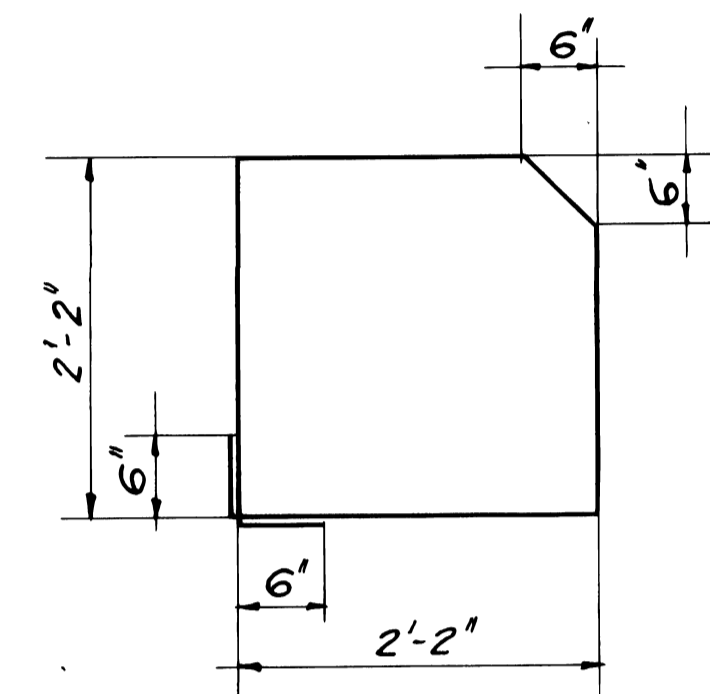
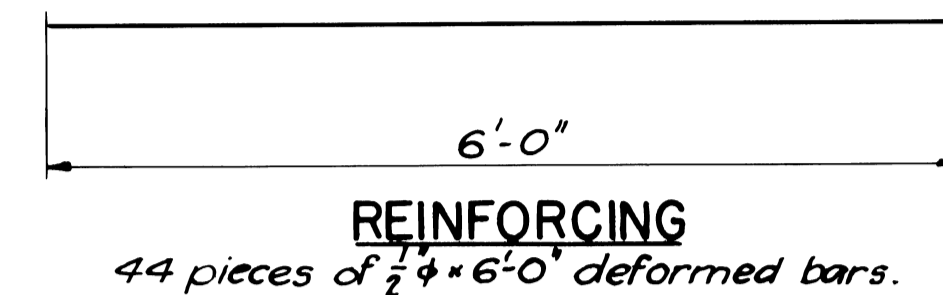


FOOTING & ANCHOR PLAN

This layout is square. Cable shall slope at 45°. Variable dimensions shall be determined in the field to suit local conditions.

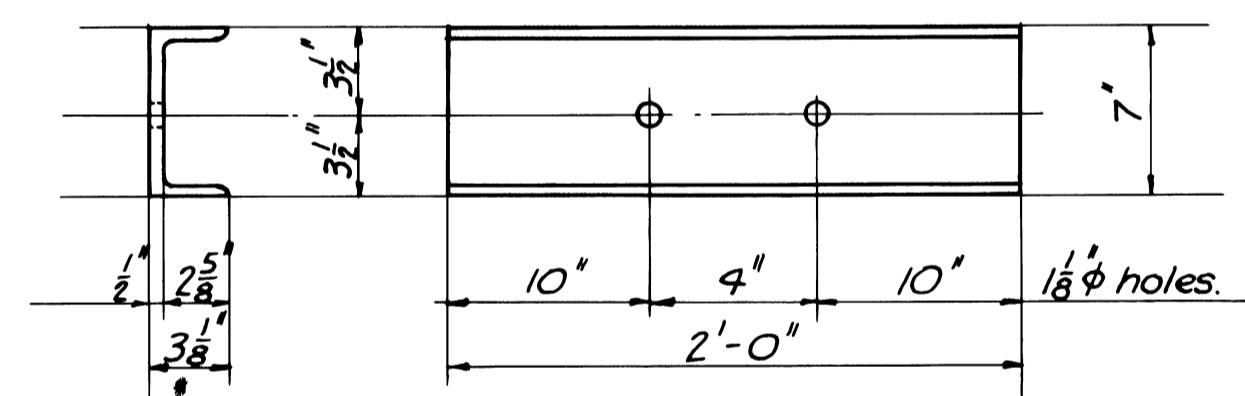


ANCHOR DETAIL



ANCHOR ROD

1" ϕ x 8'-9" rod, Thread ends as indicated. Furnish 3 sq. nuts ea. rod. Make 8 galvanized.



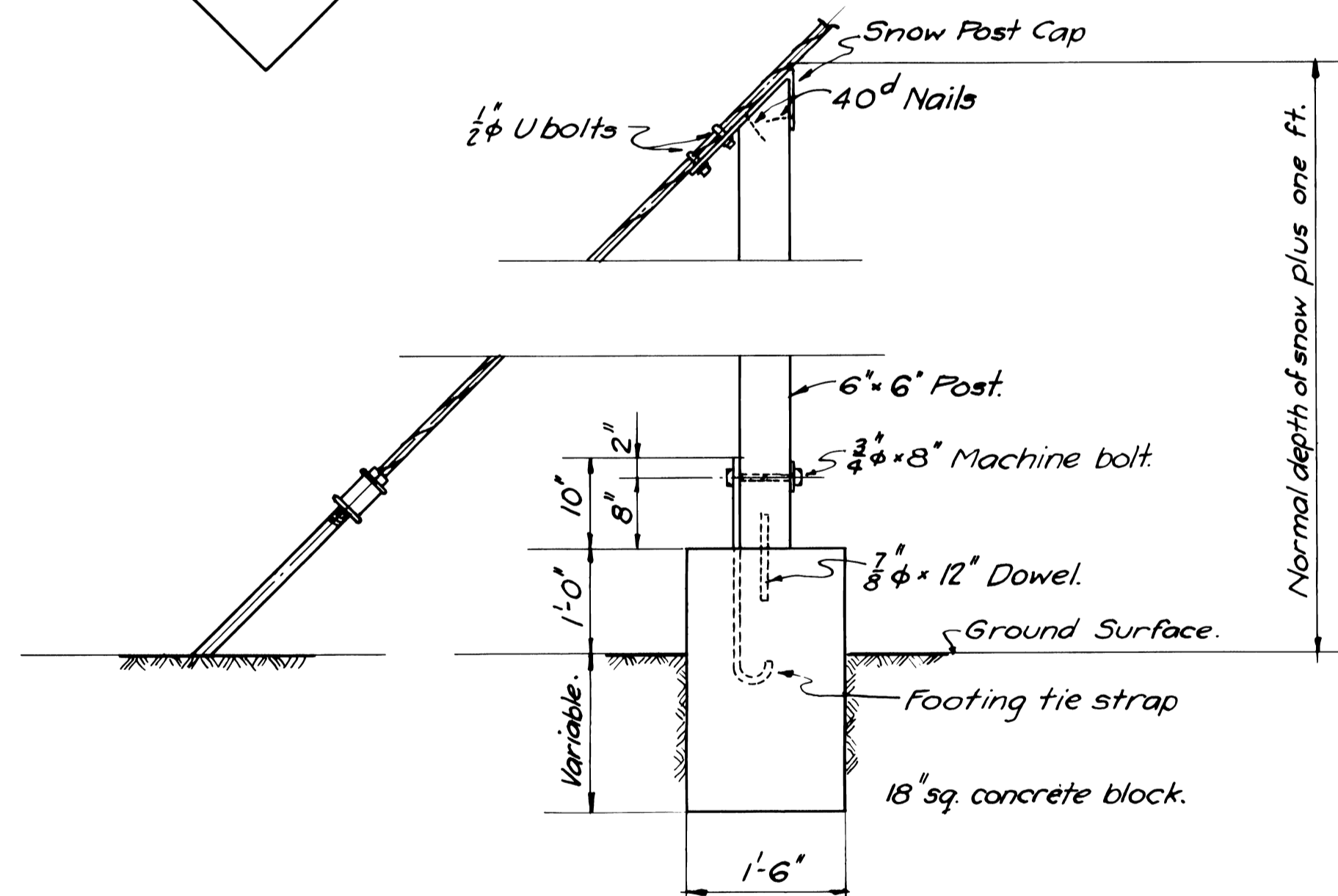
ANCHOR PLATE

7" x 3 3/8" x 1/4" Channel C42 (B5C9) Make 4, galvanized

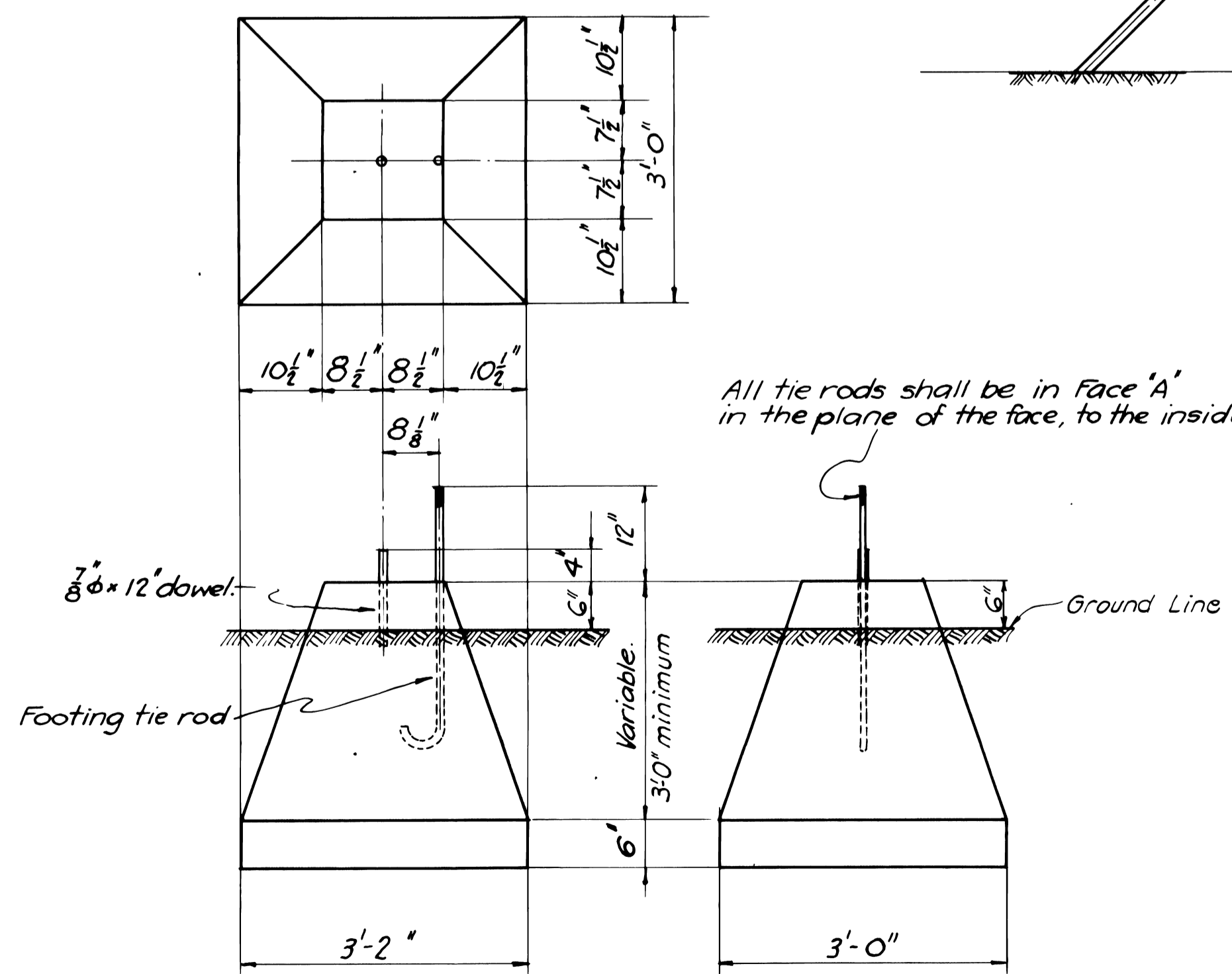
Furnish all detailed material plus
8 - 7/8" ϕ x 12" plain dowels, galvanized.
4 - 3/4" x 8" machine bolts
4 - 3/8" malleable washers

CONCRETE

Mix 1:3:5
Approximate Volume 9 c.yds.
Cement 10 bbls.
Sand 4.7 cu. yds.
Gravel 7.8 cu. yds.

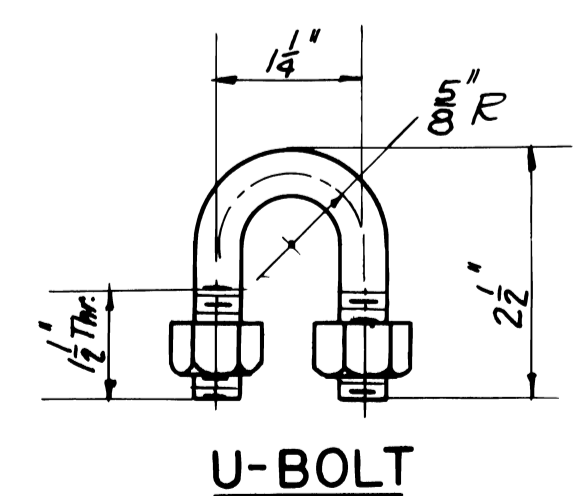


GUY CABLE SUPPORT



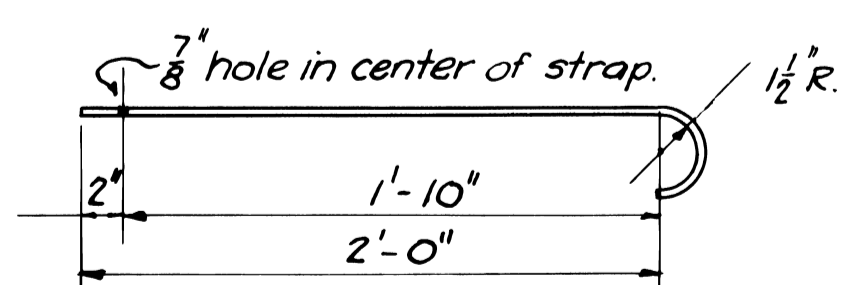
TOWER FOOTING

Footing tops shall project about six inches above ground.



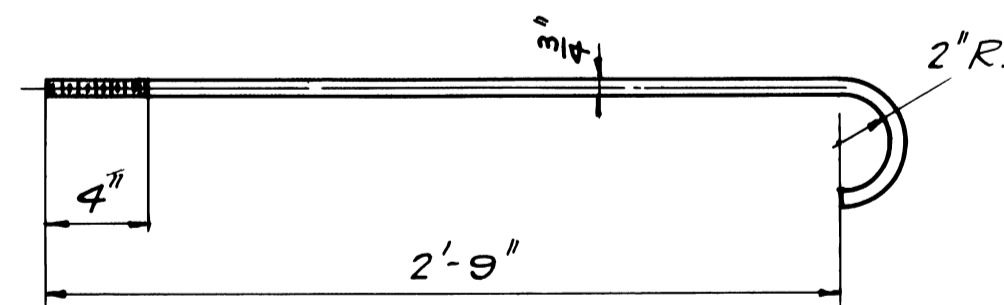
U-BOLT

1/2" ϕ galvanized U-bolt Make 8. Furnish 2 hex nuts each.



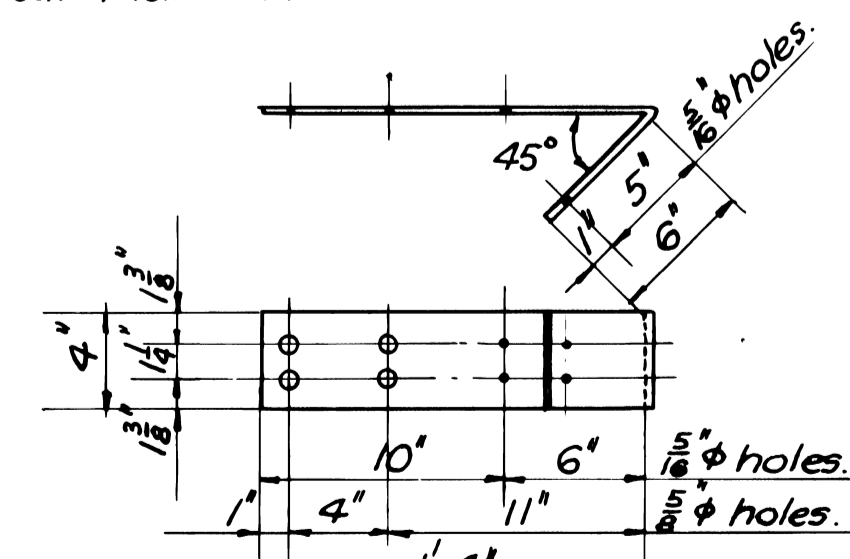
TIE STRAP

3/8" ϕ x 2'-6" strap, galvanized. Make 4.



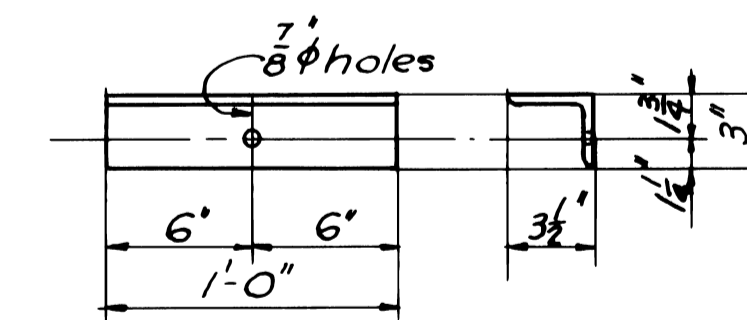
FOOTING TIE ROD

3/8" ϕ x 3'-4" rod, galvanized. Furnish one sq. nut ea. Make 4.



SNOW POST CAP

4 1/4" x 1'-10" galvanized strap. Make 4.



FOOTING ANGLE

3/8" x 3" x 3/8" Angle, galvanized. Make 4. To tie down lower horizontals, attached to footing tie rod.

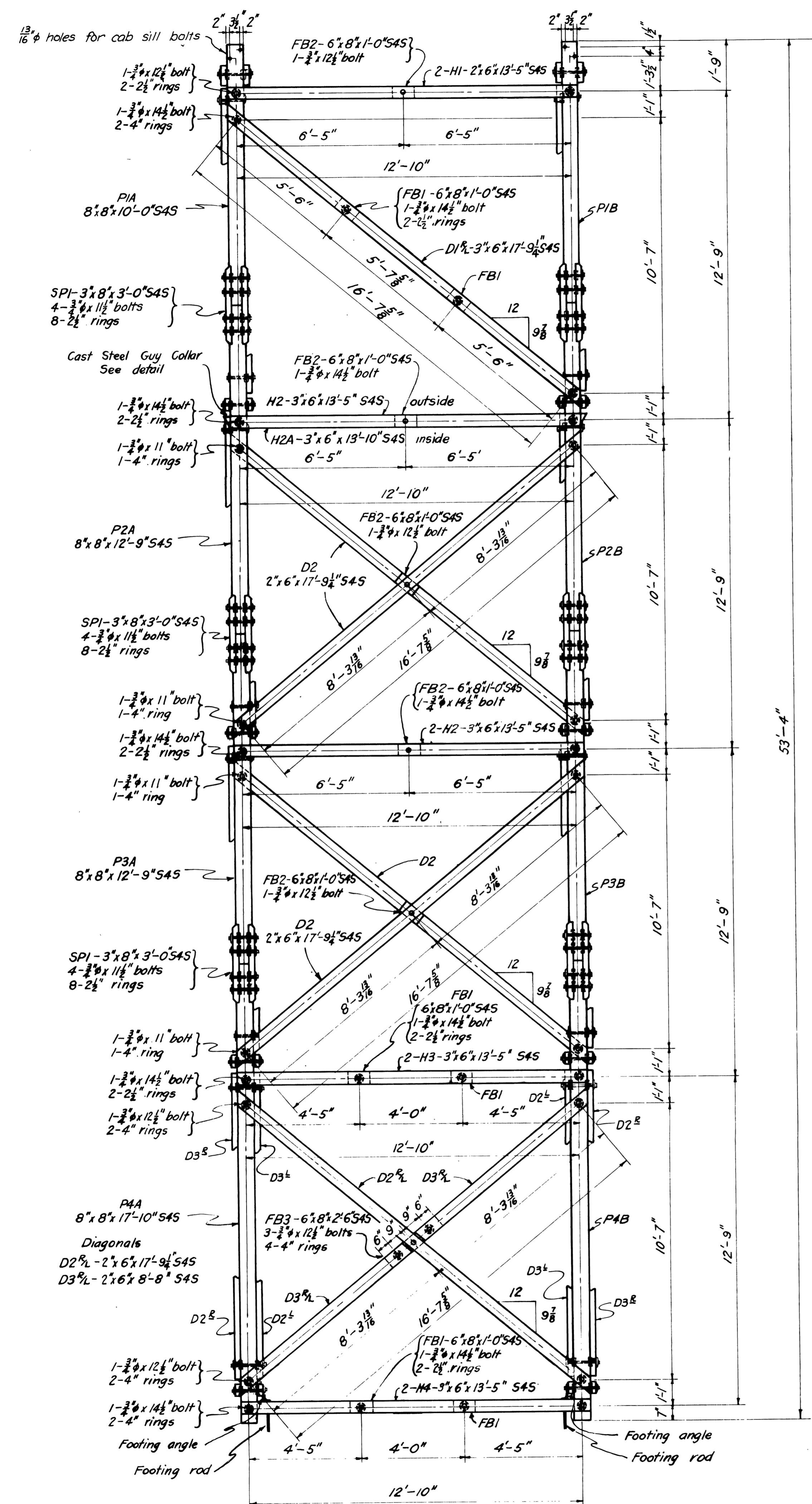
Footings Revised Feb. 1941 by W.D.S.

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

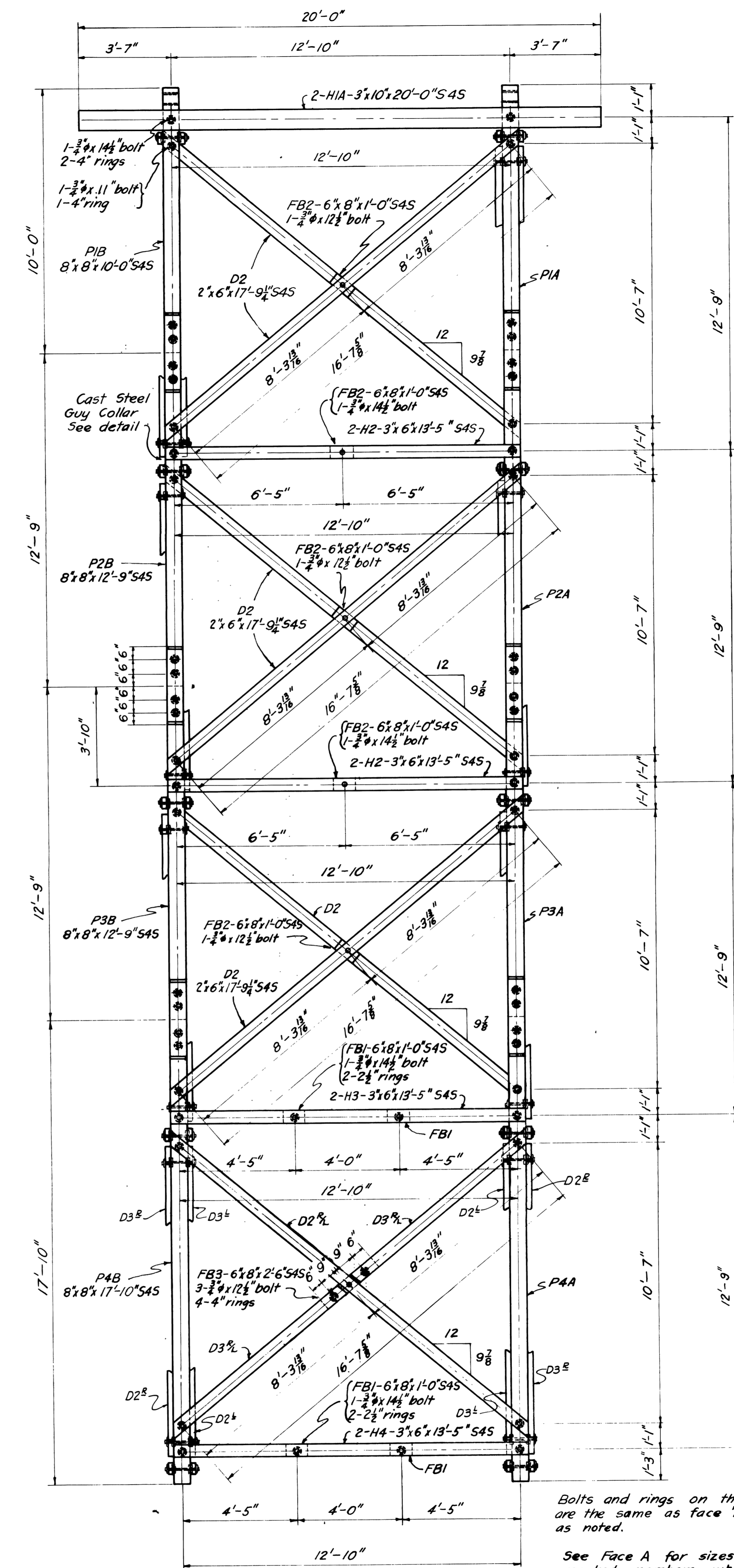
REGION SIX JAMES FRANKLAND, REGIONAL ENGINEER

STANDARD LOOKOUT TOWER
53-FOOT TYPE CT-2
FOUNDATION PLAN

DESIGNED B.C.O. DRAWN B.C.O. TRACED B.C.O.
SCALE NONE CHECKED B.C.O.
APPROVED [Signature] DATE MARCH 1938
ASSISTANT REGIONAL FORESTER



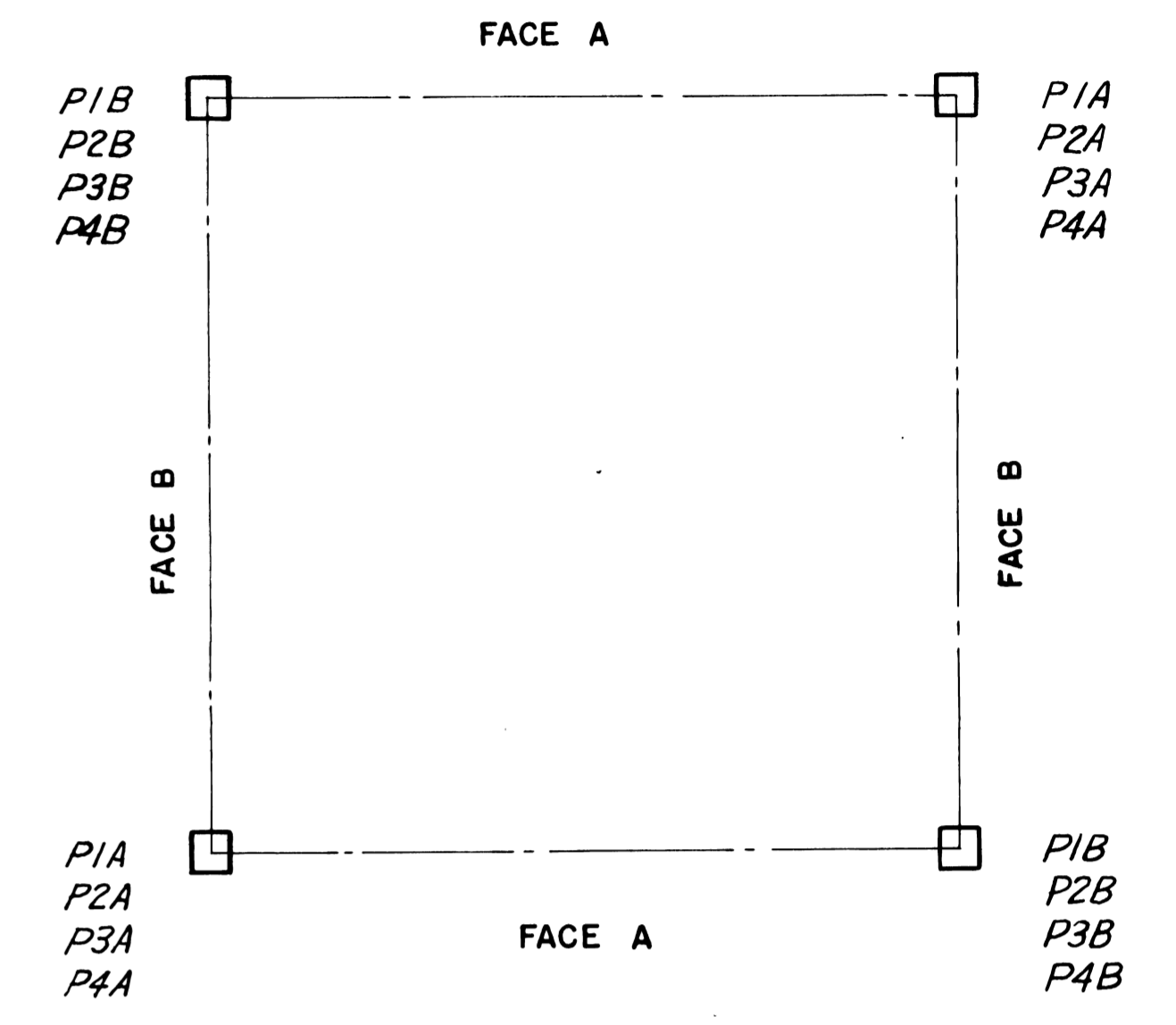
FACE A



FACE B

Bolts and rings on this face are the same as face "A" except as noted.

See Face A for sizes of marked members where not otherwise shown.



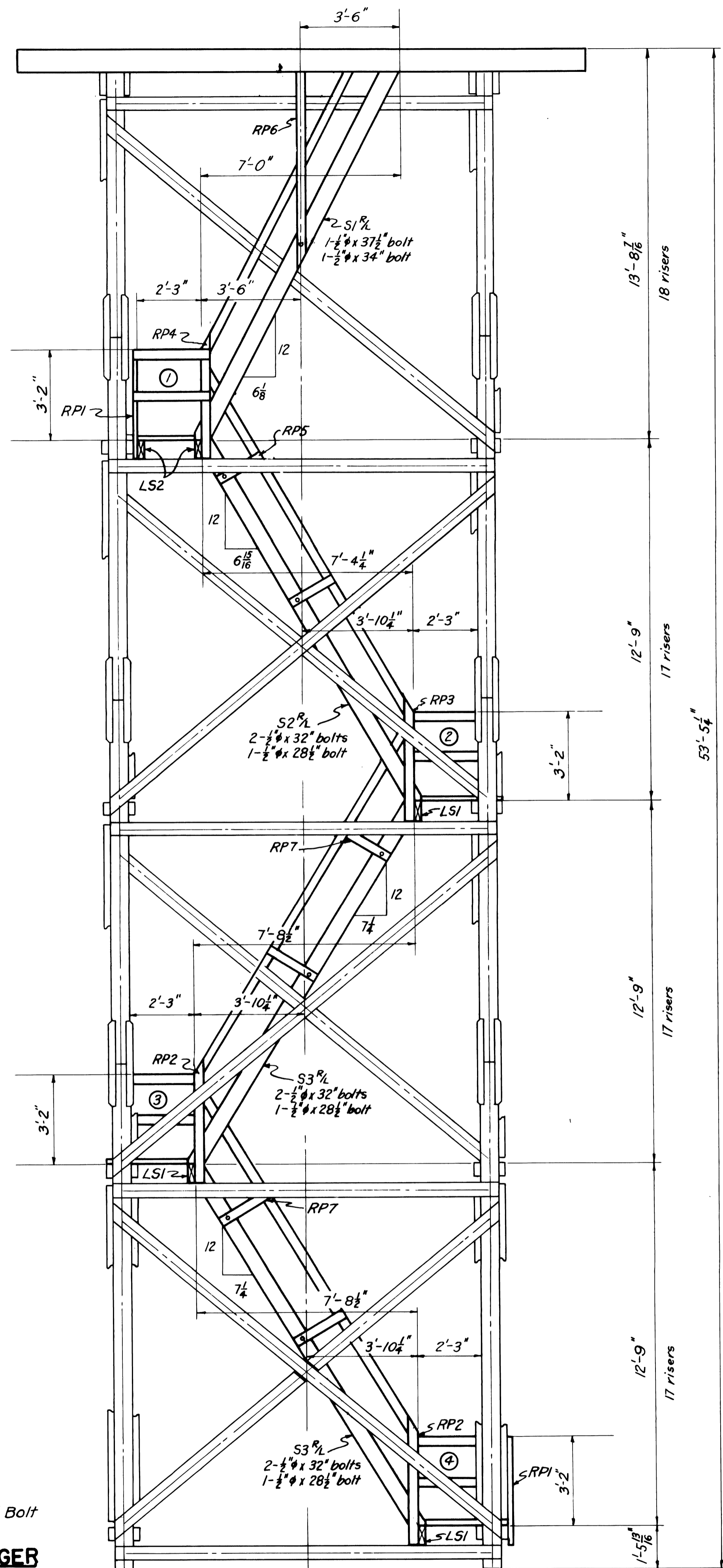
POST SCHEDULE

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

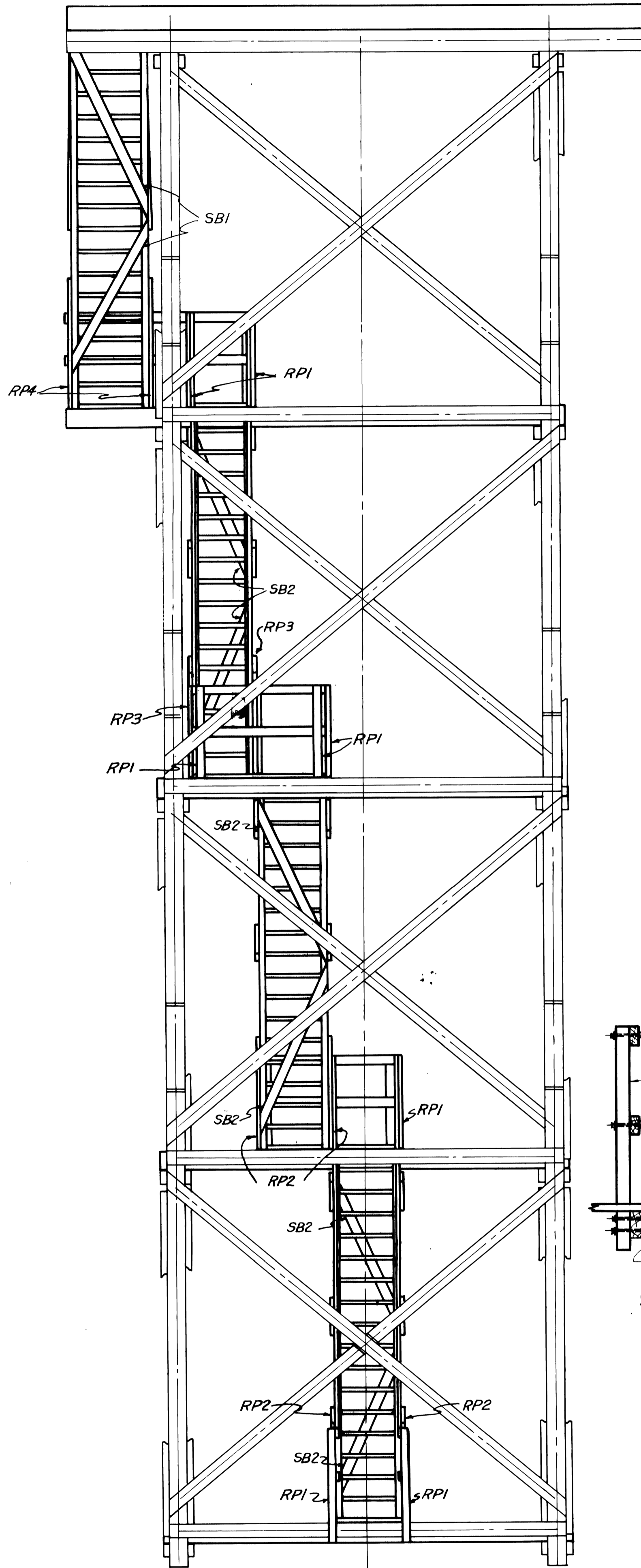
REGION SIX J. FRANKLAND, REGIONAL ENGINEER

STANDARD LOOKOUT TOWER
53 FOOT - TYPE CT2
GENERAL PLAN

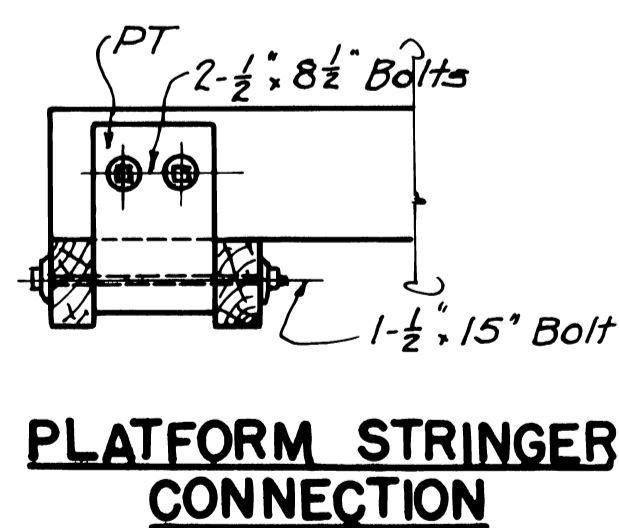
DESIGNED B.C.O. DRAWN B.C.O. TRACED R.W.S.
SCALE 1/4" = 1'-0" CHECKED C.W.S.
APPROVED DATE APRIL 1988
ASSISTANT REGIONAL FORESTER



FACE A



FACE B

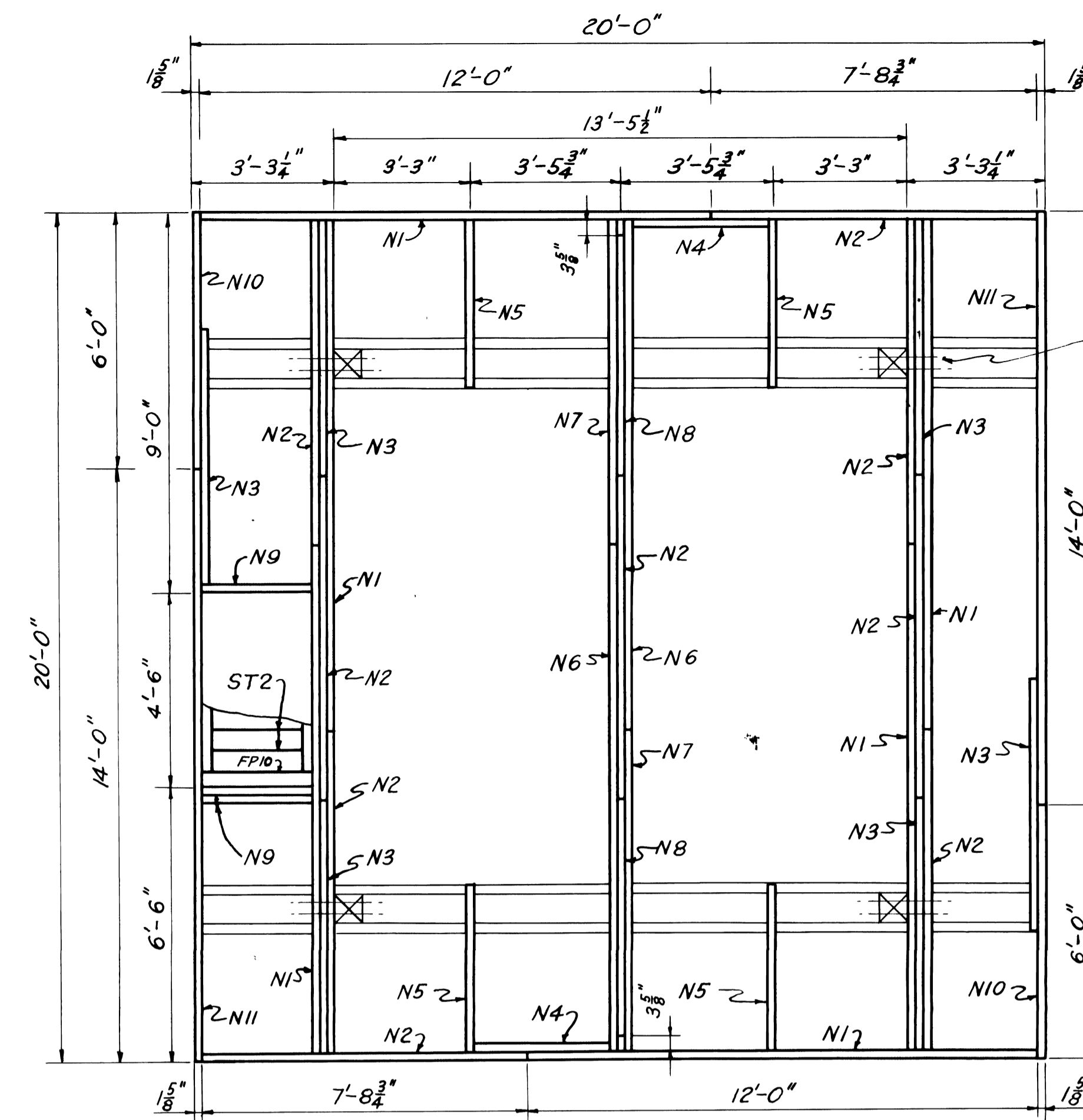


PLATFORM STRINGER CONNECTION

NOTE
Stair stringers to rest directly on joists, not on platform planks.

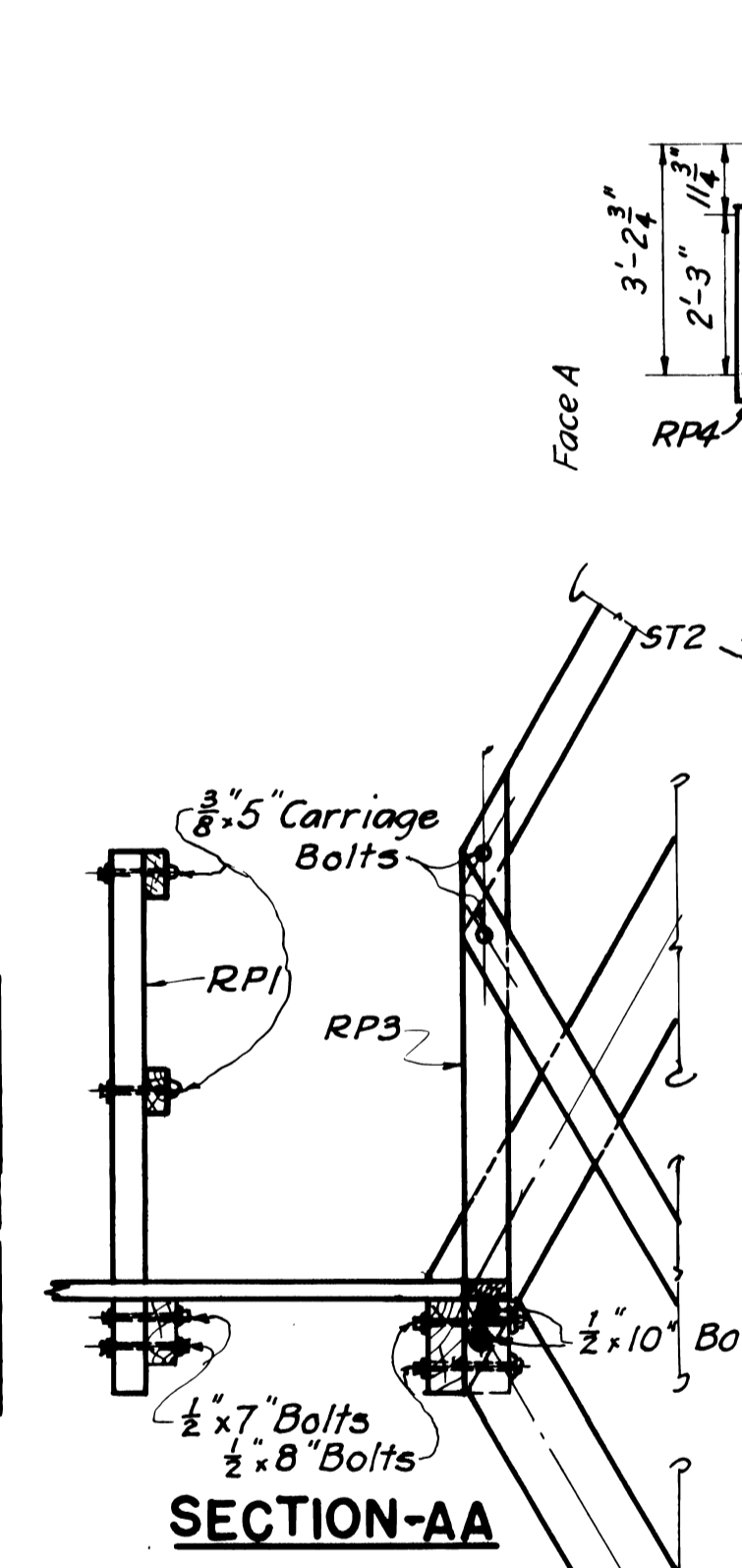
MATERIAL SIZES

House & Catwalk Sills.....	2"x10" S4S Treated	Platform Floor Plank.....	2"x16" S4S Treated
Stair Stringers.....	3"x8" S4S "	Rail Posts.....	3x4x2"x4" S4S "
Stair Treads.....	2"x8" S4S "	Stair Stringer Sways.....	2"x4" S4S "
Platform Stringers.....	3"x8" Rgh "	Hand Rail.....	2"x4" S4S Untreated

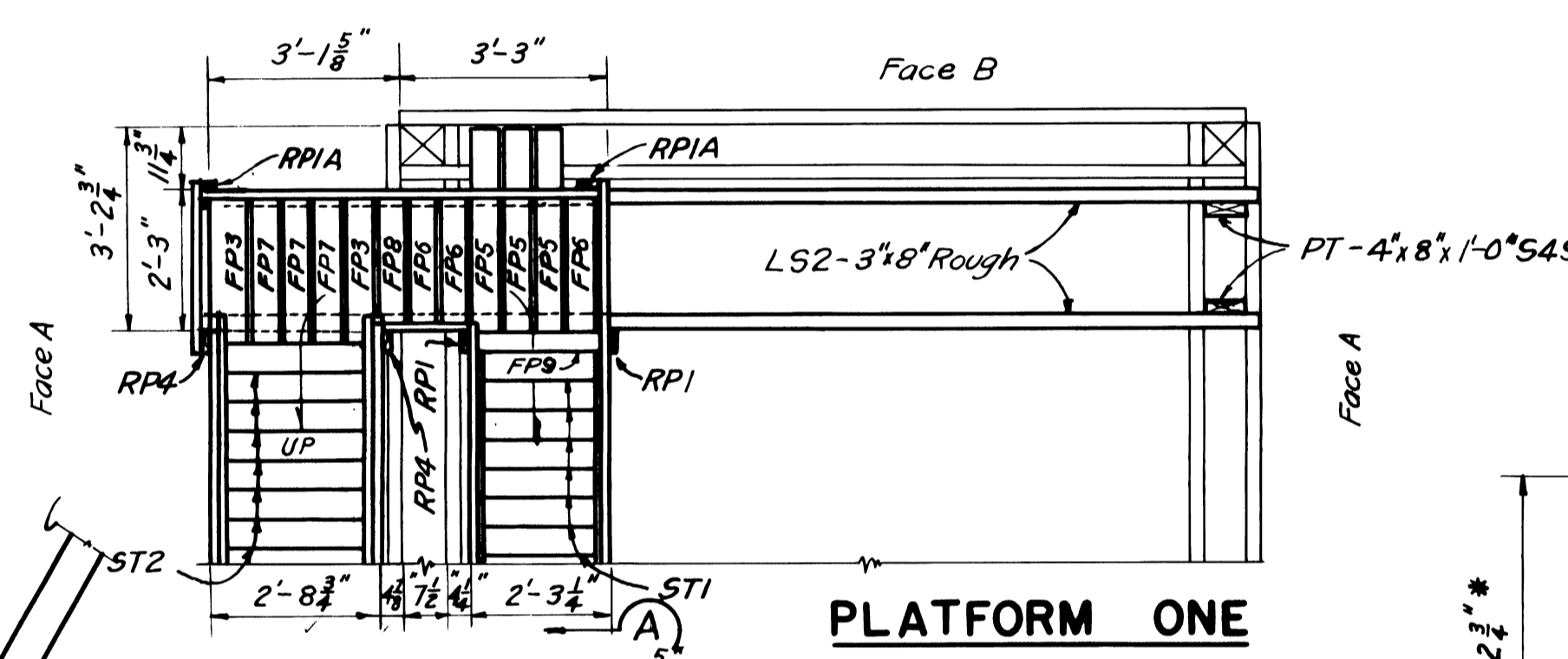


HOUSE & CATWALK SILLS

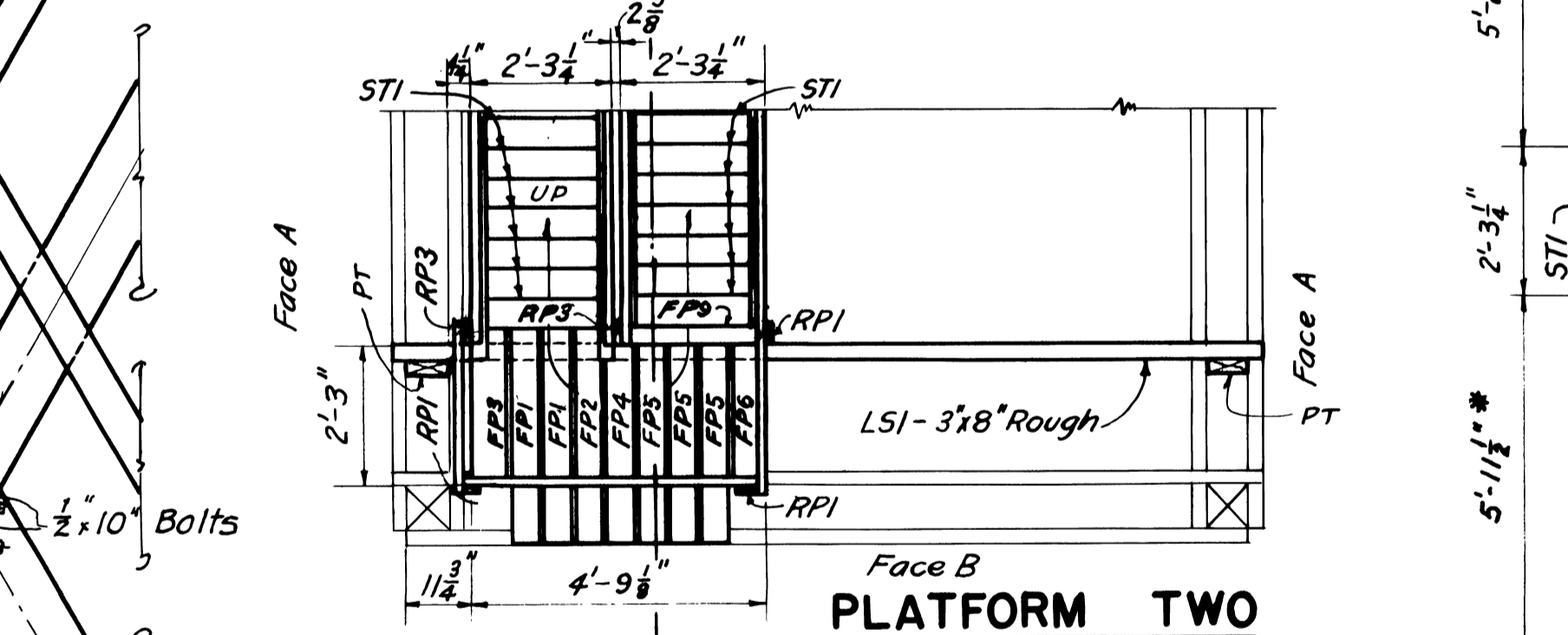
2-3/4" x 14 1/2" bolts
Field bore 1/8" holes in catwalk joists to suit 1/8" holes in tower stub, treat with creosote, and fasten with 3/4" x 14 1/2" bolts



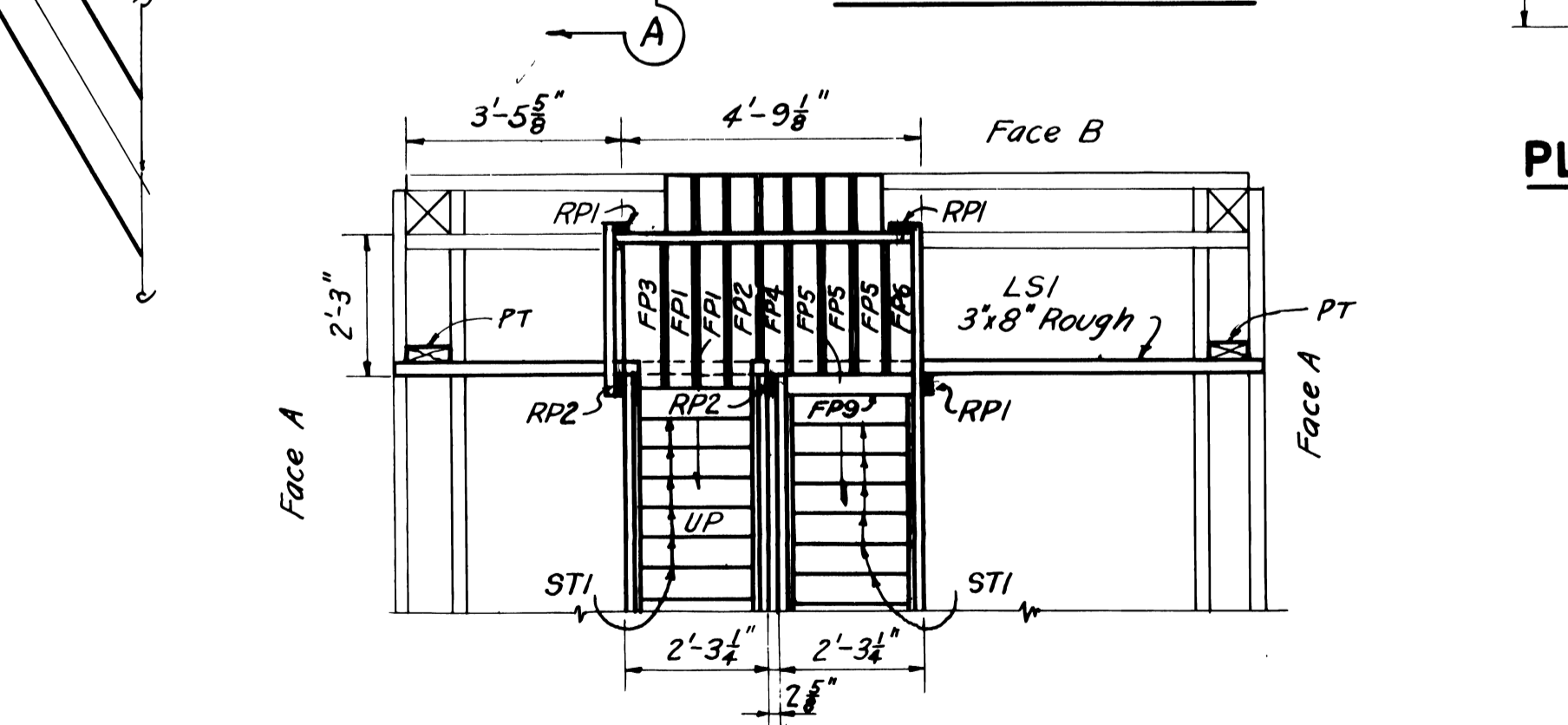
SECTION-AA



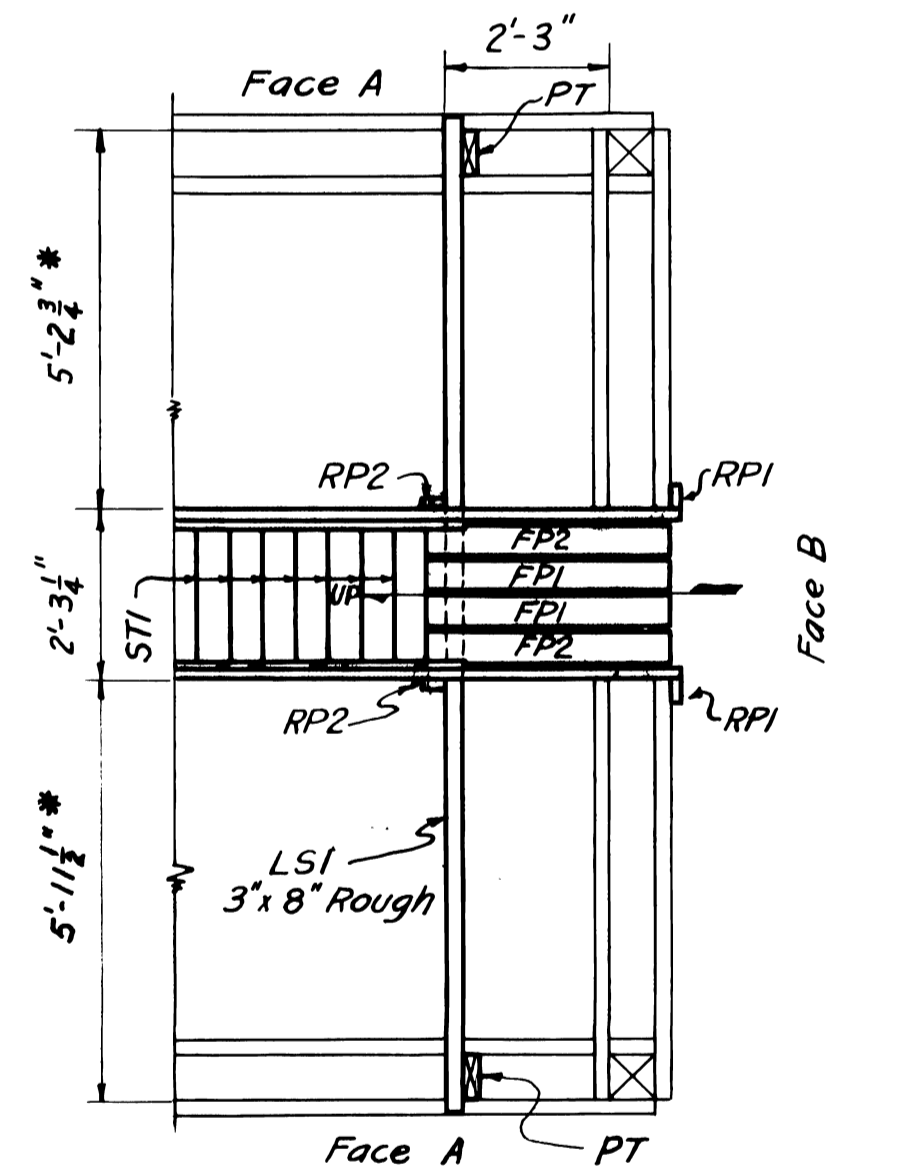
PLATFORM ONE



PLATFORM TWO



PLATFORM THREE



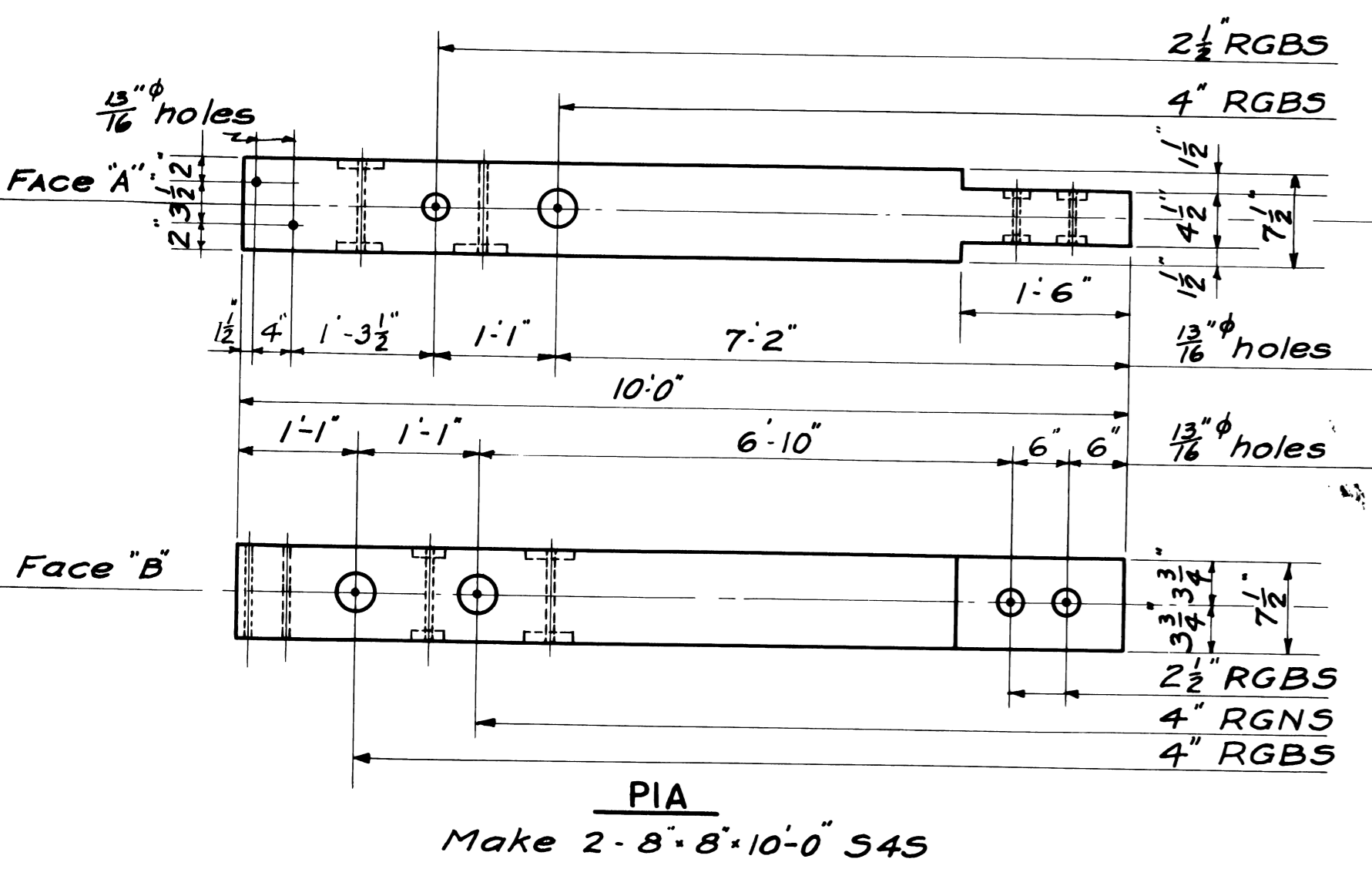
PLATFORM FOUR

* Revised July, 1948 by DMA.
Revised January, 1941 by V.V.D.S

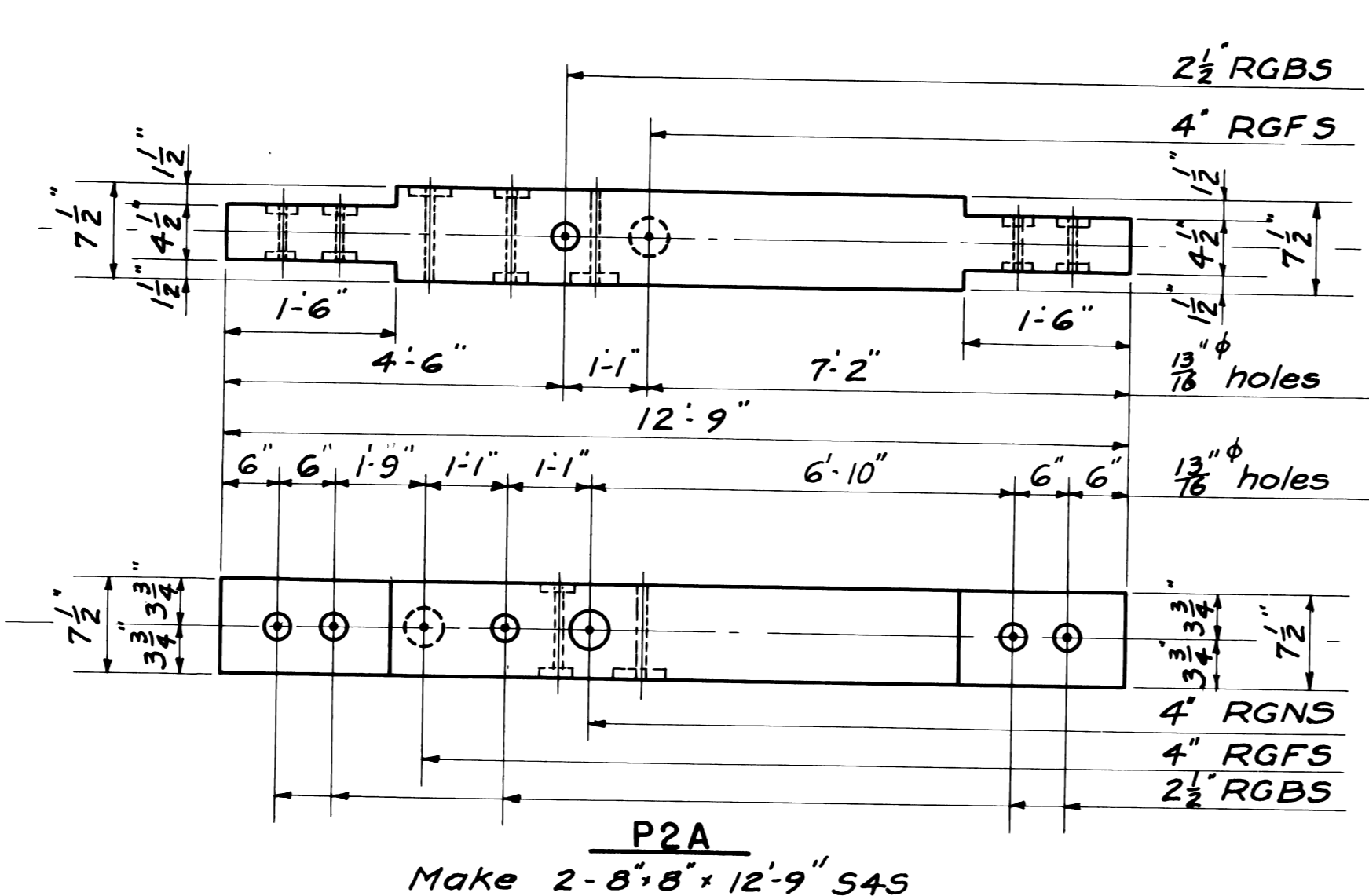
U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX J. FRANKLAND, REGIONAL ENGINEER

STANDARD LOOKOUT TOWER
53 FOOT - CT2
STAIR LAYOUT

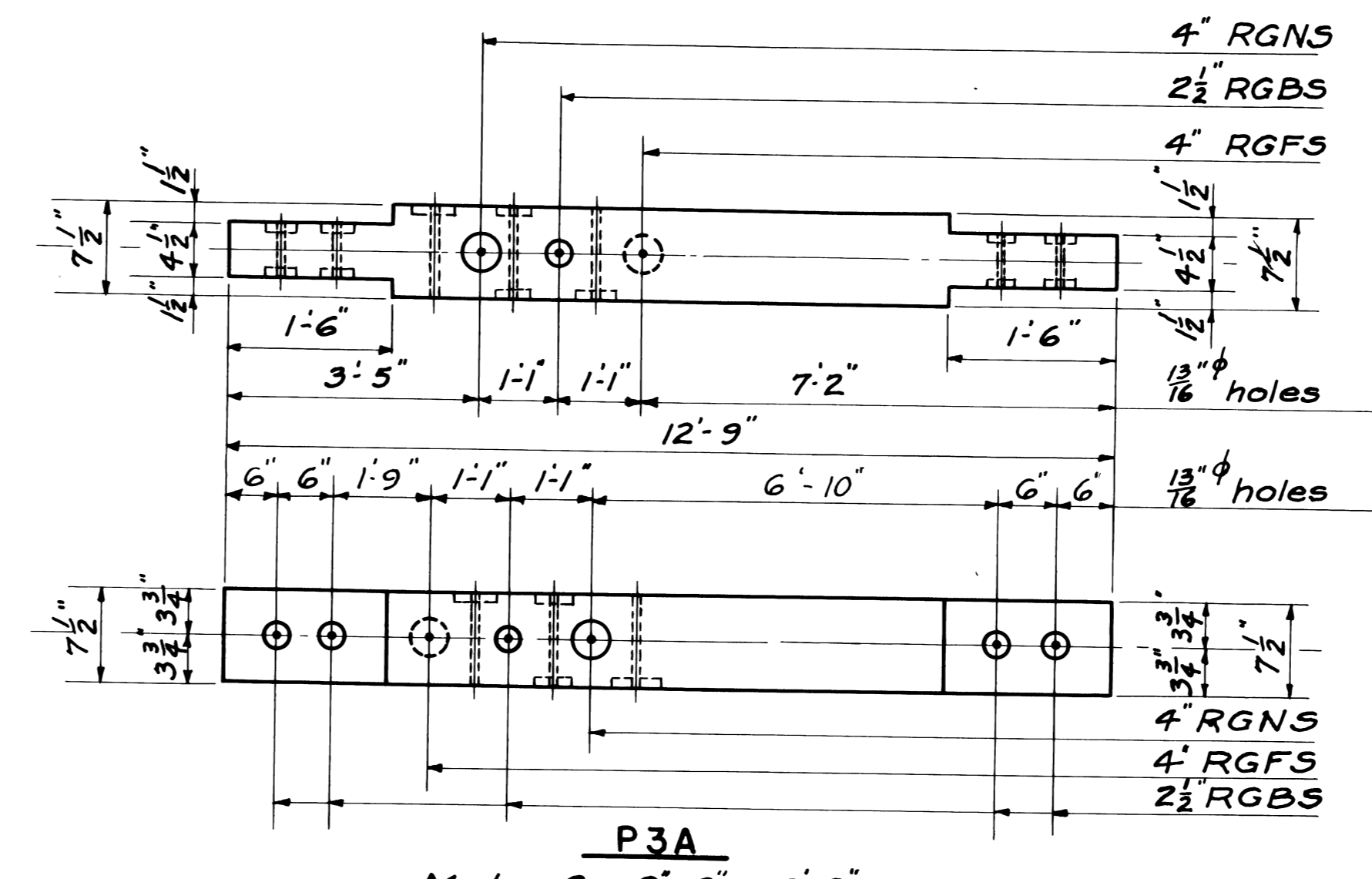
DESIGNED B.C.O. DRAWN R.W.S. TRACED R.W.S.
SCALE 1/4" = 1'-0" CHECKED DATE APRIL 1948
APPROVED ASSISTANT REGIONAL FORESTER



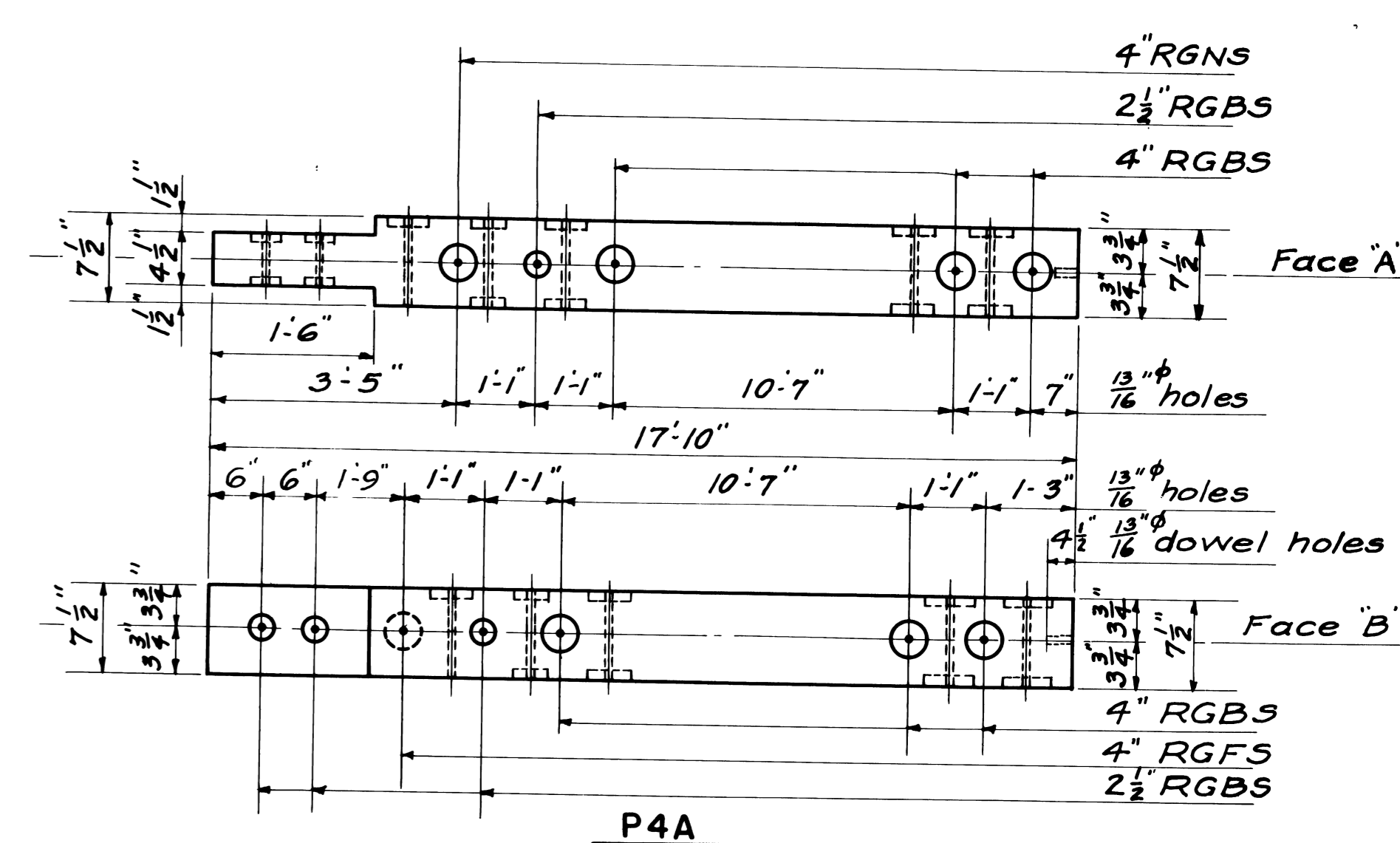
P1A
Make 2 - 8'-8" x 10'-0" S4S



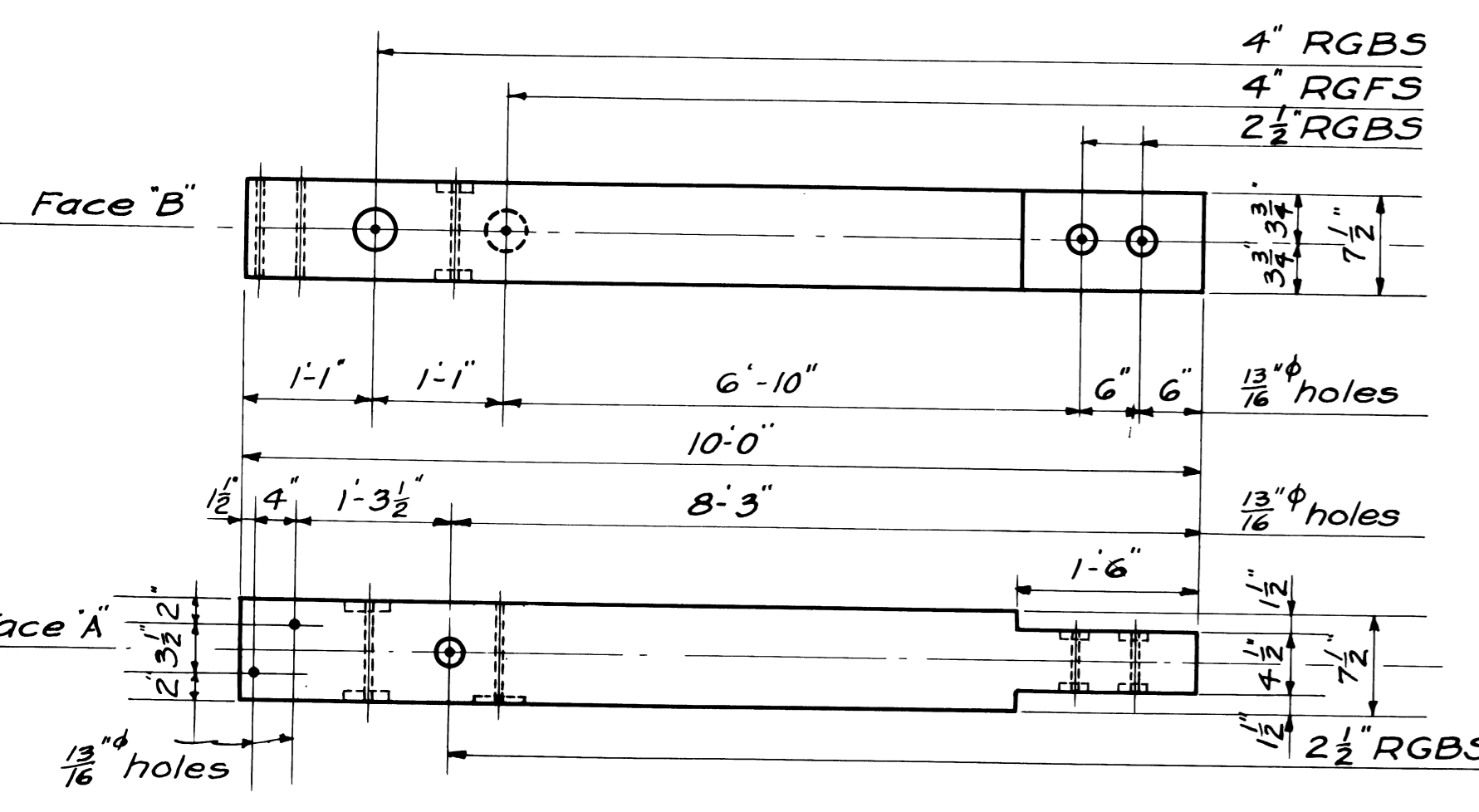
P2A
Make 2 - 8'-8" x 12'-9" S4S



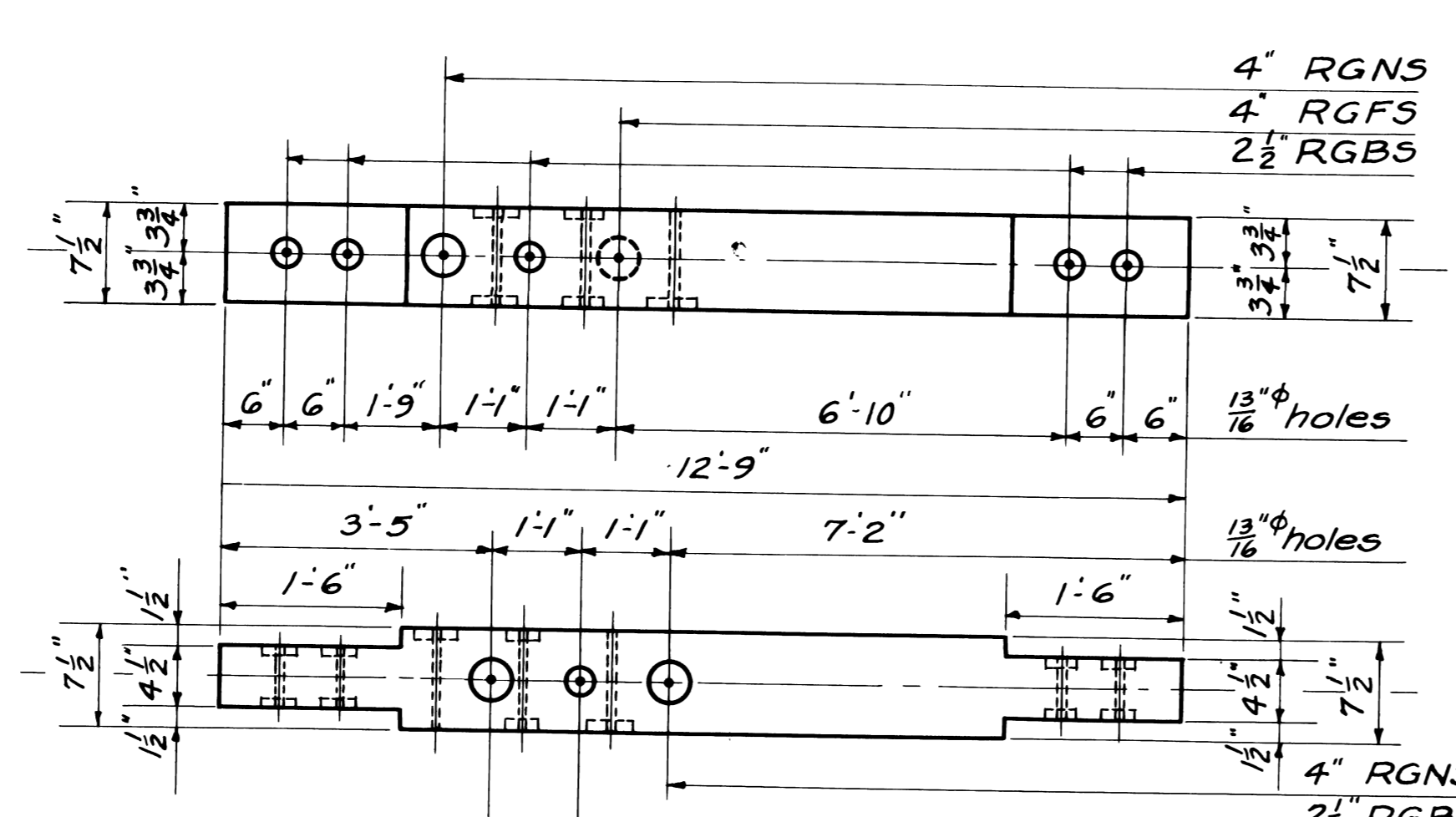
P3A
Make 2 - 8'-8" x 12'-9" S4S



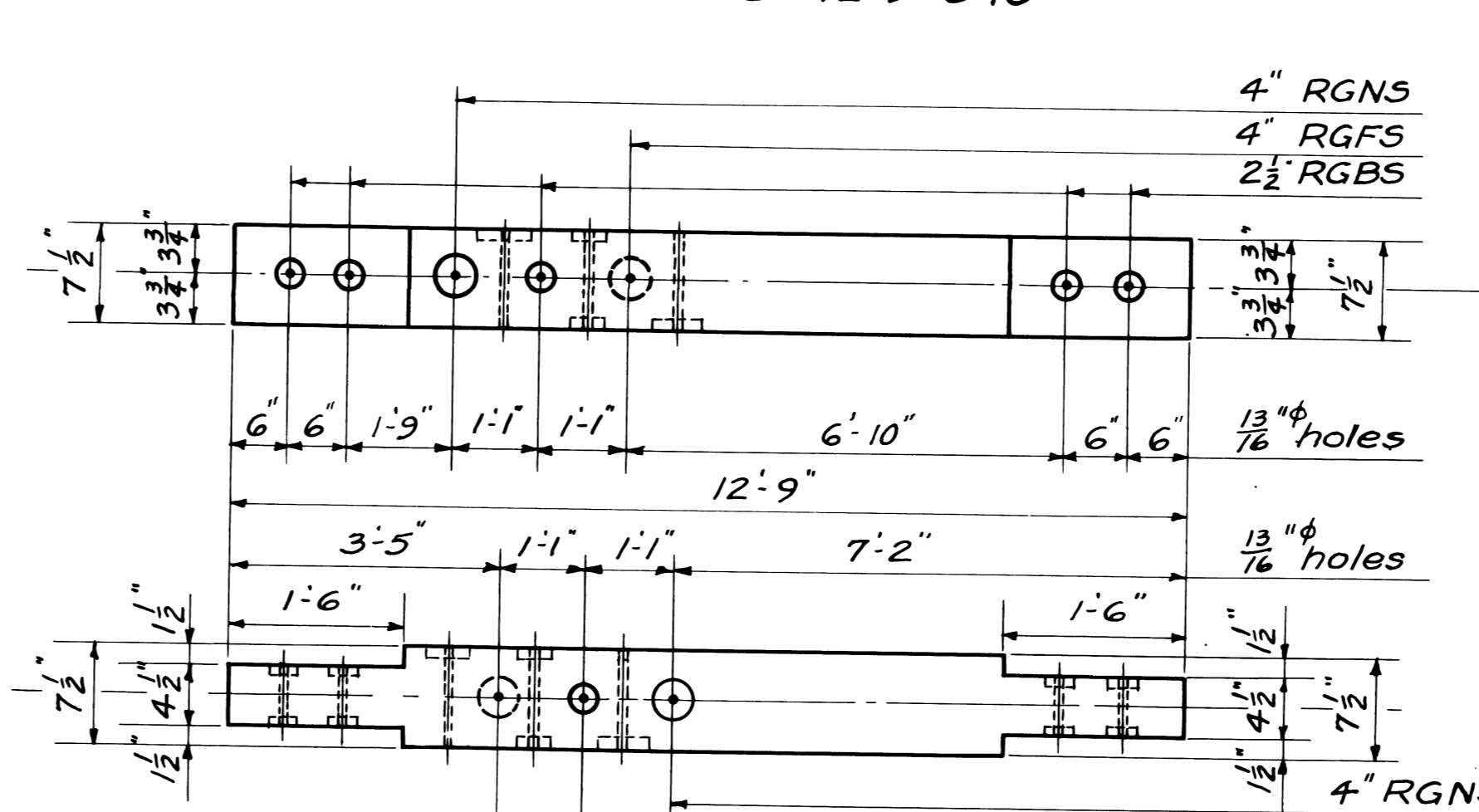
P4A
Make 2 - 8'-8" x 17'-10" S4S



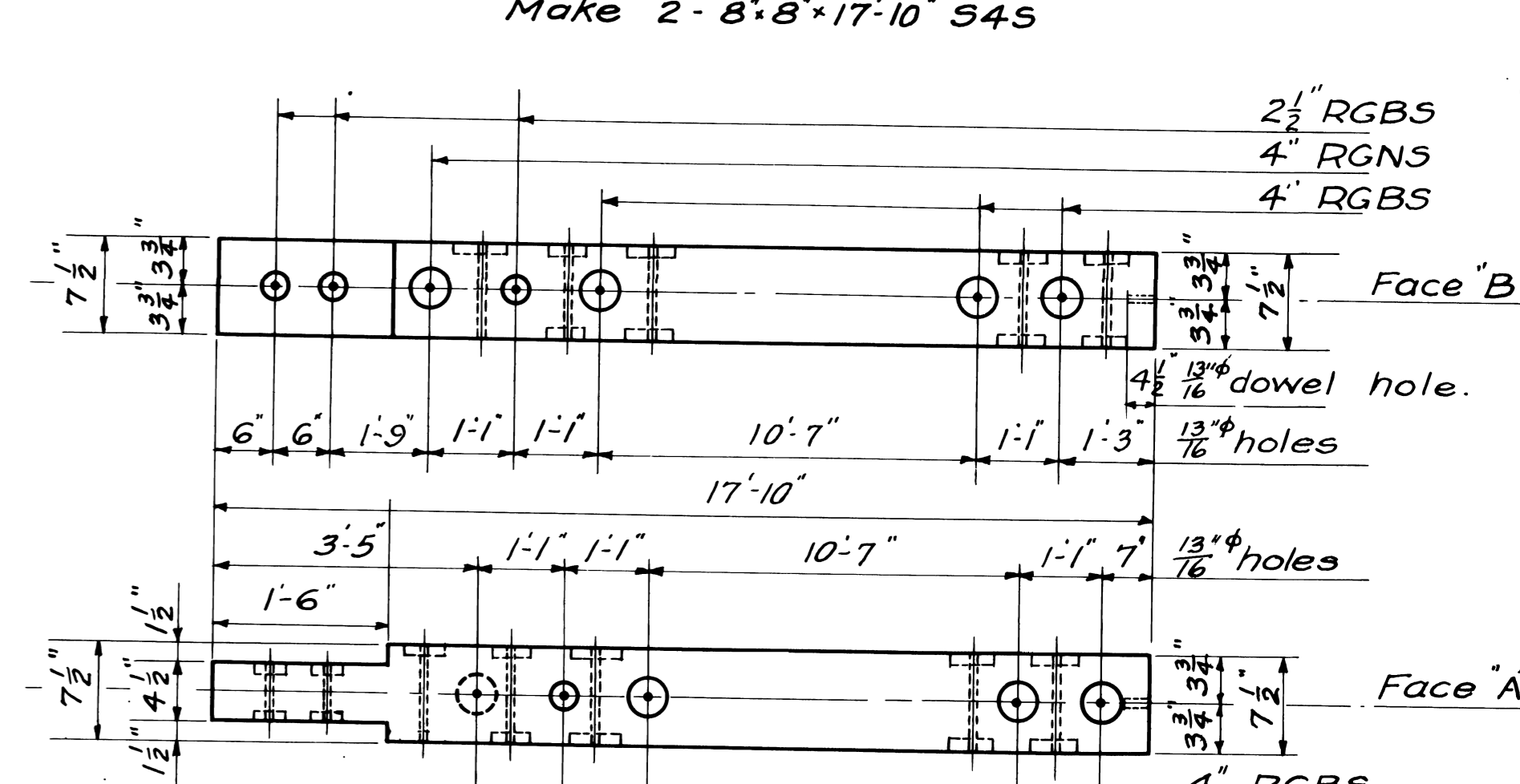
P1B
Make 2 - 8'-8" x 10'-0" S4S



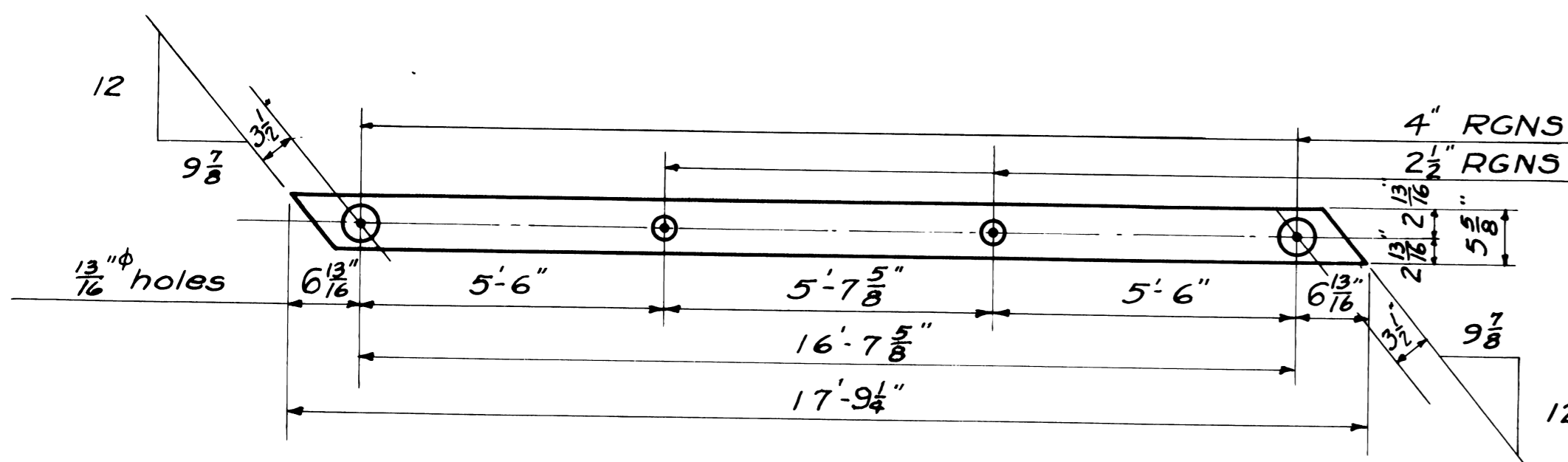
P2B
Make 2 - 8'-8" x 12'-9" S4S



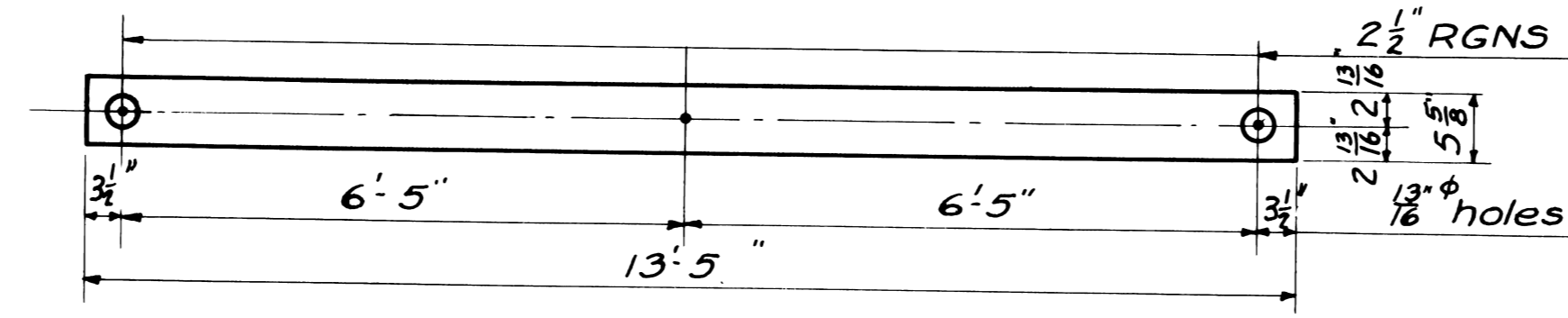
P3B
Make 2 - 8'-8" x 12'-9" S4S



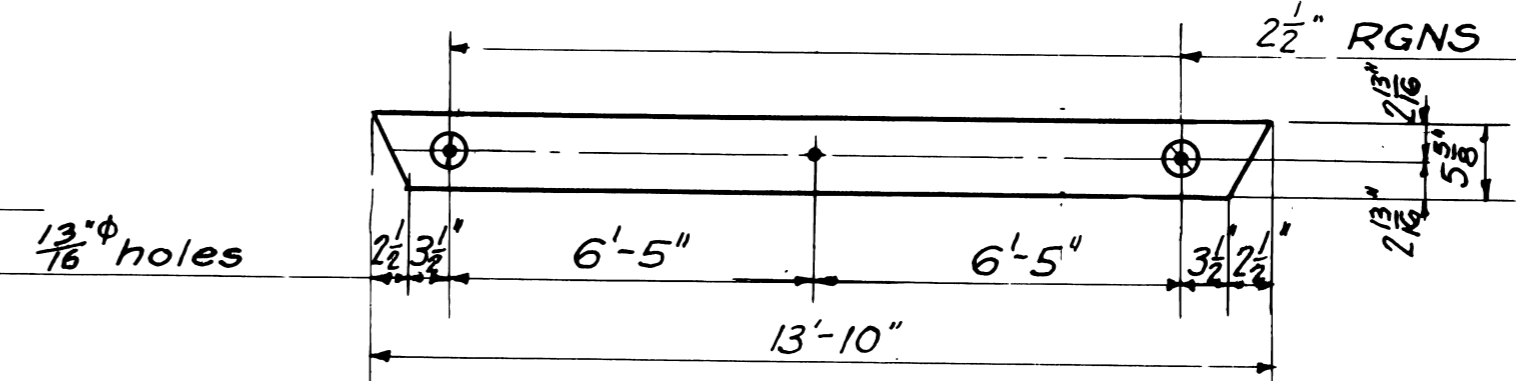
P4B
Make 2 - 8'-8" x 17'-10" S4S



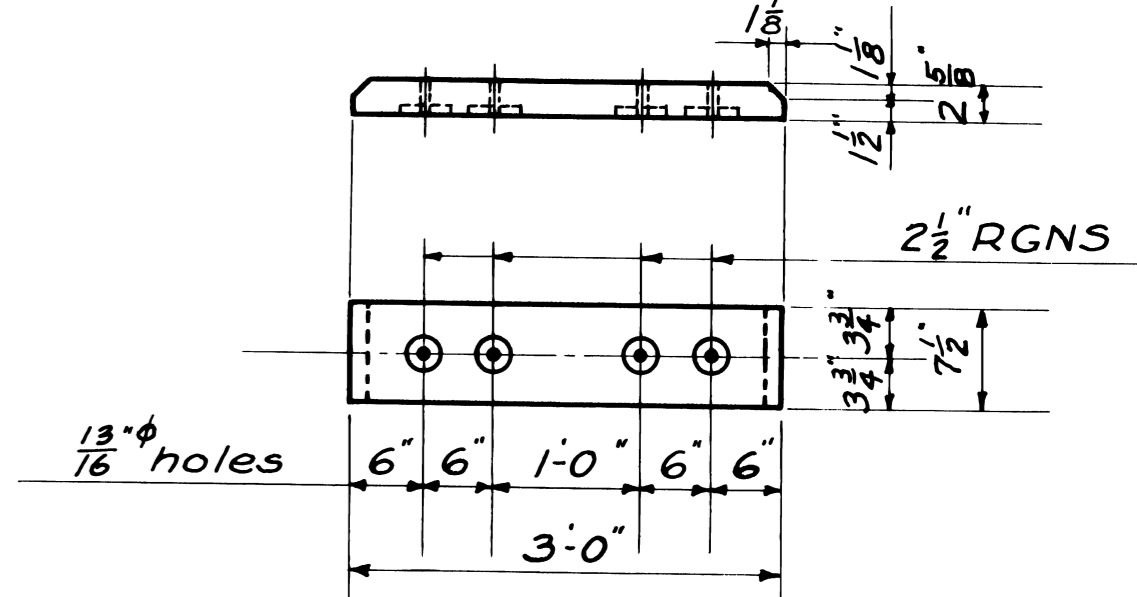
D1^R Make 2 - 3'-6" x 17'-9 1/4" S4S as shown.
D1^L Make 2 - 3'-6" x 17'-9 1/4" S4S opposite hand.



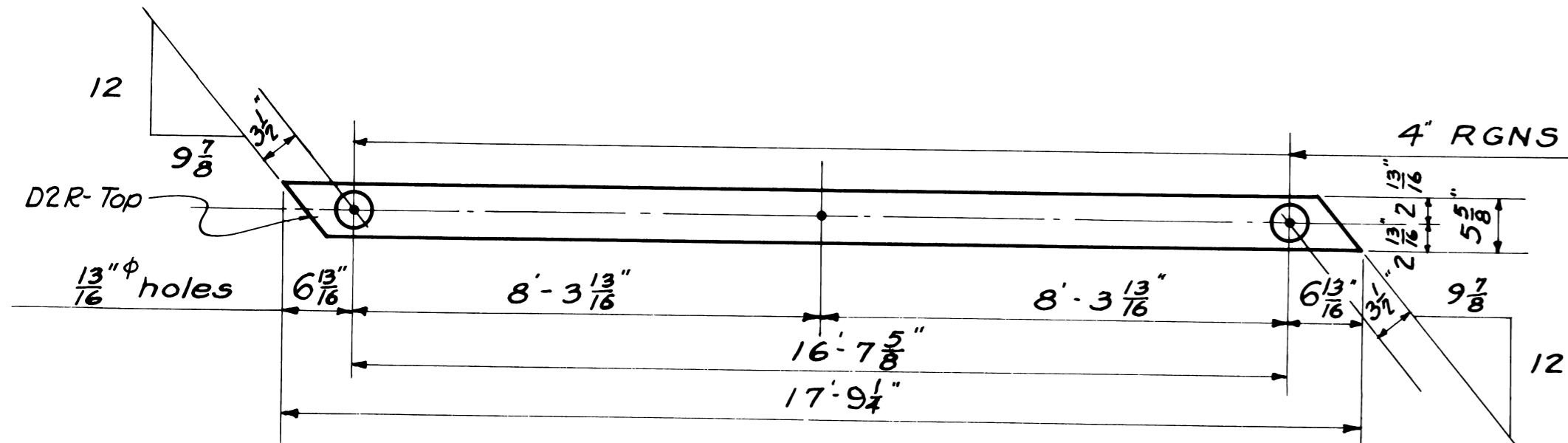
H1 Make 4 - 2'-6" x 13'-5" S4S as shown.
H2 Make 4 - 3'-6" x 13'-5" S4S as shown.



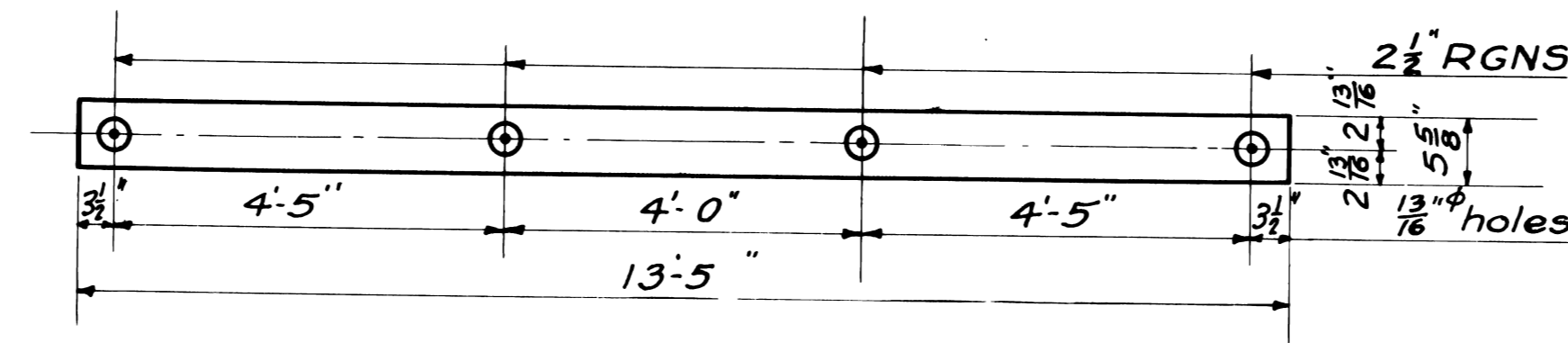
H2A
Make 2 - 3'-6" x 13'-10" S4S as shown



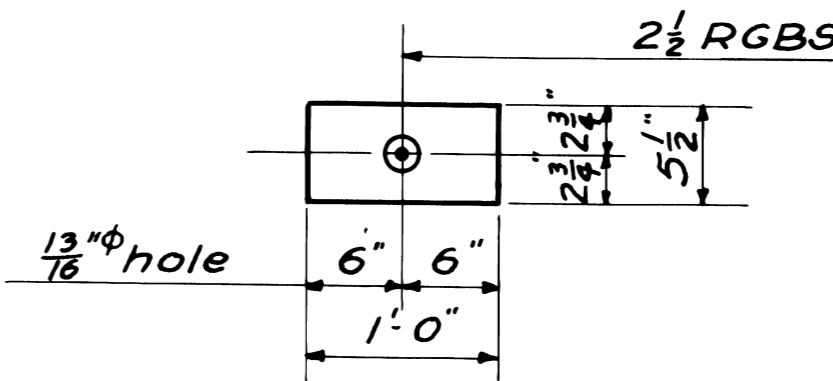
SPI Make 24 - 3'-8" x 3'-0" S4S



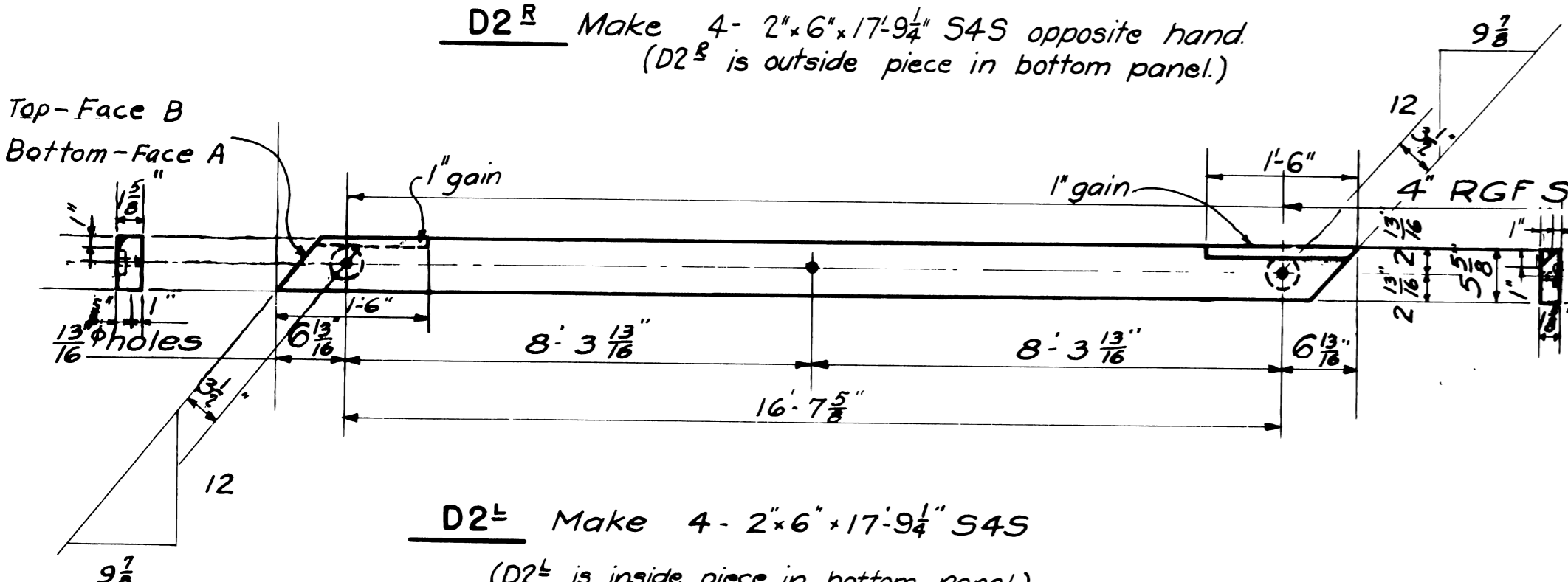
D2 Make 20 - 2'-6" x 17'-9 1/4" S4S as shown.
D2^R Make 4 - 2'-6" x 17'-9 1/4" S4S opposite hand (D2^R is outside piece in bottom panel.)



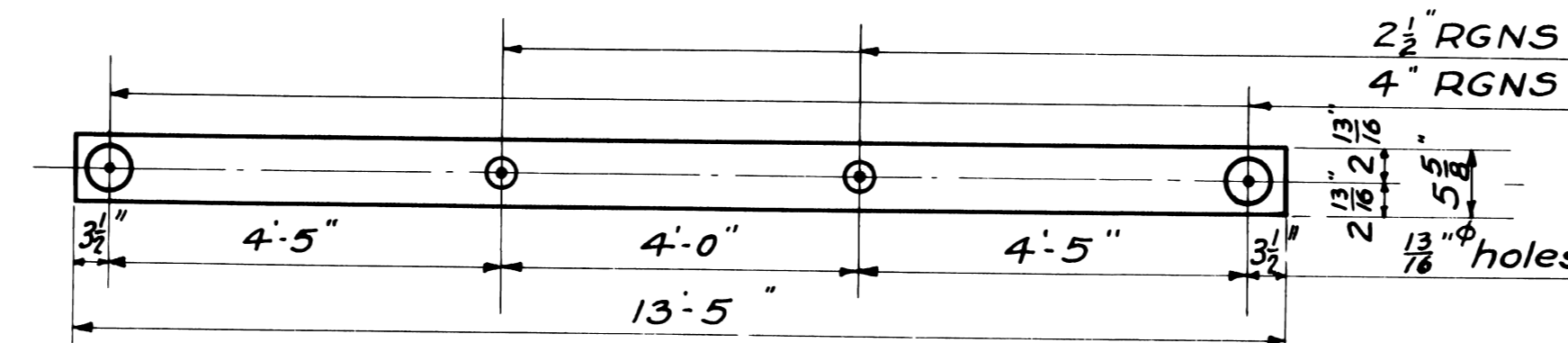
H3 Make 8 - 3'-6" x 13'-5" S4S



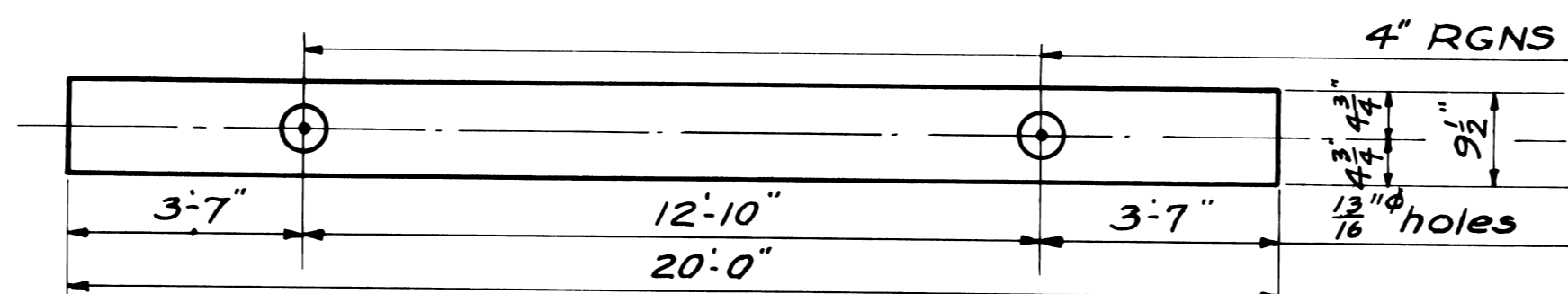
FBI Make 20 - 6'-8" x 1'-0" S4S



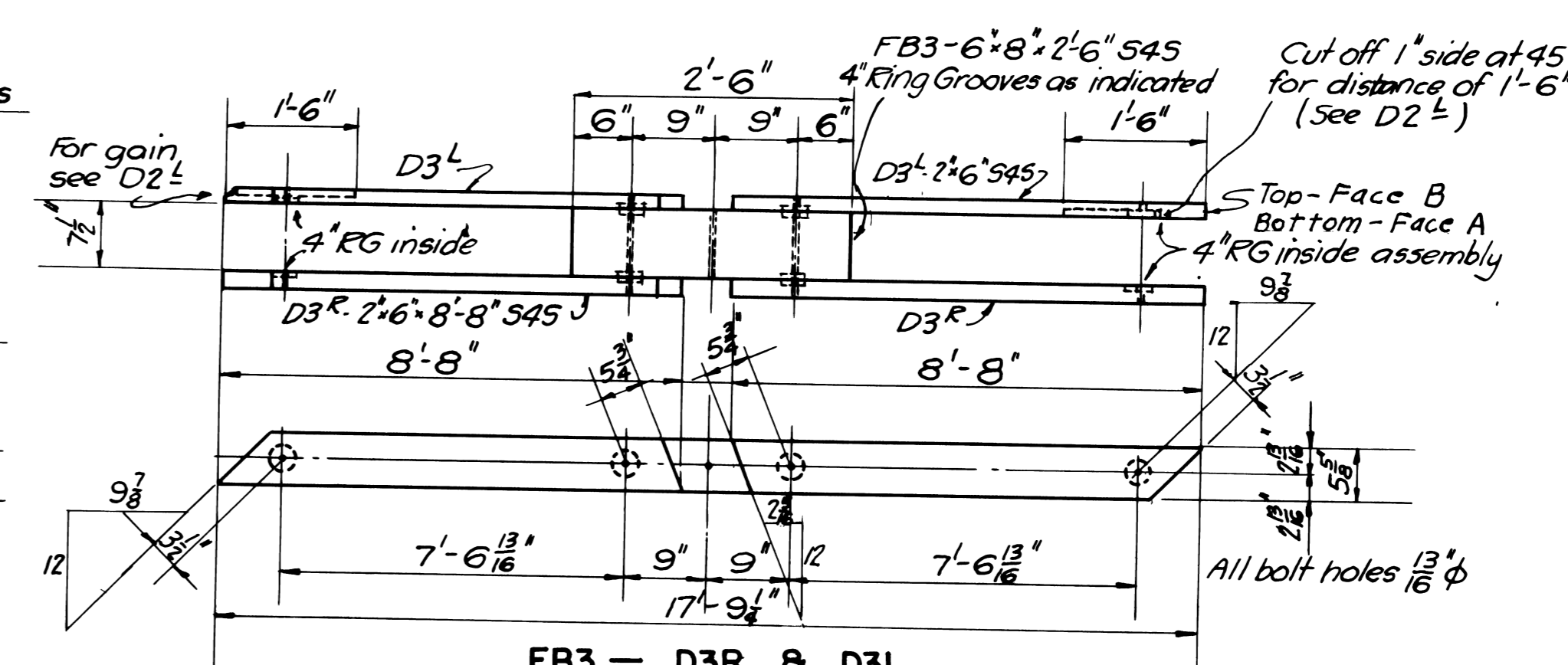
D2^L Make 4 - 2'-6" x 17'-9 1/4" S4S (D2^L is inside piece in bottom panel.)



H4 Make 8 - 3'-6" x 13'-5" S4S



H1A Make 4 - 3'-10" x 20'-0" S4S



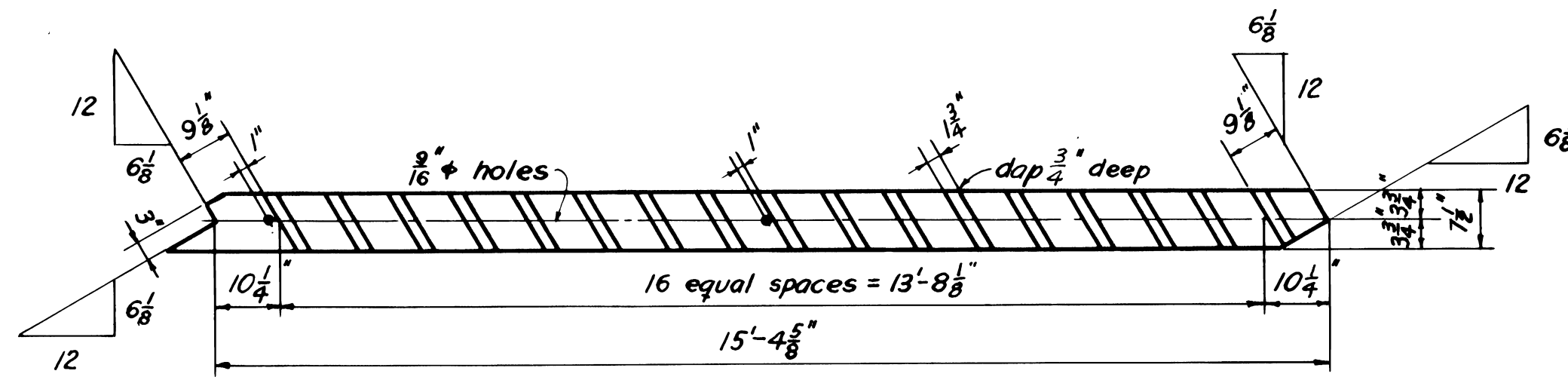
FB3 - D3R & D3L
Make four complete assemblies as shown. Gain Revised on D2^L & D3^L - B.D.E. 10/1/52
D3L - 2'-6" x 8'-8" S4S top as shown. D3R - 2'-6" x 8'-8" S4S as shown
FB3 - 6'-8" x 2'-6" S4S as shown.

NOTE:
RGNs = ring groove near side.
RGFS = ring groove far side.
RGS = ring groove both sides.

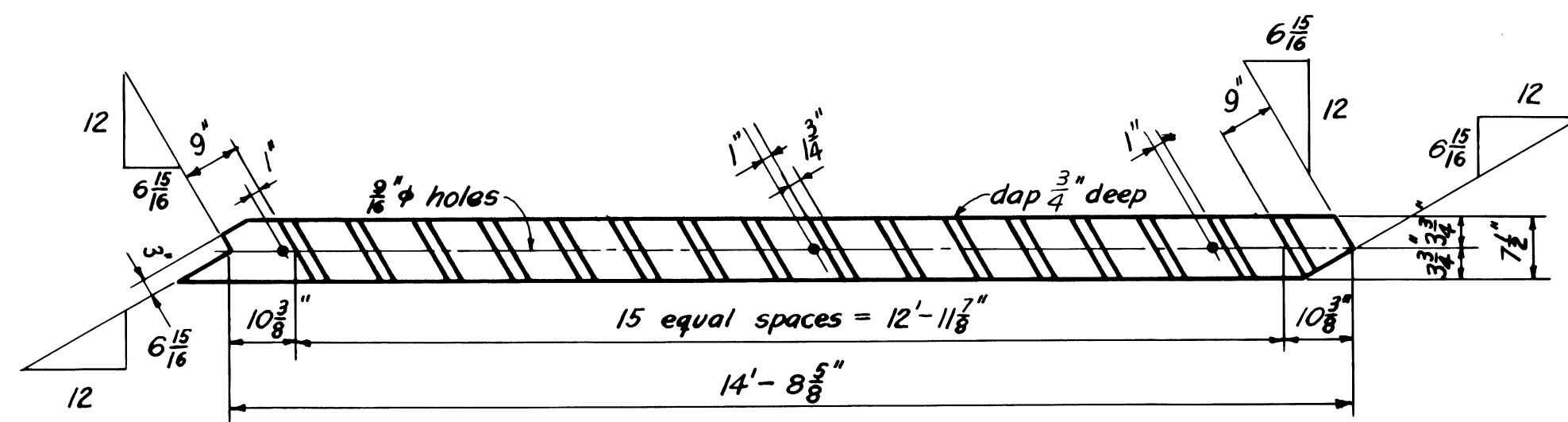
U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
REGION SIX J. FRANKLAND REGIONAL ENGINEER

**STANDARD LOOKOUT TOWER
53-FOOT TYPE CT-2
SHOP DETAILS**

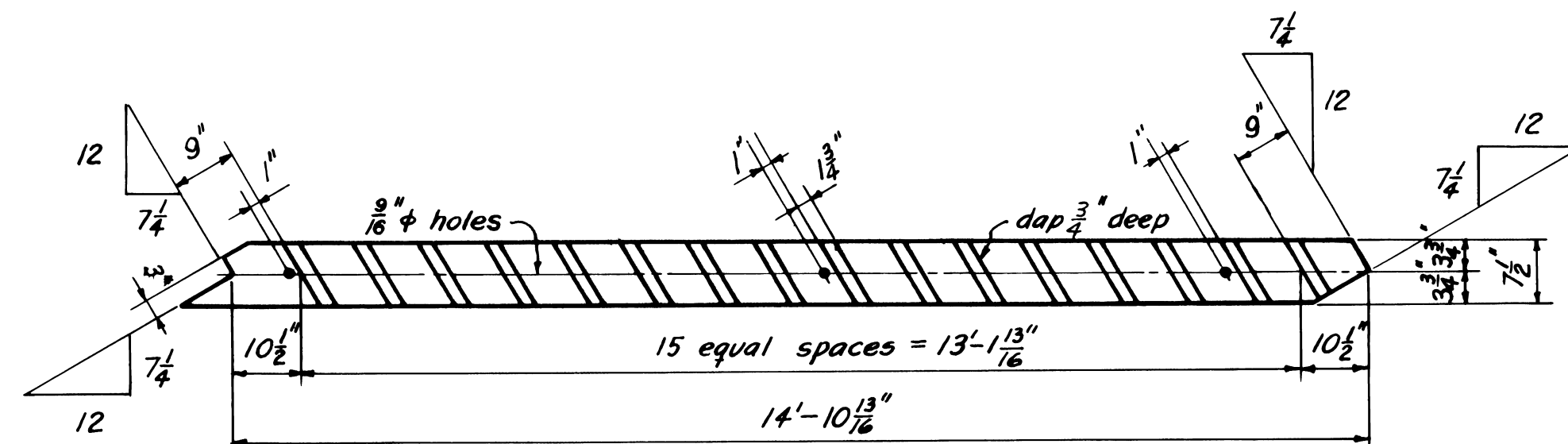
DESIGNED B.C.O. DRAWN L.L.L. TRACED L.L.L.
SCALE NONE CHECKED B.C.O.
APPROVED [Signature] DATE APRIL 1938
ASSISTANT REGIONAL FORESTER



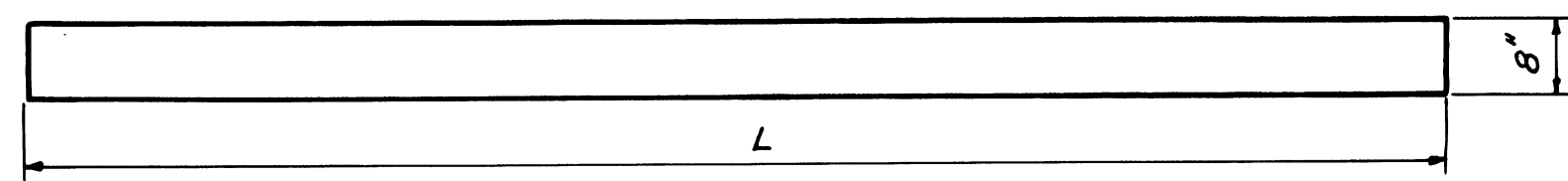
Stair Stringer S1^{1/4}
 3"x8"x16'-0" S4S
 Make 1 as shown
 Make 1 opposite hand



Stair Stringer S2^{1/4}
 3"x8"x15'-3 3/8" S4S
 Make 1 as shown
 Make 1 opposite hand

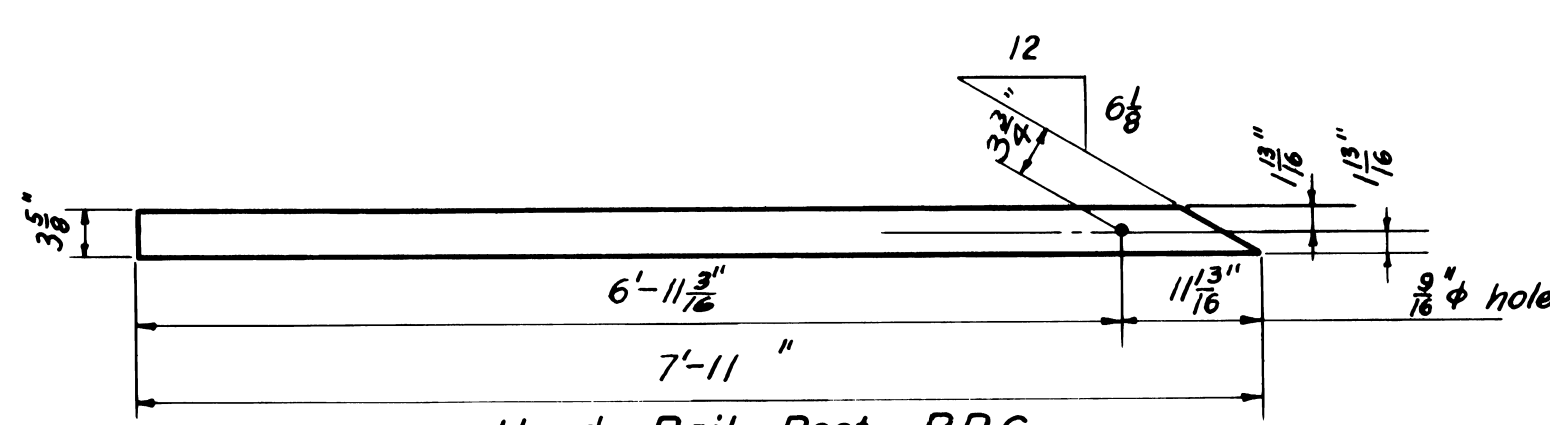


Stair Stringer S3^{1/4}
 3"x8"x15'-5" S4S
 Make 2 as shown
 Make 2 opposite hand

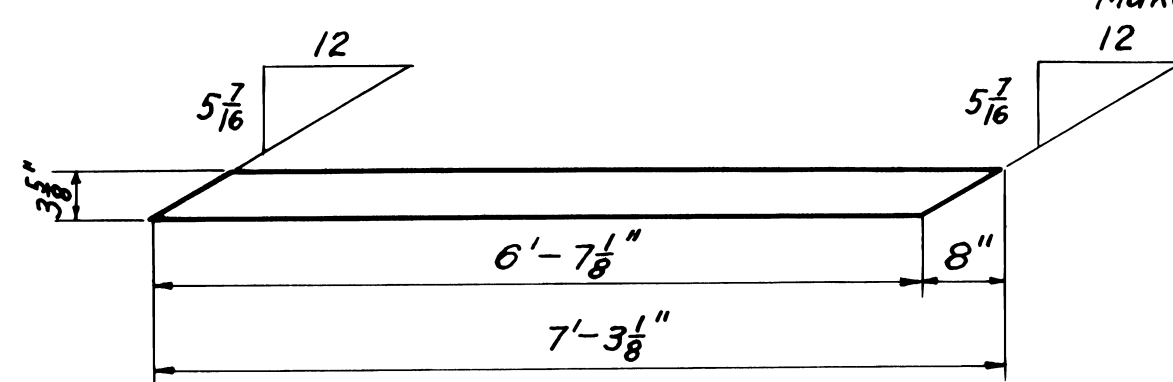


Landing Stringers
 3"x8" Rough

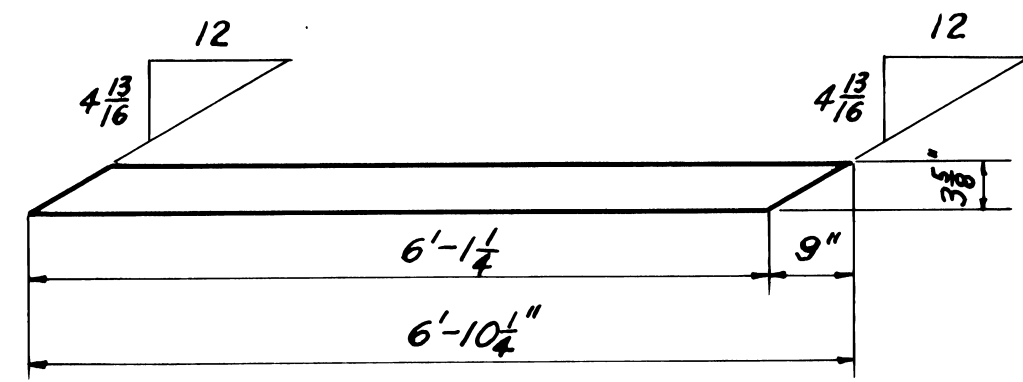
NO. REQ'D	MARK	LENGTH L
3	LS1	13'-11"
2	LS2	17'-0"



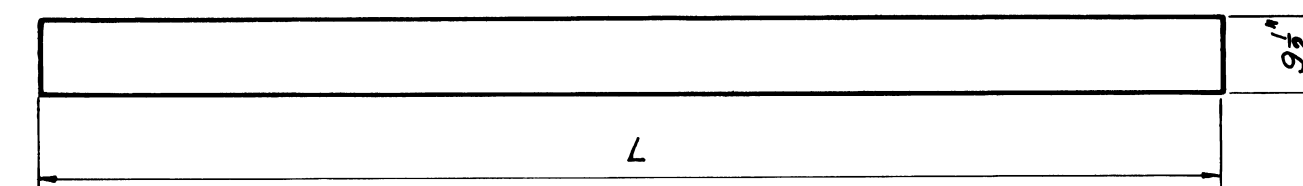
Hand Rail Post RP6
 2"x4"x7'-11" S4S
 Make 2.



Stair Brace SB1
 2"x4"x7'-3 1/8" S4S
 Make 2

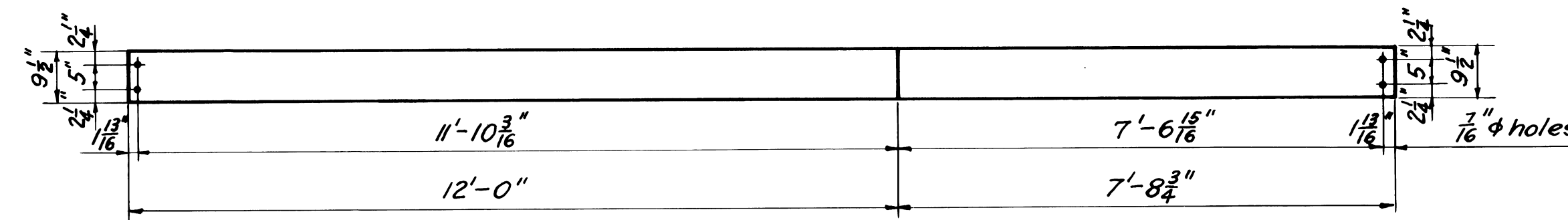


Stair Brace SB2
 2"x4"x6'-10 1/4" S4S
 Make 6

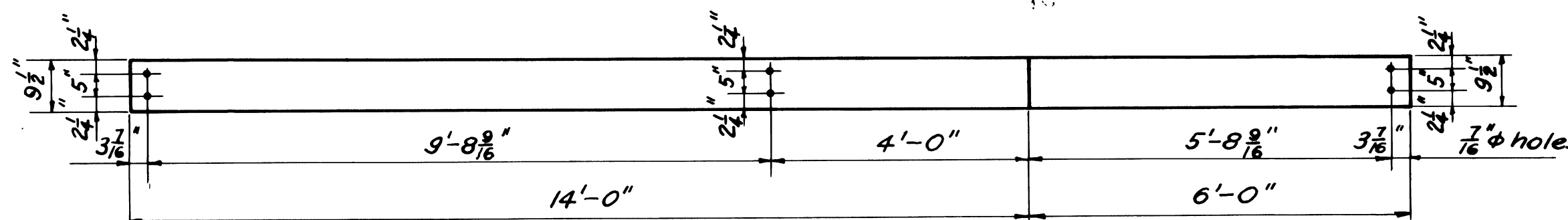


Cab Girder System
 2"x10" S4S

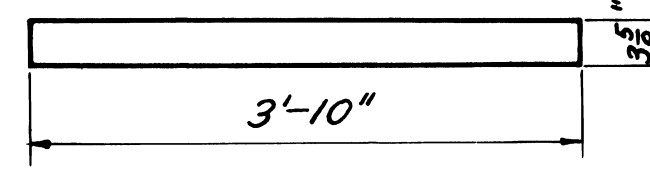
MARK	NO. REQ'D	LENGTH L
N1	6	12'-0"
N2	9	7'-8 3/4"
N3	6	6'-0"
N4	2	3'-2 1/2"
N5	4	4'-0"
N8	2	5'-8 3/4"
N9	3	2'-8 3/4"



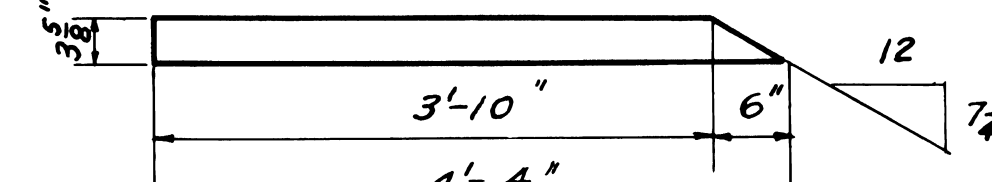
Cab Girder System
 N6 Make 2 - 2"x10"x12'-0" S4S
 N7 Make 2 - 2"x10"x7'-8 3/4" S4S



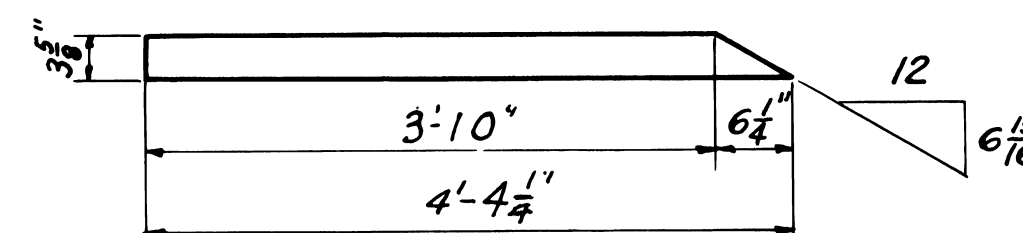
Cab Girder System
 N8 Make 2 - 2"x10"x14'-0" S4S
 N9 Make 2 - 2"x10"x6'-0" S4S



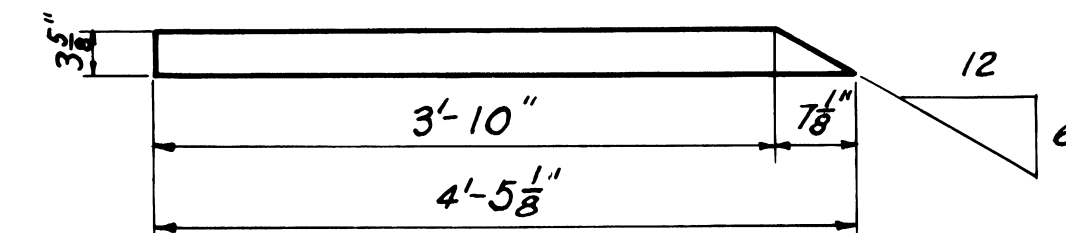
Hand Rail Post RP1
 3"x4"x3'-10" S4S
 Make 10
 Scale: 3/4"=1'-0"
 Also make 2 same pattern
 2"x4"x3'-10" S4S
 Mark RP1A.



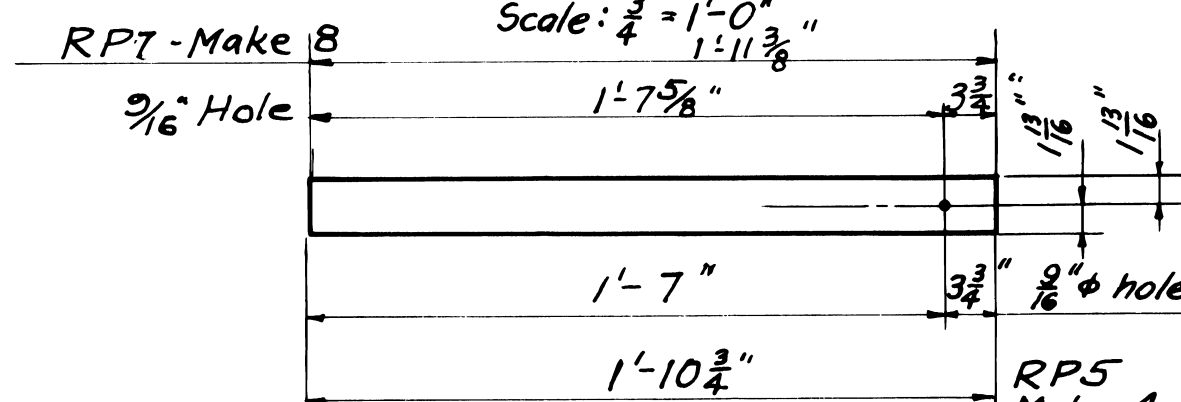
Hand Rail Post RP2
 3"x4"x4'-4" S4S
 Make 4
 Scale: 3/4"=1'-0"



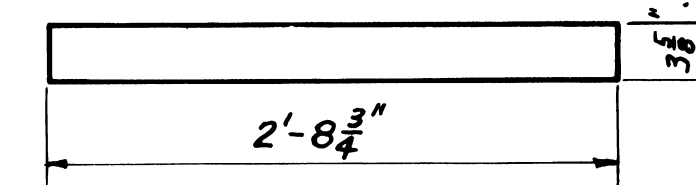
Hand Rail Post RP3
 3"x4"x4'-4 1/4" S4S
 Make 2
 Scale: 3/4"=1'-0"
 1'-11 3/8"



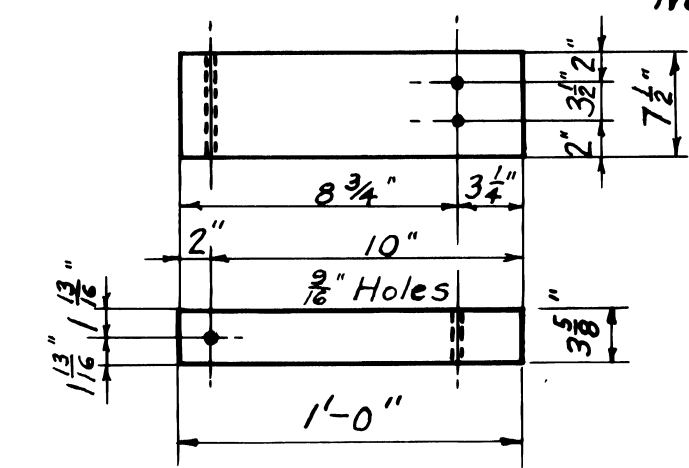
Hand Rail Post RP4
 3"x4"x4'-5 1/8" S4S
 Make 2
 Scale: 3/4"=1'-0"



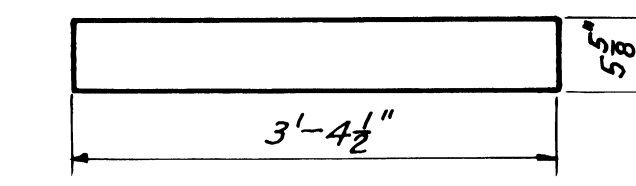
Hand Rail Posts RP5 & RP7
 2"x4" S4S



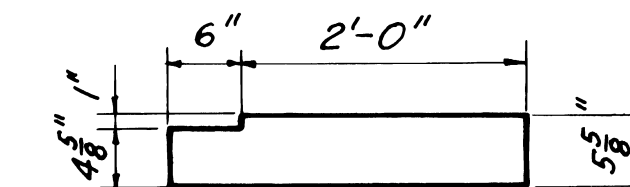
Floor Plank FP10
 2"x4"x2'-8 3/4" S4S
 Make 1
 No Scale



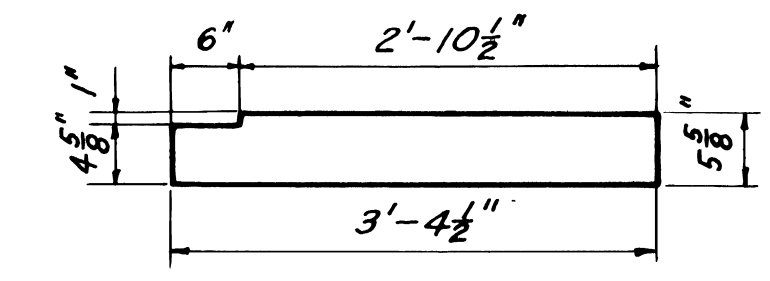
Landing Stringer Ties PT
 4"x8"x1'-0" S4S
 Make 10
 No Scale



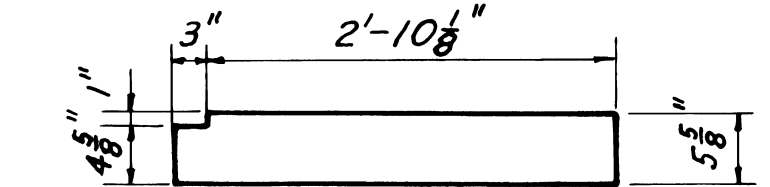
Floor Plank FP1
 2"x6"x3'-4 1/2" S4S
 Make 6
 Scale: 3/4"=1'-0"



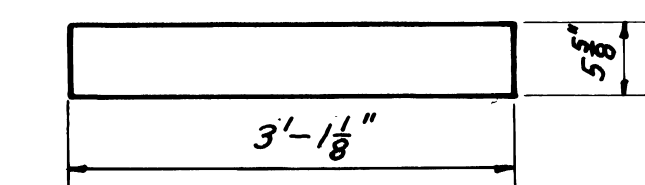
Floor Plank FP3
 2"x6"x2'-6" S4S
 Make 4
 Scale: 3/4"=1'-0"



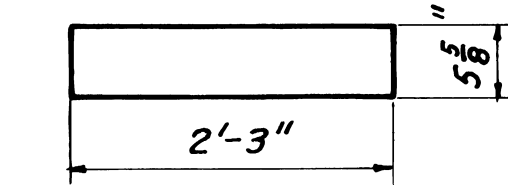
Floor Plank FP2
 2"x6"x3'-4 1/2" S4S
 Make 4
 Scale: 3/4"=1'-0"



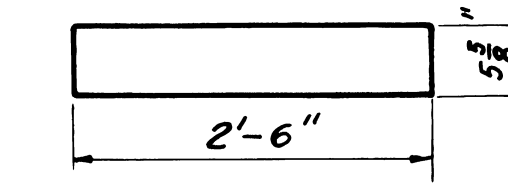
Floor Plank FP4
 2"x6"x3'-1 1/8" S4S
 Make 2
 Scale: 3/4"=1'-0"



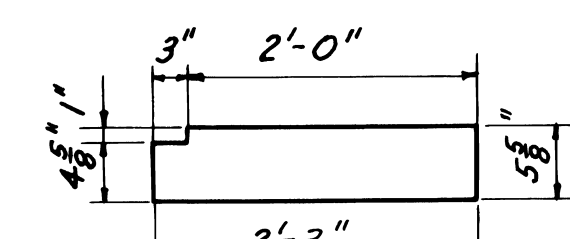
Floor Plank FP5
 2"x6"x3'-1 1/8" S4S
 Make 9
 Scale: 3/4"=1'-0"



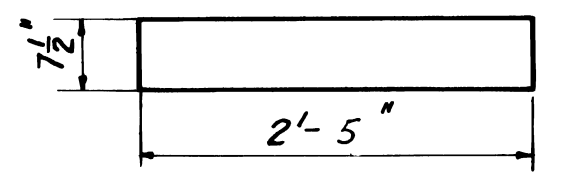
Floor Plank FP6
 2"x6"x2'-3" S4S
 Make 5
 Scale: 3/4"=1'-0"



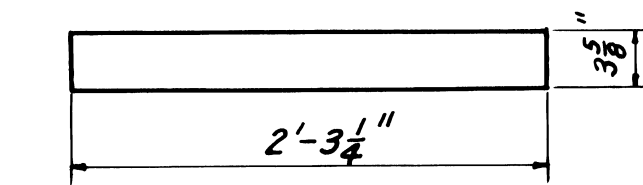
Floor Plank FP7
 2"x6"x2'-6" S4S
 Make 3
 Scale: 3/4"=1'-0"



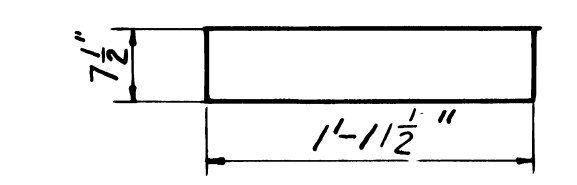
Floor Plank FP8
 2"x6"x2'-3" S4S
 Make 1
 Scale: 3/4"=1'-0"



Stair Tread ST2
 2"x8"x2'-5" S4S
 Make 17
 No Scale



Floor Plank FP9
 2"x4"x2'-3 1/2" S4S
 Make 3
 No Scale



Stair Tread ST1
 2"x8"x1'-11 1/2" S4S
 Make 48
 No Scale

Revised 8-13-48 by B.B.P.
 Revised 2-12-41 by W.D.S.

U.S. DEPARTMENT OF AGRICULTURE
 FOREST SERVICE

REGION SIX J. FRANKLAND REGIONAL ENGINEER

STANDARD LOOKOUT TOWER
 53-FOOT TYPE CT-2
 SHOP DETAILS

DESIGNED B.C.O. DRAWN R.W.S. TRACED R.W.S.
 SCALE AS NOTED CHECKED W.D.S.
 APPROVED DATE APRIL 1953
 ASSISTANT REGIONAL FORESTER

TREATED MATERIAL						
Item	No	Mark	Size	Length	DESCRIPTION	FBM
1	2	P1A	8"x8"	12'-0"	Top Posts	128
2	2	P1B	"	"	" "	128
3	2	P2A	"	14'-9"	Intermediate Posts	171
4	2	P2B	"	"	" "	171
5	2	P3A	"	"	" "	171
6	2	P3B	"	"	" "	171
7	2	P4A	"	19'-10"	Bottom Posts	213
8	2	P4B	8"x8"	"	" "	213
9	24	SP1	3"x8"	3'-0"	Splice Plates	144
10	4	H1	2"x6"	13'-5"	Horizontals	56
11	4	H1A	3"x10"	20'-0"	"	200
12	14	H2	3"x6"	13'-5"	"	294
13	2	H2A	"	14'-2"	"	48
14	8	H3	"	13'-5"	"	168
15	8	H4	"	13'-5"	"	168
16	4	D1 ^{3/4}	3"x6"	17'-9 ^{1/2} "	Diagonal	108
17	28	D2 ^{3/4}	2"x6"	17'-9 ^{1/2} "	"	504
18	16	D3 ^{3/4}	2"x6"	8'-8"	"	144
19	20	FB1	6"x8"	1'-0"	Fill Block	80
20	20	FB2	"	1'-0"	" "	80
21	4	FB3	6"x8"	2'-6"	" "	40
22	2	S1 ^{3/4}	3"x8"	16'-0"	Stair Stringer	64
23	2	S2 ^{3/4}	"	15'-3 ^{1/2} "	" "	64
24	4	S3 ^{3/4}	"	15'-5"	" "	128
25	3	LS1	"	13'-11"	Landing Stringer (Rgh)	84
26	2	LS2	3"x8"	17'-0"	" (Rgh.)	72
27	6	N1	2"x10"	12'-0"	Cab Girders	120
28	9	N2	"	7'-8 ^{3/4} "	" "	120
29	6	N3	"	6'-0"	" "	60
30	2	N4	"	3'-2 ^{1/2} "	" "	12
31	4	N5	"	4'-0"	" "	27
32	2	N6	"	12'-0"	" "	40
33	2	N7	"	7'-8 ^{3/4} "	" "	27
34	2	N8	"	5'-8 ^{3/8} "	" "	20
35	3	N9	"	2'-8 ^{3/4} "	" "	15
36	2	N10	"	6'-0"	" "	20
37	2	N11	2"x10"	14'-0"	" "	47
38	48	ST1	2"x8"	1'-11 ^{1/2} "	Stair Treads	128
39	17	ST2	2"x8"	2'-5"	" "	57
40	10	PT	4"x8"	1'-0"	Platform Ties	27
41	6	FPI	2"x6"	3'-4 ^{1/2} "	Floor Plank	21
42	4	FP2	"	3'-4 ^{1/2} "	" "	14
43	4	FP3	"	2'-6"	" "	10
44	2	FP4	"	3'-1 ^{1/8} "	" "	7
45	9	FP5	"	3'-1 ^{1/8} "	" "	30
46	5	FP6	"	2'-3"	" "	12
47	3	FP7	"	2'-6"	" "	8
48	1	FP8	2"x6"	2'-3"	" "	3
49	3	FP9	2"x4"	2'-3 ^{1/4} "	" "	5
50	1	FP10	"	2'-8 ^{3/4} "	" "	2
51	10	RPI	3"x4"	3'-10"	Hand Rail Posts	40
52	4	RP2	"	4'-4"	" "	20
53	2	RP3	"	4'-4 ^{1/2} "	" "	10
54	2	RP4	3"x4"	4'-5 ^{1/2} "	" "	10
55	4	RP5	2"x4"	1'-10 ^{3/4} "	" "	5
56	2	RP6	"	7'-11"	" "	11
57	2	SB1	"	7'-3 ^{1/8} "	Stair Braces	11
58	6	SB2	2"x4"	6'-10 ^{1/2} "	" "	28
59	2	RPIA	2"x4"	3'-10"	Hand Rail Posts	5
60	8	RP7	2"x4"	1'-11 ^{3/8} "	" "	11

TOTAL FBM. 4795

UNTREATED MATERIAL						
Item	No	Mark	Size	Length	DESCRIPTION	FBM
1	1		2"x4"	8'-0"	Hand Rails	6
2	2		"	9'-0"	" "	12
3	4		"	11'-0"	" "	30
4	2		"	12'-0"	" "	16
5	1		"	14'-0"	" "	10
6	6		"	16'-0"	" "	64
Total FBM						138

All material shall be furnished S4S with the exception of items 25 and 26 (LS1 and LS2) which shall be furnished Rough

As required by specifications, material for Posts is listed 2'-0" greater than shop detail length to eliminate seasoning end checks

Revised February 1941 by WWD

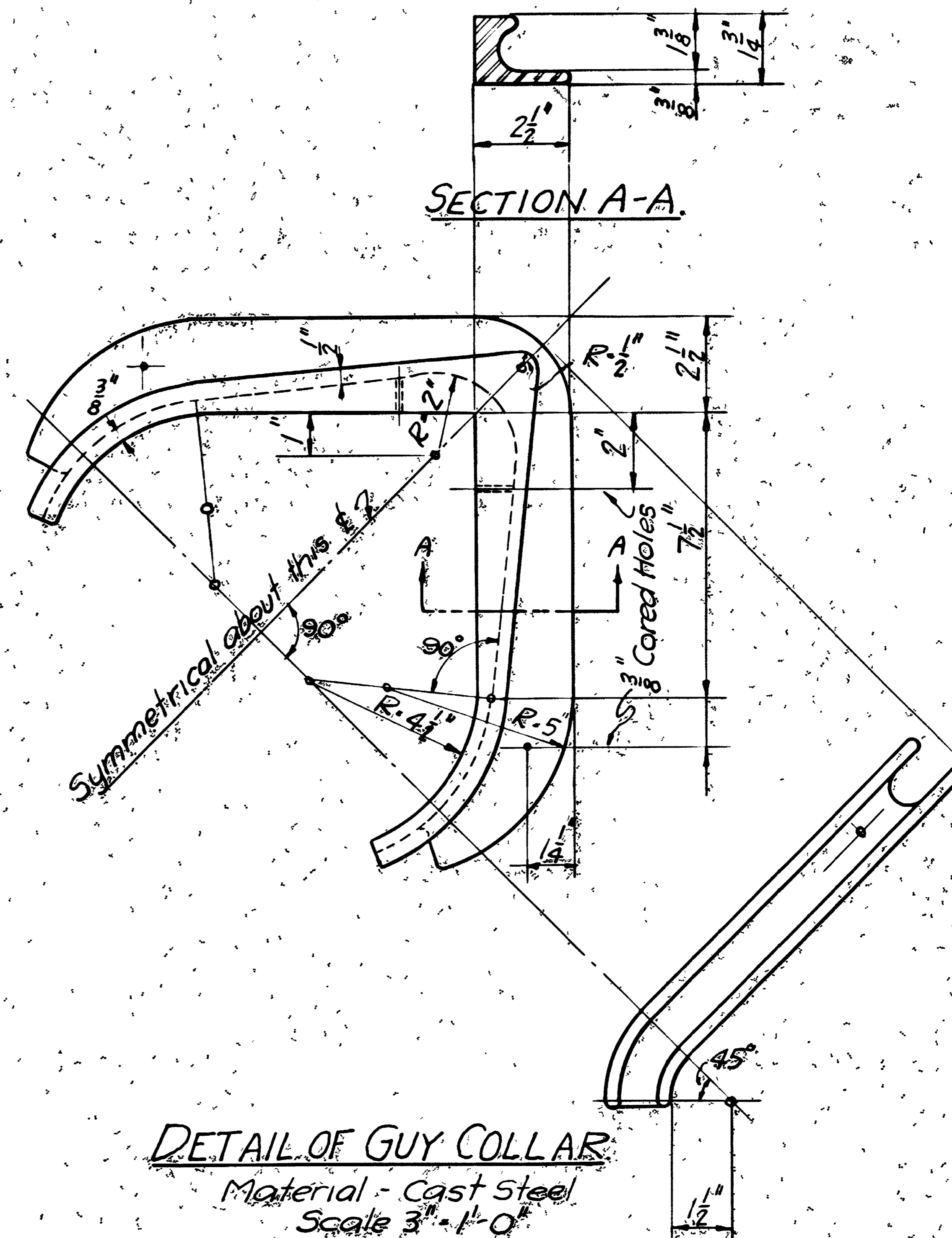
U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

REGION SIX JAMES FRANKLAND, REGIONAL ENGINEER

STANDARD LOOKOUT TOWER
53-FOOT TYPE CT-2
BILL OF LUMBER

DESIGNED B.C.O. DRAWN B.C.O. TRACED B.C.O.
SCALE _____ CHECKED _____
APPROVED *J. Frankland* DATE APRIL 28, 1938
ASSISTANT REGIONAL FORESTER

BILL OF IRON					
No.	SIZE	LENGTH	DESCRIPTION	LOCATION	WEIGHT
44	$\frac{3}{4}$ "	11"	Machine Bolts	Diagonal ends D2	78
53	"	11 $\frac{1}{2}$ "	" "	Post Splices	97
48	"	12 $\frac{1}{2}$ "	" "	Diagonals D2 & D3 H1	93
90	"	14 $\frac{1}{2}$ "	" "	D1; H-1A, 2, 2A, 3 & 4; N to P	197
458	$\frac{3}{4}$ "		Malleable C.I. Washers		151
211	2 $\frac{1}{2}$ "		"Teco" or similar Split Rings		58
132	4"		" " " " " "		88
3	$\frac{1}{2}$ "	2'-4 $\frac{1}{2}$ "	Machine Bolts	Stairs - bottom & interim panels	5
6	"	2'-8"	" "	" " " "	11
1	"	2'-10"	" "	Stairs - top panel	2
1	"	3'-1 $\frac{1}{2}$ "	" "	" " " "	2
150	$\frac{1}{2}$ "		Cut Washers		6
	$\frac{3}{4}$ "	6x19	Plow Steel Wire Rope	Length to suit topography	✓
16	$\frac{3}{4}$ "		Standard Wire Rope Clips		15
4	$\frac{3}{4}$ "		Bridge Bowls		40
4			Cast Steel Guy Collars	See detail	80
	10 ^d		Common Nails		7
	20 ^d		" "		25
	40 ^d		" "		20
30	$\frac{1}{2}$ "	7'	Machine Bolts	Hand Rail to Stringers	15
26	"	8'	" "	" " " "	14
22	"	8 $\frac{1}{2}$ "	" "	Platform Stringer Ties	12
5	"	10	" "	Hand Rail Posts to Strgrs	3
11	"	15"	" "	Platform Stringer Ties	10
33	$\frac{3}{8}$ "	5'	Carriage Bolts	Hand Rail	7
22	"	6'	" "	" "	5
6	"	8'	" "	" "	2
65	"		Cut Washers for $\frac{3}{8}$ " Bolts		1
					1044



NOTE
This list includes an approximate 10% average of bolts, washers, split rings and nails.

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE

REGION SIX JAMES FRANKLAND, REGIONAL ENGINEER

STANDARD LOOKOUT TOWER
53-FOOT TYPE CT-2
BILL OF HARDWARE

DESIGNED B.C.O. DRAWN B.C.O. TRACED B.C.O.
SCALE _____ CHECKED *WJ*
APPROVED *Frankland* DATE APRIL 28 1938
ASSISTANT REGIONAL FORESTER

Quantity of 14 $\frac{1}{2}$ " bolts
changed 12-6-39 by A.S.