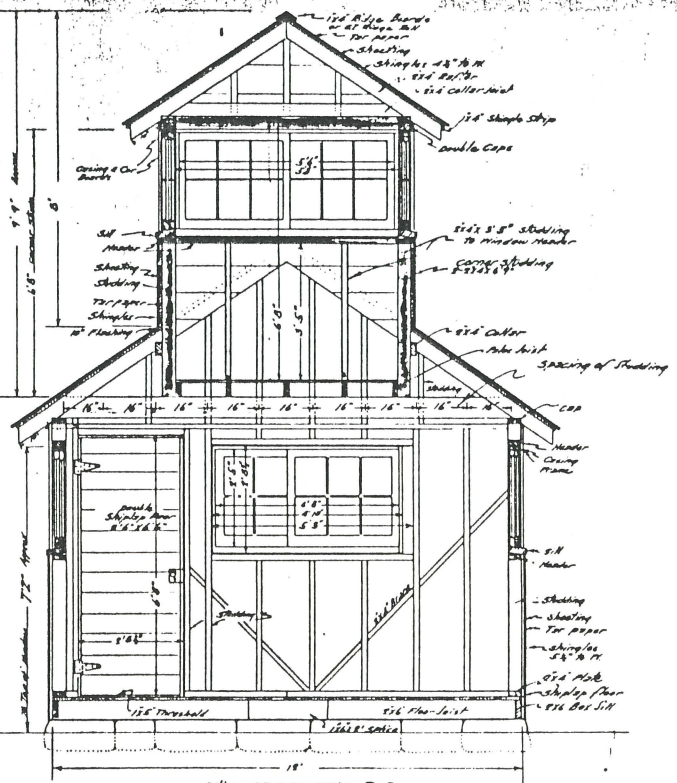
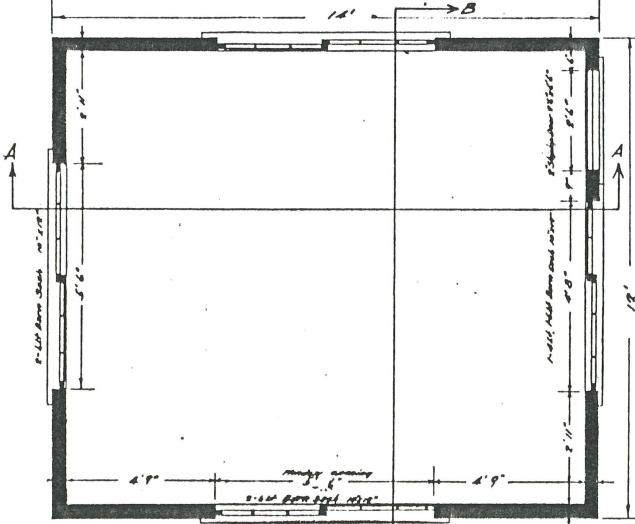


SIDE CROSS SEC. A-A



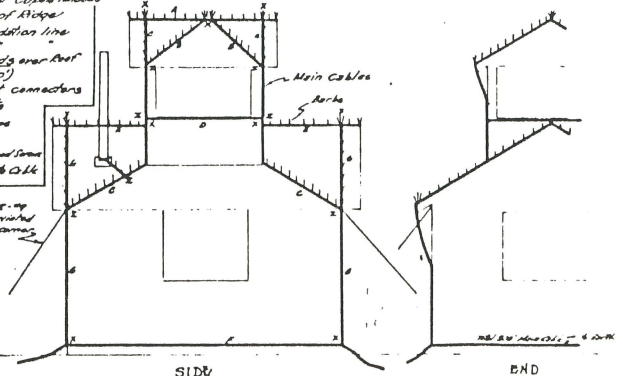
END CROSS SEC. B-B  
scale 1/4" = 1'



FLOOR PLAN

- LIGHTNING PROTECTION MATERIAL**
- Use #6 GI Wire or Coppermold or
  - 6" 7 strand cable as desired
  - A 1 8' cupola ridge
  - B 2 18' Roof diagonal
  - C 4 16' Eave ribs that are cupola
  - D 4 6 1/2" Bolt under Cupola rim joist
  - E 2 5' Main Roof Ridge
  - F 2 18' Bolt foundation line
  - G 2 18' Bolt Main Level over Roof
  - Total 77 1/2' (Gross Feet)
  - X 18 corner Bracket connectors
  - 11 8 1/2" x 1" steel bolts
  - 11 9 Bolt guy clamps
  - 100 3/8" GI Pipe straps
  - 360 3/8" x 3/8" Bolt head and form
  - Material to hard stone pipe to cable

Anchors, 5" x 1/2" all over. Trunked at each corner



LIGHTNING PROTECTION DIAGRAM

FRAME LOOKOUT HOUSE  
PLAN 1-2

BILL OF MATERIAL					MATERIAL ASSUMED FOR ESTIMATE AND ORDER						
LUMBER					CLASS MATERIAL						
No. Items	No. Pieces	Dimensions	Use	Converted to Yard Dimensions No. Pieces Dimensions	No. Pieces	Size		Cedar	Board Feet	Unit Price	Cost
1	4	2" x 6" - 7'	Cupola Joist		21	2" x 6" - 12'	#1 Dm. S4S Fir & Larch	#1 Dm. S4S	258		
2	4	2" x 6" - 5'			2	2" x 6" - 14'			28		
3	84	2" x 6" - 6' 10"	Floor Joist	17	2" x 6" - 12'				10		
4	10	2" x 6" - 0"	Ceiling		16	2" x 4" - 14'			122		
5	4	2" x 6" - 7'	Box sills	2	2" x 6" - 14'				56		
6	1	2" x 6" - 8' 6"	Ladder Clear Mt.	1	2" x 6" - 10'				43		
7	20	2" x 4" - 6' 8"	Studding - Main side walls	14	2" x 4" - 14'				65		
8	24	2" x 4" - 6' 6"	end	8	2" x 4" - 14'				21		
9	4	2" x 4" - 3' 4"	gable		2E	1" x 8" - 12'	#2 Com.		200		
10	4	2" x 4" - 2' 10"			110	1" x 8" - 12'		#2 Com.	1200		
11	4	2" x 4" - 2' 4"			2	1" x 6" - 10'	Select Com.	#1 & #2 Com.	10		
12	4	2" x 4" - 1' 8"			11	1" x 4" - 14'	#1 Dm.		65		
13	10	2" x 4" - 3' 6"	Cupola under windows	2	2" x 4" - 14'				8		
14	8	2" x 4" - 6' 9"	corner posts	4	2" x 4" - 14'				7		
15	2	2" x 4" - 2'	gables		9	1" x 4" - 14'			42		
16	4	2" x 4" - 1'			7	1" x 4" - 16'			28		
17	5	2" x 4" - 8' 4"	Floor Joist cupola	3	2" x 4" - 14'				5		
18	4	2" x 4" - 8' 4"	Collar over plates		2	1" x 2" - 16'			8		
19	4	2" x 4" - 8' 8"	False sills windows		2	1" x 2" - 14'			5		
20	8	2" x 4" - 6' 4"	Plates	2	2" x 4" - 12'						
21	2	2" x 4" - 6' 4"	Collar main short rafter support	6	2" x 4" - 14'						
22	12	2" x 4" - 8' 6"	Rafters long (out rafters along)		74	1E Part Stop-10'					
23	6	2" x 4" - 4' 10"	short	1E	2" x 4" - 14'						
24	10	2" x 4" - 5'	Cupola	2	2" x 4" - 10'						
25	4	2" x 4" - 6' 6"	Headers window sides and rear	3	2" x 4" - 14'						
26	2	2" x 4" - 5' 2"	front	1	2" x 4" - 12'						
27	3	2" x 4" - 3'	Door header and window stud	1	2" x 4" - 10'						
28	8	2" x 4" - 6'	Plates, front and rear	4	2" x 4" - 12'						
29	8	2" x 4" - 7'	sides	4	2" x 4" - 14'						
30	24	1" x 8" - 4'	Splices Joists	3	1" x 6" - 12'						
31	74	1" x 8" - 4'	Shiplap floor cupola JE								
32	74	1" x 8" - 4'									
33	169	1" x 8" - 4'	wall sheathing								
34	16	1" x 8" - 4'	Cupola								
35	2	1" x 8" - 6' 6"	gables								
36	2	1" x 8" - 5'									
37	2	1" x 8" - 4' 6"									
38	2	1" x 8" - 3'									
39	56	1" x 8" - 4' 6"	roof sheathing, long rafters								
40	32	1" x 8" - 3' 6"	short								
41	32	1" x 8" - 3'	Cupola								
42	8	1" x 8" - 6' 6"	Door, vertical								
43	11	1" x 8" - 2' 6"	horizontal								
44	36	1" x 8" - 6"	shutters, window								
45	5	1" x 8" - 4'		155	1" x 8" - 12'						
46	7	2" x 8" - 6' 6"	Window sills	3	2" x 8" - 14'						
47	1	2" x 8" - 5'	Door								
48	1	2" x 8" - 3' 6"	Door	1	2" x 8" - 16'						
49	7	1" x 6" - 6'	Window frames, top								
50	1	1" x 6" - 4' 6"	sides	4	1" x 6" - 12'						
51	14	1" x 6" - 2' 8"		1	1" x 6" - 16'						
52	2	1" x 6" - 7'	Door	3	1" x 6" - 12'						
53	1	1" x 6" - 3'	top	1	1" x 1" - 14'						
54	28	1" x 4" - 2'	Fillers and plate splices	4	1" x 4" - 14'						
55	4	1" x 4" - 6' 8"	Window casing top cupola								
56	3	1" x 4" - 6' 6"	main								
57	1	1" x 4" - 5'									
58	1	1" x 4" - 3' 6"	Door	4	1" x 4" - 14'						
59	8	1" x 6" - 2' 6"	Window sides cupola	2	1" x 6" - 10'						
60	8	1" x 4" - 2' 6"	main	2	1" x 4" - 10'						
61	2	1" x 4" - 7'	Door	1	1" x 4" - 14'						
62	8	1" x 4" - 7' 6"	Corner boards	4	1" x 4" - 16'						
63	8	1" x 4" - 2'	Cupola	1	1" x 4" - 16'						
64	4	1" x 4" - 2'	Ridge								
65	2	1" x 4" - 3' 6"	Cupola	4	1" x 4" - 16'						
66	5	1" x 2" - 5'	Shingle strips	4	1" x 2" - 10'						
67	4	1" x 2" - 8'	main gables	2	1" x 2" - 16'						
68	2	1" x 2" - 6' 6"	Door stop	2	1" x 2" - 10'						
69	1	1" x 2" - 3'		2	1" x 2" - 14'						
70	32	1" x 2" - 2' 6"	Parting stop	8	10'						
71	4	1" x 2" - 1'		4	12'						
72	88	1" x 2" - 1'		12	2'						
73	30	1" x 8" - 4'	Shiplap - Table & shelving	10	1" x 8" - 12'						

NOTE: Approximate weight using pine lumber 6000 lbs. cedar 4600 "

SPECIFICATIONS

Framing: All dimension material S4S #1 dimension. Floor joist 2x6-12, spaced 16", spliced at centers with 1x6-2' well nailed. Box sills 2x6-14, cut 7' and spliced between joist with 1x6-2' well nailed. Floor 1x8 shiplap laid as false floor, 2x4 bottom and top plates, spliced with 1x4-2' at centers. Studding 2x4, set 16" centers. Ceiling joist 2x6-12 spliced at center with 2-1x6-2' well nailed. Where logs for cupola post bearing joist are not available use 2-2x6-12', cut 7 and 5 and nail together for each joist. Window and door openings should be framed in as shown in the plans, the cut-outs in the studding being used for the corner bracing shown in the detail. Cupola posts 2-2x4-6' 8" nailed together, cap plates 2-2x4 laid flat. Rafters 2x4 spaced according to detail. Wall and roof sheathing 1x8 shiplap covered with tar paper and shingles. Wall shingles laid 5/8" to weather and roof shingles 4/8" to weather. Nail close to bottom line of next tier of shingles to get a tight job on account of wind. When corner boards are put on, a strip of tar paper should be laid under them so as to get a tight corner. In setting the window and door frames, strips of tar paper should be put in all around the opening to assure an air-tight joint. Care should be used in putting on the paper and tin flashing around the cupola so as to get a water-tight joint. Plenty of lap at all joints is essential.

In cutting up the dimension material it should be remembered that a 2x4 S4S is 1-5/8" x 3-5/8" actual measurement and due allowance made where the plan shows 2" material.

The ladder will be made from a 2x6-8' 6" ripped 2" to 4" for the uprights, and fastened with two 8" T hinges. For nailing the shingles use 2d coated shingle nails so that points will not project through sheathing.

Window casing should leave a margin of one-half inch on the jamb for the shutters to fit in. Shutters should be made up long and set in place, marked, and then cut to fit.

The door will be built up of two thicknesses of shiplap.

The outside trim should have at least one coat of paint as soon as building is completed. The inside walls may be painted at some time if that is deemed desirable. The shingles should not be either stained or painted.

The building may be guyed at each corner as soon as completed, using two strands of #9 wire twisted until tight. Guying is not considered necessary, however.

Stage Construction: This building lends itself readily to the advantages of stage construction. Material can be purchased in the fall and stored at the ranger station where it can be cut at such times as convenient. It may be cut and cored well in advance of the field season. The building can be set on rock walls to start with and the rubble wall laid up as time is available for it. At the end of two or three years a top floor should be put in, with tar paper between the new and old floors.

Cost of Materials: The materials for the construction of this building, exclusive of lightning protection should cost at the most of \$150.00 anywhere in the District west of the continental divide, using the grades specified in the bill of material under "Pondosa Pine." By using cedar this estimate can be reduced to some extent. In those communities where mill yards are accessible this can be further reduced for either class of material by purchasing "short common" or old-length material. This can be done to good advantage, since all the material used cuts into short lengths. Savings can be made by using fir or larch, but the use of either increases the peaking weight considerably. Larch is not desirable on account of its tendency to split. Spruce or white fir may be used where available.

Well-planned stage construction, combined with close scrutiny of possible savings in grades of material, should result in a well-built, serviceable, lookout house at very moderate cost. Additional sleeping or storage space may be secured by flooring the gable ends.

Lightning Protection: Lightning protection should be installed as shown in the small cut, using 1/2" stranded cable, #4 galvanized iron wire, or the equivalent for the main lead cables. Short points, not over two inches long, at intervals of six inches, should be twisted into and soldered to the main cables.

FRAME LOOKOUT HOUSE  
PLAN L-2  
Sheet 3 of 3