FARRIER MARINE

An F-33 on trailer

STUDY BOOK

More detailed information on Farrier multihull designs for the home builder

Waterskiing behind an F-9R

F-9AX being built in South Africa

F-33 Cruising in Canada

Study Book Contents:

FARRIER MARINE (NZ) LTD
FARRIER MARINE, INC. (USA)

The F-22 is a brand new design that is being developed in New Zealand by Farrier Marine (NZ) Ltd. It will be available in several versions, a full cabin cruising version with either an aft cockpit or aft cabin, and a cuddy cabin version, also with aft cockpit or aft cabin options.

It uses the third generation Farrier Folding System, with externally mounted beams, increasing the interior room significantly. This gives a very spacious feeling to the cabin, and makes the forward double berth area noticeably roomier than even the F-24 design.

Rig is very simple, with rotating mast, all synthetic shrouds, and carbon fiber chainplates - turnbuckles and all metal parts have been eliminated wherever possible.

Only three sails are standard, for simplicity and ease of use, these being main, jib, and a larger screacher. Mainsail is boomless, to save both weight and cost (and sore heads), while the longer luff of the boomless main is more efficient, and gives a lower center of effort.

The aft cockpit is very long and a little wider than earlier designs, for a more spacious feel. The usual cockpit bridge is to be eliminated by some careful engineering, and replaced by a removable compression strut for when needed (such as racing). This leaves the aft mounted traveler as the only obstacle across the cockpit, but one that is well out of the way.

Daggerboard or centerboard options are available, the daggerboard being the simplest and most efficient option, its case also helping to support the mast. The centerboard can be more convenient, its offset case taking up less room in the cabin, plus it will kick back should it hit bottom.

Directional control will be via the latest transom mounted retractable daggerboard rudder system, as recently developed for the F-82, for maximum efficiency and simplicity.

An outboard of 4 to 8 HP is recommended, and this is mounted on an offset bracket, forward of the stern, to minimize cavitation.

Down below, there will be standing headroom under the large pop-top. which can also slide forward for quick cabin access, or have the aft end only lifted to act as a dodger.

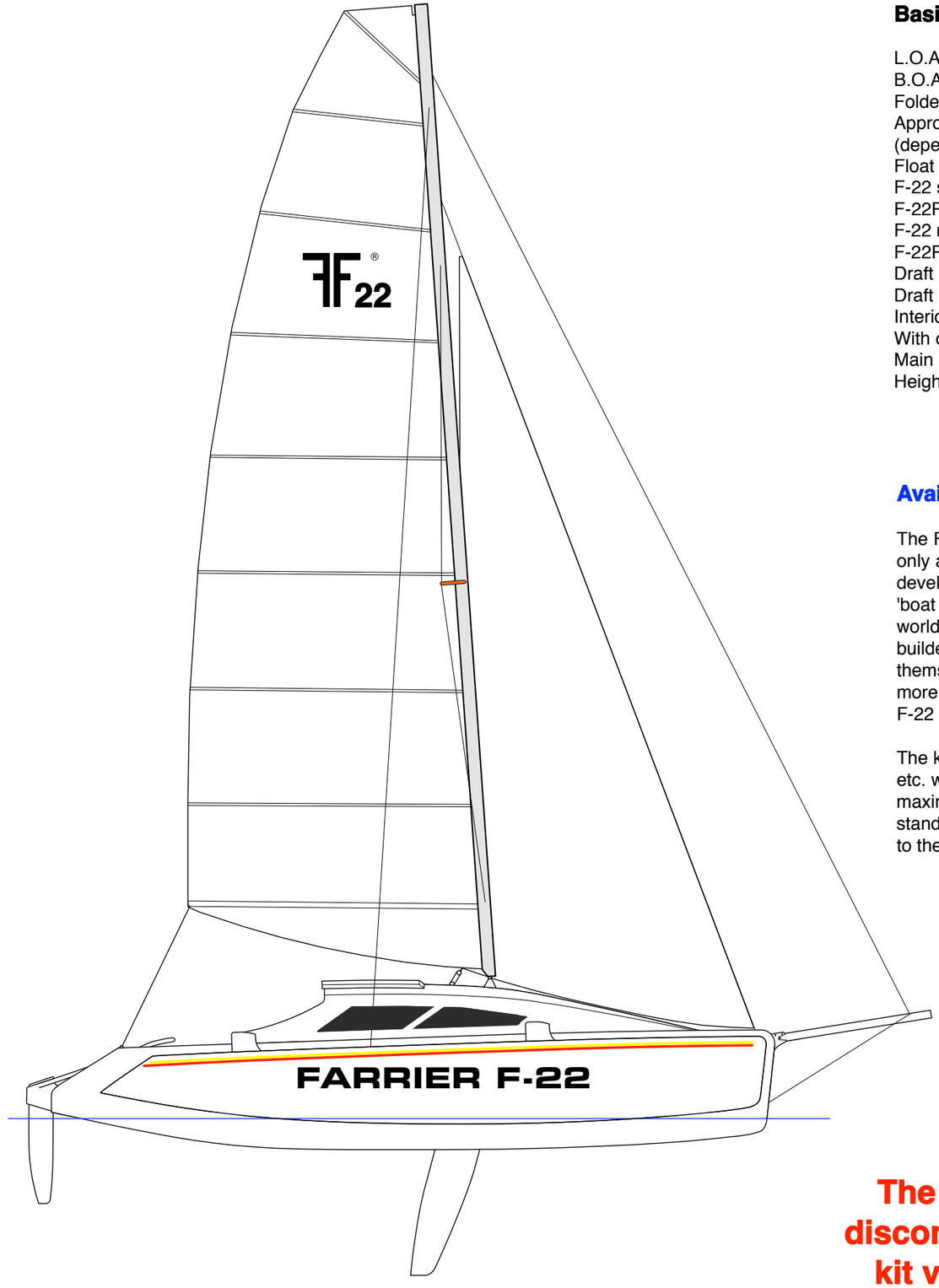
The standard boat can sleep four, with one double berth forward and a single berth on each side of the main cabin.

The cabin sides have been moved outboard to be more parallel to centerline than earlier designs, creating more interior room, and also allowing the option of wing berths, which can greatly increase accommodation choices.

The cuddy cabin version has a smaller cabin, but it is still capable of sleeping four at a pinch, with a double in the bow and two quarter berths on each side. A little narrow from waist down (16 - 18" wide), but still usable for most. An additional wide single berth can also be setup under the cockpit floor, or the aft cabin option can be used.

The cuddy cabin's accommodation can be greatly increased by setting up an optional Bimini top, which can then be fully closed in around the cockpit coamings to give a large sheltered living area that can easily seat 6 - 8, with even enough room left over for a picnic table.

Galley can be fixed (at the cost of berth space), or removable. Head can be located forward to one side, and a full width curtain across cabin center can give basic privacy when needed.



FARRIER F-22

Basic Dimensions:

L.O.A..... 22' 10" (6.96m)
B.O.A..... 18' 1" (5.51m)
Folded beam..... 8' 2 1/2" (2.5m)
Approx. bare weight ..... 1300 - 1500lbs (590 - 680kg) (depends on model)
Float displacement.....3056lbs (1390kg)
F-22 sail area (main & jib)..... 325sq.ft (30.15sq.m.)
F-22R sail area (main & jib).... 386sq.ft (35.86sq.m.)
F-22 mast height..... 31' (9.4m)
F-22R mast height..... 35' 1" (10.7m)
Draft (board up)..... 12" (0.31m)
Draft (board down)..... 4' 11" (1.51m)
Interior headroom .....5' 2" (1.58m)
With optional "pop top"..... 6' 2" (1.88m)
Main cabin width.....7' 3" (2.2m)
Height on trailer..... 8' 8" (2.64m)

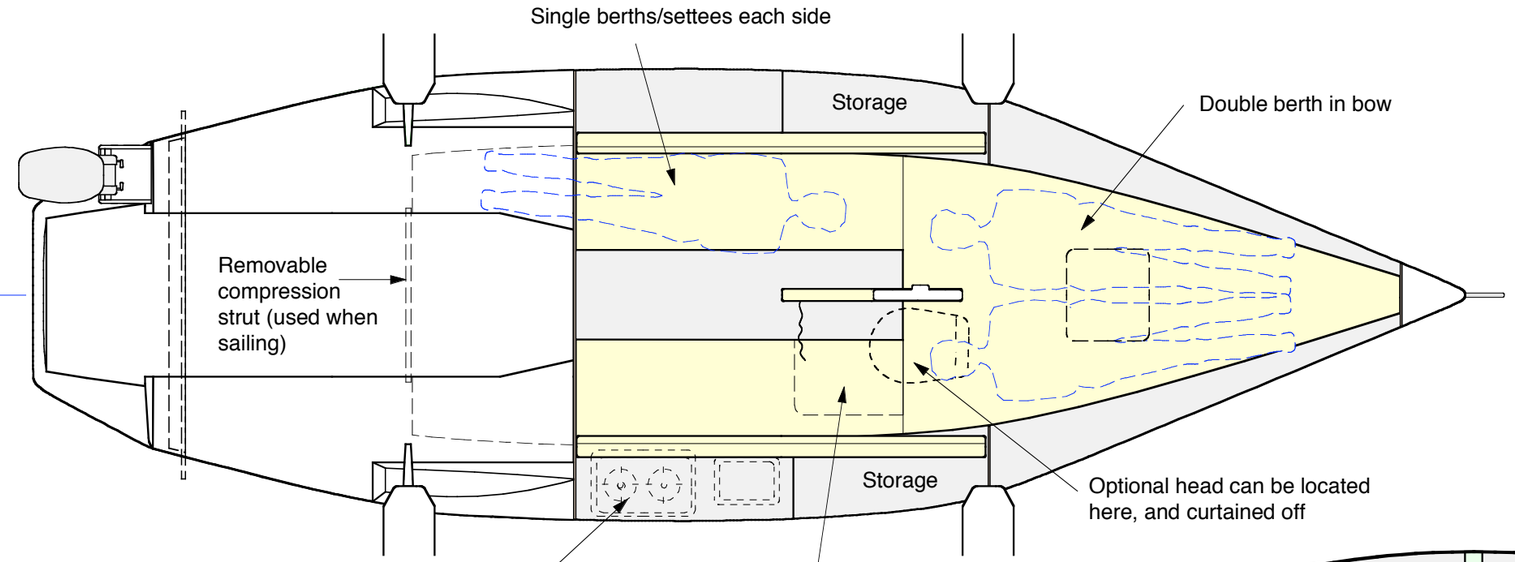
Availability

The F-22 was initially available in plan form but is now only available in kit form. The kit is still under development, as per F-22 web site, and will come as a 'boat in a box', that can be shipped anywhere around the world. It can be assembled by anyone, or by a local boat builder for those without the time or inclination to do it themselves. Hulls will come in a much bigger box, or, more likely, will be built in several locations by franchised F-22 builders to minimize freight costs.

The key parts such as beams, rudders, daggerboards etc. will all be built by Farrier Marine (NZ) Ltd, for the maximum efficiency, and to ensure a high quality standard. These components will then be shipped in bulk to the various builders as required.

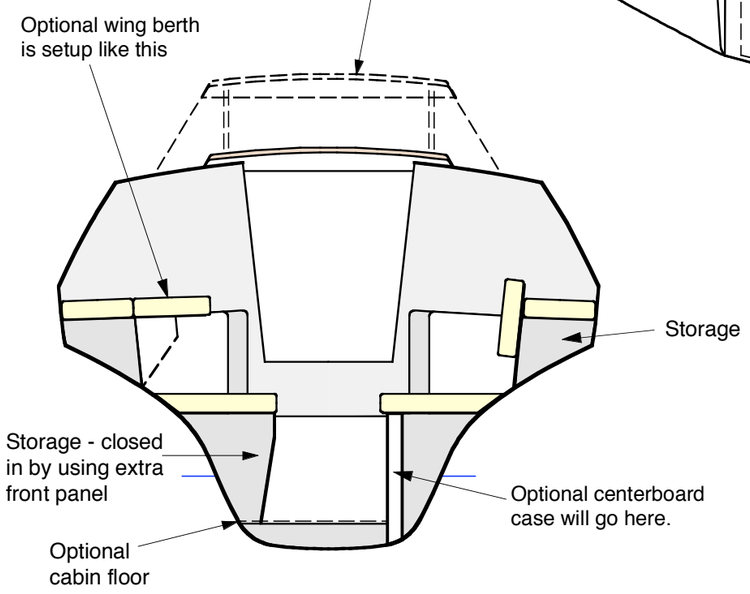
The F-22 Plans have now been discontinued to be replaced by the kit version as per F-22 Website

www.f-boat.com/pages/trimarans/F-22.html



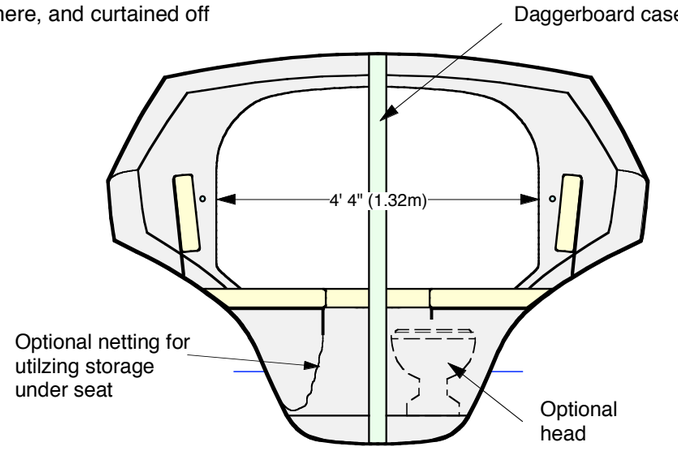
STANDARD CABIN PLUS AFT COCKPIT

(with daggerboard and can sleep up to 4)



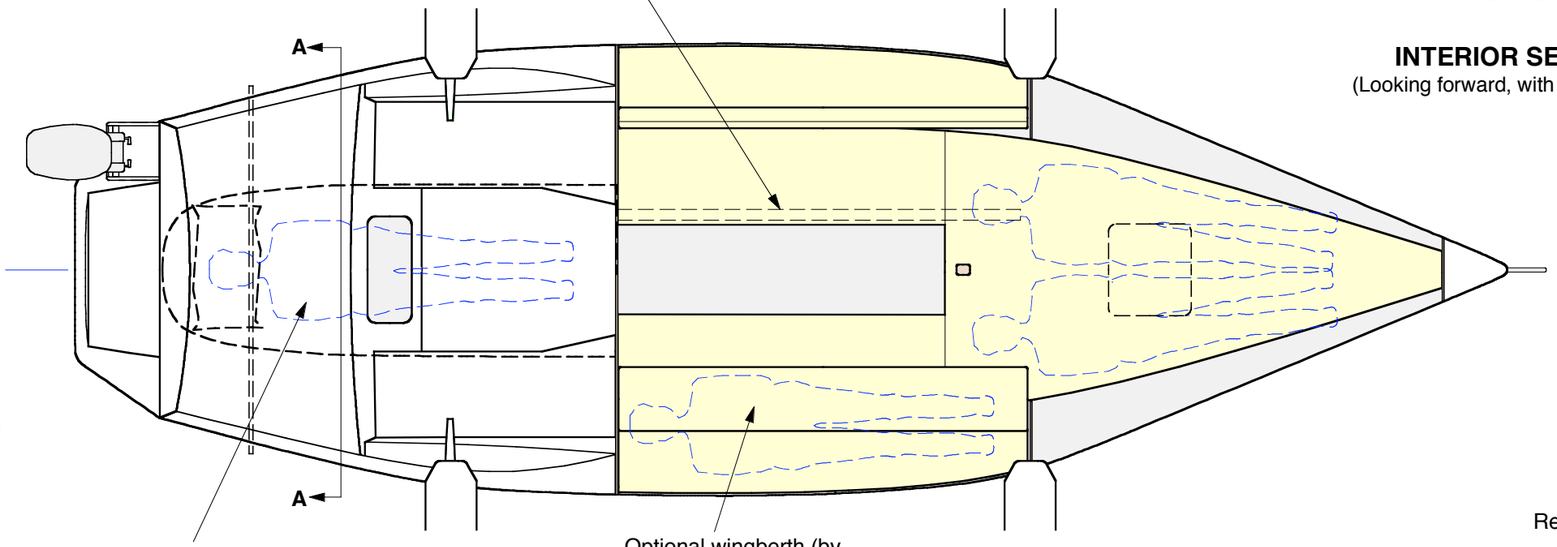
INTERIOR SECTION

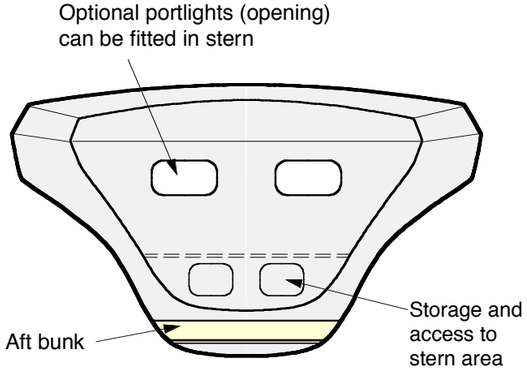
(Looking aft, with opt. c/board and wing berths)



INTERIOR SECTION

(Looking forward, with daggerboard)





SECTION A - A

STANDARD CABIN PLUS AFT CABIN

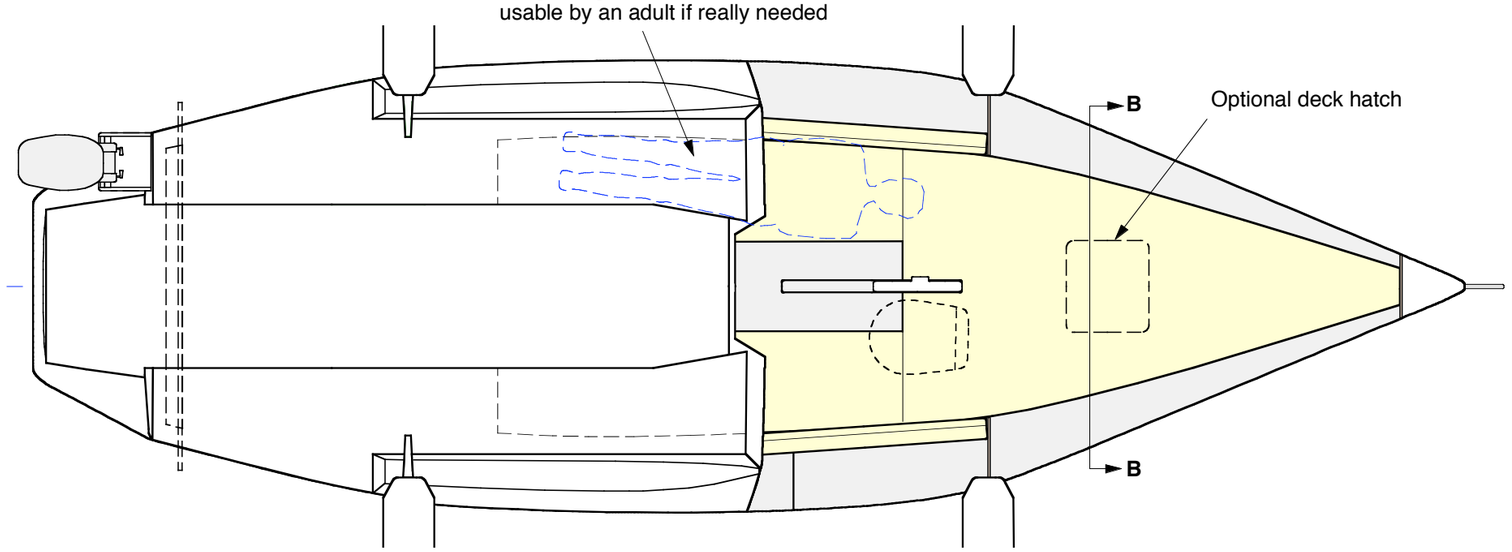
(with centerboard, and wingberth options. Can sleep up to 5)

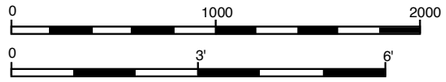
Revised: July 15th, 2006

Scale 1 : 25 & 1 : 30

F-22 Sheet 27
STANDARD CABIN INTERIOR OPTIONS
Farrier Marine (NZ) Ltd

Quarter berths each side - a little snug, but good for children and still usable by an adult if really needed

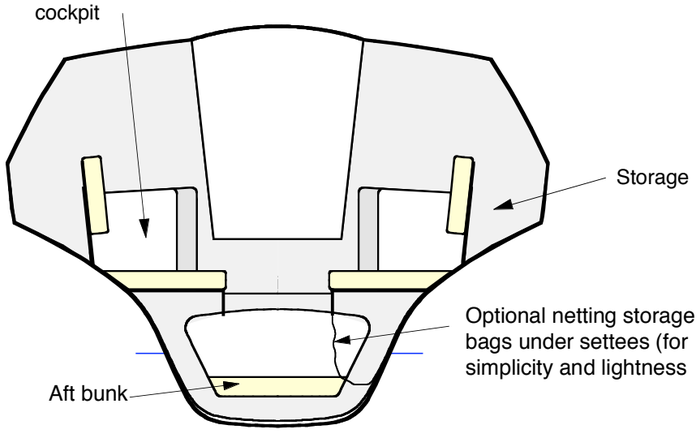




CUDDY CABIN PLUS AFT COCKPIT

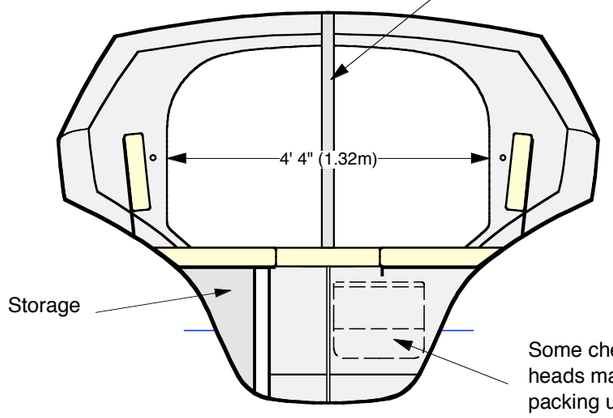
(with daggerboard and can sleep up to 4)

Quarter berths extend further aft under/alongside cockpit



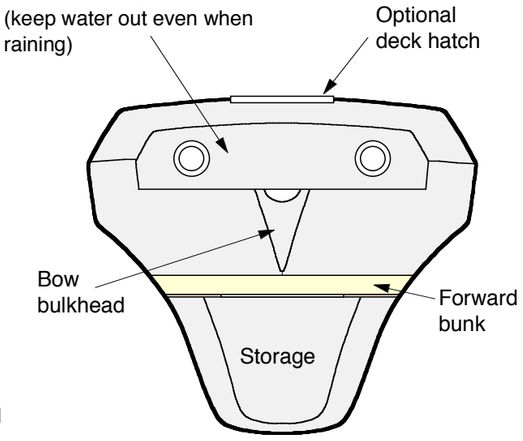
INTERIOR SECTION
(Looking aft)

Mast support post



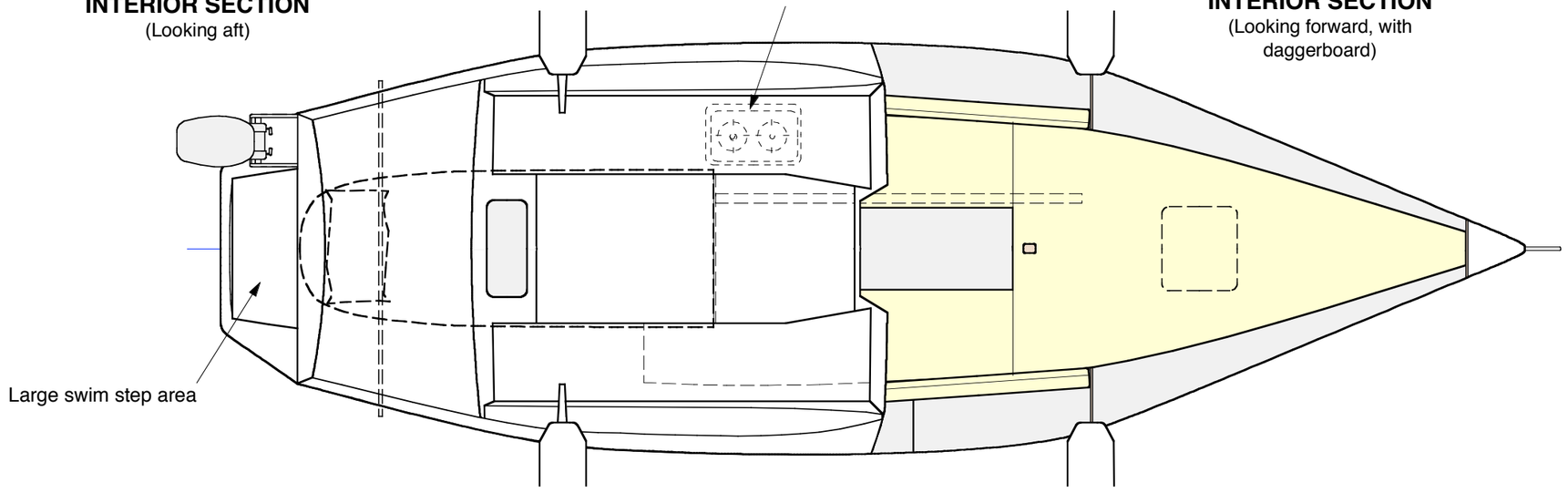
INTERIOR SECTION
(Looking forward, with daggerboard)

Anchor well, with screw in hatches for interior ventilation (keep water out even when raining)



SECTION B - B

Stove can be fitted under cockpit seat if wished, or to one side of cabin inside



CUDDY CABIN PLUS AFT CABIN

(with centerboard and can sleep up to 5)

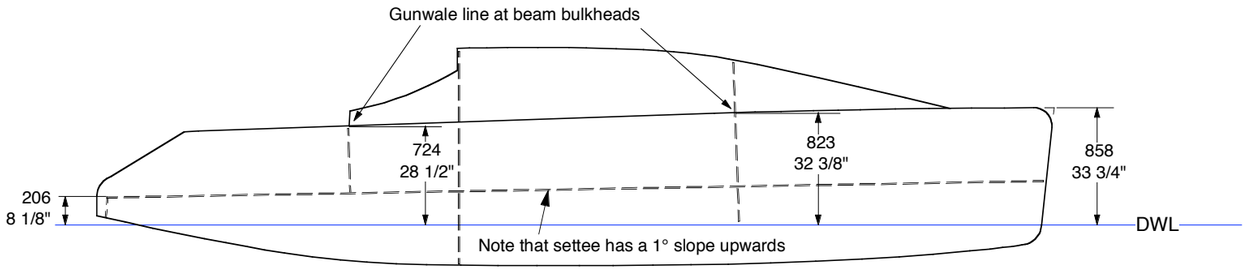
Scale 1 : 25 & 1 : 30

Revised: July 15th, 2006

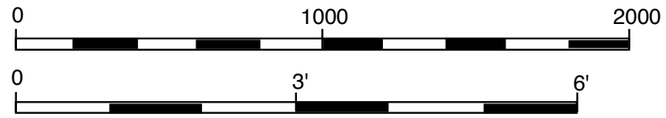
F-22 Sheet 28

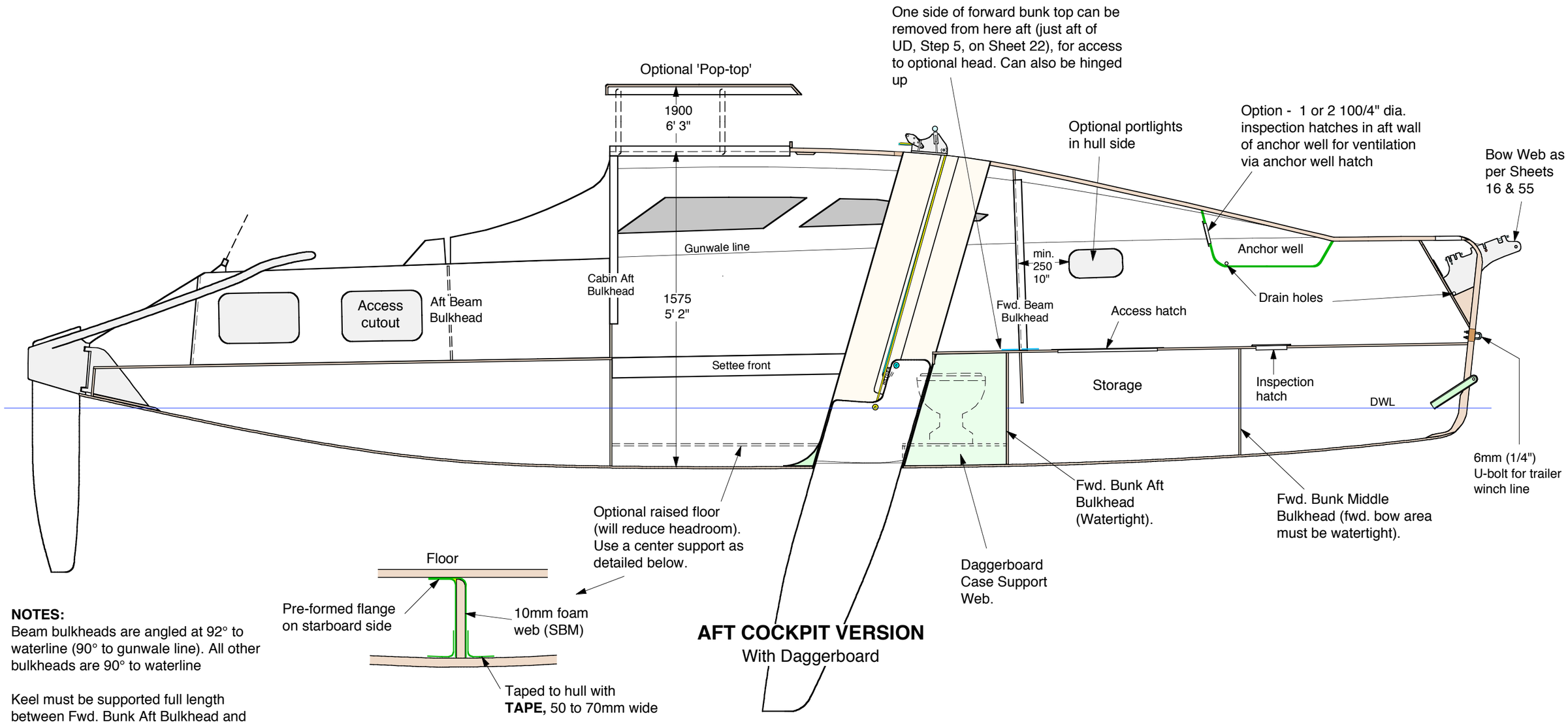
CUDDY CABIN INTERIOR OPTIONS

Farrier Marine (NZ) Ltd



ESTABLISING NORMAL LEVEL





AFT COCKPIT VERSION
With Daggerboard

NOTES:
Beam bulkheads are angled at 92° to waterline (90° to gunwale line). All other bulkheads are 90° to waterline

Keel must be supported full length between Fwd. Bunk Aft Bulkhead and Cabin Aft Bulkhead, by a curved bunk board on trailer.

Avoid creating any sealed area that cannot be inspected or does not have a drain hole

OPTIONAL FLOOR SUPPORT

Maximum headroom is achieved by walking directly on hull bottom, as is the case with F-24 and F-28. However, a raised floor can have advantages with storage underneath, and a better foot height for seating.

If using the raised floor then the additional layer of **A** on hull bottom (550 wide - Sheet 17) can be reduced in width to 300/12"

All interior bulkheads or panels to be as per Sheet 1. Light load furniture vertical panels can be reduced to 6mm thick foam or balsa core with 200gm/6oz cloth each side.

Interior bulkheads/panels to be taped in place with one **TAPE** 80/3" wide.

Light load panels can be taped in place with a 50/2" wide 200gm/6oz cloth tape

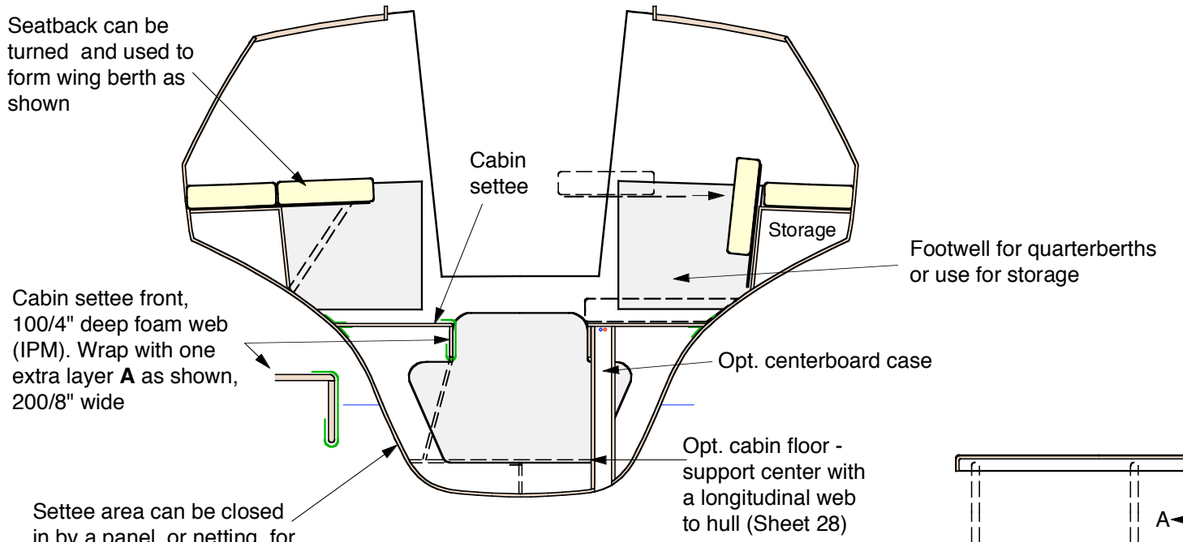
Scale 1 : 20

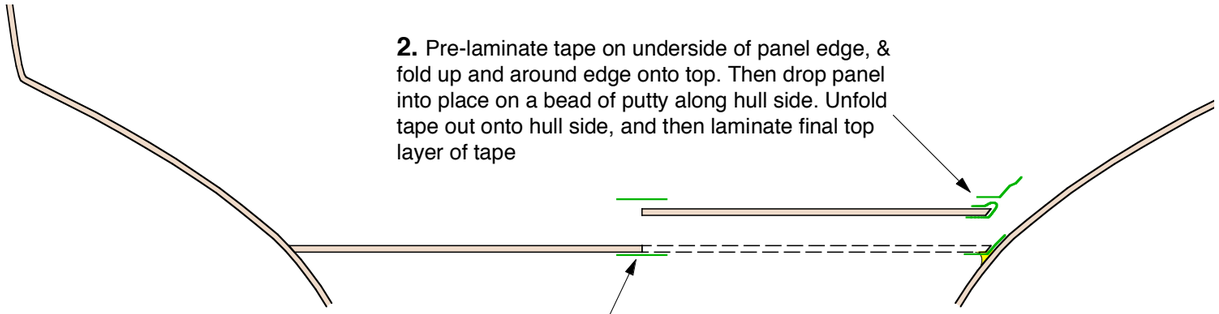
Revised: May 8th, 2008

F-22 Sheet 29

INTERIOR LAYOUT & CONSTRUCTION

Farrier Marine (NZ) Ltd

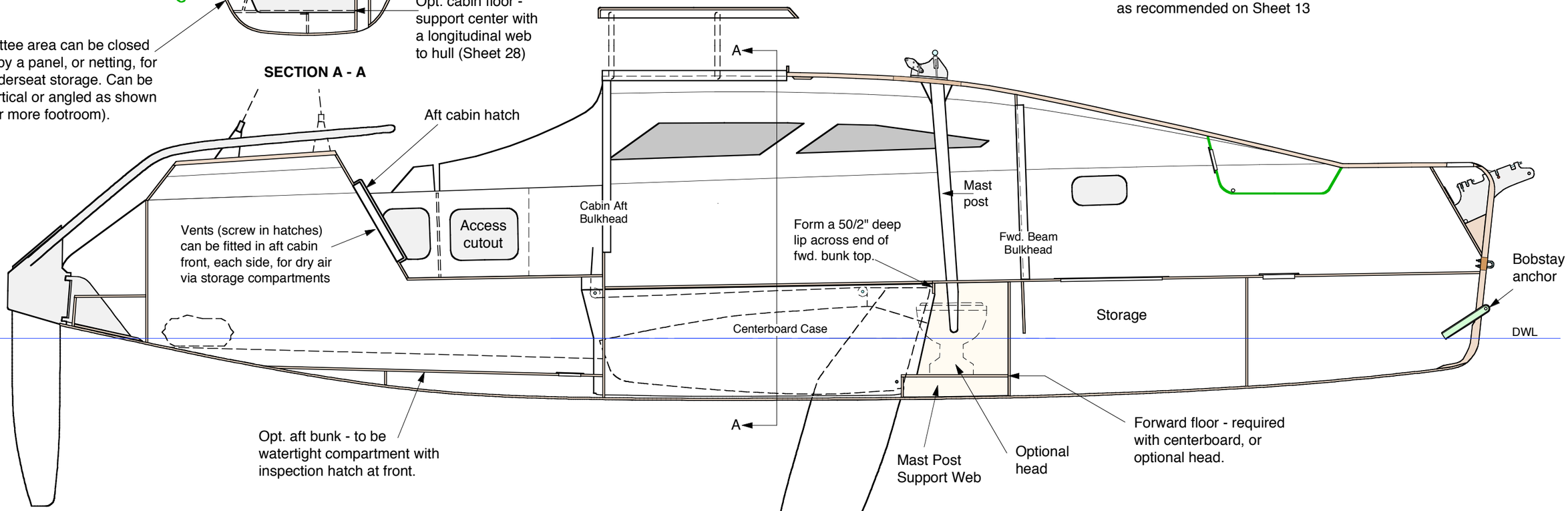




FITTING BUNK/SETTEE TOPS OR FLOOR

Should lower hull gluing flange not be pre-molded as recommended on Sheet 13

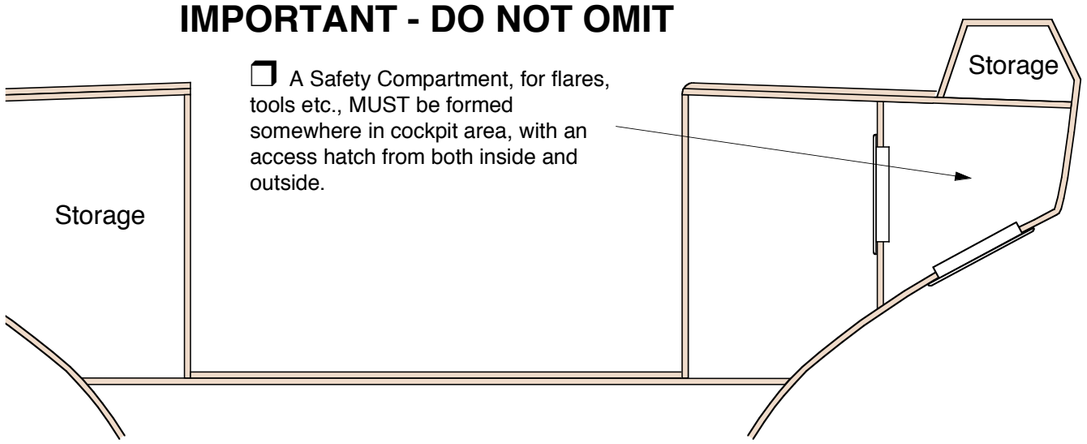
SECTION A - A



AFT CABIN VERSION

With Centerboard

IMPORTANT - DO NOT OMIT



❒ A Safety Compartment, for flares, tools etc., MUST be formed somewhere in cockpit area, with an access hatch from both inside and outside.

Interior layout and dimensions can be varied to suit individual taste, but interior structural bulkheads must be as specifed

Scale 1 : 20

Revised: January 28th, 2008

F-22 Sheet 30

INTERIOR LAYOUT & CONSTRUCTION

Farrier Marine (NZ) Ltd

Opt. Bimini top for a shaded cockpit (can be up while sailing). Detachable sides or a full cover can then fully enclose cockpit and considerably increase room for overnight stays

2.04m (6' 8") long central cockpit

Optional 'Blister Hatch' (sheet 39)

0 1000 2000

0 3' 6'

Access cutout

Storage

DWL

Centerboard Case

Opt. Cuddy Cabin Sub-Bulkhead

CUDDY CABIN VERSION

With Aft Cabin & Centerboard

2.88m (9' 6") long cockpit

Access cutout

Aft Beam Bkhd.

Cuddy Cabin Bulkhead

DWL

CUDDY CABIN AFT COCKPIT VERSION

With Daggerboard (this configuration will have the lowest cost to build, and be the fastest for racing)

Revised: January 28th, 2008

F-22 Sheet 31
INTERIOR LAYOUT & CONSTRUCTION
Farrier Marine (NZ) Ltd

Scale 1 : 20

Winches: It is possible to avoid any winches on the F-22 by using 2 : 1 Jib sheeting. Alternatively, just one winch will be able to do all tasks, but two winches are optional if wished.

Halyards: these are cleated on the mast, but can be temporarily led back to the cockpit, when needed for tensioning, via a simple 'wrap around' turning block

Part options and details are on Materials List

Take care that height of float deck fittings, such as a commercial deck hatch, do not exceed the allowable trailering beam

❒ 150/6" screw in access hatches (4). Three only if large hatch is fitted. Economy option is a screw down fiberglass plate

Optional float hatch, max. size 360 x 460mm (14 x 18")

Optional pad eye for general use, if required

Deck eye for bow pole side braces, with two 6mm (1/4") fasteners tapped into internal plate (Sheet 7).

Opt. bow net support (synthetic line). Use eye bolt, eye welded to top of fwd. beam bolt, or tang, tosaddle eye bolted thru hull side at inner end, just in front of anchor well forward wall

Wing Nets (Sht. 32)

Removable compression strut (optional)

Optional Bow Nets go here

4 - 8hp outboard and bracket

❒ 150/6" cleat with large backing plate. Use rope chocks/fairleads as required on deck edge

Optional sheet Winch

Sheet track (Sheet 32)

Optional pulpit - thru bolt with backing plates

Pop-top (Sht. 35) can slide forward and lift up

Mast Step (Sheet 32)

Optional centerboard control lines will exit here

100 4"

450/18"

Anchor well

❒ Camcleat

Opt. Mast rotation control tackle eye

Forestay access opening for forestay and furler. Furling lines can run aft along hull side and under beams to cockpit.

Mainsheet traveler for boomless main (Sht. 32)

Mainsheet traveler for optional boom (compression strut not required)

Optional foredeck hatch 400 x 500mm (16 x 20") or similar.

Optional screacher or spinnaker (F-22R) will sheet to eyes on aft beam, sheets being led to a cabin top winch

0 1000 2000

0 3' 6'

❒ Float vent - 2mm hole covered by a midget cowl vent, eg. Seadog Part no. 331360-1. This is to vent any pressure buildup from heat inside floats, which can cause problems.

6mm (1/4") U-bolt for trailer tie down, Use a fold down pad eye if trailering beam has to be under 2.5m

If required, barber hauler eyes can be bolted along wingnet support web

Shroud carbon Chainplate

Optional deck hatch - wingnet support web is cutaway if necessary for clearance. Screw in hatch behind beam can be omitted if this hatch is fitted.

Dimensions are not given for items where exact position is unimportant. Builder can use own judgement, or can scale from this drawing.

Scale 1 : 25

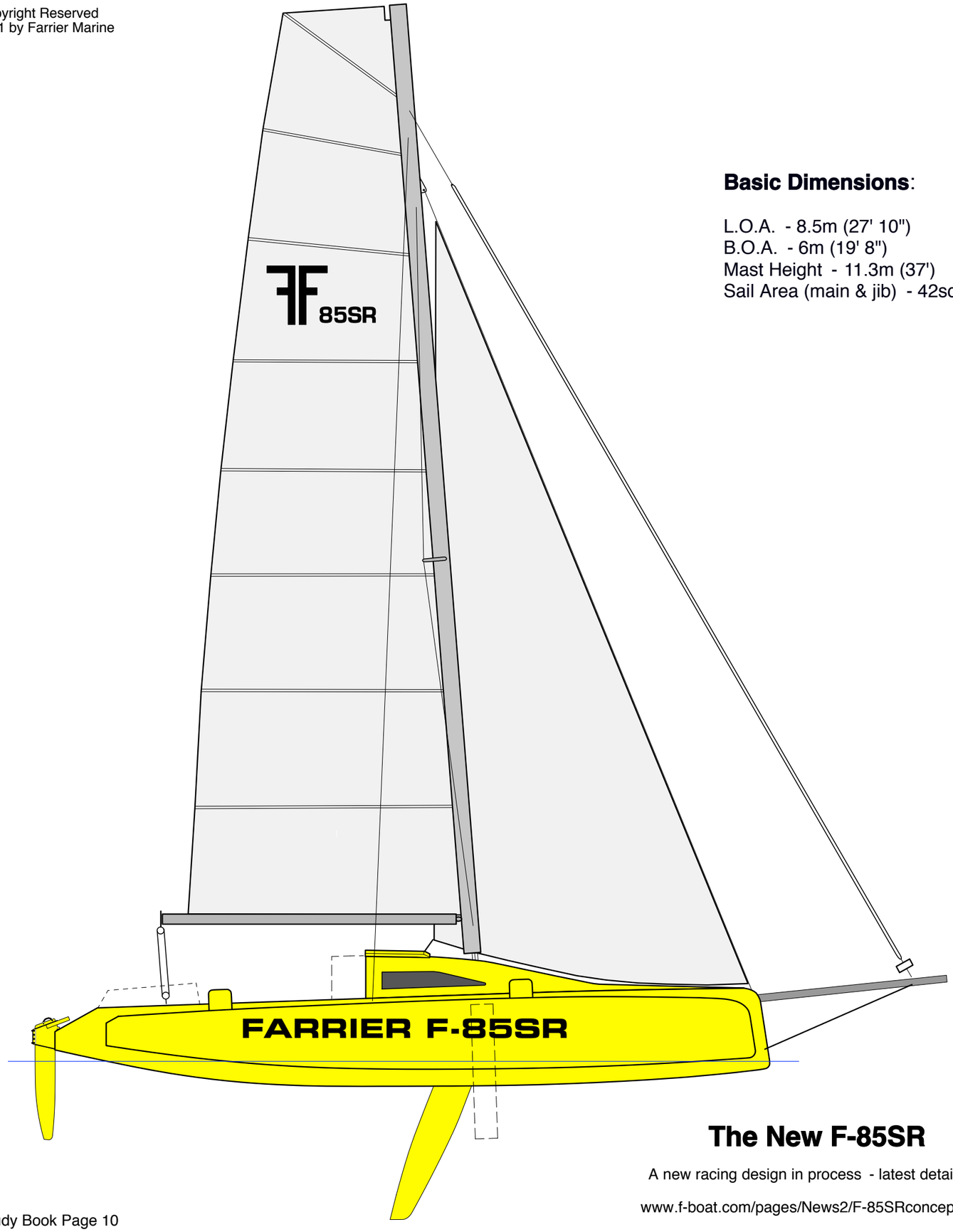
Revised: March 28th, 2008

F-22 Sheet 33

DECK LAYOUT

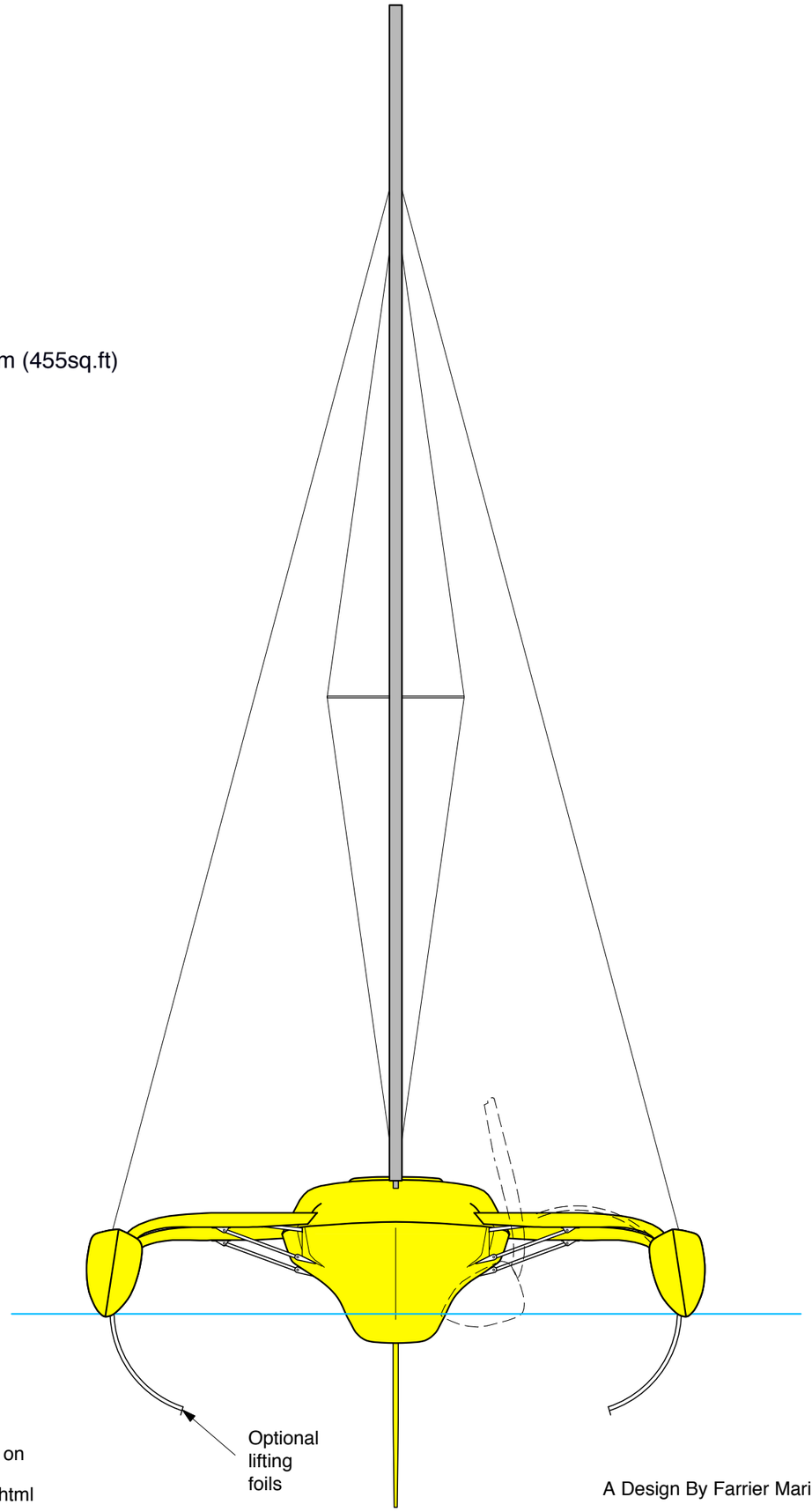
(STD. CABIN WITH DAGGERBOARD)

Farrier Marine (NZ) Ltd



Basic Dimensions:

L.O.A. - 8.5m (27' 10")
B.O.A. - 6m (19' 8")
Mast Height - 11.3m (37')
Sail Area (main & jib) - 42sq.m (455sq.ft)



The New F-85SR

A new racing design in process - latest details on

www.f-boat.com/pages/News2/F-85SRconcept.html

A Design By Farrier Marine

THE F-32

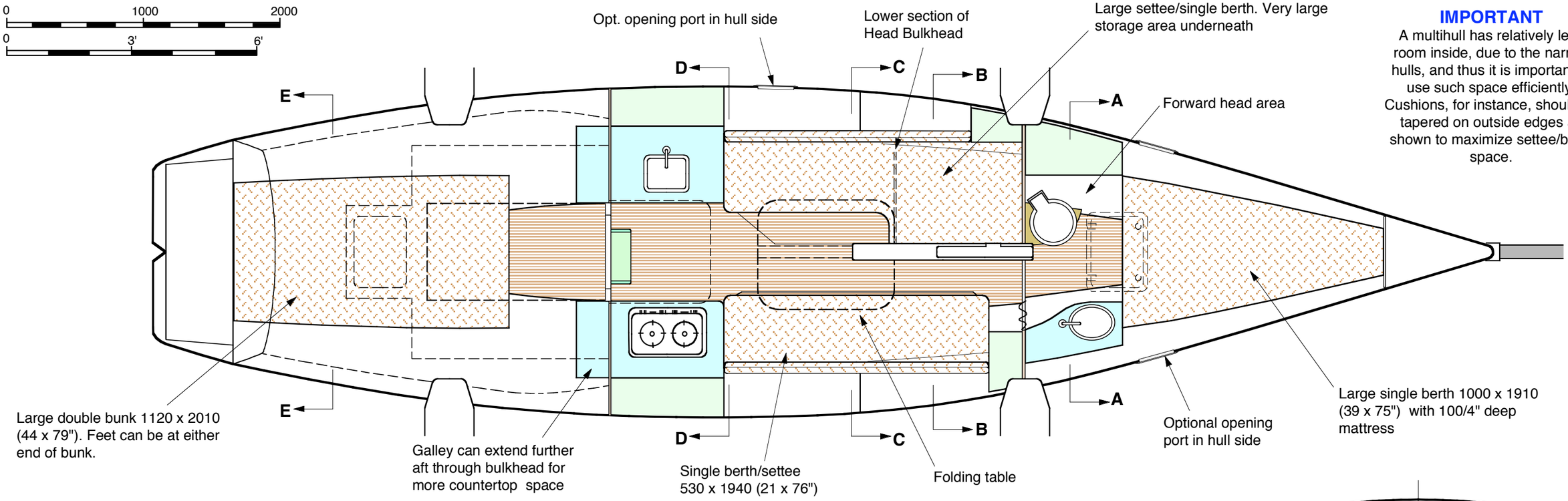
The home builders version of
the production F-33.

F-32A AFT CABIN VERSION

F-32A AFT COCKPIT VERSION

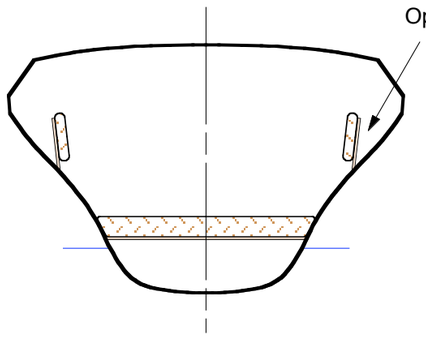
0 1000 2000

0 3' 6'



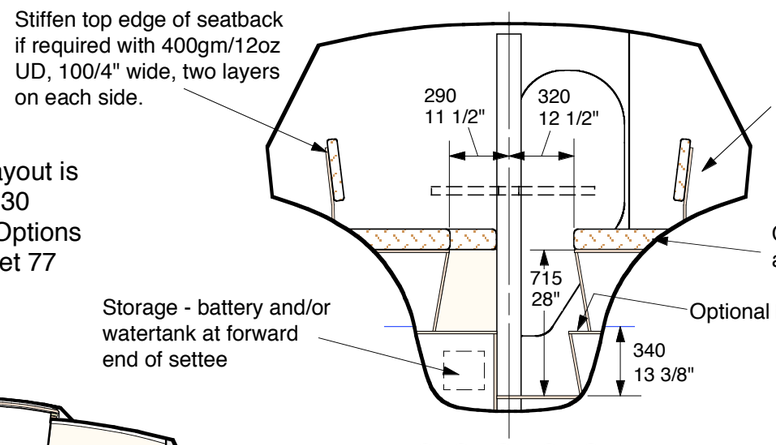
IMPORTANT

A multihull has relatively less room inside, due to the narrow hulls, and thus it is important to use such space efficiently. Cushions, for instance, should be tapered on outside edges as shown to maximize settee/berth space.

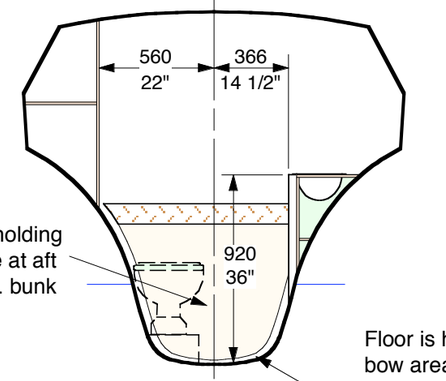


SECTION E - E
(Looking aft)

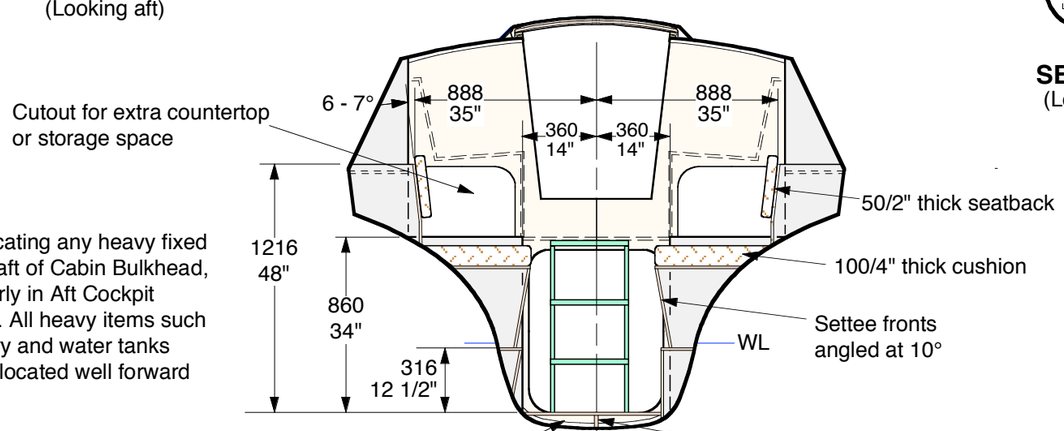
Aft Cockpit Layout is on Sheet 30
More Interior Options Are On Sheet 77



SECTION C - C
(Looking forward)

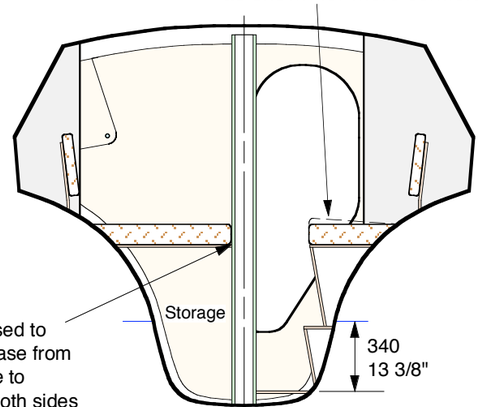


SECTION A - A
(Looking forward)



SECTION D - D
(Looking aft)

Avoid locating any heavy fixed weights aft of Cabin Bulkhead, particularly in Aft Cockpit versions. All heavy items such as battery and water tanks must be located well forward



❒ Port settee top is used to structurally brace d/b case from moving sideways. Tape to daggerboard case on both sides and around case fore and aft ends

SECTION B - B
(Looking forward)

Trailerable at 2.5m (8' 2 1/2")

Scale 1 : 30

Revised: July 11th, 2005

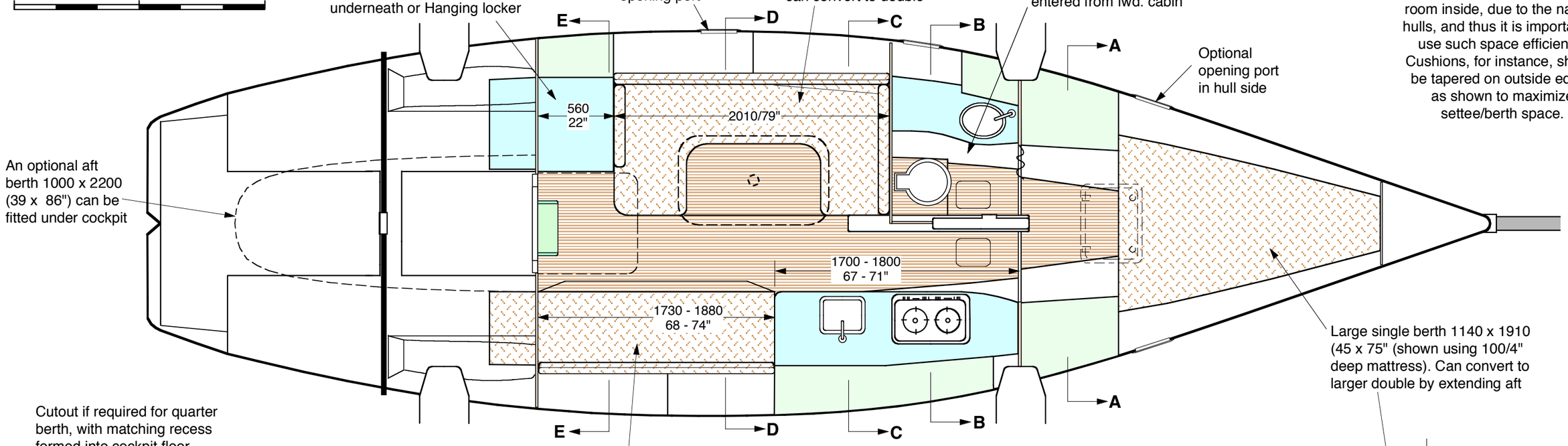
F-32 Sheet 27

F-32A INTERIOR
Aft Cabin Traditional Layout

A Design By Farrier Marine

0 1000 2000

0 3' 6'



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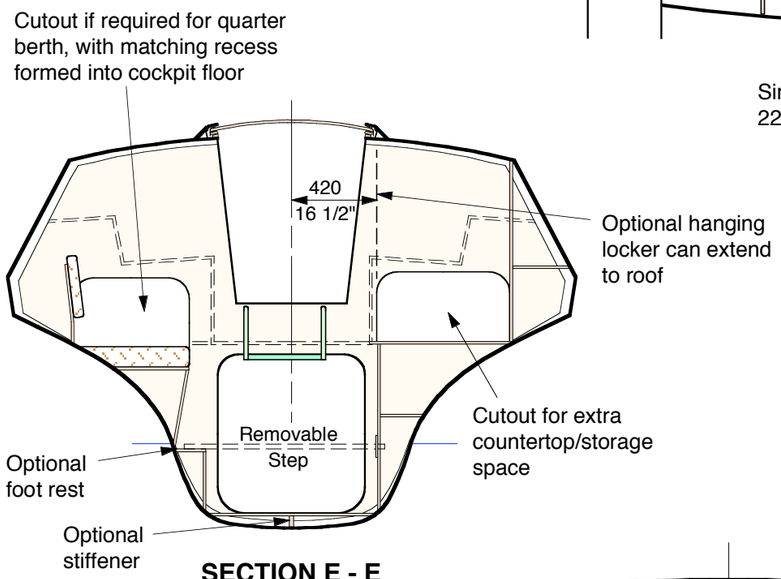
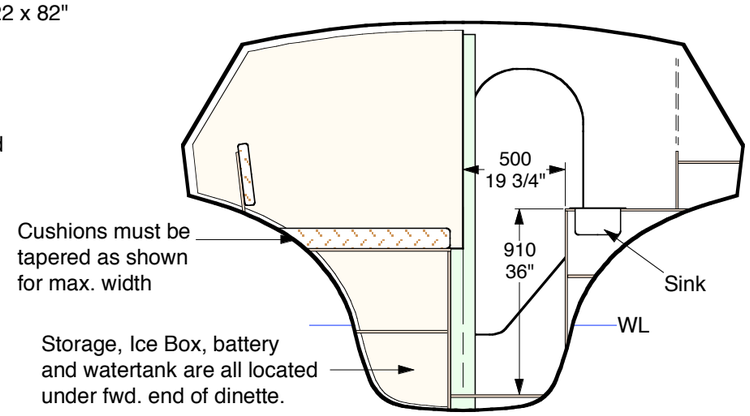
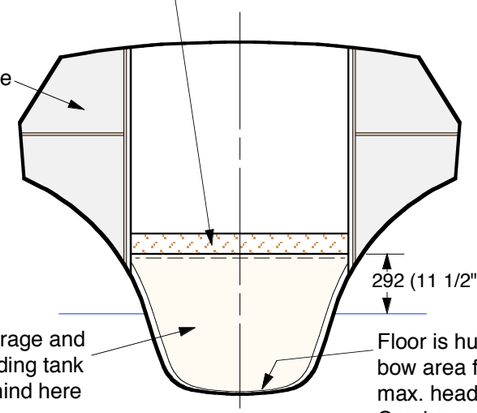


SECTION E - E
(Looking Aft)

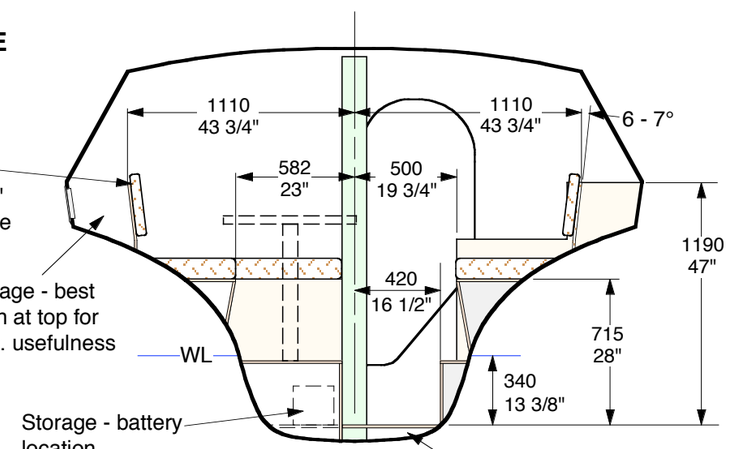


SECTION C - C
(Looking forward)

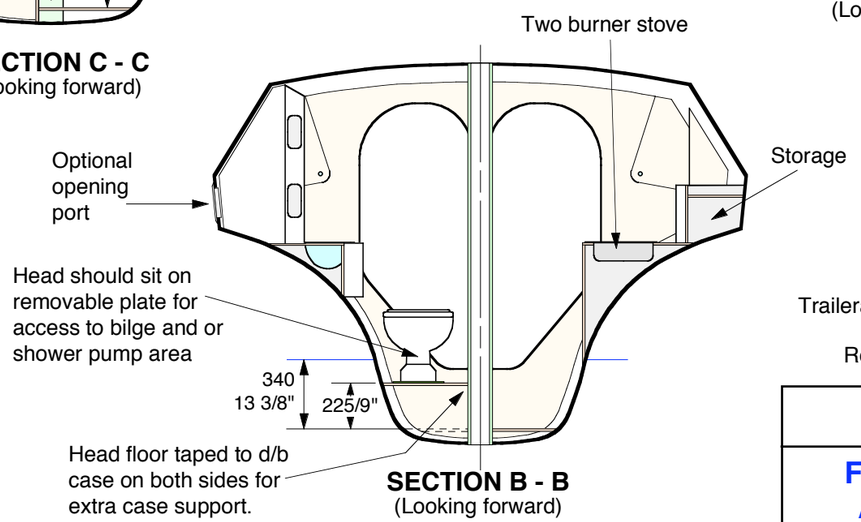
More Interior Options Are On Sheet 77



SECTION A - A
(Looking forward)



SECTION D - D
(Looking forward)



SECTION B - B
(Looking forward)

Avoid locating any heavy fixed weights aft of Cabin Bulkhead, particularly in Aft Cockpit versions. All heavy items such as battery and water tanks must be located well forward

Scale 1 : 30

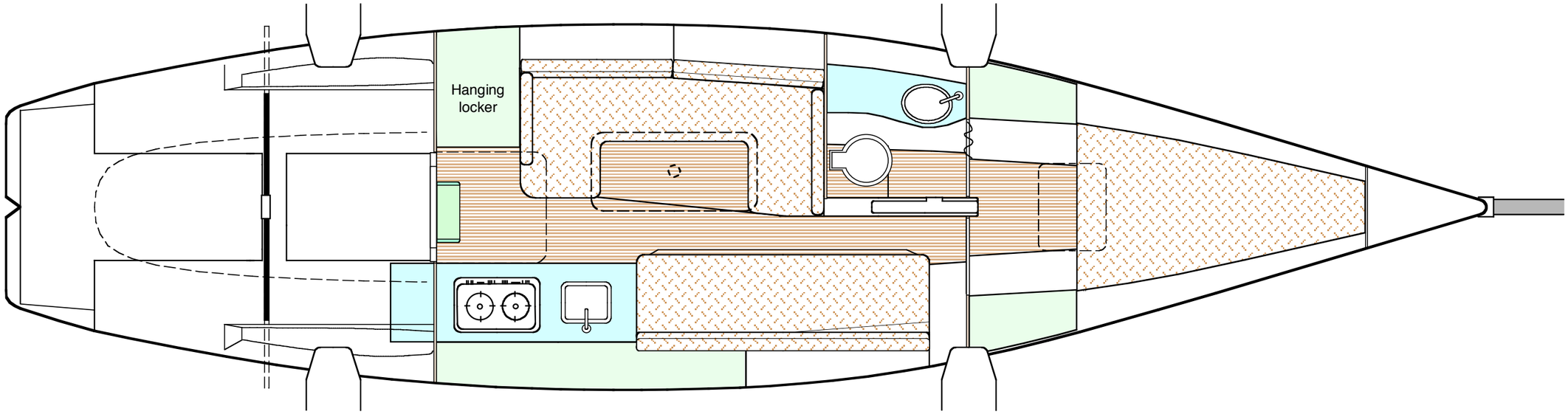
Trailerable at 9' 6" - 9' 8" (2.9 - 2.95m)

Revised: July 11th, 2005

F-32 Sheet 30

F-32AX INTERIOR
Aft Cockpit Layout

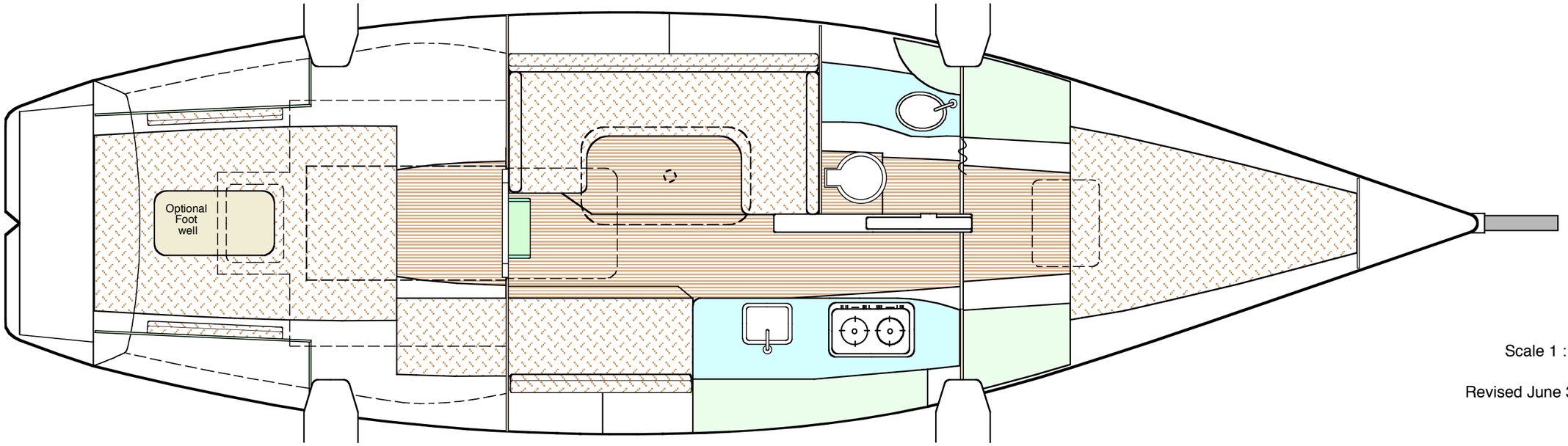
A Design By Farrier Marine



F-32A Aft COCKPIT VERSION WITH AFT GALLEY

Trailerable at 2.5m (8' 6")

Interior features can be mixed and matched among the different models, provided structural bulkheads remain as designed



F-32AX Aft CABIN VERSION WITH DINETTE

Trailerable at 2.94m (9' 8")

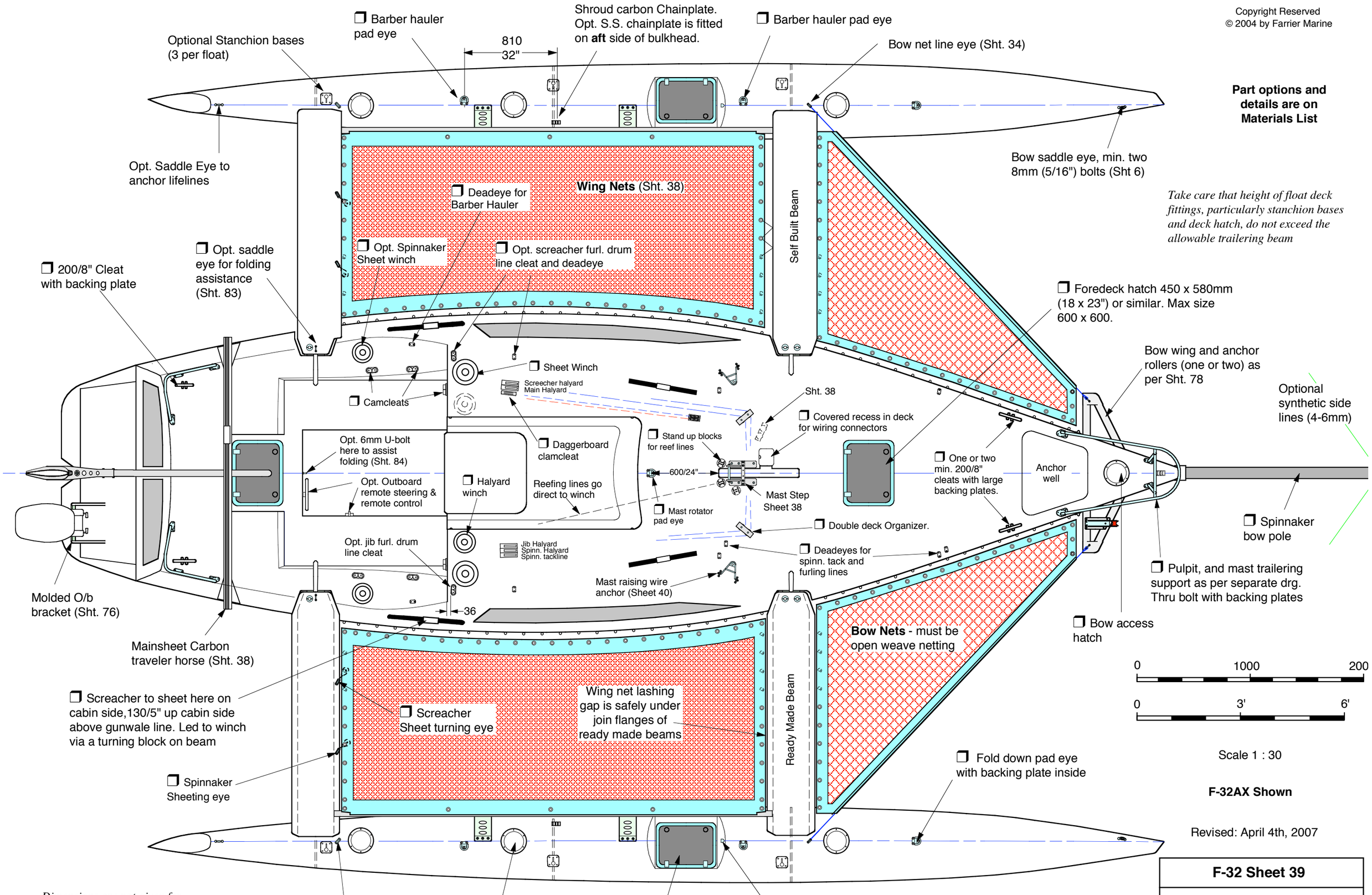
Scale 1 : 30

Revised June 30th, 2005

F-32 Sheet 77
F-32 INTERIOR LAYOUT OPTIONS
A Design By Farrier Marine

Part options and details are on Materials List

Take care that height of float deck fittings, particularly stanchion bases and deck hatch, do not exceed the allowable trailering beam



Scale 1 : 30

F-32AX Shown

Revised: April 4th, 2007

Dimensions are not given for items where exact position is unimportant. Builder can use own judgement, or can scale from this drawing.

❒ 8mm (5/16") U-bolt or fold down pad eye for opt. masthead side stays. Locate in beam tape area for max. strength.

❒ 150/6" screw in access hatch (3 per float)

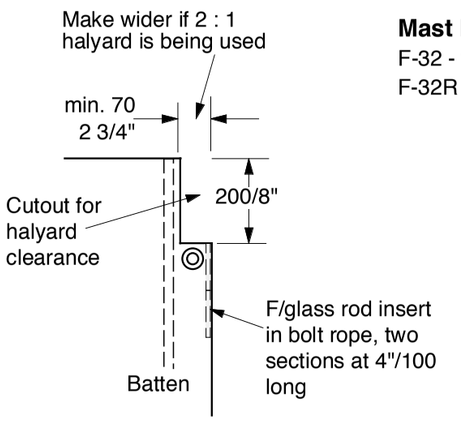
❒ Float hatch 400 x 530mm (16 x 21") or similar

❒ Float vent - 2mm hole covered by Seadog midget vent Part no. 331360-1

F-32 Sheet 39

Deck Layout

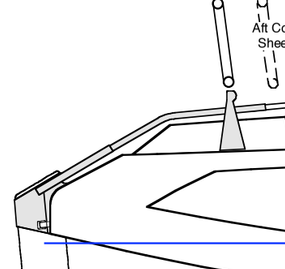
A Design By Farrier Marine



HEAD DETAIL

Bolt Rope - 8oz Teflon Tape or similar over 3/8" min. to 1/2" max. solid braided rope to suit mast
Slides - must suit mast and **be extra long** (min 50mm metal) or **doubled** at head area, to prevent 'pull out'.

SAIL NO____



Sailmaker should be aware that the loadings on a Multihull's sails are considerably higher than an equivalent monohull due to the much greater maximum stability as follows:
F-32: 56,000 ft. lbs
F-32X: 57,500 ft. lbs

Mast height from waterline
F-32 - 14.8m/48' 7"
F-32R - 15.6m/51' 2" (Carbon mast only)

Sail	Luff	Leach	Foot	Area	Additional Info
Mainsail	12640 41.46	12930 42.42'	4210 13.81'	37.9sq.m. 408sq.ft	
Jib	11235 36.86'	9860 32.35'	4250 13.94	21.3sq.m 230sq.ft	Max. foot round 155mm (6")
Screacher	12580 41.27'	11120 36.5'	7690 25.23'	43.88sq.m 473sq.ft	Max. foot round 310mm (12")
Asym. Spinn.	14305 46.93'	12355 40.53	9410 30.9	89sq.m 960sq.ft	
Storm Jib	7410 24.32'	5820 19.1'	3685 12.1	10.6sq.m 114sq.ft	
R Main	13440 44.09'	13680 44.88'	4210 13.81'	42sq.m 452sq.ft.	
R Asym. (masthead)	15905 52.18'	13955 45.78'	9560 31.4'	111sq.m 1198sq.ft	

Masthead spinnaker or Code 0 optional on F-32R (Code 0 may need extra side stays)

1090/3.58'
F-32R
956/3.14'
F-32
1655
5.4' max
1250
4.1' max
12930
42.42'
Recommended reef points (dashed lines are for F-32R)
Aft Cockpit Sheeting
Forestay is 12.18m (39' 11") pin to pin. Reduce by 45mm/1 3/4" with Marstrom masts to allow for top shackle in their system
13.4m (43.96') bow pin - sheave pin

NOTES:
Sailcloth weight to suit material used, and average wind strength in area sailed.
Mainsail to have 3 sets of reefpoints and Cunningham eye fitted. Batten Car/track system recommended for mainsail luff on cruisers. Head loads are very high and extra precautions must be taken to prevent pull out with bolt ropes.
Class emblem located and sized as shown.
Jib to have 4 leach battens placed at equal distance on leach, unless roller furling. Hanks are to be for 7 - 8mm (9/32" to 5/16") wire
Telltales to be fitted to all sails.
Screacher has a min. 5mm/7/32" wire or 9mm/3/8" Kevlar luff and is a furling multi- purpose sail set from bow pole. Can be used to windward in light airs (up to 7 knots instead of genoa) and for reaching or running in light to heavy winds. Luff must be tight (2 : 1 halyard recommended) for windward use. Tacking is accomplished by furling during tack.
The flush **Squaretop Main** has proven to be superior to all other conventional full batten mains on identical boats. It will give the same performance as a mast 5-7% higher but with less weight and windage aloft.

DO NOT INCREASE MAINSAIL ROACH OR HEAD WIDTH
Some sailmakers may try to recommend this, and if so take your business elsewhere. Performance will not be improved to any degree but you will be the one left with the handling problems that will result.

FARRIER F-32

Scale 1 : 50

May 13th, 2008

Mast lengths
F-32 - 13.2m/43.3'
F-32R - 14.0m/46' (carbon)

F-32 is a trademark of Farrier Marine

Study Book Sheet 16

F-32 Sheet 49

SAIL PLAN

A Design By Farrier Marine
www.f-boat.com

The F-39 design is an enhanced version of the F-36, and incorporates the Farrier Folding System.

There are two versions of the F-39 as follows:

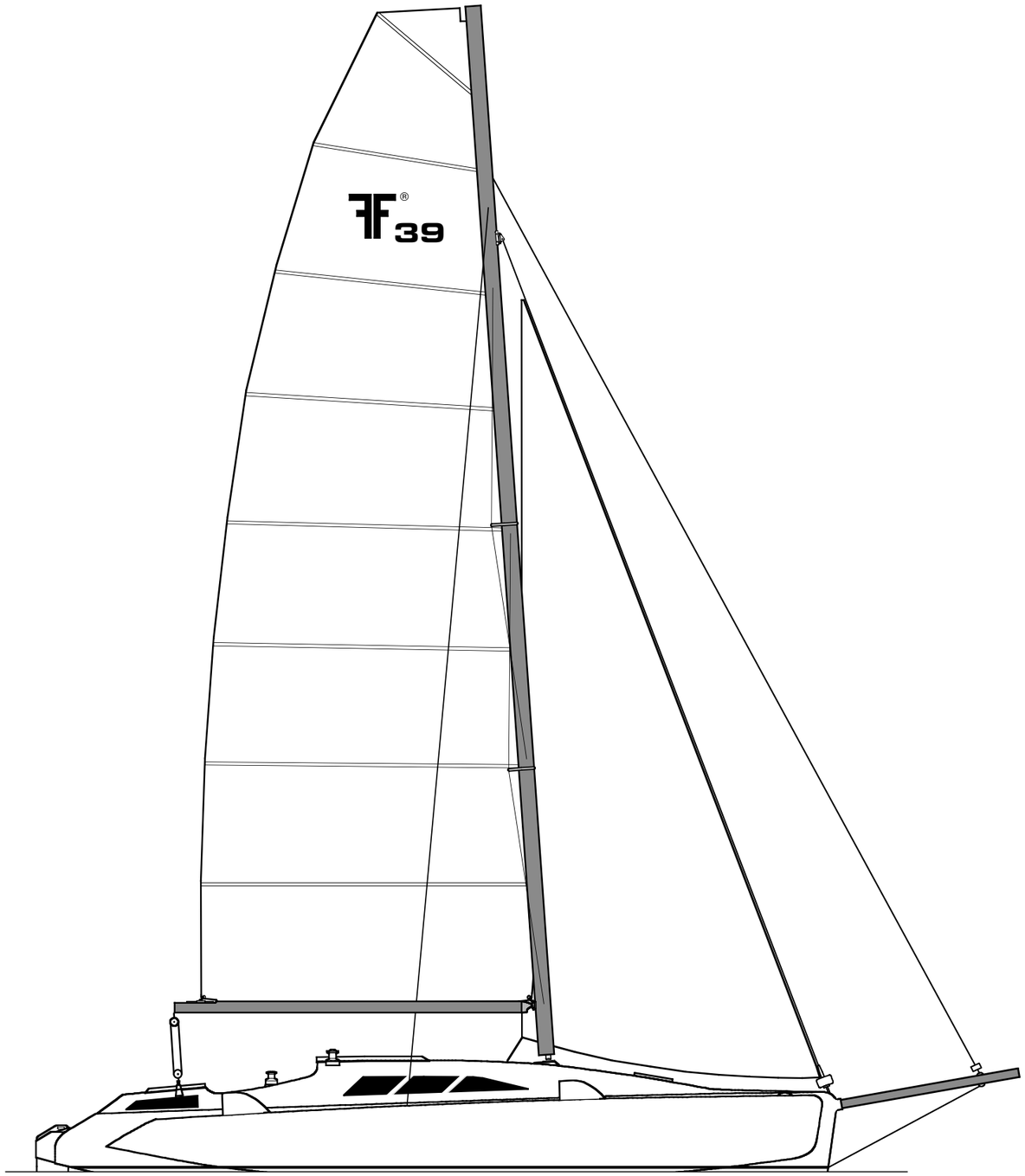
F-39 Sport Cruiser
The perfect high performance cruiser, and available in both aft cabin and aft cockpit versions. Performance will be about equivalent to an F-31R - faster in some conditions, slower in others.

F-39R Sport Racer
A very high performance version, with a more basic interior, and also available in both aft cabin and aft cockpit versions. Performance will be significantly superior to an F-31R, in all conditions.

All models will be fully transportable by road trailer, with the demounting process further streamlined.

Folding capability via the Farrier Folding System for marina docking, or canal traversing, is standard. Floats will fold in more vertical to minimize the need for any anti-fouling on the float side. However, it should be noted that folded trailering is not a feature, as the center hull and floats would have to be too small to achieve a legal trailering width in this size boat.

Rotating masts with synthetic rigging and carbon fiber chainplates are standard across the range, as will a 'kickup' daggerboard style rudder. A conventional fixed mast with stainless steel rigging will still be an option for the cruiser, but rotating masts with synthetic rigging are now looking more reliable, with fewer rigging connections required, while synthetic line is not as fatigue or corrosion prone as stainless steel wire.



Specifications

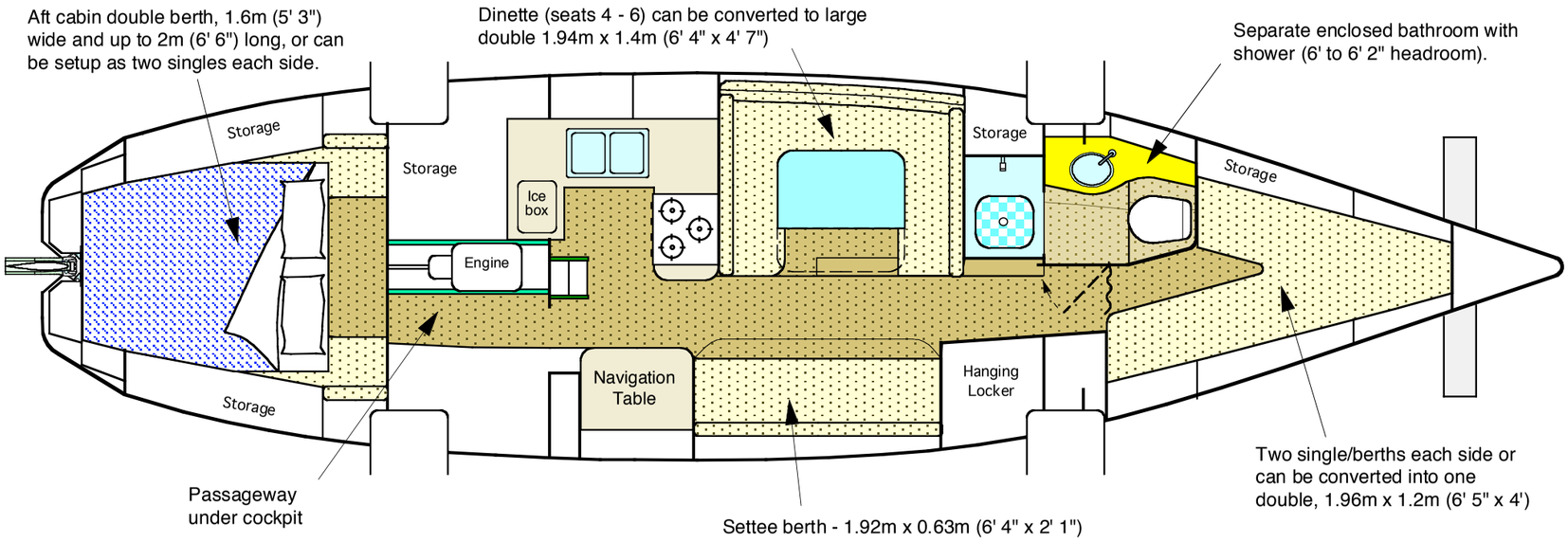
F-39

L.O.A..... 39' 4" (12m)
B.O.A..... 27' 1" (8.26m)
L.W.L..... 36' 11" (11.25m)
Approx. bare weight 6000lbs (2730kg)
Full load. displ (at DWL)..... 9800lbs (4455kg)
F-38 rotating mast..... 52' (15.24m) long
F-38 sail area (main & jib)..... 890sq.ft (82.4sq.m.)
Draft (board up)..... 1' 10" (0.56m)
Draft (board down)..... 6' 11" (2.11m)

F-39R

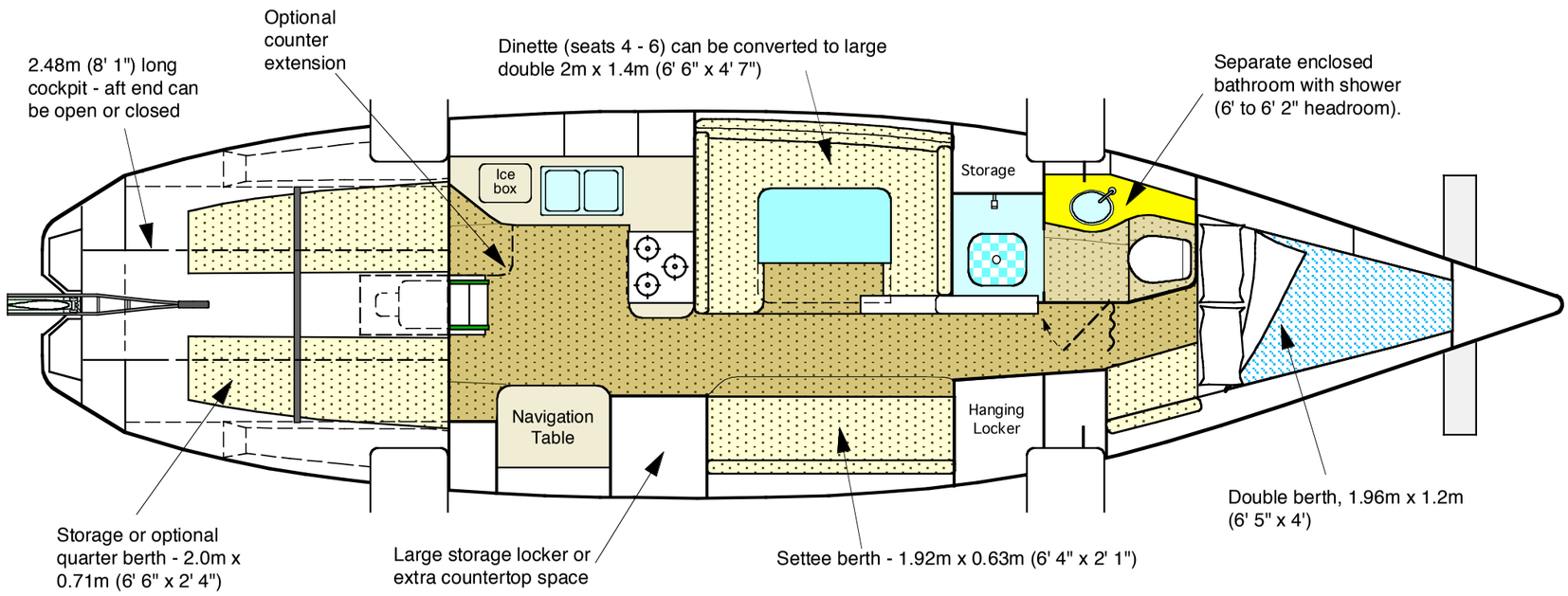
L.O.A..... 39' 4" (12m)
B.O.A..... 27' 1" (8.26m)
L.W.L..... 36' 11" (11.25m)
Approx. bare weight 5400lbs (2450kg)
Full load. displ (at DWL)..... 9800lbs (4455kg)
F-38R rotating mast..... 54' (16.45m) long
F-38R sail area (main & jib)... 939sq.ft (86.9sq.m.)
Draft (board up)..... 1' 10" (0.56m)
Draft (board down)..... 6' 11" (2.11m)

FARRIER F-39



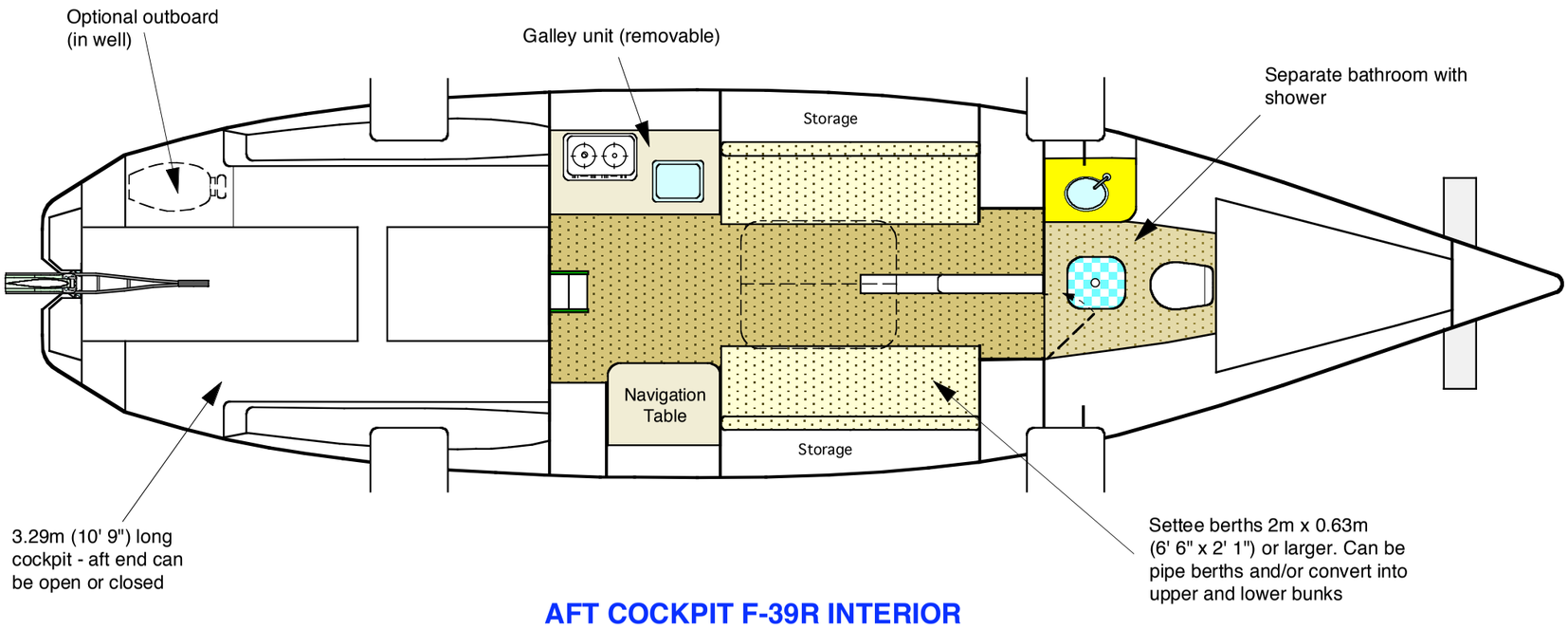
AFT CABIN FULL CRUISING INTERIOR

(With Standard Main Cabin and optional 'kick-back' centerboard)



AFT COCKPIT CRUISING INTERIOR

(With Longer Main Cabin and daggerboard)



AFT COCKPIT F-39R INTERIOR

(With Standard Main Cabin length and daggerboard)

F-39™ INTERIOR OPTIONS

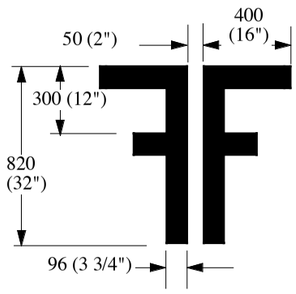
Mast height from waterline
F-39 : 17.6m/57.7'
F-39R : 18.5m/60.7'

Sail	Luff	Leach	Foot	Area	Notes
Mainsail	14960 49.1'	15330 50.3'	5040 16.54'	54.2sq.m. 584sq.ft	Max. roach 850/32" 60% up leach.
Jib	13060 42.85'	11500 37.72'	4780 15.68'	28.2sq.m 305sq.ft	Max. foot round 200mm (8")
Screacher	14700 48.22'	12800 42'	9210 30.22'	61sq.m 657sq.ft	Max. foot round 410mm (16")
Asym. Spinn.	16700 54.8'	14450 47.41'	11200 36.76'	121.8sq.m 1315sq.ft	
Storm Jib	8710 28.58	6950 22.8'	4200 13.78'	14.55sq.m 157sq.ft	Roller furling/reefing jib may be sufficient alone
F-31R Main	15850 52'	16160 53.02'	5040 16.53'	59.3sq.m 639sq.ft.	Max. roach 1010/40" 60% up leach.

Note mainsail head system - check that halyard/shackle or 2 : 1 block has clearance

Batten

HEAD DETAIL



1320/4.33'
F-39R
1150/3.77'
F-39
850 2.8' max. roach
15330 50.3'

NOTES:
Sailcloth weight to suit material used, and average wind strength in area sailed.
Mainsail to have 3 sets of reefpoints and Cunningham eye fitted. Batten Car/track system recommended for mainsail luff. Class emblem located and sized as shown.
Jib to have 4 leach battens placed at equal distance on leach, unless roller furling. If used, hanks are to suit headstay size.
Screacher has a min. 6mm/1/4" wire or 10mm/3/8" Kevlar luff and is a furling multi-purpose sail set from bow pole. Can be used to windward in light airs (up to 7 knots instead of genoa) and for reaching or running in light to heavy winds. Luff must be tight (2 : 1 halyard recommended) for windward use. Tacking is accomplished by furling during tack.
The flush **Squaretop Main** has now proven to be superior to all other conventional full batten mains on identical boats. It will give the same performance as a mast 5-7% higher but with less weight and windage aloft. Not all sailmakers have experience with these, and a specialist multihull sailmaker may be required.

DO NOT INCREASE MAINSAIL ROACH OR HEAD WIDTH
Some sailmakers may try to recommend this, and if so take your business elsewhere. Performance will not be improved to any degree but you will be the one left with the handling problems that will result.

Mainsail, jib and screacher represent the best overall value for a minimum sail wardrobe.

Forestay is 14080 46.19' pin to pin

F-39

Sailmaker should be aware that the loadings on a Multihull's sails are considerably higher than an equivalent monohull due to the much greater maximum stability (125,000ft. lbs)

Revised November 7th, 2004

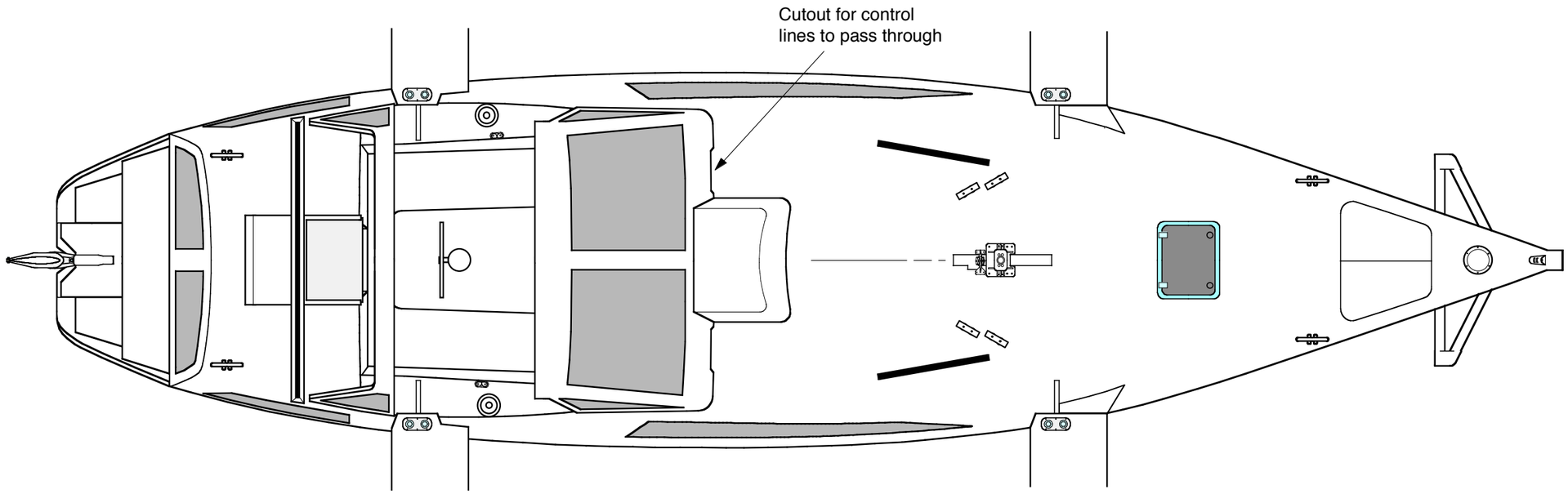
Scale 1 : 56

All Metric Dimensions are in Millimetres unless otherwise specified

F-39 Sheet 49

SAIL PLAN

A Design By Farrier Marine, Inc.



PLAN VIEW
Showing roof and back removed

Pilothouse is modular and removable. It is thus not a structural part of the boat, and can completely or partially enclose cockpit.

Roof and back are detachable and roof can incorporate clear removable panels (similar to automotive T-Tops) for observation of sails. Pilot house sides can be enclosed by canvas curtains (with windows) when required.

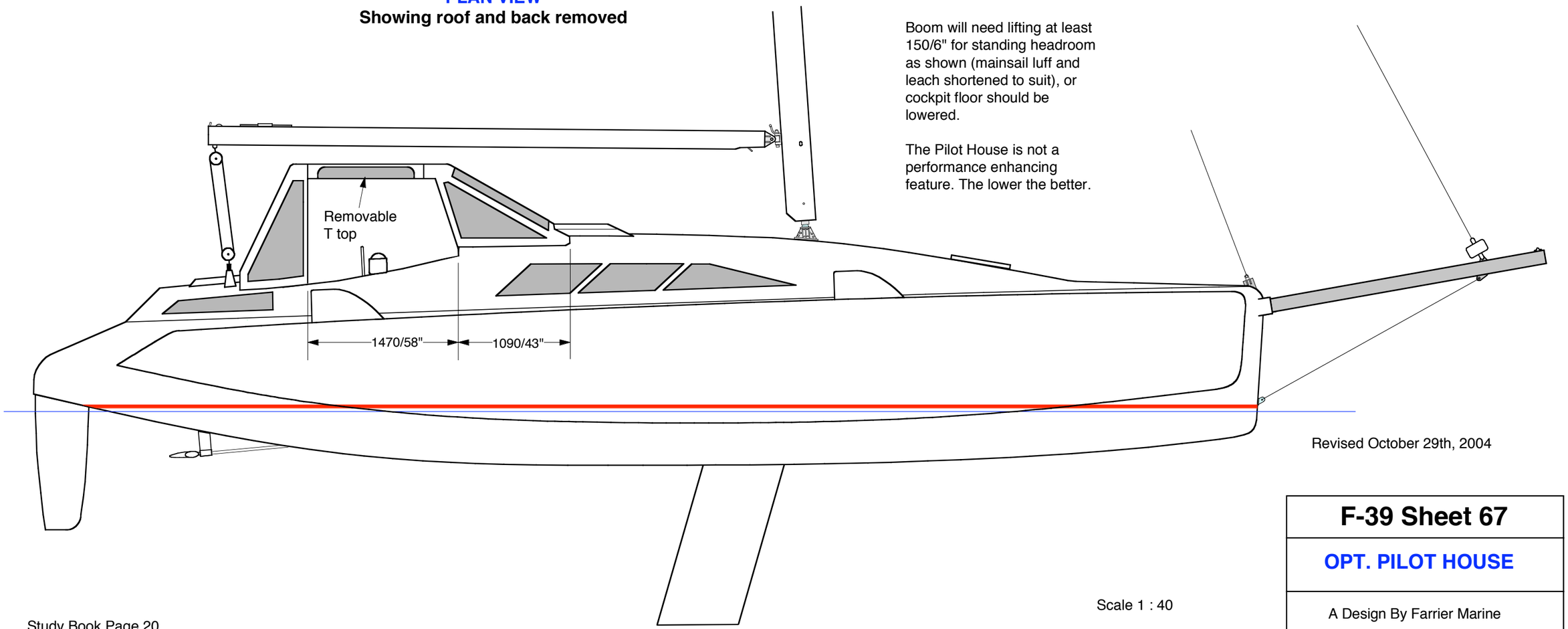
Cockpit floor and seats can be lowered if wished to give standing headroom inside, but this also reduces headroom in Engine compartment.

All control lines pass through front of pilothouse. Access to operate winches may be limited, but they can be moved inboard to improve this.

Pilothouse can be constructed from SBM (Sht. 1)

Boom will need lifting at least 150/6" for standing headroom as shown (mainsail luff and leach shortened to suit), or cockpit floor should be lowered.

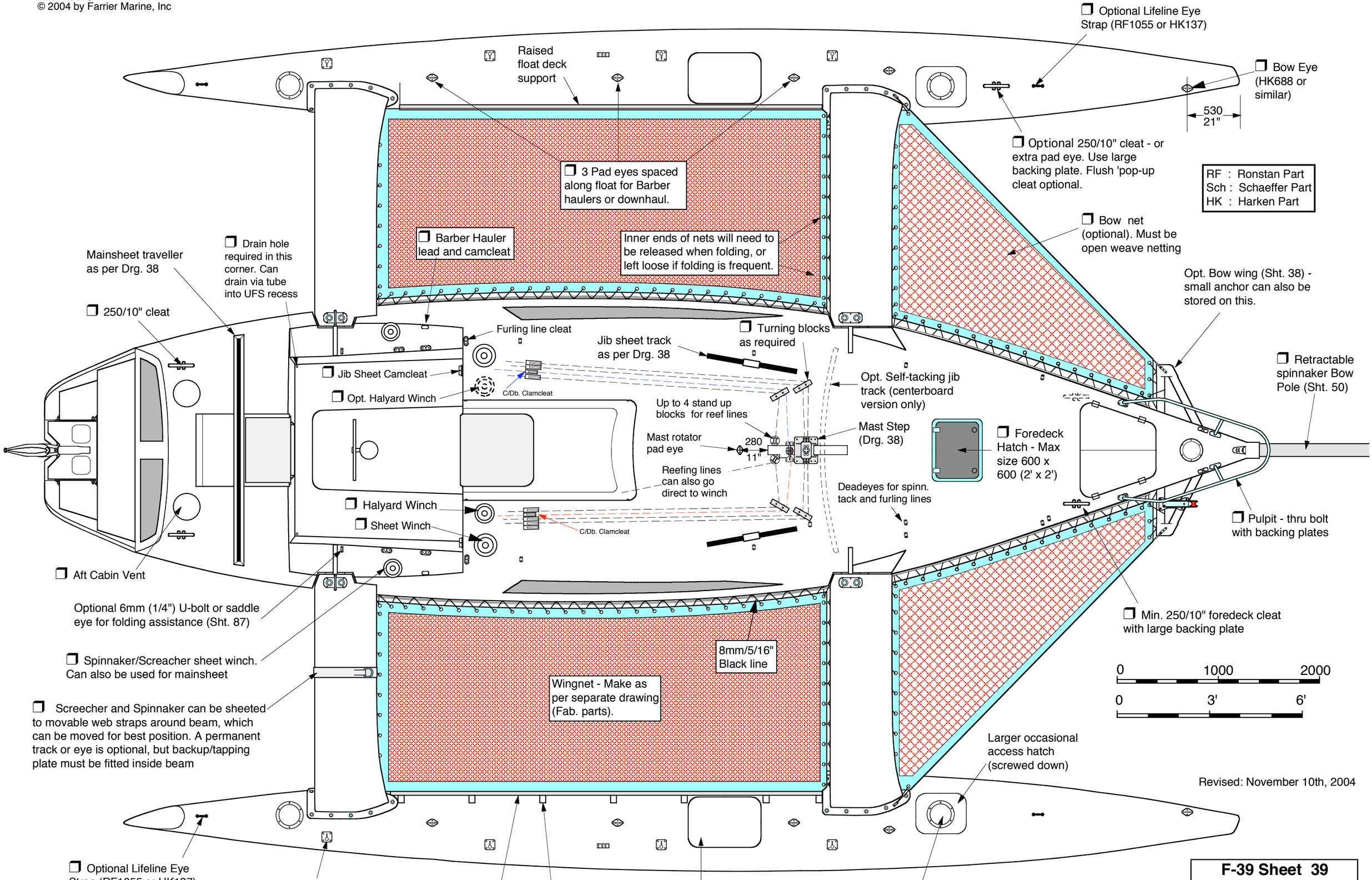
The Pilot House is not a performance enhancing feature. The lower the better.



Revised October 29th, 2004

Scale 1 : 40

F-39 Sheet 67
OPT. PILOT HOUSE
A Design By Farrier Marine



Revised: November 10th, 2004

F-39 Sheet 39
DECK LAYOUT
A Design By Farrier Marine, Inc.

The F-39 will have the latest 'third generation' Farrier Folding System™, for marina docking or traversing narrow waterways

Folding geometry and mechanics have been designed specifically for ocean going ruggedness and reliability. This is essential for extended voyages where little or no maintenance may be frequent factors for long periods.

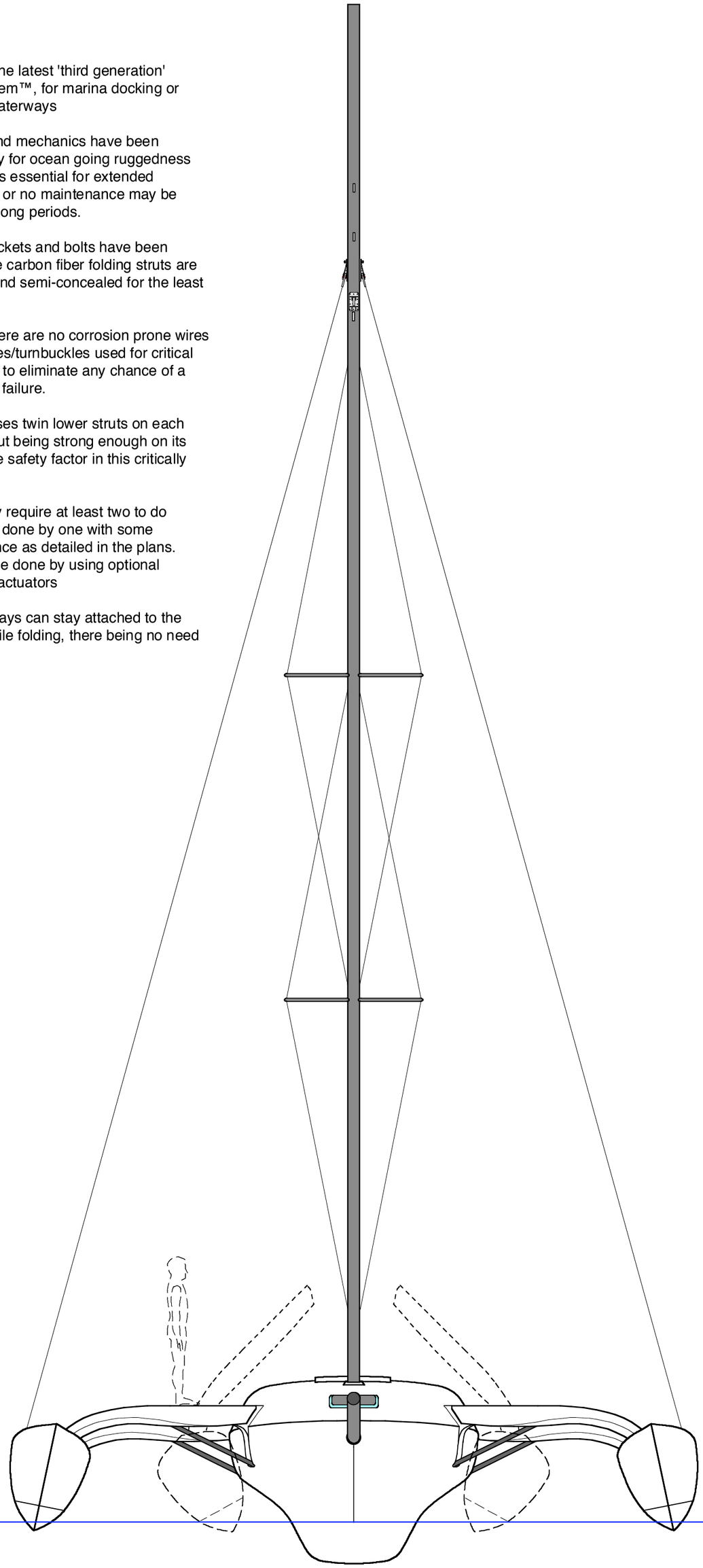
Numerous alloy brackets and bolts have been eliminated, while the carbon fiber folding struts are high above waves and semi-concealed for the least drag.

Most importantly, there are no corrosion prone wires or associated swages/turnbuckles used for critical structural purposes, to eliminate any chance of a sudden unexpected failure.

The F-39 actually uses twin lower struts on each beam, with each strut being strong enough on its own, giving a double safety factor in this critically important area.

Folding will normally require at least two to do manually, or can be done by one with some mechanical assistance as detailed in the plans. Folding could also be done by using optional electro-mechanical actuators

In all cases, mast stays can stay attached to the float chainplates while folding, there being no need to detach these.



F-39™ FOLDING OPTION

A Design By Farrier Marine, Inc.

Catamarans become the cruising multihull of choice over 40', with considerably more room and better interior layouts possible. A cruising catamaran will not perform or handle as well as a cruising trimaran, but once large enough to offer full standing headroom on the bridgedeck, without a high windage boxy cabin, performance can be acceptable, and even impressive. However, they do need to be designed correctly, with a modern rig and systems, and be built with advanced methods to achieve the very necessary light weight.

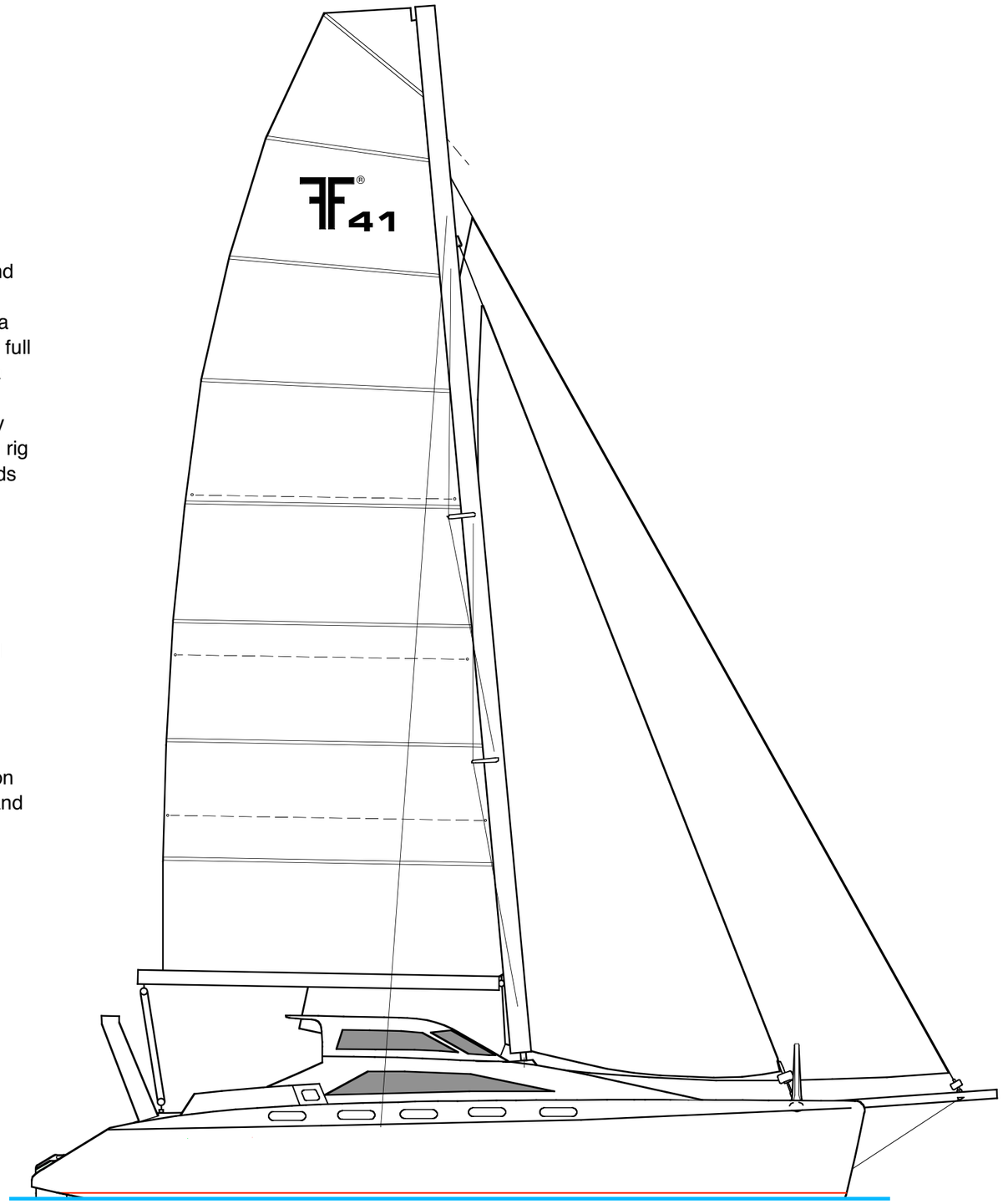
Design variations available of the F-41 include:

F-44R

A high performance version with taller rig and low profile cabin is also available, this being the F-44R

F-44SC

The latest F-44SC is the 'super cruiser' version of the Farrier F-41, with more waterline length, and more internal room.



F-41 Specifications

L.O.A..... 41' 8" - 43' (12.7 - 13.1m)
B.O.A..... 23' 1" (7.04m)
L.W.L.....39' 5" (12.0m)
Loaded Displ. (at DWL)..16,900lbs (7680kg)
Bridgedeck Clearance ... 2' 9" (840mm)
(at full load)
Bridgedeck Headroom... 6' - 6' 6" (1.83 - 2m)
Hull Headroom..... 6' - 6' 6" (1.83 - 2m)
Mast Height..... 54' 2" (16.5m)
Sail Area (main & jib)..... 916sq.ft (85sq.m.)
Draft (bd. up)..... 1' 10" (0.56m)
Draft (Bd. down)..... 7' 4" (2.24m)

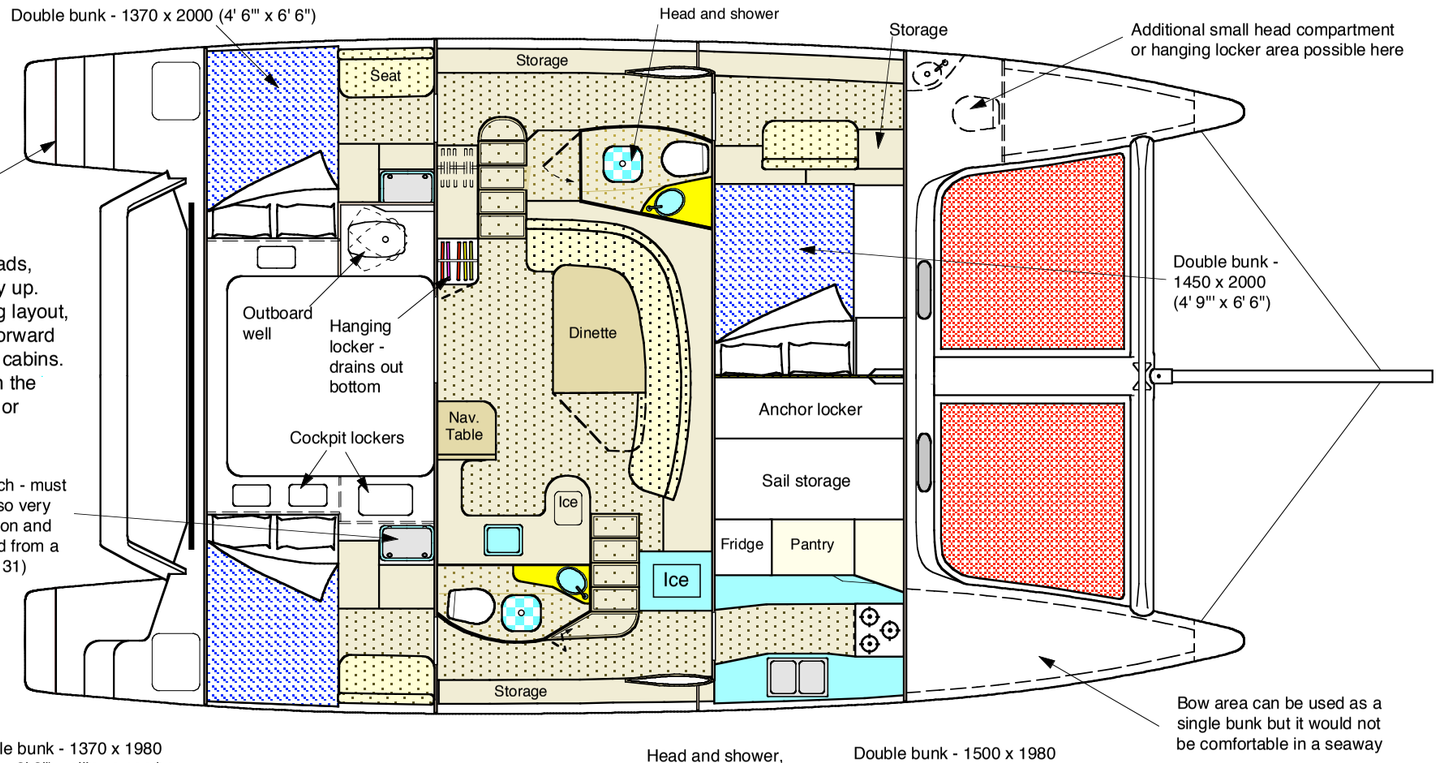
F-44SC Specifications (New)

L.O.A.....43' 11" (13.38m)
B.O.A.....23' 1" (7.04m)
L.W.L.....41' 3" (12.58m)
Loaded Displ (at DWL)..17,600lbs (8000kg)
Estimated Weight.....11,000 - 13,000lbs (5000 to 5900kg)
Draft (board up).....1' 10" (0.56m)
Draft (Board down).....7' 4" (2.24m)
Sail Area (Main and jib)...916sq.ft (85sq.m.)

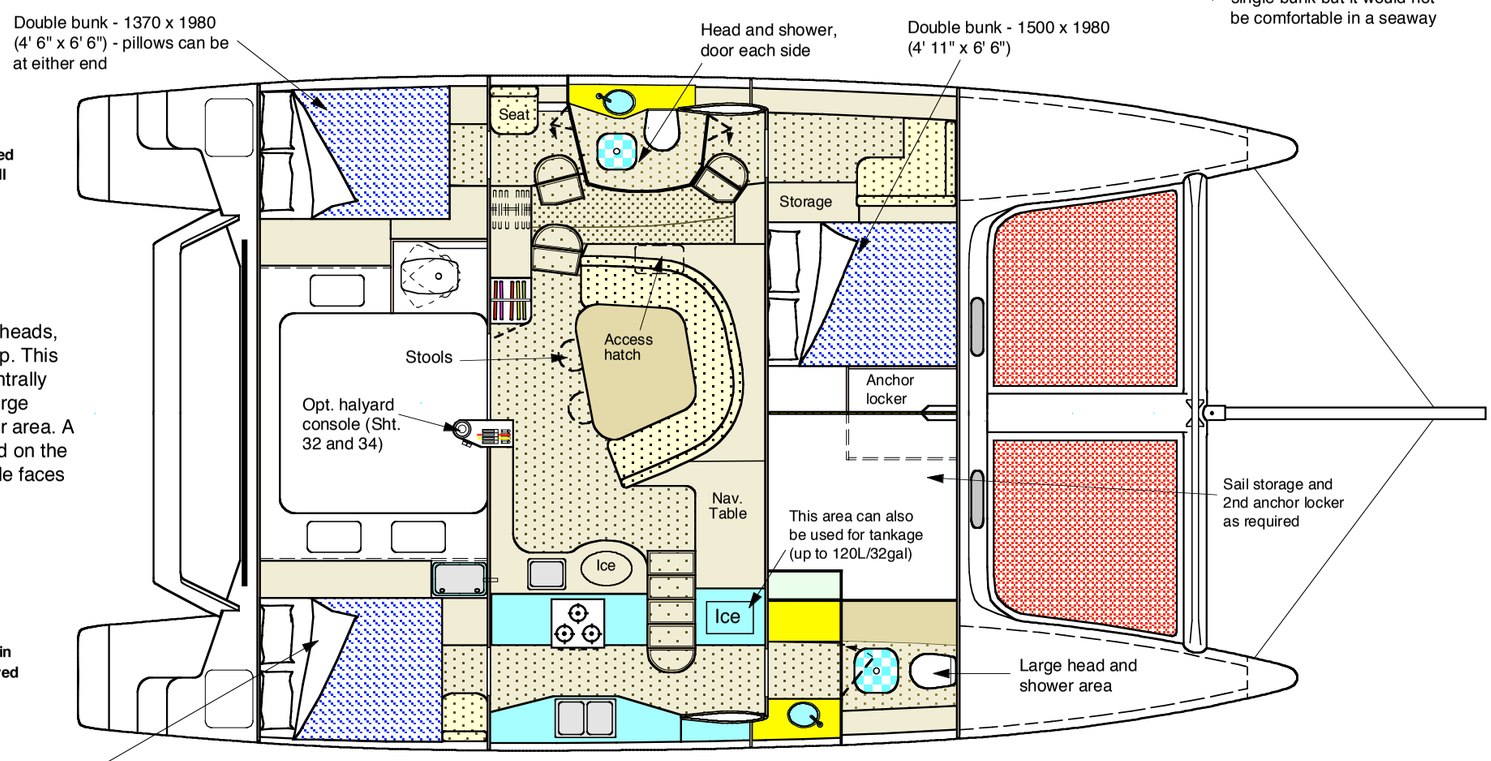
F-44R Specifications

L.O.A.....43' 11" (13.38m)
B.O.A.....23' 1" (7.04m)
L.W.L.....41' 3" (12.58m)
Full Load. Displ (at DWL).16,900lbs (7680kg)
Draft (board up).....1' 10" (0.56m)
Draft (Board down).....7' 4" (2.24m)
Sail Area (Main and jib)....1057sq.ft (98sq.m.)

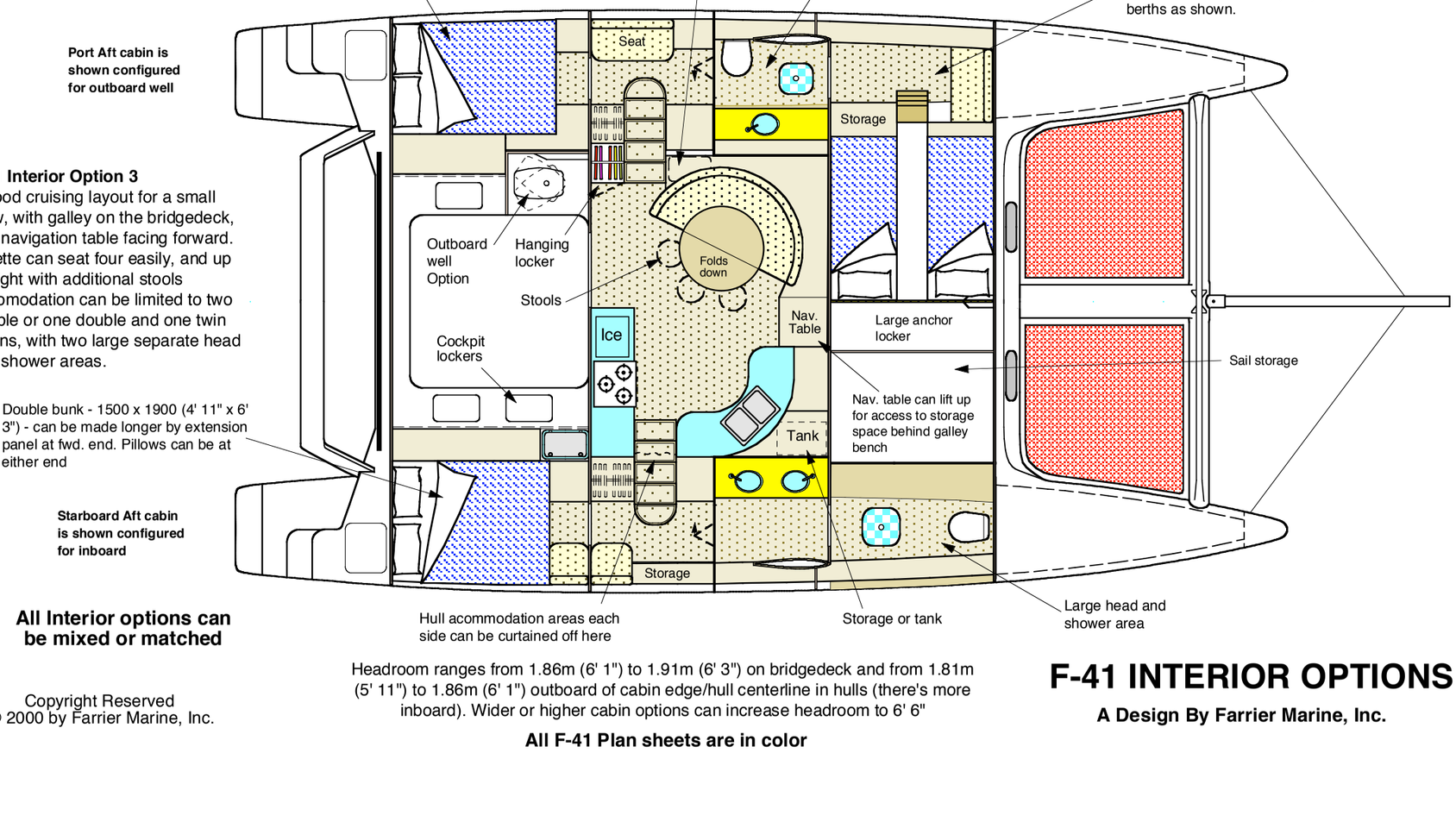
FARRIER F-41 & F-44



F-41 Interior Option 1
Three double cabins, two heads, large galley down, mini-galley up. This general purpose cruising layout, has a large separate galley forward in one hull, and three double cabins. There is also a mini-galley on the bridge deck for quick snacks or drinks.



F-41 Interior Option 2
Three double cabins, two heads, galley down, mini-galley up. This has a good size galley centrally down in one hull, plus a large separate head and shower area. A mini-galley is also included on the bridgedeck., and Nav. table faces forward



F-41 Interior Option 3
A good cruising layout for a small crew, with galley on the bridgedeck, and navigation table facing forward. Dinette can seat four easily, and up to eight with additional stools Accomodation can be limited to two double or one double and one twin cabins, with two large separate head and shower areas.

All Interior options can be mixed or matched

Headroom ranges from 1.86m (6' 1") to 1.91m (6' 3") on bridgedeck and from 1.81m (5' 11") to 1.86m (6' 1") outboard of cabin edge/hull centerline in hulls (there's more inboard). Wider or higher cabin options can increase headroom to 6' 6"

All F-41 Plan sheets are in color

F-41 INTERIOR OPTIONS

A Design By Farrier Marine, Inc.

Mast height from waterline is 18.62m/61' 1"

Conventional pin head main is optional

Sail Plan Optimized by Randy Smyth

Sail	Area
Mainsail	60sq.m. 646sq.ft
Jib	25sq.m 270sq.ft
Screacher	64.9sq.m 700sq.ft
Asym. Spinn.	148.2sq.m 1595sq.ft
Optional if required:	
Storm Jib	12.7sq.m 136sq.ft
Genoa	33.5sq.m 361sq.ft.

Mainsail, jib and screacher represent the best overall value for a minimum sail wardrobe. This combination of easily handled sails will give up to 90% of the maximum potential performance possible with a full set of sails.

Screacher is an effective substitute for the spinnaker downwind and can also be used to windward in light airs (replacing genoa).

Storm jib may not be necessary with a good furling/reefing jib.

Genoa is only essential for serious racing in the 9 to 12 knot wind speed range.

The flush squaretop main has now proven to be superior to all other conventional full batten mains on identical boats. It will give the same performance as a mast 5-7% higher but with less weight and windage aloft.

Optional Saildrive auxiliary

Optional mini-keel to protect bottom and prop in shallow waters

Optional 'kick up' daggerboard style transom rudder - transom can be extended for protection as shown

Optional kick-up centerboard

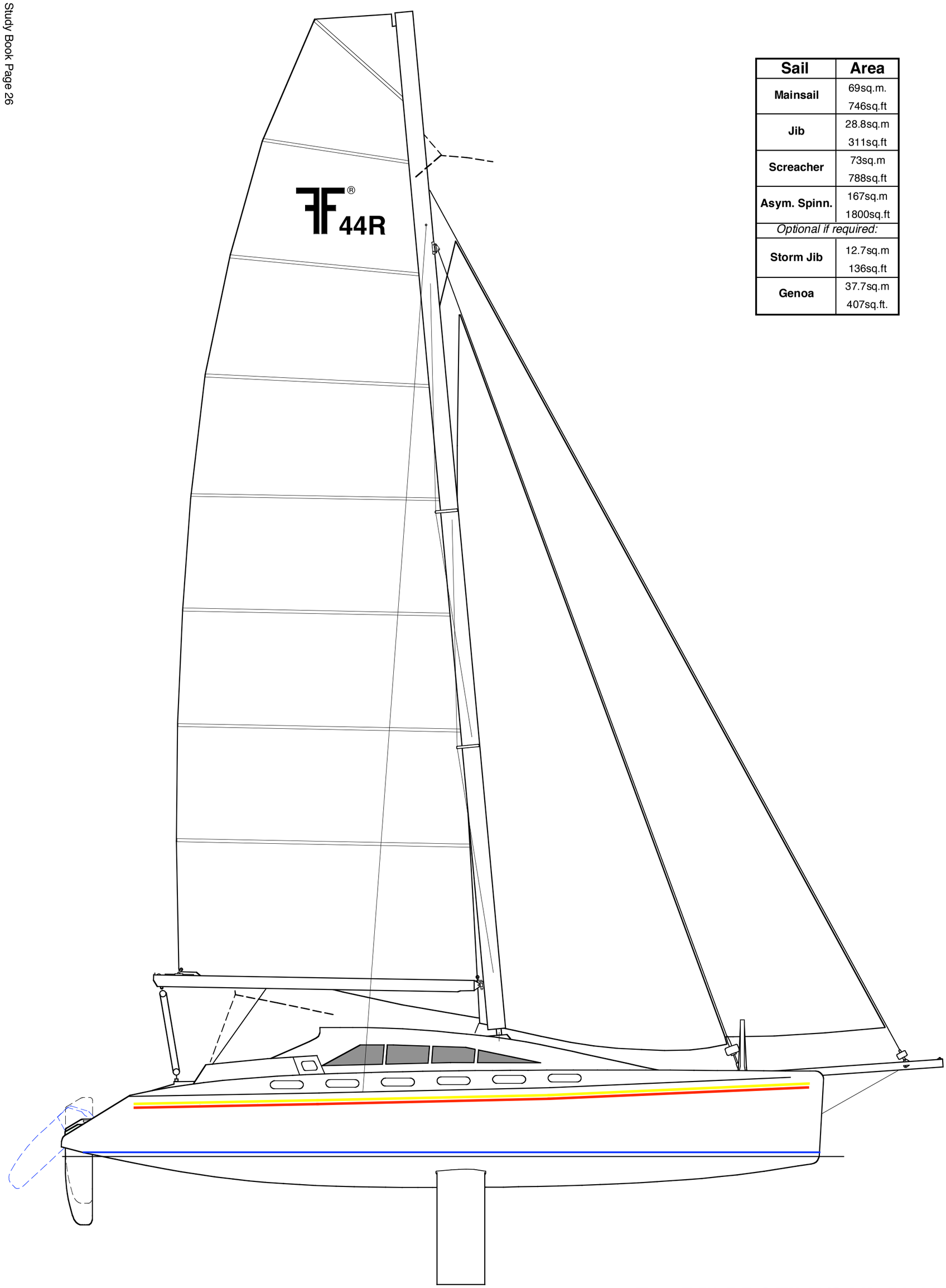
Retractable Daggerboard in each hull (one only is optional)

F-41™ PROFILE/SAIL PLAN

Current at April 8, 2006

A Design By Farrier Marine, Inc.

F-41 is a trademark of Farrier Marine



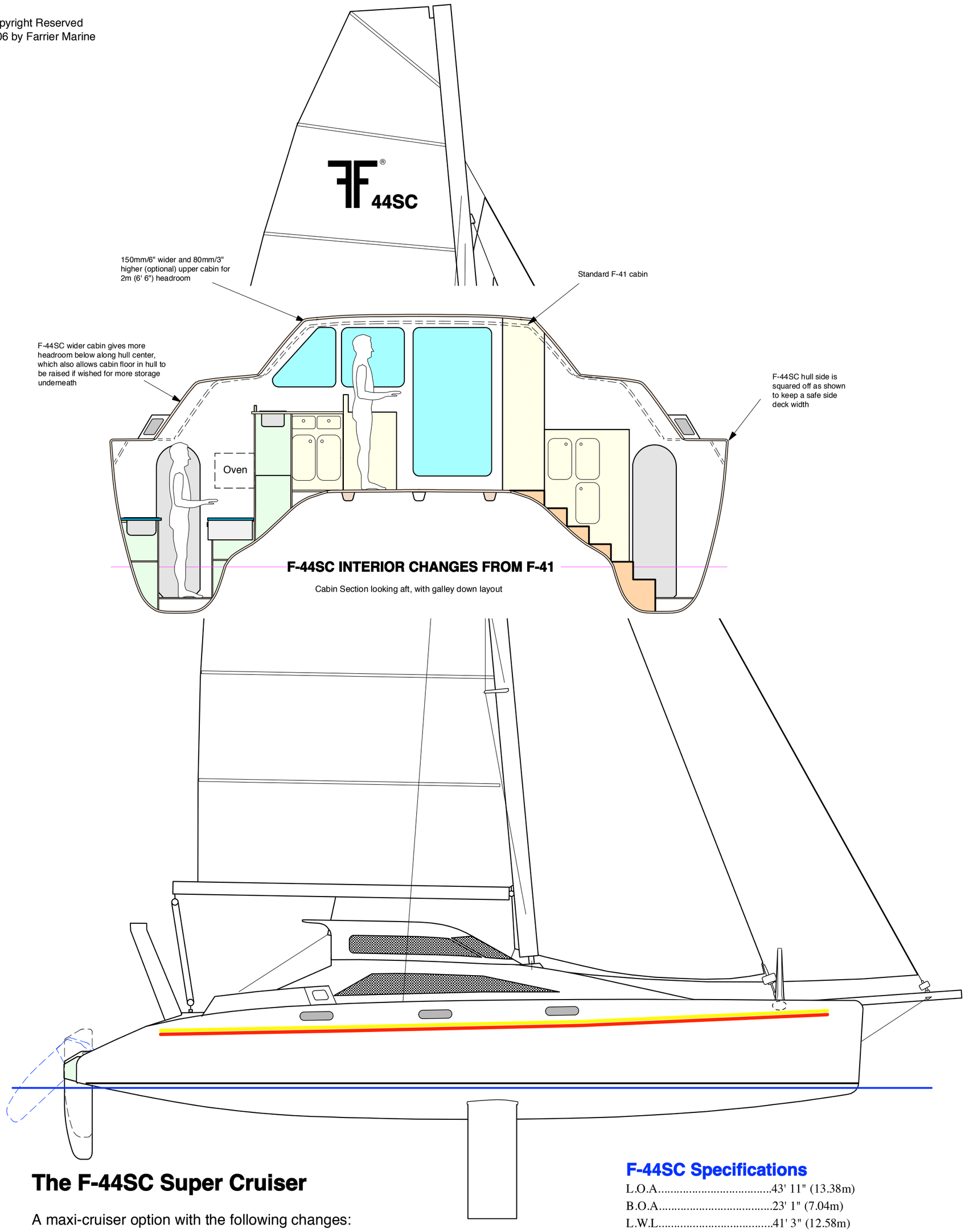
Sail	Area
Mainsail	69sq.m. 746sq.ft
Jib	28.8sq.m 311sq.ft
Screacher	73sq.m 788sq.ft
Asym. Spinn.	167sq.m 1800sq.ft
Optional if required:	
Storm Jib	12.7sq.m 136sq.ft
Genoa	37.7sq.m 407sq.ft.

F-44R™ PROFILE/SAIL PLAN

Current at July, 2006

A Design By Farrier Marine, Inc.

Scale 1 : 60



F-44SC INTERIOR CHANGES FROM F-41

Cabin Section looking aft, with galley down layout

The F-44SC Super Cruiser

A maxi-cruiser option with the following changes:

1. Uses the longer F-44R hulls

2. Has the F-41 cruising cabin but enlarged/wider

3. Uses the standard F-41 rig

4. All other F-41 options such as underslung rudders, inboard etc. can also be used

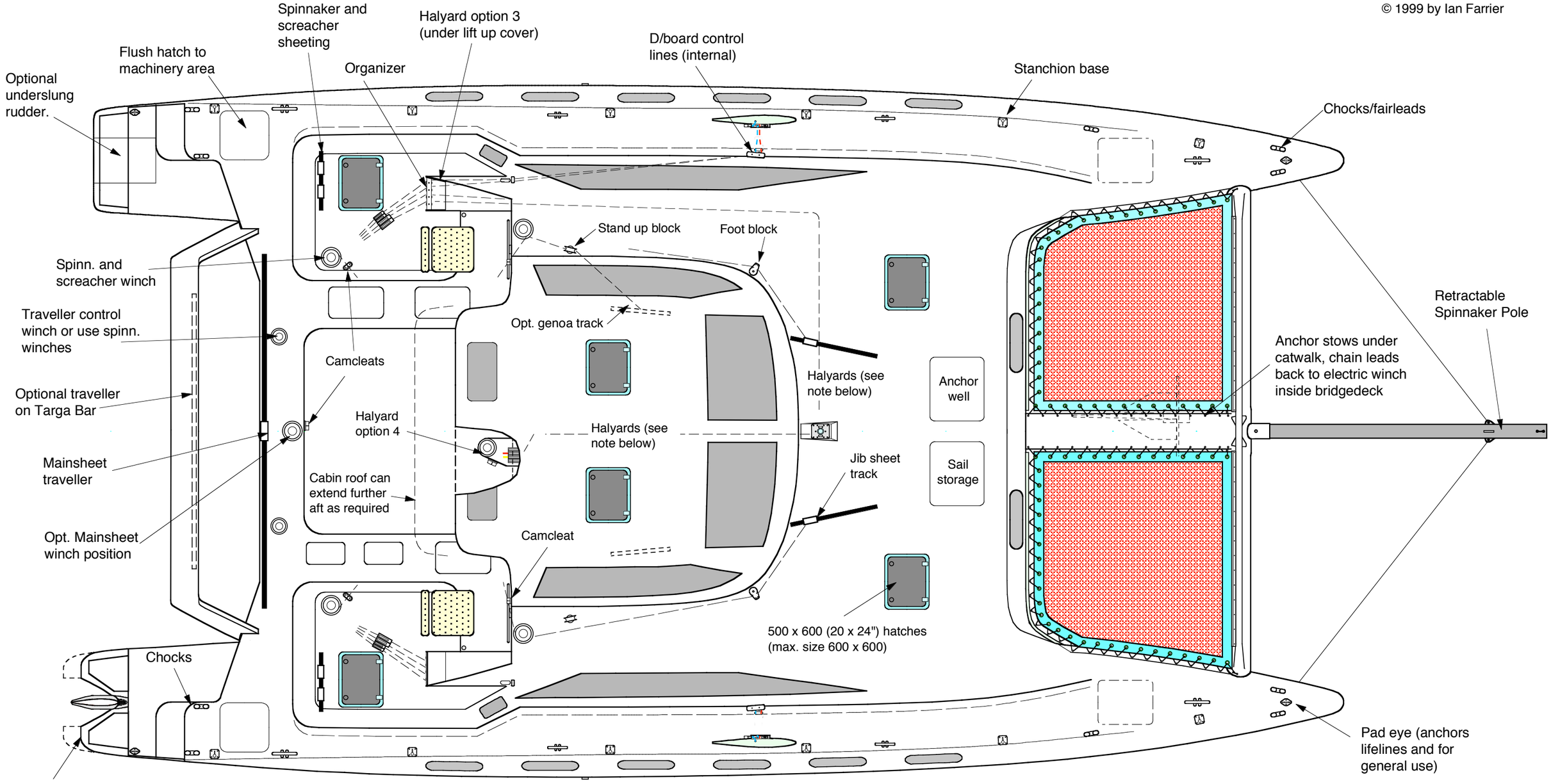
F-44SC Specifications

L.O.A.....43' 11" (13.38m)
B.O.A.....23' 1" (7.04m)
L.W.L.....41' 3" (12.58m)
Full Load. Displ (at DWL).....17,600lbs (8000kg)
Estimated Weight.....11,000 - 13,000lbs (5000 to 5900kg)
Draft (board up).....1' 10" (0.56m)
Draft (Board down).....7' 4" (2.24m)
Sail Area (Main and jib).....916sq.ft (85sq.m.)

Scale 1 : 40 and 1 : 60

F-44SC DETAILS

Revised November 20th, 2009



Additional hatches can be fitted for tropical areas

Mainsheet Options:

1. Lead to winch in front of traveller
2. Lead forward along boom, through under deck just aft of mast, then down and aft under bridge deck, to emerge in cockpit just behind main cabin bulkead at halyard console

Note: All control lines led aft under deck (halyards etc.) are fully accessible from inside boat for maintenance. All sheaves have transparent quick release covers, and line channels are self-draining

Halyard Options (all halyards are internal):

1. Cleat and leave on mast (simplest, most efficient, but inconvenient)
2. Lead aft on deck (convenient but causes deck clutter)
3. Lead through step under deck, out to cabin side, and then aft to emerge at end of cockpit coamings (very convenient and also handy to helmsman)
4. Lead through step, then down and aft under bridge deck, to emerge in cockpit just behind main cabin bulkead at a halyard console with clutches and winch (extremely convenient). This is also an ideal position for an electric/power winch
5. Any combination of the above

Foredeck Control Lines

(Spinnaker tack, furler controls)

1. Lead aft on deck (convenient but causes deck clutter)
2. Lead aft under catwalk, and then through under deck between anchor well and sail storage locker. Can then be led aft to cockpit coamings or halyard winch console in cockpit

Scale 1 : 40

F-41™ DECK LAYOUT

March 28, 2004

A Design By Farrier Marine, Inc.

Bulkheads

Bulkheads and Bow Floor are made from Full Size Patterns (sheets 14 to 24) and Plan Book (sheets 16 to 18). Material (**SBM**) as per sheet 1 plus all extra laminations and H.D. inserts as specified on sheets 16-18.

All bulkheads are to be setup **vertical,** and bulkhead centerline aligned with hull vertical centerline (top edge of Form Frames).
If required, position of frame edge used to locate a bulkhead etc. can be transferred through hull by drilling small holes (filled later).

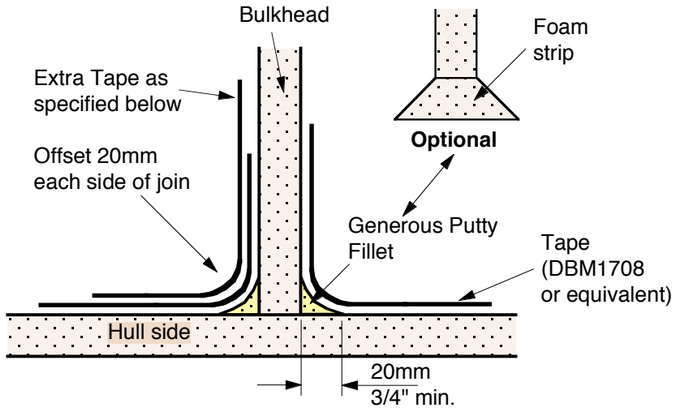
All bulkheads, bow floor, side web and aft seat top are then installed as detailed.

Add additional laminates as specified for all highly loaded deck fittings

Once all bulkheads and daggerboard case (Sheet 6-7) are fitted and glassing has been completed hull can be removed from form frames as per Sheet 8.

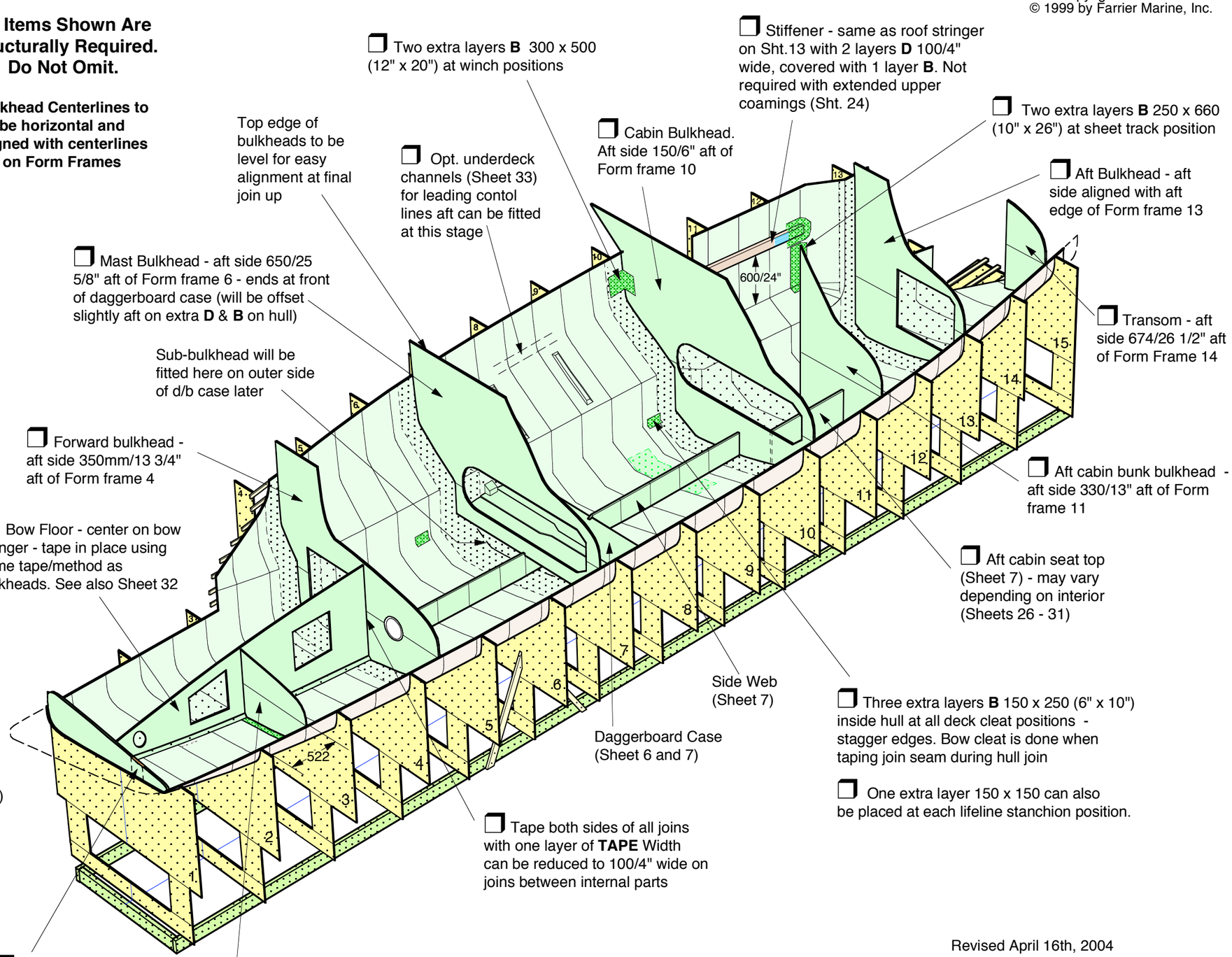
All Items Shown Are Structurally Required. Do Not Omit.

Bulkhead Centerlines to be horizontal and aligned with centerlines on Form Frames



Bulkhead and Side Web Detail
All bulkheads and side webs are bedded in position with either a large putty fillet, or a foam strip as above. Foam strips are better but take more time.
Bulkheads and webs are then taped in place with one layer 150mm (6") **TAPE** (Sheet V - VI) both sides of bulkhead.

Use **ONE EXTRA** layer of **TAPE** both sides of Forward, Mast, Cabin, and Aft Bulkheads, each layer offset 20mm (3/4") as shown.



All dimensions are from **AFT SIDE** of form frames

NOTE: All F-41 Plan sheets are in color

SAMPLE F-41 PLAN DRAWINGS

All Metric Dimensions are in Millimetres

Revised April 16th, 2004

F-41 Sheet 5

STBD. HULL OUTER SIDE BULKHEADS

A Design By Farrier Marine, Inc.

REVERSE HULL HALVES

Form frames are now turned around and set up as required for opposite hull halves. Either port outer or starboard inner hull can be built first as mirror images of Sheets 4, 5, and 9.

If room is available, all hull halves can be built first, and existing form frames then used as cradles for the joining process. Form frame tops will need to be cut down 180mm/7" for access to tape exterior join seams. Being the heaviest and strongest, outer hull should be the one underneath, to minimize heavy lifting. Once the first halves are joined, form frames can then be removed from around hull, and reversed for joining other hull side.

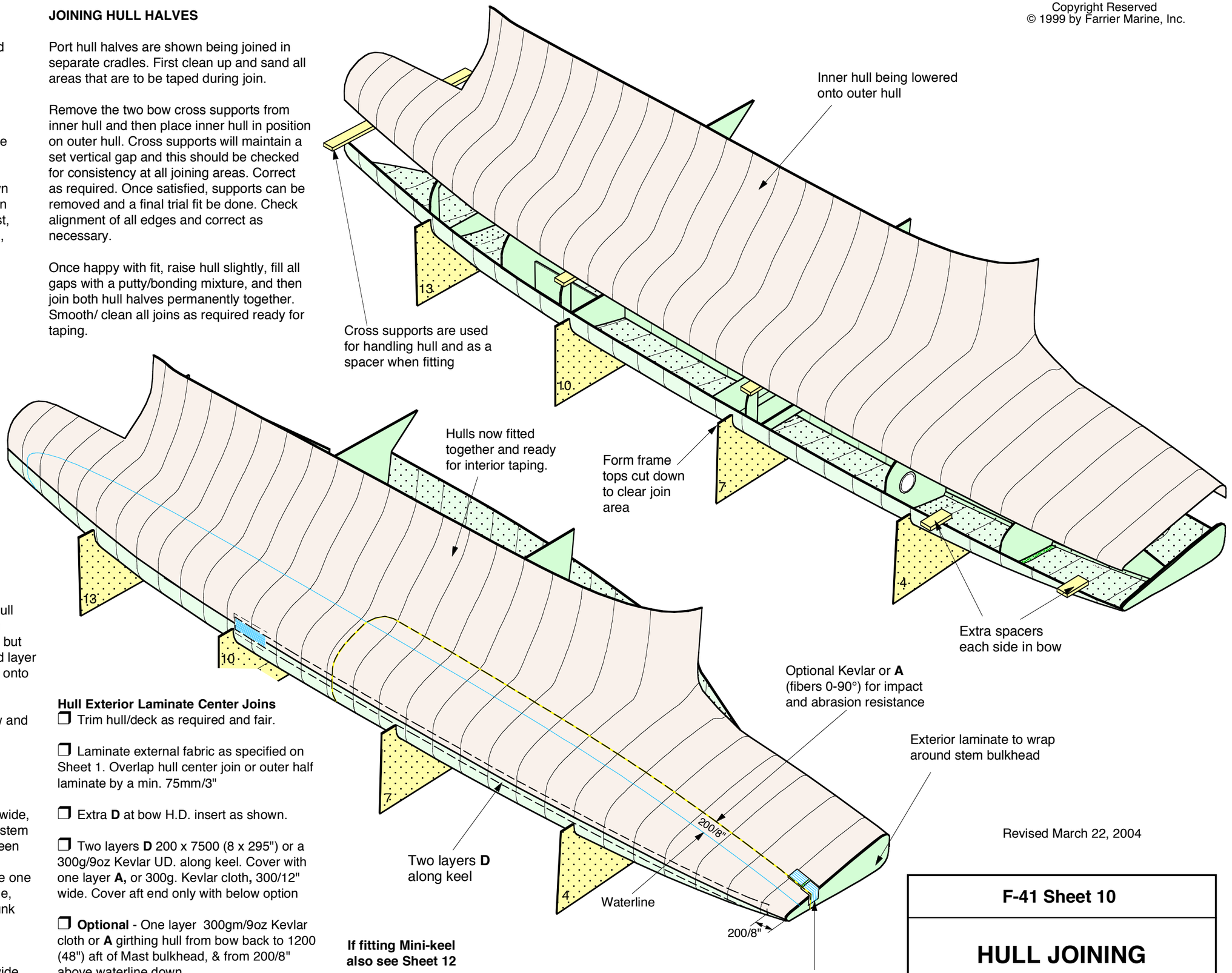
If room is limited, and hulls need to be joined when made, then four separate cradles will be required, these being located at form frame positions 4, 7, 10 and 13. Set up outer hull in cradles with join/center edges level both fore and aft and athwartships. Bow may need an additional prop to prevent sagging until after join.

JOINING HULL HALVES

Port hull halves are shown being joined in separate cradles. First clean up and sand all areas that are to be taped during join.

Remove the two bow cross supports from inner hull and then place inner hull in position on outer hull. Cross supports will maintain a set vertical gap and this should be checked for consistency at all joining areas. Correct as required. Once satisfied, supports can be removed and a final trial fit be done. Check alignment of all edges and correct as necessary.

Once happy with fit, raise hull slightly, fill all gaps with a putty/bonding mixture, and then join both hull halves permanently together. Smooth/ clean all joins as required ready for taping.



TAPING HULL HALVES

All joins are taped as follows:

Bulkheads

❒ Taped to inner hull same as outer hull except use only **ONE** layer of **TAPE** on Forward, Mast, Cabin & Aft Bulkheads, but still offset 20mm (up bulkhead). Second layer is done later (Sht. 20 & 21) & offset out onto hull/UD.

Some taping areas may be difficult now and can be left until later when hull is either upright or upside down for painting, whichever is easiest.

Keel Join Inside (See also Sht. 12)

❒ Tape with one layer **TAPE,** 150/6" wide, with one extra layer 250/10" wide from stem back to cabin bulkhead. Use csm between layers with polyester.

❒ For inboard Engine option only - use one additional layer of **A** or **B**, 1000/40" wide, between Aft bulkhead and Aft Cabin bunk bulkhead

Deck Join Inside

❒ Tape with one layer **TAPE** 150/6" wide.

Hull Exterior Laminate Center Joins

❒ Trim hull/deck as required and fair.

❒ Laminate external fabric as specified on Sheet 1. Overlap hull center join or outer half laminate by a min. 75mm/3"

❒ Extra **D** at bow H.D. insert as shown.

❒ Two layers **D** 200 x 7500 (8 x 295") or a 300g/9oz Kevlar UD. along keel. Cover with one layer **A,** or 300g. Kevlar cloth**,** 300/12" wide. Cover aft end only with below option

❒ **Optional** - One layer 300gm/9oz Kevlar cloth or **A** girthing hull from bow back to 1200 (48") aft of Mast bulkhead, & from 200/8" above waterline down.

If fitting Mini-keel also see Sheet 12

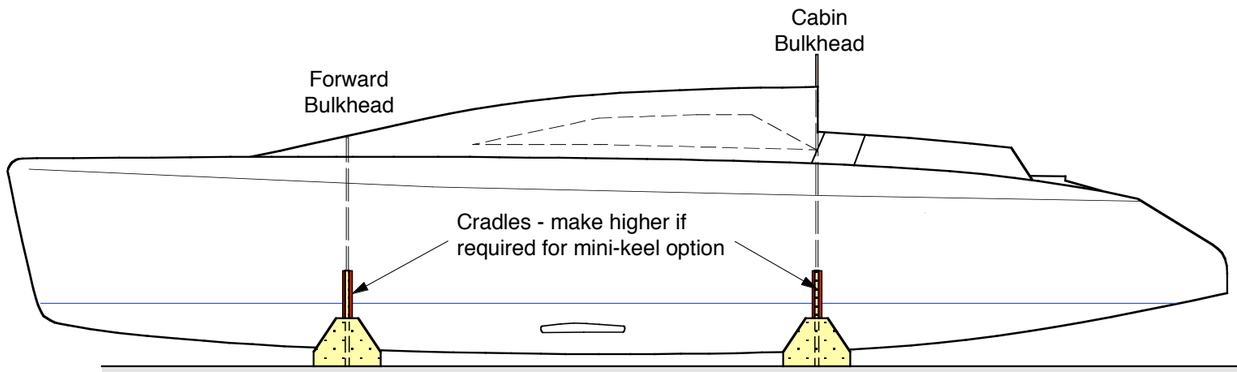
Revised March 22, 2004

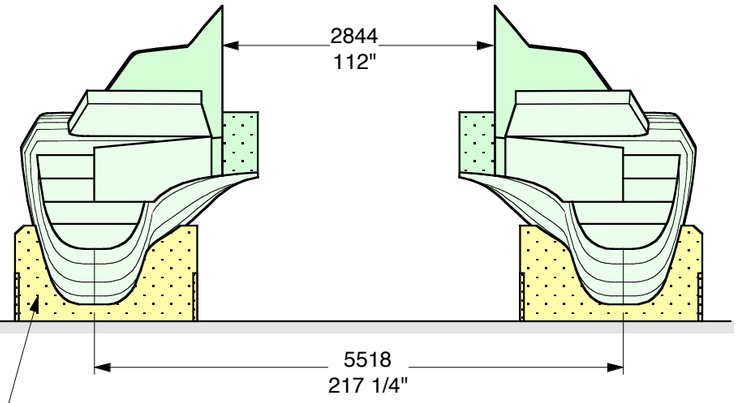
F-41 Sheet 10

HULL JOINING

A Design By Farrier Marine, Inc.

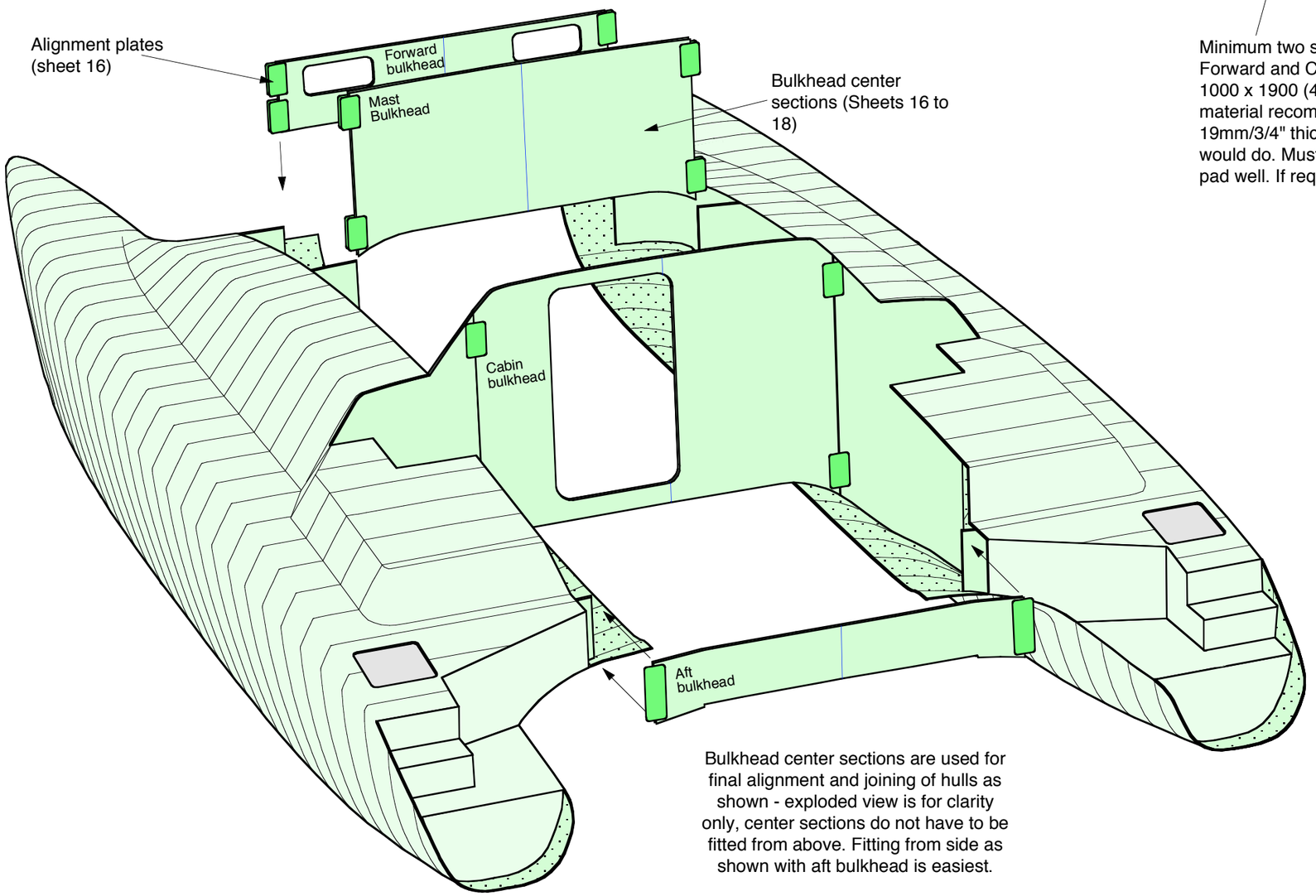
All Metric Dimensions are in Millimetres





Minimum two support cradles per side at Forward and Cabin bulkheads. Size is approx. 1000 x 1900 (40 x 75"), 38mm (1 1/2") thick material recommended. Two layers of 19mm/3/4" thick particle board glued together would do. Must bear against bulkhead areas - pad well. If required, support hull ends also.

Scale 1 : 64



Bulkhead center sections are used for final alignment and joining of hulls as shown - exploded view is for clarity only, center sections do not have to be fitted from above. Fitting from side as shown with aft bulkhead is easiest.

HULL ASSEMBLY SETUP

Hulls are set up for joining as shown. Waterline of both hulls to be level fore and aft, with bulkhead join edges and hull centerlines vertical. Bulkheads should be aligned in a straight line across the boat.

Correct spacing is not important at initial setup - final alignment being done by bulkhead center sections. Then use wedges or whatever necessary on cradles for fine adjustments.

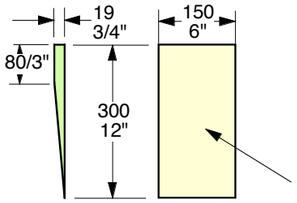
Alignment plates can be removed from one side of bulkhead center sections to allow fitting from the side.

Revised January 12, 2000

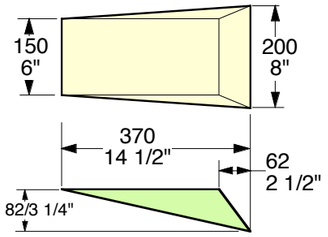
All Metric Dimensions are in Millimetres

SAMPLE CONSTRUCTION DRAWING

F-41 Sheet 15
HULL PRE-ASSEMBLY
A Design By Farrier Marine, Inc.



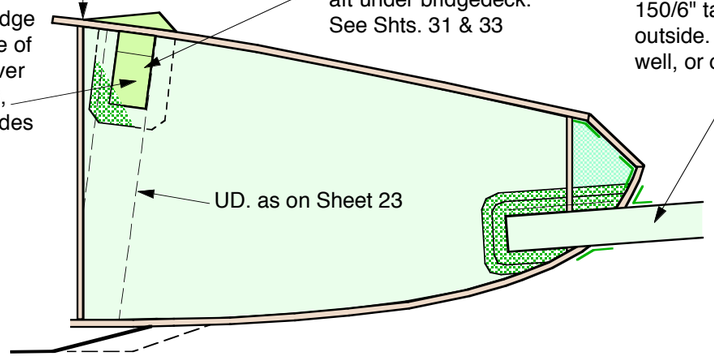
❒ Hardwood wedge bedded each side of support web. Cover with two layers **B**, overlapping all sides by 80mm/3"



MAST STEP PAD
Make from a durable hardwood, min. density 680kg/cu.m (40lbs/cu ft.).

Position step pad with aft edge above fwd. edge of Mast bulkhead

To be set up differently for internal halyards led aft under bridgedeck. See Shts. 31 & 33

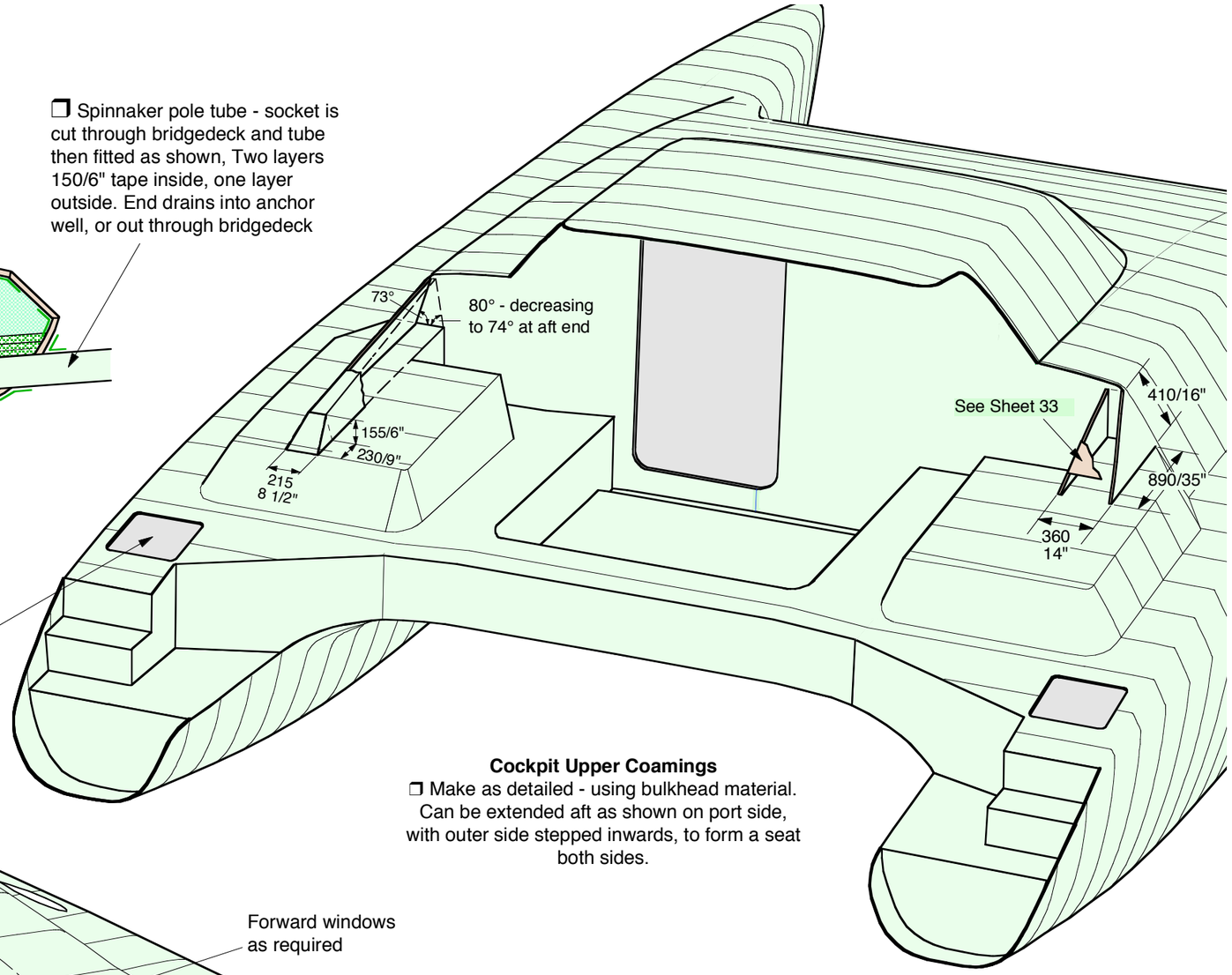


Mast Support Web Details

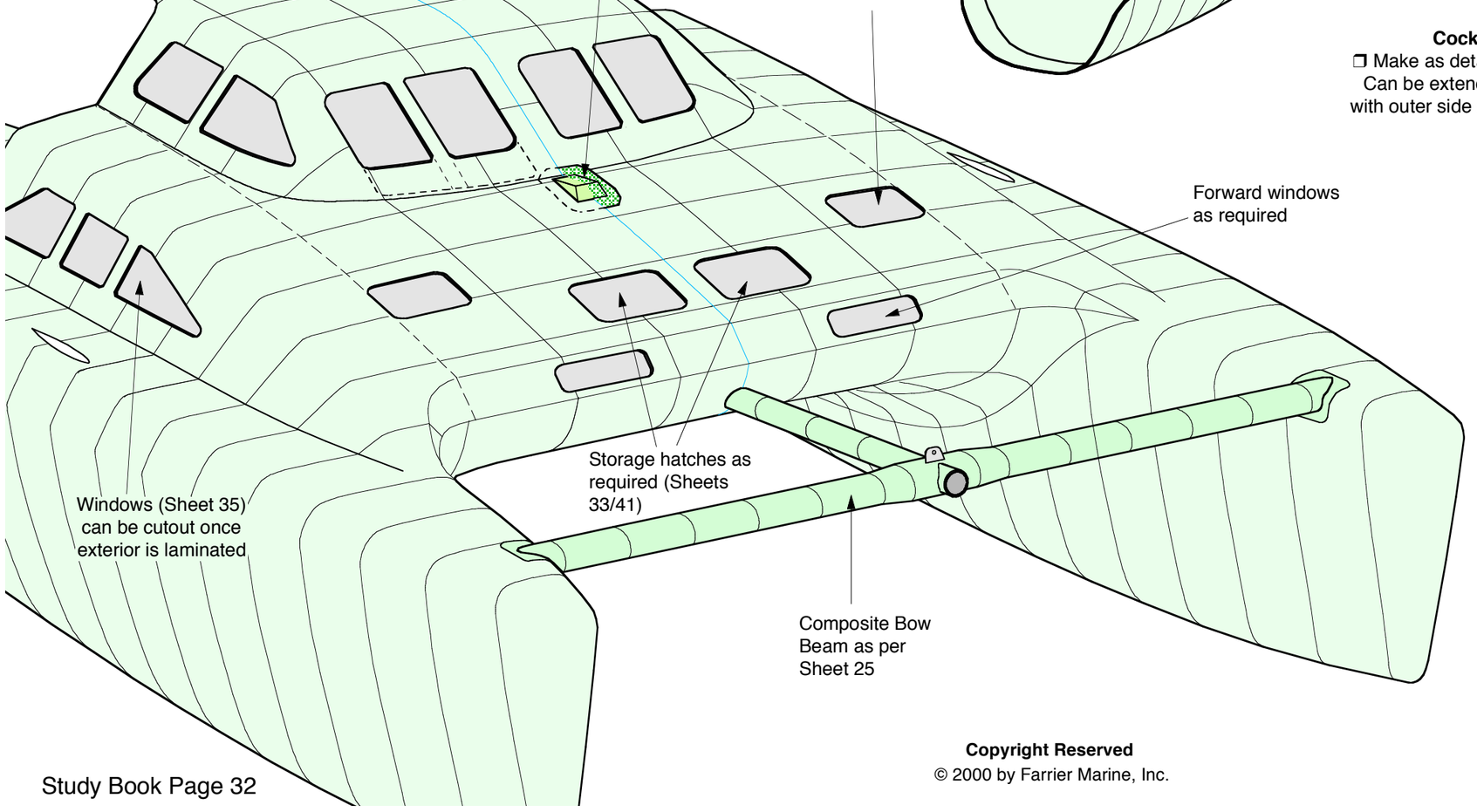
❒ Spinnaker pole tube - socket is cut through bridgedeck and tube then fitted as shown, Two layers 150/6" tape inside, one layer outside. End drains into anchor well, or out through bridgedeck

❒ Bed Mast Step pad on deck with H.D. bonding compound and then laminate over with two layers **B**

Access hatches as per Sheet 33/41



Cockpit Upper Coamings
❒ Make as detailed - using bulkhead material. Can be extended aft as shown on port side, with outer side stepped inwards, to form a seat both sides.



SAMPLE CONSTRUCTION DRAWING

Scale 1 : 40

Revised June 4th, 2007

F-41 Sheet 24

COCKPIT/CABIN FINAL DETAILS

A Design By Farrier Marine, Inc.

If one wants to build a superb boat, efficiently and quickly, then there is no better way than to start with comprehensive and highly detailed plans. Farrier plans are simply the best available, with extensive computer generated 3-D drawings for clarity, and step by step, detailed procedures, to help eliminate hundreds of hours of building or 'working it out' time by the builder.
All plans include details on the very latest vertical foam stripping construction methods that have proved so fast, as well as more traditional 'low tech' wood strip planked construction options.
All of the many options for each model such as a choice between aft cabin or aft cockpit versions in the F-22, F-82, F-32, F-36 and F-39, or a daggerboard or centerboard in the F-22, F-82R, F-36 and F-41 are included standard in all plans.
A good set of plans is vital to the success of any building project, and these, along with the designer's reputation, can add thousands of dollars value to the finished product.

PLAN BOOK

The construction plans are in a large format 'production style' book form, which guide construction step by step, and in the correct sequence, for maximum ease and efficiency.
Large plan sheets are not used, as these usually just give specifications with no guidelines on what to do first, or how to do it, as well as being awkward to handle. Planning construction thoroughly, and then detailing when and how things should be done, can save both amateur and professional builders literally hundreds of hours.
The **F-22**, **F-32, F-39** and **F-41** plans are in color, to make it even easier and clearer for the builder to follow each step.

FULL SIZE PATTERNS

Comprehensive full size frame patterns (all now in color) are included with all models, even for bulkheads and many other interior panels. Anyone who has had to make these from a bare hull will appreciate what a time saver this can be. Dxf files for frames and bulkheads are also available at extra cost, and these can be used for cutting frames via a computer controlled cutter.

FABRICATED PARTS BOOK

All plans include a Fabricated Parts Book, which fully details and specifies all the various smaller parts, such as chainplates, mast step, and the folding system struts. Such detailed drawings can offer considerable savings by allowing the builder to make many parts, avoiding countless hours in working out how to make them.

MANUALS

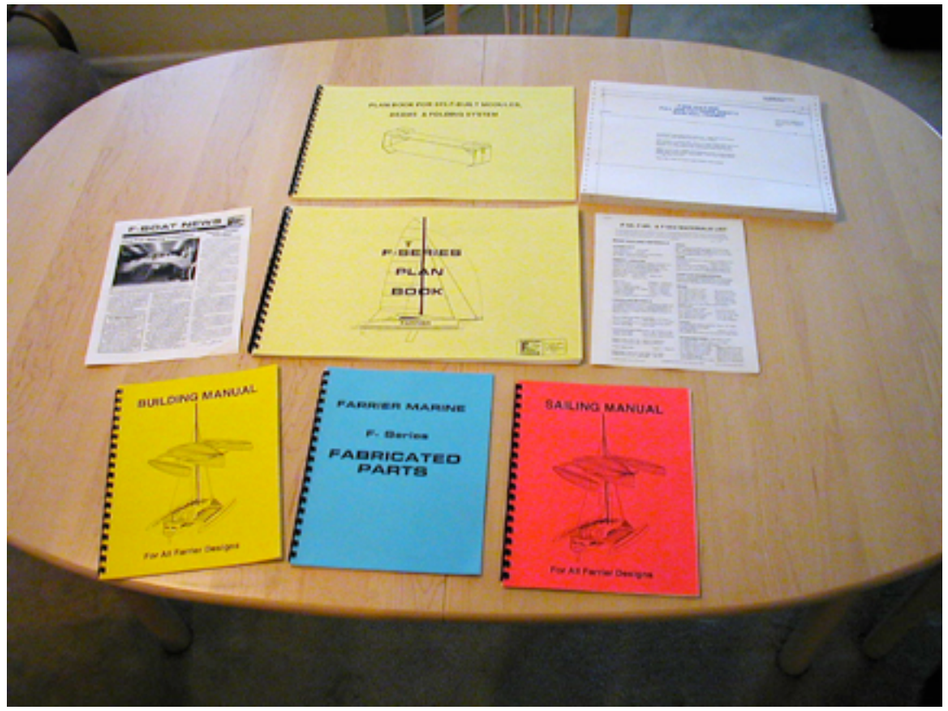
Comprehensive Building and Sailing Manuals are included with all plans, with many photos, detailed guidelines on construction techniques and methods, along with hints on trailering, rigging, launching, and practical sailing techniques developed from many years of sailing Farrier designs.

EFFICIENT PROCEDURES

Extensive practical experience in personally building five trimarans and then setting up Corsair Marine's production assembly line in the eighties has shown that most building time actually goes into assembly, fit out and finishing. The hulls are actually the easy part.
Thus special care and attention has been directed into assembly and fitout, with the use of production procedures, to reduce construction time.For efficient building, it is vitally important that each task is done properly and in the right order, and many quick and easy to build systems/hints are incorporated.
Farrier plans thus ensure the easiest and fastest to build multihulls, and very cost competitive, particularly when the usual high resale value of any Farrier design is factored in.

PLANS

The following pages detail actual plan contents and have examples of typical trimaran plan sheets. Some reinforcing fabric specifications are considered proprietary or confidential and have been blanked off.



TYPICAL PLAN CONTENTS:

General Plan Book
(from 60 to 105 pages depending on model)

Beam and Folding System Plan Book
(up to 20 pages for folding models)

Full Size Patterns
(for all hulls plus interior bulkheads and many interior panels)

Fabricated Parts Book
(from 27 to 58 pages - detail drawings for small metal or plastic parts)

Building Manual
(54 page general guide for building methods and techniques)

Sailing Manual
(50 page general guide for sailing and sailing techniques)

Materials list
(A comprehensive list of all materials required)

Optional DXF files
For computerized cutting of Form Frames

COMPARE

If considering any other design then be sure to insist on first seeing some actual construction drawings and the materials list. There is no reason why several sample construction drawings cannot be made available to prospective builders, as any proprietary information can be easily blanked off. Such sample drawings will then enable one to see how good the plans are, and how much you are expected to work out.
Extensive and detailed plans are what make a boat simpler and easier to build, not lack of detail. Don't be fooled.

BACKUP

The plan cost always includes personal backup/support by Ian Farrier, draftsmen or other inexperienced persons not being used, and all emails, phone calls etc. are always answered. Plans are constantly being revised and the new builder can be assured of receiving the latest most advanced plans, plus updates for many years as improvements come to light.

SOME COMMENTS RECEIVED ON PLANS:

My friend was astonished when I showed him the details of the plans. Last year I forgot to compliment you enough about the quality of your plans. As a professional designer and engineer, I fully appreciate the effort you put in detailing every phase of the construction process and the instant email support you give to every question.
Bepi Bottacin, F-82R, Soanara, Italy
I have built several boats and Tom is an engineer, we both continually marvel at the accuracy and detail of Ian's plans. They are a joy to build from and contain only a couple of "irksome" (Ian's word) maneuvers and head scratchers.
Mike Winkler, building F-9s with Tom Comstock, Michigan
Where the knowledge of composite engineering is concerned, Ian Farrier has resolved all that for me by providing, what are to my knowledge, the most detailed building plans available, with full-size patterns. All a Farrier builder needs is a decent dose of common sense and perseverance. If that's not enough, Ian backs up his plans with the best e-mail info and service I have ever experienced!
Dennis Meulensteen , Netherlands
Thank you very much for the Sailing Manual received yesterday. I am stunned by the level of detail and assistance in your plans Ian - they are remarkable.
Chris Rowntree, Nova Scotia, Canada
Other plans seen have consisted of just a few plan sheets, some even having a list of notes stapled on one side - the study drawings for the F-41 alone give more information on building a boat.
Chris Treadwell, Qld. Australia
I'd like to take this opportunity to thank you for taking the time to develop such explicit and detailed instructions. Building F82R #91 is less like work and more like a series of finite steps that make it easy to plan the construction
Douglas Foster, Newton, Kansas

PLAN COST

A good well detailed set of plans are not inexpensive, as they take considerable time and can make or break a project. Saving a little here can be a very expensive mistake, as one could then spend hundreds of extra hours working out how to build, or items or features may not actually fit or work as originally claimed. Worse, once finished, the resale value could be tens of thousands less with an unknown design.

F-22 Plan Book : Table Of Contents

(Now Discontinued)

FULL SIZE PATTERNS (FSP)

Float FSP (Sheets1, 2, 3 & 4)
Main Hull FSP (Sheets 5 to 13)
Miscellaneous FSP Sheets 14 to 17

Building Manual
Fabricated Parts Book
Materials list
Sailing Manual

ALL F-22 PLAN SHEETS ARE IN FULL COLOR

As at June 11th, 2008

F-82 PLANS - Table Of Contents

1. General Construction Details
2. Strongback Construction
3. Float Frame Set-up
4. Float Construction
5. Float Construction - Bulkheads
6. Float Construction - Joining
7. Float Construction
8. Main Hull Frame Set-up
9. Main Hull Port Side Construction
10. Main Hull Bulkheads (aft)
11. Main Hull Bulkheads (fwd.)
12. Main Hull External Glassing
13. Main Hull Stbd. Side Construction
14. Dagger and Centerboard Case Construction
15. Dagger and Centerboard Case Installation
16. Main Hull Joining - Exterior
17. Main Hull Joining - Interior
18. Main Hull Exterior Lamination
19. Central Mounting Modules - Fitting
20. Central Mounting Modules - Positioning
21. Fitting Forward C.M.M.
22. Fitting Forward C.M.M. (Taping)
23. Fitting Forward C.M.M. (Taping)
24. Fwd. Passageway and Mast Support Systems
25. Fitting Aft C.M.M. and Taping
26. Cockpit Construction
27. Interior Layout (centerboard)
28. Interior Construction
29. Interior Construction
30. Interior Layout (daggerboard)
31. Folding System Assembly
32. Beam and Float Assembly
33. Beam Locks & Diagonal Braces
34. Transom and Outboard Details
35. Window and Wingnet details
36. Dagger and Center board Construction
37. Dagger and Center board Installation
38. Deck Construction Details
39. Deck Layout
40. Pop-top Details
41. Float Miscellaneous Details
42. Rudder Blade Construction
43. Rudder Case Construction
44. Rudder Case Assembly
45. Mast Assembly
46. Running Rigging
47. Standing Rigging
48. Sail Plan
49. Spinnaker Bow Pole
50. Trailer Details
51. Trailering
52. Optional Bow Wing Details
53. Optional Boom Assembly
54. Optional Transom Rudder
55. Optional Mast Raising Deck Loops
56. Optional Aft Cabin
57. Optional Aft Cabin

Vertical Foam Stripping Guide Sheet
Vacuum Bagging Guide Sheet

Plus (as separate items):

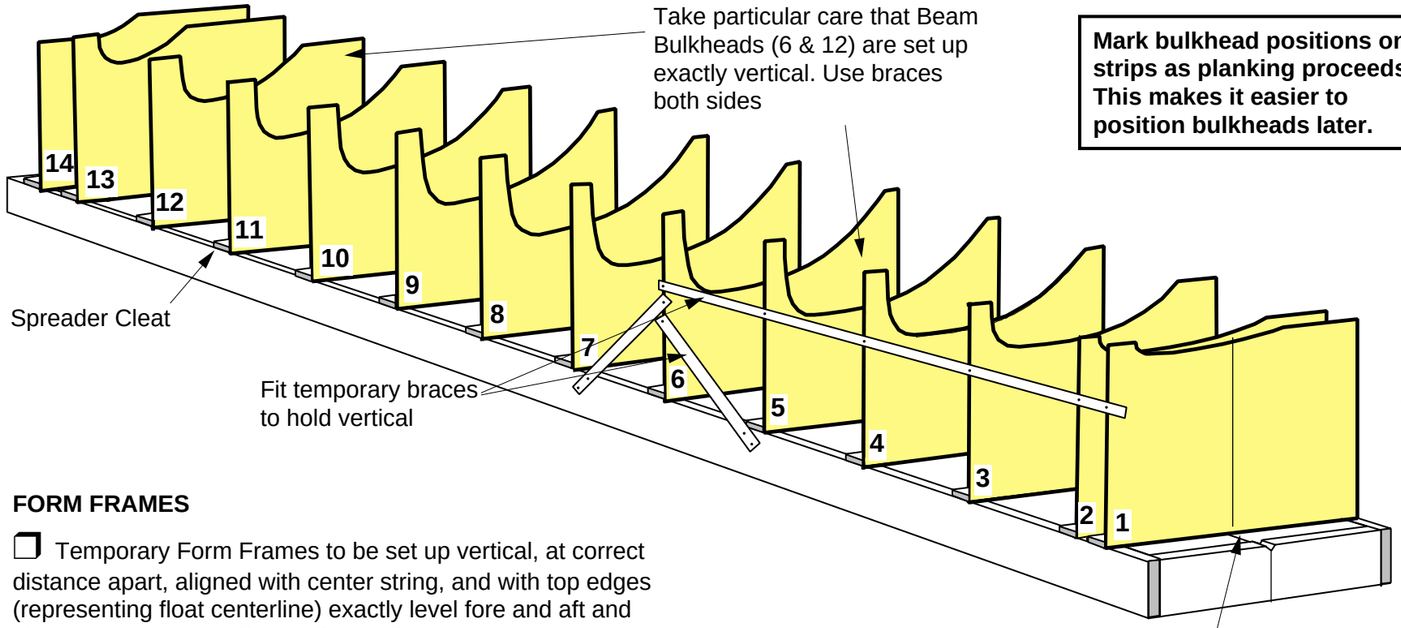
Plan Book for Mounting Modules, Beams & Folding System

1. Index and Materials
2. Central Mounting Module Components
3. Central Mounting Module Construction
4. Central Mounting Module Assembly Jig
5. Central Mounting Module Assembly
6. Central Mounting Module Completion
7. Metalwork - Folding Struts
8. Metalwork - Lower F. Strut Brackets
9. Metalwork - LFS Pivot Pins & Bolt Pads
10. Metalwork - UFS Pivot Pin & Beam Bolt
11. Beam Construction
12. Beam Mold
13. Beam Foam and Internal Lamination
14. Beam Bottom Lamination
15. Beam Internal Lamination
16. Beam Internal Lamination
17. Beam Folding Fittings
18. Beam Top Lamination
19. Beam Top Lamination
20. Beam & Hull Preparation for Assembly

Float Full Size Patterns (Sheets1, 2, 3 & 4)
Main Hull Frame Patterns (Sheets 5, 6, 7, 8 & 9)
Main Hull Interior Panel Patterns (Sheets 10, 11, 12, 13 & 14)
Miscellaneous Full Size Patterns (Sheets 15, 16 & 17)
Beam Patterns (Sheets A & B)
Building Manual (54 pages)
Fabricated Parts Book (27 pages)
Materials list and sources for materials (5 pages)
Sailing Manual (46 pages)

F-32 Table Of Contents

August 2nd, 2008



Take particular care that Beam Bulkheads (6 & 12) are set up exactly vertical. Use braces both sides

Mark bulkhead positions on strips as planking proceeds. This makes it easier to position bulkheads later.

Spreader Cleat

Fit temporary braces to hold vertical

Center string

Start first fore and aft strip here

FORM FRAMES

❒ Temporary Form Frames to be set up vertical, at correct distance apart, aligned with center string, and with top edges (representing float centerline) exactly level fore and aft and athwartships (across Strong Back). Packing pieces can be used to achieve this on Frame bottom edges if required.

❒ Screw frames to **FORWARD** side of spreader cleats. Double brace both sides of beam bulkheads to ensure these cannot move. Remaining frames are held vertical by a stringer each side.

❒ Fit battens for foam planking, longer at stern as required.

PLANKING

❒ Planking can now begin. Follow instructions as given in Manual and Sheet iii. Edges along deck and keel to be sanded or planed flat, to be flush with top edges of temporary frames (float centerline). Float halves are glued together later, along this line.

❒ Fwd. planking ends flush with front edge of Frame 1. Final bow shape is later formed in foam and glassed over. This gives a good ability to absorb impacts. Leave stern planking long and then cut to correct profile by using template.

❒ Leave float ends open at this time for access later when taping halves together. If wished, fit High density inserts (sheet 6) now.

❒ Smooth inside surface & apply the correct internal fabric (Sht.1)

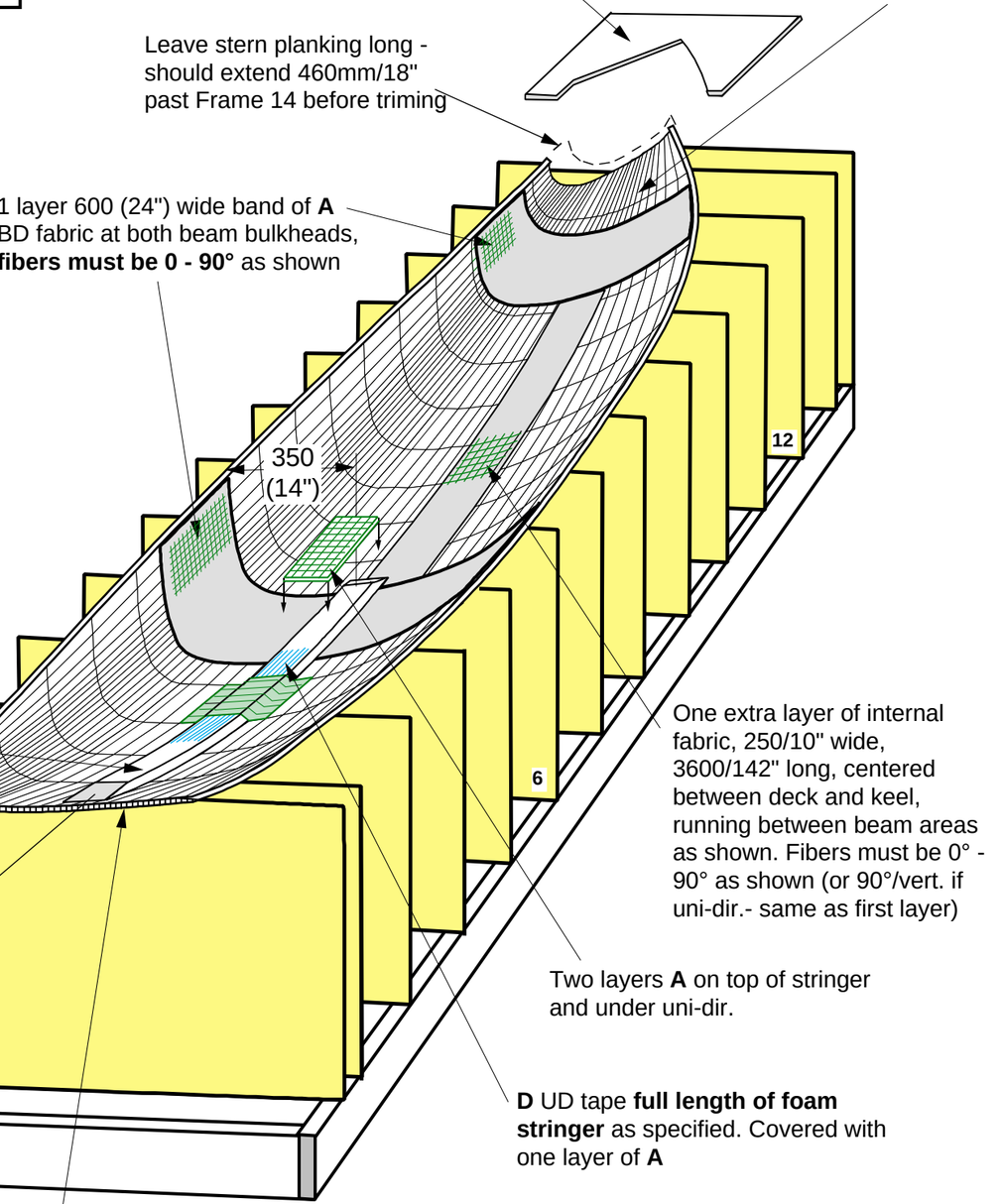
❒ One extra 250/10" wide strip down center as shown (Don't omit).

❒ One layer of **A** centered on Frames 6 & 12 .

❒ Fit foam stringer in bow as shown and bed on putty mixture.

❒ Two layers **A** BD 200 x 600 (8" x 24") centered at Frame 6 and covering stringer.

❒ Run 1 layer **D** 100mm/4" wide **UD** tape by 3660 (12' long) on top of stringer and then cover with 1 layer **A** 250/10" wide,



Stern shape template from Full Size Patterns 3 and 4. Use to mark stern shape while horizontal and located by Frame 13.

Note: Lines drawn are for illustration only, and are not intended to show orientation of strips.

Leave stern planking long - should extend 460mm/18" past Frame 14 before triming

1 layer 600 (24") wide band of **A** BD fabric at both beam bulkheads, **fibers must be 0 - 90°** as shown

Foam stringer, as above, 3500 (11' 6") long, positioned 25mm (1") back from bow edge. Fit one stringer on each float half.

To center of foam stringer

One extra layer of internal fabric, 250/10" wide, 3600/142" long, centered between deck and keel, running between beam areas as shown. Fibers must be 0° - 90° as shown (or 90°/vert. if uni-dir.- same as first layer)

Two layers **A** on top of stringer and under uni-dir.

D UD tape **full length of foam stringer** as specified. Covered with one layer of **A**

Planking to be cut flush with Frame 1 at bow

***NOTE:** High density inserts, as detailed on Sheet 6, can be fitted at this stage, prior to interior laminate. Probably easier to do here - but be sure they are on correct sides*

A: 600gm (18oz) B.D (0-90°)
B: 400gm (12oz) B.D. (0-90°)
C: 600gm (18oz) D.B. (45-45°)
D: 400/430gm (12/13oz) UD

Revised August 26th, 2004

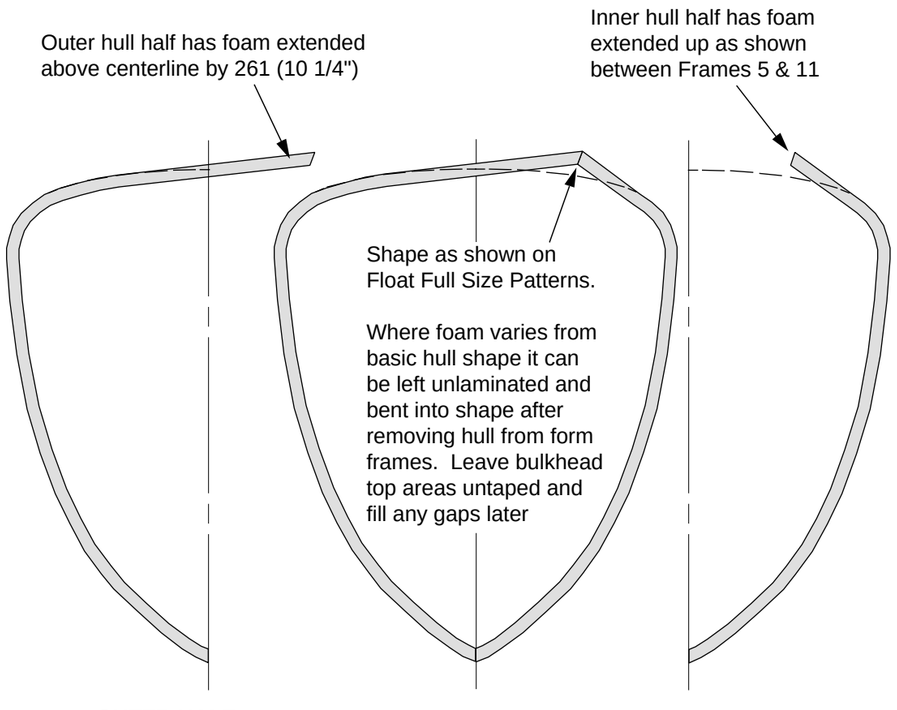
F-32 Sheet 4

FLOAT CONSTRUCTION DETAILS

A Design By Farrier Marine

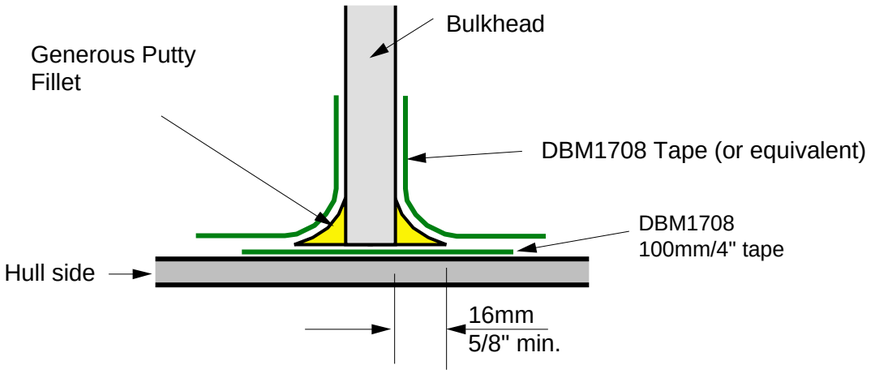
All Metric Dimensions are in Millimetres

Build Port Inner and Starboard outer sides first, then reverse Form Frames to build matching sides.



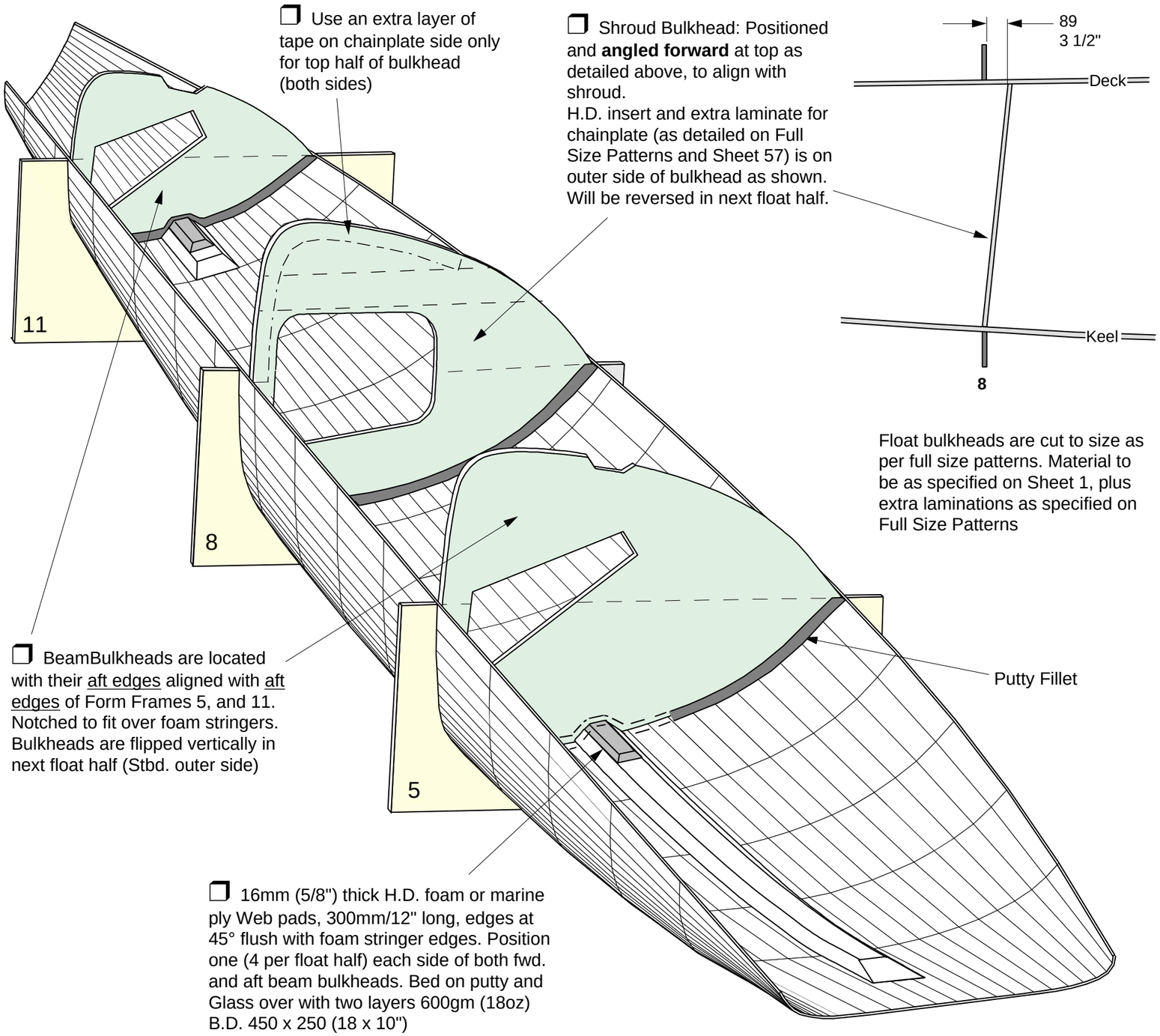
FLOAT DECK SHAPE OPTION

To give a flatter walking area, along with a higher and built in wing net mounting point - See Sheet 37 & 38. Shape as shown on F.S. Patterns and above - alternatively two opposite sets of Form Frames can be made if wished, but this is not necessary. Should extend from 635/25" in front of Frame 11 to 300/12" aft of Frame 5



Bulkhead Detail

All Float bulkheads are bedded in position on a 100mm/4" wide strip of DBM1708 with a large putty fillet, shaped as shown. Bulkheads are pre-laminated and then taped in position with 150mm (6") DBM1708 tape (or equivalent - See Sheet V) on both sides



Float bulkheads are cut to size as per full size patterns. Material to be as specified on Sheet 1, plus extra laminations as specified on Full Size Patterns

Float halves are removed once bulkheads are fitted. Seal or glass outside of hull before storing. Do not leave in sun.

Revised July 23rd, 2004

All Metric Dimensions are in Millimetres

F-39 Sheet 5

FITTING BULKHEADS (Port Inner Float Side shown)

A Design By Farrier Marine

GENERAL PROCEDURE

❒ Fair keel foam as shown lower right.

❒ Make two cradles to support float upright at beam bulkhead areas.

❒ An extra coat of resin is recommended along keel join seam inside, particularly where water may collect.

❒ Fit bow compression struts as detailed.

❒ Fit and fair bow foam cap as detailed. This is to help absorb a bow collision so don't laminate too heavily (three layers **B** max. down very front).

❒ Fit carbon fiber chainplates (Appendix C) as detailed

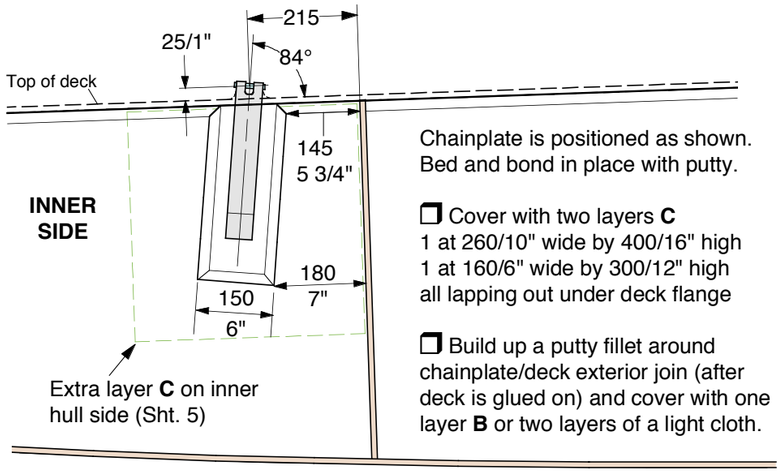
❒ Fit Deck (Appendix B) and glue in place

❒ Fit wingnet rail (as per Sheet 32)

❒ Float exterior can now be faired, laminated and painted.

Deck to be non-skidded and it is recommended that a strip of non-skid be placed along the inside of the bows for safe access/stepping when folded on trailer.

❒ VENT HOLES: Drill 1.5mm (1/16") vent holes in very top of Shroud and Fwd. Beam Bulkheads. These equalize air pressure throughout float to help avoid possible seam failure due to air pressure buildup when in sun.

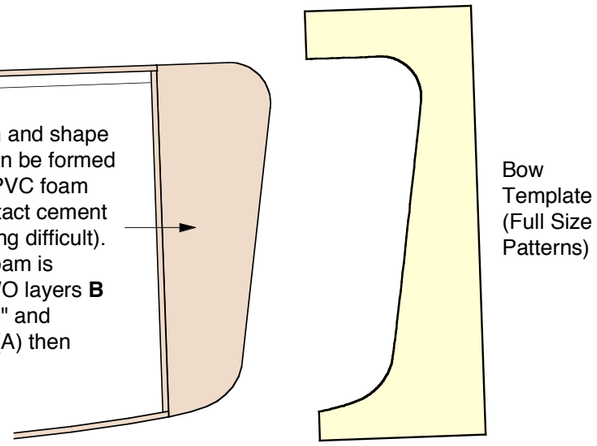


Chainplate is positioned as shown. Bed and bond in place with putty.

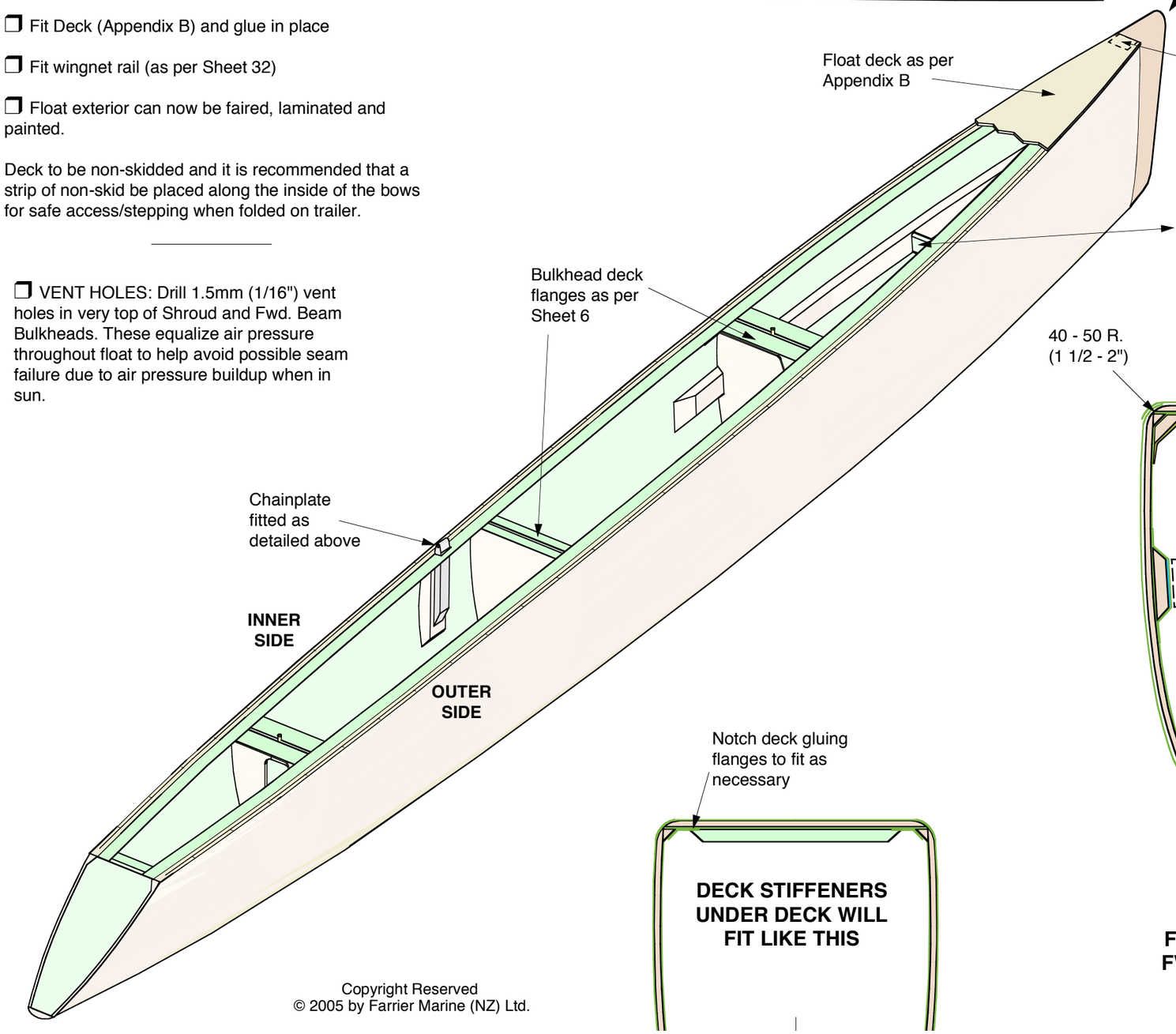
❒ Cover with two layers **C**
1 at 260/10" wide by 400/16" high
1 at 160/6" wide by 300/12" high
all lapping out under deck flange

❒ Build up a putty fillet around chainplate/deck exterior join (after deck is glued on) and cover with one layer **B** or two layers of a light cloth.

Float Bow Cap
Glue on a piece of foam and shape using Bow template. Can be formed from multiple layers of PVC foam glued together with contact cement (a rigid glue makes fairing difficult). A 100kg/6lb urethane foam is optional. Cover with TWO layers **B** overlapping hull by 75/3" and 150/6". Outer laminate (A) then covers this.



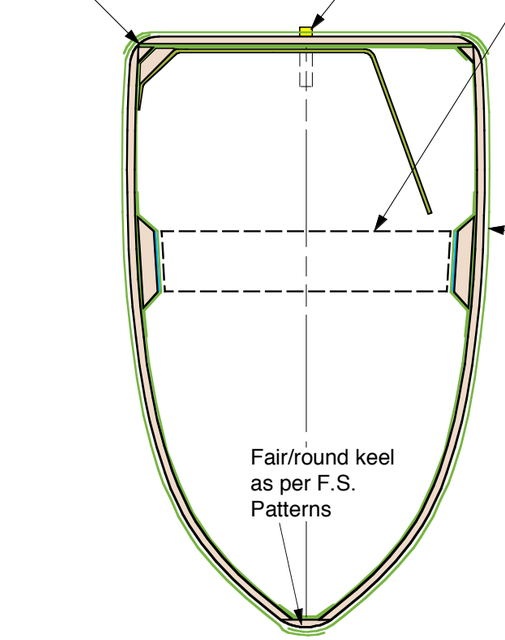
Bow Template (Full Size Patterns)



❒ Glue a 5mm (3/16") thick aluminum or fiberglass tapping plate under deck flanges here prior to fitting deck for bow eye (used to brace bow pole). Lock in place with some **TAPE** underneath.

Foam Compression Strut
20 x 75 (3/4" x 3"). Locate 1000/40" aft of Bow Bulkhead.

❒ Wrap strut with 2 layers **B**, and lapping out onto foam stringer by 50/2". May be easier to wrap strut before fitting, and then tape ends into place.



Outer laminate, (as per Sheet 1), with overlaps at keel and gunwale radii as shown, for minimal fairing. Min. overlap to be 40 (1 1/2").

❒ Additional laminates at beam & hatch areas to be placed on deck now, as per Appendix A

Notch deck gluing flanges to fit as necessary

DECK STIFFENERS UNDER DECK WILL FIT LIKE THIS

SECTION THROUGH FINISHED FLOAT NEAR FWD. BEAM BULKHEAD

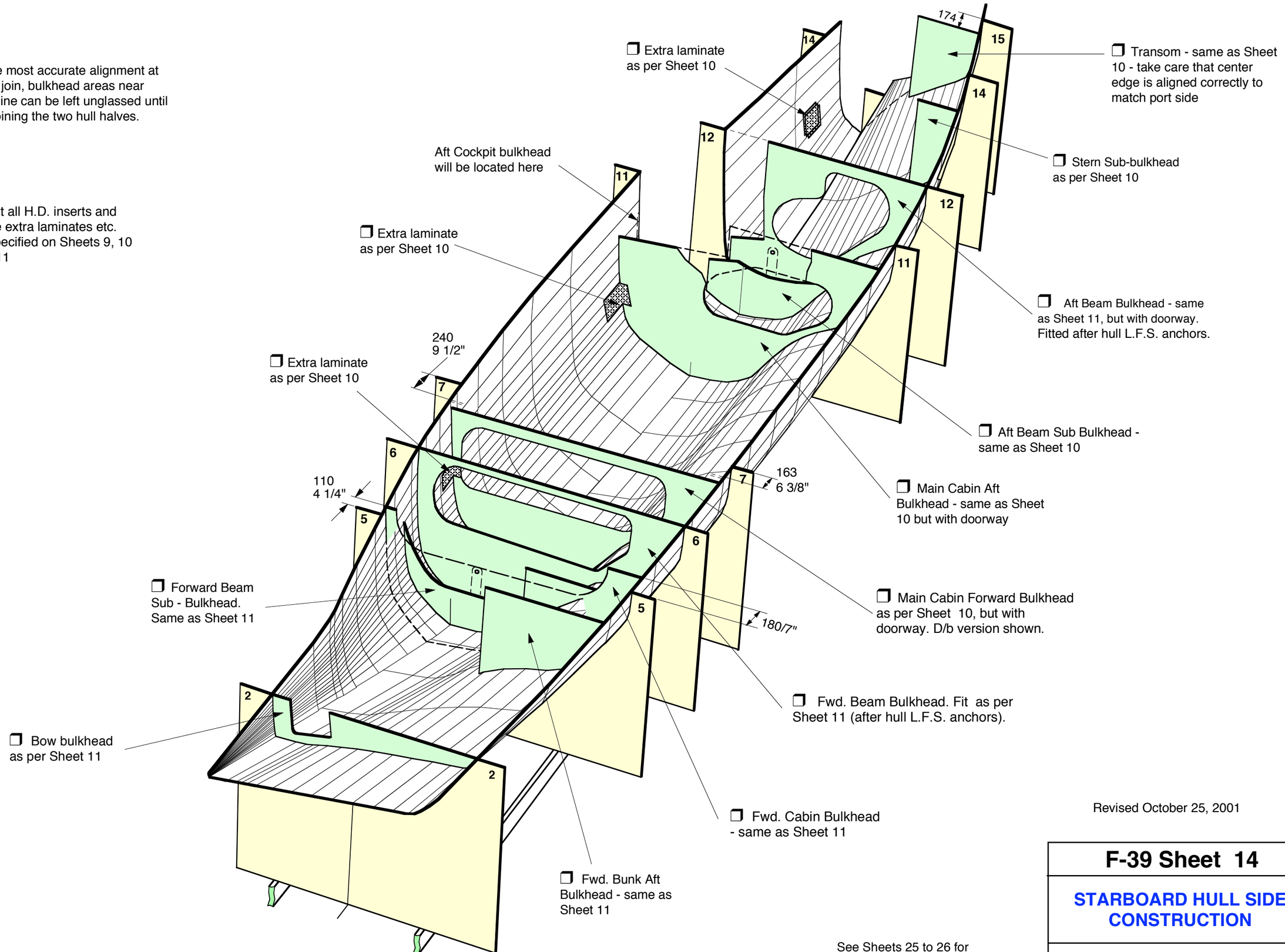
Scale 1 : 8 & 1 : 12

Revised September 26th 2007

F-22 Sheet 7
FLOAT DECK
Farrier Marine (NZ) Ltd

For the most accurate alignment at center join, bulkhead areas near centerline can be left unglassed until after joining the two hull halves.

❒ Fit all H.D. inserts and same extra laminates etc. as specified on Sheets 9, 10 and 11



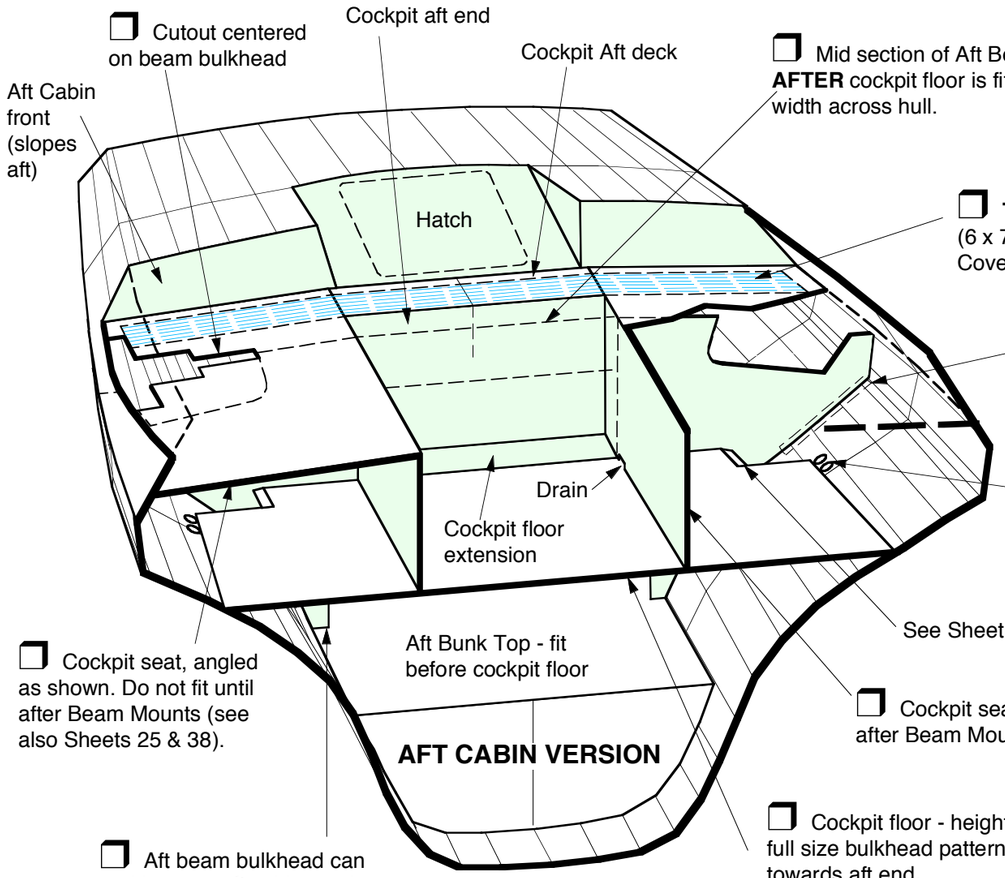
Revised October 25, 2001

See Sheets 25 to 26 for **Aft Cockpit Version**

F-39 Sheet 14

STARBOARD HULL SIDE CONSTRUCTION

A Design By Farrier Marine



❒ Mid section of Aft Beam Bulkhead is cut out **AFTER** cockpit floor is fitted, to preserve correct width across hull.

❒ **THREE** layers **D** UD, 150 x 1900 (6 x 75"), across on top of deck. Cover with one layer **B**

No need for tape in dashed line area - is cut out later - see Sheets 22 - 26

❒ Two 32 (1 1/4") dia. cockpit and locker drain holes. Must be min. 160/6" away from beam bulkhead. Fill edges

See Sheet 26

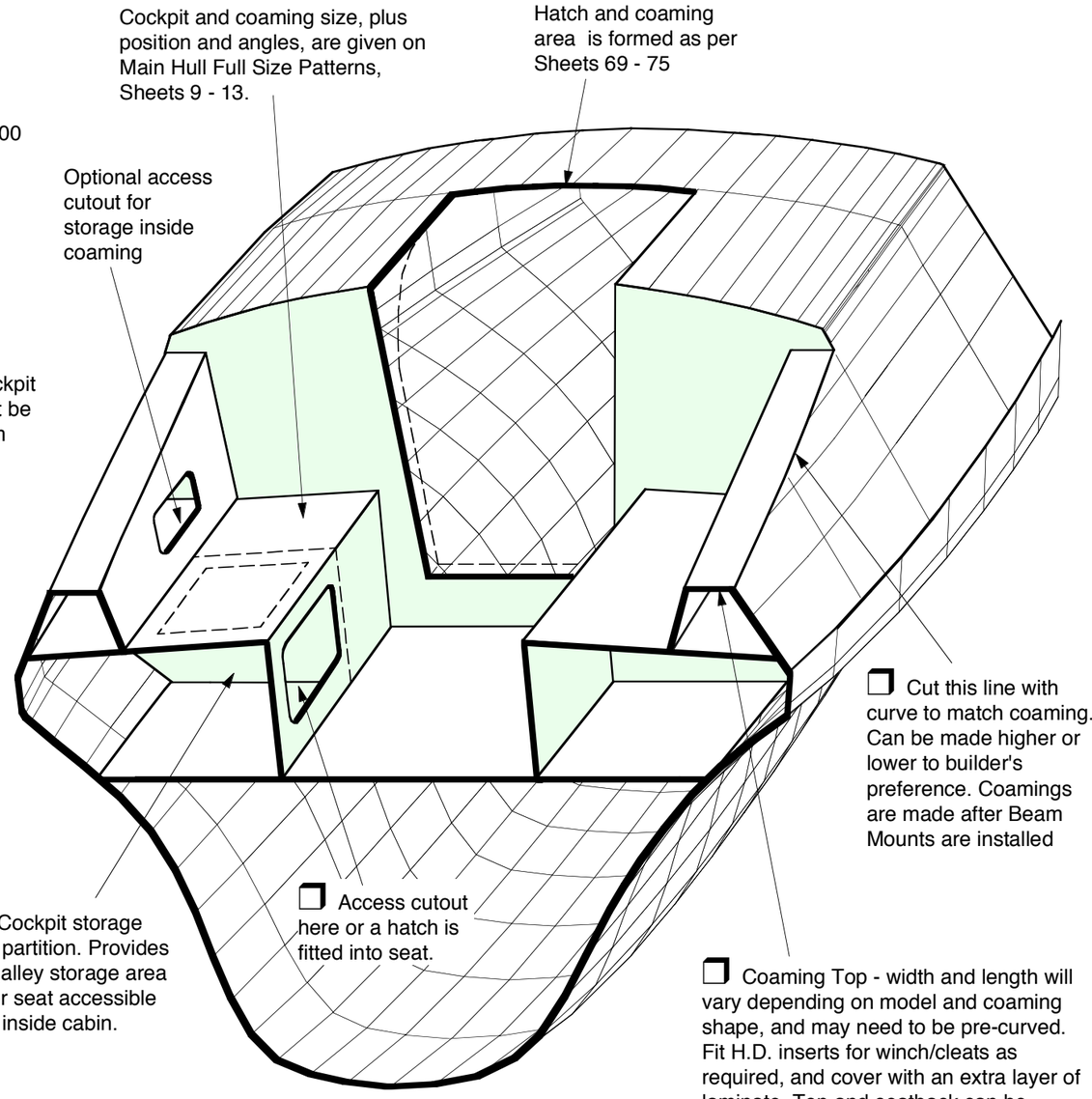
❒ Cockpit seat front. **Do Not Fit** until after Beam Mounts (Sheets 20 - 25)

❒ Cockpit seat, angled as shown. Do not fit until after Beam Mounts (see also Sheets 25 & 38).

❒ Aft beam bulkhead can end here on aft cabin version

❒ Cockpit floor - height/position given on full size bulkhead patterns - will slope down towards aft end.

❒ Tape to hull and bulkheads with 100/4" wide tape both sides.



❒ Cut this line with curve to match coaming. Can be made higher or lower to builder's preference. Coamings are made after Beam Mounts are installed

❒ Cockpit storage area partition. Provides dry galley storage area under seat accessible from inside cabin.

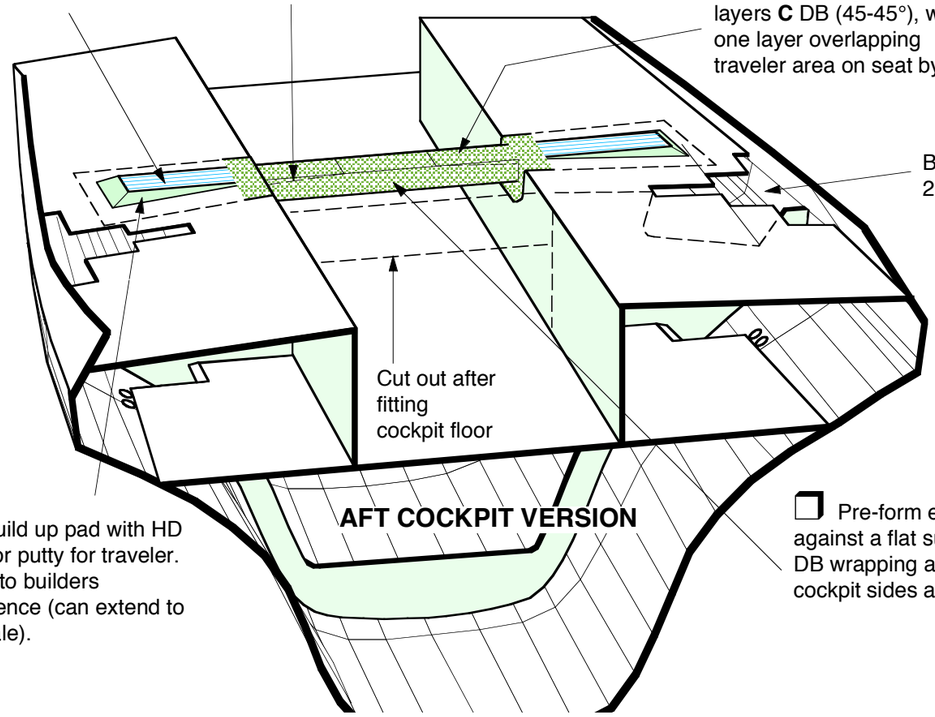
❒ Access cutout here or a hatch is fitted into seat.

❒ Coaming Top - width and length will vary depending on model and coaming shape, and may need to be pre-curved. Fit H.D. inserts for winch/cleats as required, and cover with an extra layer of laminate. Top and seatback can be laminated as one piece. More details on Sheet 38

❒ **THREE (3)** layers **D** UD, 100/4" wide, min. 1620 (64") long, across top of bridge (after filling corners)

❒ Fill these areas with HD foam or putty so bridge is flat across top & flush with seat tops

❒ Wrap bridge with TWO layers **C** DB (45-45°), with one layer overlapping traveler area on seat by 50/2"



❒ Build up pad with HD foam or putty for traveler. Width to builders preference (can extend to gunwale).

❒ Pre-form end 50/2" wide flanges against a flat surface with three layers **C** DB wrapping around bridge ends. Fit after cockpit sides and seat is then glued on.

USE IN COMBINATION WITH SHEETS 20-25

COCKPIT AND AFT CABIN PANELS

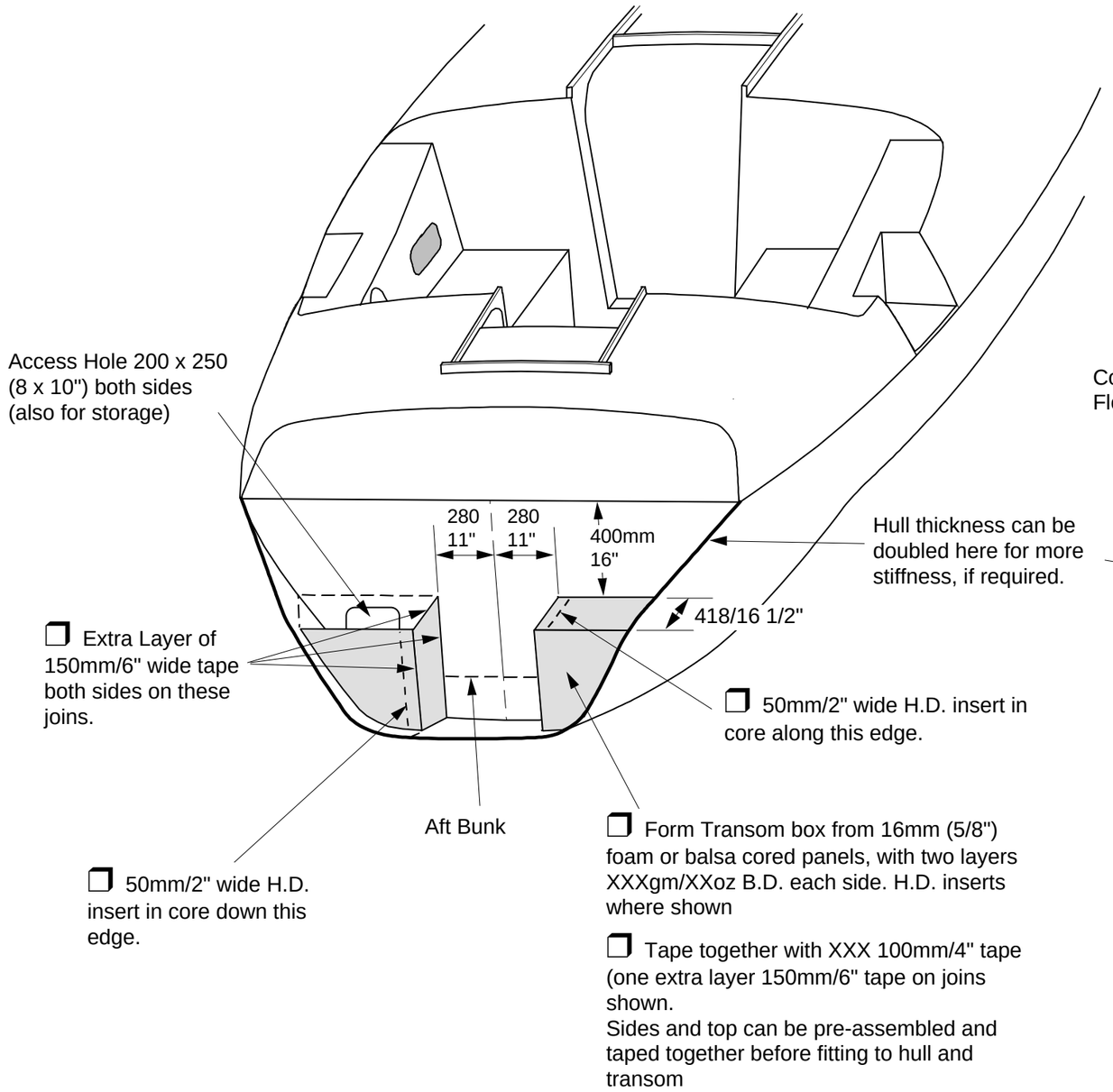
Are made as per Appendix B and C
All exterior joins can be taped with an exterior fabric (**A**) 100/4" wide tape, while interior joins can be taped with an interior fabric (**B**) 100/4" wide tape. Alternative is a pre-cut 100/4" wide TAPE such as DBM1208 (Sheet V).

July 4th, 2005

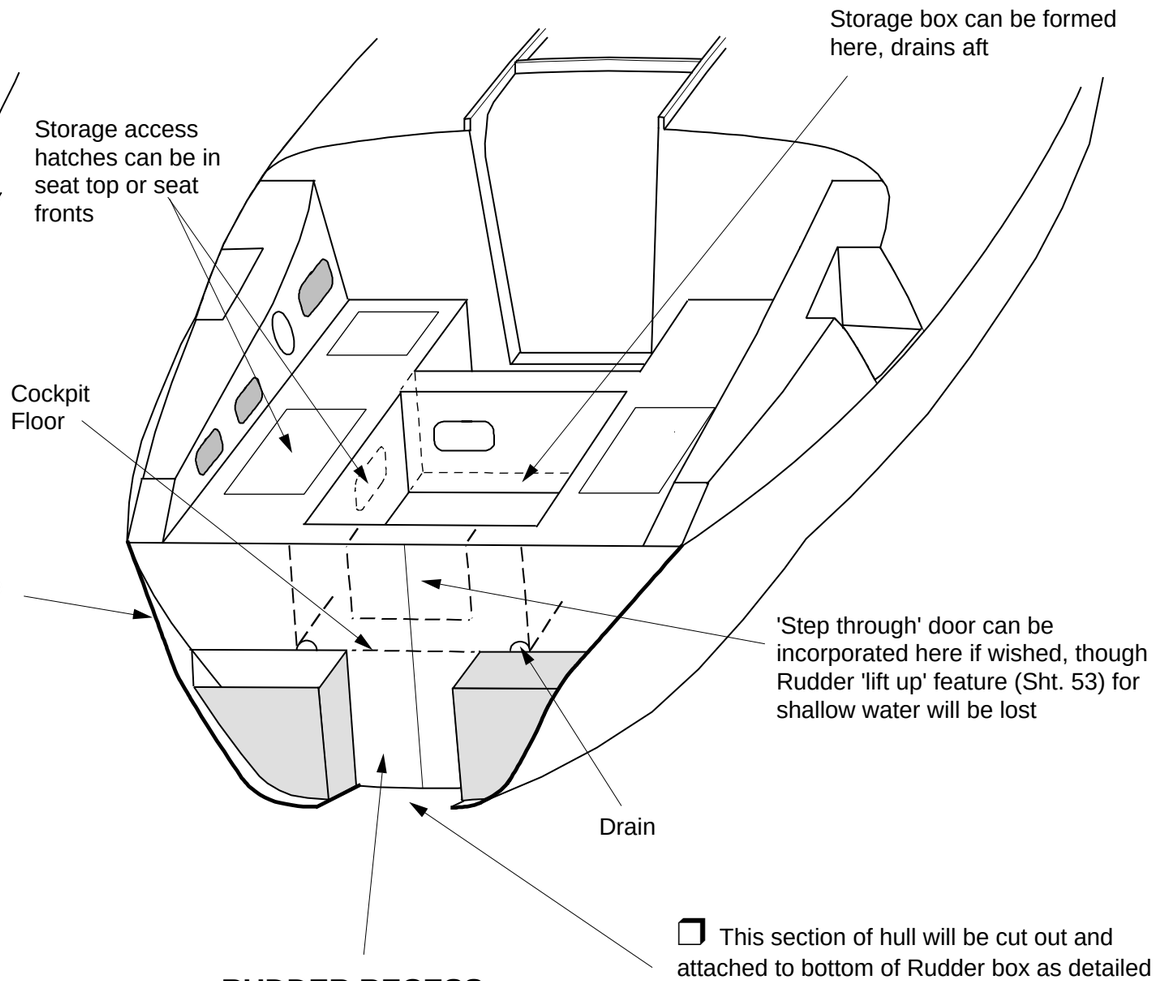
F-32 Sheet 19

COCKPIT CONSTRUCTION

A Design By Farrier Marine



AFT CABIN VERSION



RUDDER RECESS

(For Rudder box - Sht. 52). Rudder box can kick back, or can be lifted for shallow water. Vertical sides must be parallel and smooth to allow rudder box to slide easily between. Make as shown on left.

❒ This section of hull will be cut out and attached to bottom of Rudder box as detailed on Sheet 52. Dig out core along edge of cutout 25mm/1" deep and fill with putty. Then glass this, and vert. sides, along side of Rudder recess, with two layers 270gm/8oz cloth. Wraps around lower corner onto hull. Stagger edges for smooth transition.

AFT COCKPIT VERSION

Revised December 3, 1994

F-36 Sheet: 27

TRANSOM DETAILS

A Design By Ian Farrier

All Metric Dimensions are in Millimetres

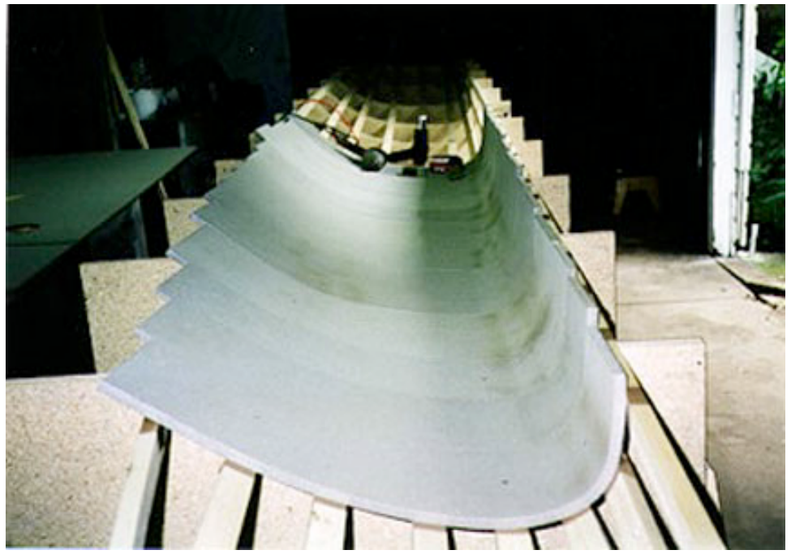
CONSTRUCTION - MATERIALS

The latest F-Series designs feature a unique method of building the hulls split vertically down the center, in simple female form frames. This halves the amount of work required for temporary building frames. The Full Size Patterns are only used once, there being no need to mark their reverse side and then flip them over for marking the opposite hull side. The building frames are instead just flipped around to build the other hull half - much easier and faster - half the work in fact.

Once both hull halves are complete, they are joined down the centerline, the ideal place for extra reinforcement. Gunwale is no longer a join, and can thus be clean and well rounded. The considerable time required to later 'frame up' for the deck and cabin is also avoided. Recommended materials are as follows:

FOAM:
Foam core will give the lightest and most durable boat and correct type is a PVC or polymer (SAN) foam of the correct density (usually 80kg/5lb). Suitable brands include Divinycell, Herex, Klegecell and Corecell.
Foam has the advantage that either epoxy of polyester resin can be used, which can be an important advantage to those that may suffer from an epoxy allergy. Detailed general information about building with foam is covered in the Farrier Building Manual and Plans, plus most foam manufacturers will provide material on the various basic techniques and recommended practices on request.
The advantages of foam core include a significantly lighter boat, durability, no tendency for strips to move with differing humidity levels while building (which can be a problem with wood strips), and excellent insulation properties.

WESTERN RED CEDAR :
A light and durable wood, that is very popular for wood stripping. May be more economical than foam, but can also now be more expensive in many areas. It will give a heavier boat, but is a familiar material to many and pleasant to work with. Another wood alternative is DuraKore, which is a balsa core laminated between wood veneers, to form a composite strip for strip planking. Can be slightly lighter than cedar for hulls thicker than 12mm (1/2”), but still heavier than foam.



Vertical foam stripped F-25A float hull in vertically split female form frames - note how wide strips can be

RESINS:
The basic choice is between epoxy and polyester. **Epoxy** is the best and strongest, but also the most expensive, and only epoxy should be used with wood. **Polyester or vinylester** (better) can be used with foam core construction, and most production boats use polyester or vinylester resins

FIBERGLASS:
There are many different variations possible, and the basic requirement is an E glass, compatible with the type of resin being used. Other reinforcing materials that may be used include:
Carbon Fiber: Not essential, but recommended for a number of key areas for the high strength to weight ratio possible, and better long term fatigue properties compared to fiberglass. The complete boat can also be built in carbon fiber, and guidelines on how to do this are included in the plans.
Kevlar: Again not essential, but a good choice for some hull and other areas to take advantages of the high tensile strength, and excellent puncture/abrasion resistance. Guidelines on where to use Kevlar are also included in the plans.

BALSA CORE:
has a number of advantages in high load areas where a lightweight core with very high mechanical properties are required. Very good for daggerboard case sides, or deck areas for instance.

OTHER MATERIALS AND METHODS
Many different materials and methods have been investigated, tried, and used over the past 30 years and these include:

SHEET PLY: Once the most common way of building your own boat. The materials are readily available, well proven, and most builders are familiar with it. The disadvantage is the room taken by the stringers and frames inside, the additional labor required, the additional weight, the potential for rot problems, and lower resale value. The early Trailertri designs used this method, but it has now been discarded by superior strip planking methods.

CYLINDER MOLDING: Similar to tortured ply, which was tried but discarded for the Trailertri 18 back in 1974. It is difficult to achieve consistent shapes, the process being unreliable, and the many additional stringers and bulkheads required to be fitted later take too long, more than eliminating any initial time savings, while reducing interior space.

CONSTANT CAMBER: This can be a very useful and quick method of boat building for boats with basic or limited hull shapes. However, more advanced hull shapes such as used in the latest F-boat designs cannot be built this way. Modern strip planking systems have now overtaken this method, and are thus now generally favored and used by most professional boat builders.

ALUMINUM: Not practical for small multihulls, the minimum skin thickness being too heavy compared to other materials, while welds can be troublesome and fatigue prone. Only for very large multihulls, and even then very out of favor.

COLD MOLDED: An older labor intensive method, with literally thousands of veneer or ply strips to be cut. Seldom used now.

FOAM SANDWICH - MALE MOLDED - The original way of building a foam core hull. However, laying foam over a male mold is awkward and much too

A completed F-9A hull half in foam strip planking and ready for bulkheads to be fitted

labor intensive. It was used for the prototype F-27, with an excellent result, but the labor required discouraged its use for many years, wood strip planking being preferred, even though heavier. However, the development of vertical foam stripping in female form frames has now made foam the best choice.

PRE-MOLDED FOAM/GLASS PANELS - A recent development and a good choice for hard chine hulls, but such hulls do have some limitations in both performance and interior room. Final fairing of exterior seams still remains a problem, as does the resale value of hard chine hulls. Bare hulls are also a relatively quick part of building so any time savings overall are small.

MATERIALS LIST
One of the most underestimated items of importance, as looking or going for unlisted items can be one of the biggest time wasters in the building of any boat. A materials list can range from just one or two pages of basic building materials to a full production boat material list which has to list every little thing from a simple cotter pin to the largest bolt. This is a critical aspect of building any boat efficiently - accurate costing and having the parts there when needed. The same applies to any 'one off' boat, and while the materials lists for Farrier plans are not as extensive as a true production list, they are probably the most comprehensive available, being based on a production type system, with at least five to six pages covering all building materials and fitout.
It should also be noted that underestimating or **omitting materials** from any design's materials list **does not make it any cheaper to build**. Those missing materials still have to be purchased at some stage.
Just to get started, you only need a small quantity of foam or wood, plus fiberglass and resin, and you can then get an idea if boat building is for you, before making a large outlay.

Cost of Materials
This can vary tremendously from builder to builder, and a good rule of thumb is around 50% of an equivalent standard production boat. Some builders can do better, others worse. It is important to look for discounts, and not waste materials. Some builders can use twice as much resin as others, and their boat ends up significantly heavier as well.
If budget is restricted, premium materials are not necessary, as the high safety factors used allow for lower grade materials. Polyester resins for instance can cost half that of epoxies Skilled builders using premium materials (such as epoxy) could in fact lighten off many areas by around 10%, using 16oz fabric instead of 18oz for example.

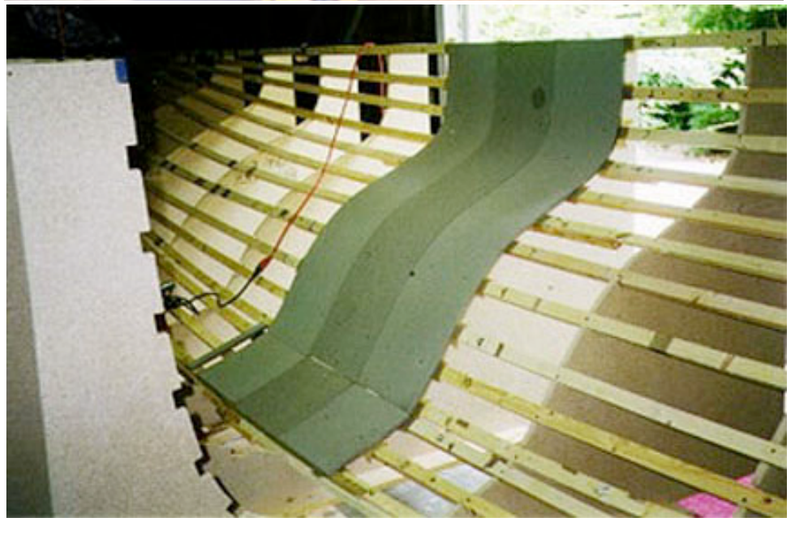
CONSTRUCTION METHODS

THE RECOMMENDED METHODS:
The methods that many years of practical experience have now shown to be the best choices are:

GOOD - WOOD STRIP PLANKING: →
Many fore and aft wood strips are laid side by side on temporary form frames/molds, edge glued, and these provide the fore and aft strength. A suitable unidirectional reinforcing fabric such as fiberglass, combined with epoxy resin, is then laminated vertically, across the strips, providing the athwartships strength.
Wood strip planking gives a relatively light and stiff hull with no need for complex internal stringers or framing. It is easy to fair, and strips can be from a number of different materials, western red cedar the most common, it being very light and durable.
A further more advanced stripping method has also been developed for Farrier designs, with the hull and deck being built as one, in two vertical halves, in female form frames. This offers many advantages, including the use of half frames for the temporary forms, which then merely need to be turned around to make the other side, halving the amount of form frames required.
The hull, cabin sides, roof, and most of the deck can then all be made at the same time, avoiding considerable additional framing later. Interior bulkheads and panels are then easily and accurately added before the hull halves are removed from the frames and the halves then joined down the center. This is exactly where any extra reinforcement should be, for stiffness, and abrasion resistance.

BETTER - FORE AND AFT FOAM STRIP PLANKING: →
The weight of wood stripped boats however can be disappointing, and to improve this, fore and aft foam stripping was tried in the early nineties. The lighter and more durable foam is not stiff enough to lay fair on its own so the strips were preglassed on one side with a fore and aft unidirectional. A vertical unidirectional was then laid across the strips, to complete the laminate. However, it was time consuming to pre-glass and cut up the strips, while the finished stripped hull was difficult to fair, and took a lot of fairing putty to blend in all the little flats and any raised 'hard' fiberglass edges. Laminating vertical unidirectional on a multi-curved hull, particularly inside, also tends to be slow and tiresome. To improve matters, frame spacing was reduced, so that the foam strips did not need to be pre-glassed. This was better, and the F-36 was designed to be built this way with unglassed fore and aft foam strips. But the basic problem of all those numerous long narrow strips that had to be made/joined, handled and fitted, whether foam or wood, remained. **There had to be a better way..... and there is.....!**

BEST- FOAM VERTICAL STRIP PLANKING: →
This developed from using foam fore and aft strips, which gets very tiresome, with so many strips to cut, edge glue and fit. It was suddenly realized that much wider and shorter strips could be used simply by turning them around and running them vertically. The more ductile foam core makes such a vertical orientation possible, and the strips can be held in place and very fair by temporary fore and aft battens. The vertical foam strips (or panels in some areas) are considerably easier to handle and fit, and the female form frame mold system also makes it very simple to hold them in place, as access is easy from both sides. Not only were the hulls lighter, but they were fairer, with significantly fewer joins, easier to laminate, and much quicker to build.



The fore and aft battens do take a little longer to setup, but no longer than say the first 10 to 15% of the numerous strips required for the more traditional fore and aft wood stripping. Fewer more widely spaced form frames can also be used. The relatively few battens are then just quickly laid in wherever they want to go, or as needed, and from then on the much fewer/wider vertical strips are considerably quicker and easier to apply.
There is actually around 3000 less lineal feet (915m) of glue join line required with a foam vertical stripped 41 footer, and every foot of these joins has to be carefully fitted and glued. It doesn't take much math to work out the considerable extra work and weight with over 1/2 mile (1 km) more of glue line to be done.
The inside of the hull is laminated, using either epoxy, polyester, or vinylester resins as desired (epoxy only with wood). Bulkheads etc. can then be accurately added as specified in plans, and hull is removed for exterior glassing once resin has cured. Form frames are then simply reversed, and battens re-positioned to build the other hull half.
Advantages over the old male mold method of foam core construction include all the holding screws being on the outside for access (no awkward crawling inside a mold) and stiffening bulkheads are already there when hull is removed from the form frames. This makes the partly finished hull rigid and easier to handle, a major problem with the traditional foam system being the hard to handle 'floppy' hulls that are produced.
The vertical foam stripping system has now been used on many F-Series designs with excellent results, and has become the recommended, and designers preferred method.

VACUUM BAGGING:
Vacuum bagging is a process of using a vacuum under a plastic film to apply pressure to the laminate while curing, to give a very high quality part. It is highly recommended for bulkheads, and interior panels, and is the lightest and best method of making such items. It can also give a finished, and fair surface to both sides of any particular part, and experienced builders can use it for the complete boat.
The plans give full details on how to do the double layer bagging system as used on the F-24, F-28 and F-31 where both laminates on each side of the foam core are bagged simultaneously. This is an aerospace technique, but is relatively simple to do once the principles are understood. Try it and you will be delighted with the results.

We have just finished joining the first two halves of a float and get a beautiful finish, without any need of putty. Your method of vertical foam stripping is really simple and very fast (takes us one day to put the foam in the mold, one day for the interior GRP and one more day for gluing the bulkheads and all the interior reinforcements). Fast, easy and a beautiful finish, without any humps or bumps.
Raul Diaz Langou, Professional Boat Builder, Ventair Boatyard, Brazil

More extensive photos are on the Farrier Marine web site at www.f-boat.com

SKILLS REQUIRED

"Doing it right the first time is far quicker and less expensive than having to do it over"

Farrier designs have been built by many with no previous experience, and the plans have been drawn specifically for amateur builders, with detailed step by step procedures. Only basic practical skills are required, along with some knowledge of simple boat building procedures, and these are covered in the Building Manual and plans. Hiring a good boatbuilder for a few days can also get you started and demonstrate the various techniques.

There is some metalwork involved, but most of this is fairly basic cut and drill, and can be done with a bandsaw and drill press, or a local machine shop can be employed. Some welding is also required and this is best done by taking to an experienced welder.

Application, or the ability to get things done are far more important than a high skill level, and if you could not build or assemble something simple like a bookcase then building a boat is probably not a good idea.

Building is thus not for everyone, but if one wants the boat done a certain way, or with specific features, or a roomier boat like the F-9AX, or one just does not have the money to buy, or just wants to be sure it is built well, then building may be the best choice. However, if you do not have the full support of your spouse or family then don't even think of starting, as building any boat can take a considerable time.

It is also important to decide what sort of boat you want and then plan accordingly. If very particular, and wanting the perfect boat, and you don't mind putting in lots of time, then there is little to be said. It is going to take a while, and for many, the building can be just as enjoyable as sailing.

However, if you just want a boat to go sailing, and as quickly as possible, then it is important to just get on with it in the quickest and most efficient manner. Don't spend weeks trying to get every little piece of foam or wood to fit perfectly - under the skin it is not that important. It doesn't have to be rough either - just don't try and get everything perfect, particularly with modern fillers being so readily available to fill any gaps (and they're stronger).

There are quite a few tricks in building fast, and these are covered in the Building Manual. But in the end a mental attitude of just getting the job done is the most important. The general motto should be to start fast, but finish slow, so that what you see at the end is the best part, and you don't end up with enclosed hull areas that look like furniture, while the final finish is rough from running out of patience and rushing it. Do all the rushing at the beginning, as hurrying the final finish is a major reason why many home builts can have a lower resale value, in spite of the fact they may be better built under the skin.

Experienced tradesmen such as carpenters or bricklayers tend to work very fast and can get a boat built very quickly, while more precise cabinet makers can take the longest, but it is usually a beautiful job that would not look out of place in any lounge room! Best time for an F-9A was 1600 hours (using ready made beams and folding system), but that is exceptional. The same builder then built an F-82R in around 1500 hours (making beams also this time), and he has just finished an F-9R. The finished products were excellent, very basic and light, with nothing fancy inside (flat textured paint only), but he was out sailing and winning races very quickly.

Jack Dearden starting to lay the foam strips on the hull side of his F-41. Fitting the strips is fairly straight forward, and one soon learns the various techniques and tricks required. Jack is also using some clamps to help hold in place prior to screwing.

Laminating hull side of an F-41. Laminating is fairly straight forward, and once one has had some practice, it becomes relatively easy. Just don't try too big of an area at one time until familiar with the process - even very large hulls can be broken down into easy to handle small areas.

The trick is the ability to just get on with it, with minimal daydreaming, and not taking hours over some little thing that doesn't really matter. Build one step at a time, as laid out in the plans, and never put anything off till later, as this can generate a huge backlog of incomplete tasks which is bad for morale.

SIMPLE OR SOPHISTICATED - IT'S YOUR CHOICE!

Farrier plans offer a choice between relatively basic and simple boats, to more complex and very sophisticated craft. The plans are the most comprehensive available and choices included range from basic materials and many 'make it yourself' parts for keeping costs down, to highly advanced options for those who want the best and a 'state of the art' modern multihull.

Interiors are a particular trap - simple is better - wine racks, drawers, etc. or a perfectly faired and painted interior finish may be nice, but can take longer than building the hulls. The process can also be speeded up considerably by hiring skilled help along the way, as required.

SHOULD YOU BUILD?

There is much to enjoy about building a boat, and a lot of satisfaction.You also have the advantage of knowing how it is built, and once completed it can be a considerable asset, and may even prove to be a profitable undertaking. With the proven strength, and sailing reputation of Farrier designs now well established world wide, the resale value is excellent.

However, building takes patience, self discipline, the development of some new skills, and many may find there is more work than they have the patience for. This applies to all types of boats, regardless of all 'easy build' claims etc., as there is always a certain core amount of what may be boring and repetitive work that is unavoidable. But, for those with the inclination, building your own boat can be very rewarding, with a good sense of achievement. Once finished and sailing, a lot of pleasure and pride can be taken with the end result.

I received the F-82 plans today and have only had a quick look at them. Without a doubt they are the most detailed plans I have ever seen. I don't think there will be much guess work in building this boat unlike others I have built.
Andrew Downing, NSW, Australia

VERTICAL FOAM STRIPPING

Foam stripping is a new, but now proven procedure, that has now been used on many F-9s and F-82s with excellent results. It is now the recommended and designer's preferred method. The same basic system as shown can be used on all components.

With both cedar and Durakore becoming more expensive due to rising lumber prices, foam core is now also becoming perhaps the lowest cost method in many areas. One can also use less expensive polyester or vinylester resins, and this can be an important advantage to those with an epoxy allergy.

Polyester resin properties are not as good as epoxy, while vinylesters are between the two. However, polyesters are still strong enough to be used, but either vinylester or epoxy will give a slightly stronger/tougher boat, and thus be less susceptible to damage.

Other advantages of foam core, include a significantly lighter boat, with no tendency for the strips to move with differing humidity levels, which can be a problem with Durakore.

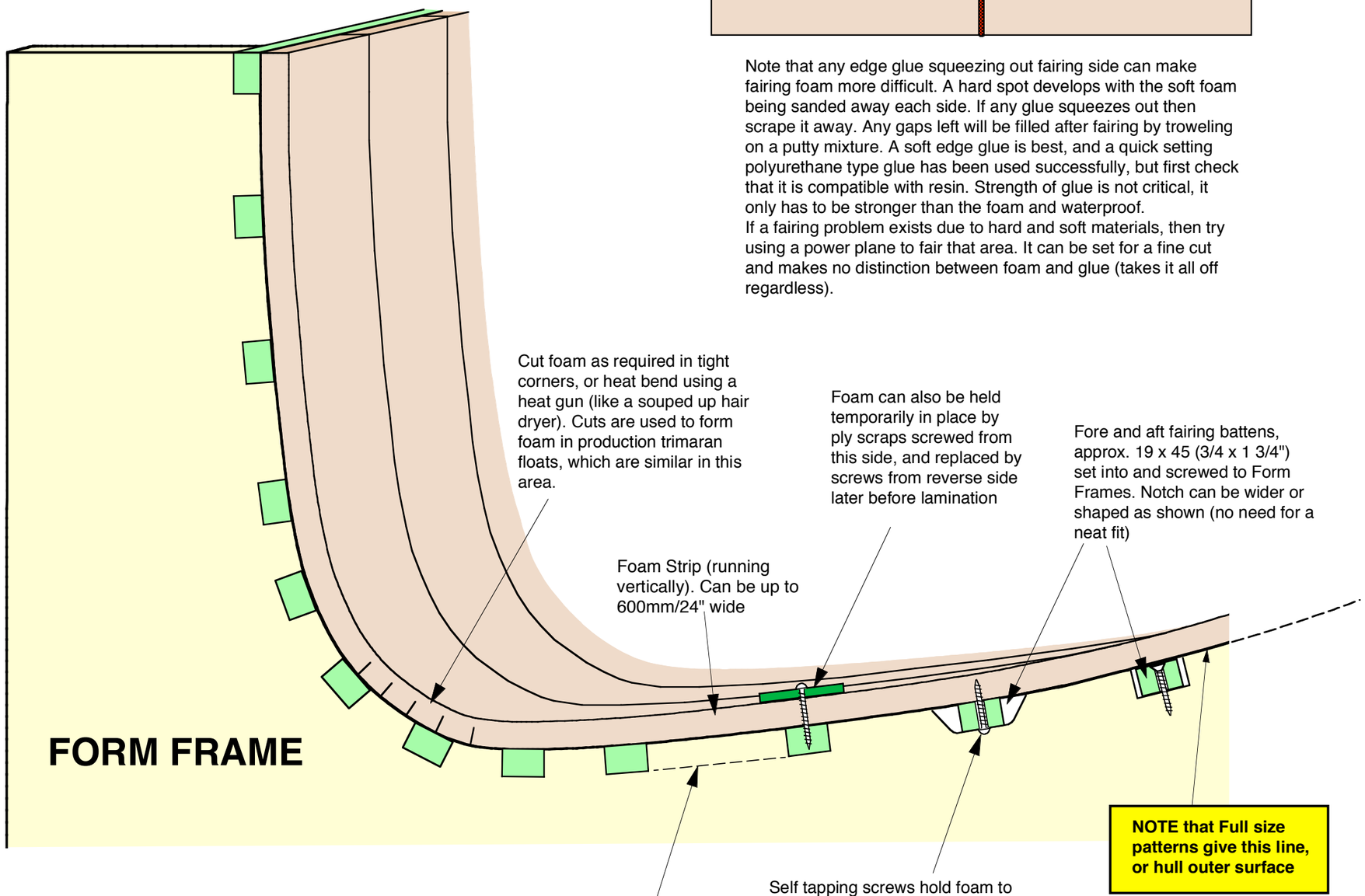
A **5lb/80kg PVC foam** should be used (do not use the weaker urethane foams - these are only suitable for non-structural areas). Also avoid contoured foam (pre-cut with scrim backing) as this takes more resin and is difficult to keep fair.

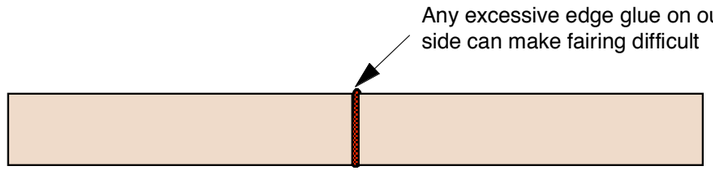
BASIC PROCEDURE

The same basic form frames are used as with either wood or foam stripping, but, with foam, full length (scarf as required) longitudinal wood stringers/battens are set into the frames every 150-250mm (6-10") and even closer in tighter corners. This also depends on stiffness of foam and experimentation will determine the best spacing. Holes (5mm - 7/32") are then drilled at random through these stringers for screws to hold the foam down from the **outside**. Set-up will be longer with such fore and aft stringers, but considerable time will be saved in not having to glue long fore and aft planking strips together, while the amount of edge gluing and labor is greatly reduced due to the much wider vertical strips.

Foam is cut into 150mm/6" wide strips, which seems to be a good general width. Can also be wider or narrower as the need may be (could be 600mm/24" wide or a large panel in some areas). Strips are laid in vertically, being held down by screws from the outside, or temporary staples or screws through ply scaps from inside. Foam should be partly cut longitudinally or heated to bend around tighter corners (heated foam becomes formable). Each strip is edge glued and time should be taken here to get it right, checking for fairness. A little care could save a lot of work later.

Once glue has set, any staples/screws on inside can be removed, before interior is glassed (being replaced by screws from outside as necessary). Glassing inside then proceeds, using the correct reinforcing fabrics as specified. If access is a problem in large hulls then it may be best to glass half the hull side, then the other half. This will avoid walking or kneeling on bare foam.





Note that any edge glue squeezing out fairing side can make fairing foam more difficult. A hard spot develops with the soft foam being sanded away each side. If any glue squeezes out then scrape it away. Any gaps left will be filled after fairing by troweling on a putty mixture. A soft edge glue is best, and a quick setting polyurethane type glue has been used successfully, but first check that it is compatible with resin. Strength of glue is not critical, it only has to be stronger than the foam and waterproof.
If a fairing problem exists due to hard and soft materials, then try using a power plane to fair that area. It can be set for a fine cut and makes no distinction between foam and glue (takes it all off regardless).

Bulkheads etc. are next added as detailed in the plans, and hull is finally removed for exterior glassing once resin has cured. Form frames are then simply reversed, and battens re-fitted to build other hull half.

Advantages over the old male mold method of foam core construction are all the screws are on the outside and stiffening bulkheads are added before hull is removed from frames. Anyone who has had to climb inside a male mold to remove screws will appreciate the external screws, and once the hull is removed, one is not presented with a huge flexible hard to handle 'whale'.

GENERAL INFORMATION

VERTICAL FOAM STRIP PLANKING SYSTEM

FARRIER MARINE, Inc
www.f-boat.com

The **F-82** is available in two versions, the F-82A cruiser and the F-82R racer.

The **F-82R** is the home builders version of the F-25C, but with a number of improvements.

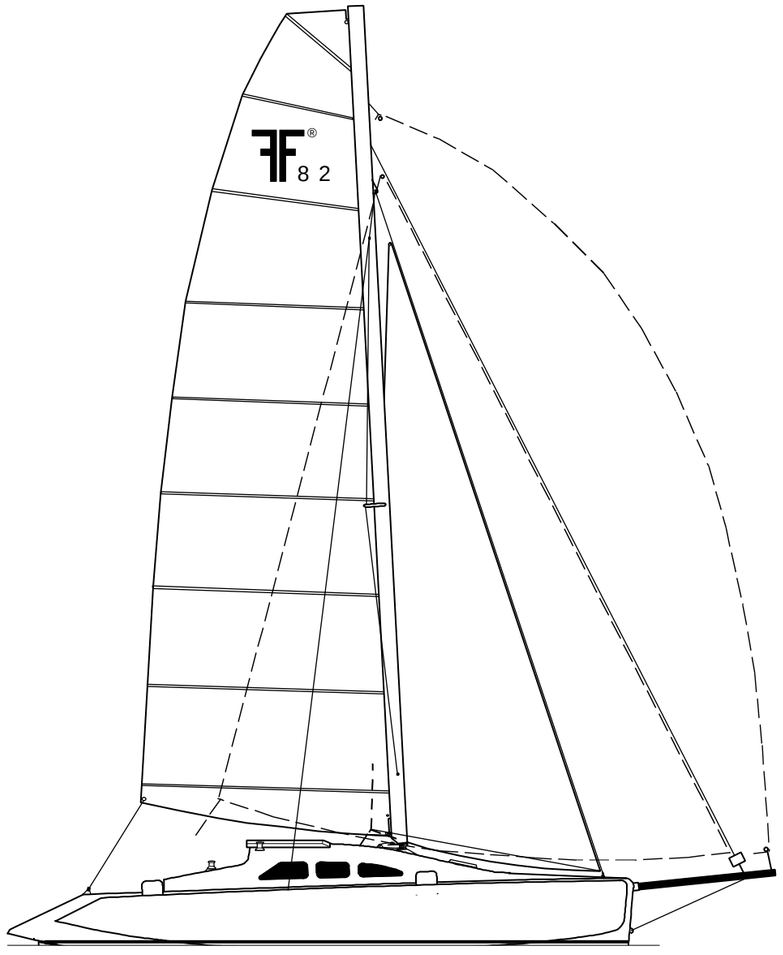
The cockpit will seat six, and is large enough for outdoor sleeping on summer nights. Different interior layouts are possible, with an optional enclosed head, while galley can be at either fwd. or aft end of cabin to suit sleeping requirements. An aft cabin option is also now available.

Both cabin settees are wide and can form two very comfortable permanent quarter berths. Forward is a large double berth, with a huge storage area underneath.

There is standing headroom under the large and unique combination pop-top. This can slide forward for quick cabin access, have the aft end only lifted to act as a dodger, or lift completely up to considerably increase comfort and room below. Sides can be fully enclosed/screened.

Mast is an aluminum or carbon fiber rotating wing section, and mainsail can be boomed or boomless. A retractable 'free standing' bow pole (no side stays required) is used for the asymmetric spinnaker, for convenience and easy handling.

Daggerboard or centerboard are optional, as are a kick-up spade rudder or a transom mounted rudder. An outboard of 4 to 8 HP is recommended and this is mounted on the stern.



F A R R I E R F-8 2

F-8 2 A

L.O.A.....26' 11" (8.2m)
L.W.L.....24' 6" (7.46m)
Beam.....19' 6"(5.95m)
Folded Beam.....8' 2 1/2" (2.5m)
Draft Hull only .....1'(0.3m)
Draft D/board down .....4' 7" (1.4m)
Sail Area (Main and Jib) 408sq.ft. (37.8sq.m)
Mast length.....34'(10.36m)
Mast height above water.....38' 7"(11.78m)
Approx. Weight .....1700lb(770kg)
Load Capacity 1400lb (636kg)
Height on trailer .....9' 10" (3.0m)
Approx. Towing Weight.....2500lb(1140kg)
Auxiliary Power.....4-8HP Outboard
Approx. wind capsize force (main & jib): 33 knots

F-8 2 R

L.O.A.....26' 11" (8.2m)
L.W.L.....24' 6" (7.46m)
Beam.....19' 6"(5.95m)
Folded Beam.....8' 2 1/2" (2.5m)
Draft Hull only .....1'(0.3m)
Draft D/board down .....4' 7" (1.4m)
Sail Area (Main and Jib) 430sq.ft. (39.8sq.m)
Mast length.....36'(11m)
Mast height above water.....40' 7"(12.38m)
Approx. Weight .....1500lb(680kg)
Load Capacity 1600lb (727kg)
Height on trailer .....9' 10" (3.0m)
Approx. Towing Weight.....2400lb (1100kg)
Auxiliary Power.....4-8HP Outboard
Approx. wind capsize force (main & jib): 31 knots

Single quarter berth and settee, 24" x 6' 6" (0.61 x 2m)

Galley - position is optional and can be anywhere in cabin area. If fitted at aft end, one full length bunk may be lost, unless galley swings up to give more room as shown on Sheet 28. Galley has been found to work very well in forward position, allowing more crew cabin access when in use, and it can be vented through small hatch in deck above

Storage

O/B

Large swim step area

Cockpit, 6' 6" (1.99m) long

Storage

Double bunk, 4' 6" x 6' 6" (1.37 x 2m)

Single quarter berth & settee, 23" x 8' 10" (0.59 x 2.7m)

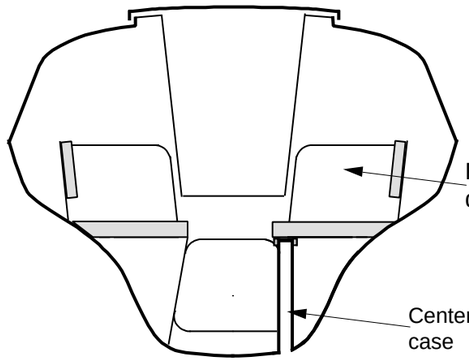
Optional seat or head area (see above right).

HEAD

It is difficult to find sufficient room for a true separate head area in all boats this size, and many elaborate built in head systems have been found to be impractical. A fixed head can be located aft of the forward bunk, however, this can be difficult to use while overnighting as the only real solution for privacy is to clear the cabin.

Experienced cruisers have found the best practical solution to be a Porta Potti, either aft of the forward bunk, or slid aft under the cockpit. It can then be moved outside to the aft swim step after dark. A temporary canopy from aft mast support can give privacy if necessary.

Width of berths is given at shoulder level.



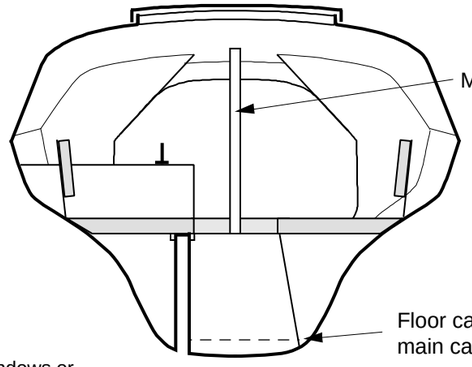
Footwells for quarter berths

Centerboard case

Cabin mid-section, Looking aft

Pop-top for 1.9m (6' 3") standing headroom when up, 1.64m (5' 6" when down).

Optional cover (with windows or flyscreens) to fully enclose and weatherproof pop-top when up

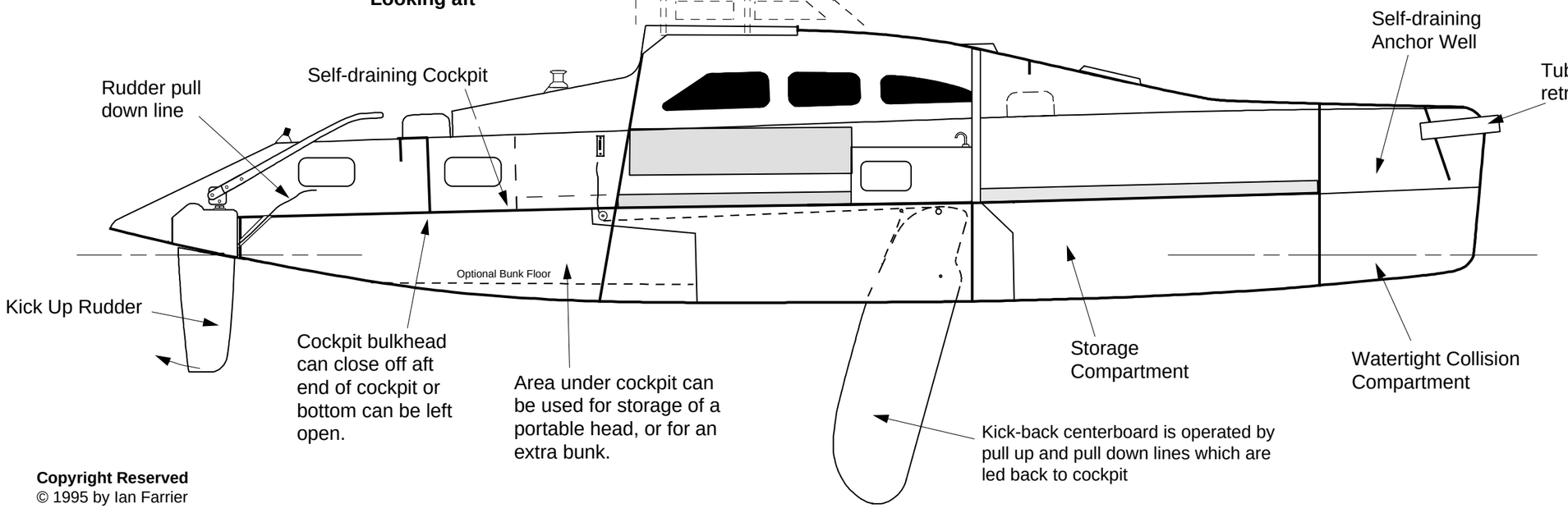


Mast support post

Floor can be fitted in main cabin if wished

Cabin mid-section, Looking forward

The interior layout shown is a general guideline only, and can be varied by individual owners to suit personal taste. Items that cannot be changed are designated structural bulkheads, and horizontal panels taking folding strut loads



0 1000 2000

Scale 1 : 30

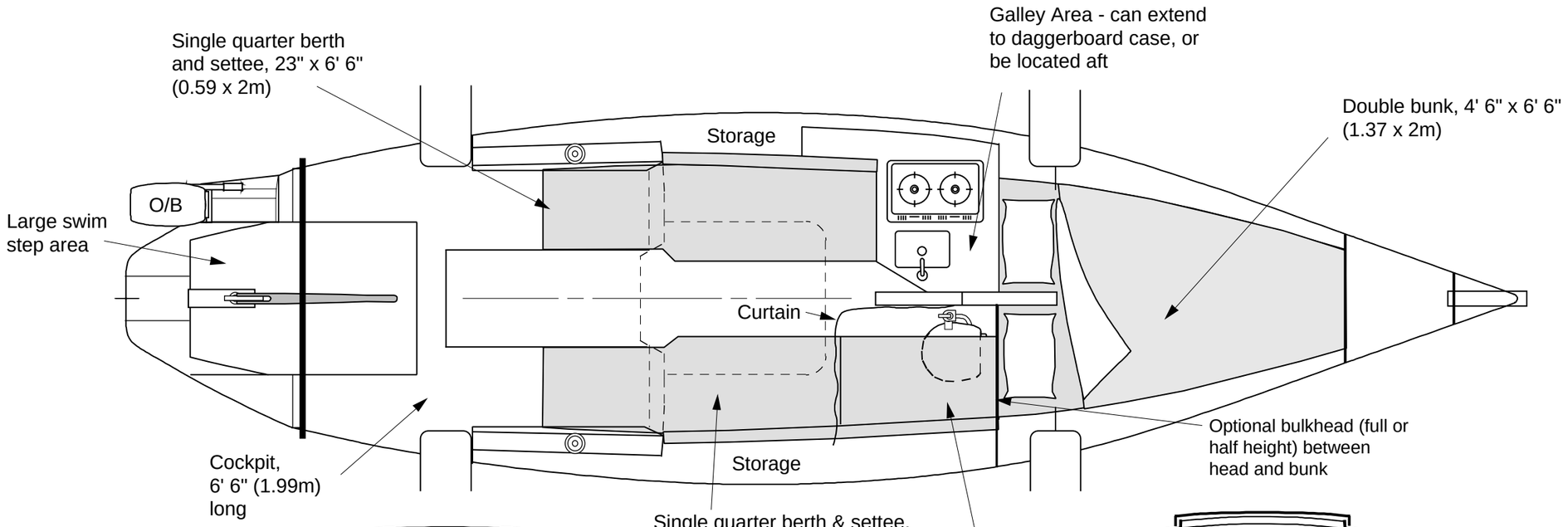
0 3' 6'

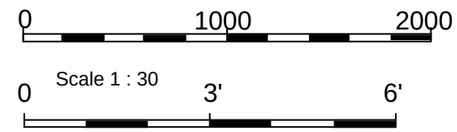
Revised: October 18, 1995

F-82R Sheet 27
INTERIOR LAYOUT with Centerboard Case

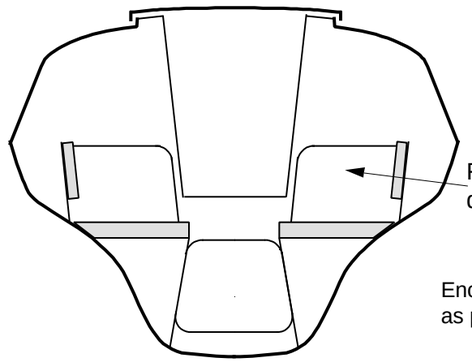
An Ian Farrier Design

The interior layout shown is a general guideline only, and can be varied by individual owners to suit personal taste. Items that cannot be changed are designated structural bulkheads, and horizontal panels taking folding strut loads

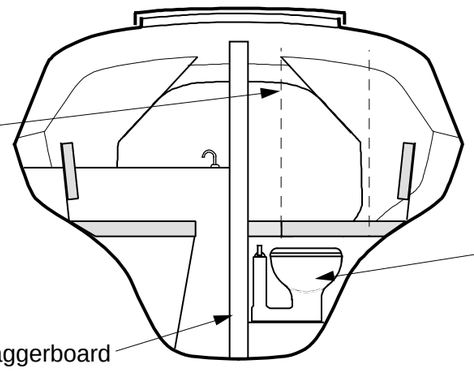




Width of berths is given at shoulder level.



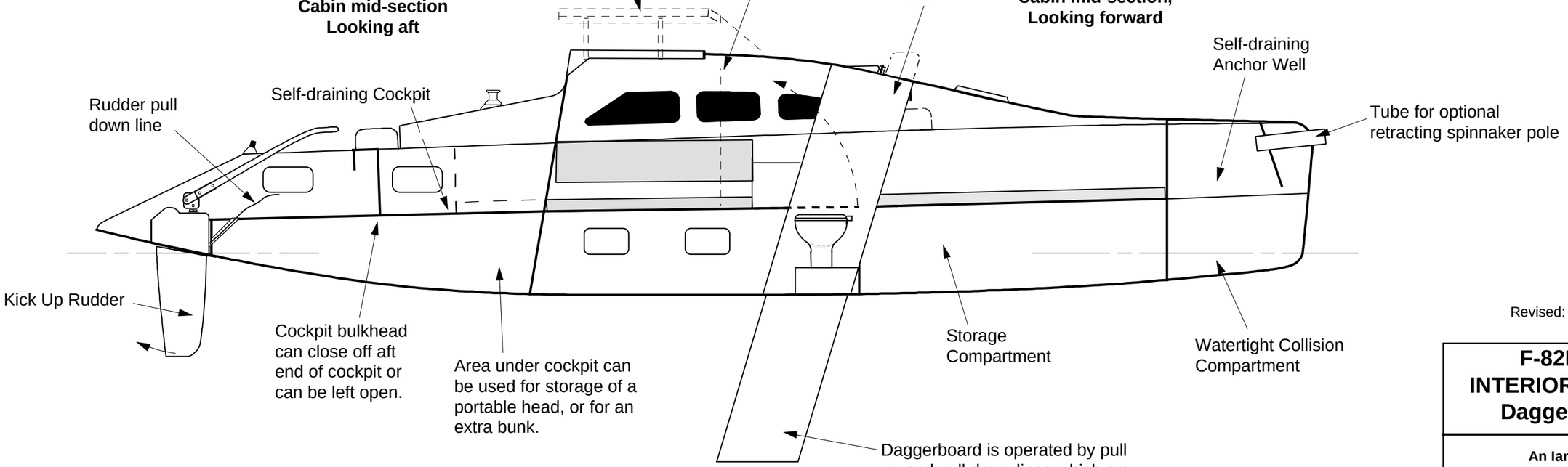
Cabin mid-section Looking aft



Cabin mid-section, Looking forward

HEAD

The daggerboard version offers a good solution for the Head, where it can be in a private area next to the daggerboard case. Front end of settee can be made to swing up to form an aft or fwd. wall, while a curtain slides out from alongside daggerboard case to give full privacy. Works very well.



Revised: September 27, 1995

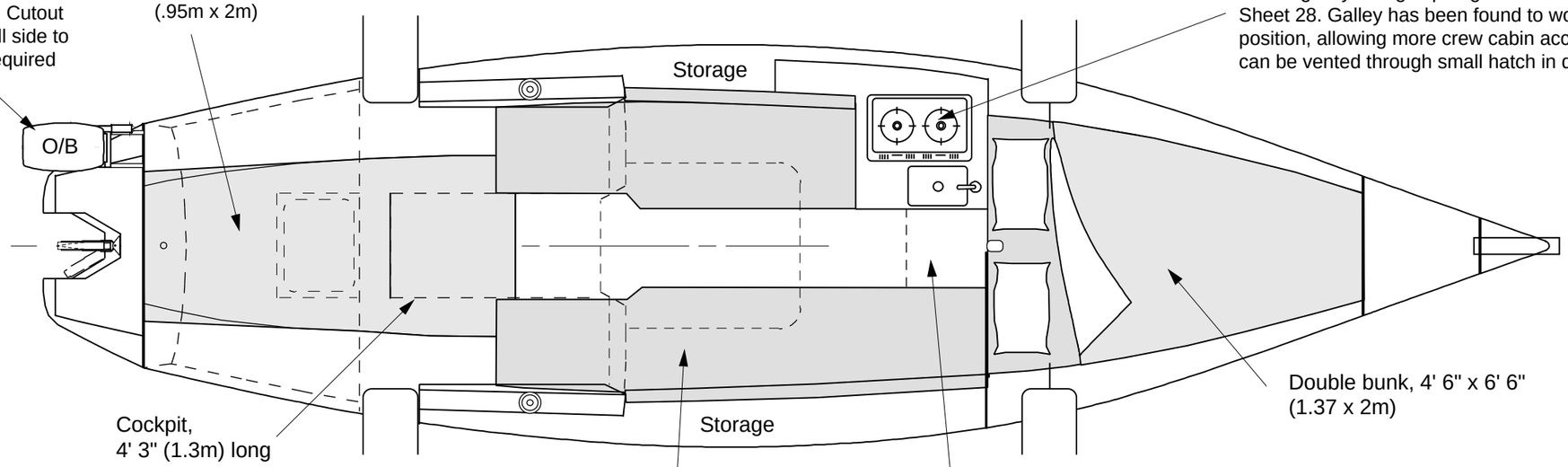
F-82R Sheet 30
INTERIOR LAYOUT with Daggerboard Case

An Ian Farrier Design

Galley - position is optional and can be anywhere in cabin area. If fitted at aft end, one full length bunk may be lost, unless galley swings up to give more room as shown on Sheet 28. Galley has been found to work very well in forward position, allowing more crew cabin access when in use, and it can be vented through small hatch in deck above

Outboard mounted on lift up bracket. Cutout in transom/hull side to clear leg as required

Aft bunk 3' 2" x 6' 6" (.95m x 2m)

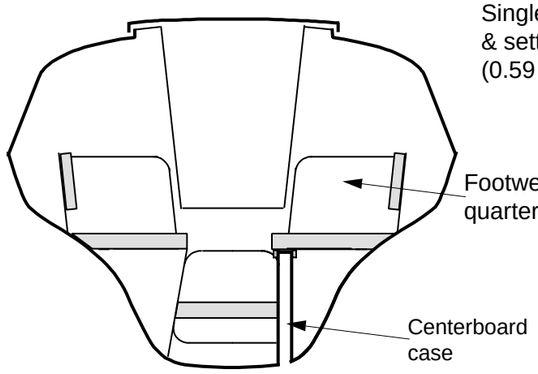


HEAD

It is difficult to find sufficient room for a true separate head area in all boats this size, and many elaborate built in head systems have been found to be impractical. A fixed head can be located aft of the forward bunk, however, this can be difficult to use while overnighting as the only real solution for privacy is to clear the cabin.

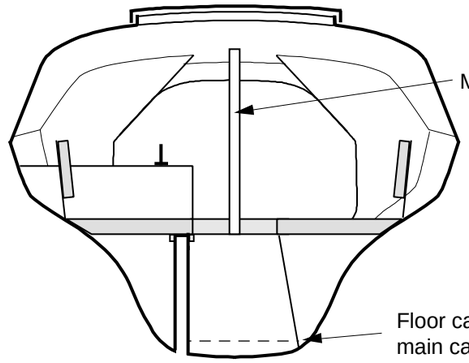
Experienced cruisers have found the best practical solution to be a Porta Potti, either aft of the forward bunk, or slid aft under the cockpit. It can then be moved outside to the aft swim step after dark. A temporary canopy from aft mast support can give privacy if necessary.

Width of berths is given at shoulder level.



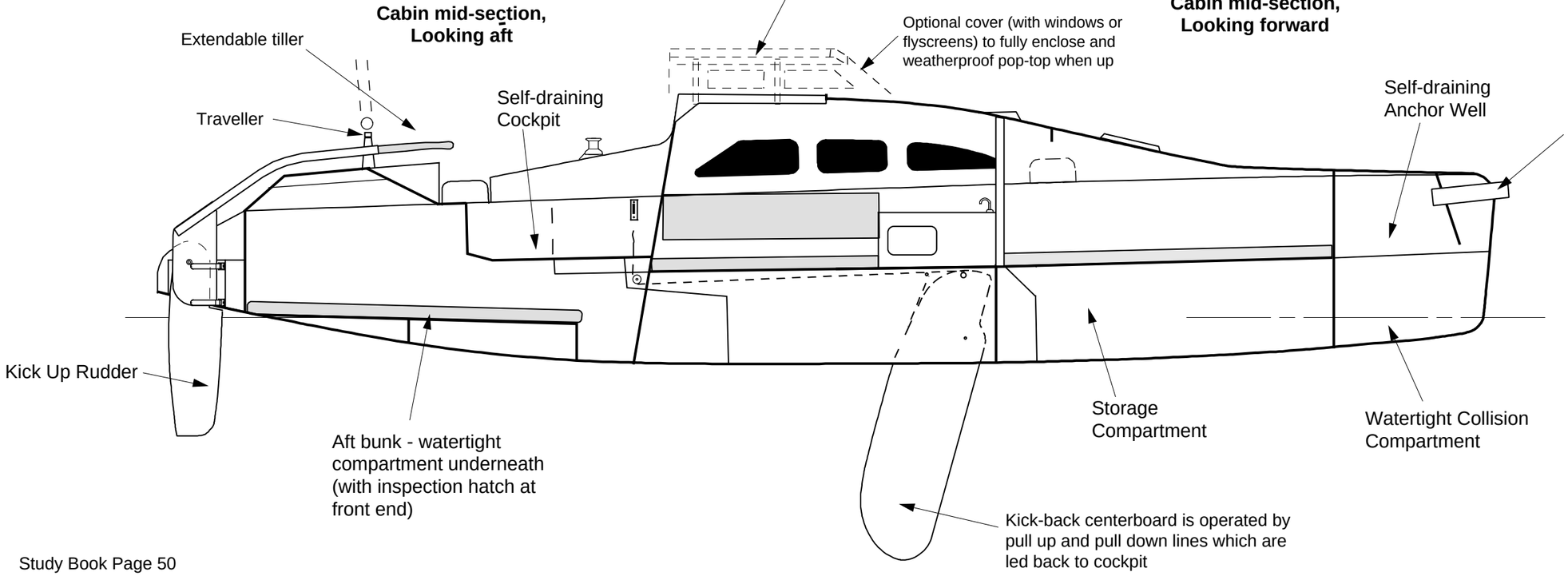
Cabin mid-section, Looking aft

Pop-top for 1.9m (6' 3") standing headroom when up, 1.64m (5' 6" when down).



Cabin mid-section, Looking forward

The interior layout shown is a general guideline only, and can be varied by individual owners to suit personal taste. Items that cannot be changed are designated structural bulkheads, and horizontal panels taking folding strut loads



0 1000 2000

Scale 1 : 30

0 3' 6'

Revised: August 1, 2001

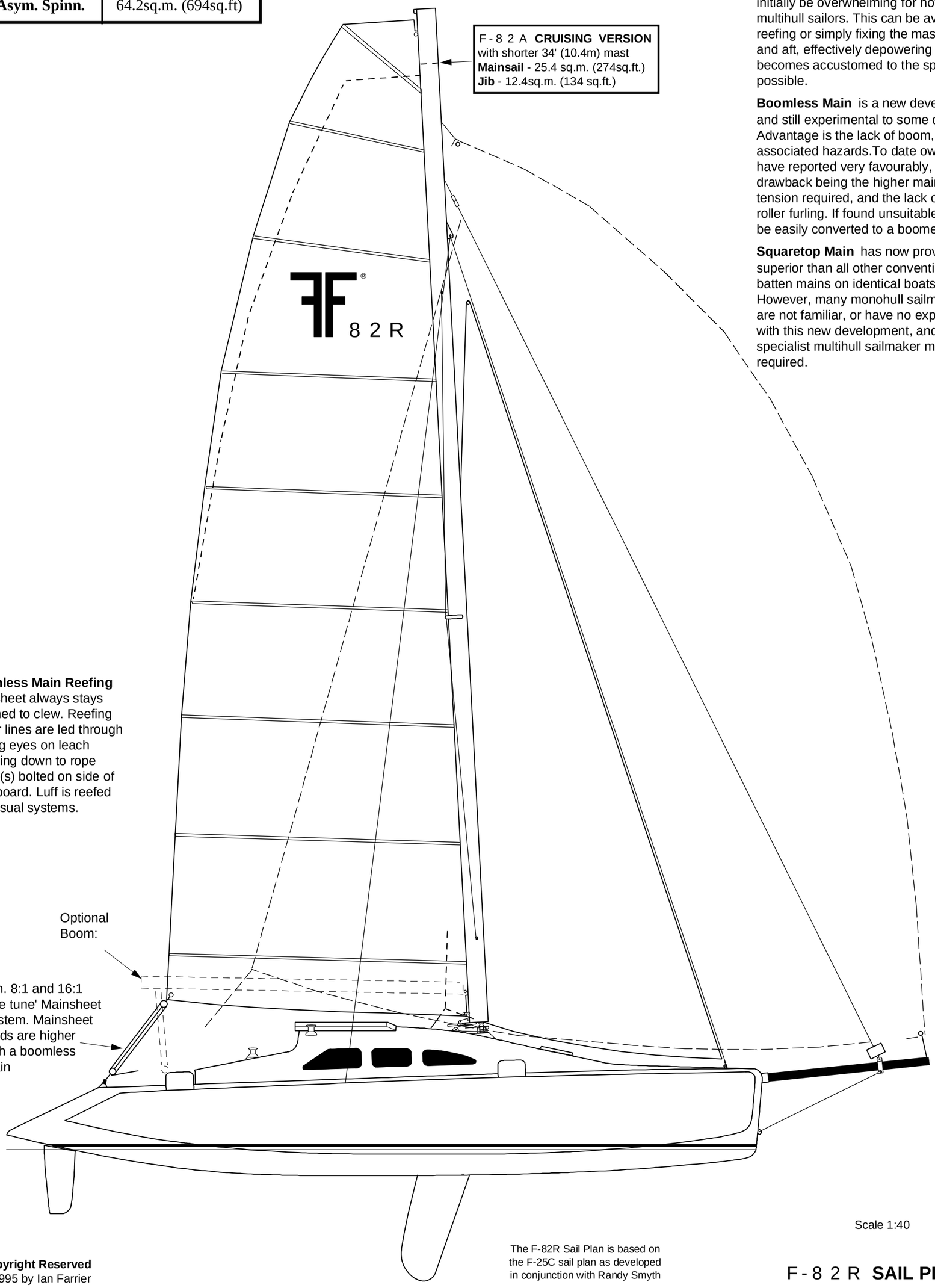
F-82R Sheet 58
AFT CABIN INTERIOR
(with Centerboard Case)

An Ian Farrier Design

Sail	Area
Mainsail	26.9sq.m. (291sq.ft)
Jib	12.9sq.m. (139sq.ft)
Screacher	29.7sq.m. (321sq.ft)
Asym. Spinn.	64.2sq.m. (694sq.ft)

F-82R Mast length
is 36' (11m)

F - 8 2 A **CRUISING VERSION**
with shorter 34' (10.4m) mast
Mainsail - 25.4 sq.m. (274sq.ft.)
Jib - 12.4sq.m. (134 sq.ft.)



Boomless Main Reefing
Mainsheet always stays attached to clew. Reefing line or lines are led through reefing eyes on leach returning down to rope clutch(s) bolted on side of clew board. Luff is reefed with usual systems.

Optional Boom:

Min. 8:1 and 16:1 'fine tune' Mainsheet System. Mainsheet loads are higher with a boomless main

Screacher is a wire/kevlar luff furling multipurpose sail, that can be used to windward in light airs (replacing genoa) and for reaching or running in light to heavy winds. Luff must be tight for windward use, while tacking is easily accomplished by furling during tack

Rotating Mast can generate considerable reaching power that can initially be overwhelming for novice multihull sailors. This can be avoided by reefing or simply fixing the mast fore and aft, effectively depowering until one becomes accustomed to the speeds possible.

Boomless Main is a new development and still experimental to some degree. Advantage is the lack of boom, and associated hazards.To date owners have reported very favourably, only drawback being the higher mainsheet tension required, and the lack of boom roller furling. If found unsuitable it can be easily converted to a boomed main.

Squaretop Main has now proven to be superior than all other conventional full batten mains on identical boats. However, many monohull sailmakers are not familiar, or have no experience with this new development, and a specialist multihull sailmaker may be required.

Scale 1:40

The F-82R Sail Plan is based on the F-25C sail plan as developed in conjunction with Randy Smyth

F - 8 2 R **SAIL PLAN**

❒ Optional Stanchion Bases (3 per float) (RF406 or Sch 36-01)

❒ 150mm (6") Access hatch (3 per float)

❒ Bow Eye RF528 or Sch 78-37 Thru bolted

❒ Optional Lifeline Eye Strap (RF1055 or Sch78-36) Fit aft deck items before sealing access hatch

300
12"

❒ Docking Pad eye (fold down type), min. three 6mm/1/4" bolts

❒ 3 Eye straps (RF1055 or Sch. 78-36) spaced along float for Barber haulers, or use wingnet support bolts.

WINGNETS - as per Fab. Parts Drg.

Dimensions are not given for items where exact position is unimportant. Builder can use own judgement, or can scale from this drawing.

Take care that height of float deck fittings, particularly stanchion bases and deck hatch, do not exceed the allowable trailering beam

Optional Bow Diagonal Brace Wire (Sheet 33)

Optional Bow wing (Sheet 52)

❒ Optional 150/6" stern cleats

Optional small Deck Hatch, max. size 300 x 300 (12 x 12")

Attach small block here to lead Screecher furling line aft

❒ Pulpit - thru bolt with backing plates

Position as per Sheet 38

O/B

❒ Spinn. sheet Winch

❒ Carbon fiber Spinnaker Bow Pole. Details on Drg. 50

If Centerboard is fitted, control line cleat is mounted here

Anchor well

❒ Spinn. sheet camcleat

❒ Barber Hauler lead and camcleat

Daggerboard (if used)

❒ Forestay Chainplate

❒ Anchor Line lead/chock

❒ Screecher Sheets here. Position may vary along beam, depending on screecher. Fitting same as with Spinnaker as detailed below

250/10"

❒ 200mm (8") Foredeck Cleat (4 bolt) with large backing plate inside. An option is two 150mm/6" cleats each side of bow & bolted through deck

Check this eyelet and shackle when folding for tightness

❒ Spinnaker Sheets here - machine screw/glue suitable s.s. tang on side of beam. Alum. Tapping strips are inside beam. Position may vary along beam, and be on front side, depending on spinnaker cut. Simple initial alternative is a web strap around beam which gives infinte adjustment

NOTE: There are many variations possible in Deck Layouts. This is designer's preferred layout.

❒ Bow Nets are Optional - attach to Bow wire brace

0 100 200 500 1000mm

0 4 8 20" 40"

Revised: July 13, 1998

Scale 1 : 24

Flush or commercial type hatch, Max size 350 x 550 (14 x 22"). Check it clears wingnet rail, and does not increase folded beam.

F-82R SHEET: 39

DECK LAYOUT

A Design By Ian Farrier

The F-36 is a large, ocean going, cruising multihull, with the capability of being demounted (not folding) for occasional trailering at 10' (3.05m) wide. This gives tremendous versatility for an ocean capable boat.

Interior can accommodate six to eight, with standing headroom throughout. Galley is to port, and a chart table is on the starboard side, along with a wet locker. Dinette will seat five, and can be converted into a large double bunk. Starboard settee is wide and comfortable, and can be converted into top and bottom bunks.

Forward, there is a private bathroom with head, washbasin, and a separate shower. Forward cabin has a double berth, with seating room aft, and large storage areas underneath.

The aft cabin has a double or two single berths with full sitting headroom. Access is through a hatch in the aft cabin front, or through under the cockpit.

An optional pilothouse can shelter the cockpit, giving standing headroom to the forward end of the aft cabin, and an all weather passage to the main cabin through the cockpit.

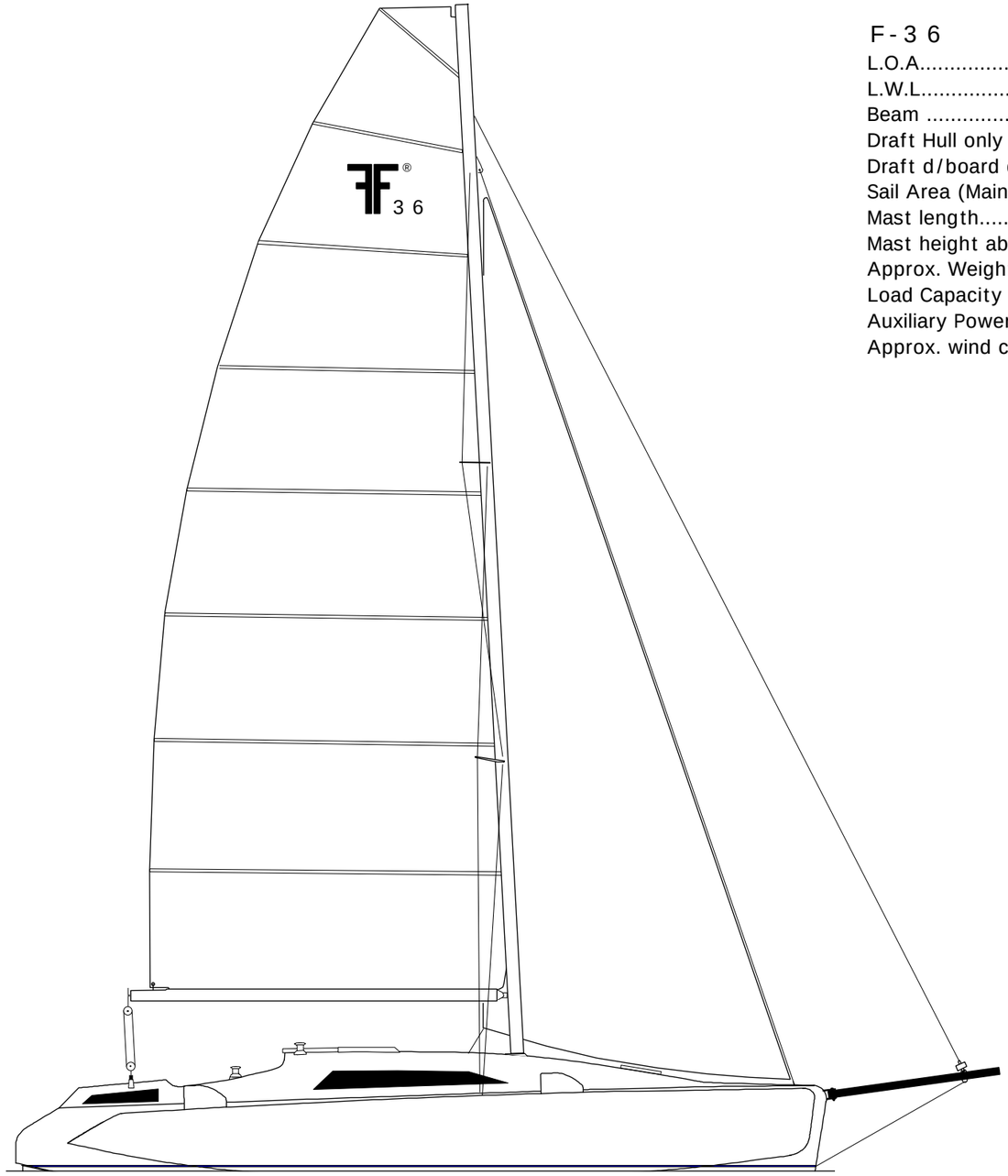
The optional aft cockpit version gives even more main cabin space, while the cockpit size is considerably increased, with easier access over the stern.

Daggerboard or centerboard are optional, while a kick-up spade rudder is housed in its own retractable rudder box in the transom. Wheel steering is standard, but a tiller is optional with the aft cockpit version.

The self-draining center cockpit can seat six adults, aft cockpit eight to ten.

An inboard of 20 to 30HP is recommended, located in a roomy and accessible area under the cockpit.

The beams are demountable, to give an occasional trailering capability at 10' (3m) wide. The strut reinforced beams eliminate the need for full width beams, increasing interior room. The beams are smaller, lighter, easier to demount, and allow standing headroom between the forward beams.



F-36

L.O.A.....36' 10" (11.2m)
L.W.L.....35' 8"(10.88m)
Beam .....26' 1"(7.95m)
Draft Hull only ..... 1' 8"(0.5m)
Draft d/board down.....6' 9"(2.07m)
Sail Area (Main and Jib) .....838sq. ft.(77.5sq.m.)
Mast length.....49'(14.94m)
Mast height above water.....54' 8"(16.65m)
Approx. Weight .....6500lb(2740kg)
Load Capacity 3000lb (1360kg)
Auxiliary Power.....20-30 HP Inboard
Approx. wind capsize force (main & jib): 38 knots

FARRIER F-36

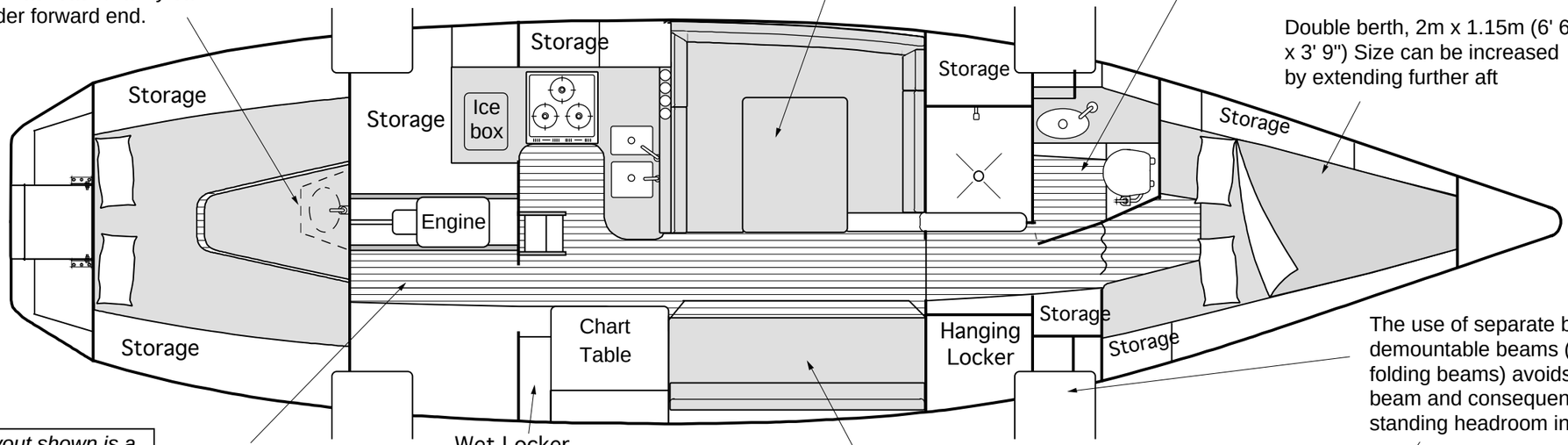
Optional table slides under cockpit when not in use, or can be used to convert aft bunks into double - 1.92m x 1.7m (6' 3" x 5' 7").
An optional washbasin/vanity can be fitted under forward end.

Dinette (seats 4 - 5) can be converted to large double 1.94m x 1.4m (6' 4" x 4' 7") and can be curtained off

Separate enclosed bathroom (6' to 6' 2" headroom). Shower is 800 x 830 (31 x 32")

Double berth, 2m x 1.15m (6' 6" x 3' 9") Size can be increased by extending further aft

In the interests of ultimate safety, and to take full advantage of total unsinkability, the F-36 has several designed in features for safe and comfortable survival in the unlikely event of capsize.
These include an emergency safety gear compartment, accessible from top and bottom, an escape/re-entry hatch (usable if inverted), and convertible bunks that can be used either way up.



Figures shown are 1.8m (5' 11") tall. Width of berths is given at shoulder level.

The use of separate braced demountable beams (similar to folding beams) avoids a full width beam and consequent loss of standing headroom in this area

The interior layout shown is a general guideline only, and can be varied by individual owners to suit personal taste. Items that cannot be changed are designated structural bulkheads.

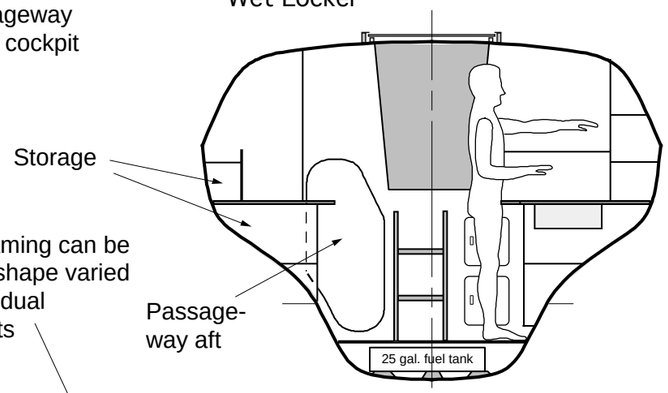
Passageway under cockpit

Wet Locker

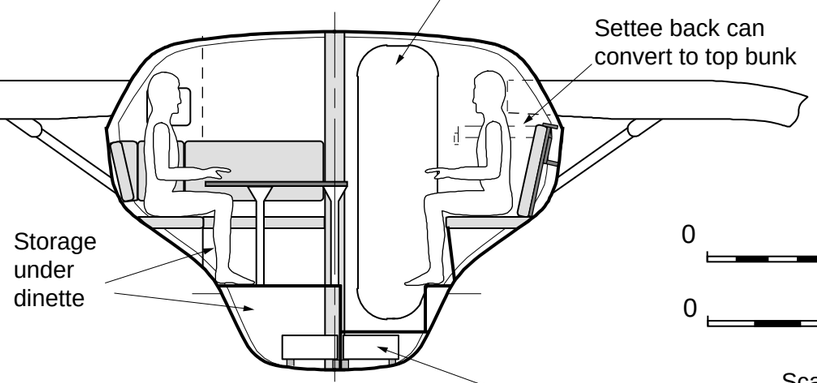
Settee berth 1.92m x 0.63m 6' 4" x 2' 1"

Settee back can convert to top bunk

Sail Storage
The F-36 needs relatively few sails, and these can be stored in the floats, to avoid cluttering the interior



View A-A



View B-B

Two 80L./20 gal. water tanks

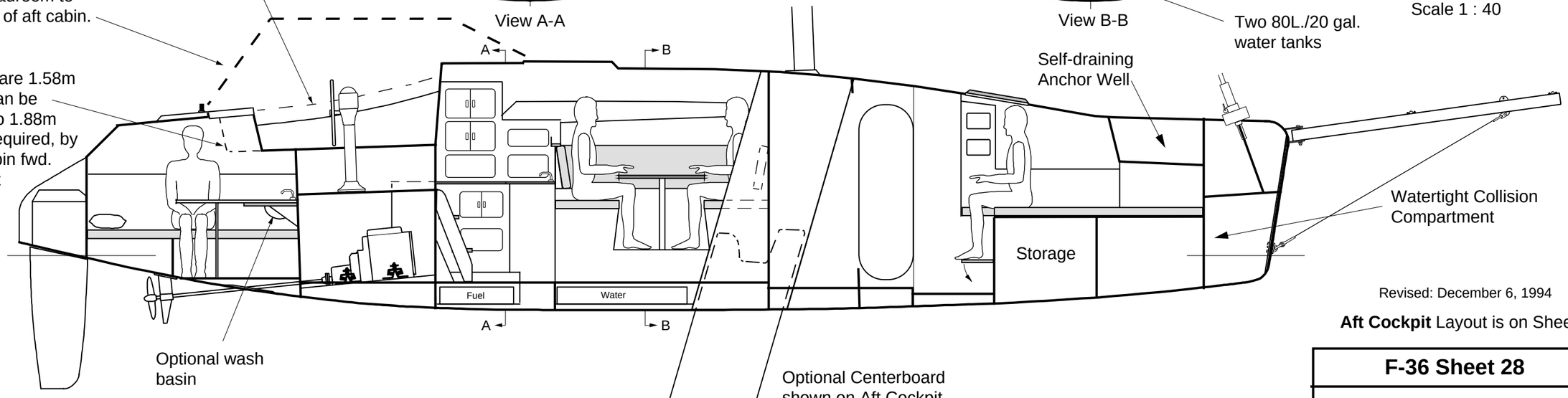
0 1000 2000

0 3' 6'

Scale 1 : 40

Optional demountable Pilothouse (Sheet 55). Shelters cockpit and gives standing headroom to forward end of aft cabin.

Cockpit seats are 1.58m (5' 2") long. Can be extended up to 1.88m (74") long, if required, by moving aft cabin fwd. side further aft



Self-draining Anchor Well

Watertight Collision Compartment

Optional wash basin

Optional Centerboard shown on Aft Cockpit layout - Sheet 29

Daggerboard is operated by pull up and pull down lines which are led back to cockpit

Either Centerboard or Daggerboard style interiors can be used in Aft Cabin or Aft Cockpit versions.

Revised: December 6, 1994

Aft Cockpit Layout is on Sheet 29

F-36 Sheet 28

AFT CABIN INTERIOR

A Design By Ian Farrier

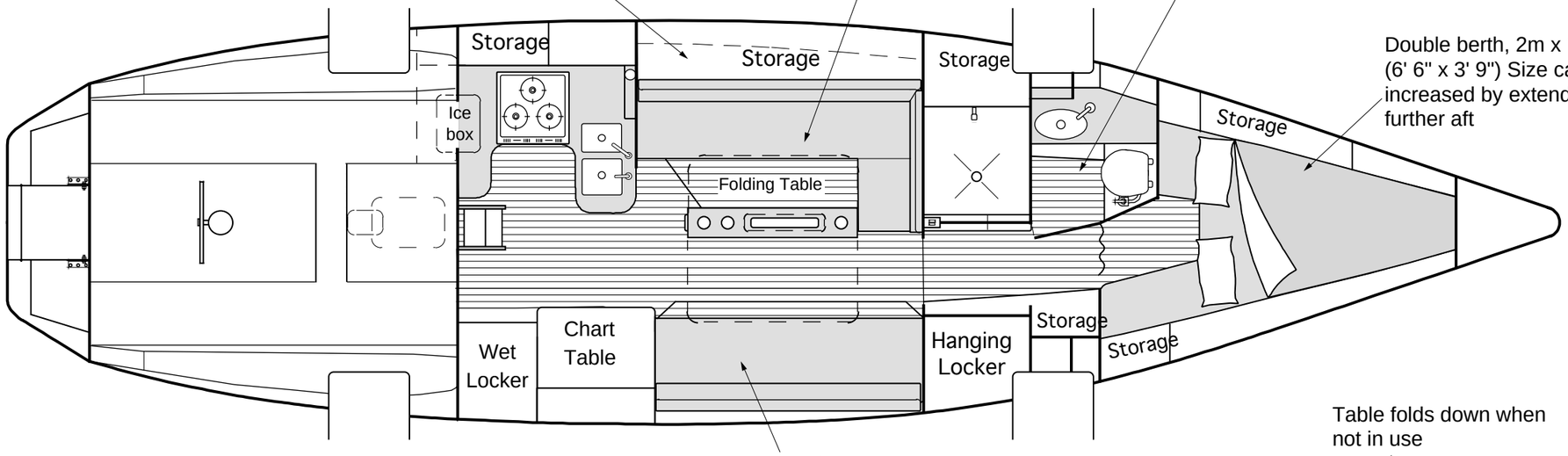
This area can also be converted to wing berth

Settee can be converted to large double 2.1m x 1.32m (6' 11" x 4' 4") and can be curtained off

Separate enclosed bathroom (6' to 6' 2" headroom). Shower is 800 x 830 (31 x 32")

Double berth, 2m x 1.15m (6' 6" x 3' 9") Size can be increased by extending further aft

The interior layout shown is a general guideline only, and can be varied by individual owners to suit personal taste. Items that cannot be changed are designated structural bulkheads.



0 1000 2000

0 3' 6'

Scale 1 : 40

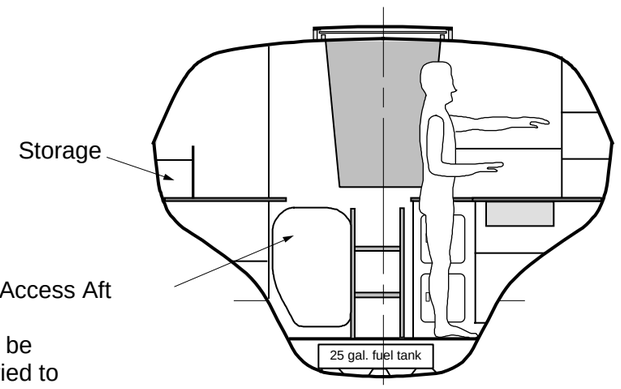
Settee berth 2m x 0.63m 6' 6" x 2' 1"

Table folds down when not in use

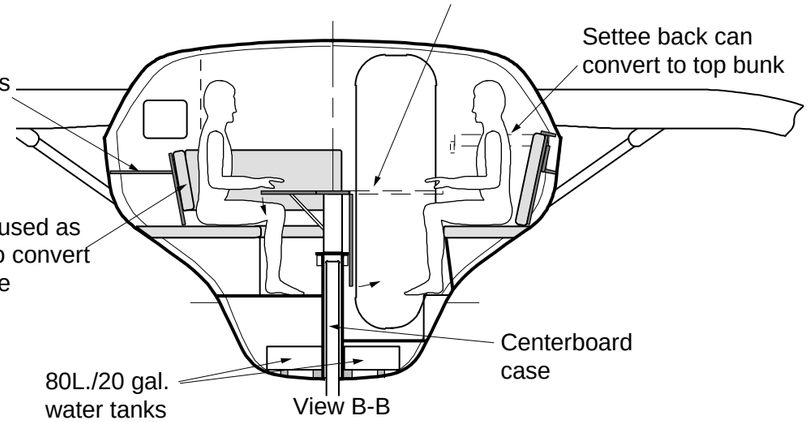
Settee back can convert to top bunk

Hinged panel swings up when settee is used as bunk

Figures shown are 1.8m (5' 11") tall. Width of berths is given at shoulder level.



View A-A



View B-B

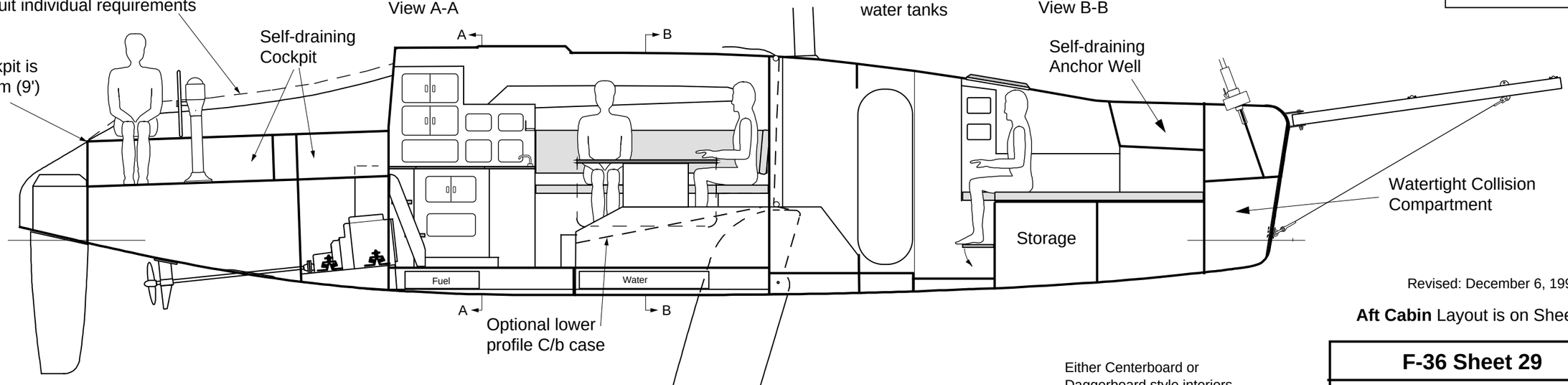
Sail Storage
The F-36 needs relatively few sails, and these can be stored in the floats, to avoid cluttering the interior

Cockpit coaming can be raised and shape varied to suit individual requirements

Self-draining Cockpit

Cockpit is 2.74m (9') long

Self-draining Anchor Well



Centerboard is operated by pull up and pull down lines which are led back to cockpit from just aft of mast.

Optional Daggerboard shown on Aft Cabin layout Sheet 28

Either Centerboard or Daggerboard style interiors can be used in Aft Cabin or Aft Cockpit versions.

Revised: December 6, 1994

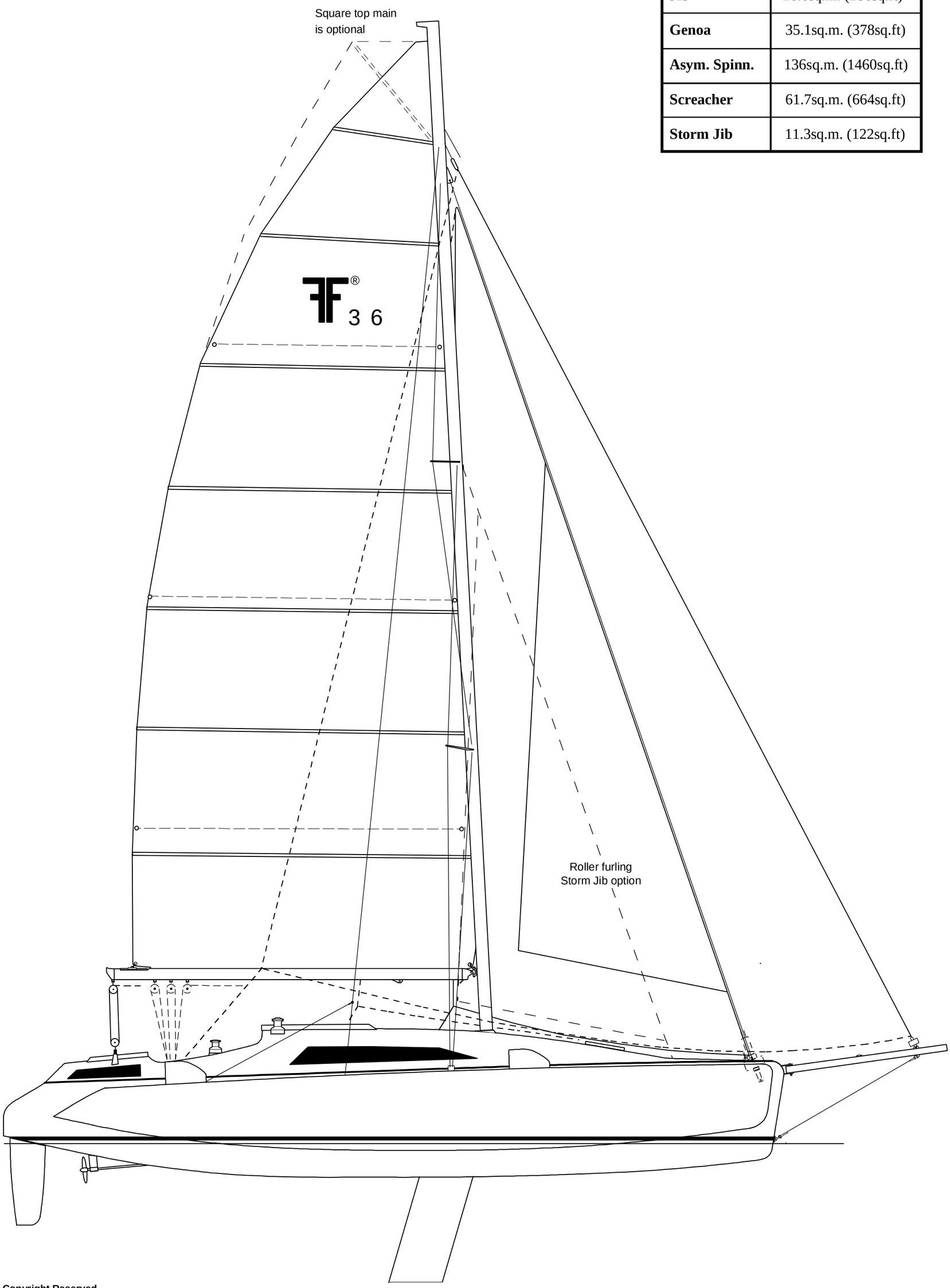
Aft Cabin Layout is on Sheet 28

F-36 Sheet 29

AFT COCKPIT INTERIOR

A Design By Ian Farrier

Sail	Area
Mainsail	51.5sq.m. (555sq.ft)
Jib	26.6sq.m. (286sq.ft)
Genoa	35.1sq.m. (378sq.ft)
Asym. Spinn.	136sq.m. (1460sq.ft)
Screacher	61.7sq.m. (664sq.ft)
Storm Jib	11.3sq.m. (122sq.ft)



Scale 1:52

F-36 **SAIL PLAN**

Optional Lifeline Eye Strap (RF1055 or HK137) Fit aft deck items before sealing access hatch

Optional Stanchion Bases (4 per float)

Shroud Chainplate (drg. 38)

200mm (8") Insp. Port (2 per float)

Optional Lifeline Eye Strap (RF1055 or HK137)

Optional **Bow Wing** increases deck area forward, and provides a more convenient anchoring system

420
17"

Bow Eye
(HK688 or similar)

Dimensions are not given for items where exact position is unimportant. Builder can use own judgement, or can scale from this drawing.

3 Pad eyes spaced along float for Barber haulers. An alternative is to use wing net rail support bolts

250mm (10") Float
Bow Cleat - Use large 16mm/5/8" ply backing plate epoxy glued inside

Eyeplate for Bow Diag. brace wire (Drg. 38)

Optional removable cover

Barber Hauler lead and camcleat

Mainsheet traveller as per Drg. 38

Bow Diagonal Brace 6mm/1/4" 1 x 19 S.S. wire with turnbuckle (Structural, do not omit)

Eyeplate for Bow Diag. brace wire with Bow Wing is bolted to top of mast section (four 6mm 1/4" bolts). Locate 88mm/3 1/2" in from end

250mm (10") Cleat

Fit cleat here with opt. Bow Wing

Small anchor can be stored on Bow Wing

Sheet tracks as per Drg. 38

Opt. Mainsheet Winch

Spinn. tackline
Main Halyard
Reefing Line
Outhaul
C/Bb. Clamcleat

Spinnaker Bow Pole (Drg. 50) can swing to side when required for docking

Opt. Self-tacking jib track (centerboard version only)

Chock

Turning Blocks as required

Jib Sheet Camcleat

Mast Step (Drg. 38)

Kick Up Rudder (Sht. 53)

C/bd. or D/bd. control line exit blocks (Sht. 43)

Foredeck Hatch - Max size 600 x 600 (2' x 2')

Pulpit - thru bolt with backing plates

Extended cockpit option

Halyard Winch

Sheet Winch

C/Bd Clamcleat
Jib Halyard
Spinn. Halyard
Screecher halyard

Anchor Line lead/chock

Shroud Chainplates (as per Drg. 38)

Eyeplate for Bow Diag. brace wire, (without Wing). Bolt (four 6mm 1/4" bolts) to hull just below deck level, & 80/3" fwd. of bow bulkhead

Aft Cabin Vent

250mm (10") Foredeck Cleat with large backing plate (or one each side with wing)

Spinnaker/Screecher Sheet winch

8mm/5/16" Black line

Wingnet - Make as per separate drawing (Fab. parts).

Optional Netting

Long 6mm/1/4" Stainless steel D shackles

Bow Nets are Optional - attach to Bow wire brace

RF : Ronstan Part
Sch : Schaeffer Part
HK : Harken Part

Screecher/Spinnaker Sheet track (Sheet 37 & 38). Simple alternative is strap around beam, which can be moved for best position

Occasional Access Hatch (screwed down)

100/4" C/L

Scale 1 : 32

Revised: July 2, 1999

Strong Pad eye (HK688) for Shroud tensioner. Through bolt large backing plate. Extra glass inside as per Sheet 6.

Flush hatch as per Sheet 44

0 1000 2000

0 3' 6'

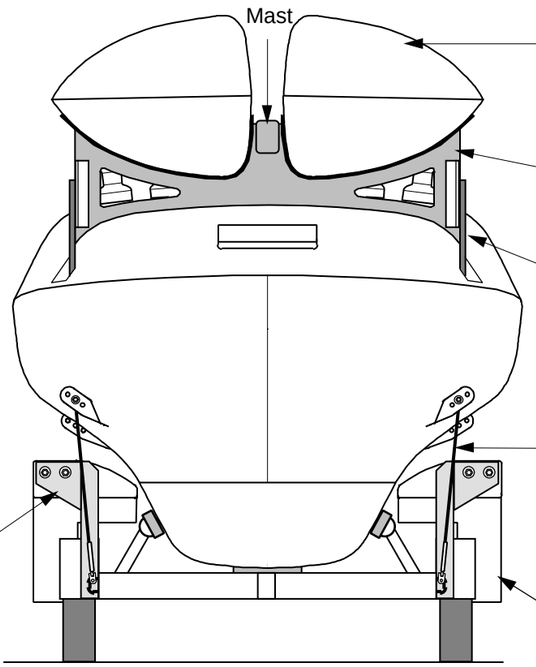
F-36 SHEET: 39
DECK LAYOUT
A Design By Ian Farrier

TRAILERING

The F-36's trailerability is intended only for occasional trailering, such as winter storage, or spending winter in a warmer climate. It is not intended for frequent weekend use. It could take a full day to demount and trailer, and crane assistance will be required to lower mast. However, manpower may be sufficient to move beams and floats. The trailer will require submerging for retrieving or launching, unless a travel hoist is used.

Trailer Regulations - Check with local authorities for maximum width, length, brake requirements etc. A written permit is usually the only requirement in the U.S. for a 3.05m (10') wide load such as the F-36.
Select a trailer that will allow the keel support board to be set low. A 'Deep V' type powerboat trailer is usually made to allow this.

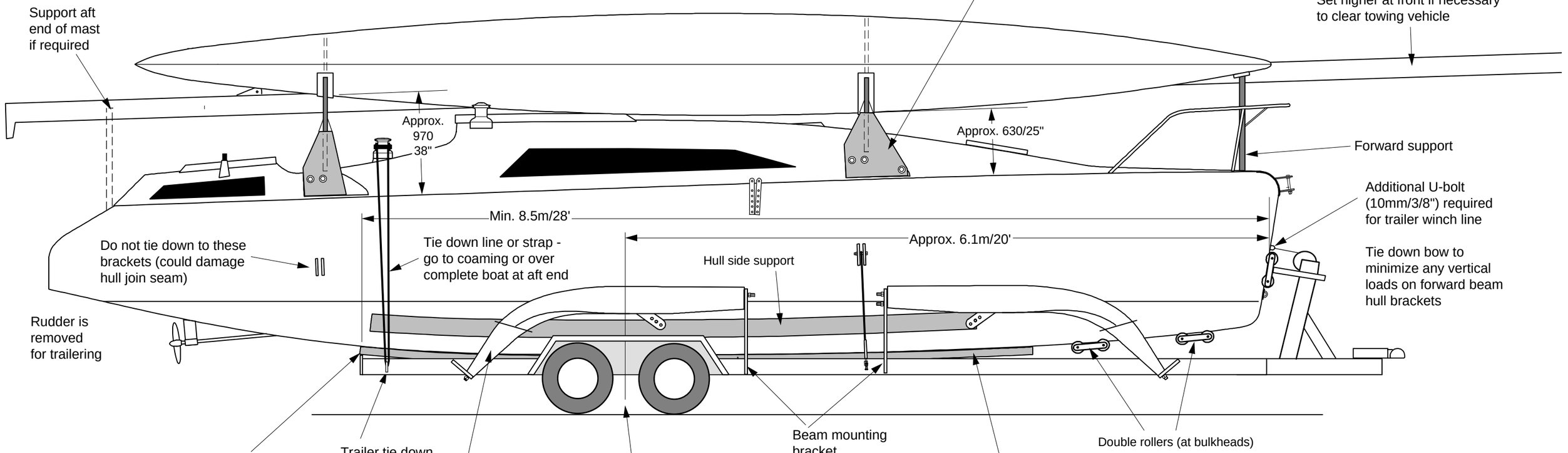
Lights - Check with local regulations for correct light configuration. Tail lights are best on separate removable brackets or bar, mounted on Transom.



Min. required Load Capacity:
4000kg/ 8800lb
Depends on built weight and amount of gear carried. Tandem or Triaxle required

Trailering Width : 3.03m (9' 11")

Trailering Height : 3.8m (12' 6")
(Will vary, depending on type of trailer used.



Scale 1:36

Revised March 9, 2001

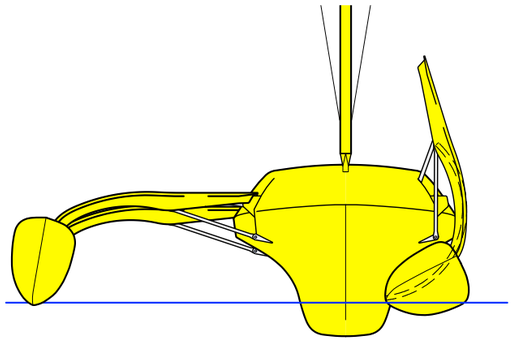
F-36 Sheet 56

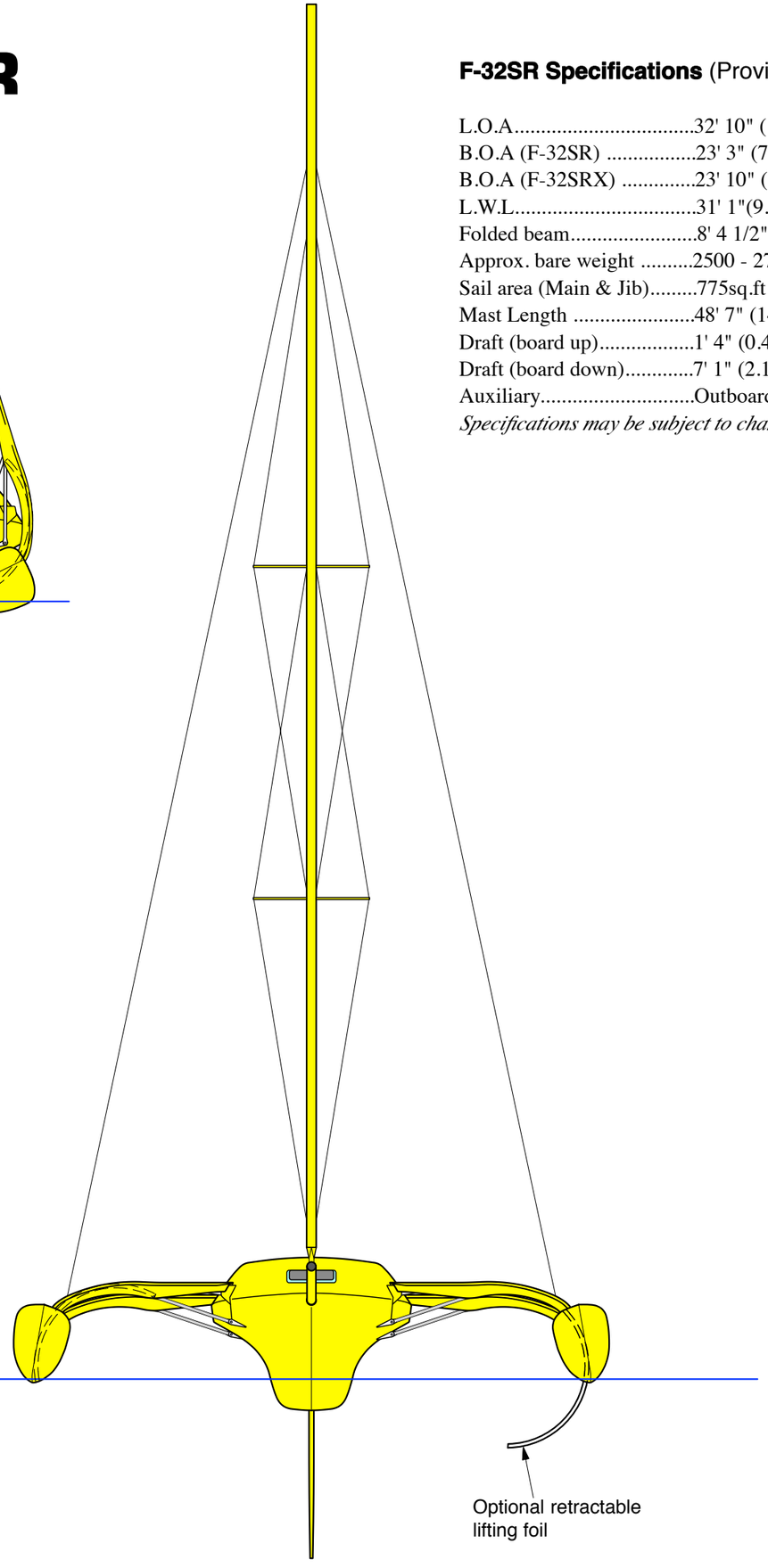
TRAILERING

A Design By Ian Farrier

THE F-32SR

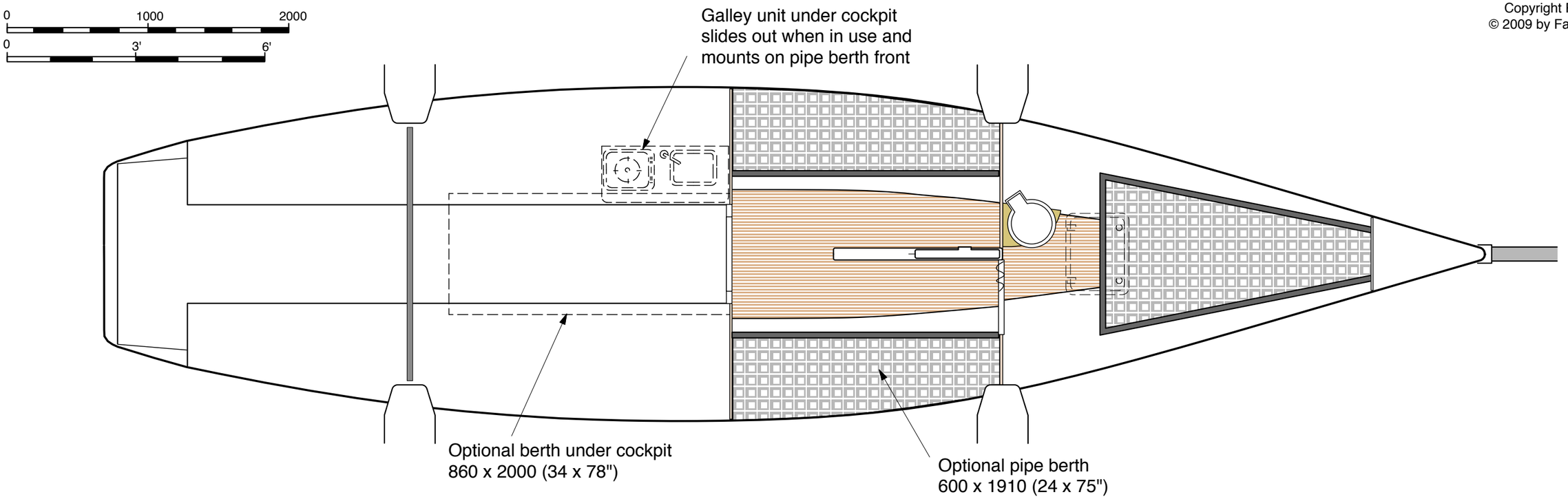
A dedicated racer and straight line honors machine based on the F-32





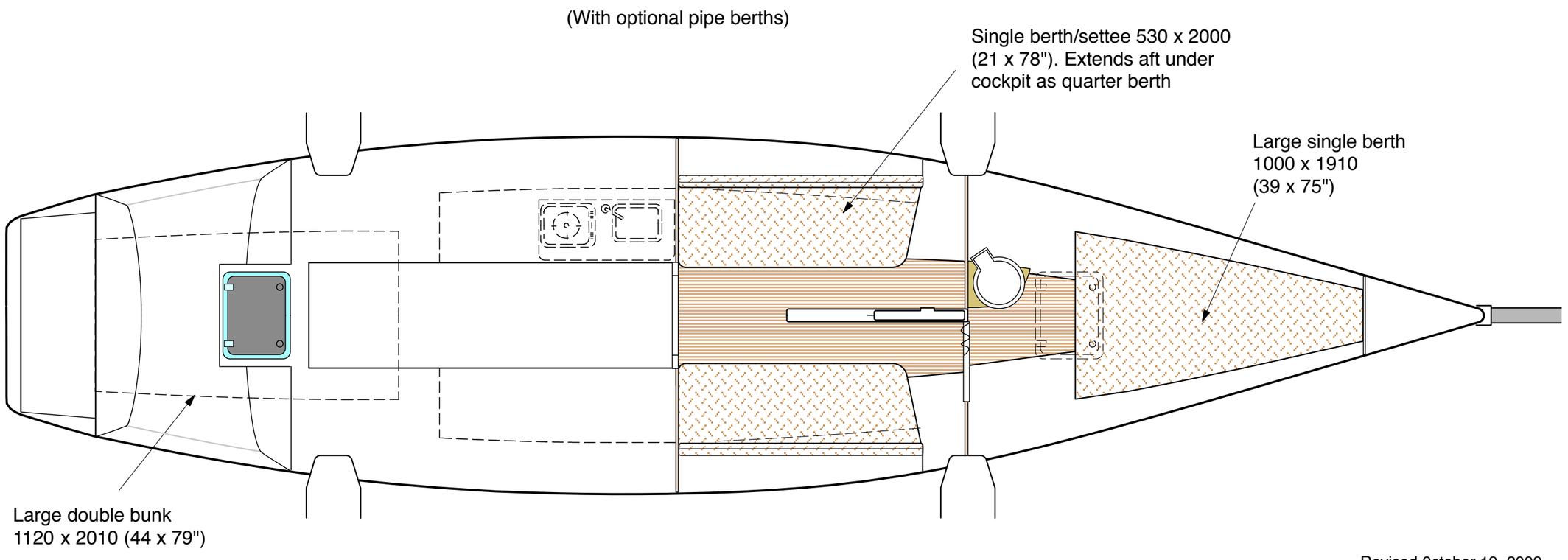
F-32SR Specifications (Provisional)

L.O.A.....32' 10" (10m)
B.O.A (F-32SR) .....23' 3" (7.07m)
B.O.A (F-32SRX) .....23' 10" (7.27m)
L.W.L.....31' 1"(9.48m)
Folded beam.....8' 4 1/2" - 9' 8" (2.55 - 2.95m)
Approx. bare weight .....2500 - 2700lbs (1140 - 1230kg)
Sail area (Main & Jib).....775sq.ft (72.1sq.m.)
Mast Length .....48' 7" (14.8m)
Draft (board up).....1' 4" (0.40m)
Draft (board down).....7' 1" (2.16m)
Auxiliary.....Outboard
Specifications may be subject to change



AFT COCKPIT VERSION

(With optional pipe berths)



AFT CABIN VERSION

(With optional cabin settees/quarterberths)

Revised 0ctober 19, 2009

F-32SR INTERIOR OPTIONS

A Design By Farrier Marine