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NOTE

THIS DESIGN CAN BE USED WITH THE 15M² SAILRIG SHOWN IN THE KIR-8 A DESIGN. THE CENTERDISTANCE BETWEEN MAIN HULL AND OUTRIGGER MUST THEN BE INCREASED FROM 2.54 TO 3.04.

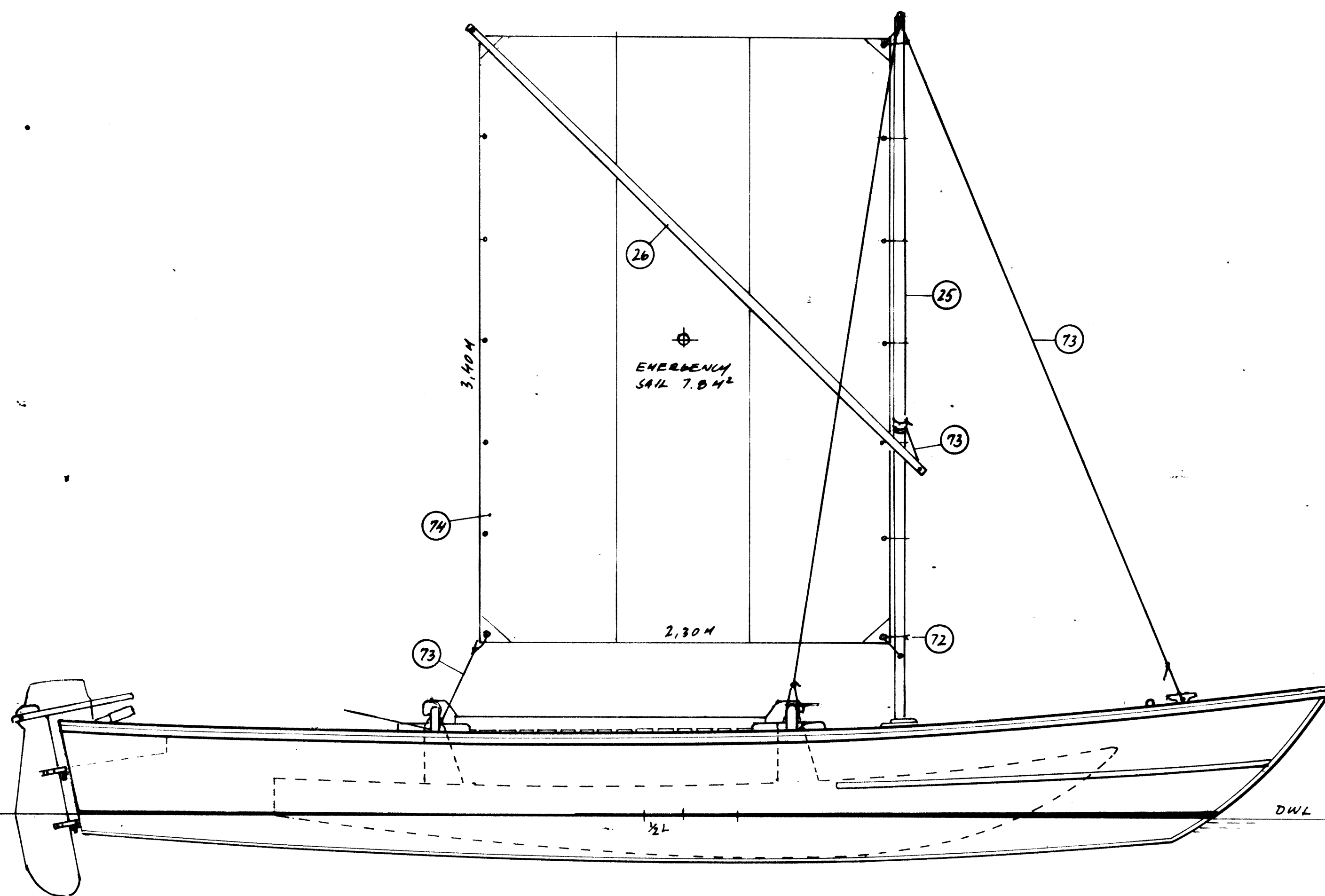
EMERGENCY SAILRIG /AWNING

SAIL AND ROPES NORMALLY STOWED IN SAILBAG. MAST AND SPRIT ALONG BEAMS.

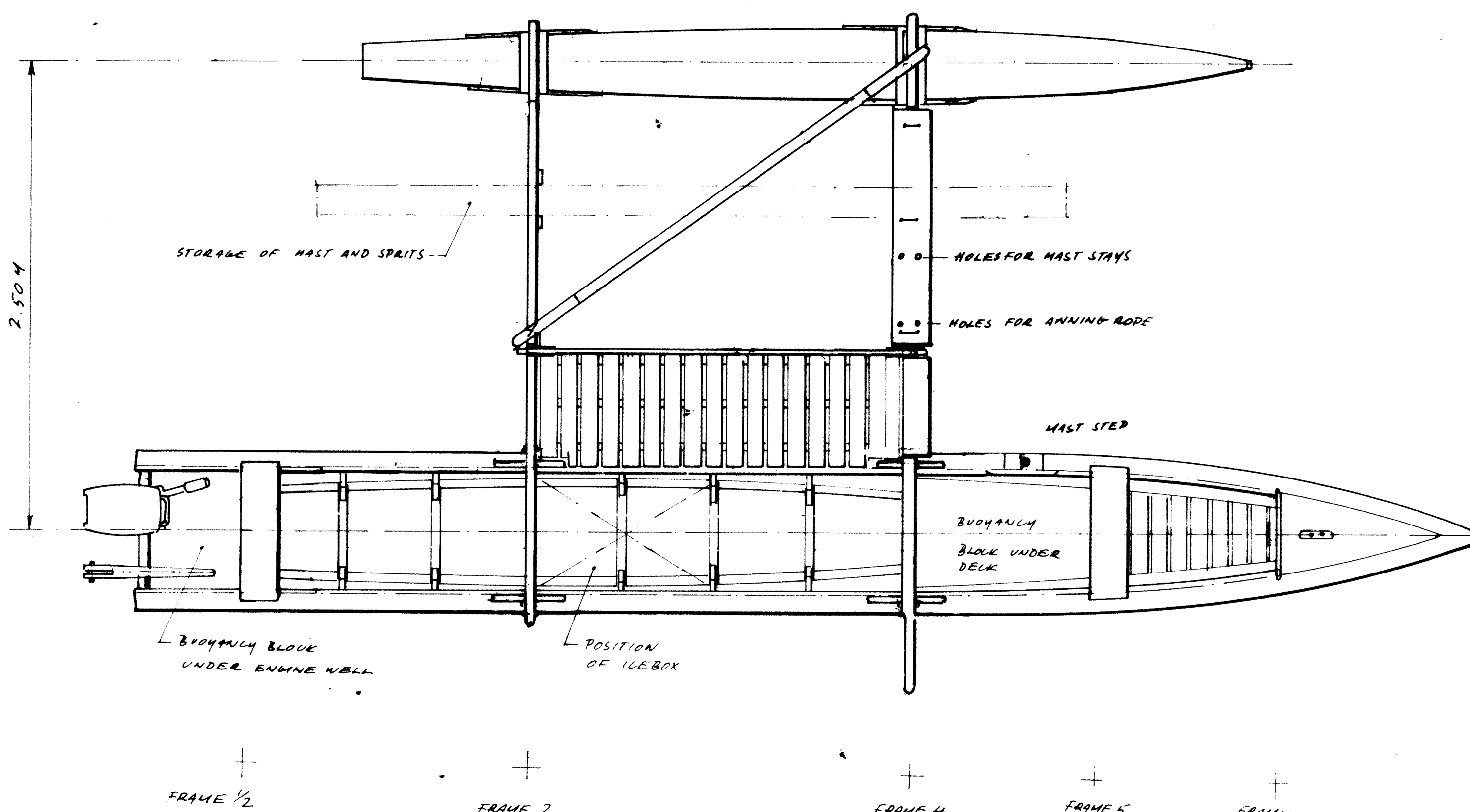
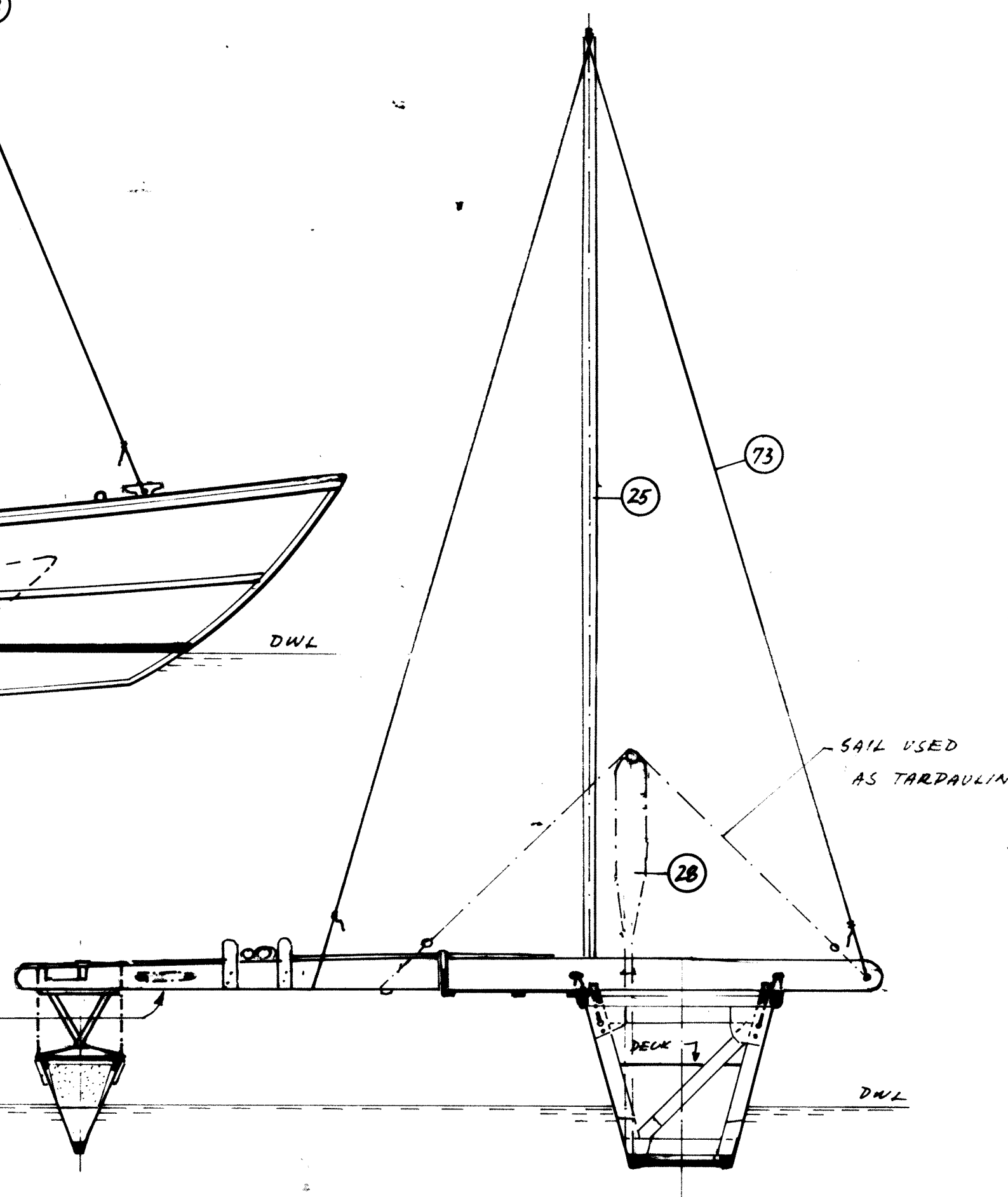
TO USE THE EMERGENCY SAIL DO AS FOLLOWS:

- 1) TIE SAIL TO MAST USING ROPE (72). STRETCH THE SAIL WELL ALONG THE MAST. POSITION RUDDER.
- 2) TIE THE MAINSHEET ROPE (73) TO SAIL.
- 3) TIE END OF SPRIT TO CORNER OF SAIL. LEAVE OTHER END LOOSE.
- 4) ROLL THE SAIL AROUND THE SPRIT UP TO THE MAST AND TIE TEMPORARILY TO MAST WITH MAINSHEET.
- 5) PLACE EYESPLICE ON END OF STAYS OVER TOP OF MAST AND PLACE FOOT OF MAST IN MAST STEP.
- 6) RAISE THE MAST TO VERTICAL POSITION AND TIE STAYS TIGHT (ROLLING MITE).
- 7) UNWRAP SAIL AND SPRIT. TIE LOWER END OF SPRIT TO MAST (ROLLING MITE).
- 8) PLACE MAINSHEET UNDER AFT BEAM.
- 9) TO LOWER SAIL, FIRST UNTIE LOWER END OF SPRIT AND WRAP THE SAIL AROUND THE SPRIT UP TO THE MAST. TIE TEMPORARILY. UNTIE FORESTAY AND LOWER MAST.

TO USE AS AWNING, A SECOND SPRIT OR BAMBPOO IS REQUIRED. THE MAST IS USED AS RIDGE-POLE KEPT UP BY TWO PADDLES (28) TIED TO THE BEAMS.



RIGHTING ROPE 8MM LENGTH 4.0M COILED UP ON FORWARD AND AFT BEAM



MAIN DIMENSIONS

LENGTH OVER ALL	-	7.16 m (23'6")
BEAM OVER ALL	-	3.804
LENGTH DWL	-	6.324 (20'9")
DEPTH MOULDED	-	0.694
DRAUGHT DWL	-	0.254
FREEBOARD MIN. DWL	-	0.444
WEIGHT EMPTY	-	270 kg
DISPLACEMENT LOADED DWL	-	540 kg
PROPULSION: OUTBOARDMOTOR 2-15HP, 20" SHAFT		
SPEED WITH 3 MEN ON BOARD; CALM WATER:		
OUTBOARDMOTOR 2HP	-	5.7 KNOTS
5HP	-	8.6 KNOTS
9.9HP	-	11.0 KNOTS

FISHING METHOD: HANDLINING, TROLLING
CREW = 2-3 MEN
MAXIMUM LOAD = 900 KG (FREEBOARD = 0.254)
SAFETY FEATURES: AUXILIARY SAIL = 7.04M²
IN CASE OF CAPSIZE, THE CRAFT CAN BE RIGHTED BY TWO MEN STANDING ON THE MAIN HULL USING ROPE FROM THE OUTRIGGER. BUOYANCY BLOCKS FOR LEVEL FLotation TO PERMIT BAILING OUT USING A BUCKET

1.0 0.5 0 1 2 M



7.2 m Outrigger Canoe

GENERAL ARRANGEMENT

SCALE = 1:20	DESIGN NO	DRAW. NO
DESIGN: P. Guldbrandsson	KIR-4 A	1
Grimsstad OCT. 1991		

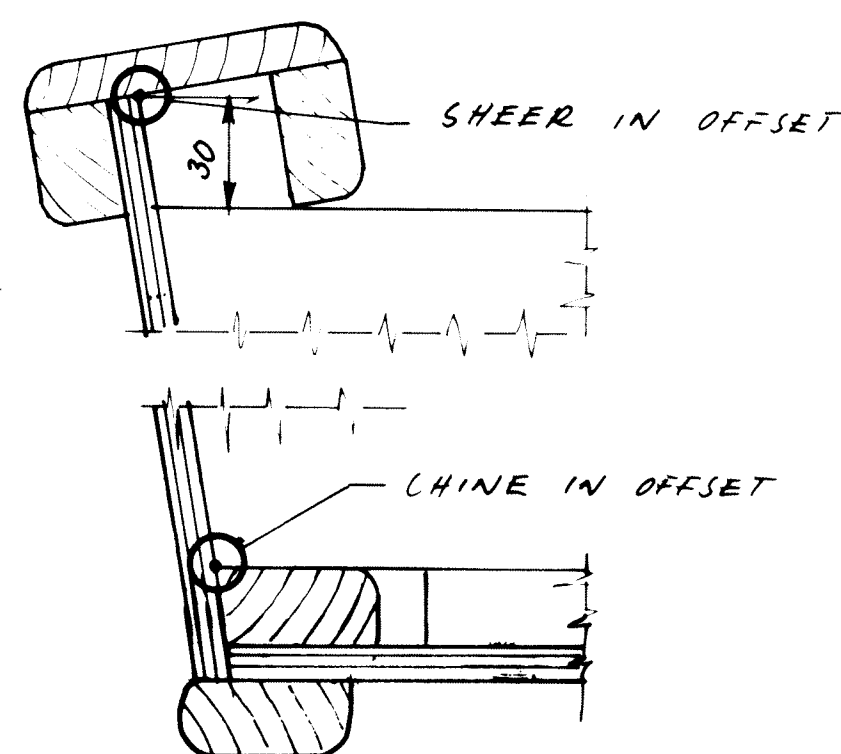
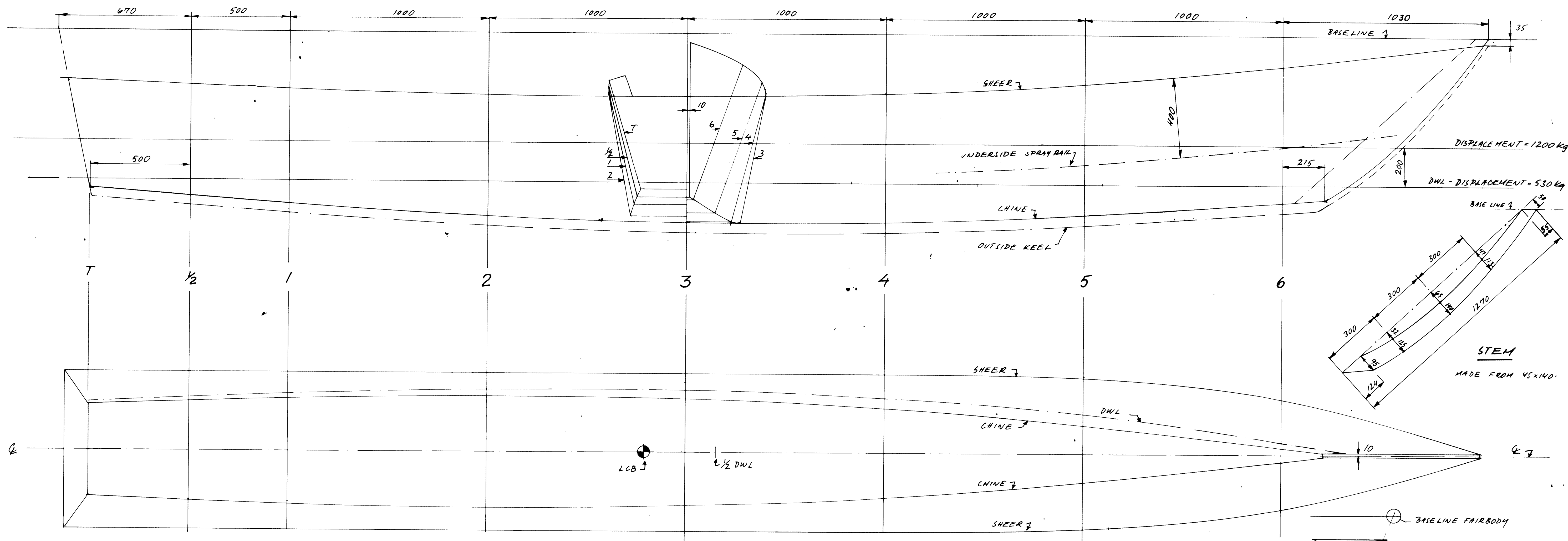
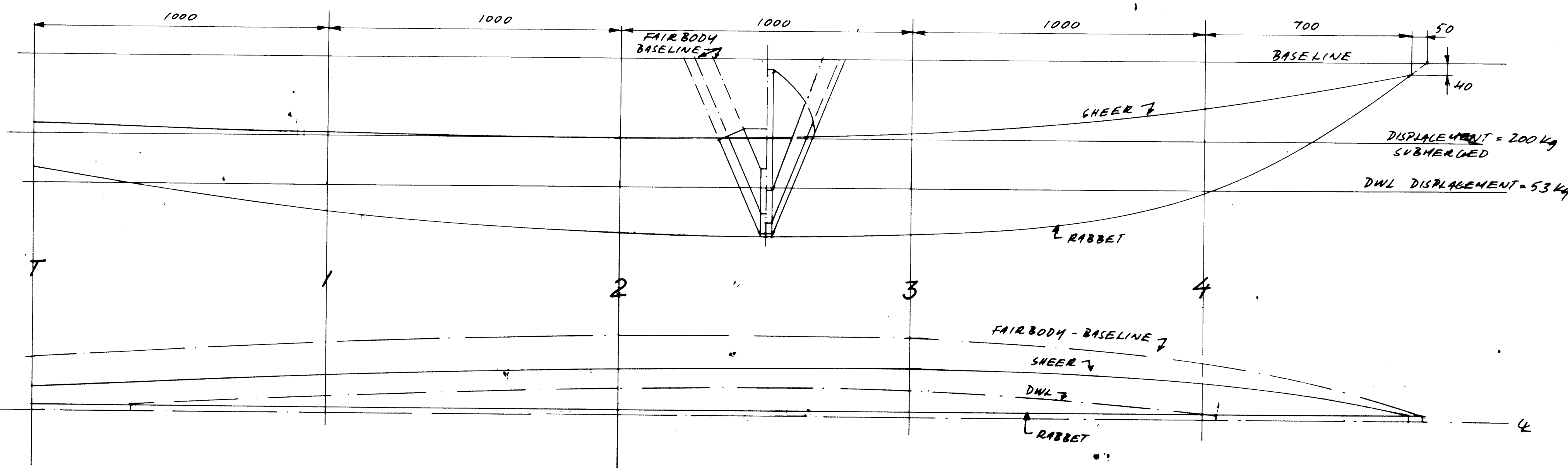
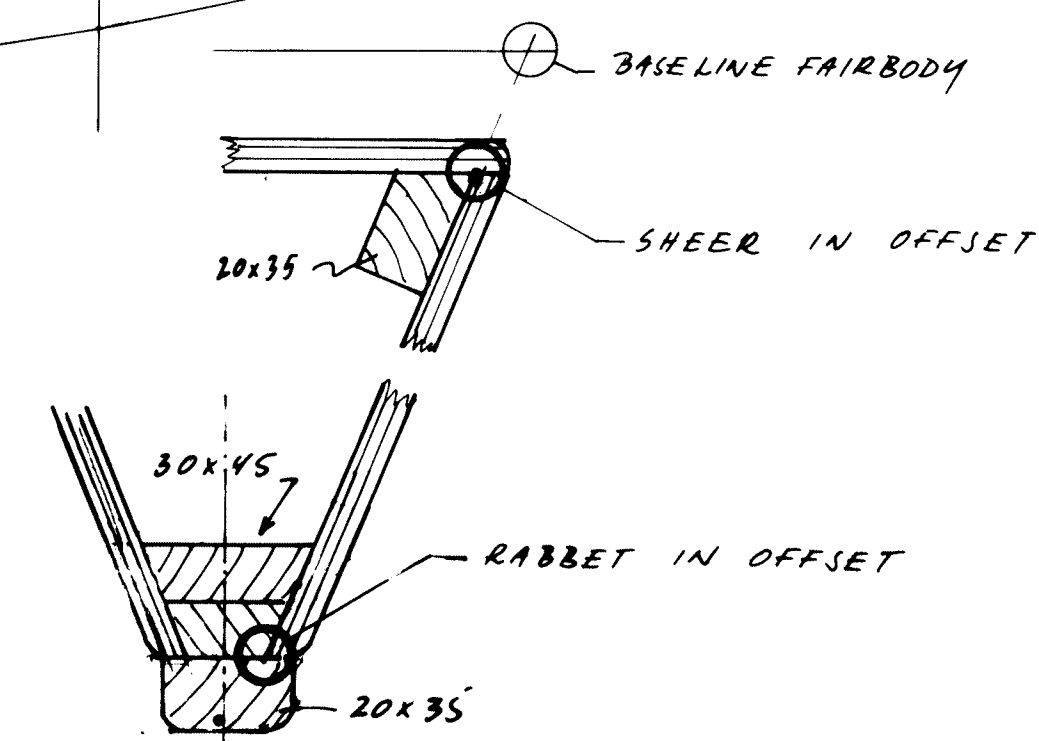


TABLE OF OFFSET - HULL IN MILLIMETER TO OUTSIDE FRAMING								
	T	1/2	1	2	3	4	5	6
HEIGHT BASELINE TO SHEER	250	268	285	311	315	295	245	150
" " " CHINE	834	828	864	918	948	942	903	835
HALF BREADTH $\frac{1}{2}$ - SHEER	395	395	395	395	395	395	376	275
" " " CHINE	220	248	263	280	265	225	140	34

*) NOT REQUIRED

TABLE OF OFFSET - OUTRIGGER IN MILLIMETER TO OUTSIDE FRAMING					
	T	1	2	3	4
HEIGHT BASELINE - SHEER	248	268	274	258	181
— " — " — RABBIT	378	570	640	632	488
HALF-BREADTH $\frac{1}{2}$ - FAIRBODY	178	260	292	288	226
— " — " — RABBIT	10	10	10	10	10



MAIN DIMENSIONS		
	HULL	OUTRIGGER
LENGTH OVER ALL LOA	7.16 M (23'6")	4.72 M (15'6")
BEAM MOULDED BMD	0.81 M	0.36 M
DEPTH MOULDED DMD	0.69 M	0.36 M
CVBIC NUMBER LOA + BMD + DMD	4.0 4 ³	0.60 4 ³
LENGTH DWL L	6.32 M (20'9")	4.08 M (13'5")
BEAM DWL B	0.64 M	0.20 M
DRAUGHT DWL T	0.25 M	0.18 M
FREEBOARD - MINIMUM DWL	0.44 M	0.18 M
DISPLACEMENT NO LOAD	220 kg	45 kg
SERVICE LOAD	310 "	10 "
DISPLACEMENT SERVICE DWL	530 kg	55 kg
COEFFICIENTS SERVICE DWL:		
L/B	9.9	20.4
$\nabla / (0.1L)^3$ 4 ³ /M ³	2.1	1.12
PRISMATIC COEFFICIENT	0.61	0.57
1/2 ANGLE OF ENTRANCE DWL	9°	5°
1/2 L AT SERVICE SPEED = 10 KNOTS	2.2	3.7
ENGINE POWER	OUTBOARD ENGINE 20 INCH SPART 2 - 10 HP	



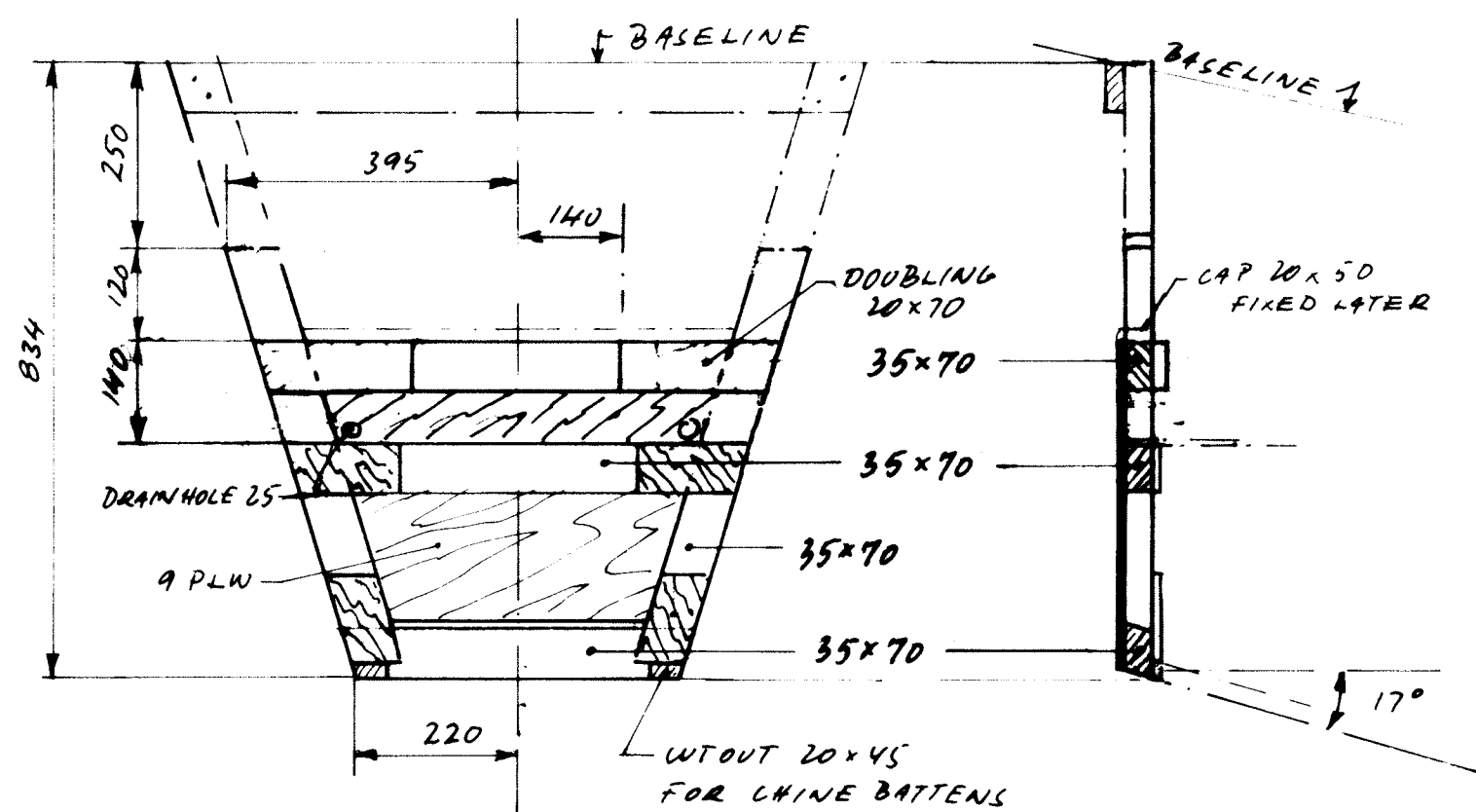
7.2m Outrigger Canoe

LINES

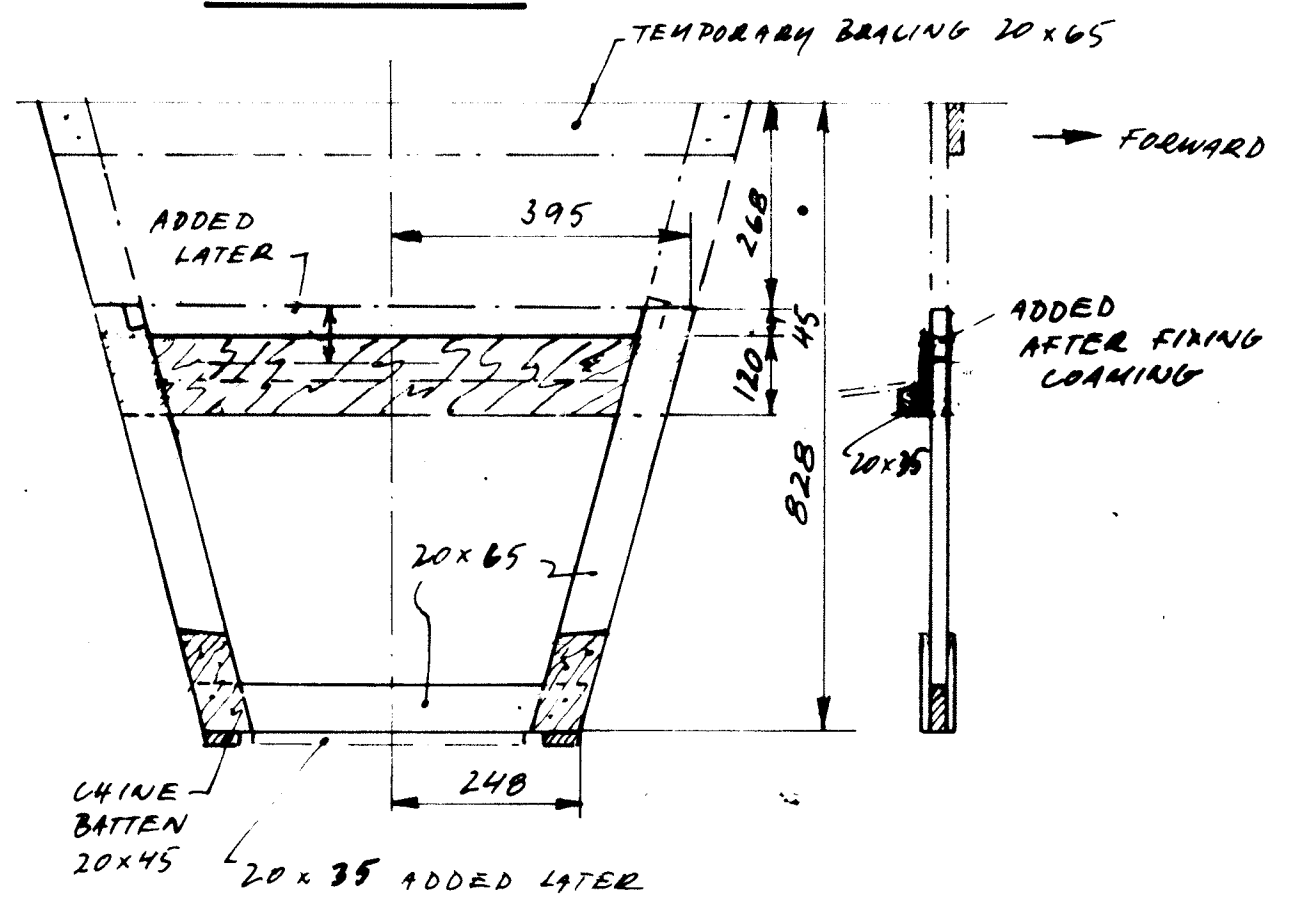
SCALE = 1:10	DESIGN NO	DRWG NO
DESIGN: G. LAMBERT	KIR-4 A	2
BRISTOL, OCT. 91		

NOTE: FRAME 1 AND FRAME 3 ARE NOT PREFABRICATED

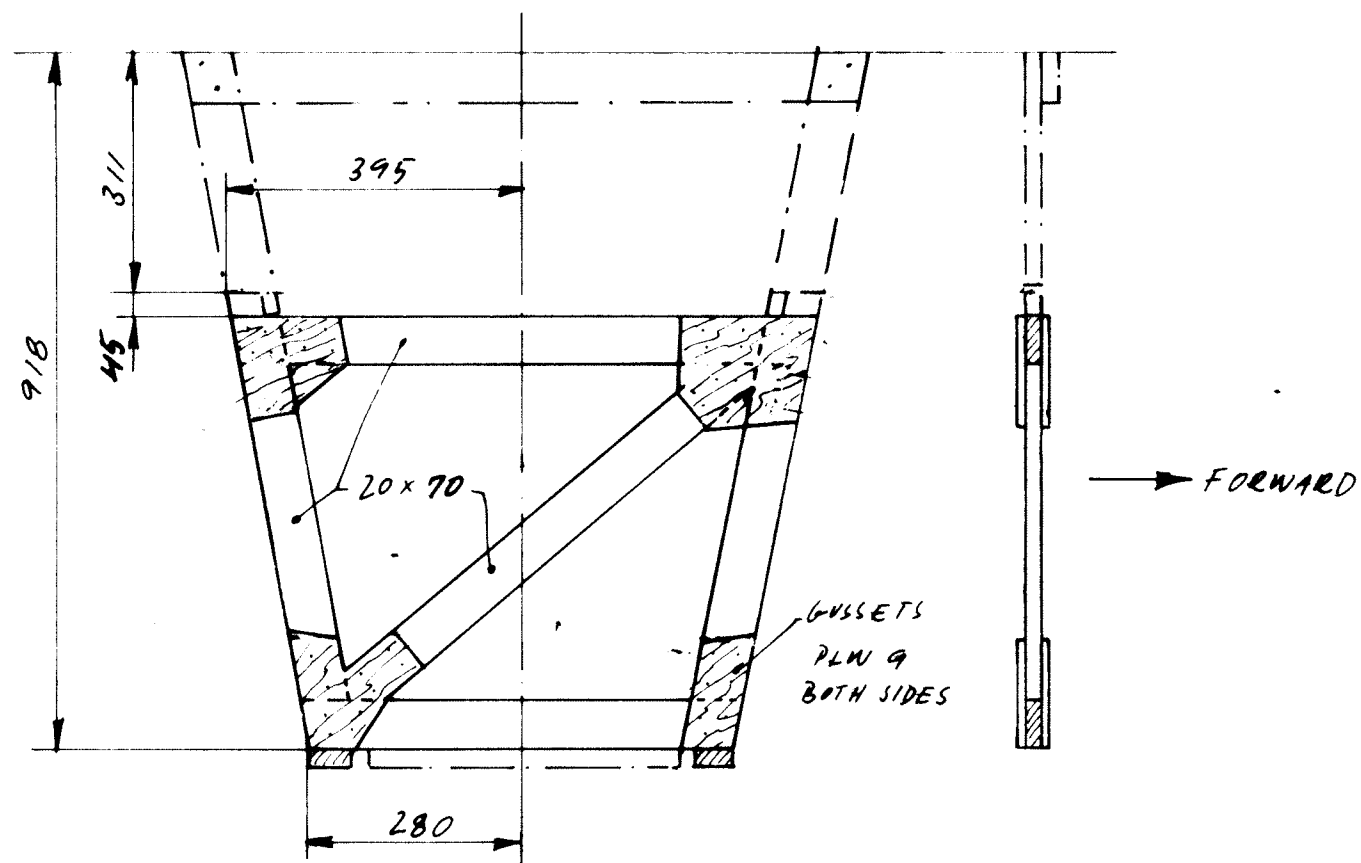
TRANSOM



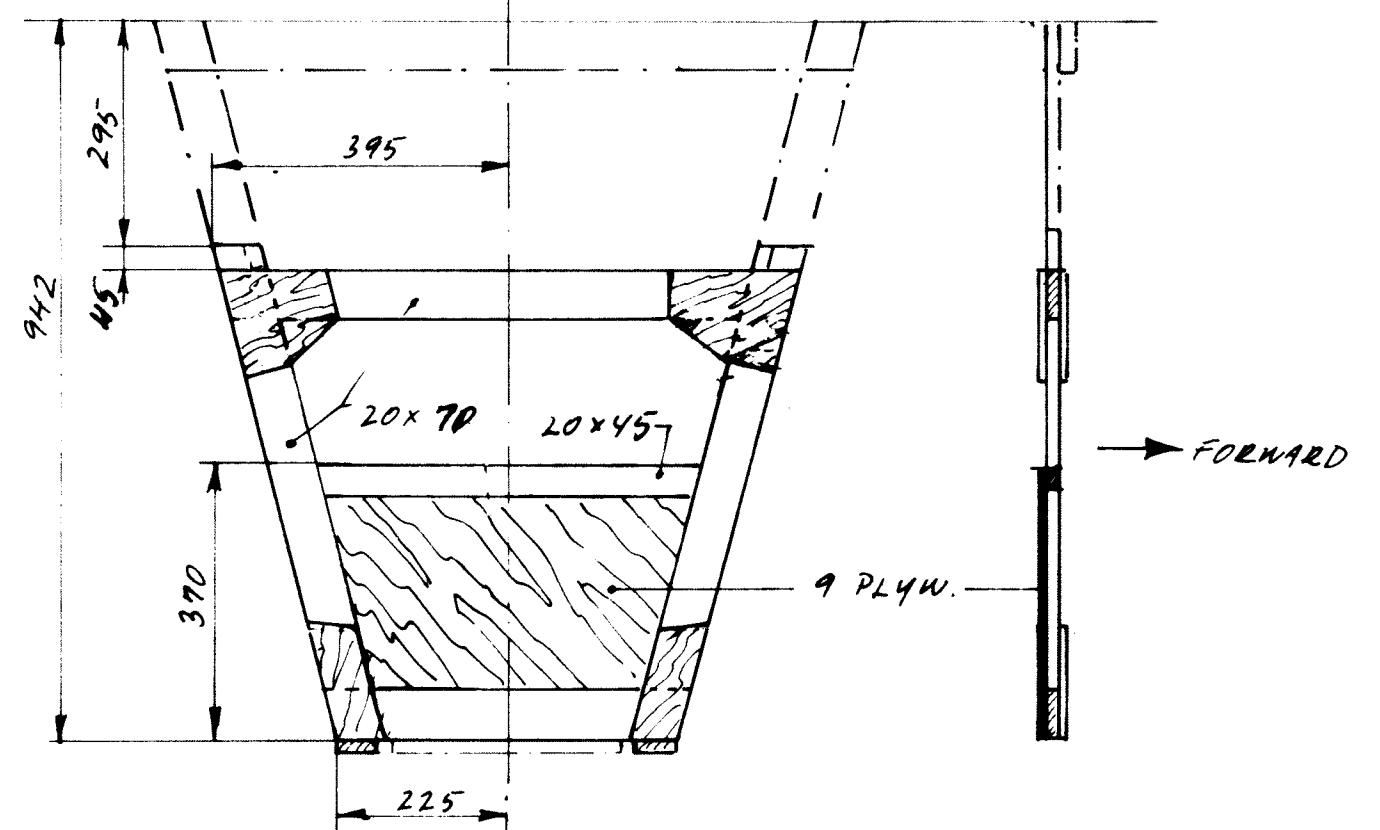
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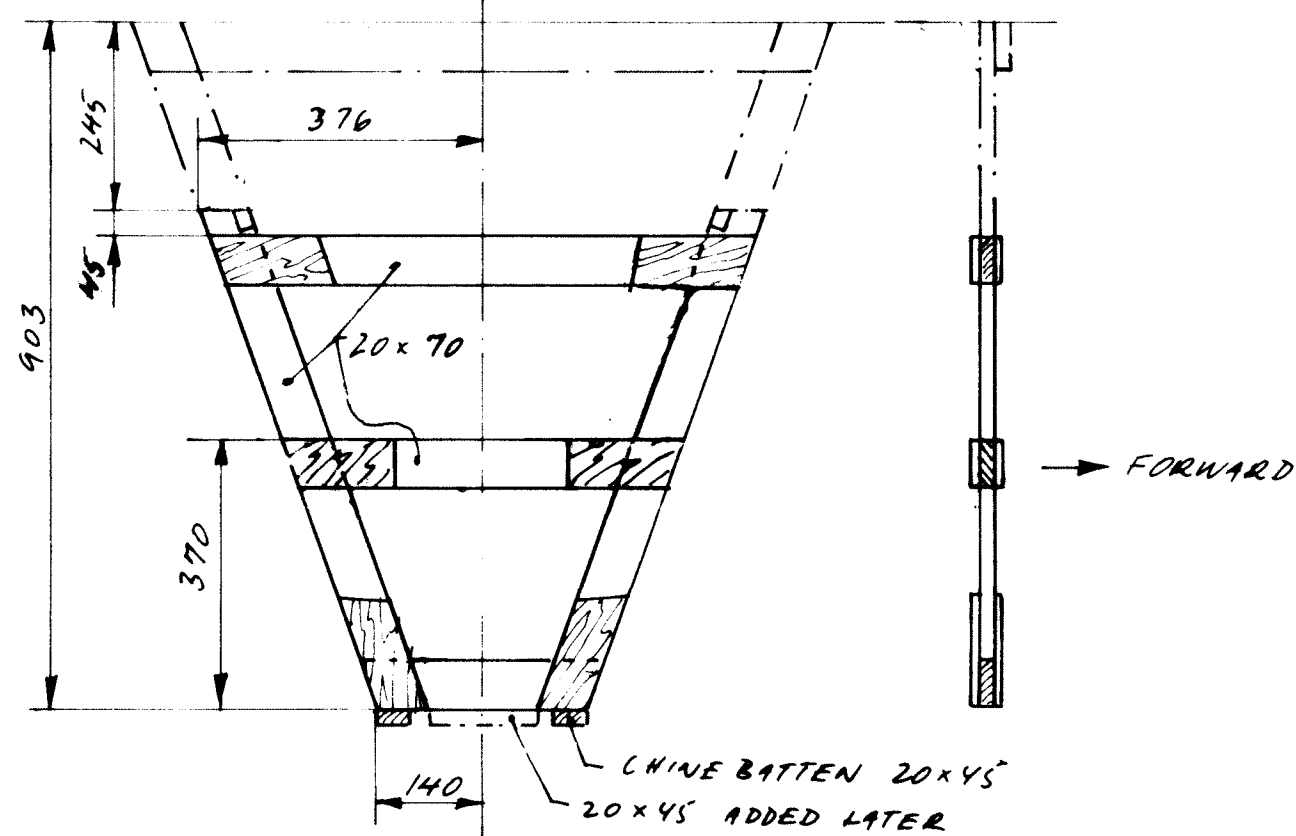
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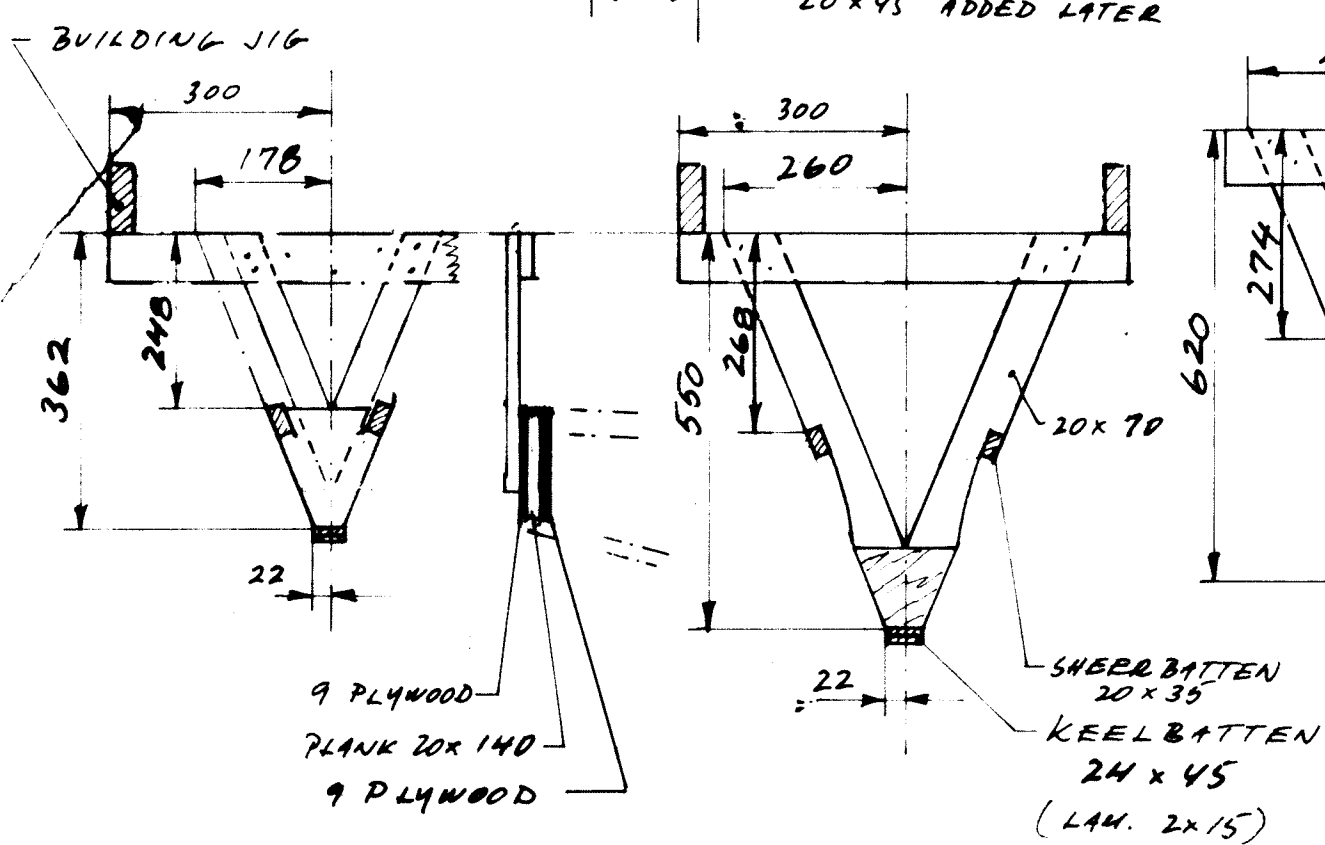
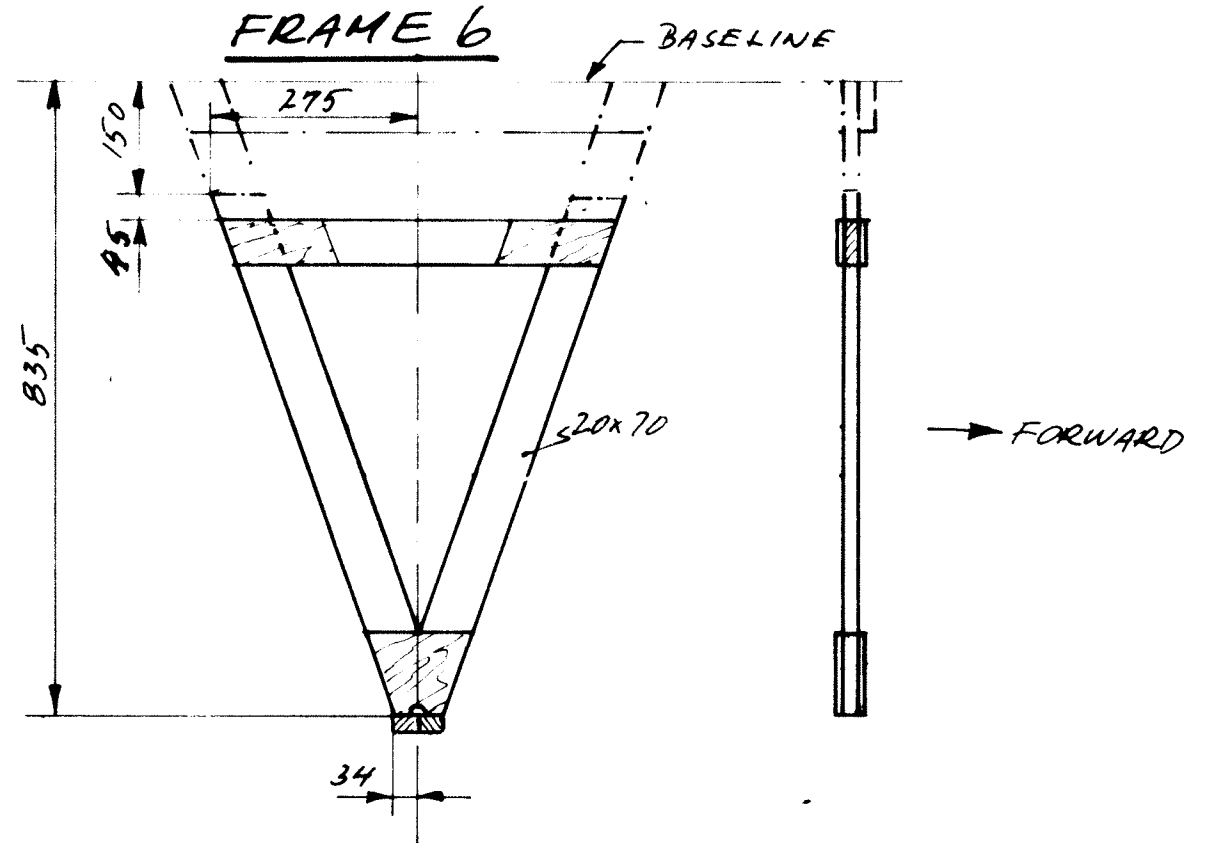
FRAME 4



FRAME 5



FRAME 6



TRANSOM

OUTRIGGER FRAMES

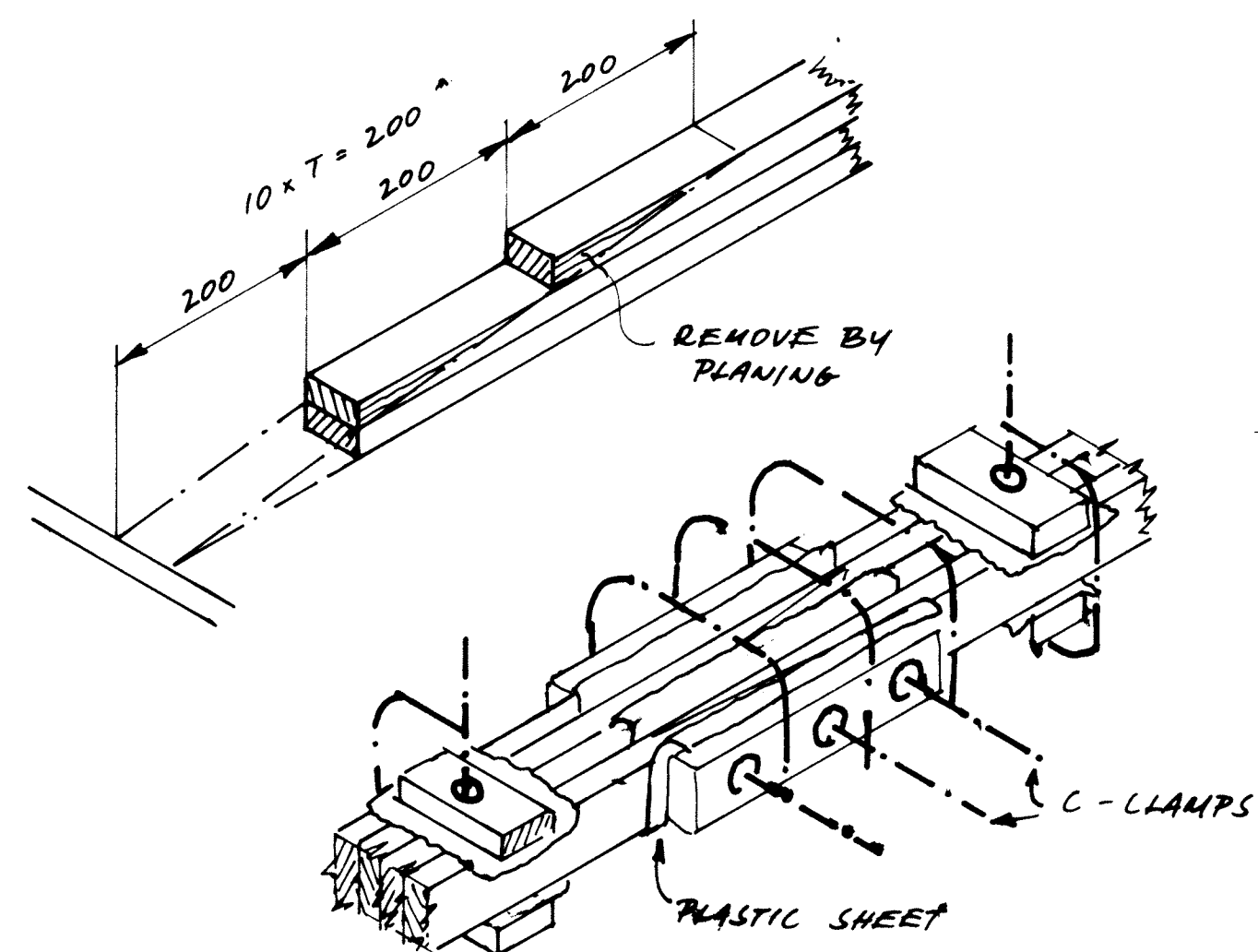
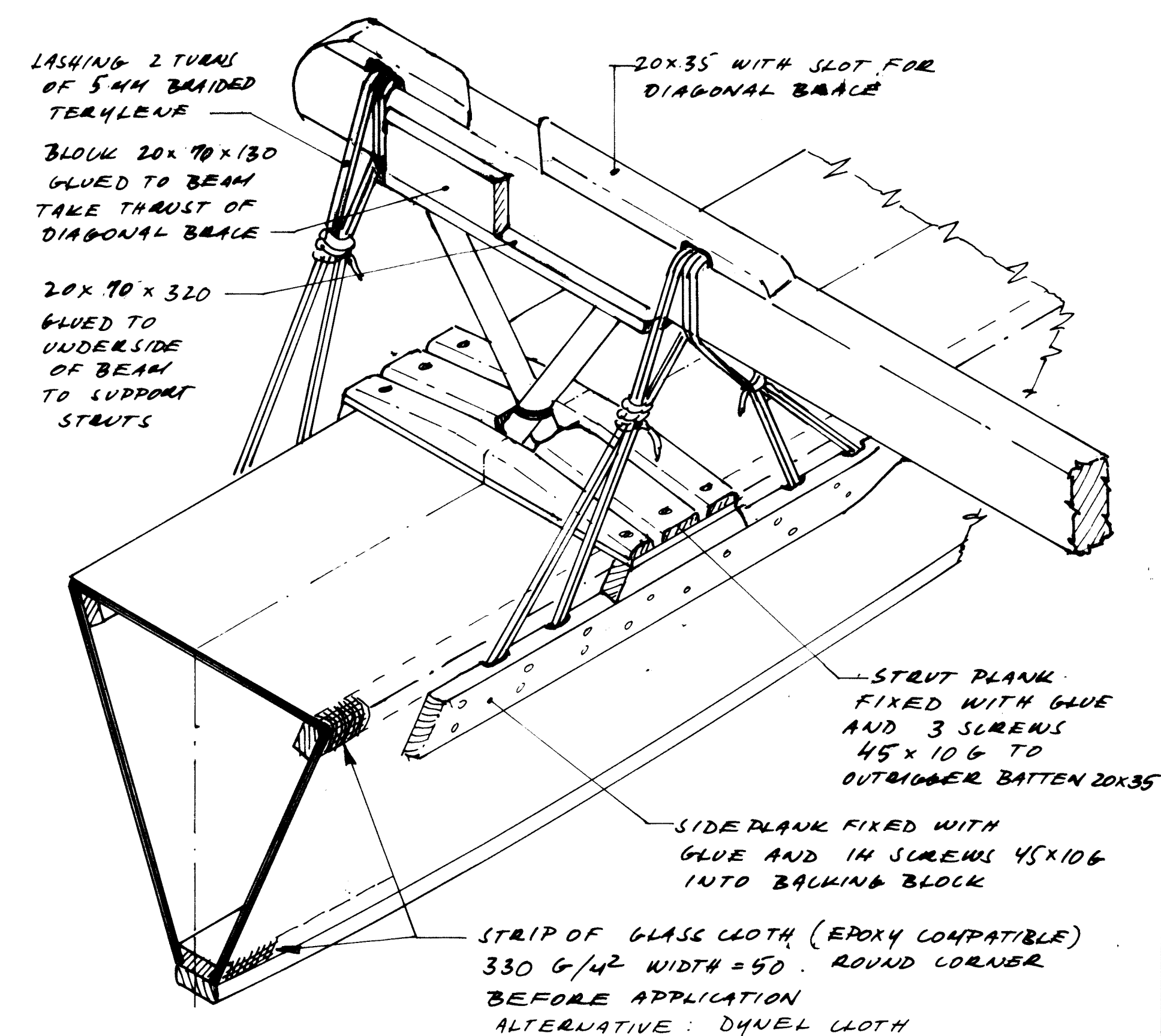
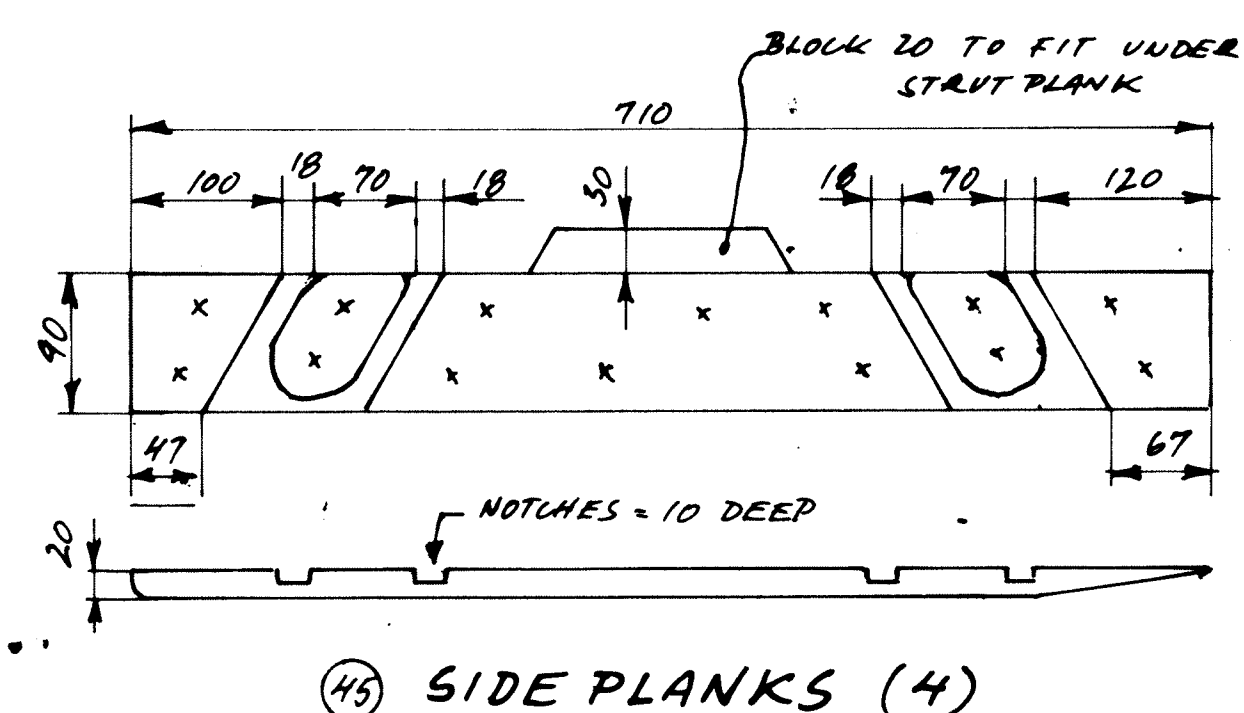
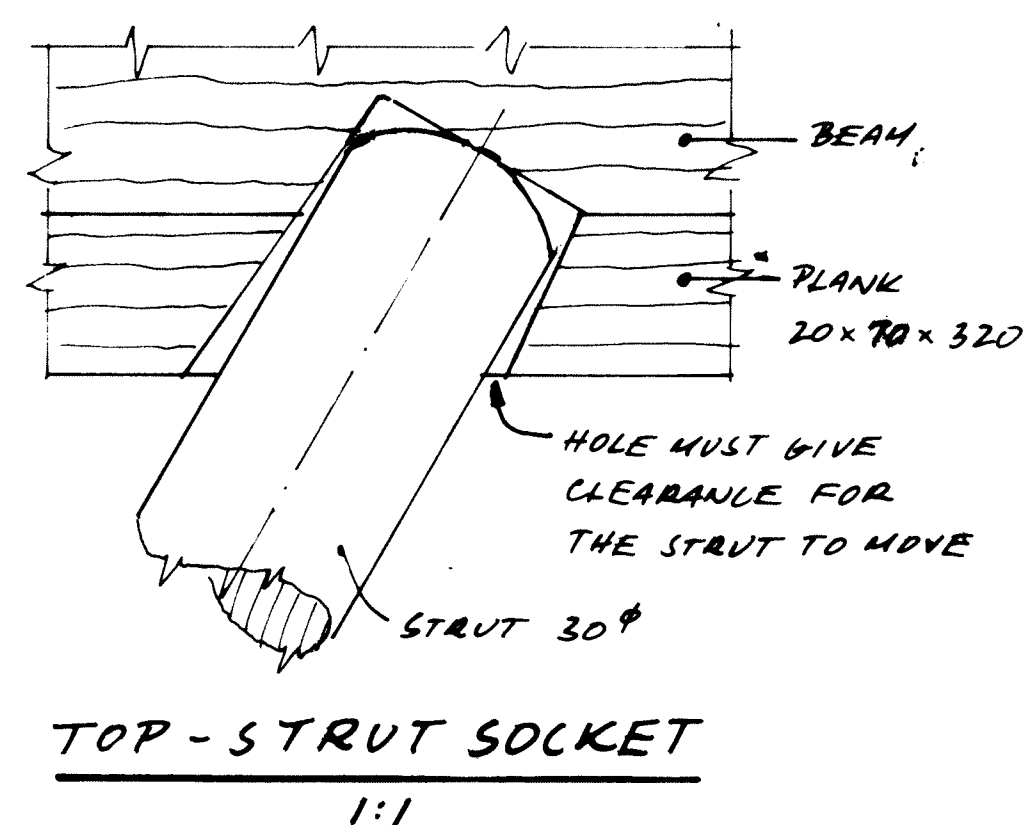
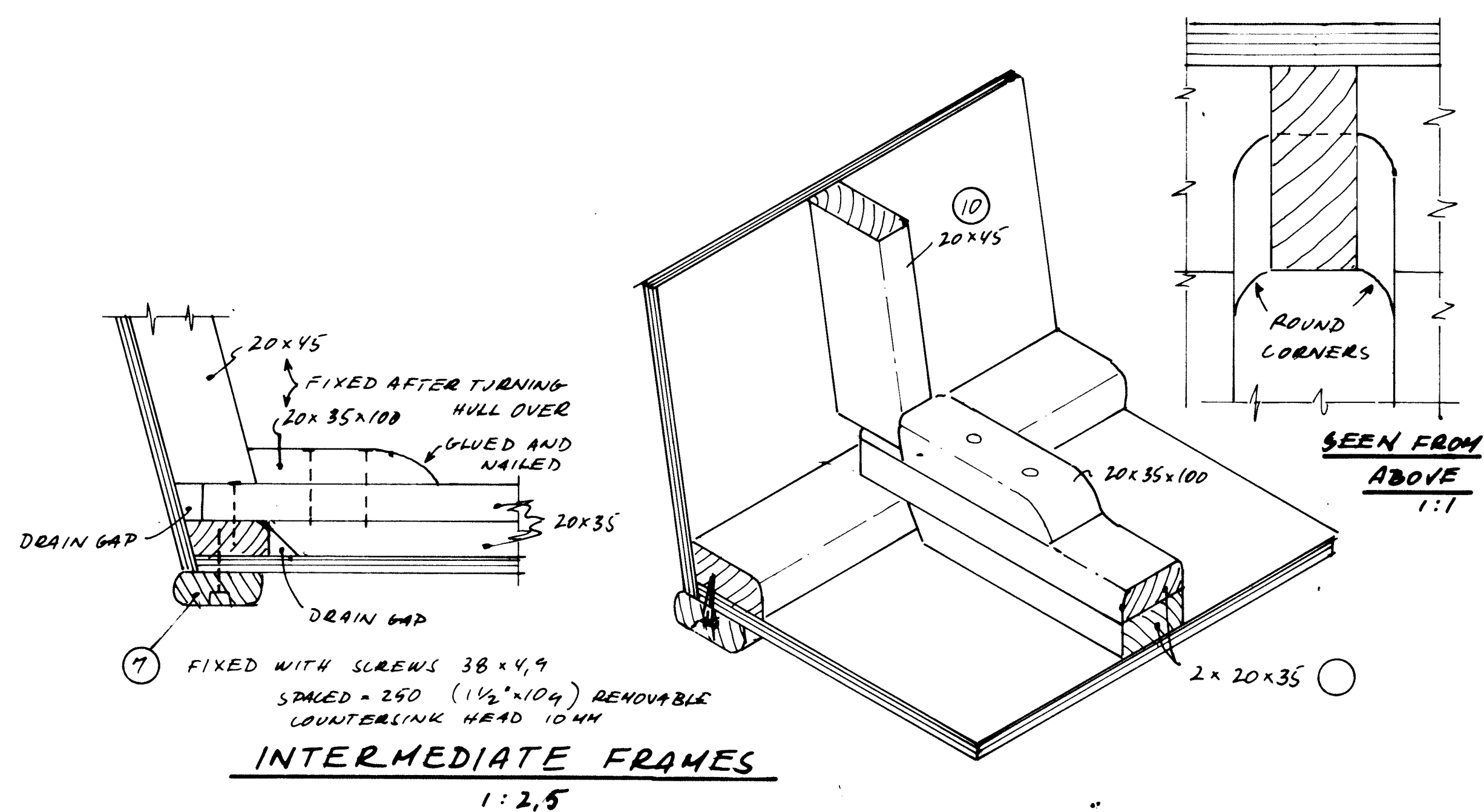
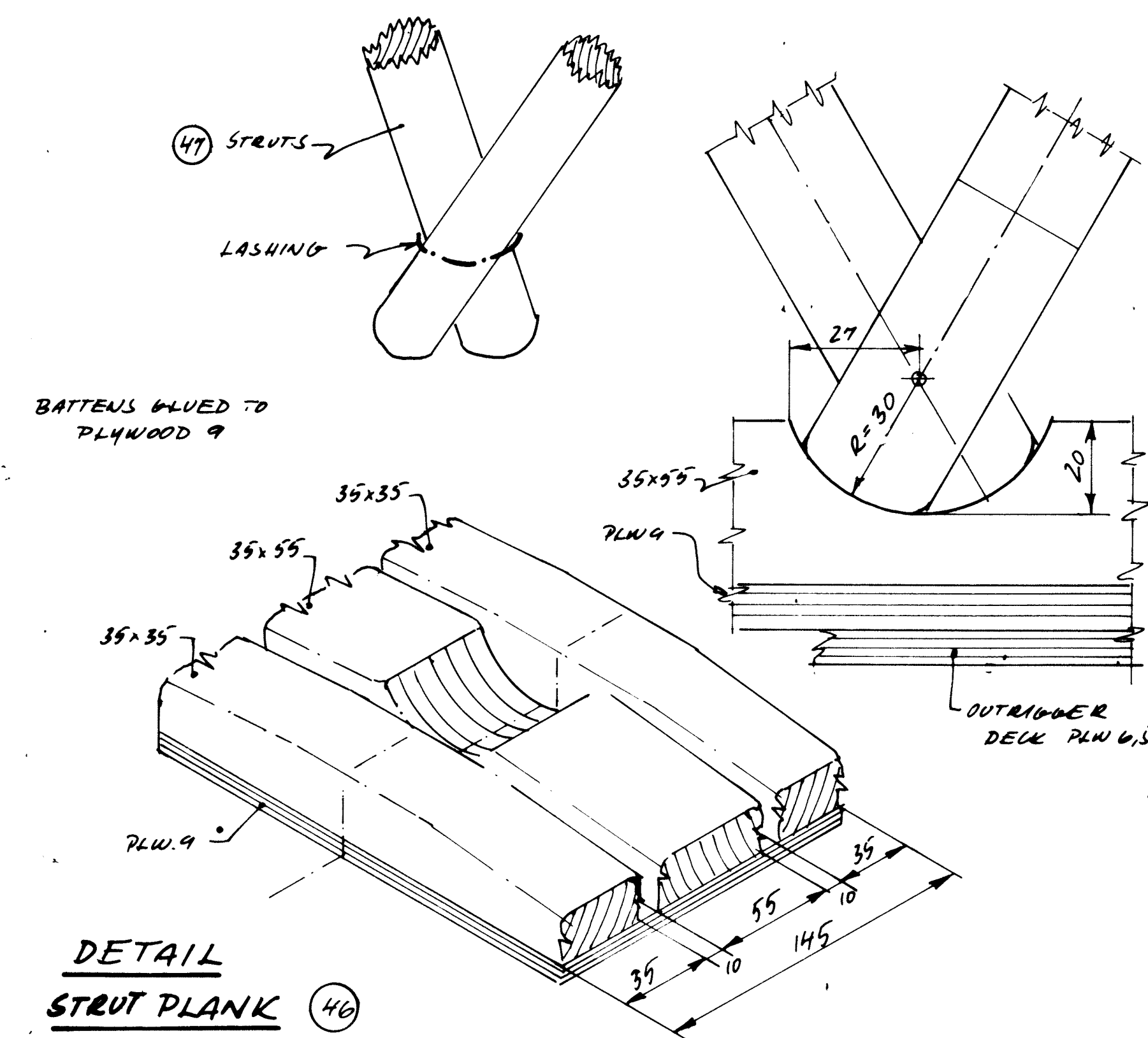
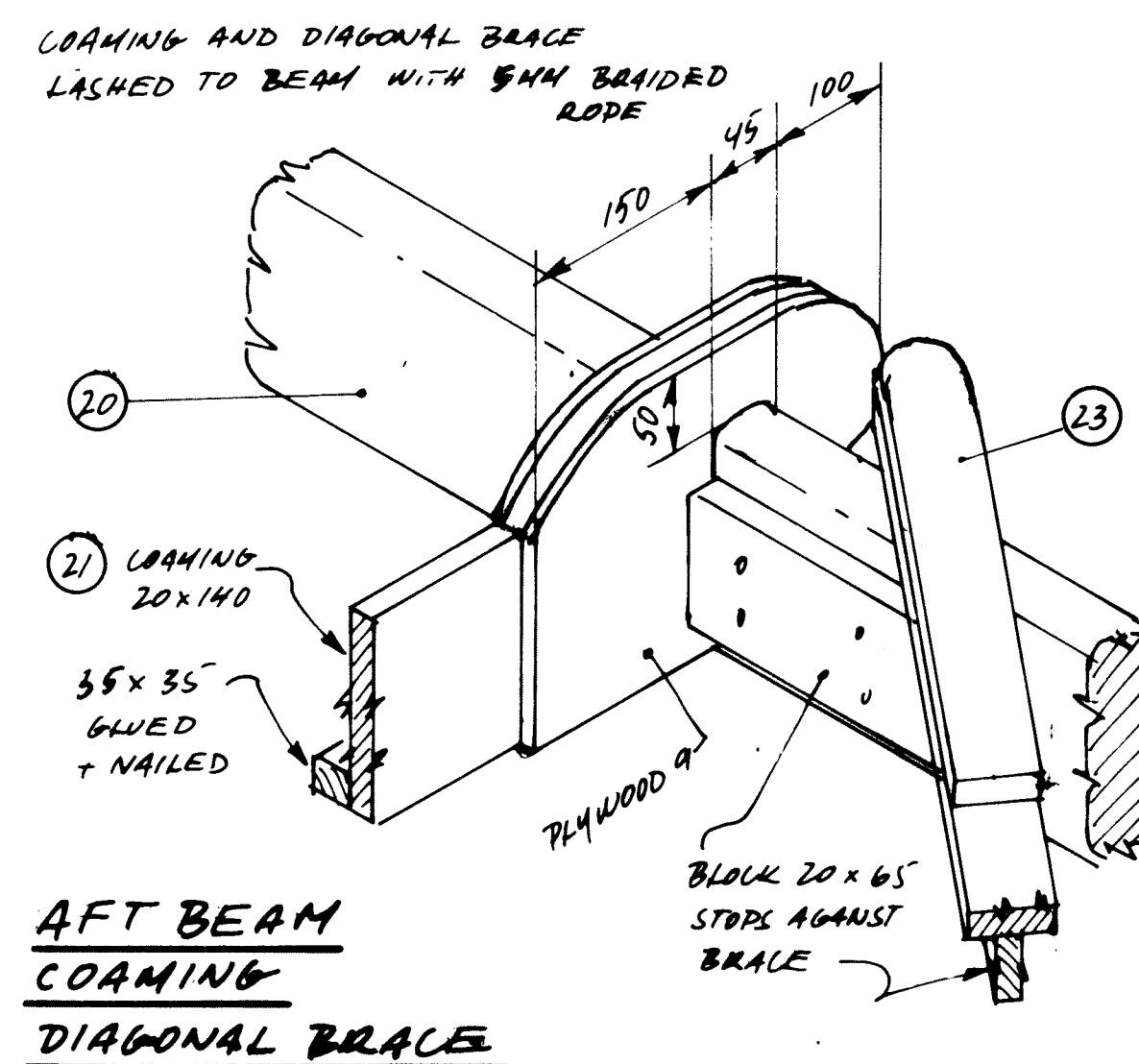
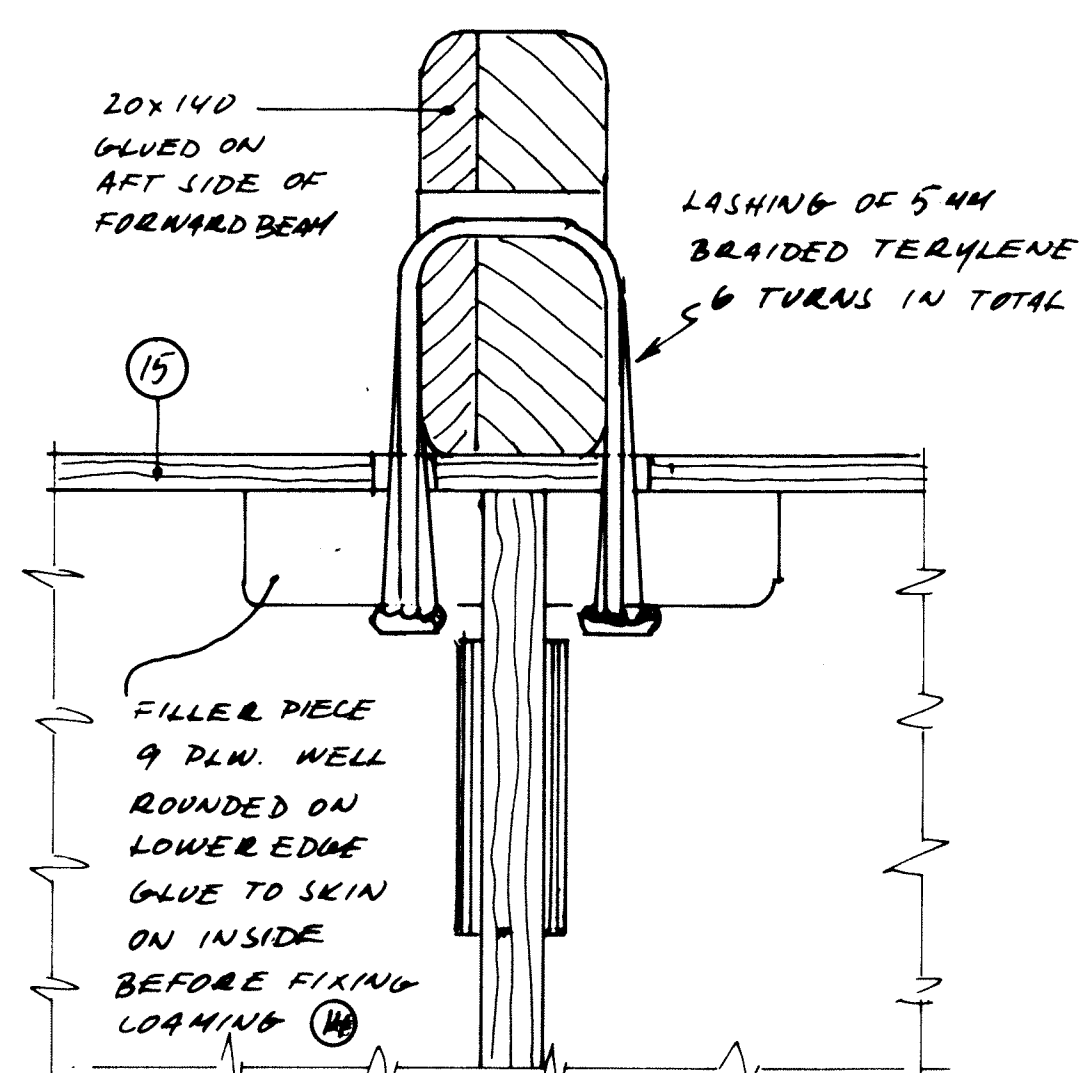
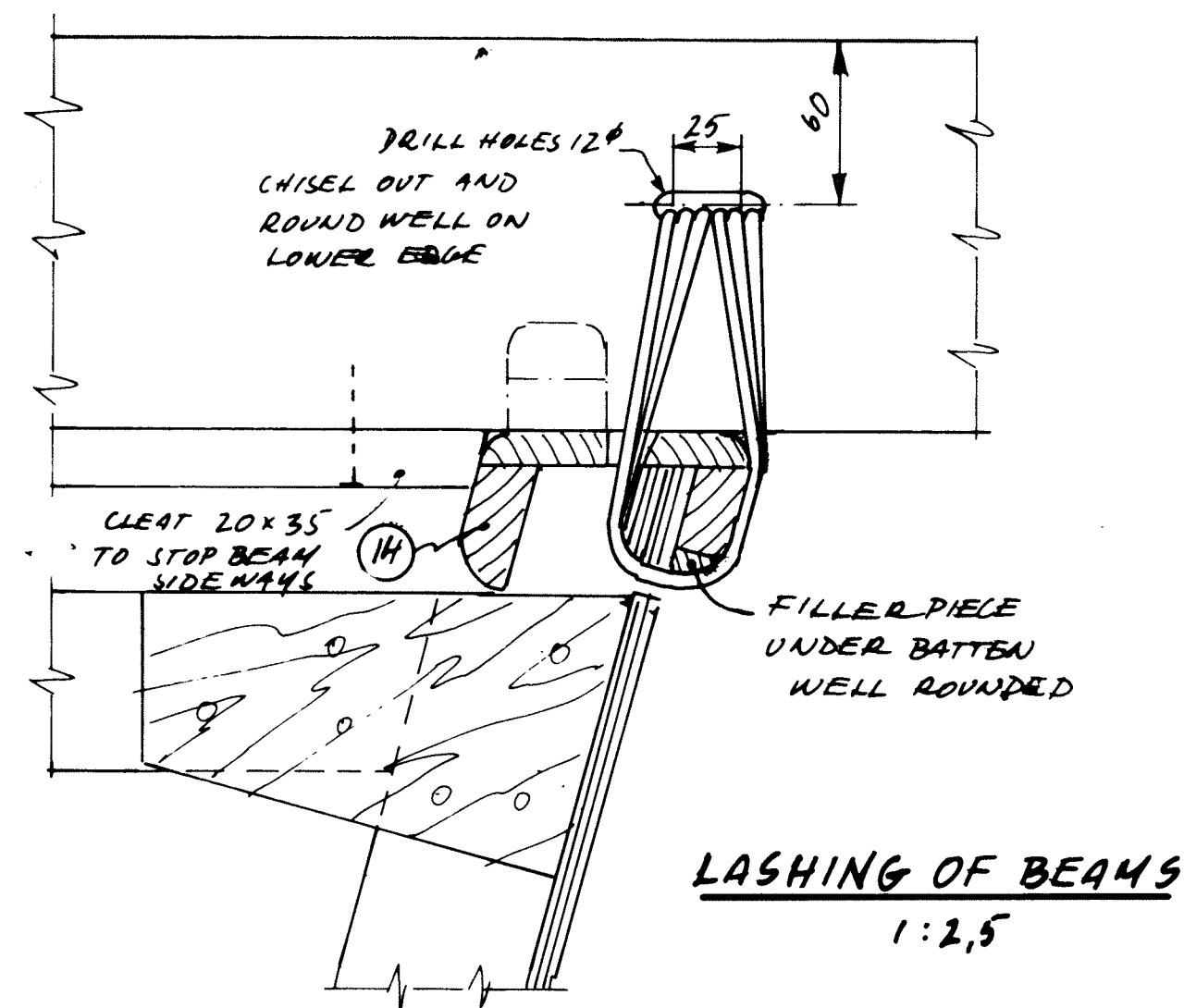
EXCEPT TRANSOM - ALL REMOVED AFTER TURNING OVER AND BEFORE FITTING DECK



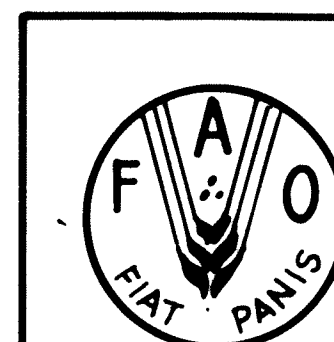
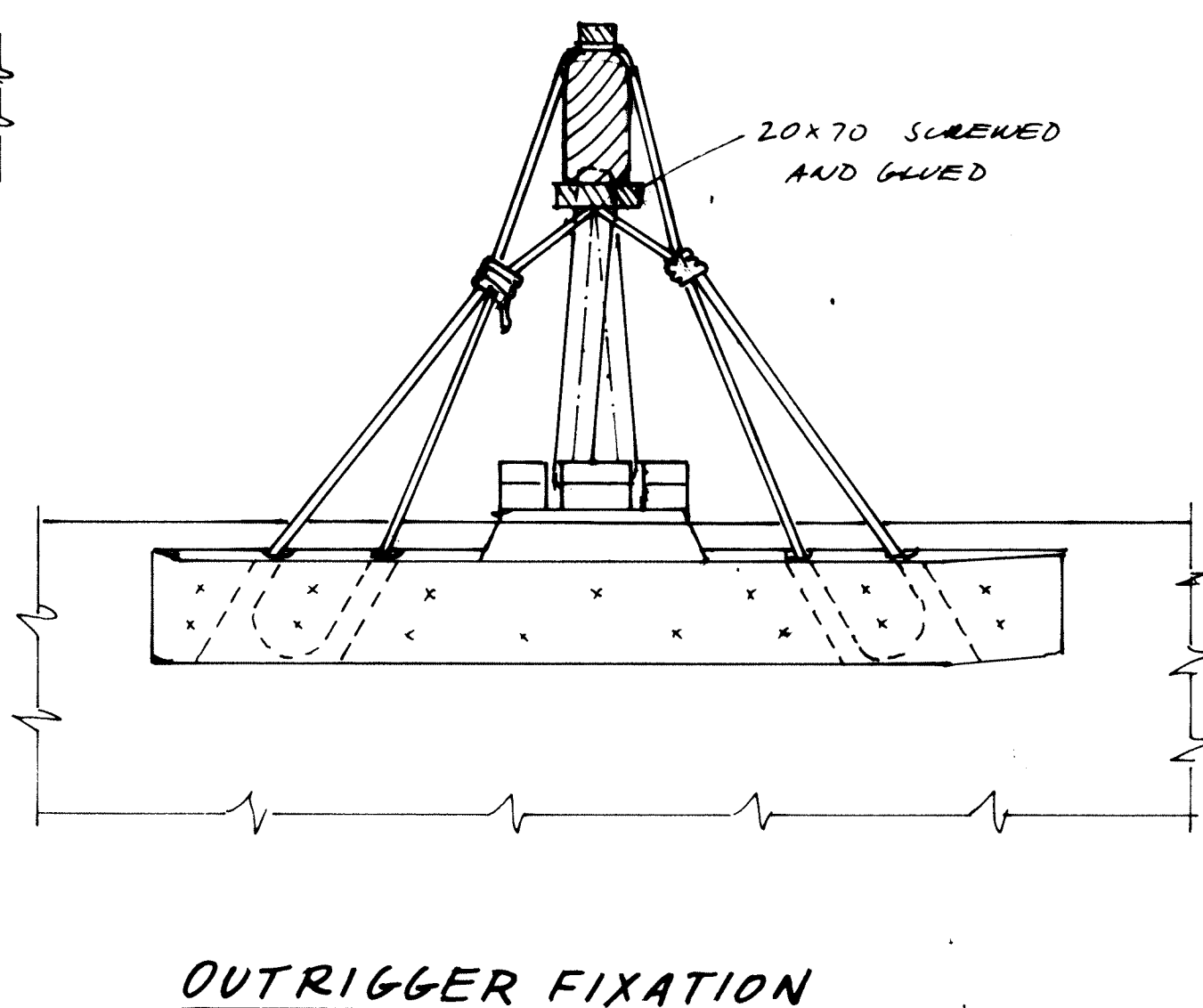
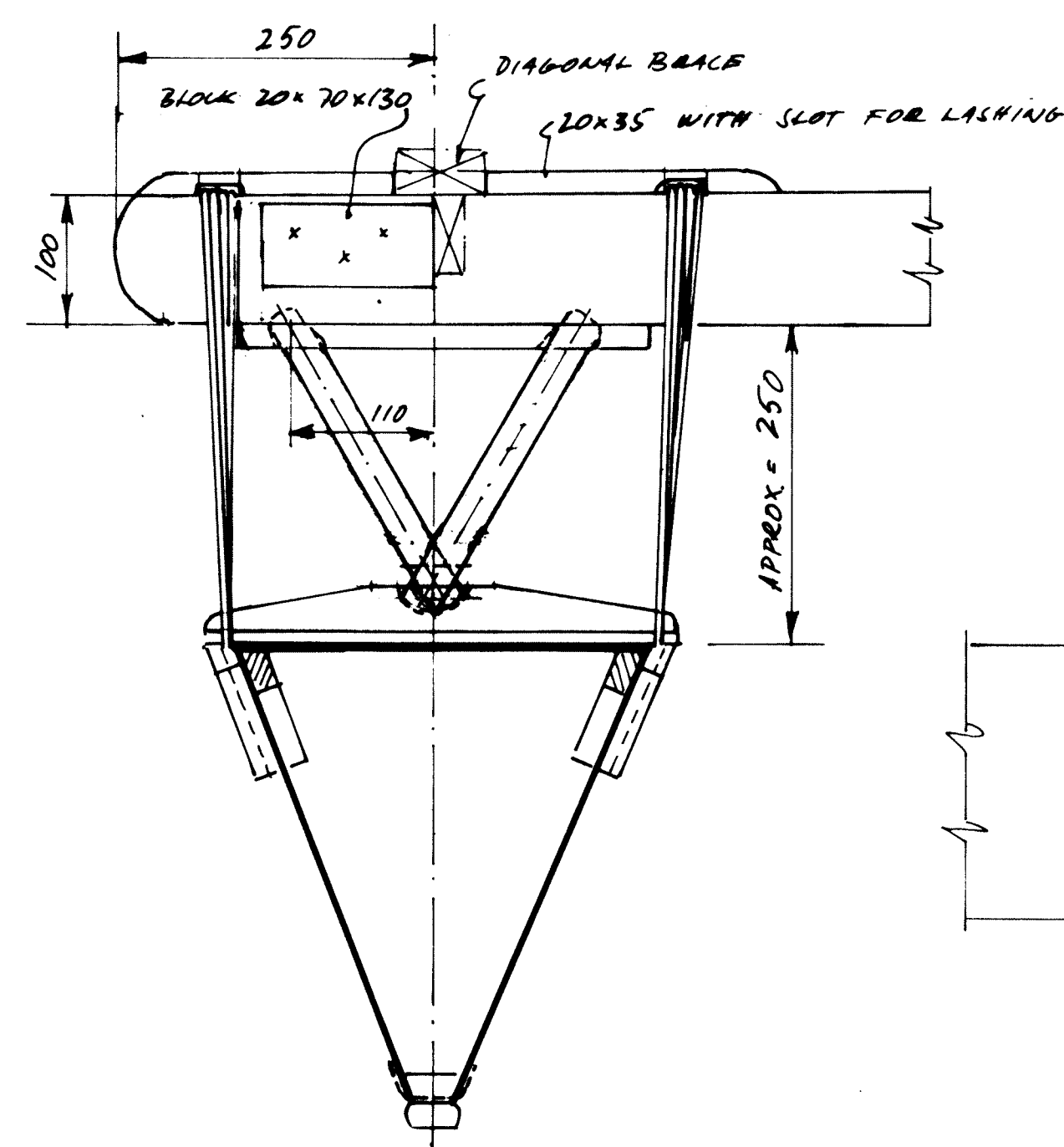
7.2 m Outrigger Canoe

FRAMES

SCALE = 1:10	DESIGN NO.	DRAWG. NO.
DESIGN: Ø. Gulbraundeen	KIR-4 A	3
Grimstad, Oct - 91		

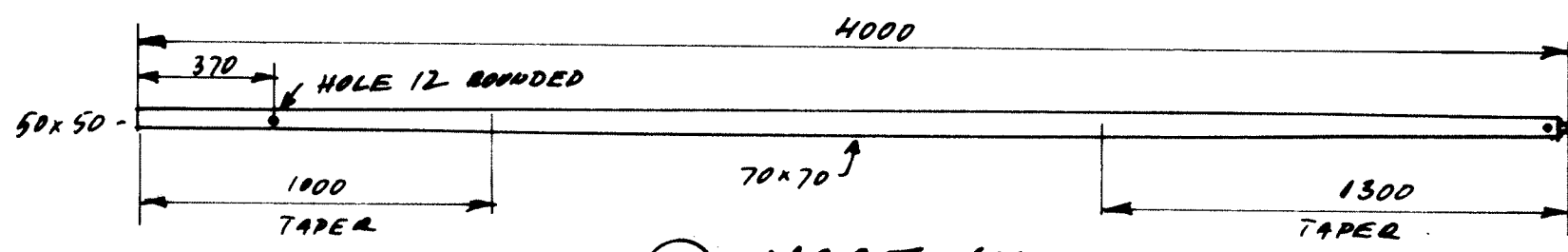


SCARFING OF BATTENS

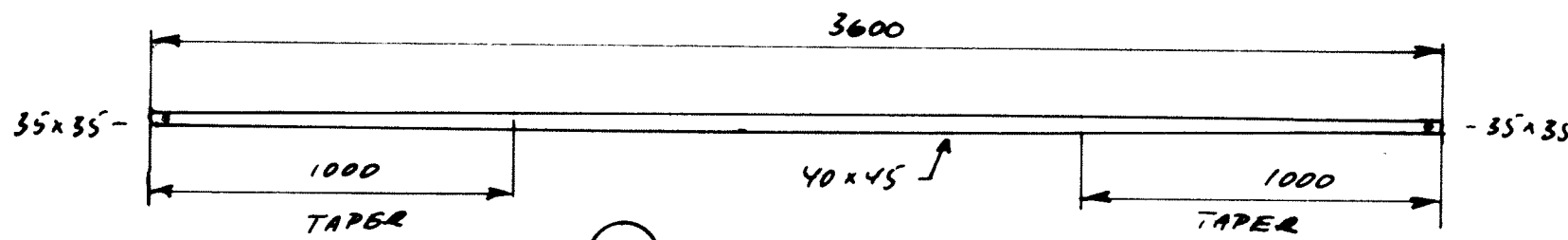


7.2m Outrigger Canoe DETAILS

SCALE: VARIOUS	DESIGN NO.	DEMP. NO.
DESIGN: P. Can/Granville	KIR-4 A	5
GRANVILLE, October 1991		

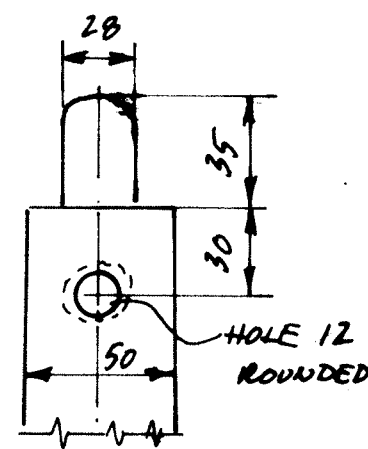


25 MAST (1)

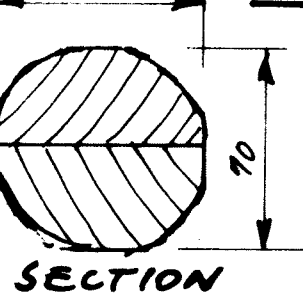


26 SPRIT (2)

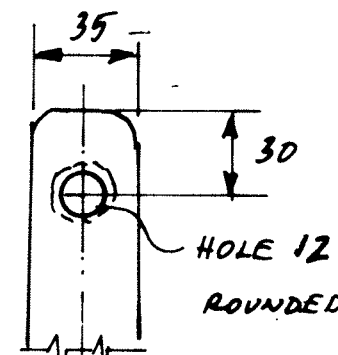
CAN ALSO BE MADE FROM BAMBOO



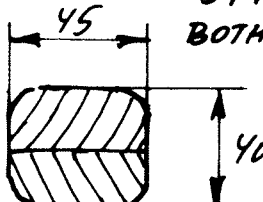
MAST TOP



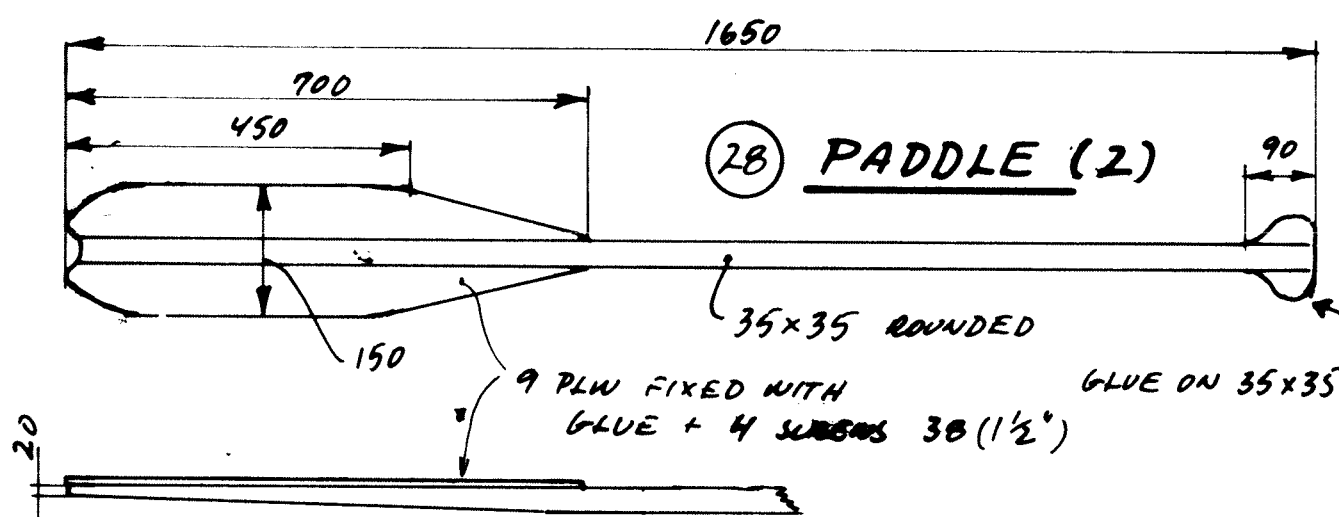
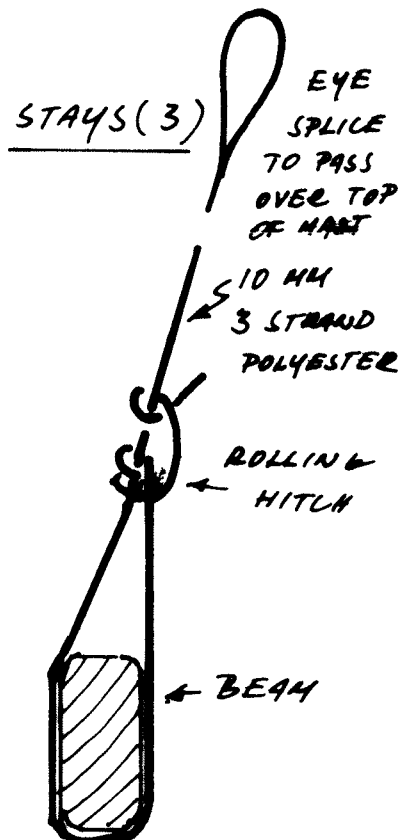
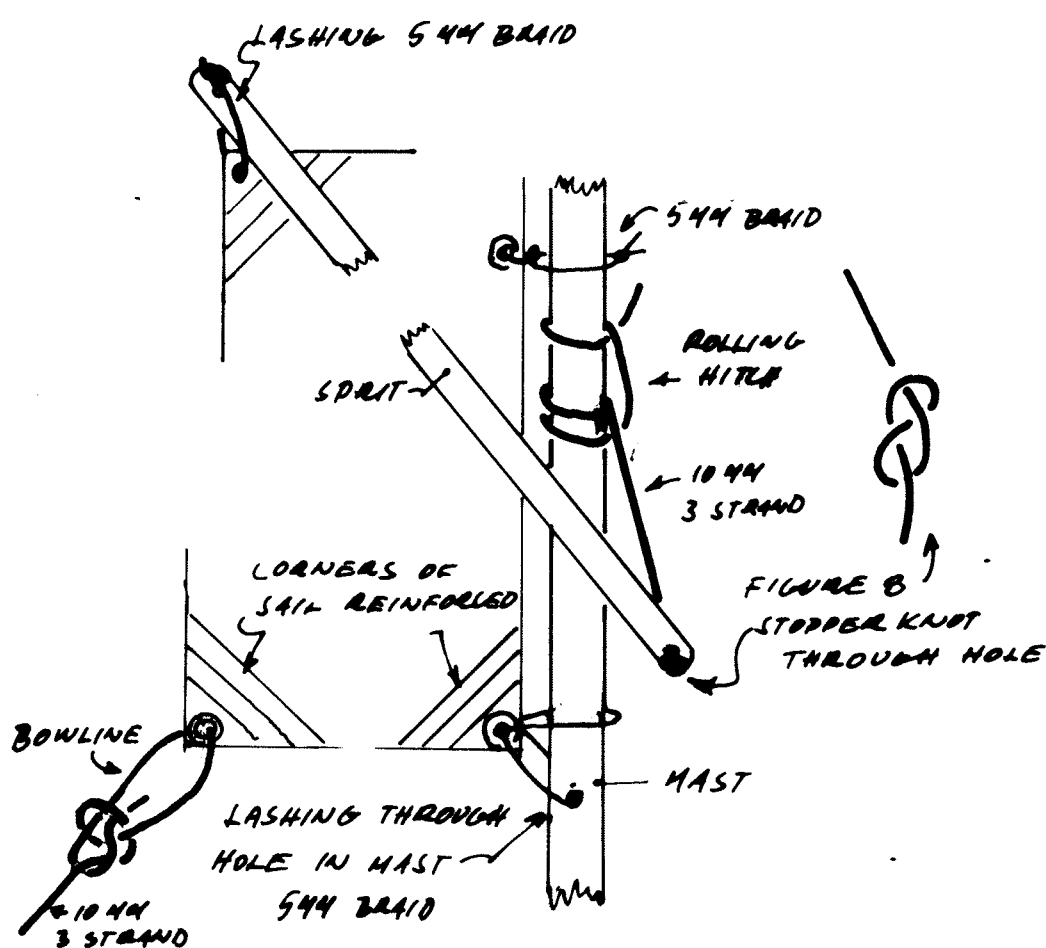
SECTION



SPRIT SAME IN BOTH ENDS



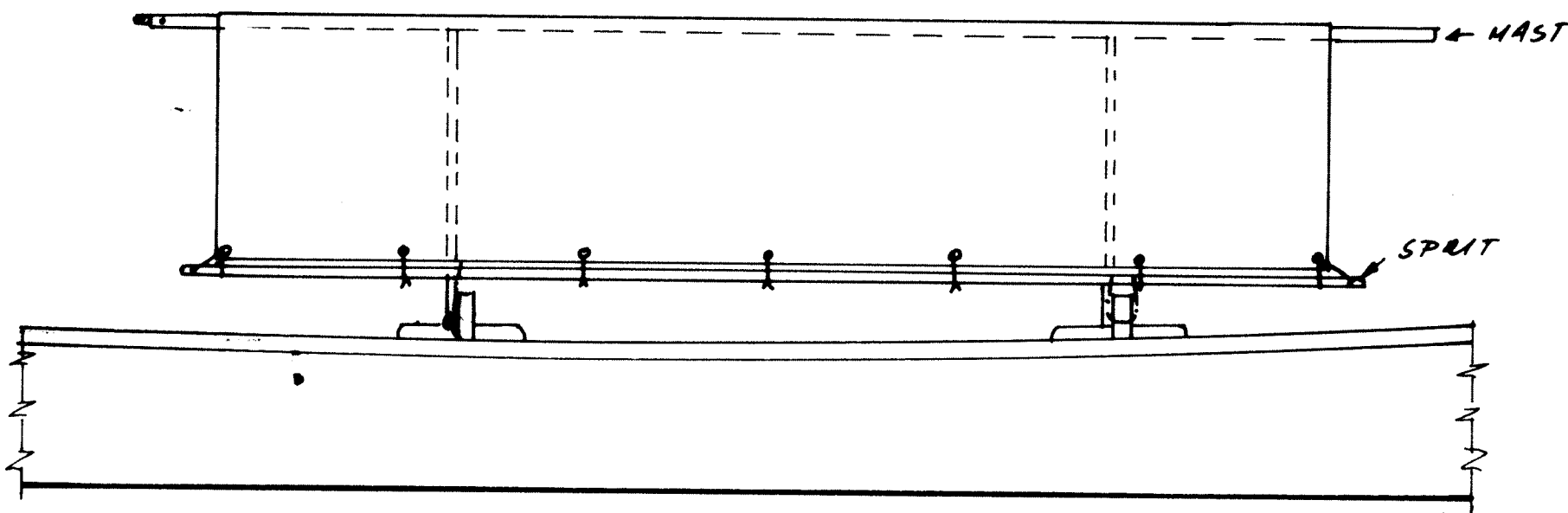
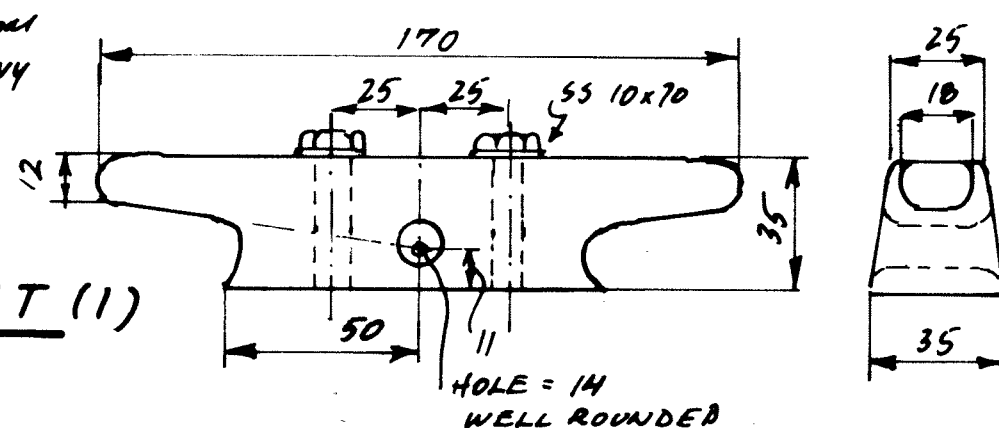
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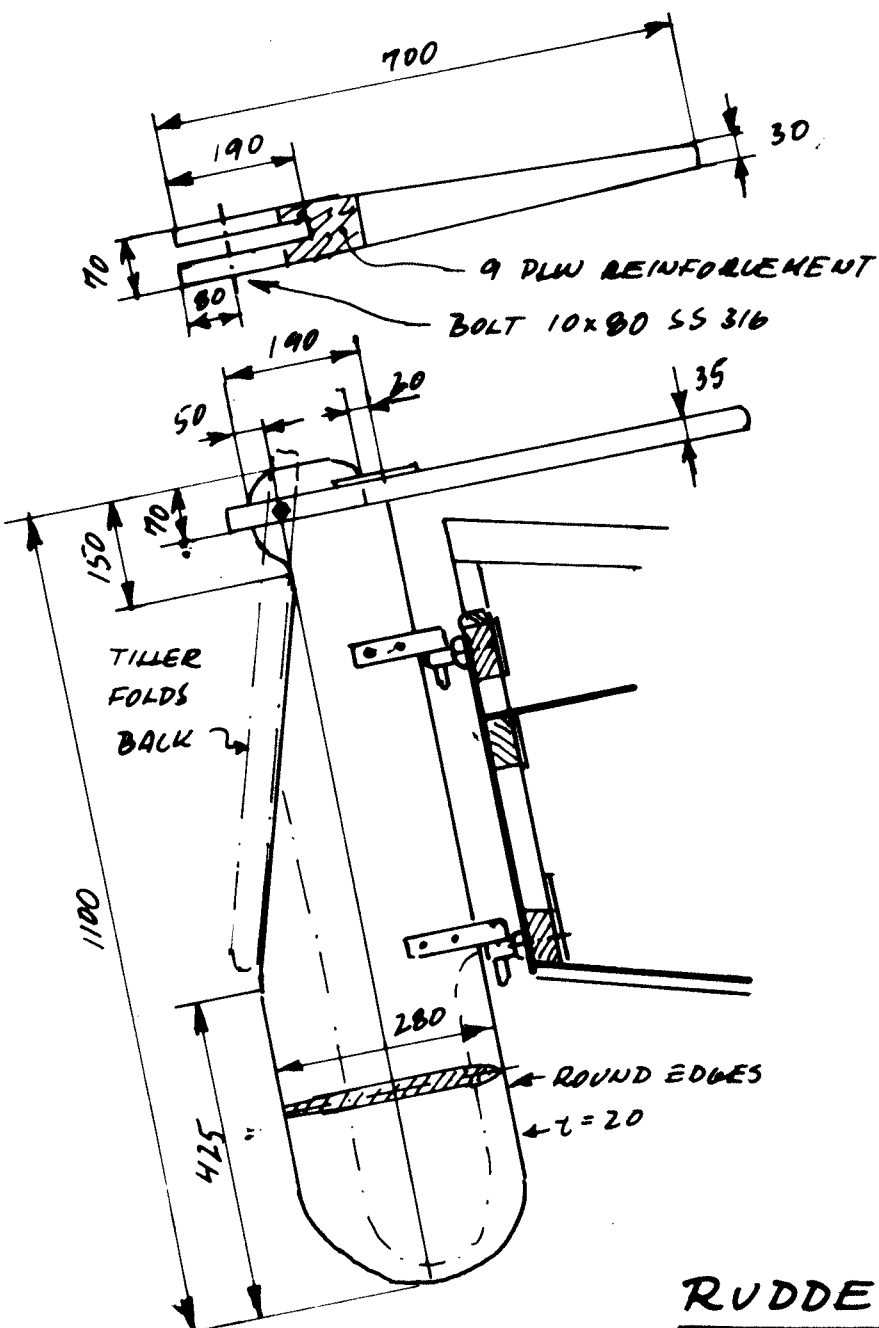
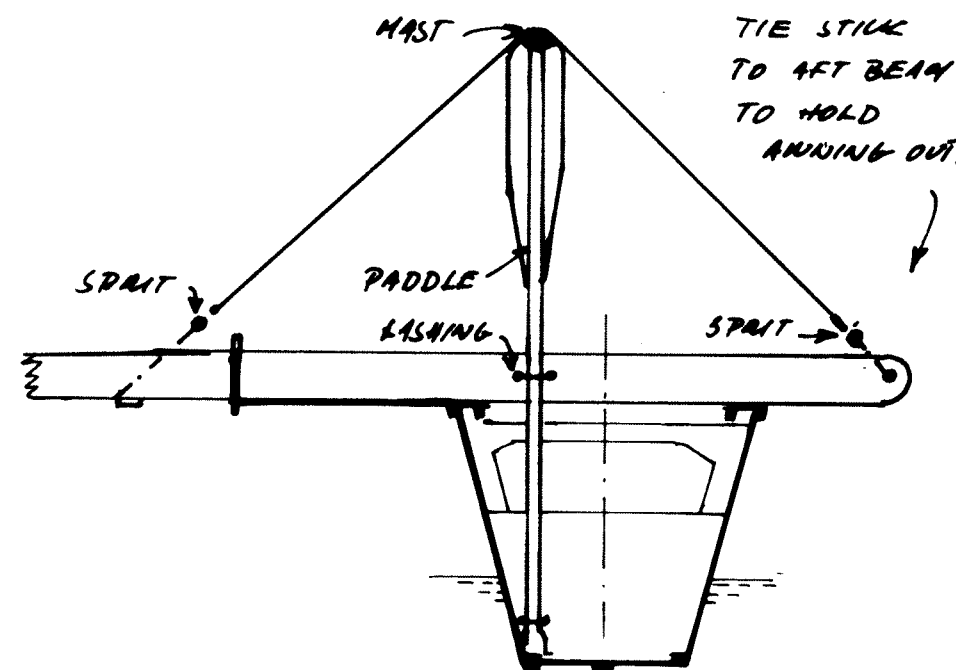
28 PADDLE (2)

MAKE FROM HARD, HEAVY TIMBER

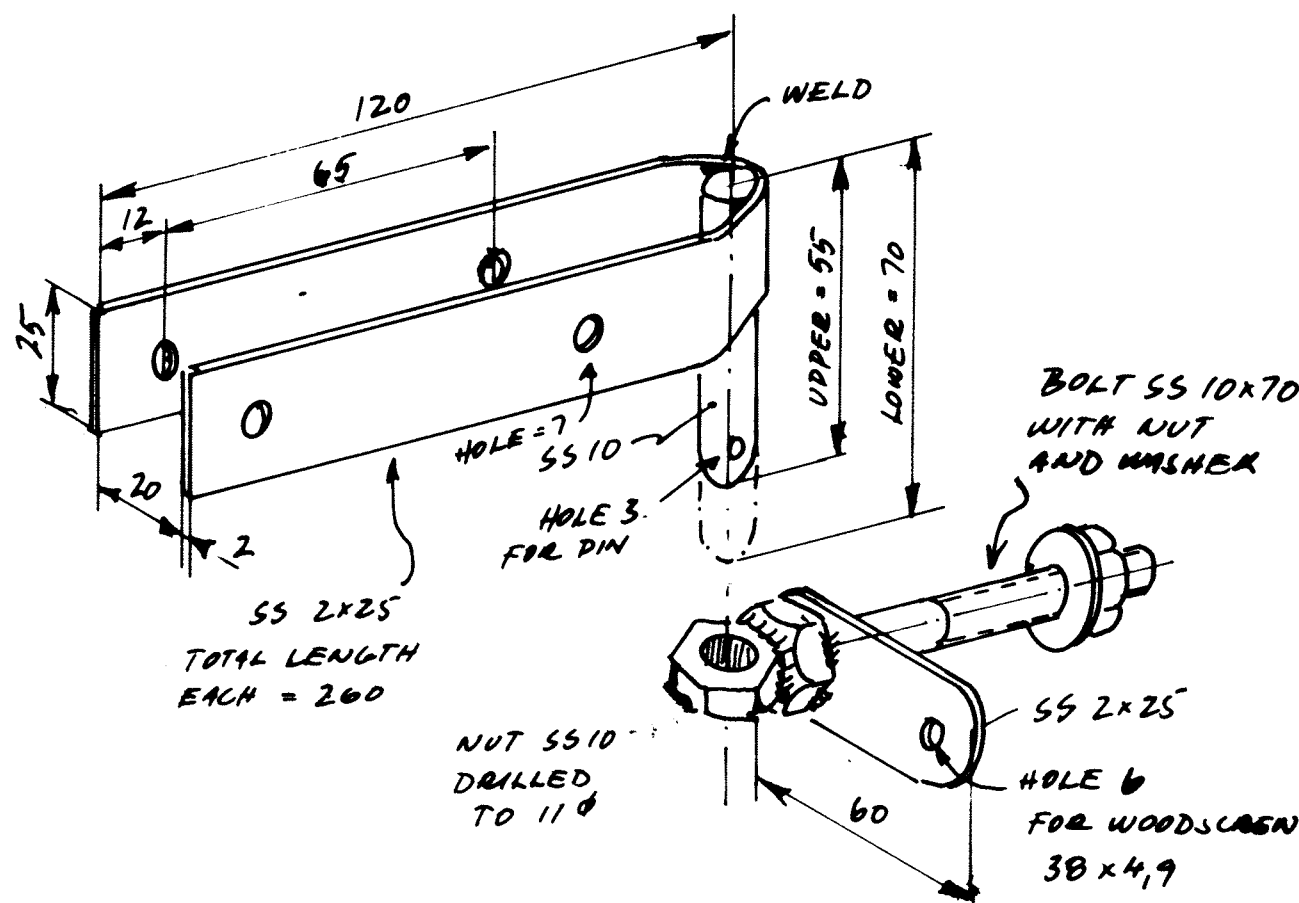
CLEAT (1)



SAIL RIGGED AS AWNING



RUDDER (1)



RUDDER FITTINGS (2)



7.2 m Outrigger Canoe EMERGENCY SAILRIG / AWNING

SCALE:

DESIGN: Ø. Gulbransen

GRIMSTAD, OCT. 1991

DESIGN NO.

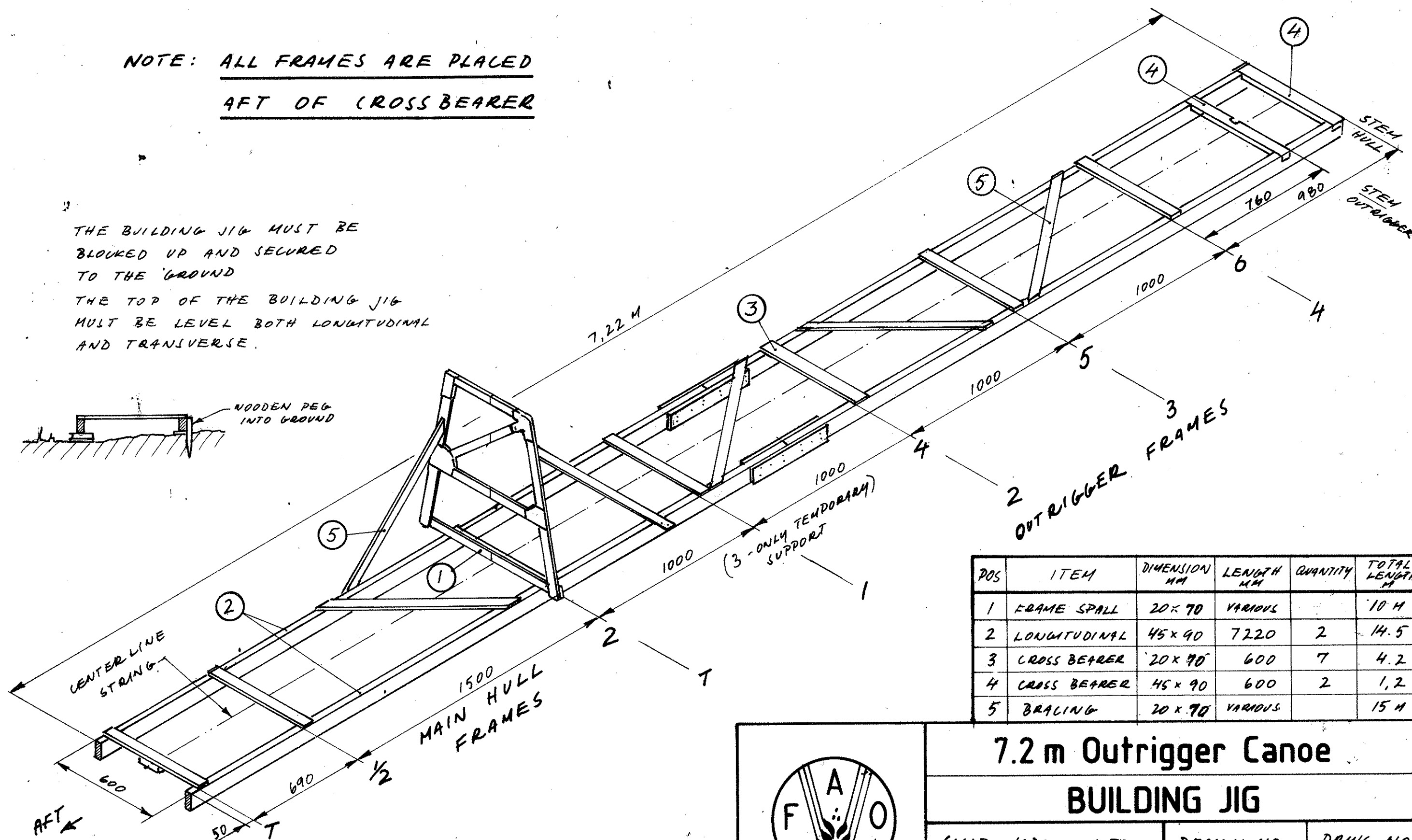
KIR-4 A

DRAW. NO.

6

NOTE: ALL FRAMES ARE PLACED
AFT OF CROSS BEARER

THE BUILDING JIG MUST BE
BLOCKED UP AND SECURED
TO THE GROUND
THE TOP OF THE BUILDING JIG
MUST BE LEVEL BOTH LONGITUDINAL
AND TRANSVERSE.



POS	ITEM	DIMENSION MM	LENGTH MM	QUANTITY	TOTAL LENGTH M
1	FRAME SPALL	20 x 70	VARIOUS		10 M
2	LONGITUDINAL	45 x 90	7220	2	14.5
3	CROSS BEARER	20 x 70	600	7	4.2
4	CROSS BEARER	45 x 90	600	2	1.2
5	BRACING	20 x 70	VARIOUS		15 M



7.2 m Outrigger Canoe BUILDING JIG

SCALE: 1:20 ISOMETRIC

DESIGN NO.

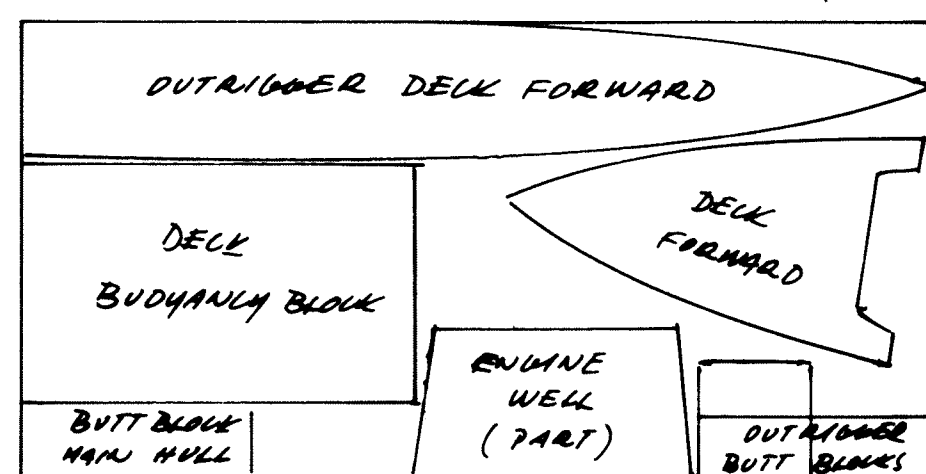
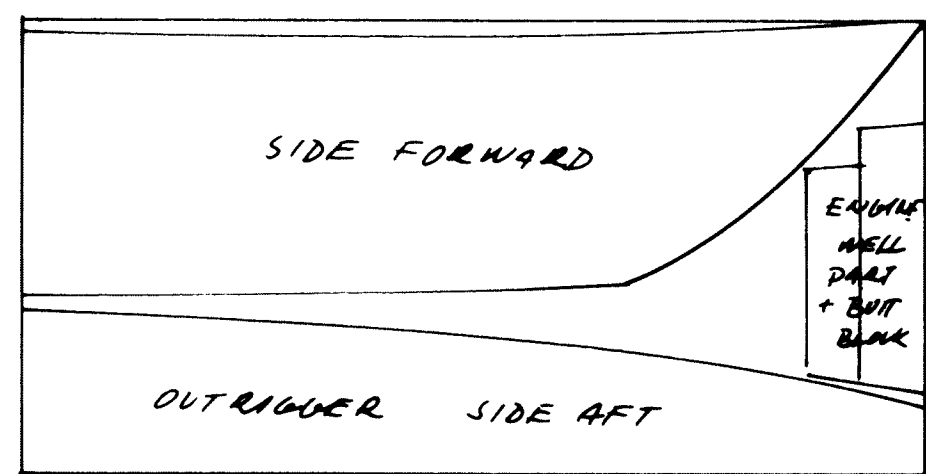
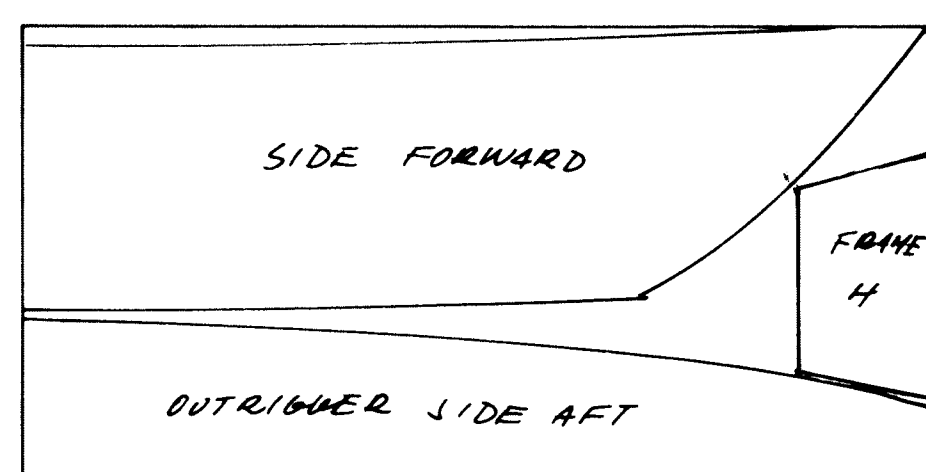
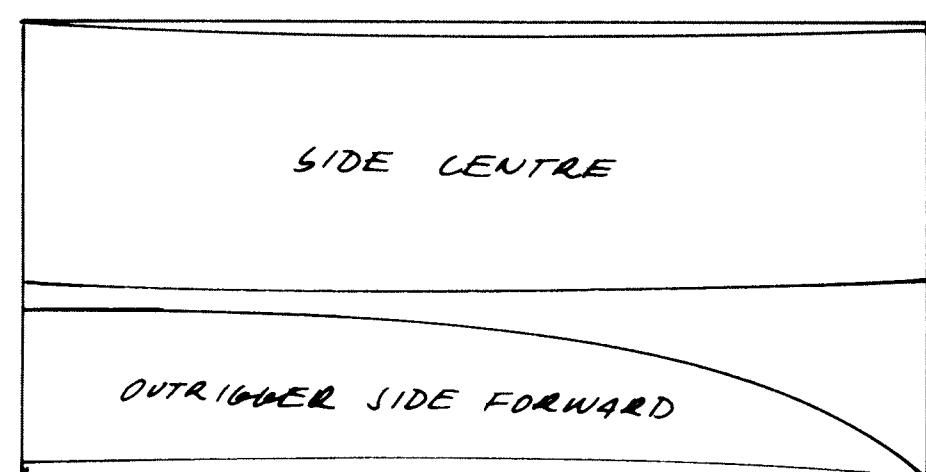
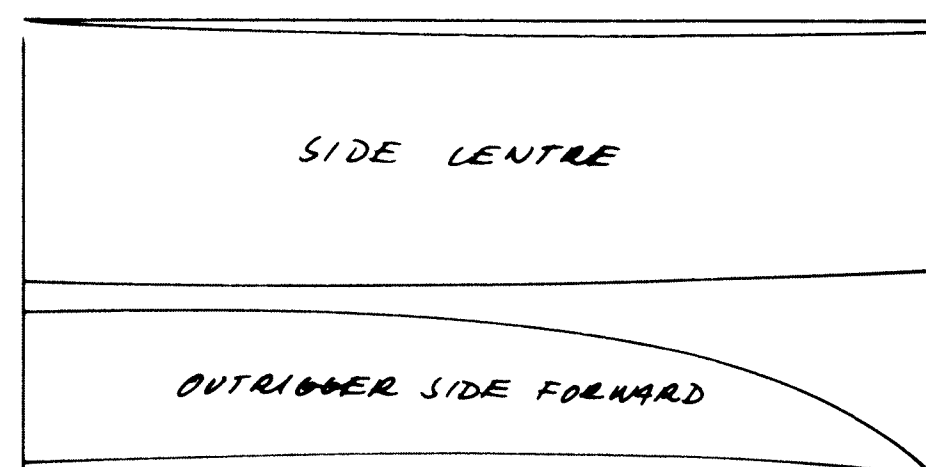
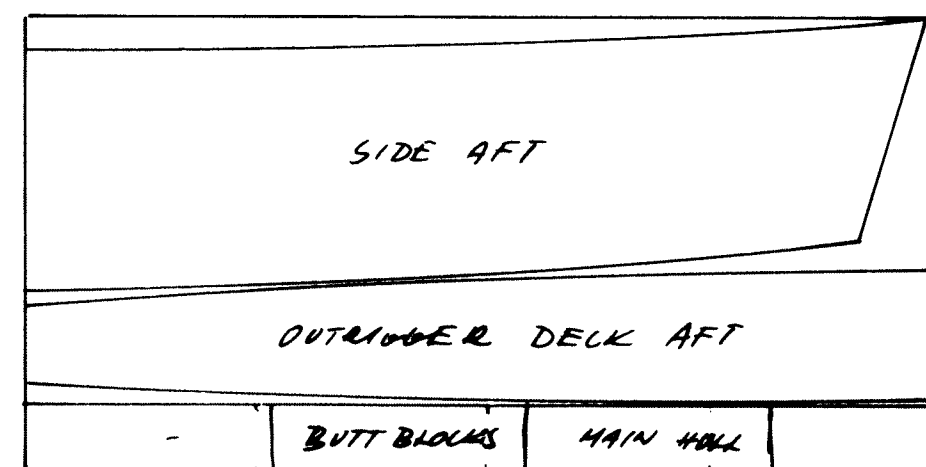
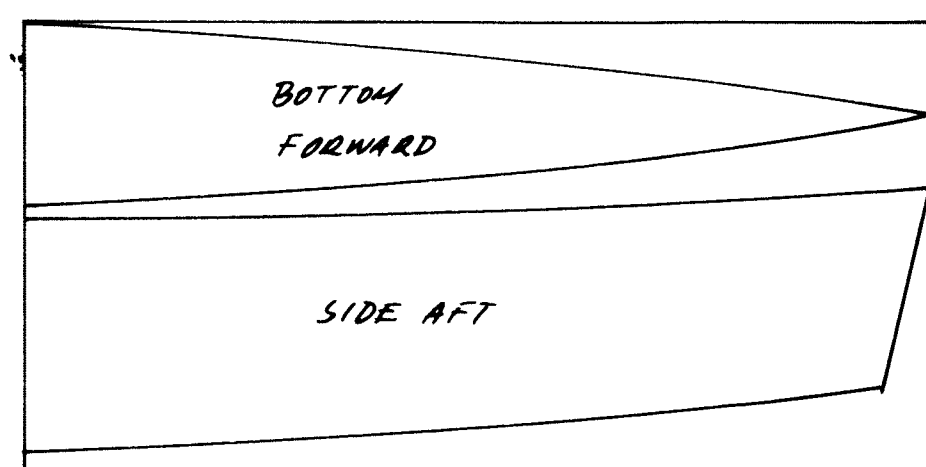
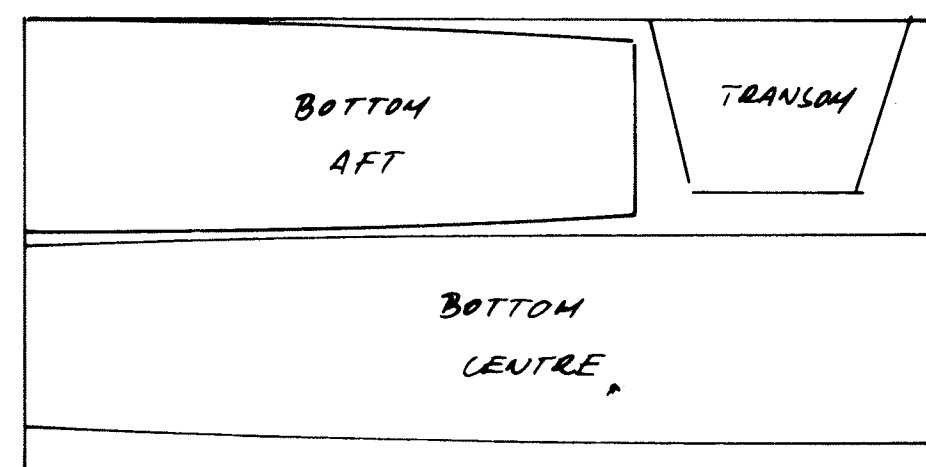
DRAWG NO.

DESIGN: Ø. Gulbrandsen

GRIMSTAD, OCT. 1991

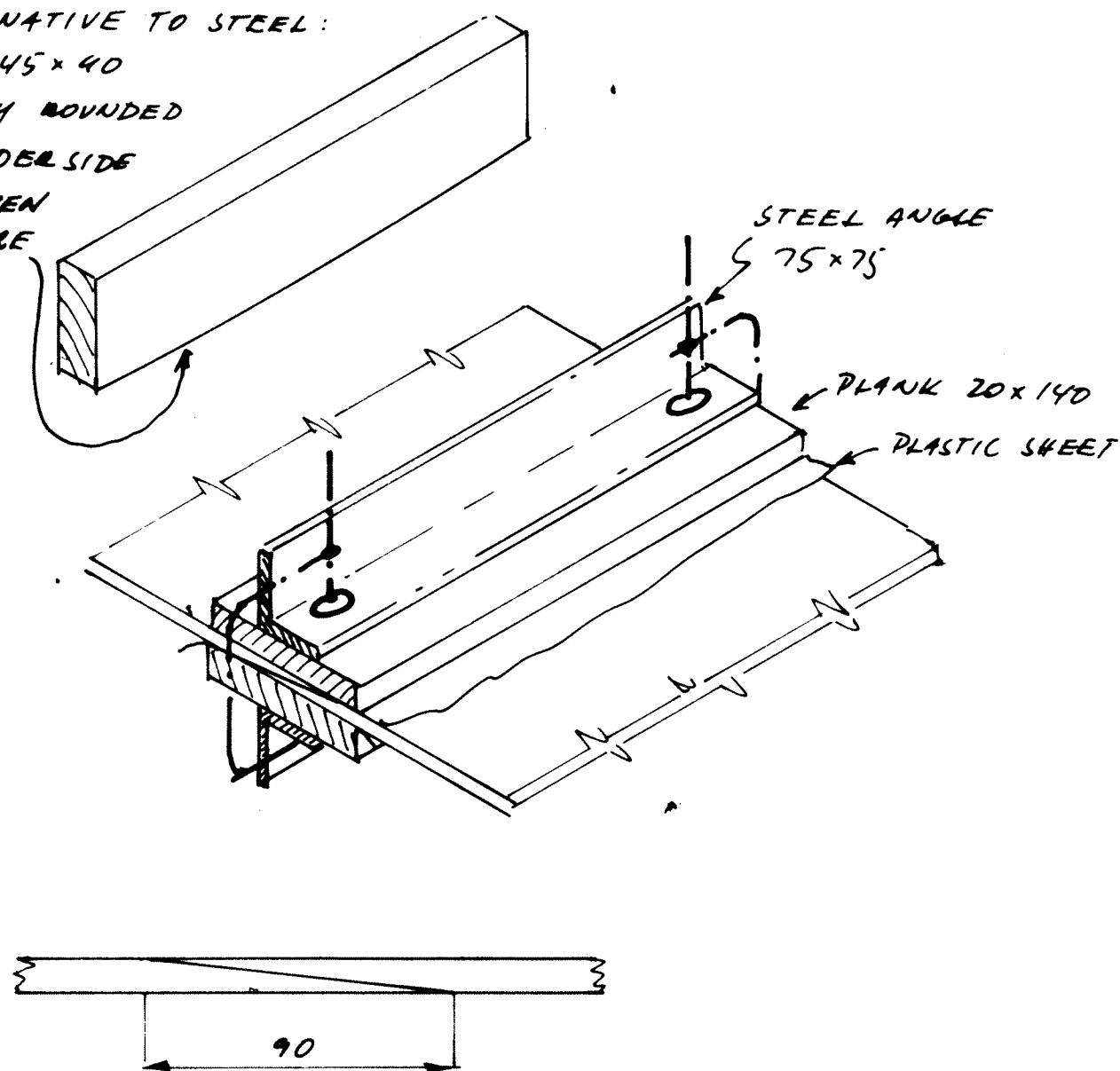
KIR 4 A

7

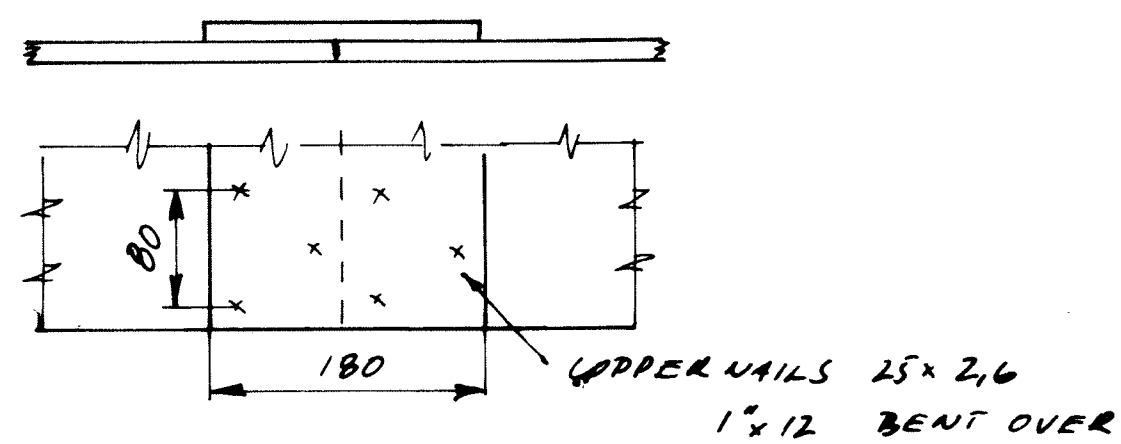


TOTAL = 8 SHEETS MARINE PLYWOOD 944x1200MM x 2400MM

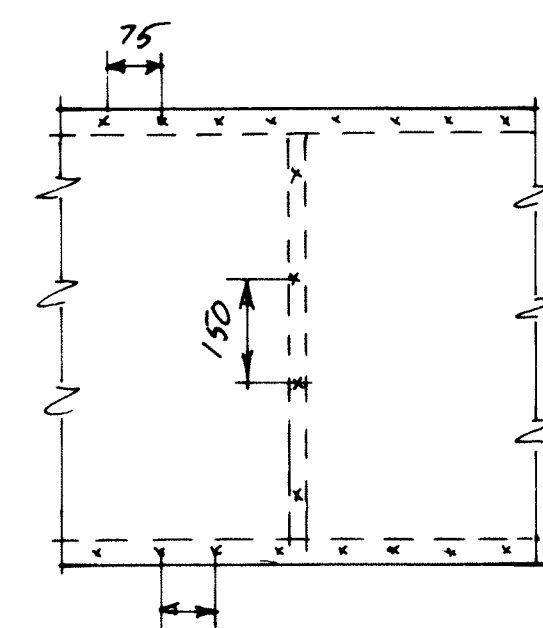
ALTERNATIVE TO STEEL:
WOOD, 45x40
SLIGHTLY BOUNDED
ON UNDER SIDE
FOR EVEN
PRESSURE



GLUED SCARF IN BOTTOM PLYWOOD



GLUED BUTT JOINT
IN SIDE PLYWOOD



SPACING OF RINGNAILS

MATERIALS

(NOT INCLUDING BUILDING JIG)

		TIMBER										FASTENINGS					
POS.	DESCRIPTION	PLANED DIMENSION, LENGTH IN METER										WOODSCREW ST. BRASS COUNTERSUNK HEAD SLOTTED		BARBED RINGNAILS BARBUE		COPPER NAILS	
		15x70	15x140	20x35	20x45	20x70	20x90	20x140	35x35	35x70	45x140	38x19 1 1/2"x10	45x19 1 3/4"x10	25x28 1"x12	45x38 1 3/4"x10	25x26 1"x12	45x33 1 3/4"x10
1	MAIN FRAMES			2,0	0,5	13,2				3,4			6	300			
2	INNER BATTEN				12,6								12				
3	INNER STEM									1,3			4				
4	INTERMED. FLOORS			6,0									12				
5	PLANKING - BOTTOM PLW.													200			
6	PLANKING SIDE PLW.													300	120		
7	CORNER PROTECTION				12,6								48				
8	BOTTOM PROTECTION				6,2								20				
9	SHEER BATTEN			14,5										190			
10	INTERMED. FRAMES			1,2	7,2								24	50			
11	ENGINE WELL PLW.			1,0										30			
12	SPRAY STRIPS								2,7 split				30				
13	FLOORING	5,6		3,8													26
14	COAMING				14,5								28				
15	RAILCAP		16												150		
16	SEATS							1,3									
17	DECK PLW.			2,5								10	4	30			
18	CLEATS, HAST STD			8,6				0,4					25				
19	FORWARD BEAM			1,0		0,4		2,5			3,6		13				
20	AFT BEAM			1,0		0,4					3,3		12				
21	PLATFORM COAMING						0,5	2,0	1,9					20			
22	PLATFORM DECK	13,8		5,7													150
23	DIAGONAL BRACE					6,5									15		
24	SPRAY DEFLECTOR					1,3		1,8	0,5					20			
25	HAST									9,0							
26	SPRIT				7,2												
27	RUDDER							2,4	1,5								
28	PADDLES								3,6	2,8			8				

ORDERLIST FASTENINGS ETC

POS.	QTY	DESCRIPTION
50	190 PC	38x4,9 (1 1/2"x10") WOODSCREW, SILICON BRASS, COUNTERSUNK HEAD
51	210 PC	45x4,9 (1 3/4"x10") " " " "
52	2,0 kg	25x2,6 (1"x12") BARBED RINGNAIL, SIL. BRASS, FLAT HEAD
53	0,7 kg	45x4,2 (1 3/4"x8") " " " "
54	0,3 kg	25x2,6 (1"x12") COPPER BOAT NAIL
55	0,8 kg	45x3,3 (1 3/4"x10") " " " "
56	2 KITS	EPoxy GLUE WITH HARDENER, KIT OF 1,5 kg
57	2 KITS	EPoxy RESIN FOR SHEATHING, KIT OF 1,5 LITRE
58	4 LITRE	HOUSEHOLD VINEGAR (FOR CLEANING EPOXY)
59	2 KITS	RESORCINOL GLUE WITH HARDENER, KIT OF 1,5 kg
60	4 M	DYSEL CLOTH, 1M WIDE
61	1 KIT	POLYESTER FILLER, KIT OF 800g
62	1 PC	BOLT, HEX. HEAD, 18x90 STAINLESS STEEL 316
63	8 PC	" " " " 10x80 " " "
64	6 PC	NUTS, 10MM, STAINLESS STEEL 316
65	4 PC	WASHER, 10MM, STAINLESS STEEL 316
66	1 PC	FLAT BAR, 2x25, LENGTH = 0,6M, STAINLESS STEEL 316
67	1 PC	ROUND ROD, 10; LENGTH = 130MM, STAINLESS STEEL 316
68	1 PC	ROUND ROD, 6 (1/4"); LENGTH = 0,5M, COPPER
69	1 PC	TUBE 1/2" SOFT DRAWN COPPER LENGTH = 0,3M
70	2 PC	DINING DRAIN PLUG 1/2" BRASS ON BRONZE
71	50 M	POLYESTER BRAIDED ROPE, 3MM
72	100 M	" " " " 5MM
73	20 M	POLYESTER 3 STRAND ROPE, 10MM
74	1 PC	SAIL, POLYESTER 2,3x3,4 M = 7,8M ²
75	4 LITRE	WOOD PRESERVATIVE
76	6 LITRE	WOOD PRIMER
77	4 LITRE	UNDERCOAT
78	5 LITRE	TOPCOAT
79	4 LITRE	MINERAL TERPENTINE
80	8 LITRE	HYCEL POLYURETHAN FOAM B 200T
81	8 LITRE	HYCEL POLYURETHAN ACTIVATOR M 30

ORDERLIST TIMBER PLYWOOD

WEIGHT AIRDRY 15% MC	SAWN DIMENSION MM	PLANED DIM. MM	TOTAL LENGTH M	CUBIC SAWN M ³
500-650 kg/m ³	20 x 150 (3/4" x 6")	15 x 140	39 M	0,11
	25 x 150 (1" x 6")	20 x 140	82 M	0,31
	40 x 75 (1 1/2" x 3")	35 x 65	25 M	0,08
650-750 kg/m ³	50 x 150 (2" x 6")	45 x 140	180 M	0,03
	50 x 150 (2" x 6")	45 x 140	180 M	0,04
			TOTAL	0,57 M ³

MARINE PLYWOOD 944x1200MM x 2400MM
TOTAL = 8 SHEETS



7.2 m Outrigger Canoe MATERIALS

SCALE:	DESIGN NO.	DRAW. NO.
DESIGN: P. Gue/Chambers		
Grimstad, Oct. 1991	KIR-4 A	8