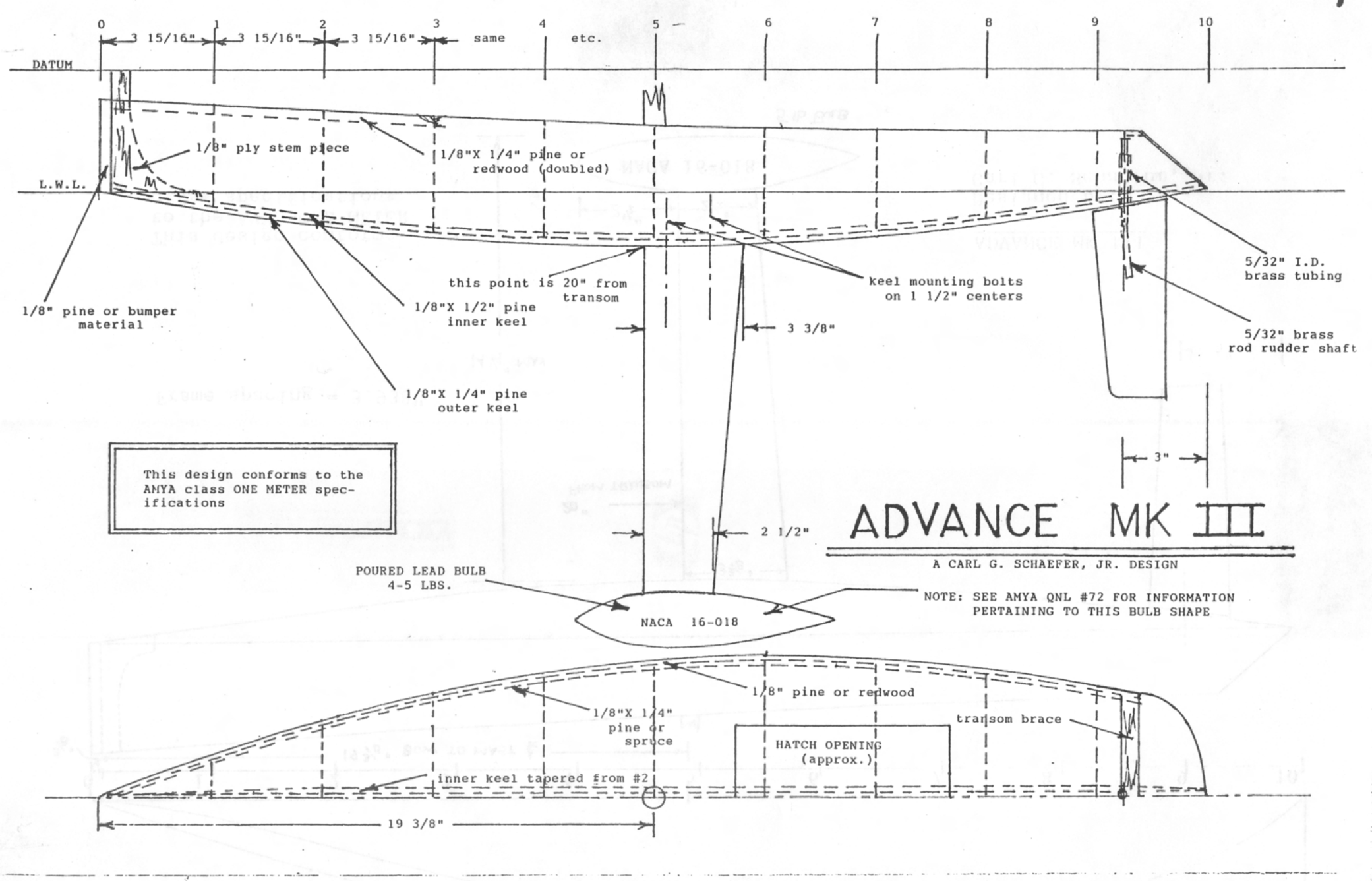
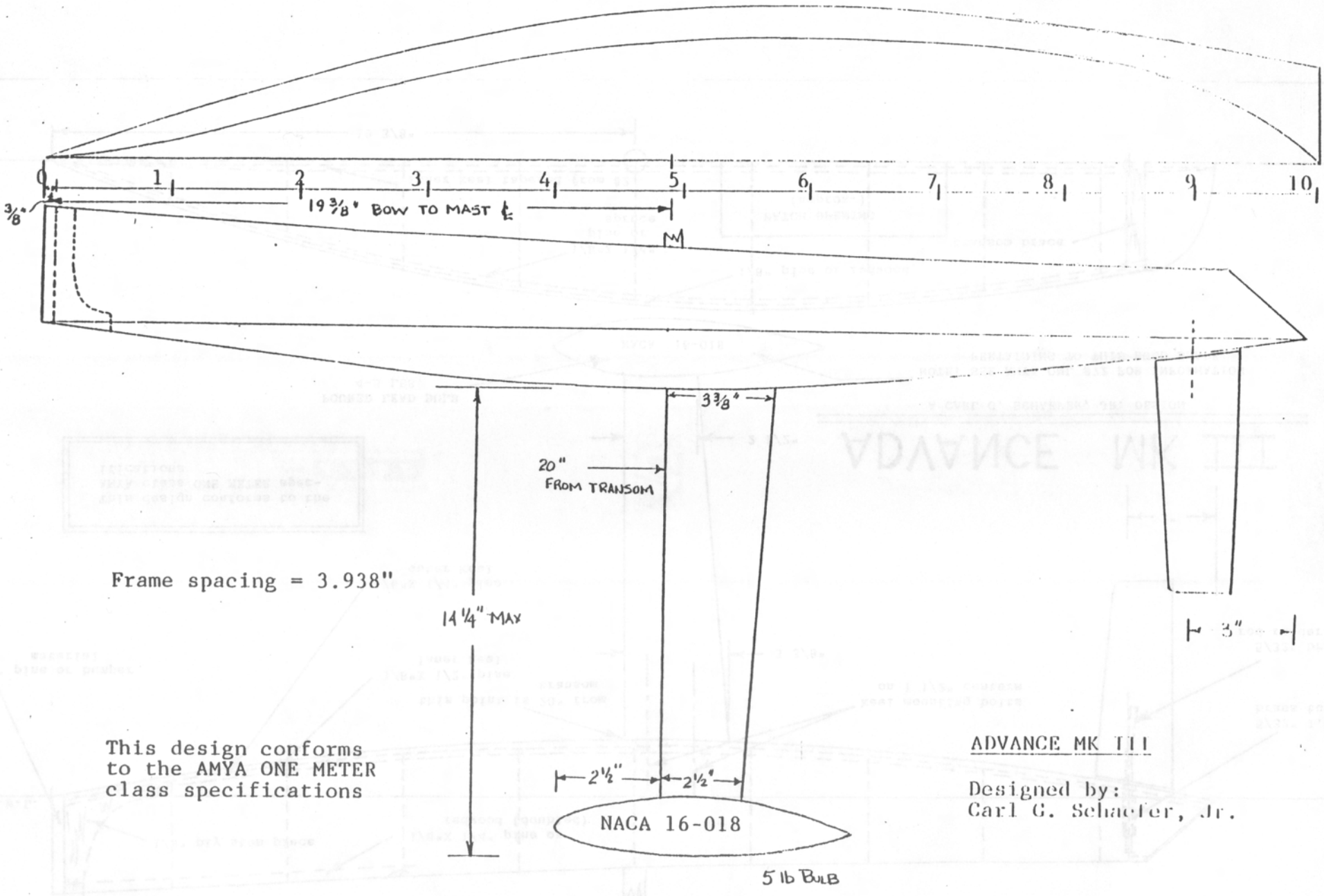



This design conforms to the AMYA class ONE METER specifications

# ADVANCE MK III

A CARL G. SCHAEFER, JR. DESIGN




Frame spacing = 3.938"

This design conforms to the AMYA ONE METER class specifications

ADVANCE MK III

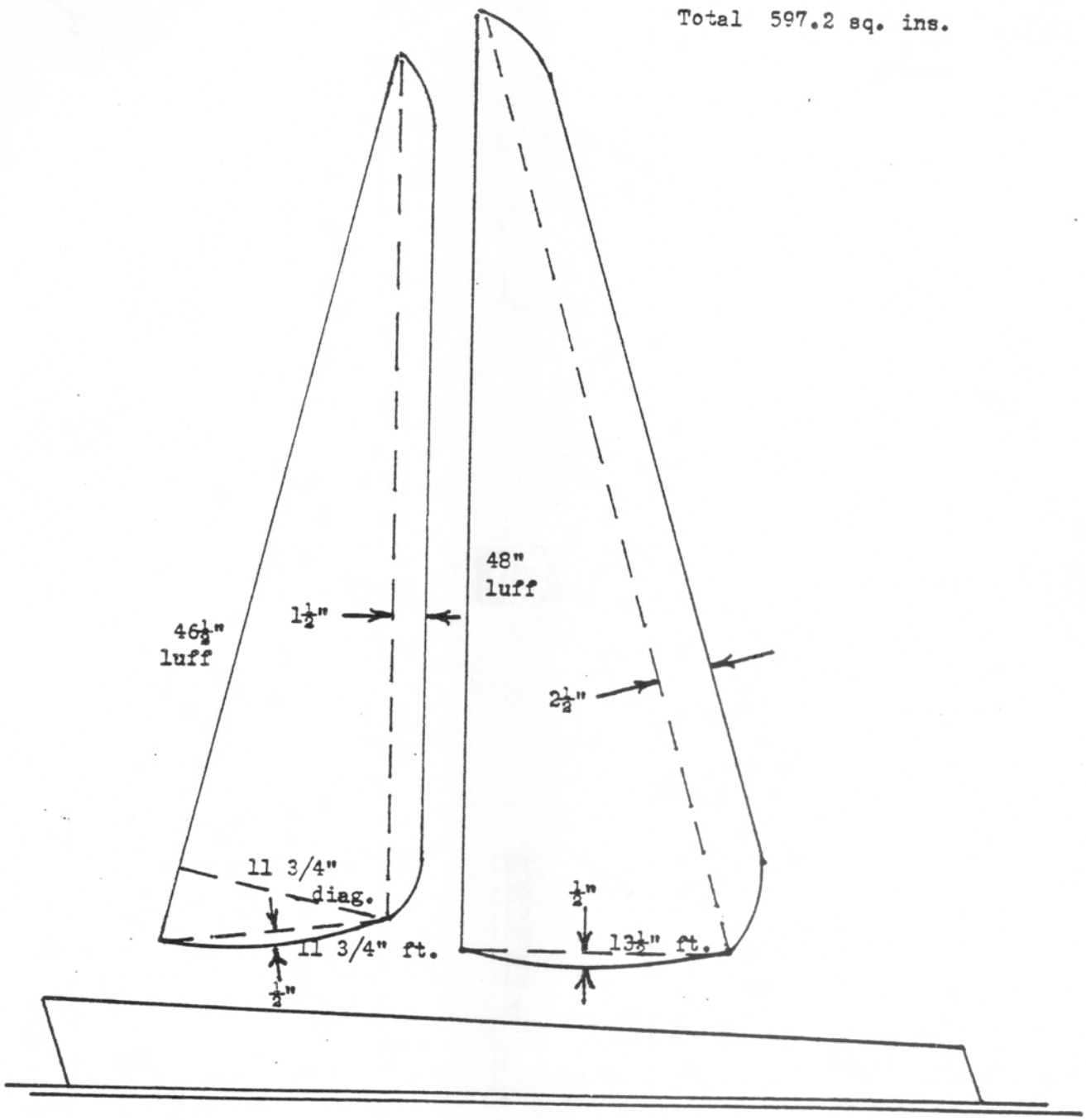
Designed by:
Carl G. Schaefer, Jr.

ONE METER CLASS

Suggested sail plan.

Main 324 sq. ins.
Jib 273.2 sq. ins.

Total 597.2 sq. ins.



# ADVANCE Mk III

Many thanks to Carl G. Schaefer, Jr. for this design. Build it! It's sure to be a winner.

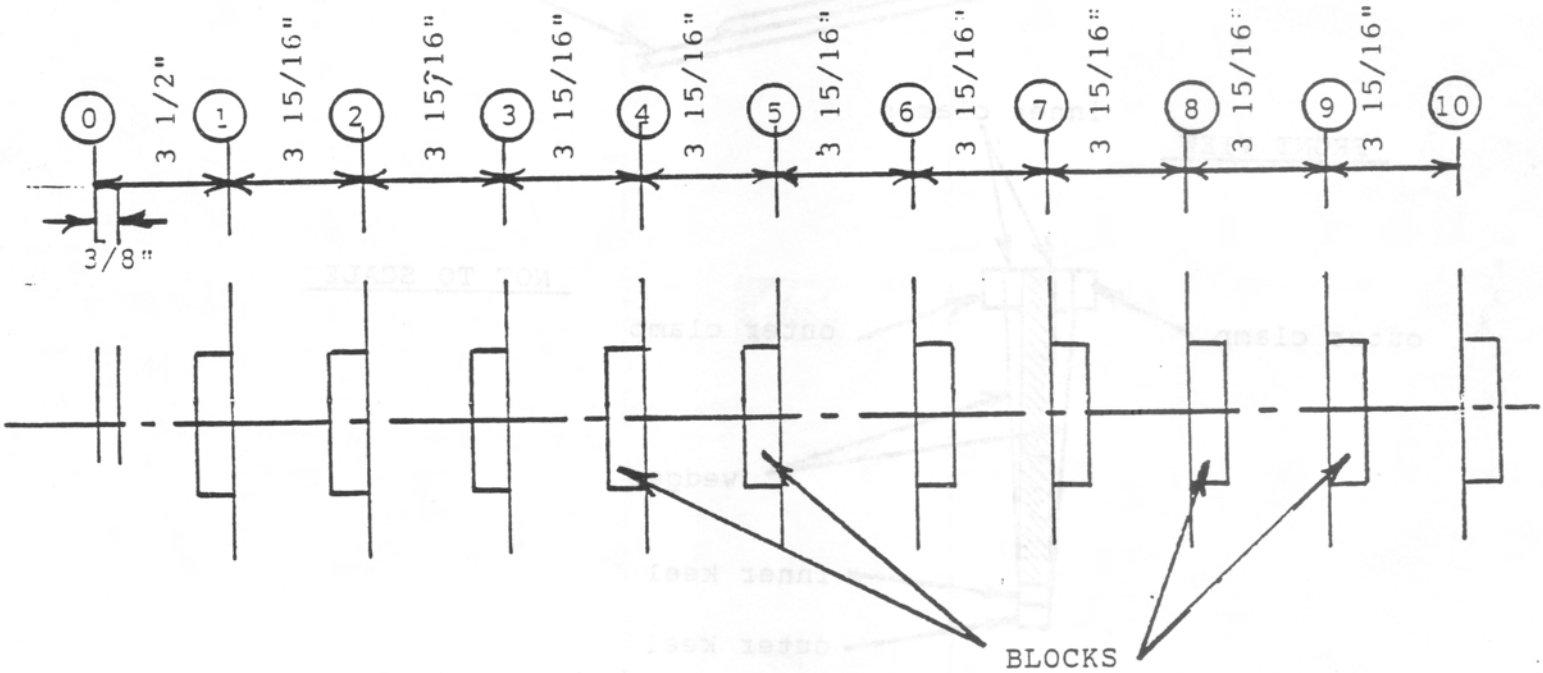
Here's an easy way to build a planked hull. You should have little difficulty in turning out an excellent finished product.

I use a "warp-free" piece of 5/8"X 12"X 48" particle board shelving for a building board.

Cover one side of board with shelf paper. Use masking tape to hold.

Draw centerline on board.

Draw station lines at right angles to centerline. See plan for spacing.



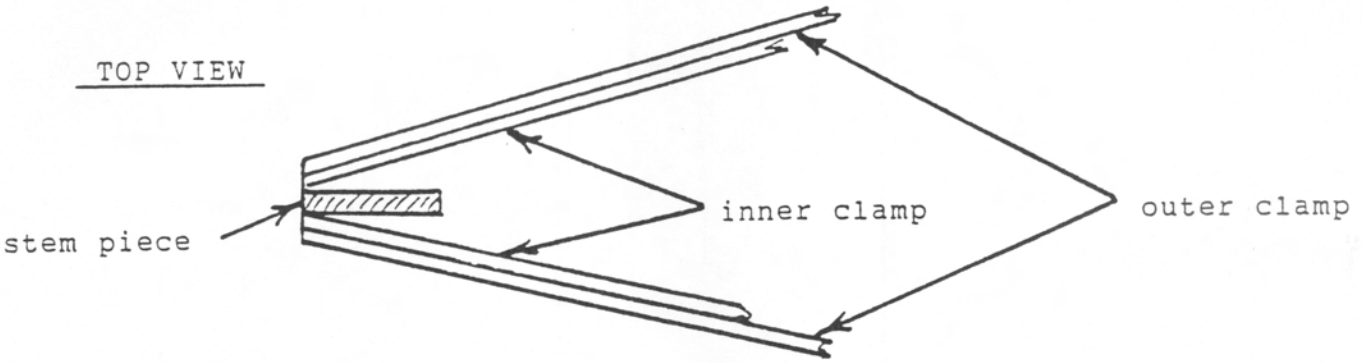

Lightly nail small scrapwood blocks (3/4"X 3/4"X ?) to board at station lines. Note that blocks are placed in front of station lines #1-#5 and behind station lines #6-#10. Do not drive nails "home". They will be removed later.

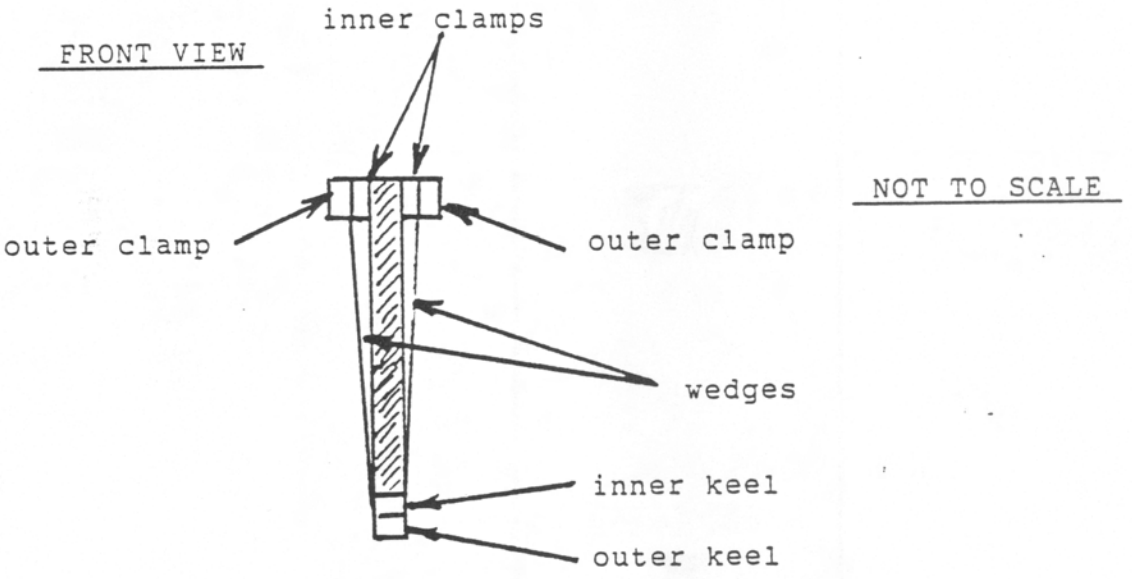
Trace frame patterns on 1/8" plywood or other thin scrap stock. I use mahogany "doorskin" or untempered hardboard. They are relatively inexpensive. These frames will be discarded later. Remember, trace the half frame, reverse the pattern for the other half. Be sure to include the centerline. Cut out frames. Glue frames to blocks on building board. Use 5 Minute epoxy or hot glue. Use a small gauge or square to make sure frames are perpendicular to building board. The centerline on frame must line up with centerline on board! Glue plywood stem piece in place. Inner keel is tapered from station #2 forward to the bow. Also, taper inner keel aft from frame #9. Glue keel in notches in frames.

These glue joints will be broken later so use glue sparingly.

Install outer keel at this time.

Fit and glue inner sheer clamps in place. These fit in the notches in the frames at the point that will be the deck edge. The inner clamps are glued to the stem piece as shown.



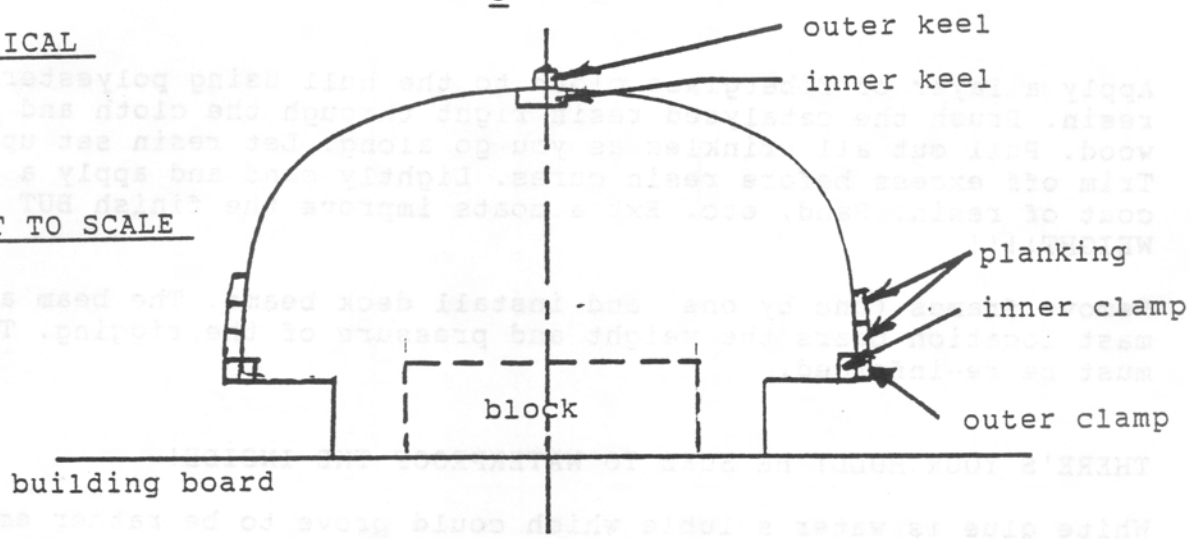




Make 1/8" thick wedges from scrap pine to fit on either side of stem piece. Glue in place. Use clamp clothes pins, pins, masking tape and/or rubber bands to hold parts in place while glue is setting. 5 Minute epoxy works well.

Plane or sand inner keel to conform to the curvature of frames in the bow and transom areas.

TYPICAL

NOT TO SCALE




The hull is planked with 1/8"X 5/16" (approximate) X 48" balsawood strips. An inexpensive balsa stripper is a must. Use 1/8" balsa sheet which is cheaper than the ready cut strips. Use white or carpenter's glue. Some builders have had excellent results using gap-filling cyano-acrylate gue.

Apply a glue bead along one edge of a balsa strip (plank). Apply a drop of glue to the stem piece where plank will be located and also at the transom or last frame. Place the strip (plank) on top of the clamp. Hold in place with pins (dressmaker's or "T") driven through the plank and into the frame. Masking tape also works well. The pins will be removed when glue has set so don't drive them too far into the frames. Repeat for the other side. Apply planks to both sides of hull alternately. This prevents the hull becoming twisted.

Continue planking until planks will not follow the bend without breaking. You will have to bevel the edges of the planks to prevent wide gaps from forming between planks. Use a small block plane or sandpaper-block for beveling. Start laying planks from the keel. It's a good idea to lay short pieces of pine or spruce along the keel in the fin area. This re-inforces the area and makes a sturdy mounting area for the fin.

When the hull is completely planked, fill all holes, gaps and "dings" with a mixture of balsa dust and glue (or your favorite method).

Remove hull from building board. A long handled screwdriver inserted under the blocks will pry them up easily (?).

Trim and true the bow with a sandpaper block. Glue the bow block in place. Sand hull with progressively finer grades of sandpaper. Use a sanding block!! Sand from keel to sheer clamp using strokes at a 45 degree angle to the planking.

The transom can be trimmed and finished now.

IMPORTANT !!! BE SURE THE OVER-ALL LENGTH IS UNDER 39 3/8" MEASURED PARALLEL TO THE WATERLINE.

Check specification sheet.

Apply a layer of fiberglass cloth to the hull using polyester or epoxy resin. Brush the catalyzed resin right through the cloth and into the wood. Pull out all wrinkles as you go along. Let resin set up slightly. Trim off excess before resin cures. Lightly sand and apply a second coat of resin. Sand, etc. Extra coats improve the finish BUT ADD WEIGHT!!!!

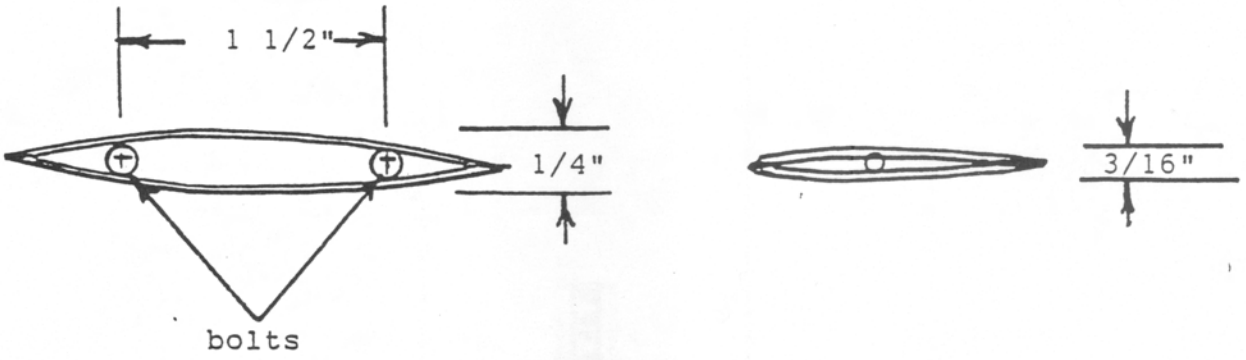
Remove frames (one by one) and install deck beams. The beam at the mast location bears the weight and pressure of the rigging. This beam must be re-inforced.

THERE'S YOUR HULL! BE SURE TO WATERPROOF THE INSIDE!

White glue is water soluble which could prove to be rather embarrassing while sailing.

The fin and rudder are extremely thin in cross section. (See below) A plan for making a "jig" may be found in the ONE METER BUILDING INSTRUCTIONS.

The fin mounting bolts are on 1 1/2" centers. The bolts may have to be filed or ground to fit inside the keel blade. The maximum thickness of fin (outside dimension) is 1/4". The maximum thicknrdd of rudder (outside dimension) is 3/16".

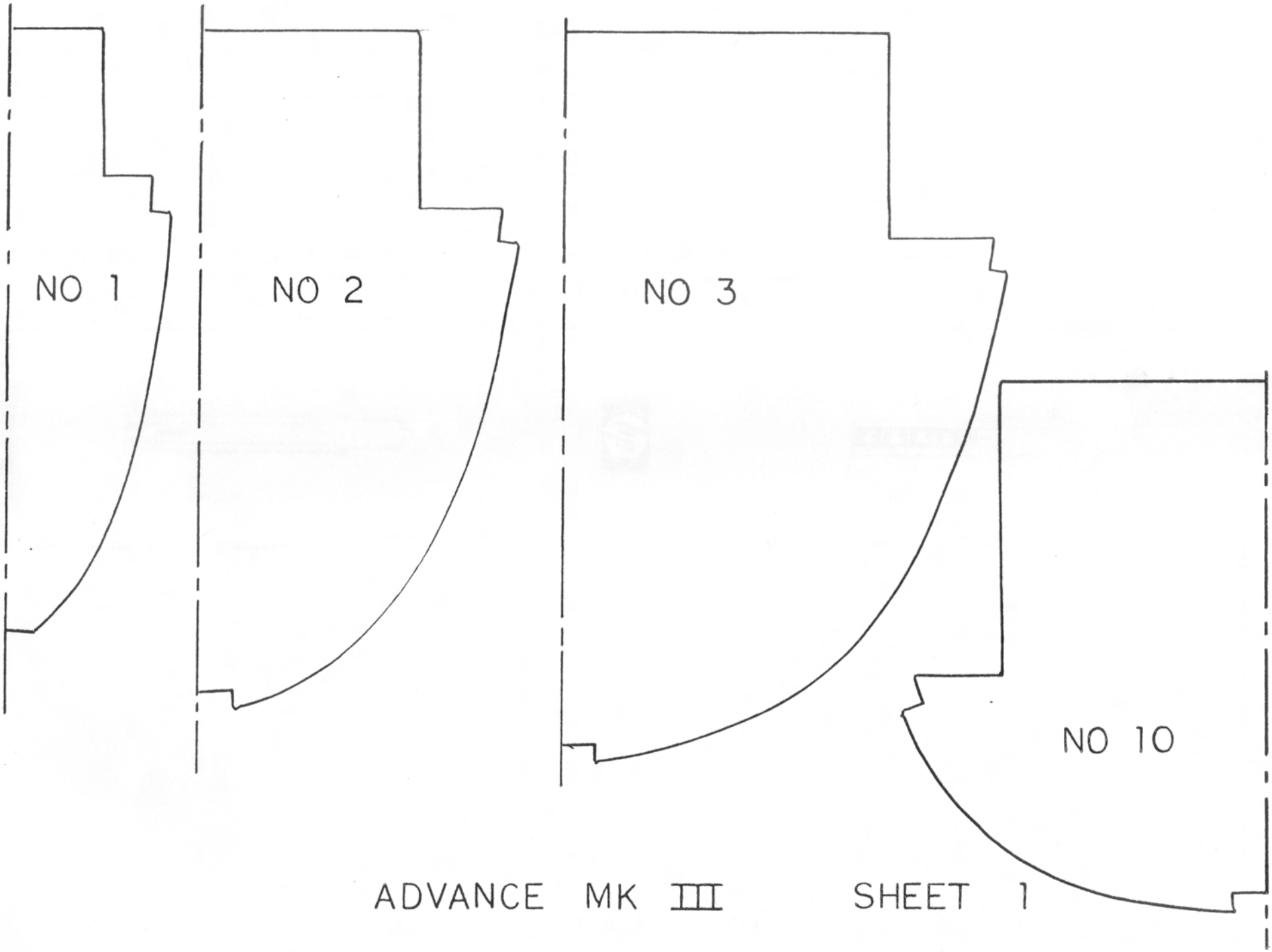



NOT TO SCALE

FIN

RUDDER

The deck,mast, sails, etc. are up to you. See ONE METER BUILDING INSTRUCTIONS for suggestions.

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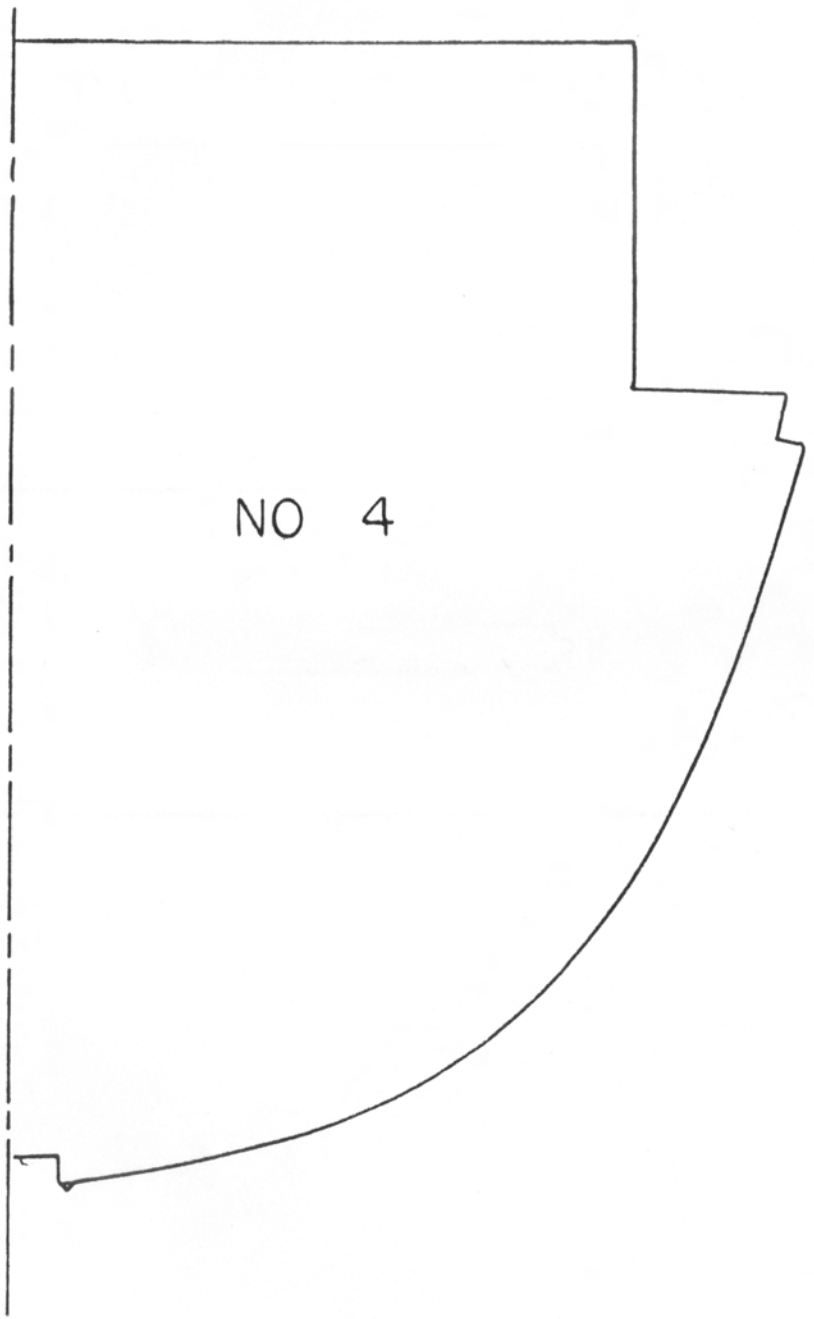


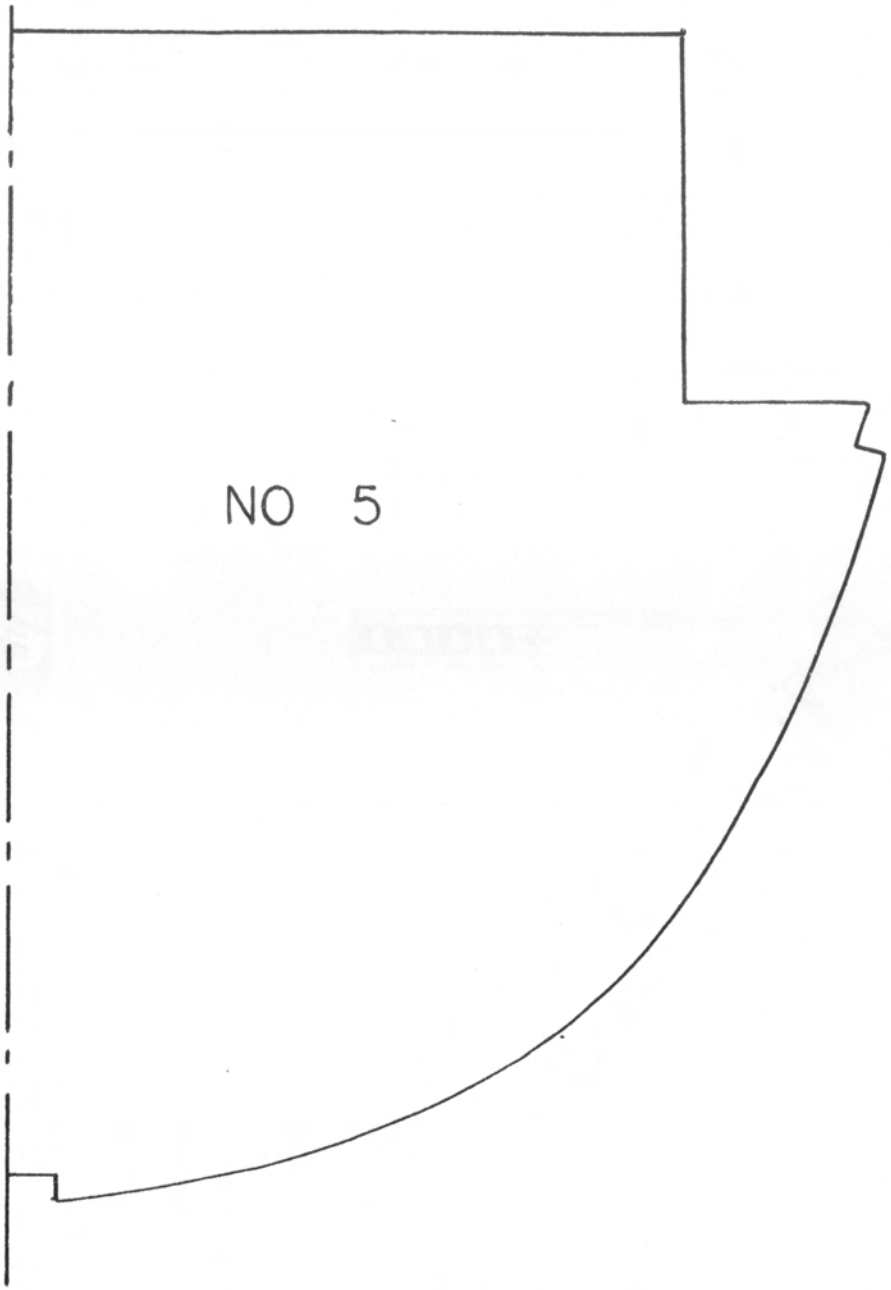


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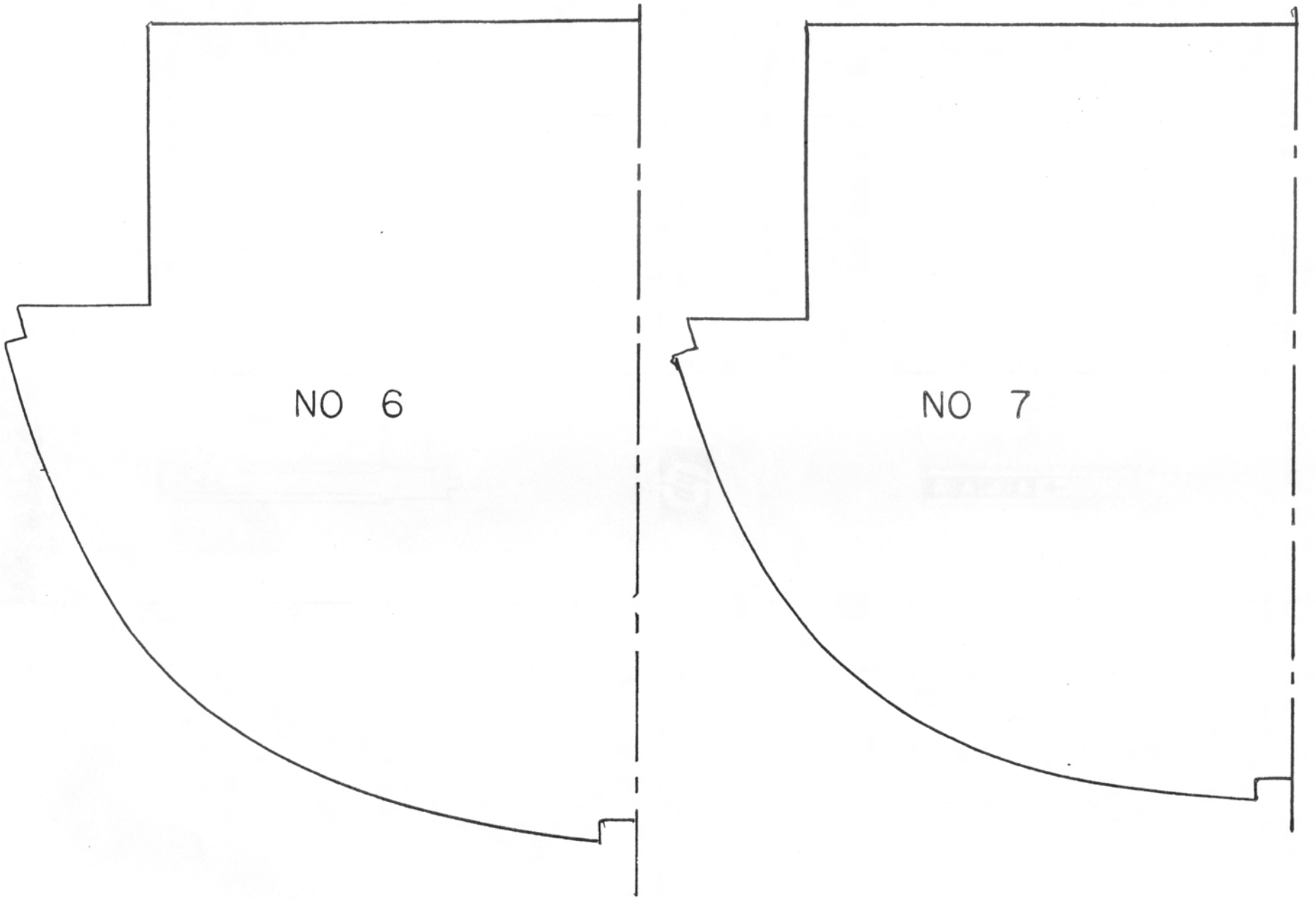


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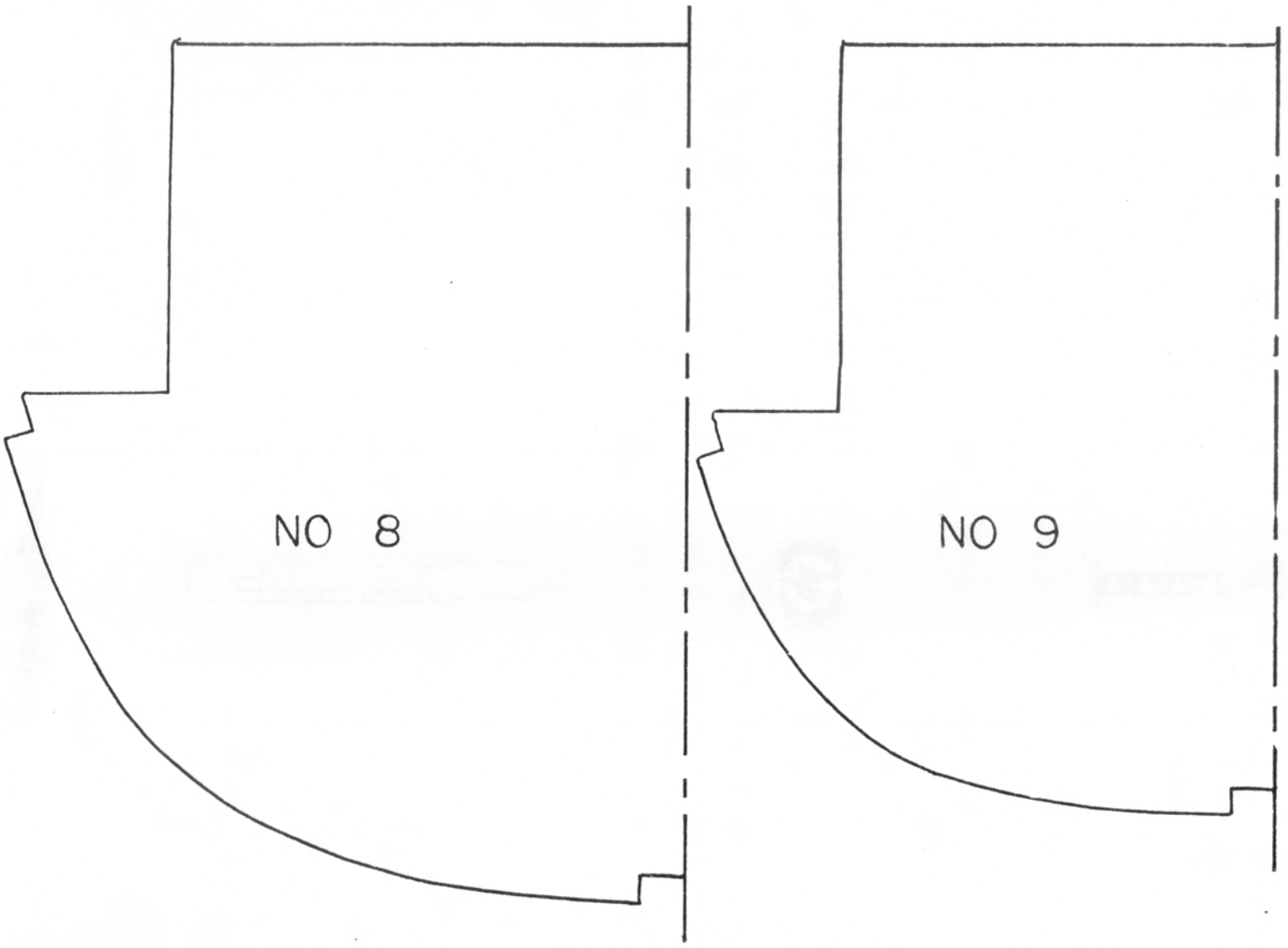


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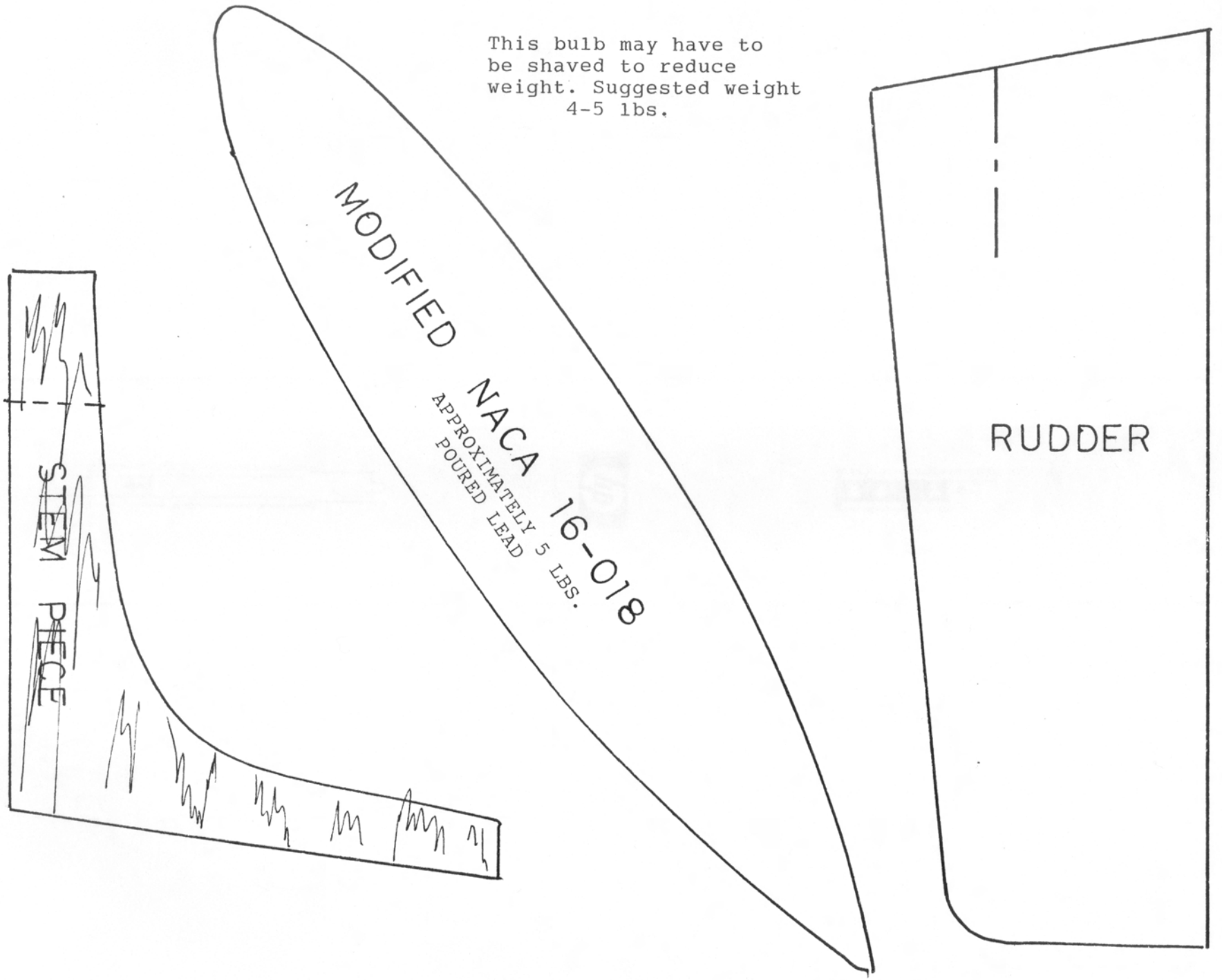


ADVANCE MK III SHEET 5