

Victorian Cobra Catamaran Association.

This plan consists of: (as supplied by the designer.)

Introduction.

Material List.

Fittings List.

Fibreglass hulls- (for use with f/g shell construction only.)

*Building Jig Construction - necessary only if not using V.C.C.A. jig or
somebody elses. It is a good idea to check
all marks as set out in Fig. B.*

Centreboard Case Construction.

Building Instructions.

Restrictions.

Also included are : (by V.C.C.A.)

Revised Material List.

Revised Fitting List.

Revised Building Instructions.

*Before commencing construction of your Cobra, please read through all above
material, and make necessary revisions or notes in building instructions as
required.*

*Please note : the revised material as supplied is suggested material,
fittings, and building instructions, as supplied by the V.C.C.A., and do not
form part of the plans, as supplied by the designer.*

*For further information on fitting out your Cobra, list of fitting
suppliers, or details of how to tune your boat, contact the VCCA.*

Revised Materials List.

Timber.

W.R.C. 1" x 1-1/4" ^{fin} 1/9' - c/b case spacer.
 1" x 1" 4/17' gunwhales.
 5/3', 4/5', 4/8' stringers.
 2" x 1" 1/2' transom tops.
 2/5' beam support blocks.
 H.W. 2" x 1" 1/5' beam mounting blocks.
 6" x 1" 1/5' beam mounting blocks.

Marine Ply.

Sides. 2/16'-6" x 4'-0" x 4mm.
 Decks, 1/8-0" x 4'-0" x 4mm
 Frames, c/b case sides. 1/8'-0" x 4'-0" x 4mm.

Fiberglass and Resin.

Chopped strand f/g matt. 3' x 6'. -if using 3/4 oz., double this quantity
 2" tape. 200'.
 Epoxy resin. 12 litres. (epoxy laminating resin is best)
 Epoxy glue. 2 lb. (or use laminating resin in lieu of glue)

Aluminium.

Mast. E5308 27'
 Beams. E5308 14'.
 Boom. K4620 9'.
 Tiller handles, spacer. 3/4" x 3/4". 2m.
 Connecting bar. 3/4" x 3/4" 2m.
 Tramp. track. 2/2m.
 Rudder box cheeks.

Miscellaneous.

Foam- 1/8'x4' sheet of polystyrene foam. x 2 inch
 Boat nails- monel 3/4" long x 16 gge 1 lb.
 Copper wire- approx. 35 ft.
 Electrical conduit- 1" diam. 1 length for tiller extension.- orange colour is best
 as it is stiffer.

Hull buoyancy: To meet AYF safety requirements, 3 cubic feet of foam buoyancy is required throughout the hulls. (i.e. 1-1/2 cubic feet per hull). It is suggested that you meet these requirements by glueing extra foam blocks throughout the hulls.

NOTE: To compete in any Championship Series, or any events held at Yacht Clubs, hulls completed after July 1978 must comply with buoyancy requirements.

Revised Fittings List.

(suggested only) open to your own individual taste

	Qty.	Ronstan	Fico	Other
Mast.				
Halyard block	1	RF733	FG159	
Gooseneck.	1		FG737	
Tangs	4	RF192	FG289	
Turnbuckles.	2	RF221	FG126	
Block halyard.	1	RF661	FG368	
Downhaul.	1			Harken #095
Downhaul swivel.	1	RF120	FG144	
Downhaul triple block.	1	RF898	FG977	
Trapeze.				
Blocks - trap. ring.	4	RF17	FG287	
Blocks - becket.	4	RF807	FG1026	
Blocks	4	RF187	FG463	
Handles.	4	RF19	FG963	
Sister clips.	8	RF 536	FG664	
Shackles.	2	RF616	FG1002	
Shackles.	4	RF615	FG1001	
Stays.				
Stay adjusters.	2	RF45	FG648	
Shackle 1/4" bow.	1	RF635	FG1016	
Boom.				
Cleats.	2	RF494	FG359	
Plug.	1	RF799		
Block.	1	RF731	FG783	
Hulls.				
Bridle - tow ring.	1	RF48	FG372	
- shackles.	2	RF616	FG1002	
Jib downhaul - blocks.	5	RF667	FG967	
- shackles.	1	RF615	FG1001	
- shackles.	1	RF616	FG1002	
- cleats.	2			Junior.

if you want to use the
Trapeze - I can design
the rig

Revised Fitting List cont.

	Qty.	Ronstan	Fico	Other
Jib - blocks (on track)	2		FG1277	
- blocks (clew)	2	RF582	FG48	
- track (15")	2	RF364	FG247D	
- track ends	4	RF366	FG357	
- track slide.	2	RF371	FG390D	
- clew coupling.	1	RF711	FG497	
- 1/4" swivel shackle.	1	RF173	FG662	
Barber hauler - blocks.	2	RF583	FG106	
- blocks.	2	RF917	FG414	
- cleats	2			Junior
Main sheet - "I" track.	5'	RF385	FG1159 c	
- track ends	2	RF388	FG1156	
- traveller.	1	RF381	FG1147	
- cleat (traveller control)	1	RF58	FG729	
- block.	1			Harken #079
Rudder clips	2	RF114	FG800	
cleats.	2			Mini
rudder bolt.	2	RF292		
downhaul blocks.	2		FG568	
Connecting bar				
Gudgeons.	2	RF254	FG266	
Pins.	2	RF266	FG308	
Clips.	2	RF114	FG800	
Universal joint.	1	RF1121	FG129	
Striker. - sheaves.	2	RF132		
Tramp. - eyes.	5	RF134	FG1048	
- toe straps.	8	RF134	FG1048	
Hatches.	4	RF530		
Front chainplates.	2			Riley RM195
Centreboard cleats.				Solomarine 1/322 1/323

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specialist Fittings:

Halyard beak or release.

Hound.

Spreaders.

Chainplates and backing plates.

Rudder pintles.

Rudder gudgeons and bushes.

Internal outhaul.

Mast step and base for mast.

Dolphin striker and adj. bolt.

Mast spanner.

Traveller control plate.

Block hanger.

Load spreading strips.

Downhaul blockhanger

Bolts , x 3/8 " diam.

Revised Building Instructions.

The following revisions are to be read in conjunction with the Building Instructions.

p. 10. Centreboard Case Construction.

delete fig. EE sheet 5.

stage 2. Delete

Follow stages 3 and 4.

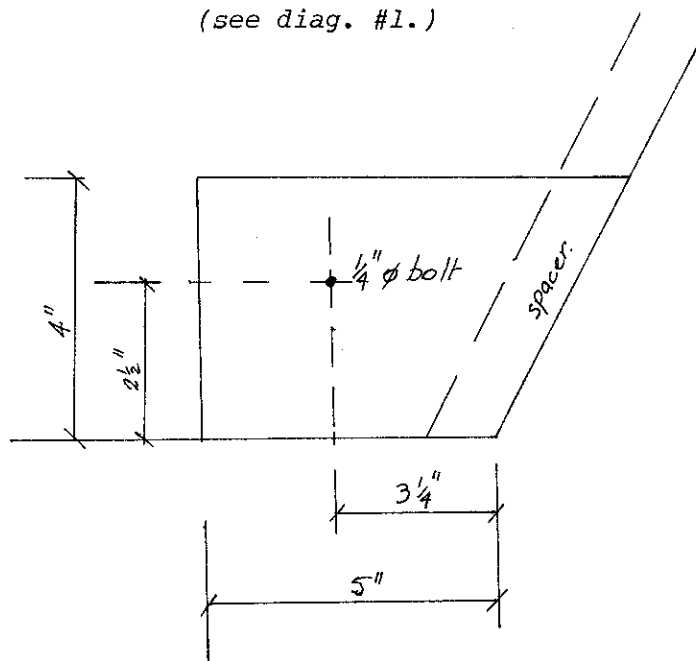
stage 5 - delete 1-1/16"x1" and replace with 1-1/4"x1".

Follow stage 5, then before fitting to hull,

drill 1/4" hole through c/board case and insert 1/4"x2-1/2" s/s bolt through.

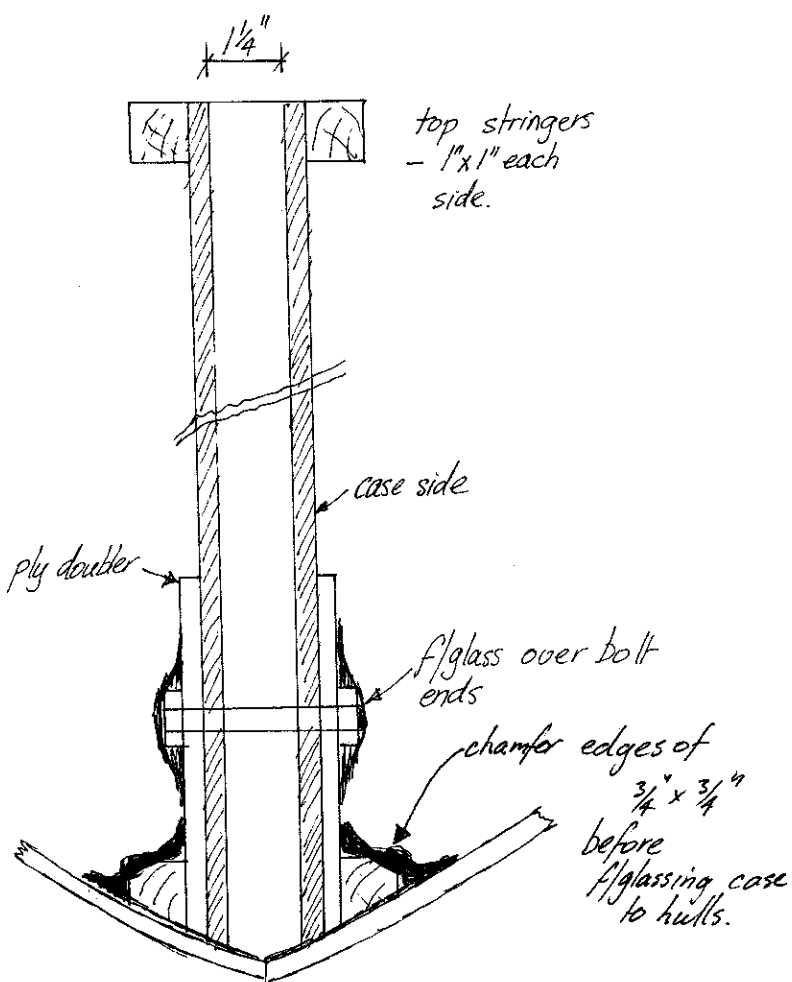
Fibreglass over each end of bolt to make waterproof when fibreglassing the c/b case to hulls. (see stage 35 & 39)

(see diag. #1.)



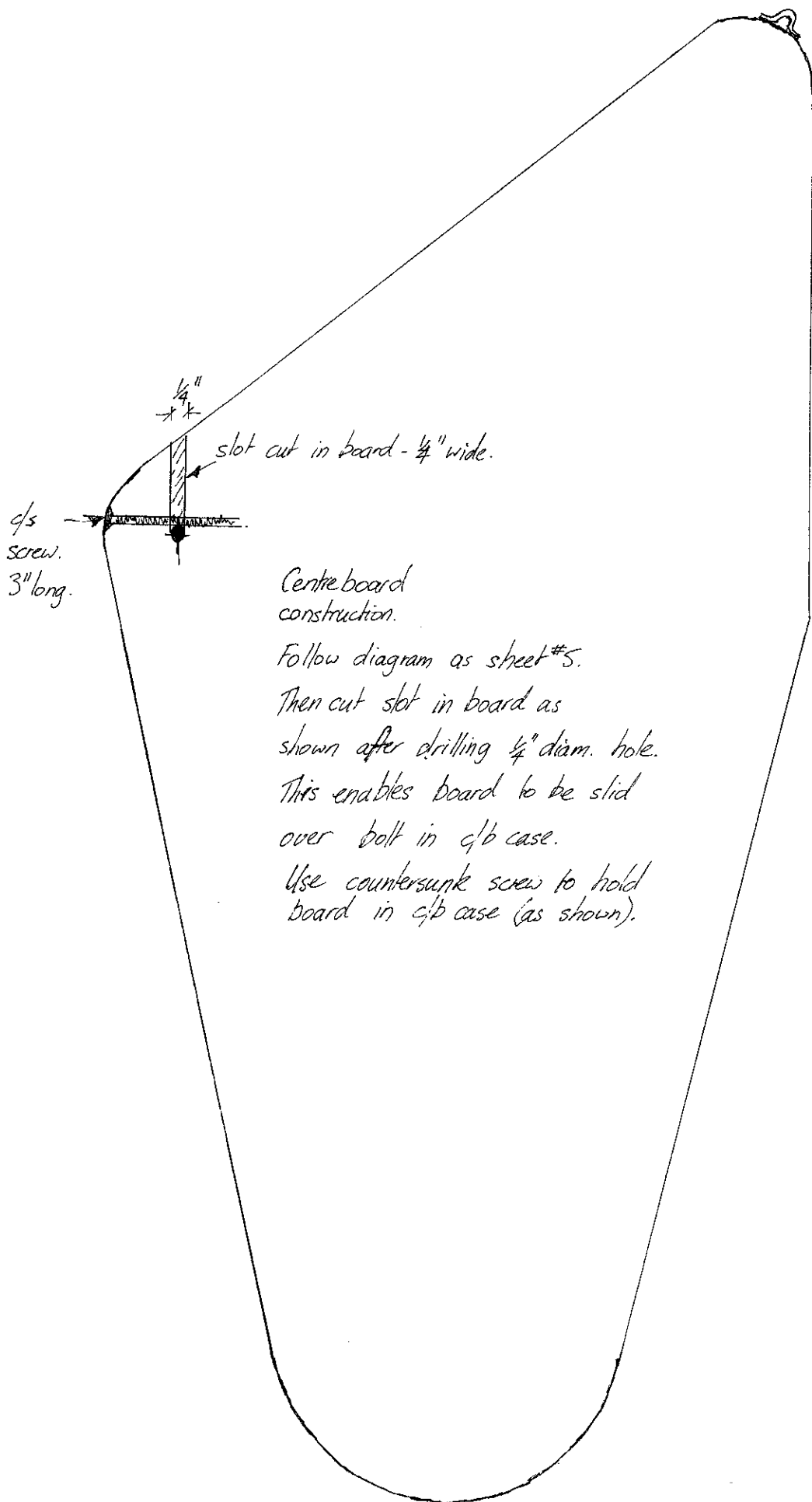
see also fig. BB, sheet 5

DIAGRAM #1



see also fig. GG, sheet 5.

SECTION THROUGH C/B CASE.



Centre board
construction.

Follow diagram as sheet #5.

Then cut slot in board as
shown after drilling $\frac{1}{4}$ " diam. hole.
This enables board to be slid
over bolt in c/b case.

Use countersunk screw to hold
board in c/b case (as shown).

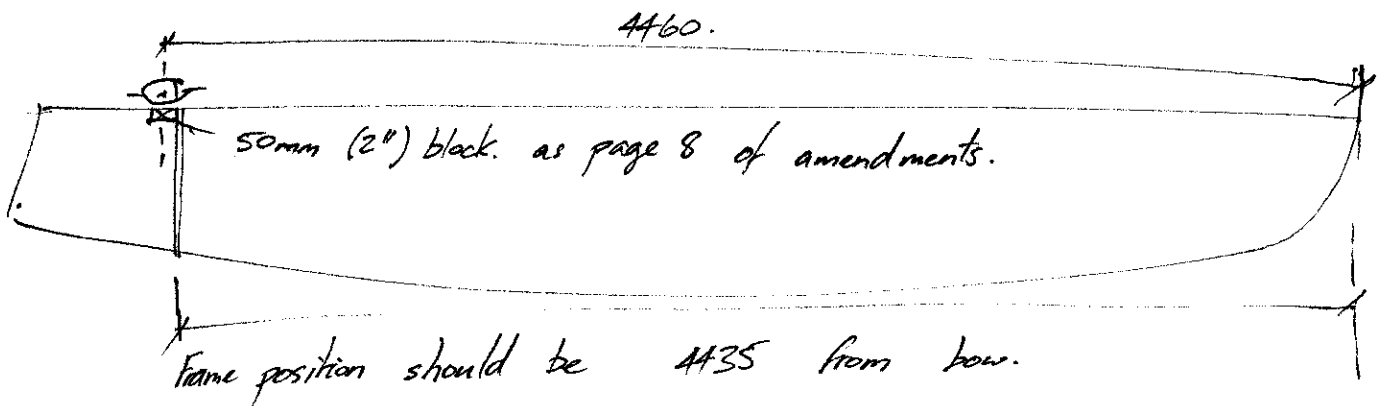
Note: Alternative to above is to glue second skin of ply to
c/board case sides; router a slot down inside of case
before assembly & allow board to pivot on a pin
fixed through board. This allows easy removal of
centreboard.

Further amendments:

Fig B. page 1 plans.

bulkhead no 9 4419mm from bow is incorrect when referring to restrictions.

Restrictions require intersection of major & minor axis to be 4465 - 4455mm from bow.



check this measurement yourself on jig before construction.

NOTE: this measurement can depend on what size rear beam that you use!!

stage 18 page 13 building instructions.

we have found it easier to carry chopped strand (or 3" tape) up into bow when doing rest of hull. It also makes the bows fuller; and does not seem to create any problems when inserting into jig.

stage 21 page 14

by using 1 layer 3" tape, and 1 layer 2" tape over keel - you seem to save a lot in sanding & filling when painting.

stage 22 page 14.

be careful regarding time - curing is proportional to heat i.e.: the hotter it is when glassing, the less time required before inserting into jig.

p. 12. stage 8. It is recommended that gunwhales be nailed as well as glued to ply sides, to make sure that they are properly clamped together - approx. 2 in. centers.

p. 13. stage 18. Do not mark and cut out bulkheads at this stage. It is recommended that cardboard templates be made and tried in hulls before cutting ply and foam bulkheads. It is also recommended not to cut holes in the centre of the frames. - except for ventilation maximum say 50mm diam. Bulkhead #9 needs to be extended towards keel line, otherwise hull will deform.

p. 14. stage 20. It is a good idea to put newspaper under the masking tape as well, as resin may flow over tape as illustrated.

p. 15. stage 28. Transom angle is optional, and may vary from 0 - 1-1/2"

stage 30. Use foam for bulkheads 1,3,4,6,7,8.& 5.

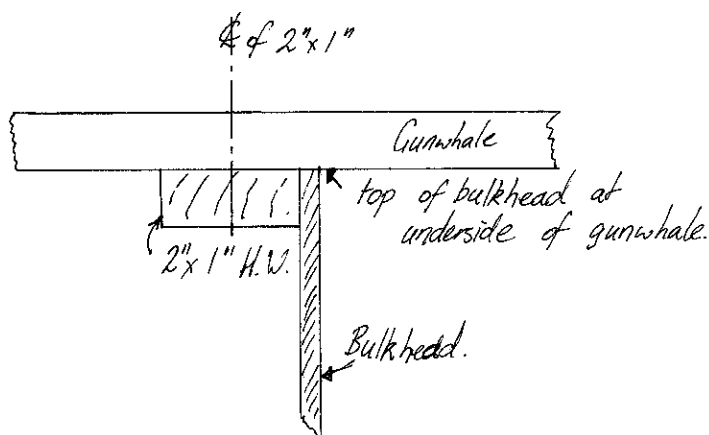
Bulkheads no. 5 and 9. Alternative construction method (shown next page.) requires top of these bulkheads to be cut level with bottom of gunwhales.

p. 16. stage 32. Delete stage 32 and fig. J. sheet 2.

Fit beam mounting blocks.

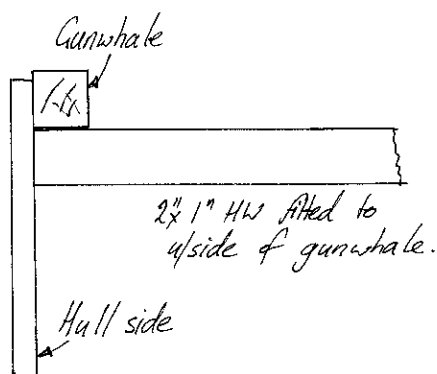
Fit 2" x 1" H.W. blocks to rear sides of nos. 5 and 9

bulkheads. Blocks to fit neatly under gunwhales. (see diag.#2)



SECTION THROUGH BULKHEAD

DIAGRAM #2



SECTION THROUGH HULL

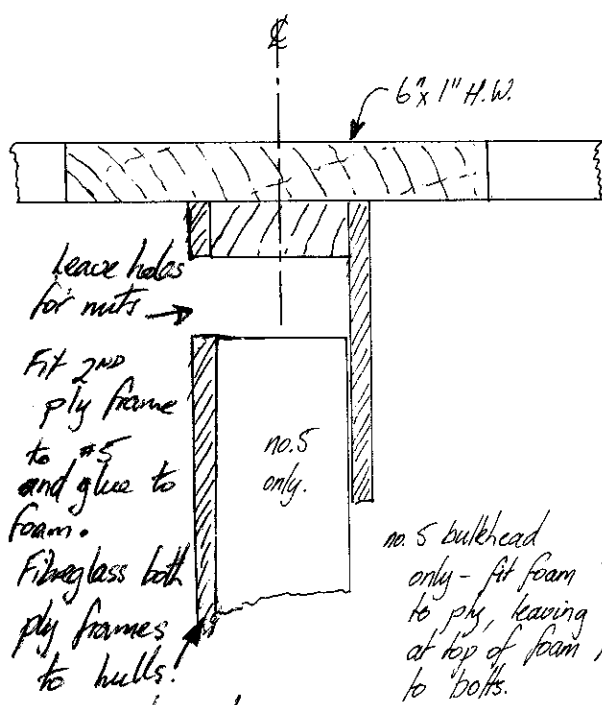
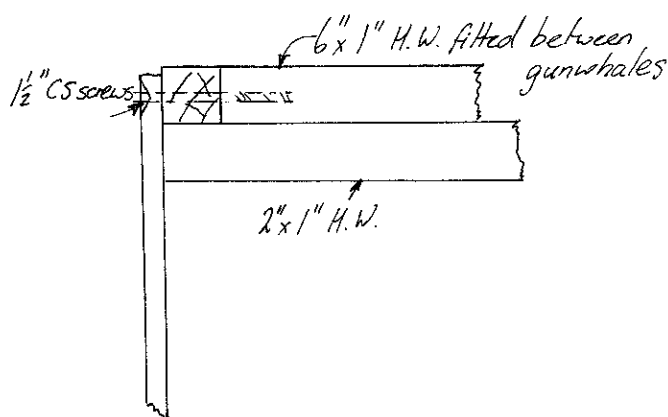


DIAGRAM #2A



leave holes for nuts →
Fit 2nd ply frame to #5 and glue to foam.
Fiberglass both ply frames to hulls.
see also diagram #5.

no. 5 bulkhead only - fit foam to ply, leaving room at top of foam for access to bolts.

Fit 6"x1" H.W. blocks over 2"x1" blocks.

Blocks have to be horizontal across top of hull, flush with top of gunwhales and at right angles with C/L of hull.

(see diag. #2A)

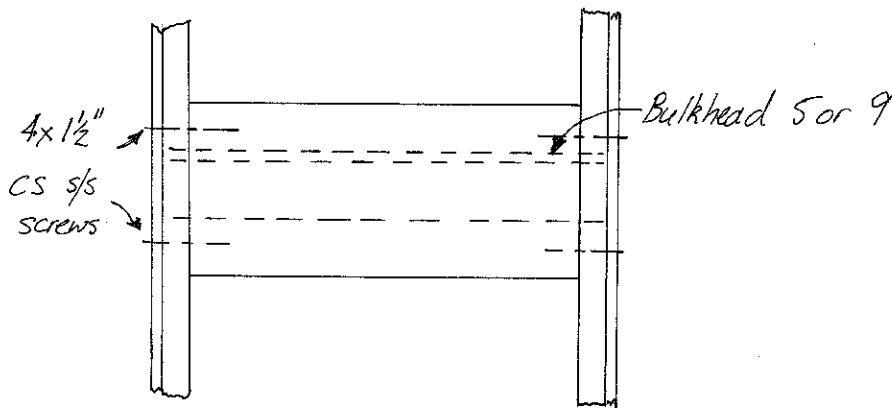
Scribe C/L along length of 6"x1" upper surface.

Glue and fix in position.

The C/L of 6"x1" block should be over C/L of 2"x1" block.

(this gives center line of beam.)

It is suggested that you use 4 cs 1-1/2" screws to fix each block through gunwhales. (see diag. #3.)



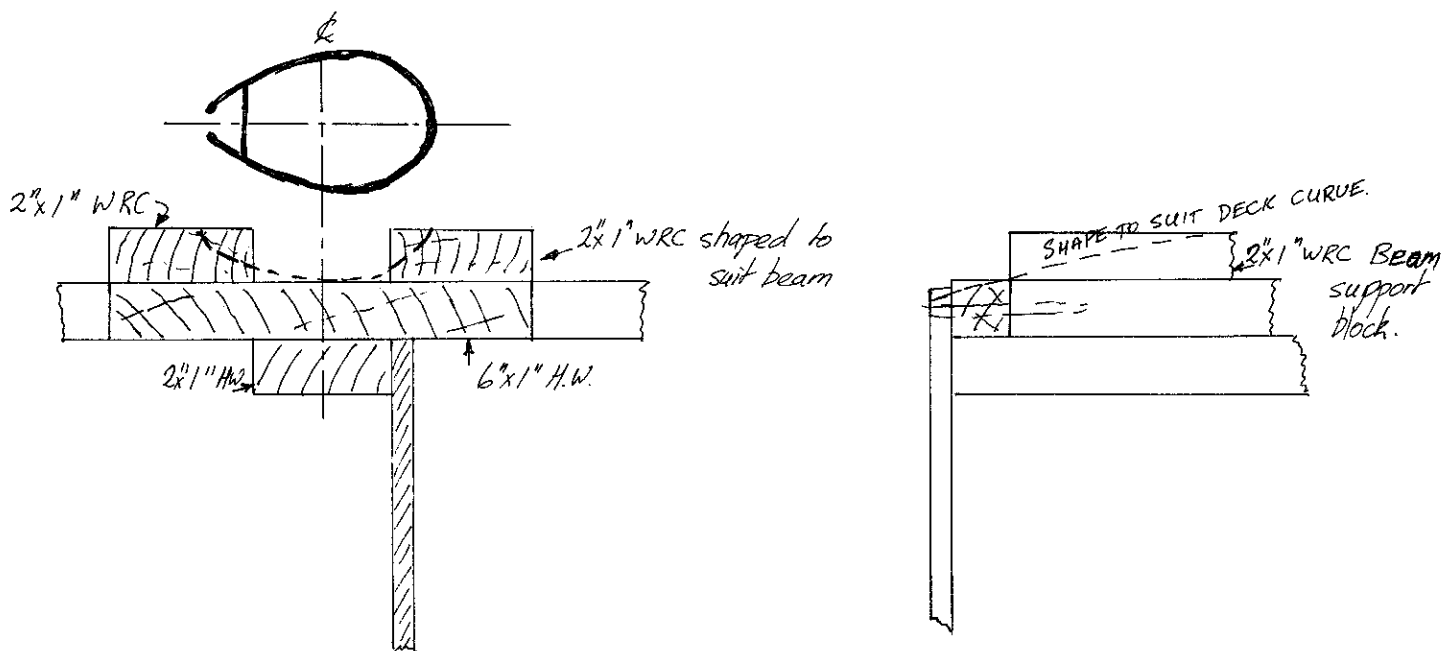
PLAN OF BULKHEAD.

DIAGRAM #3

p. 16. stage 33. Delete stage 33 and fig. K sheet 2.

Fit beam support blocks - 2"x1" W.R.C. to 6"x1" H.W. blocks.

Glue and clamp into position. (see diag, #4.)



SECTION THROUGH BULKHEAD

SECTION THROUGH HULL.

DIAGRAM #4.

stage 35. Fit centerboard case. Rear end of opening of case should be 1280 from inside of hansom. The measurement restriction is 1290 - 1300, measured rear of opening to hansom, measured externally.