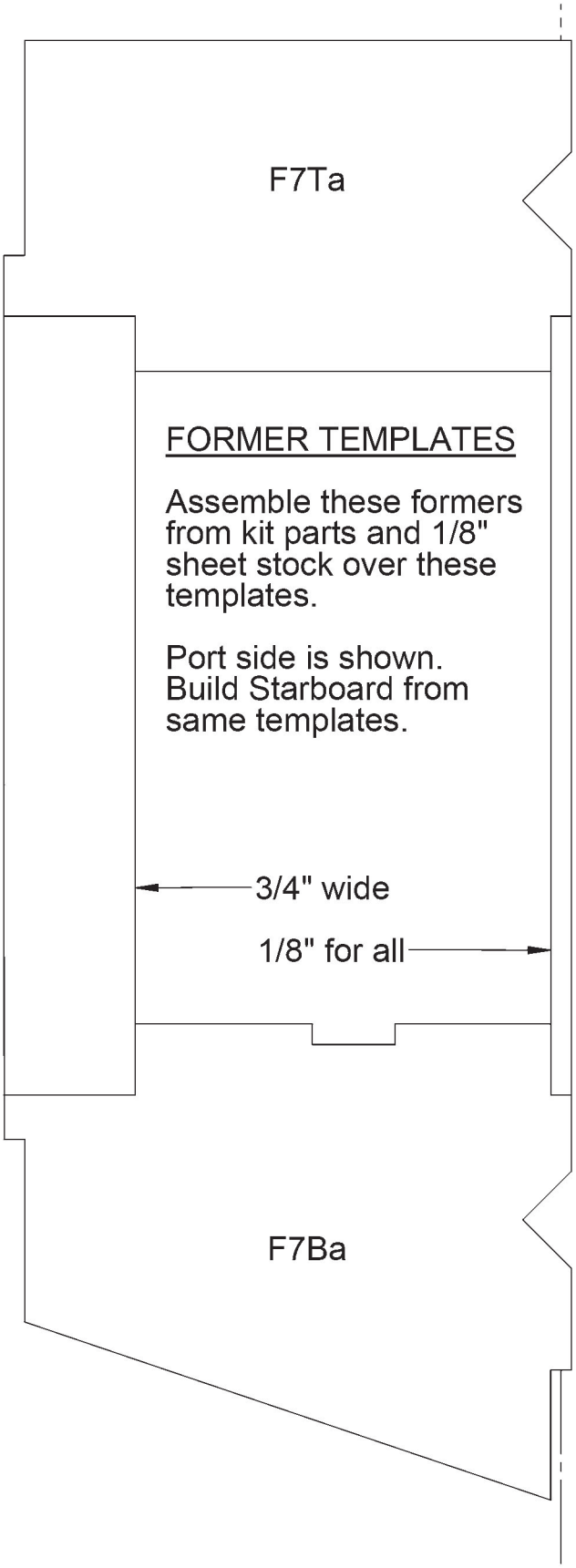


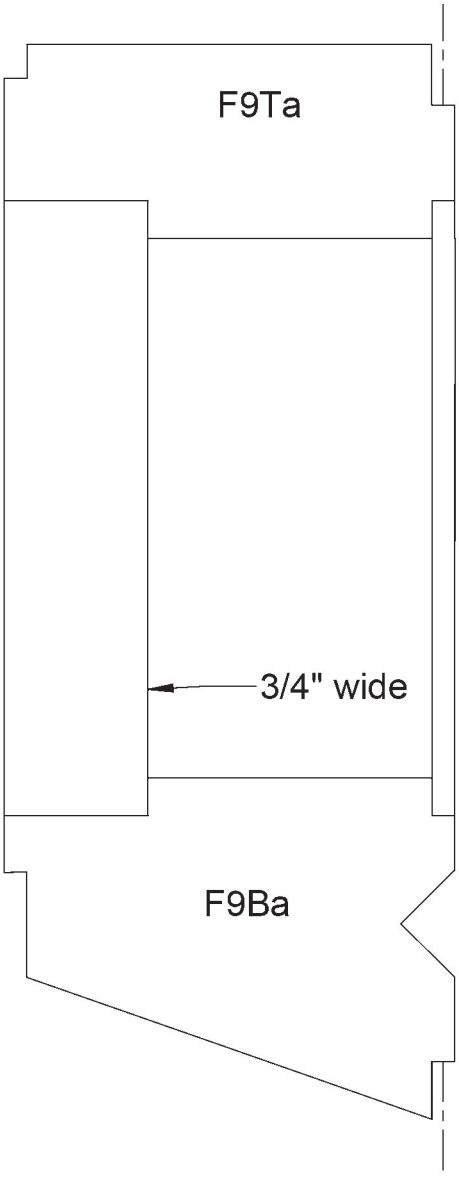
FORMER TEMPLATES

Assemble these formers from kit parts and 1/8" sheet stock over these templates.

Port side is shown. Build Starboard from same templates.

3/4" wide

1/8" for all

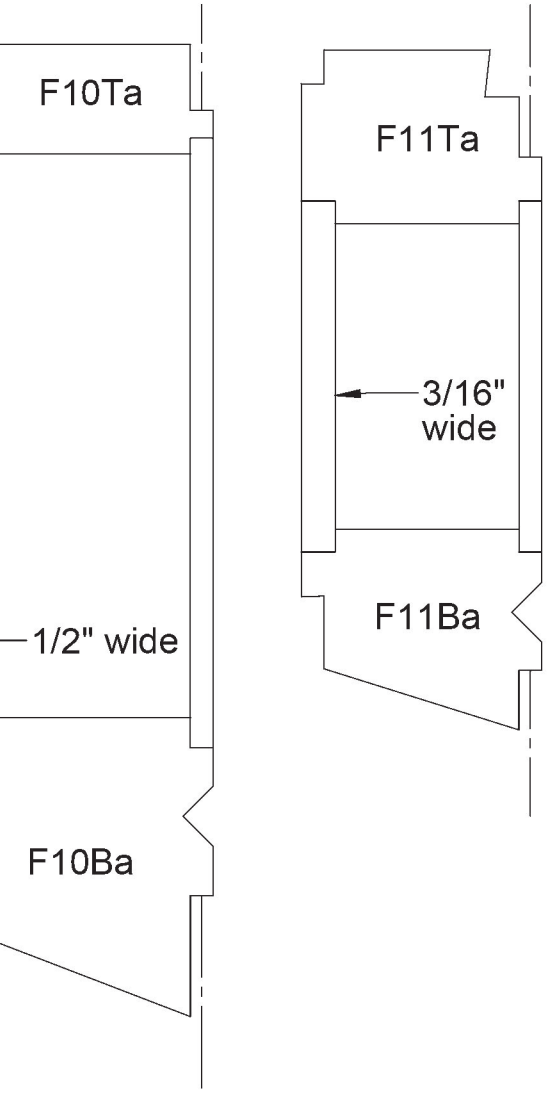


SPINNER:

An STL file for a 3D
is available on Thin

CENTER OF GRAV

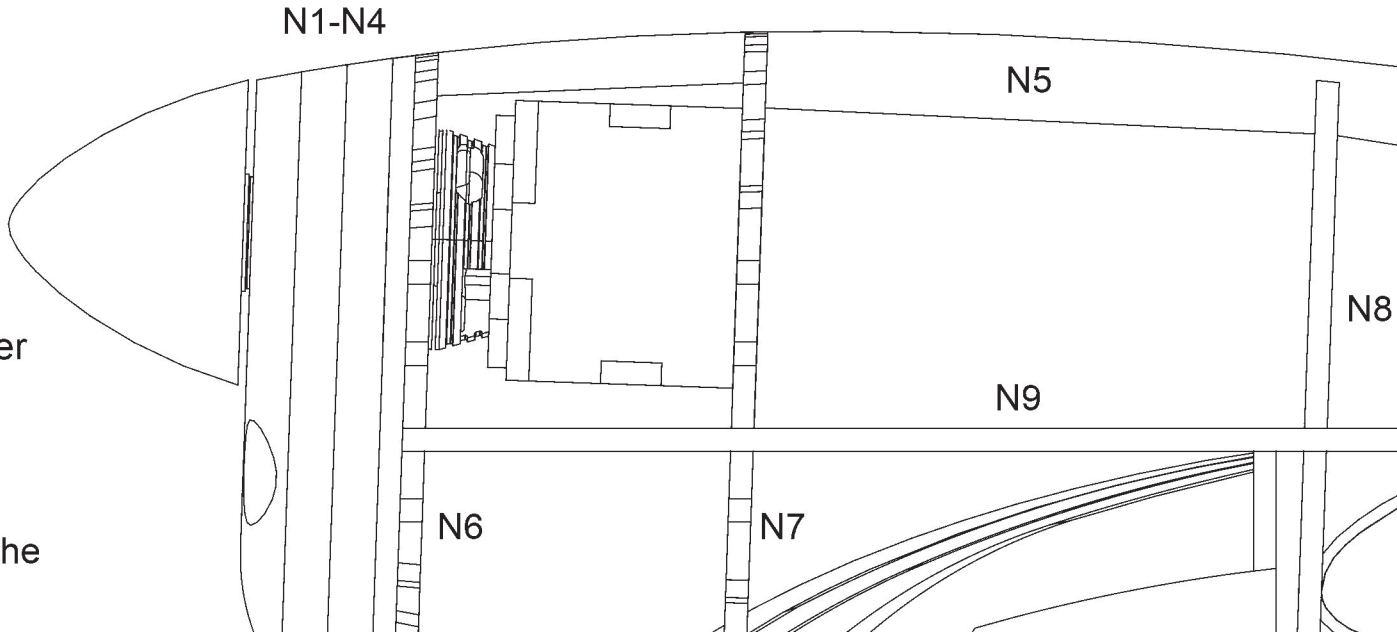
Cg shown is 2 5/8" c
back of former F6-2.
MAC.



FUSELAGE--ASSEMBLY ORDER

Build the port (left) side first--use the "a" former halves.

1. Preassemble Keels K3/4 and K5/6 over the plan.
2. Double ply Formers F6-1 and balsa Formers F6-2 by ma
    1. See Hatch Detail at bottom right.
3. Preassemble Formers F7, F9, F10, and F11 over plan.
4. Keels K1 thru K4--pin these parts flat to the plan.
5. All "a" Former parts--install perpendicular to plan.
6. Keel K5/K6 and Wing Saddle K7--glue into Formers.
7. Rear Stringer--connect the top corners of Formers F8 th 3/16" balsa strip.
8. Hatch Rail K8--glue bottom side to Formers F4, F5, and
9. Hatch Rail K9--glue top side to Hatch Formers F4H, F5, Hatch Detail below).
10. Bracing--add 1/8" square braces diagonally between for
11. Sheet the bottom hull between F1 and F7 with 1/8" bals
12. Sheet the bottom hull from F7 to F10, and from F10 to F
13. Unpin the assembly and check for flatness.
14. Battery Tray--glue to F4 thru F6
15. Repeat assembly steps for the right half of the fuselage- halves.
16. Servo Tray parts ST1 and ST2, and Wing Bolt Pad WB- Servo/Wing Bolt Detail below).
17. Stringers--1/8" x 3/16" balsa strip stock.
    1. Dampen the stringers with water and alternate the side to side to avoid warping the fuselage structure
18. Nose Block--stack and glue parts B1 thru B6 using hole
19. Cabin--see Cabin Detail to right.
20. Fin Fairing--after covering, glue parts F10T and F11T in cardstock or 1/16" balsa to create fairing between fusela



printed spinner
giverse.com.

ITY (Cg)

or 67mm from the
. This is 24%

atching outlines.

hru F12 with a 1/8" x

F6.
and F6H (see Battery

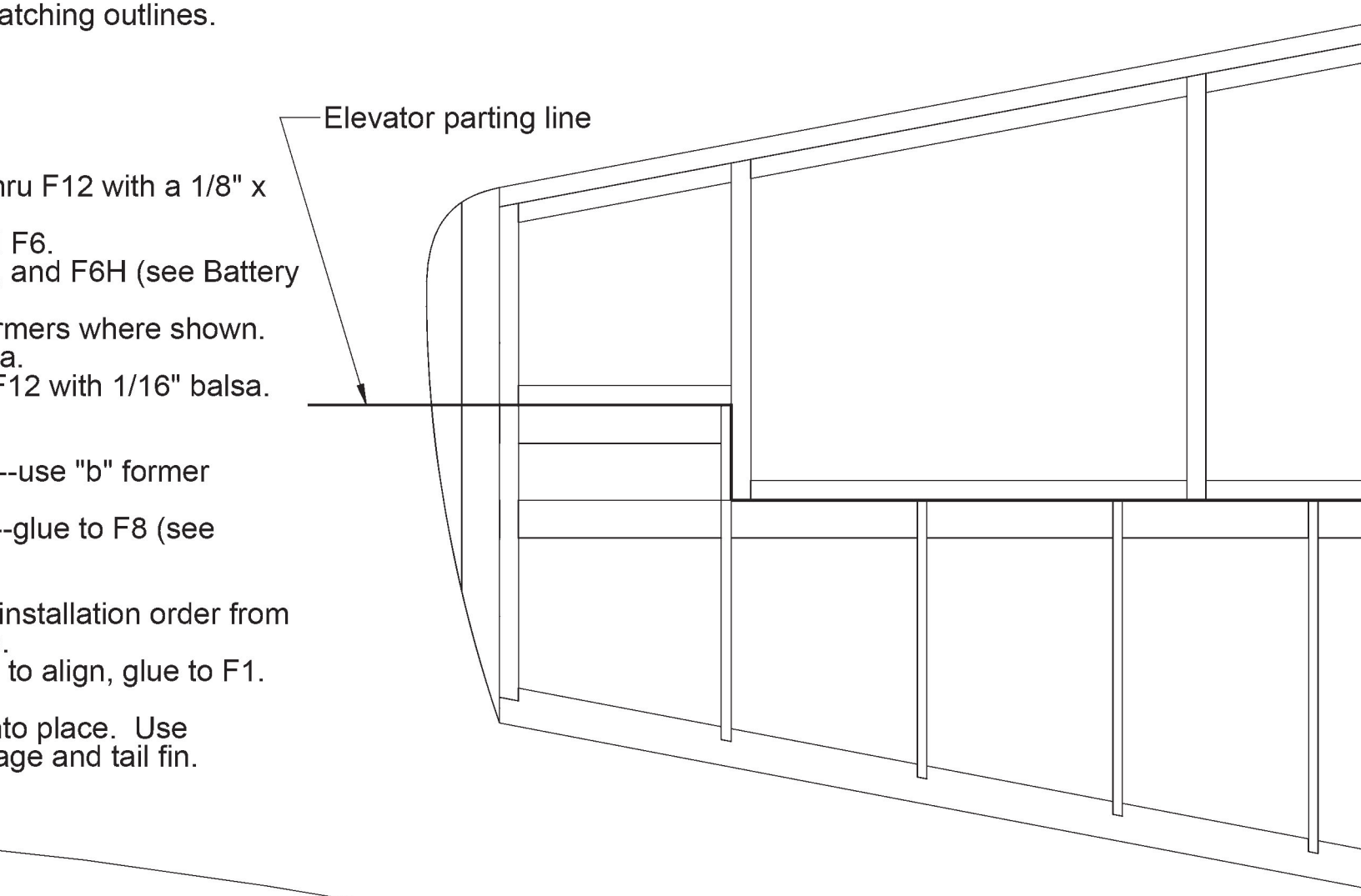
rmers where shown.
a.
F12 with 1/16" balsa.

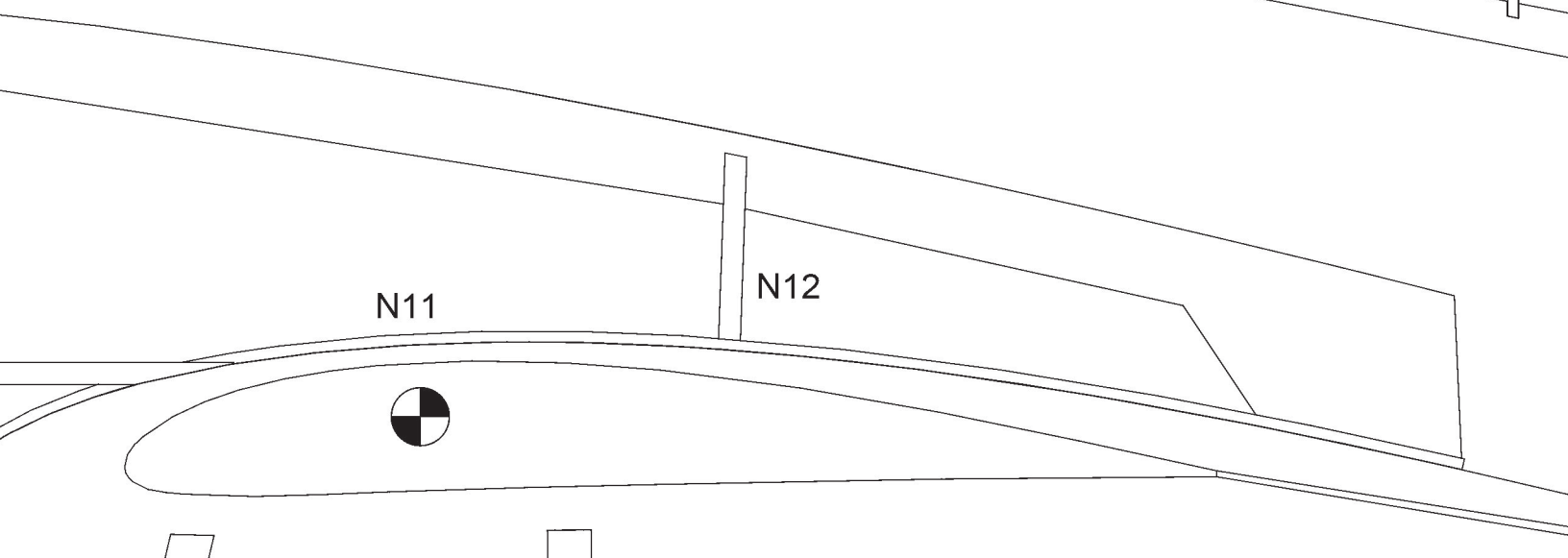
--use "b" former

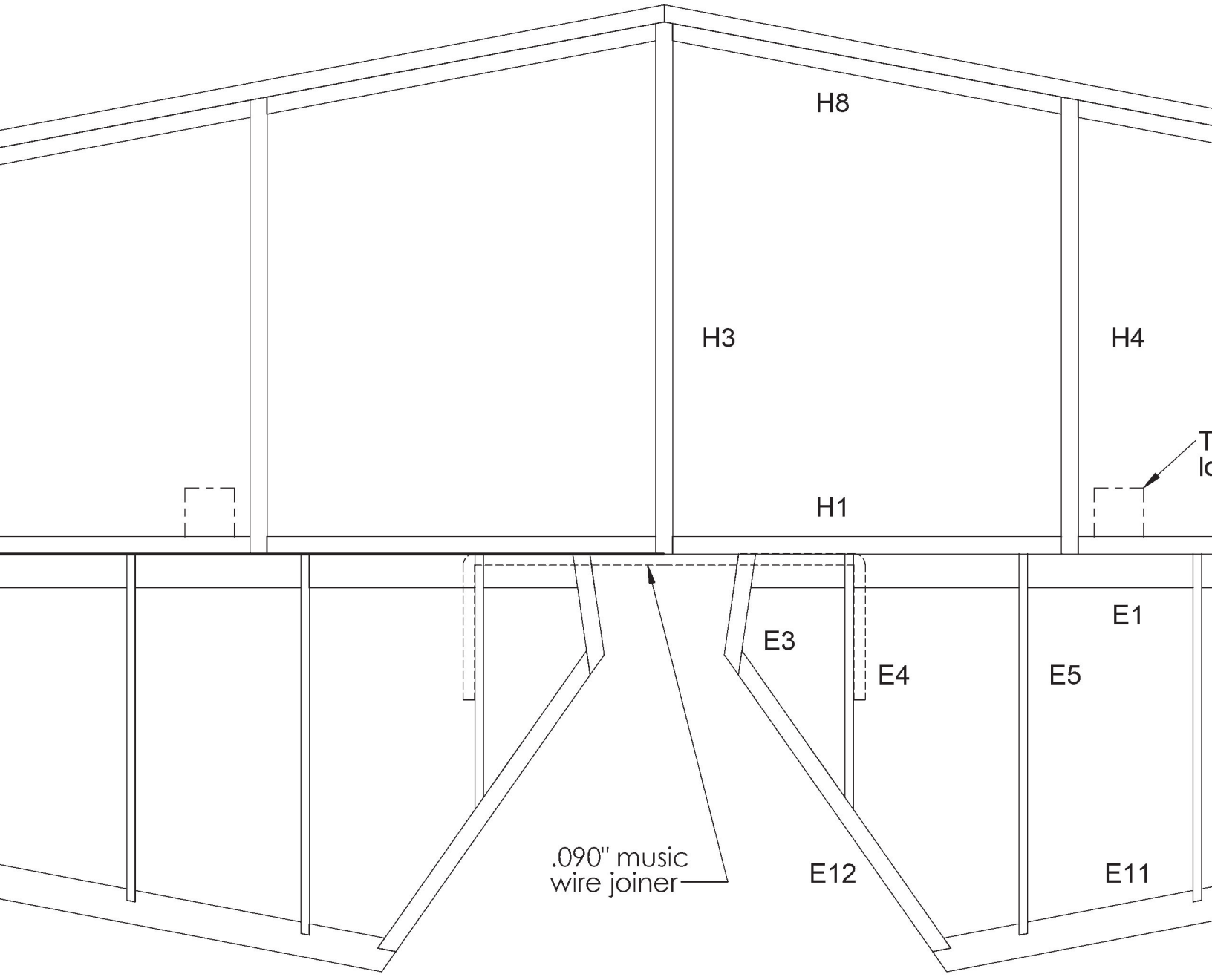
--glue to F8 (see

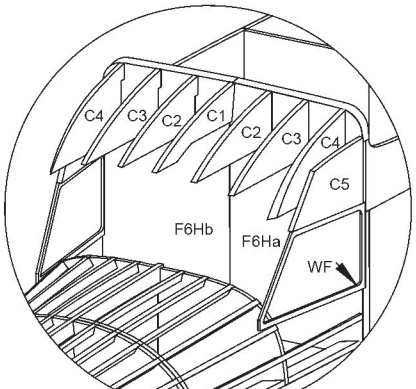
installation order from
.
to align, glue to F1.

to place. Use
age and tail fin.



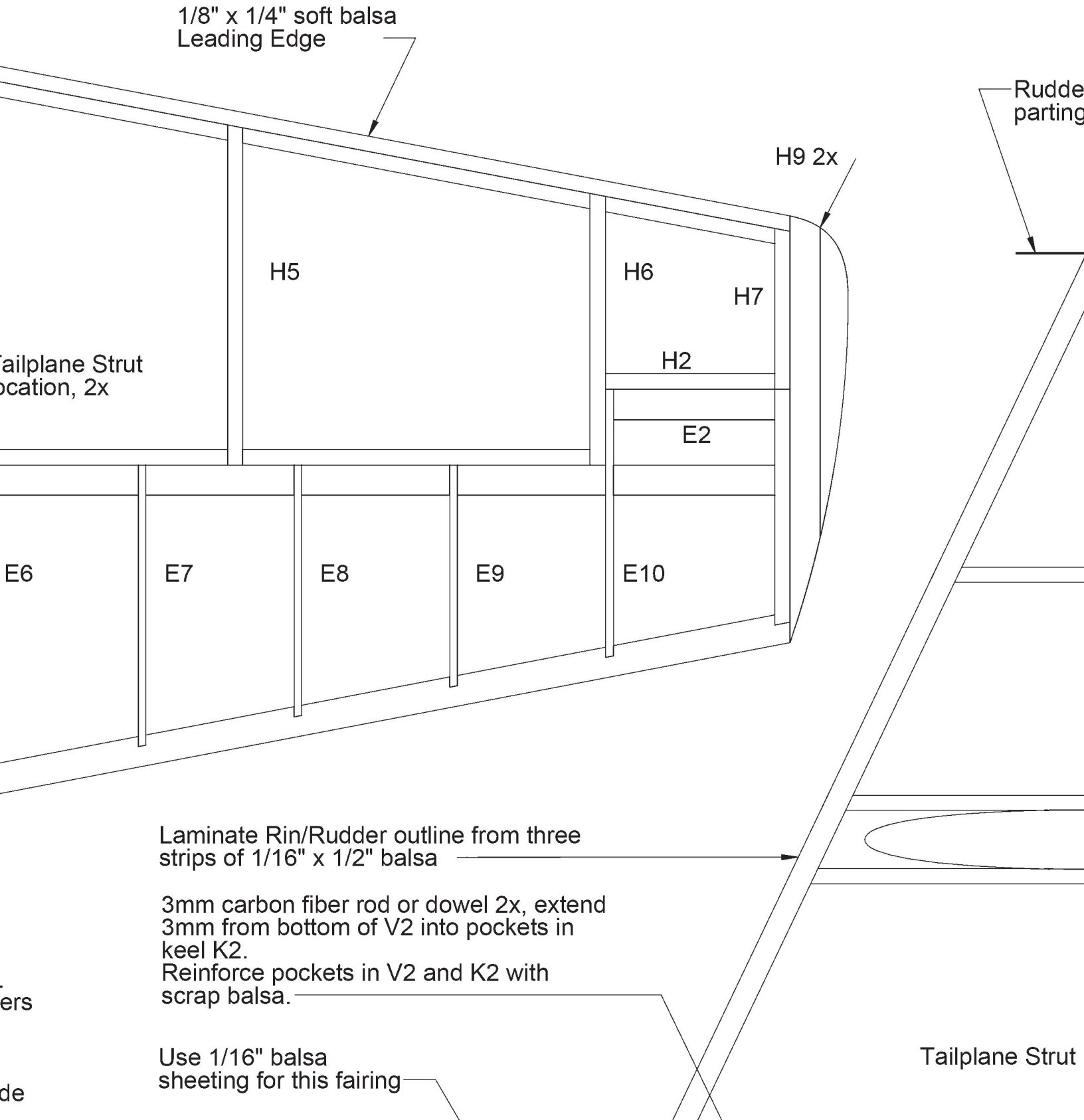


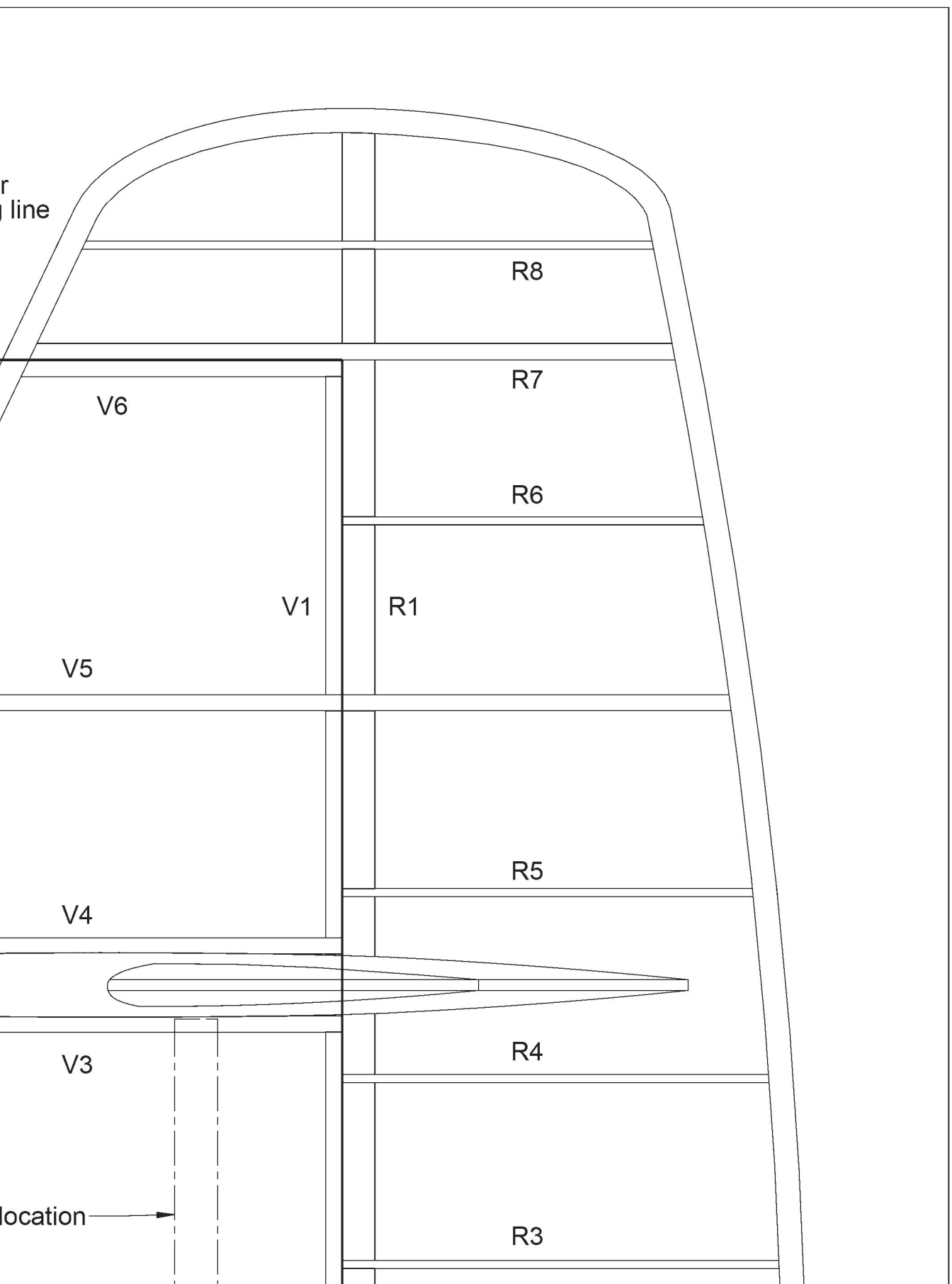




CABIN DETAIL:

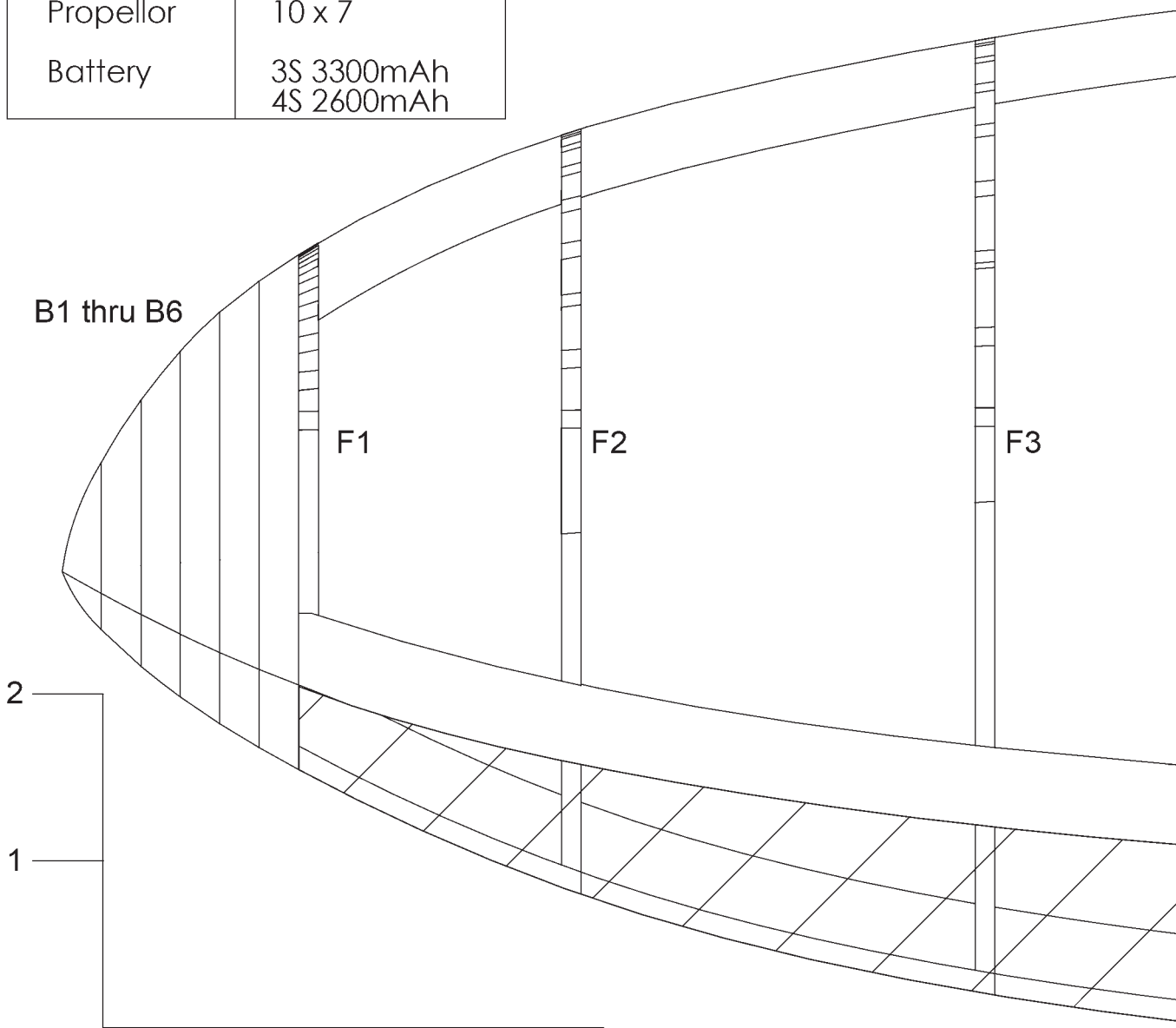
Build the cabin roof after the fuselage is assembled.
Use the detail drawing to the right as a guide
Use scrap balsa between the cabin roof form to create the outline for the windshield.
Attach the Side Window Frames after the fuselage is covered.
The windshield and side windows can be ma from PET sheet


1/8" x 1/4" soft balsa
Leading Edge
Rudde
parting
H9 2x
H5
H6
H7
H2
E2
ailplane Strut
ocation, 2x
E6
E7
E8
E9
E10
Laminate Rin/Rudder outline from three
strips of 1/16" x 1/2" balsa
3mm carbon fiber rod or dowel 2x, extend
3mm from bottom of V2 into pockets in
keel K2.
Reinforce pockets in V2 and K2 with
scrap balsa.
Use 1/16" balsa
sheeting for this fairing
Tailplane Strut

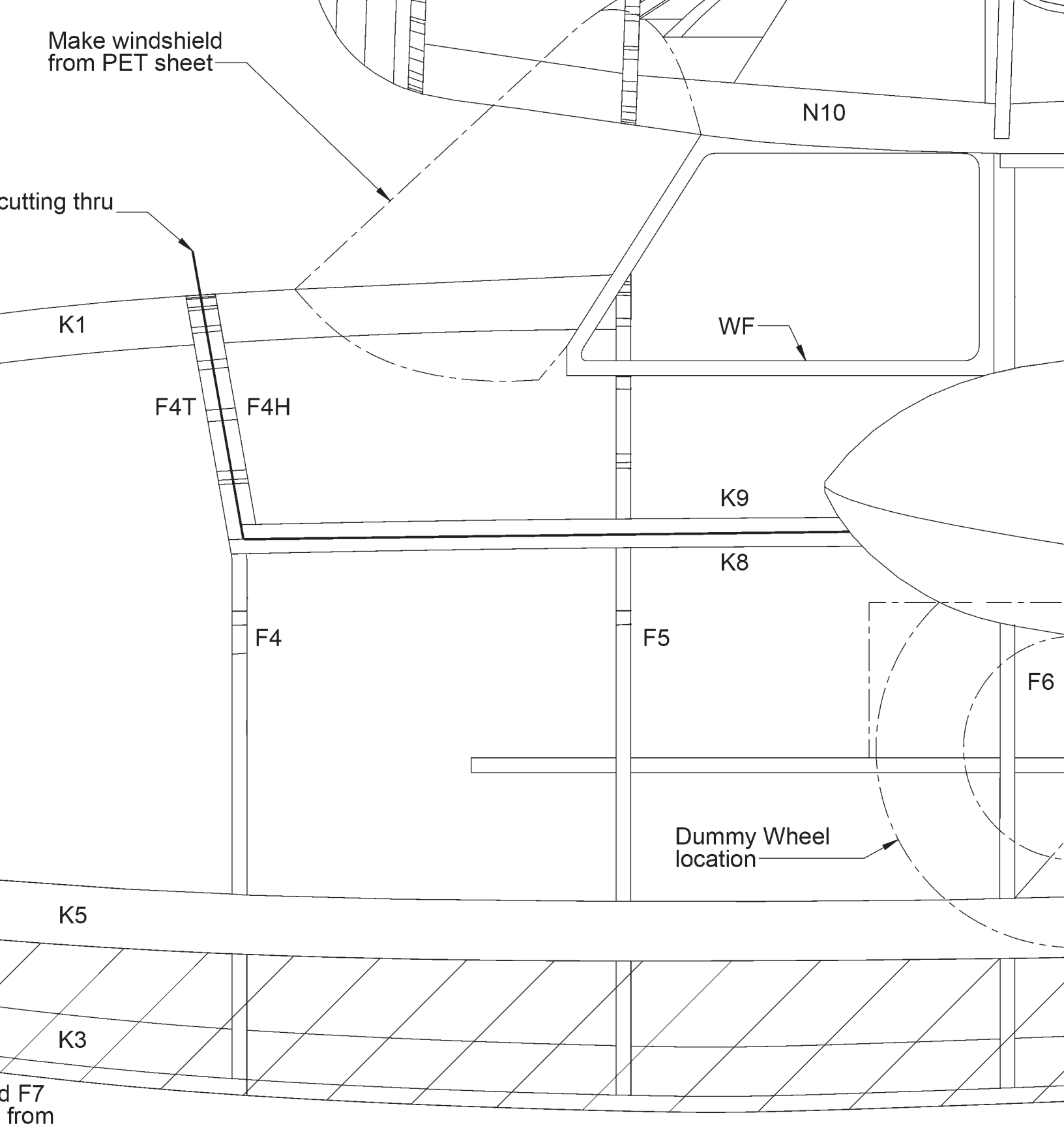

r
line
R8
R7
V6
R6
V1
R1
V5
R5
V4
R4
V3
location
R3

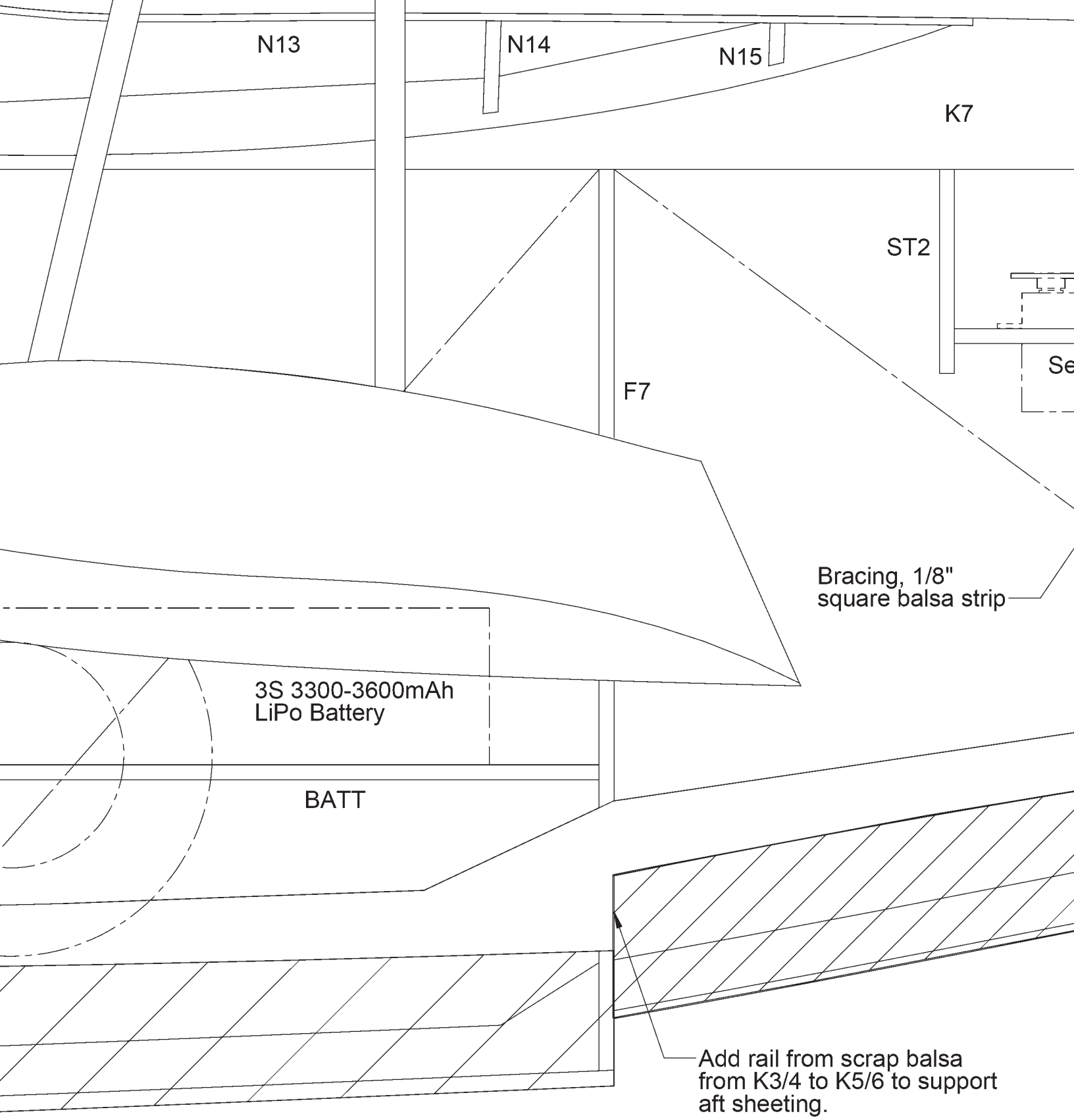
PROTOTYPE SPECIFICATIONS	
Wingspan	60"
Length	46.6"
Weight	56oz
Wing Area	558 sq in
Power	2315-880kV x 2
Propellor	10 x 7
Battery	3S 3300mAh 4S 2600mAh

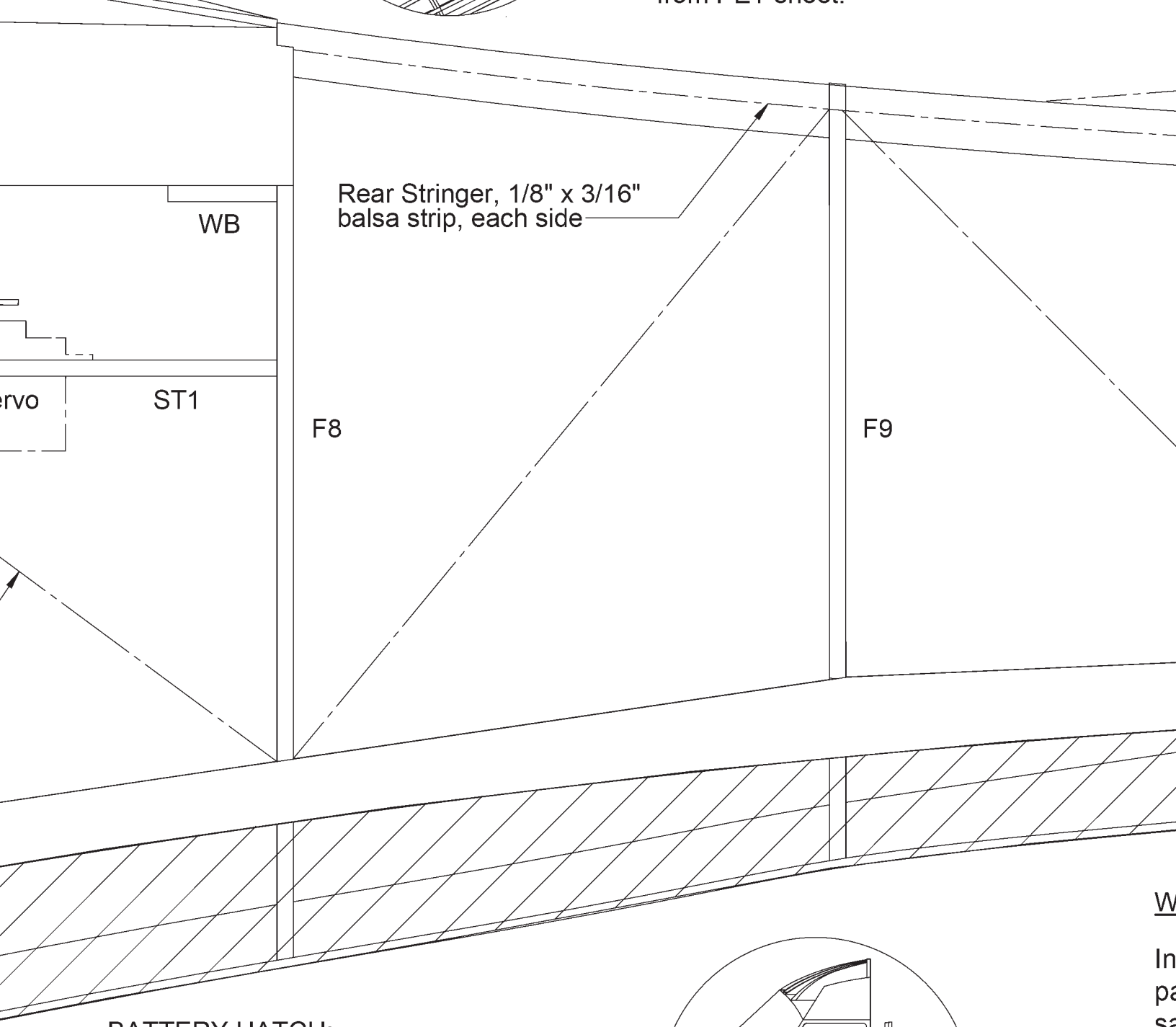
Free hatch by
stringers here



Sheet the shaded area between F1 an
with 1/8" balsa, use 1/16" balsa panels
F7 thru F10 and from F10 thru F12.

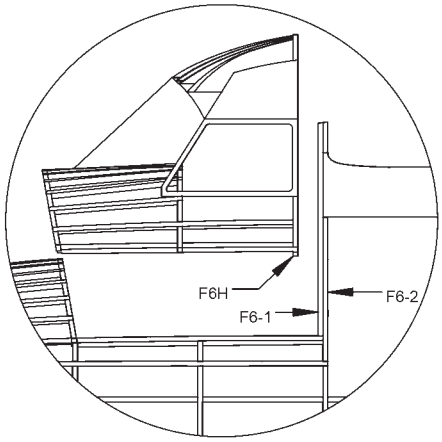

Make windshield
from PET sheet
N10
cutting thru
K1
WF
F4T
F4H
K9
K8
F4
F5
F6
Dummy Wheel
location
K5
K3
d F7
from

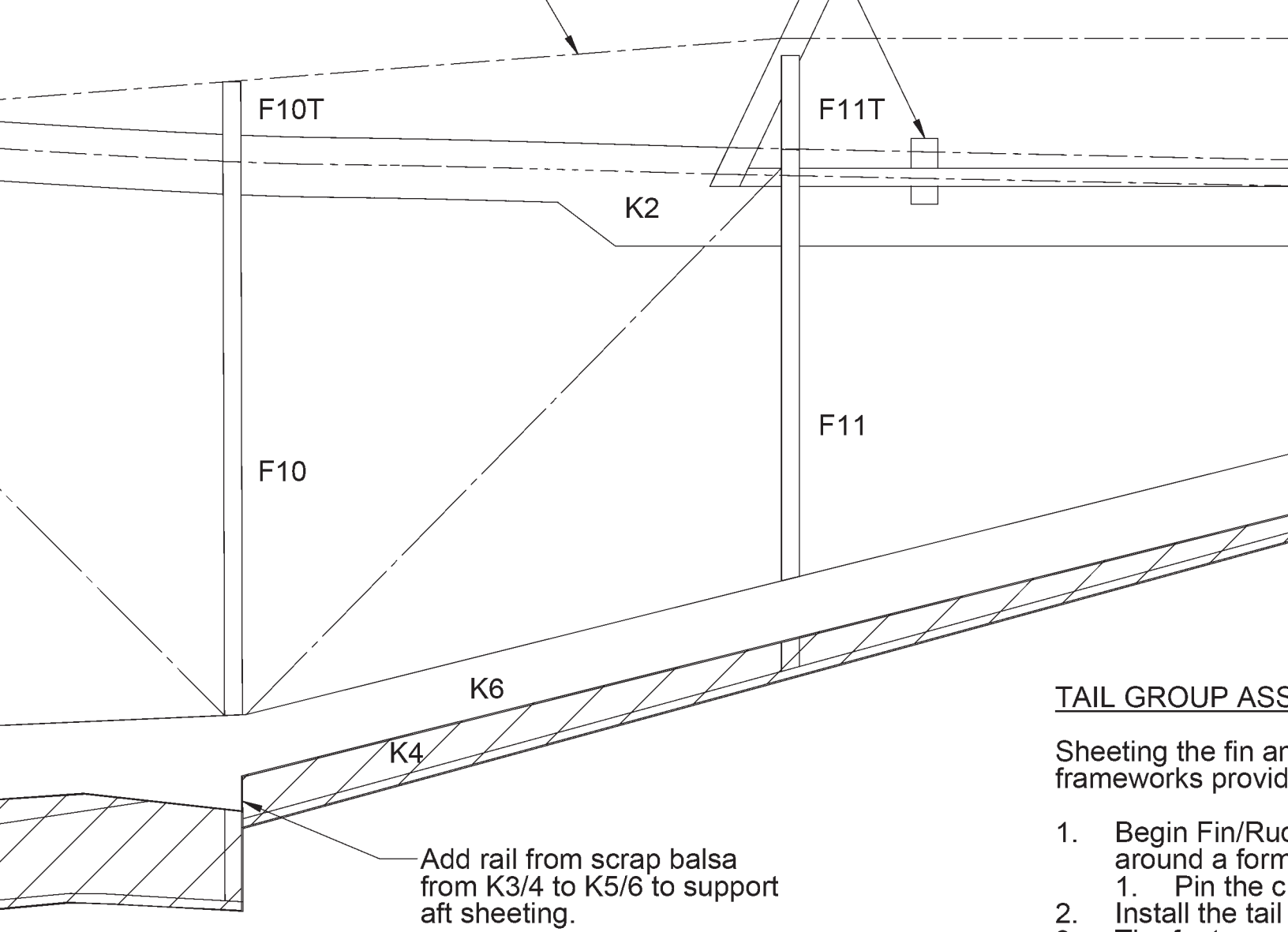

N13
N14
N15
K7
ST2
F7
Bracing, 1/8"
square balsa strip
3S 3300-3600mAh
LiPo Battery
BATT
Add rail from scrap balsa
from K3/4 to K5/6 to support
aft sheeting.



BATTERY HATCH:

After fuselage assembly is complete, cut stringers between Formers F4 and F4H, and between F6H and F6-1.
Carefully remove the cabin/hatch assembly.
Use magnets and a locating pin to attach the hatch to the fuselage.





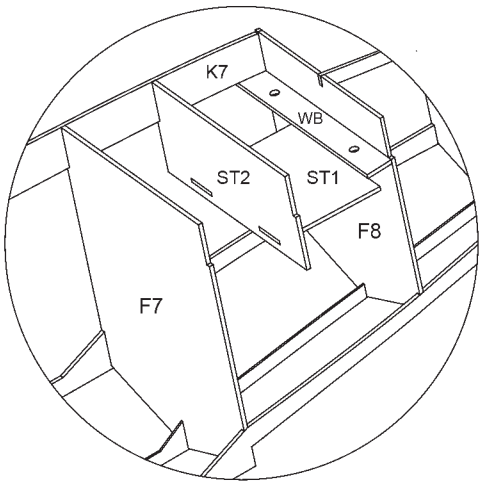
TAIL GROUP ASS

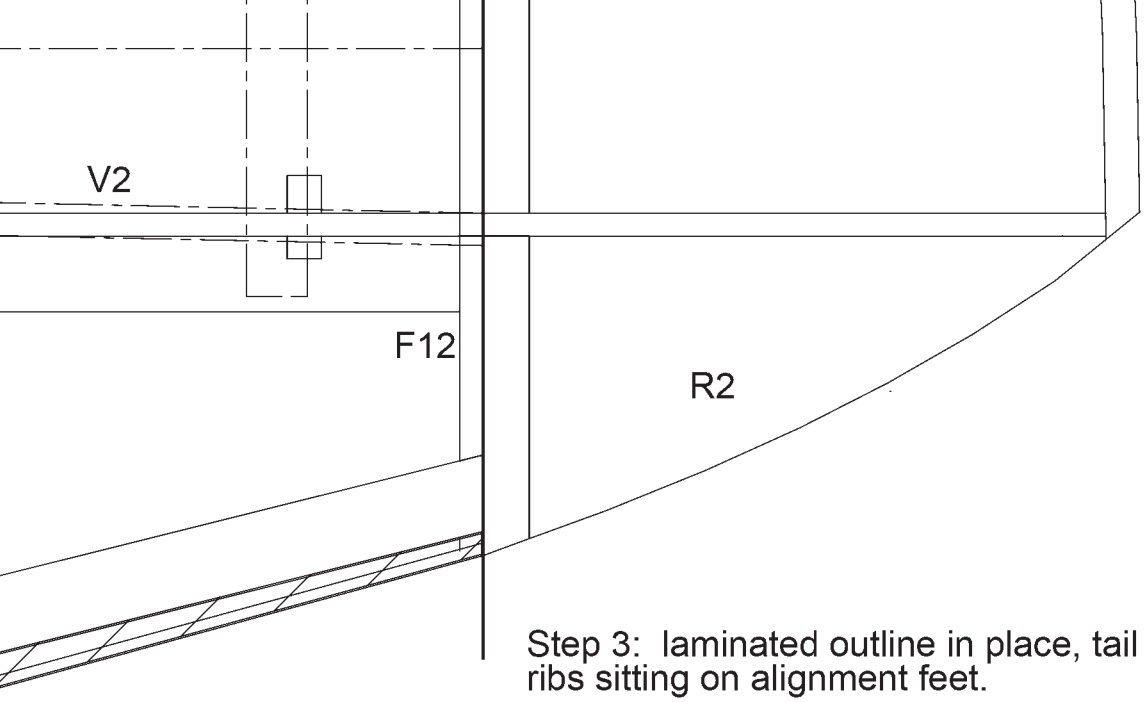
Sheeting the fin ar
frameworks provid

1. Begin Fin/Ruc
   around a form
   1. Pin the c
2. Install the tail
3. The feet on m
   square agains
   1. Additiona
      the board
      until the
4. After the asse
   completed, se
   the Fin and the
   Hstab by cuttin
   where shown
5. Sheet the upp
   Hstab with 1/1
   pinned flat to t
6. Unpin and rem
   from the botto
7. Sheet the lowe
8. Sand to shape

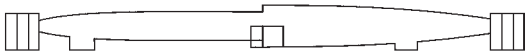
INGBOLT PLATE AND SERVO TRAY:

stall the Wingbolt Plate WB and Servo Tray
arts after the formers, keels, and wing
addles are all in place (one Saddle deleted in
set drawing for clarity).
lue ST1 to Former F8, and then ST2 to ST1
nd Saddles.
lue WB to F8 using notches to position; glue
B to Saddles
poxy nylon 1/4" x 20 nuts to the underside of
B to capture the Wingbolt Screws.

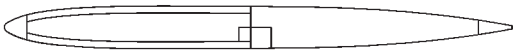




Step 3: laminated outline in place, tail group ribs sitting on alignment feet.



Step 7: alignment feet removed, sheeting in place, sanded to shape.



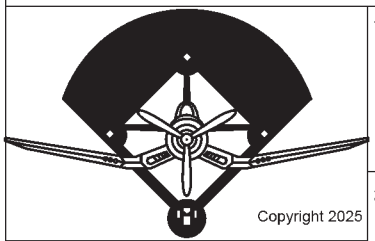
SEMBLY

nd horizontal stabilizer and covering the rudder and elevators as open
es durability with a scale appearance.

dder assembly by laminating their outline from three strips of 1/16" x 1/2" balsa
.
ured outlines into place over the plan.
group framework parts in numerical order.
any of these parts will hold the parts at the correct angles when the feet are
t the board.
lly, all of the Fin "V" and Hstab "H" parts have feet that lift them 1/16" up from
--this will hold them in the correct position relative to the Rudder and Elevators
Fin and Hstab are sheeted.
mbly has been
parate the Rudder from
e Elevators from the
ng through the outlines
on the plan.
er side of the Fin and
6" balsa while they are
he board.
nove the support feet
m of the tail group parts.
er Fin and Hstab.
e and install hinges.

Plans No. 1150

INFIELD ENGINEERINGtm **by Paul Kohlmann**



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Title

60" Grumman Widgeon

Size	Dwg. No.	Rev
X	G44 Widgeon.sldrw	B

Scale: 1:1	Weight: 56-60oz	Sheet 1 of 4