

SPECIFICATIONS

Unless otherwise specified, all cast-in-place concrete is to be at least 3000 psi @ 28 days, 6% air entrained.

All reinforcing steel to be at least 40,000 psi deformed bars; provide 2" concrete cover over reinforcing steel.

All exposed steel to be galvanized or painted to resist corrosion from moisture and manure gases.

All untreated framing lumber is No. 2 (or better), S-P-F species group, unless otherwise specified.

All wood indicated 'pressure-treated' is CCA pressure-treated to a net retention of 0.4 lb/ft³ (ground contact specification, CSA-080 Wood Preservation).

All nails exposed to treated wood, humid atmosphere or weather to be hot-dip galvanized.

This plan is designed to meet the requirements of the Canadian Farm Building Code.

Notes thus marked indicate where this plan gives structural choices to be selected to meet local climatic loads (wind, snow), soil bearing capacity and other local conditions. The plan user must ensure that these requirements are met. Consult an engineer if you are not familiar with the details required.


ONE SET OF DRAWINGS AND LEAFLETS SHOULD INCLUDE:

CPS no.	sheet no.	Title
8163	-1-	Open front clear span pole barn
8163	-2-	Plan view and section
8163	-3-	Structural details
8163	-4-	Continuous plate beams

AND LEAFLETS

8163	Open front clear span pole barn
9102	Truss erection and bracing
9301	Roof purlins

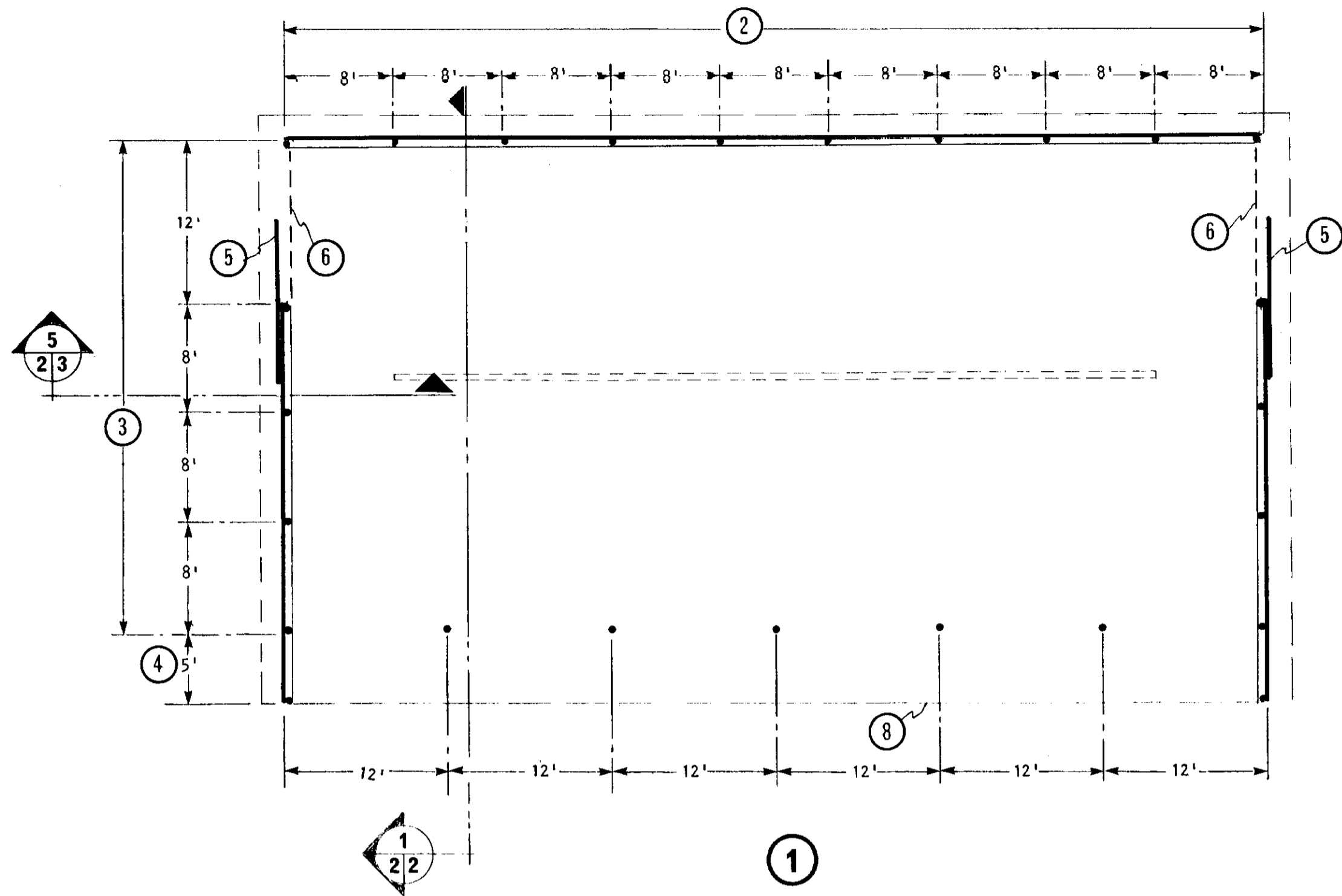
SYN	REVISIONS	CHECKED	DATE	APPROVED
	REVISED & RE-ISSUED	H.A.J.	87-09	J.E.T.
	revised and re-issued		79-07	J.E.T.



OPEN FRONT
CLEAR SPAN
POLE BARN

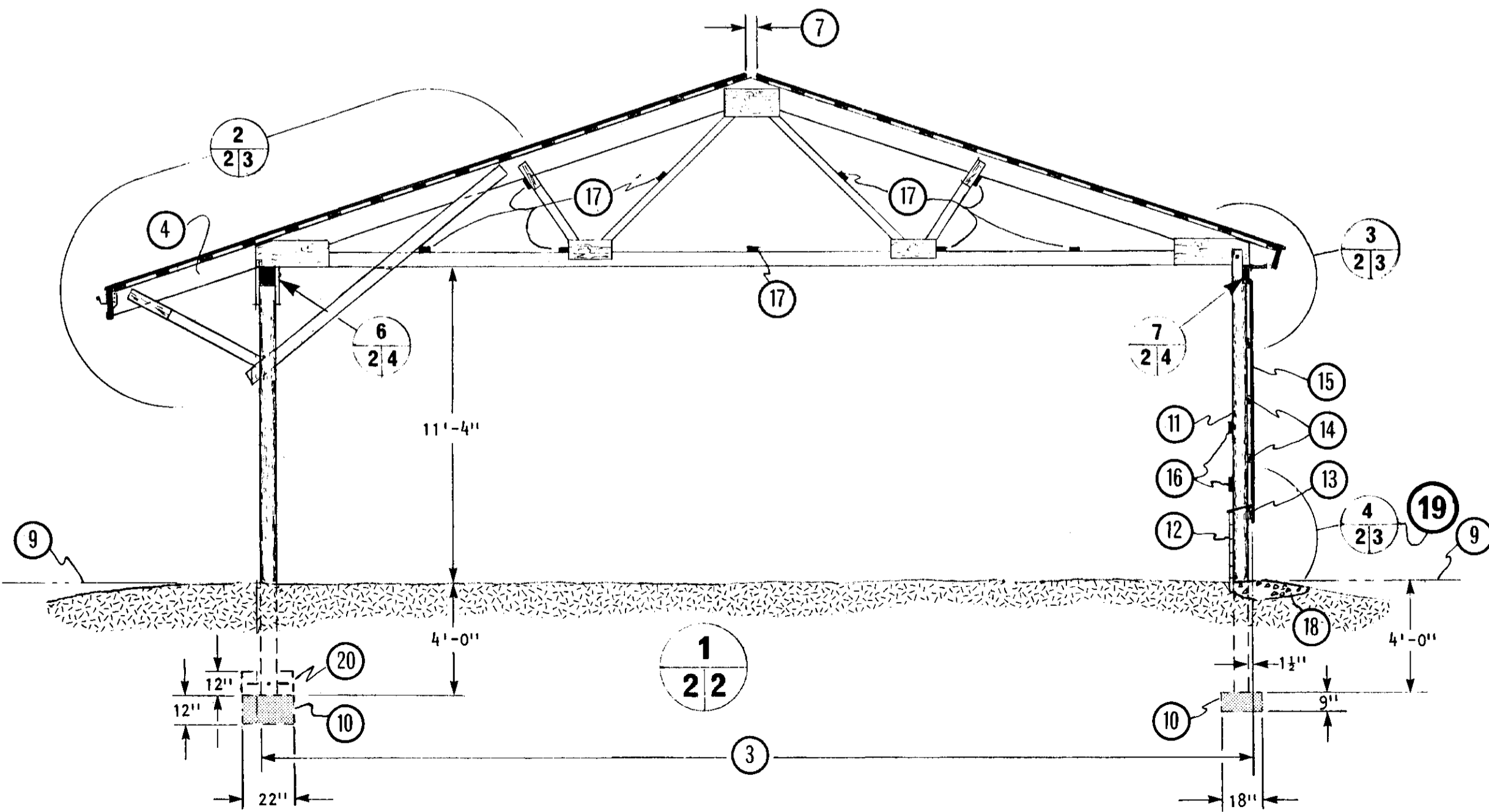
(not to scale)

DESIGNED <i>J.E.T.</i>	DATE OCT 76	PLAN 8163
DRAWN <i>Leo BLAIS</i>	REVISED 87-09	
TRACED	DETAIL NUMBER A	SHEET 1 OF 4
CHECKED <i>H.A.J.</i>	ORIGINALS ON SHEET B DRAWN ON SHEET C	

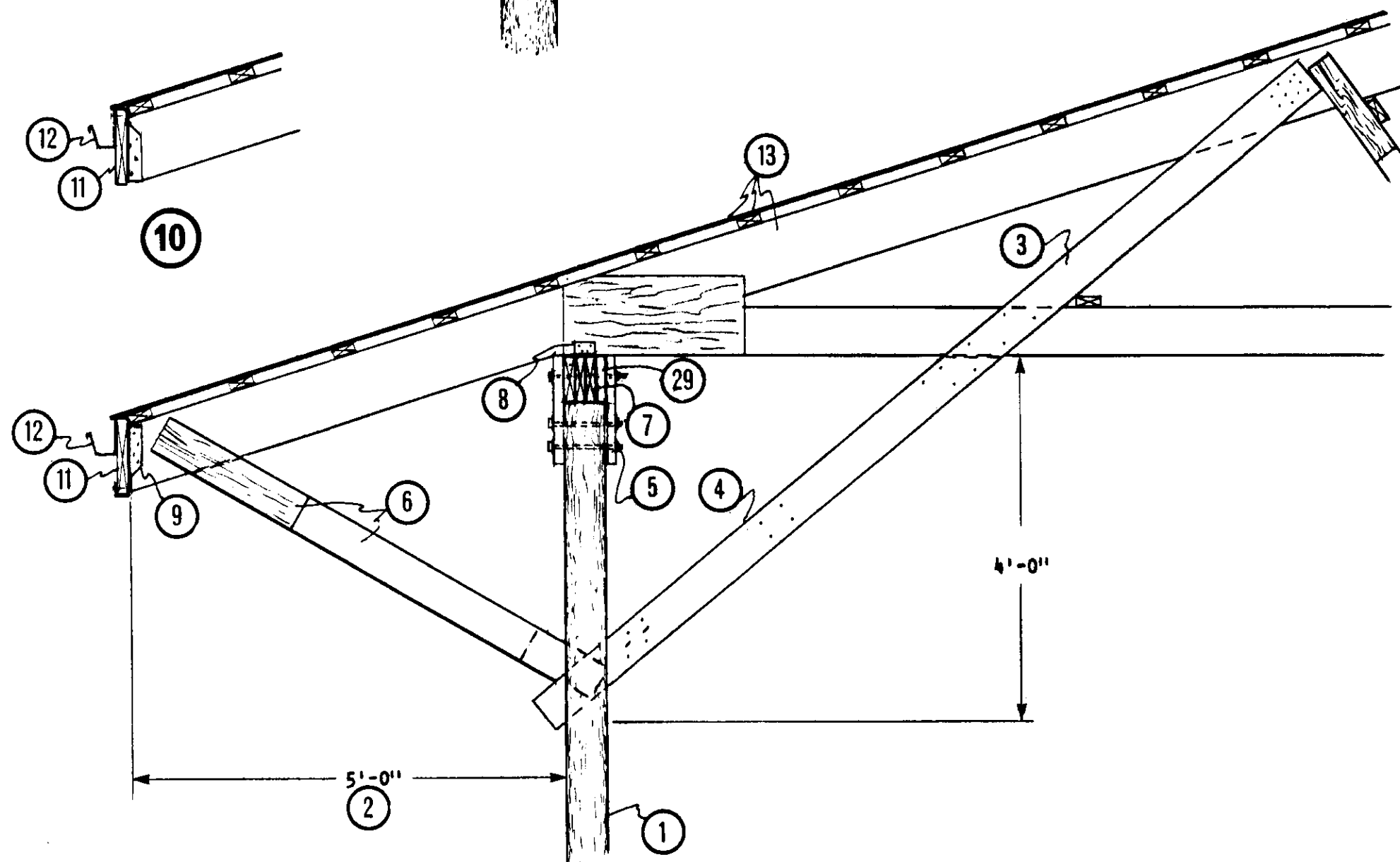
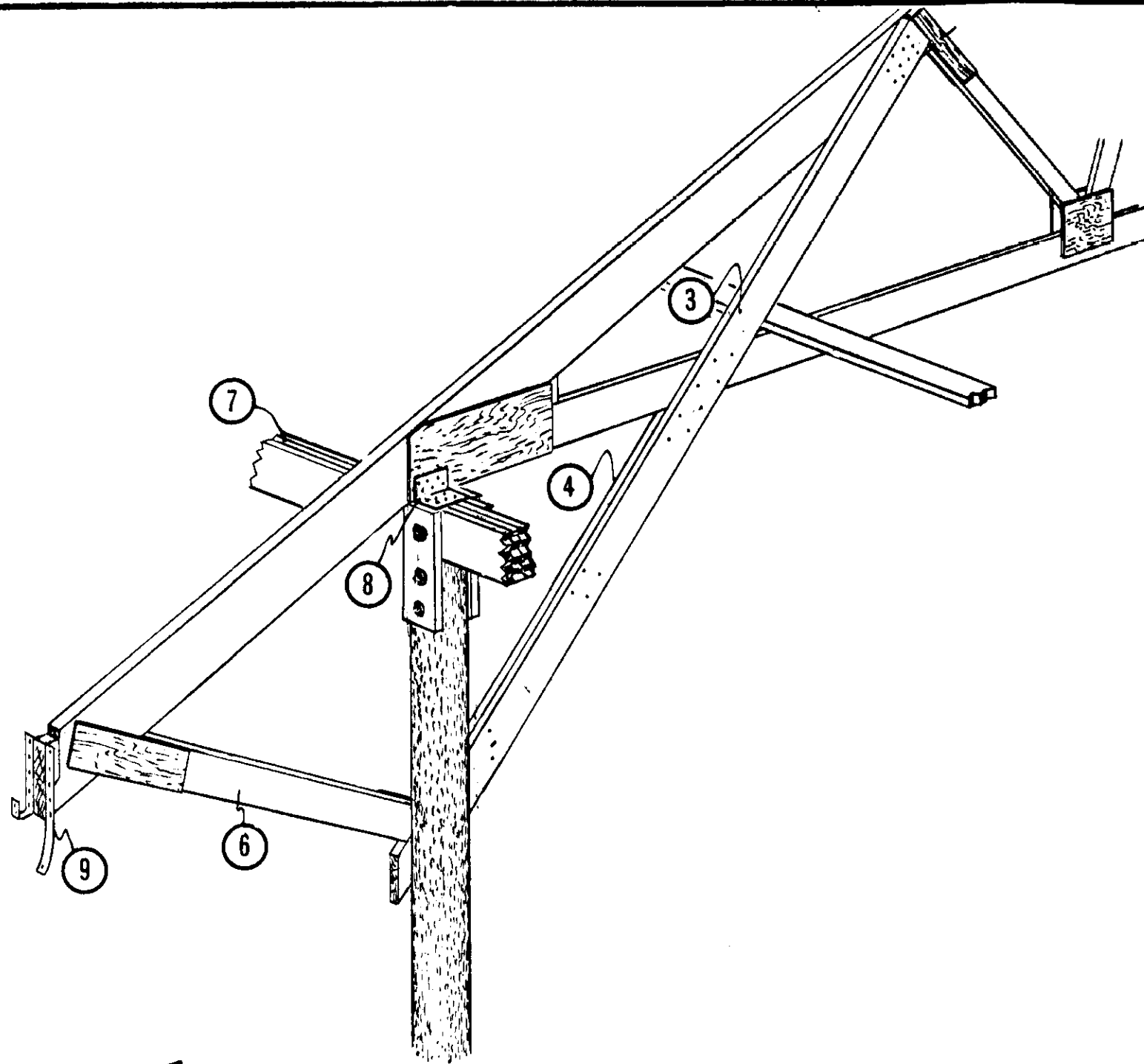


- 1 plan view, dimensions variable see ② & ③
- 2 multiples of 24'; eg. 48', 72', 96' etc.
- 3 variable, 28', 32', 36' or 40'
- 4 substitute upper chord 4' longer than shown in truss plan
- 5 12'x 10'-8" sliding door
- 6 12'x 4' lift-off gate, adjust vertically for manure pack
- 7 ridge vent slot, stops at truss 8'-0" from each end of building; slot to be 1" wide for each 10' of building width, trusses soaked with wood preservative where exposed at ridge
- 8 roof line above
- 9 datum line, floor level
- 10 footing, top to be levelled at 4'-0" below datum line ⑨
capacity of round footing on 4000 psf soil

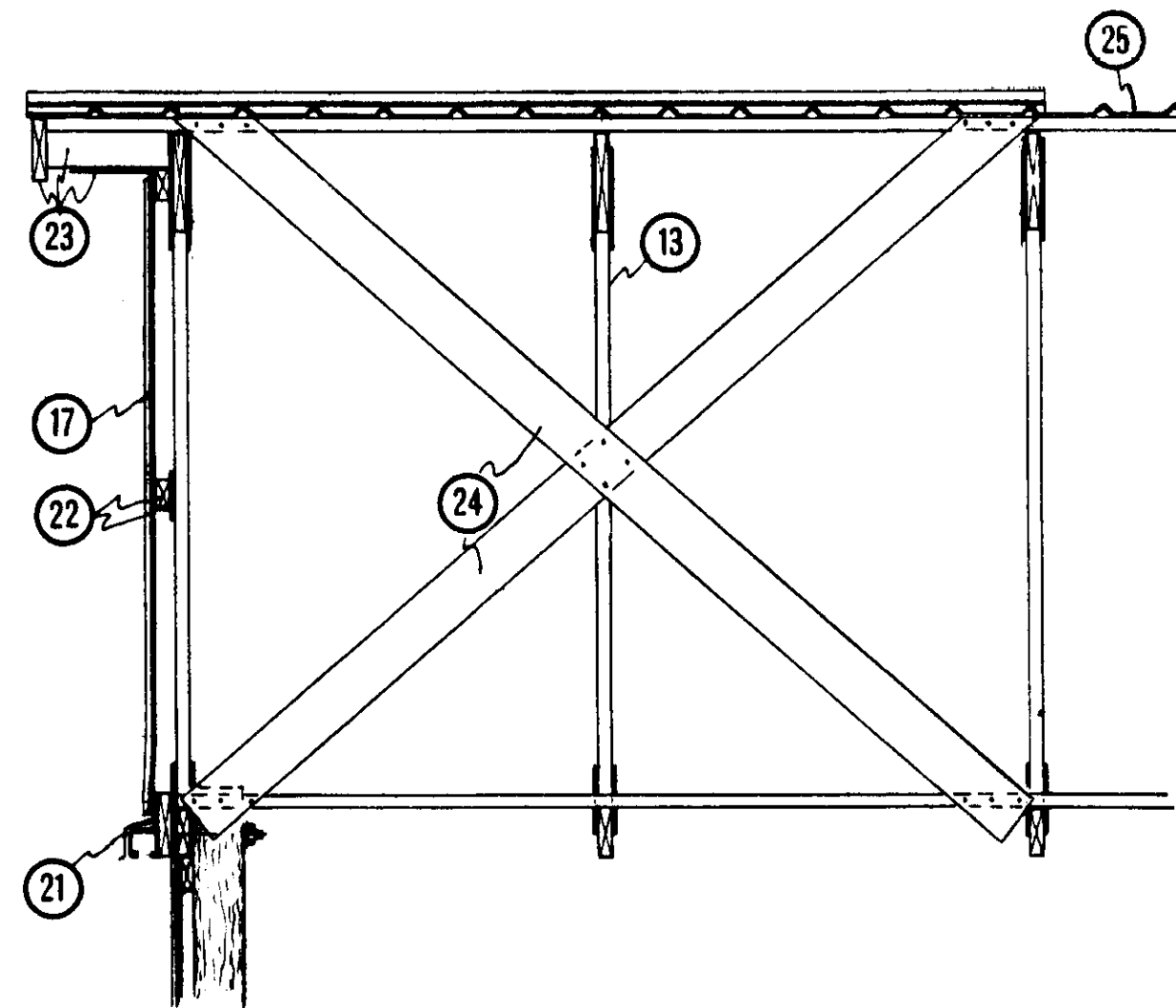
truss span ③ (ft)	28	32	36	40
roof load (psf)	60	53	47	42
- 11 16'-0" round or sawn pole, see ③ sheet 4 for size; measure from butt and notch pole tops for plates before erecting
- 12 6 courses of 2"x 6"x 16'-0" T. & G. pressure treated planking; stagger end joints 8'-0" at poles, nail each plank to pole with 2-5" spiral nails, top plank bevelled for cap strip
- 13 2"x 6" nailing girt, top bevelled for cap strip
- 14 2"x 4" nailing girts @ 24" o.c.
- 15 exterior siding, (galvanized steel, 3/8" exterior plywood, Aspenite, 1" vertical rough-sawn boards, etc.)
- 16 2"x 6" @ 24" o.c., midway between nailing girts ⑭
- 17 2" x 4" truss bracing continuous, not over 8'-0" oc, see truss plan and leaflet 9102 for details
- 18 3'-0" x 4" coarse gravel splashpad
- 19 for alternate reinforced concrete infill panel see ④/②/③
- 20 2-#5 x 1'-8" rebars through pole, at least 6" from ends, concrete anchor prevents wind uplift



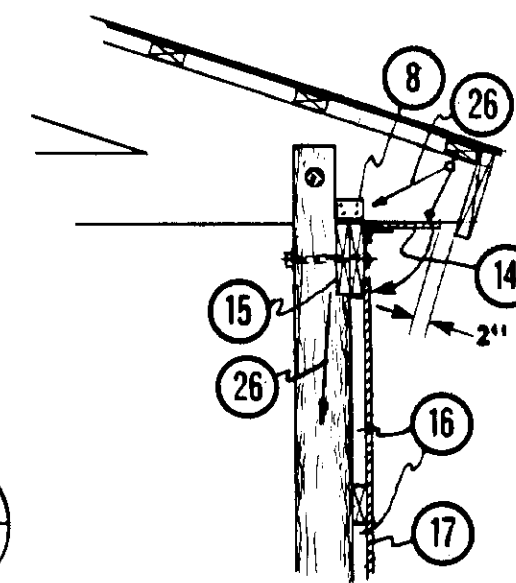
revised and re-issued		79-07	JET
SYM	REVISIONS	CHECKED	DATE APPROVED
		PLAN VIEW & SECTION	
		(not to scale)	
DESIGNED JET	DATE OCT 76	PLAN	
DRAWN LEO BLAIS	REVISED 79-07	8163	
TRACED	DETAIL NUMBER A	SHEET 2 OF 4	
CHECKED H.A.J.	ORIGINATES ON SHEET B		
	DRAWN ON SHEET C		



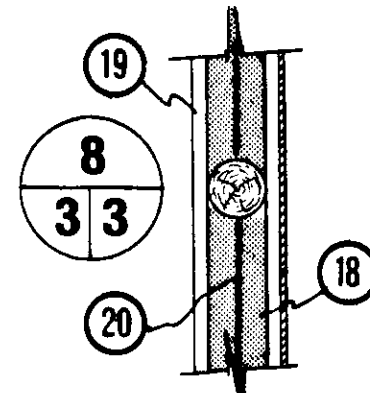
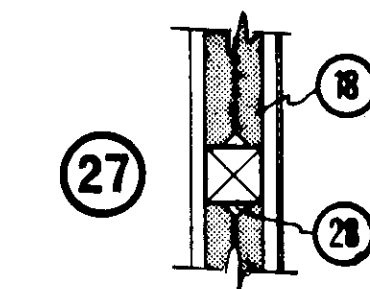
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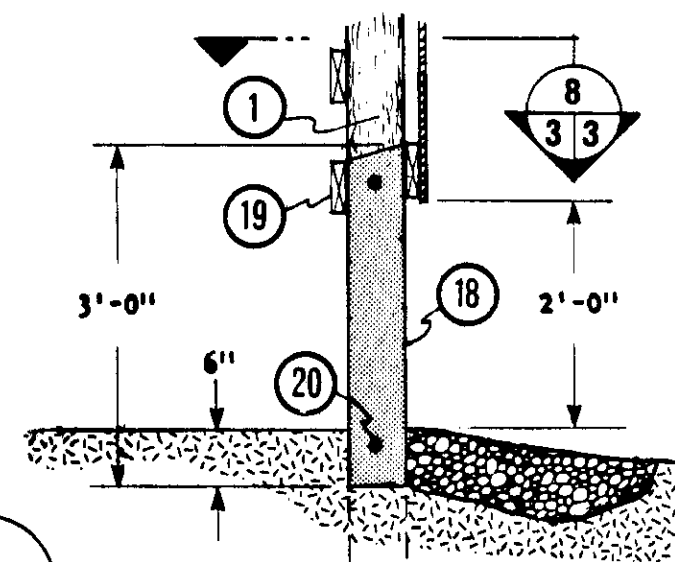
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3
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4
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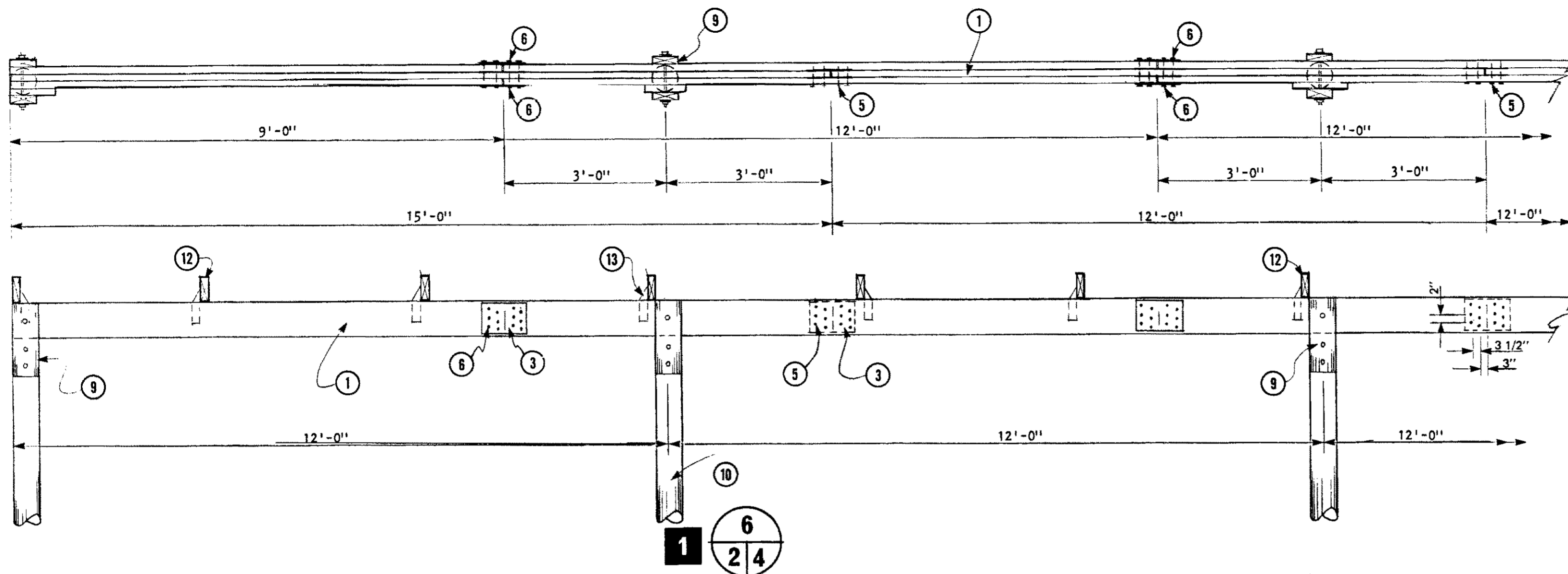
- 1 round or sawn poles, see pole selection chart ⑨ sheet 4
- 2 optional roof overhang by substituting truss upper chord 4'-0" longer than shown in truss plan (do not relocate upper chord joint)
- 3 2" x 6" knee brace, butts pole and laps lower and upper chord of truss, 10 - 5" nails to truss upper chord
- 4 2" x 6" knee brace, laps pole and butts lower chord of truss, 10 - 5" nails to pole and ③
- 5 2" x 6" x 1'-4" cleat both sides, ½" diam. bolt and washer through pole and through plate beam
- 6 2" x 6" x 6'-0" brace and ½" plywood gusset @ 12'-0" oc
- 7 3 member plate beam at front poles, see ⑥
② | ④
- 8 24 gage x 2" x 2" x 3" galvanized framing anchor each side of truss, 4 - 1½" large-head galvanized roofing nails into truss and beam ⑦
- 9 joist hanger, upside down @ 12'-0" oc at poles, notch rafter end at top
- 10 joist hanger, right side up @ 4'-0" oc between poles, notch rafter end at bottom
- 11 2" x 10" x 12'-0" face board, continuous
- 12 eavestrough drains outside of feed lot
- 13 truss 4'-0" oc (see leaflet 9100), 2" x 4" purlins (see leaflet 9301), galvanized steel roofing (see manufacturer for gage and profile to suit snow load) or 3/8" exterior plywood and asphalt shingles
- 14 8" hinged soffit board, see ⑫
- 15 continuous plate beam, see ⑦
② | ④
- 16 scabs, for nailing and size see ④ & ⑦ sheet 4
- 17 exterior siding
- 18 reinforced concrete infill panel, alternate to ⑫ sheet 2, min. 3000 psi concrete
- 19 2" x 6" nailed to ① allows ⑱ to slide up for frost
- 20 #4 x 7'-4" rebar between poles
- 21 sliding door hardware on 2" x 8" track board
- 22 2" x 4" nailing girts with ½" plywood spacers where girts cross truss members
- 23 2" x 6" blocking to roof purlins, 3/8" Aspenite or plywood soffit, 2" continuous vent, 2" x 8" face board
- 24 2" x 6" cross bracing; install as soon as first 3 trusses are bolted in place
- 25 ridge vent, see ⑦ sheet 2
- 26 nylon cord thru screw eyes to cleat on pole for closing and securing soffit
- 27 alternate detail with sawn pole
- 28 triangular cleat nailed to pole, provides lateral support to panel ⑱
- 29 spacer as required

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revised and re-issued 79-07 JET

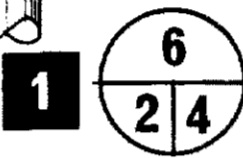
SYM REVISIONS CHECKED DATE APPROVED

CANADA PLAN SERVICE STRUCTURAL DETAILS (not to scale)

DESIGNED JET	DATE OCT 76	PLAN
DRAWN LEO BLAKS	REVISED 87-09	8163
TRACED	DETAIL NUMBER A	SHEET 3 OF 4
CHECKED H.A.J.	ORIGINATES ON SHEET B DRAWN ON SHEET C	



- 1 continuous 3-member plate beam at front poles, see table ①, no extra member in end spans
- 2 continuous 2-member plate beam at rear wall, see table ②, extra member in end spans
- 3 24 gage galv. steel gussets in 3-member plate beam ①, see table ③ for size and for number of nails in each half
- 4 scab for outer member of ②, see table ④ for size and length
- 5 4" spiral nails, see table ③ for number
- 6 2 1/2" concrete nails, see table ③ for number
- 7 number of 5" spiral nails in scab ④
- 8 extra plate member, end spans only
- 9 1/2" bolts and 2 x 6 x 16" cleat both sides of pole
- 10 16'-0" round or sawn pole, see pole selection chart ⑩
- 11 2 - 1/2" x 10" bolts and washers at each pole (notch end truss into face of endwall poles)
- 12 double sloped truss @ 4'-0" oc
- 13 2-Trip-L-grip framing anchors, each truss to plate



EXAMPLE:
 For Saskatoon, Saskatchewan, trusses 48" oc
 ground snow load = 1.5 kPa
 1/10 hourly wind pressure = 0.36 kPa
 assuming roof exposed to wind
 roof snow load (0.6 x GSL) = 1.0 kPa min.
 roof dead load = 0.2 kPa
 roof total load = 1.2 kPa

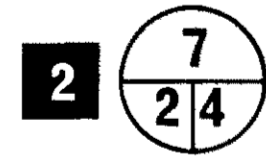
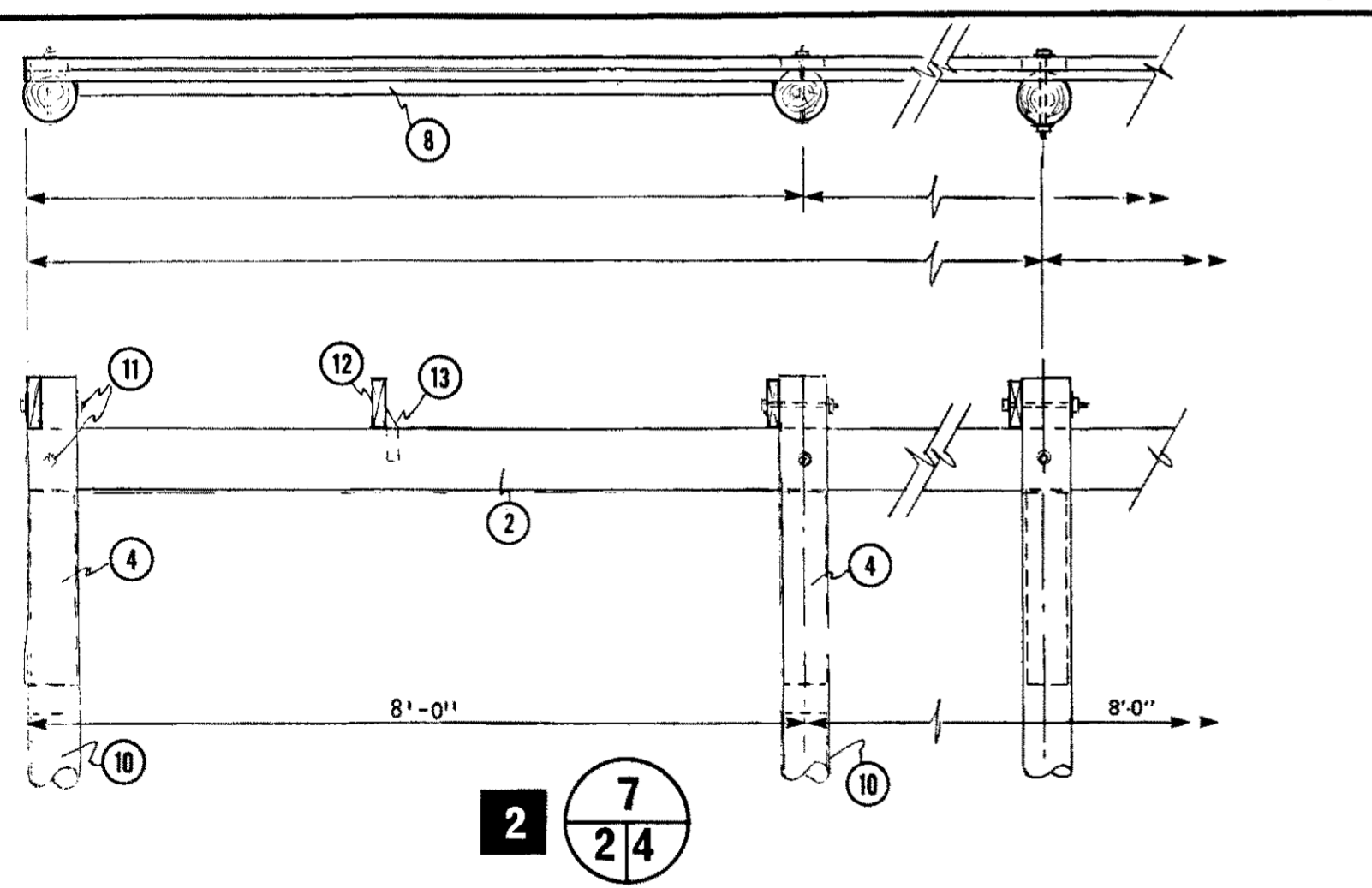


Table ① Front plate beam safe uniform total roof loads, kPa

Bldg width (ft)	3 - 2 x 8				3 - 2 x 10				3 - 2 x 12			
	No.2 S-P-F Truss spacing 48	No.2 S-P-F Truss spacing 24	No.2 D. Fir inches oc 48	No.2 D. Fir inches oc 24	No.2 S-P-F Truss spacing 48	No.2 S-P-F Truss spacing 24	No.2 D. Fir inches oc 48	No.2 D. Fir inches oc 24	No.2 S-P-F Truss spacing 48	No.2 S-P-F Truss spacing 24	No.2 D. Fir inches oc 48	No.2 D. Fir inches oc 24
24	1.82	1.66	1.54	1.41	2.72	2.49	2.30	2.11	3.66	3.10	3.10	2.84
28	1.56	1.43	1.32	1.21	2.33	2.13	1.97	1.81	3.14	2.65	2.66	2.43
32	1.36	1.25	1.15	1.06	2.04	1.87	1.73	1.58	2.75	2.32	2.32	2.13
36	1.21	1.11	1.03	--	1.81	1.66	1.53	1.40	2.44	2.06	2.07	1.89
40	1.09	1.00	--	--	1.63	1.49	1.38	1.26	2.20	1.86	1.86	1.70

Using plate tables ① and ② with total roof load value for 28' span, 2 x 8 no.2 Spruce or no.2 Douglas fir plates are required.

Using pole selection chart ⑩ with above wind pressure and total roof load values, all pole sizes shown in chart are adequate

Table ② Rear plate beam safe uniform total roof loads, kPa

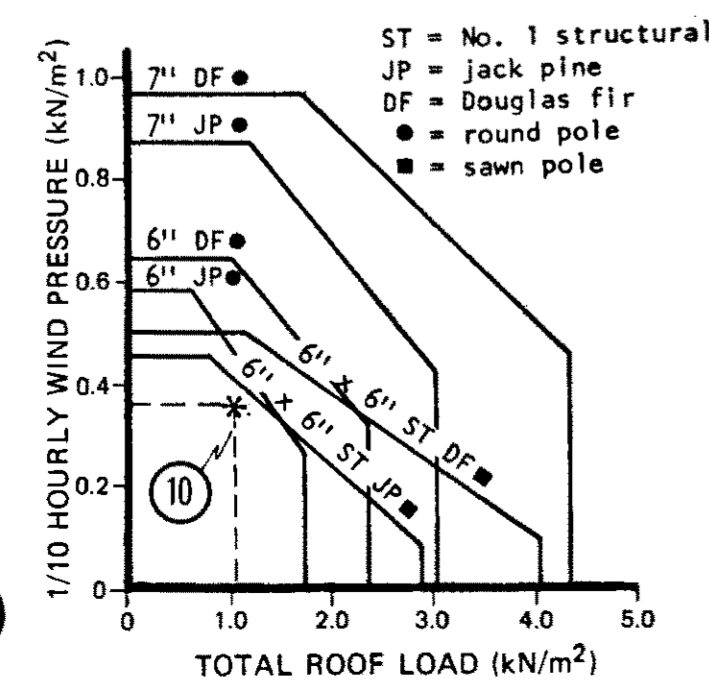
Bldg width (ft)	2 - 2 x 8				2 - 2 x 10				2 - 2 x 12			
	No.2 S-P-F Truss spacing 48	No.2 S-P-F Truss spacing 24	No.2 D. Fir inches oc 48	No.2 D. Fir inches oc 24	No.2 S-P-F Truss spacing 48	No.2 S-P-F Truss spacing 24	No.2 D. Fir inches oc 48	No.2 D. Fir inches oc 24	No.2 S-P-F Truss spacing 48	No.2 S-P-F Truss spacing 24	No.2 D. Fir inches oc 48	No.2 D. Fir inches oc 24
24	2.41	1.93	2.04	1.64	3.60	2.63	3.05	2.45	4.59	3.20	4.10	3.30
28	2.06	1.66	1.75	1.40	3.08	2.26	2.61	2.10	3.93	2.74	3.52	2.82
32	1.80	1.45	1.53	1.23	2.70	1.97	2.28	1.84	3.44	2.40	3.08	2.47
36	1.60	1.29	1.36	1.09	2.40	1.75	2.03	1.63	3.06	2.13	2.73	2.20
40	1.44	1.16	1.22	--	2.16	1.58	1.83	1.47	2.75	1.92	2.46	1.98

Table ③ 24 gage galv. steel gussets, 2 1/2" concrete nails ⑥ or 4" spiral nails ⑤

Beam size	No. of nails		Gusset size
	S-P-F	D. Fir-L	
2 x 8	6	8"	8" x 7 1/4"
2 x 10	8	8"	8" x 9 1/4"
2 x 12	10	8"	8" x 11 1/4"

Table ④ Scab size.

Beam size	5" spiral nails ⑦ in beam & scab	Scab size	
		square poles	round poles
2 x 8	15	2 x 8 x 12"	2 x 8 x 18"
2 x 10	23	2 x 10 x 16"	2 x 10 x 28"
2 x 12	29	2 x 12 x 21"	2 x 12 x 37"



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CANADA PLAN SERVICE

CONTINUOUS PLATE BEAMS (not to scale)

DESIGNED J.E.T.	DATE OCT 76	PLAN
DRAWN LEO BLAIS	REVISED 87-09	8163
TRACED	DETAIL NUMBER A	ORIGINATES ON SHEET B
CHECKED H.A.J.	DRAWN ON SHEET C	SHEET 4 OF 4