

- 1 for management information see leaflet 6311
- 2 for proportioning ventilation system and electrical details see Agriculture Canada publication 1502, Bulk Potato Storage
- 3 attach leaflet 6330, Fruit and Vegetable Storage Insulation
- 4 include plan 6121 "INSULATED STORAGE DOORS"

LIST of DRAWINGS

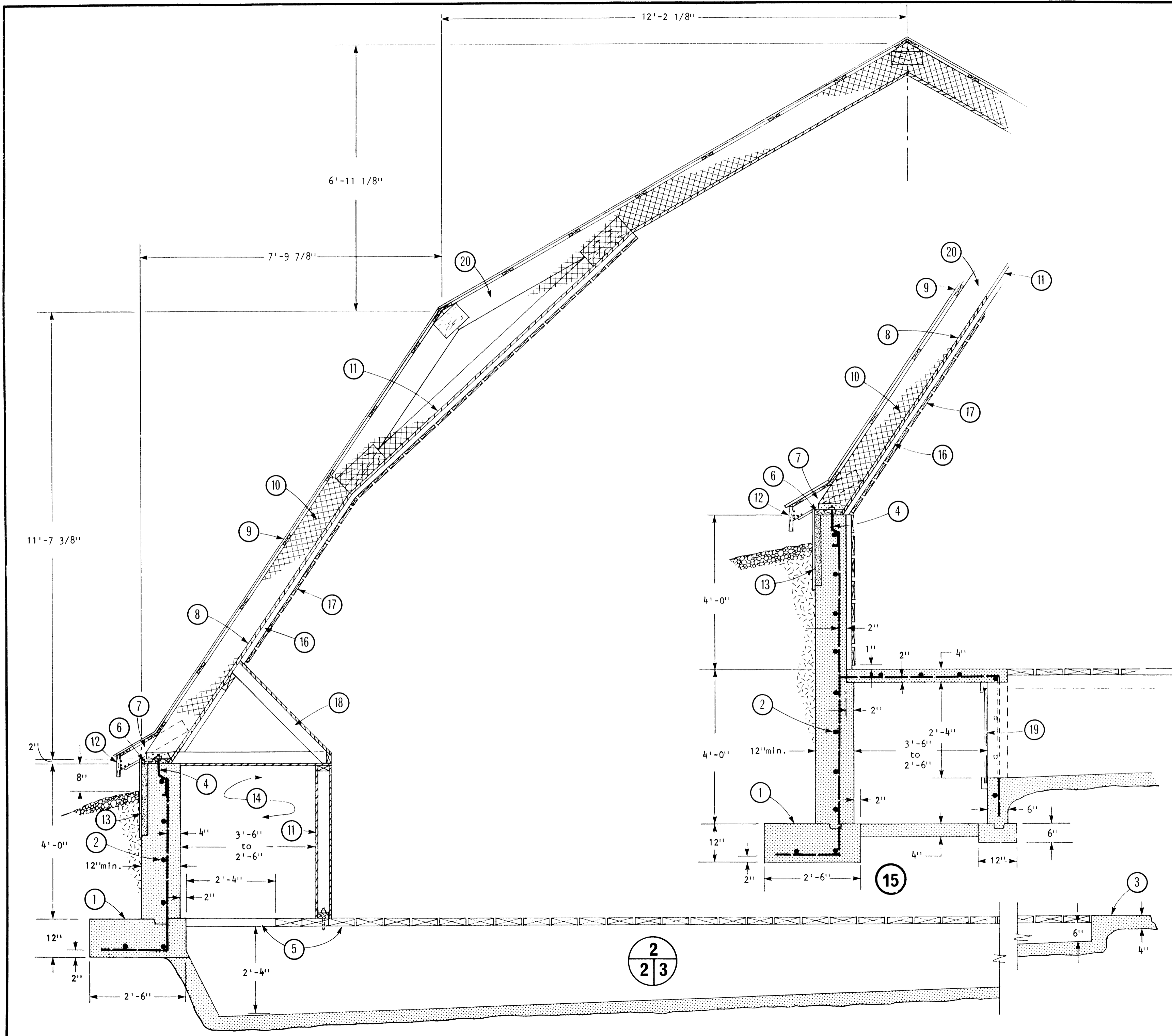
sheet no.	title
1	Braced Rafter Bulk Vegetable Storage
2	Floor Plan & Section
3	Construction Details
4	Damper Housing Details
5	Endwall Construction Details
6	Bulkhead Details

WARNING
 This plan may require structural and other changes to meet local site conditions, climatic loads, user requirements and applicable building regulations (such as the Canadian Farm Building Code). Before construction, the user of this plan is responsible to ensure that all required changes are made.

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BRACED RAFTER
BULK VEGETABLE STORAGE

DESIGNED H.A.J.	DATE AUG 76	PLAN 6311									
DRAWN LEO BLAIS	REVISED 79-04										
TRACED	<table border="1" style="font-size: small;"> <tr> <td style="text-align: center;">A</td> <td>DETAIL NUMBER</td> <td style="text-align: center;">A</td> </tr> <tr> <td style="text-align: center;">B/C</td> <td>ORIGINATES ON SHEET</td> <td style="text-align: center;">B</td> </tr> <tr> <td></td> <td>DRAWN ON SHEET</td> <td style="text-align: center;">C</td> </tr> </table>	A	DETAIL NUMBER	A	B/C	ORIGINATES ON SHEET	B		DRAWN ON SHEET	C	SHEET 1 OF 6
A	DETAIL NUMBER	A									
B/C	ORIGINATES ON SHEET	B									
	DRAWN ON SHEET	C									
CHECKED J.E.T.											



1. footing, 3000 psi concrete, 6% air entrained, 2" x 4" keyway; footing dimensions and reinforcing based on ground snow load of 80 psf and safe soil bearing capacity of 3000 psf
2. #4 rebars (60,000 psi yield) @ 12" oc both ways
3. concrete floor on compacted soil
4. anchor bolts, 3/4" x 12" @ 4'-0" oc
5. rabbet floor 2 1/4" x 3 1/4" at ducts, for 3" x 8" rough sawn planks, spaced 1/2" apart
6. 2" pressure treated sill bevel cut to match rafter (20) and plywood (11), trim rafter ends to fit galvanized joist hanger, 1 1/2" galvanized roofing nails hanger to rafter and sill
7. 2" x 4" lookout rafter from 2'-0" length
8. 6 mil polyethylene vapor barrier
9. galv. roofing over min. 1" (full) x 4" purlins 24" oc max.
10. glass fiber insulation, R-20 min., see leaflet 6330
11. 5/16" fir or spruce exterior grade plywood, face grain perpendicular to rafter, end joints staggered 4'-0" oc, nail with 1 1/2" large head galvanized roofing nails @ 6" oc
12. 1" x 6" face board, 3/4" x 4" soffit, 2" vent slot, 1/4" x 1/4" hardware cloth rodent stop all around
13. 2" x 22" rigid polystyrene insulation tacked with finishing nails to forms before placing concrete, 3/16" x 24" high-density re-compressed exterior asbestos board drilled and nailed to sill (6)
14. main plenum, framed with 2" x 4" #2 grade spruce or better, 24" oc, anchor pressure treated sill to floor with bolts and concrete anchors 4'-0" oc, 1/2" exterior plywood on vegetable side, see (15), alternate main plenum
15. alternate main plenum
16. 2" x 2" blocking at each rafter
17. slotted wall lining of 1" x 6" strapping, applied horizontally, spaced 1" apart
18. 2" x 4" framing for main plenum
19. slide valve for lateral ducts
20. see plans 9256 or 9280 for rafter details; rafters to meet snow and wind load requirements are also acceptable for potato storage loads

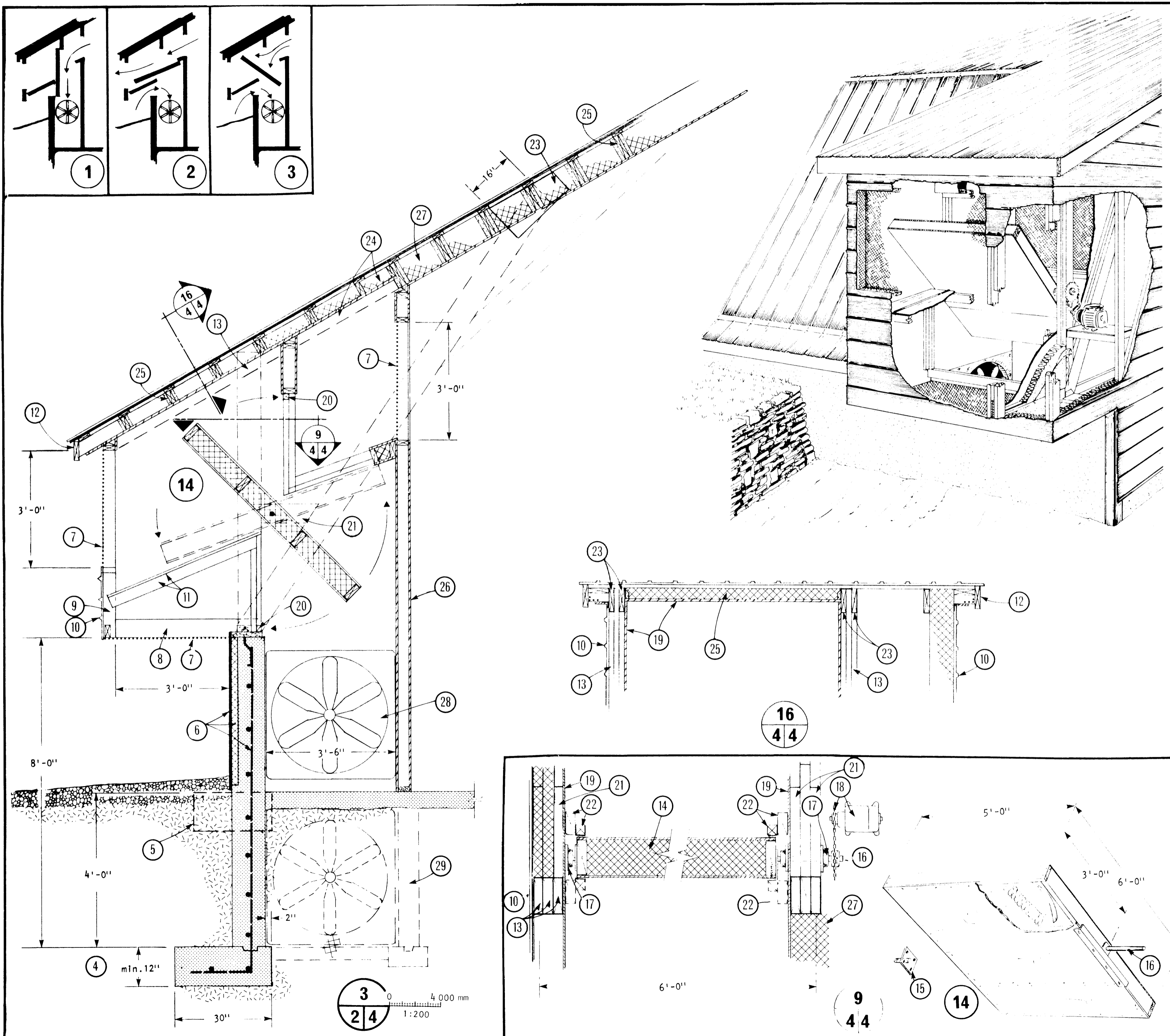
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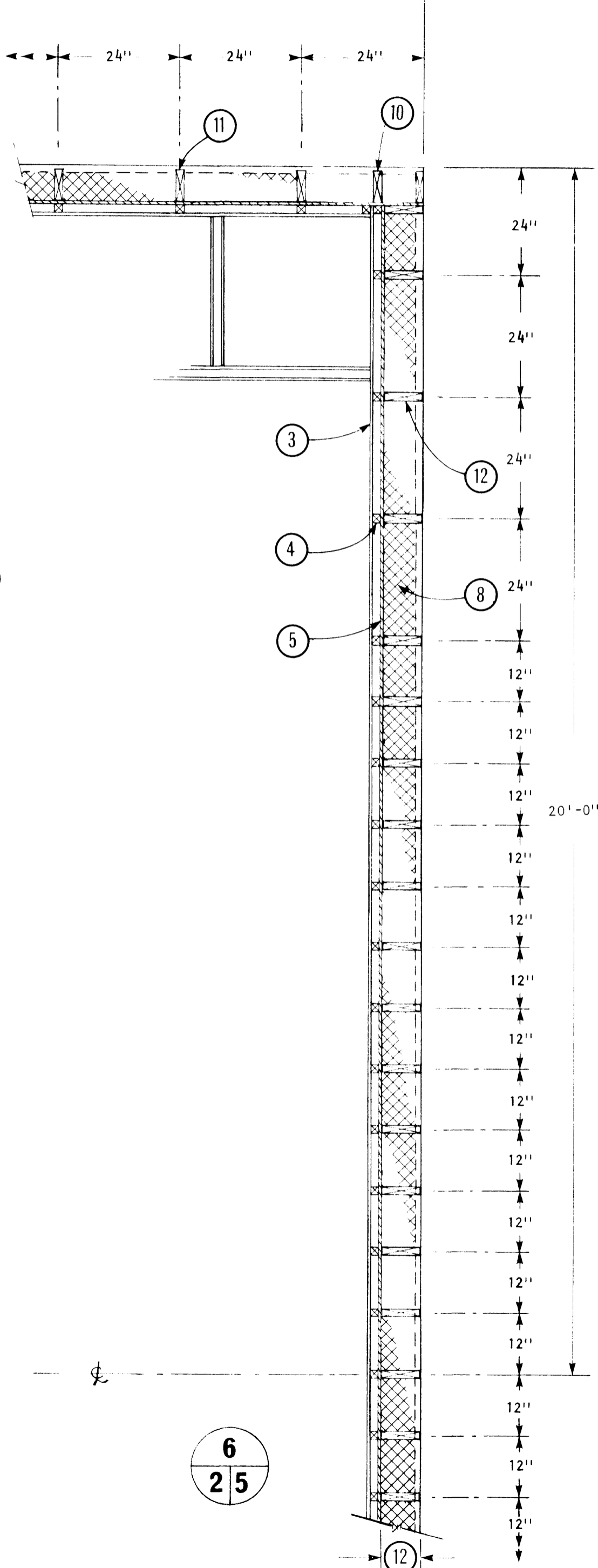
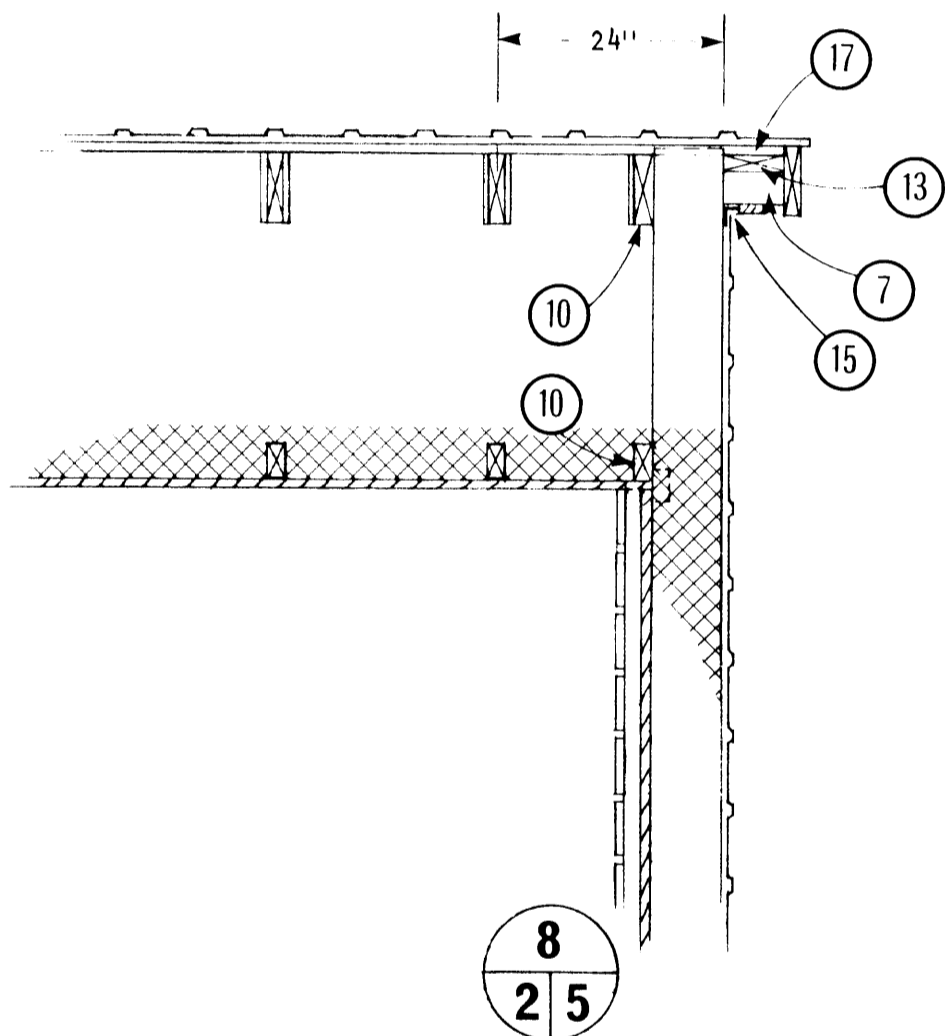
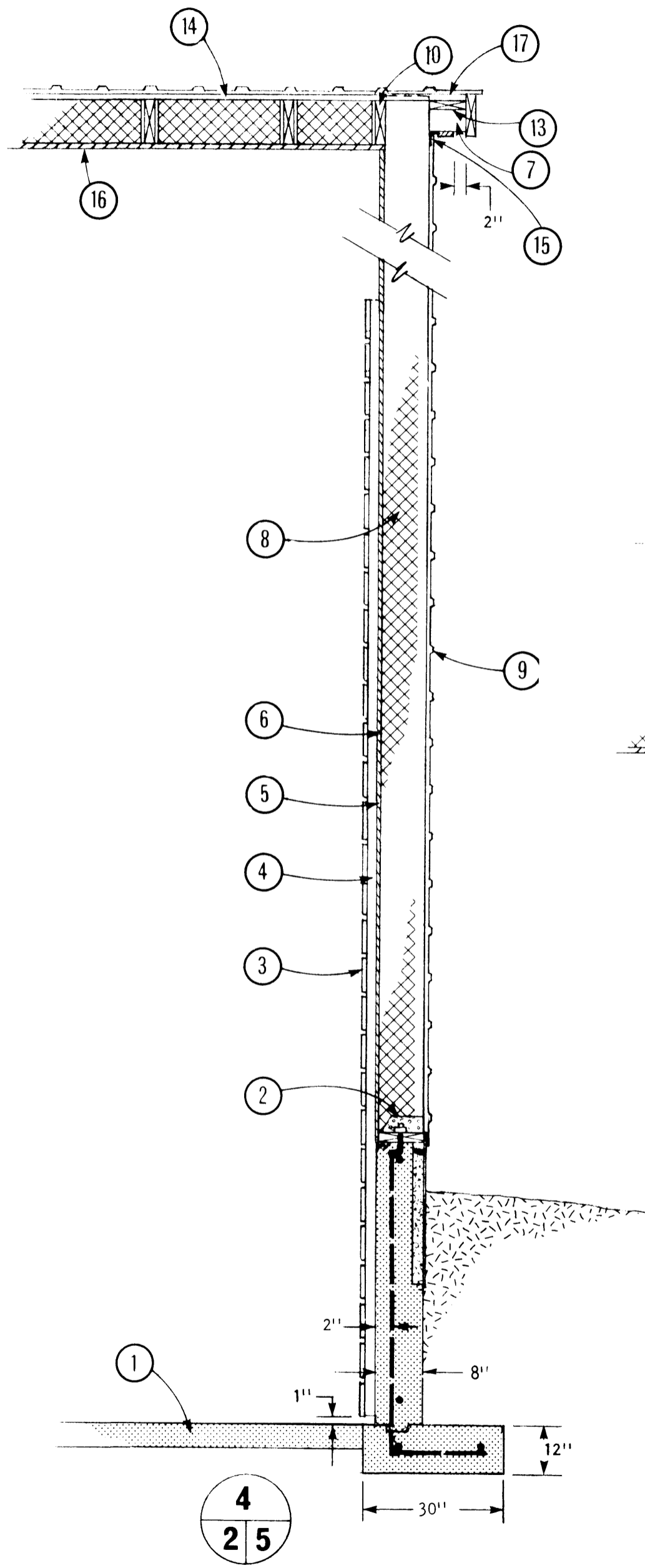
CONSTRUCTION DETAILS
(not to scale)

DESIGNED H.A.J.	DATE 79-04	PLAN
DRAWN A.C. MORDEN	REVISED	6311
TRACED	DETAIL NUMBER: A B C	SHEET 3 OF 6
CHECKED J.E.T.	ORIGINATES ON SHEET: A B C DRAWN ON SHEET: A B C	



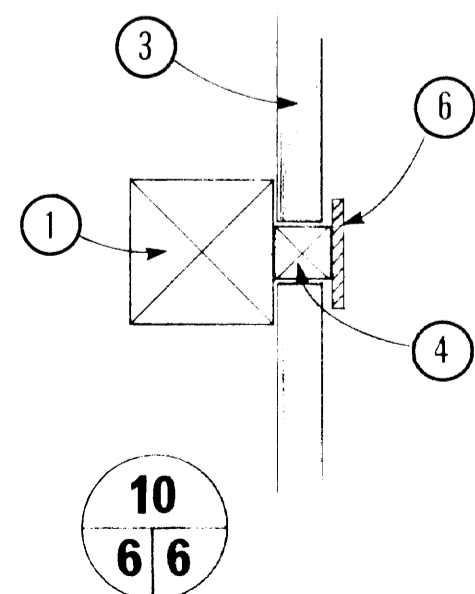
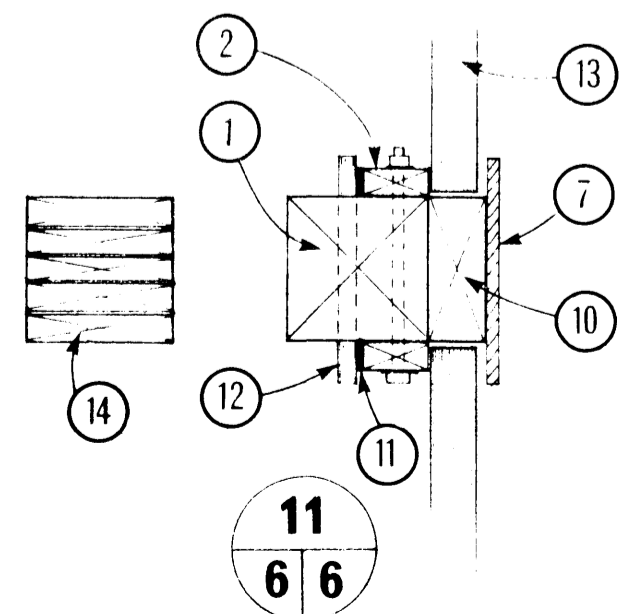
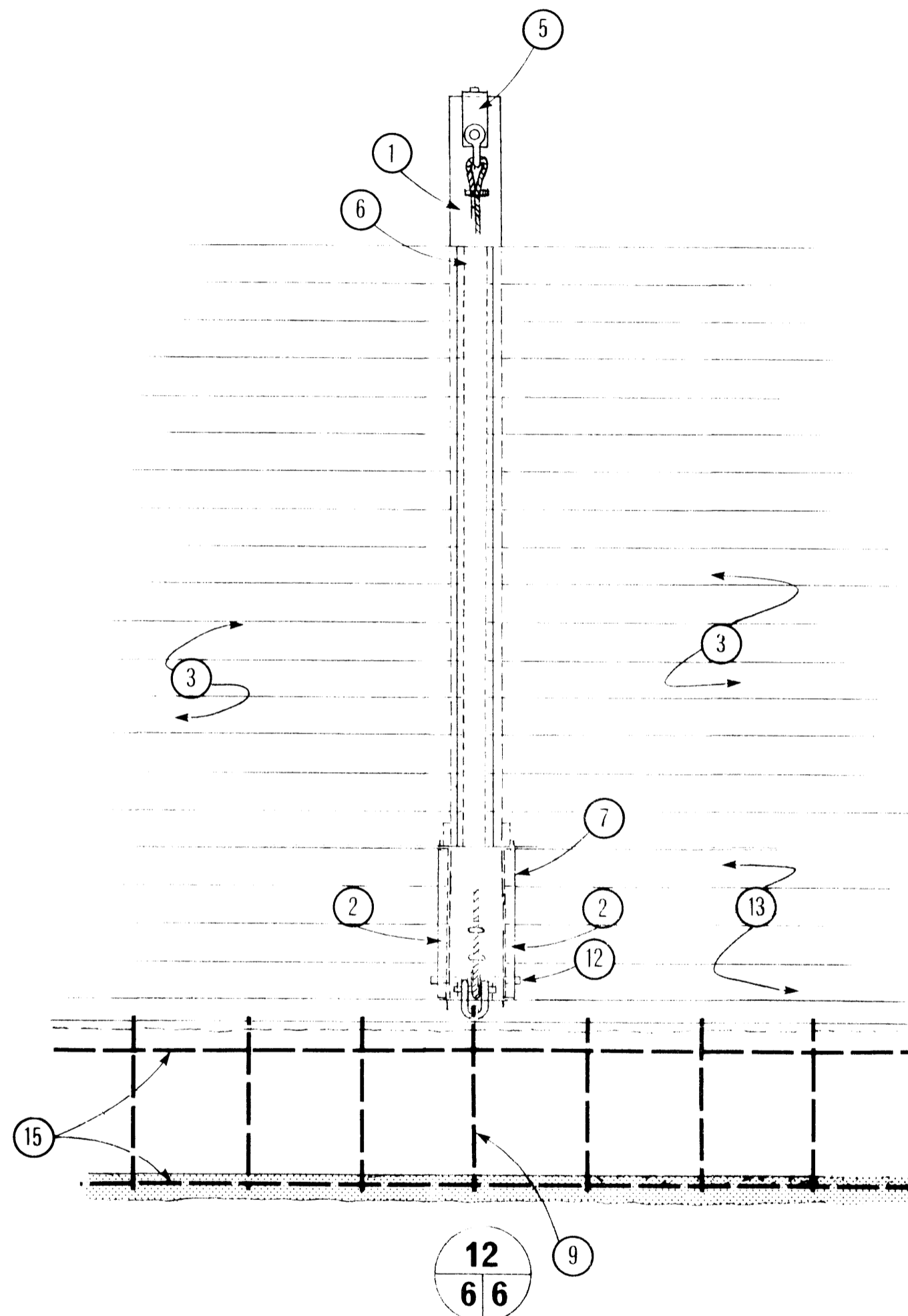
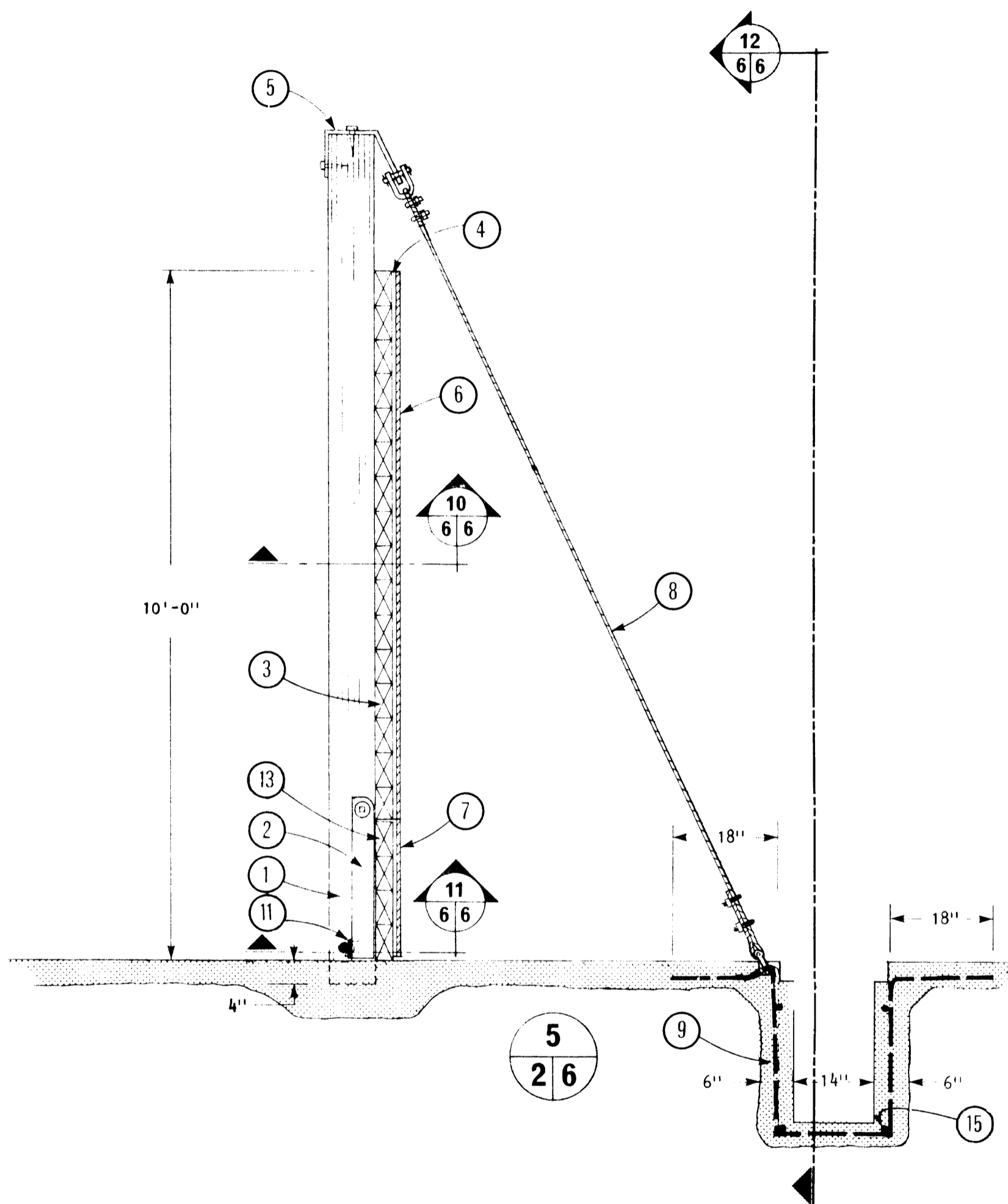
1. recirculate, damper (14) closed (see note 30)
2. ventilate, damper (14) wide open (see note 30)
3. blend, damper (14) partially open (see note 30)
4. concrete footing stepped down at damper housing and across entrance end of storage to below frost, see sheet 2 note (9)
5. footing 8'-0" beyond damper housing, not applicable to (29)
6. 2" x 46" polystyrene insulation under 3/16" cement asbestos board, see sheet 3 for rebar details
7. 1" x 3" galv. hardware cloth, bird & rodent screen
8. 2" x 6" framing
9. 2" x 4" framing
10. galv. steel cladding, horizontal
11. ribbed galv. drip sheet on 2" x 4" framing, sloped outwards, 1" clearance from (10)
12. 2" face board, 2" screened vent, 3/4" soffit
13. 3-2" x 6" laminated post; 2 outside members bear on lower rafters and support rafter extension, inside member bears on sill and fits between (24) at top and (23) at bottom
14. damper, 2 - 2" x 6" side members, 4 - 1" x 6" crosspieces, 5/16" exterior plywood both sides, 6" glass fiber blanket insulation with 6-11 polyethylene on warm side only, paint 6 faces
15. pivot, 1" dia. x 2" rod welded to 1" x 4" x 1/2" steel plate screwed to (14) with 4 - #12 x 2" flat head wood screws
16. control shaft, 1" dia. x 12" rod welded to 2" x 2" x 3" strap, to 1" x 1" x 1" x 12" steel angle, screwed to damper (14) after shaft is positioned thru (21)
17. flange bearing for (15) - (16)
18. gearmotor, chain drive
19. 5/16" plywood sheathing
20. 2" x 2" damper stop
21. support blocking for (17)
22. 2" x 4" and 2" x 2" damper stop
23. doubled rafter, with dovetail extended as dimensioned
24. rafter extension, same size as rafter
25. purlin stiffeners cut to fit between doubled rafters (23), (same size as rafters & 2" x 4" over damper housing) joist hanger at each end
26. damper chamber, 2" x 4" framing with 5/16" plywood sheathing inside and out
27. glass fiber insulation, R-20 min.
28. 14,000 cfm fan @ 1" static pressure to ventilate 24,000 cwt potatoes at rate of 0.6 cfm/cwt, hinged for duct access
29. alternate main duct, for details see sheet 3
30. for proportioning ventilation system and electrical details see Agriculture Canada publication 1508, Bulk Potato Storage

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SYM	REVISIONS	CHECKED DATE APPROVED
CANADA PLAN SERVICE		DAMPER HOUSING DETAILS (not to scale)
DESIGNED <i>H.A.J.</i>	DATE AUG 76	PLAN
DRAWN <i>LEO BLAIS</i>	REVISED 79-04	6311
TRACED	DI. TAIL NUMBER ORIGINATES ON SHEET DRAWN ON SHEET	A B C
CHECKED <i>J.E.T.</i>	A B C	SHEET 4 OF 6



1. 4" concrete floor
2. galvanized joist hanger each stud to sill, 3/4" x 12" anchor bolts @ 3'-0" oc
3. 1" x 6" strapping spaced 1" apart
4. 2" x 2" vertical spacers at each stud
5. 5/16" fir plywood
6. 6 mil polyethylene vapor barrier
7. 2" x 4" blocking, 2" face board, 2" screened vent, 3/4" soffit
8. glass fiber insulation R-20 min. (see leaflet 6330)
9. galv. steel siding, ribs horizontal, nailed over 15 lb. asphalt felt
10. end arch is located inside the stud wall
11. rafters @ 2'-0" oc
12. endwall studs 2" x 8" #2 spruce or 2" x 6" #2 Douglas fir spaced and nailed to (10) before erecting
13. 2" x 8" stud stop continuous
14. 1" x 4" x random length roof purlins, end joints staggered at least 4'-0" oc
15. 2" x 2" angle bent from 28 gage galv. steel
16. 5/16" ceiling plywood, end joints staggered 4'-0", nail 4 edges each sheet with 1 1/2" galv. large head roofing nails @ 6" oc
17. 12-2 1/2" nails each roof purlin to stud stop

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SYM	REVISIONS	CHECKED	DATE APPROVED		
		ENDWALL CONSTRUCTION DETAILS (not to scale)			
		DESIGNED H.A.J.	DATE AUG 76	PLAN	
		DRAWN H.M.ORDEN	REVISED 79-03	6311	
		TRACED		SHEET 5 OF 6	
		CHECKED			



1. 8" x 8" x 12'-0" post #1 structural spruce or Douglas fir, 10' o c
2. 2" x 4" x 28" latch board, secure with 3/4" x 12" bolt and washers
3. 2 1/2" x 6" full dimension bulkhead planks (long)
4. 3" x 3" x 8'-0" (actual dimensions) spacer
5. 1/4" x 4" x 24" steel strap, secure with 2 lag bolts; drill hole for shackle at end of wire rope (8)
6. 1/2" x 6" x 8'-0" plywood retainer
7. 1/2" x 12" x 24" plywood retainer
8. 3/8" wire rope (10,000 lb. min. breaking strength), thimble with wire rope clips and 3/4" shackle both ends
9. #4 rebar @ 18" o c (4 rebar bent to suit (8))
10. 3" x 7 1/4" x 24" (actual dimensions) spacer
11. 1/4" x 1 1/2" x 3" steel bearing plate, screwed to (2)
12. 1" x 12" steel drive-pin, loose fit thru post
13. planks same as (3) but short to clear posts (1)
14. alternate laminated post 5-2" x 8"
15. 4-#4 rebar (continuous)

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SYMBOL	REVISIONS

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BULKHEAD DETAILS
(not to scale)

DESIGNED H.A.J.	DATE AUG 76	PLAN
DRAWN H. MORDEY	REVISED 79-04	6311
CHECKED J.E.T.	DETAIL NUMBER ORIGINATES ON SHEET DRAWN ON SHEET	A B C SHEET 6 OF 6