

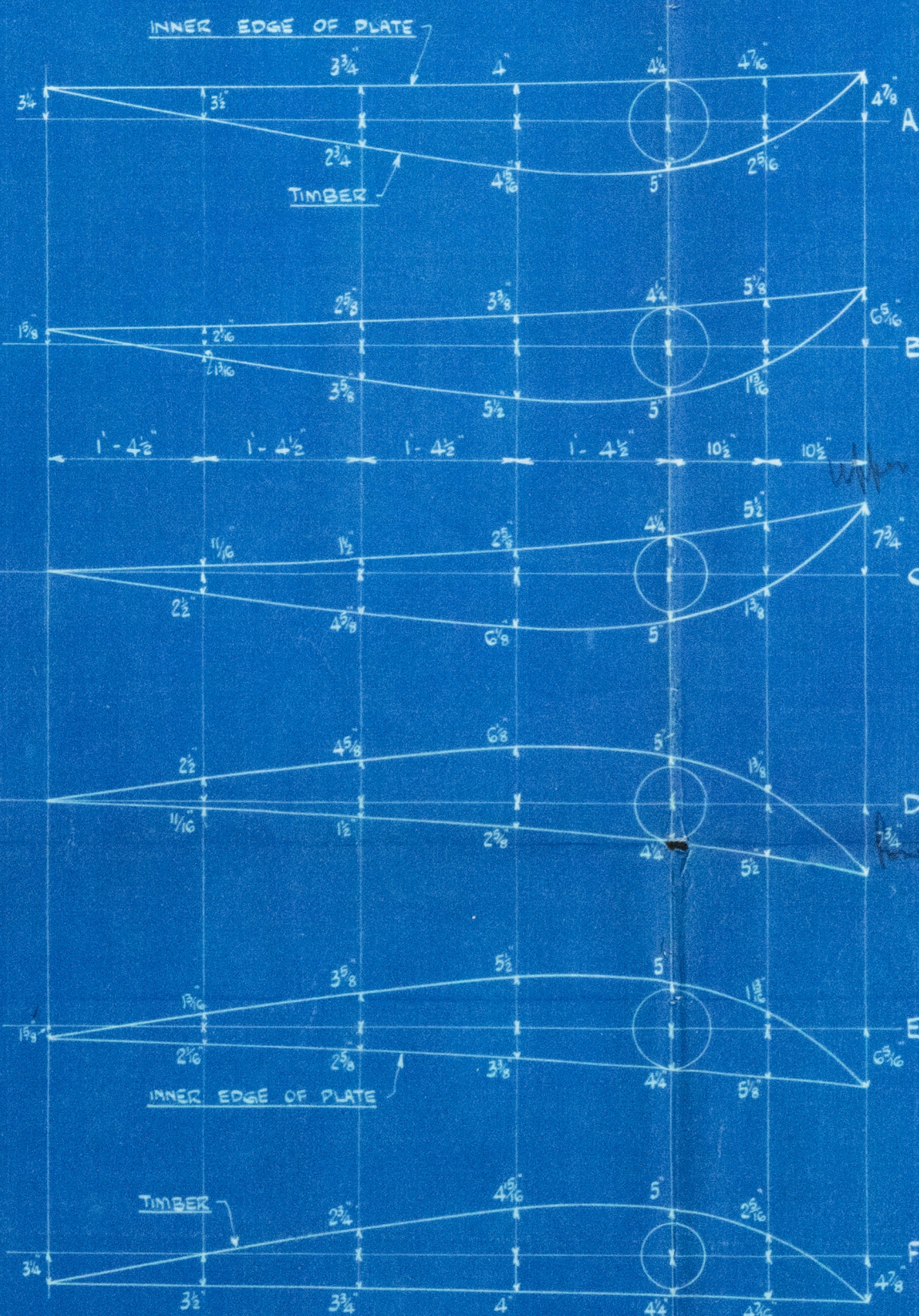
NO 1331 AND 1337 BALANCED REACTION RUDDER

TO CLASS B.S* FOR SERVICE ON GREAT LAKES AND RIVER ST. LAWRENCE
 RUDDER FRAME OF FORGED STEEL TO PASS TESTS OF BRITISH CORPORATION.
 SPEED 8 KNOTS



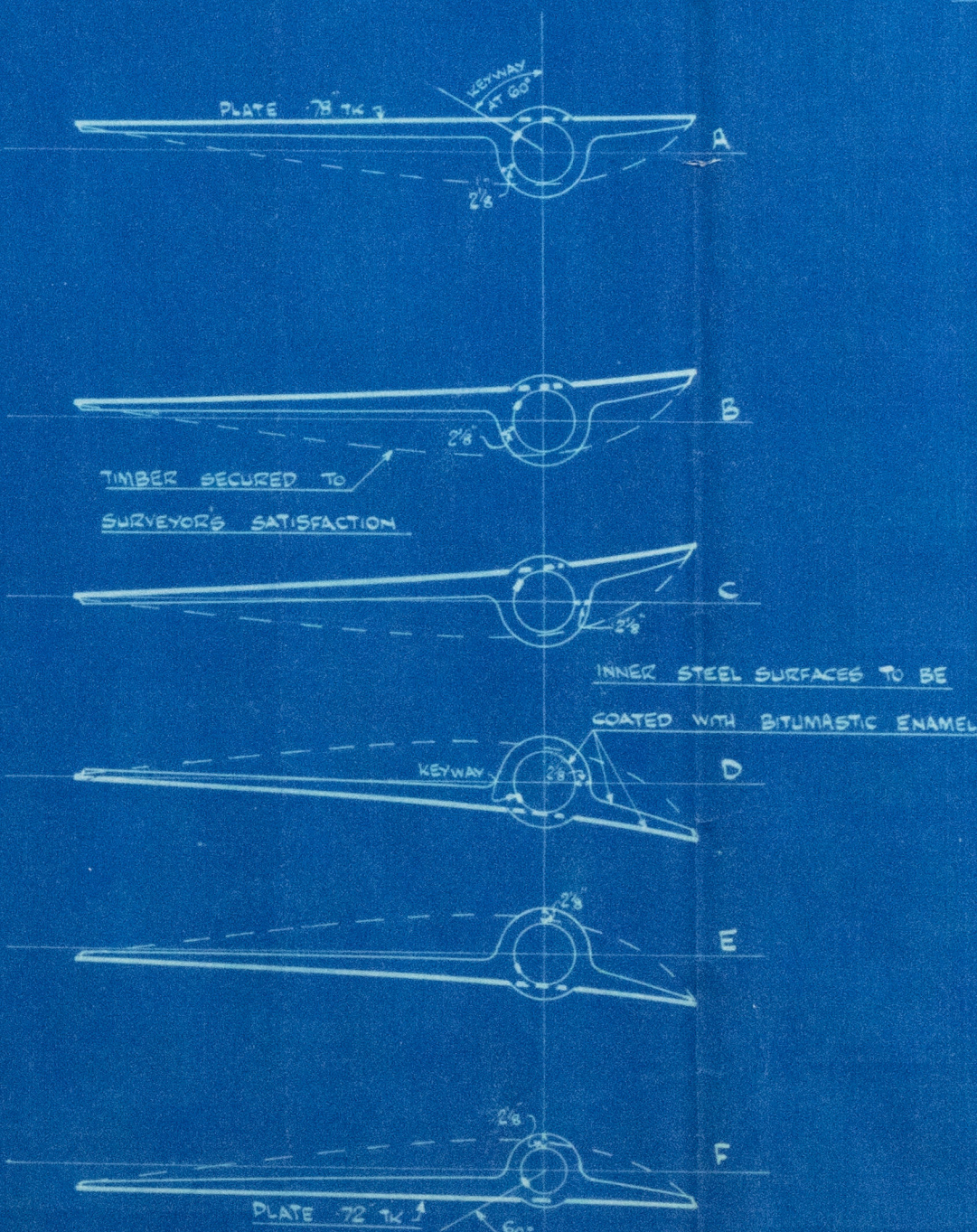
CURVATURE OF RUDDER

SCALE - 3/4" = ONE FOOT



SECTIONS THRO' RUDDER ARMS

SCALE - 1/2" = ONE FOOT



L Stock

$$\frac{6.5 \times 100}{25} = \frac{18.7 \times 12.75}{10} = 15 \text{ ft tons}$$

$$\frac{11.00}{69} = 22.8 \text{ ft tons}$$

$$84 - 118 = 166 \sqrt{\frac{30}{88}} = 49 + 18 = 67$$

$$66 \sqrt{\frac{30}{88}} = 57 + 18 = 75$$

Arms

$$.001 \times 51 \times 3.1 \times 26 \times 11^2 = 49.8$$

$$3/4 = 5.69$$

Breadth

$$(1.5 + 2.69) + 1.2 = 5.69 + 1.2 = 6.73$$

Depth

$$.9 \times 5.69 = 5.12$$

2 Blanks

$$.001 \times 51 \times 3.1 \times 26 \times 5^2 = 26.4$$

$$3/4 = 2.93$$

Breadth

$$(1.5 + 2.93) + 1.2 = 4.47 + 1.2 = 5.67$$

Depth

$$.9 \times 2.93 = 2.64$$

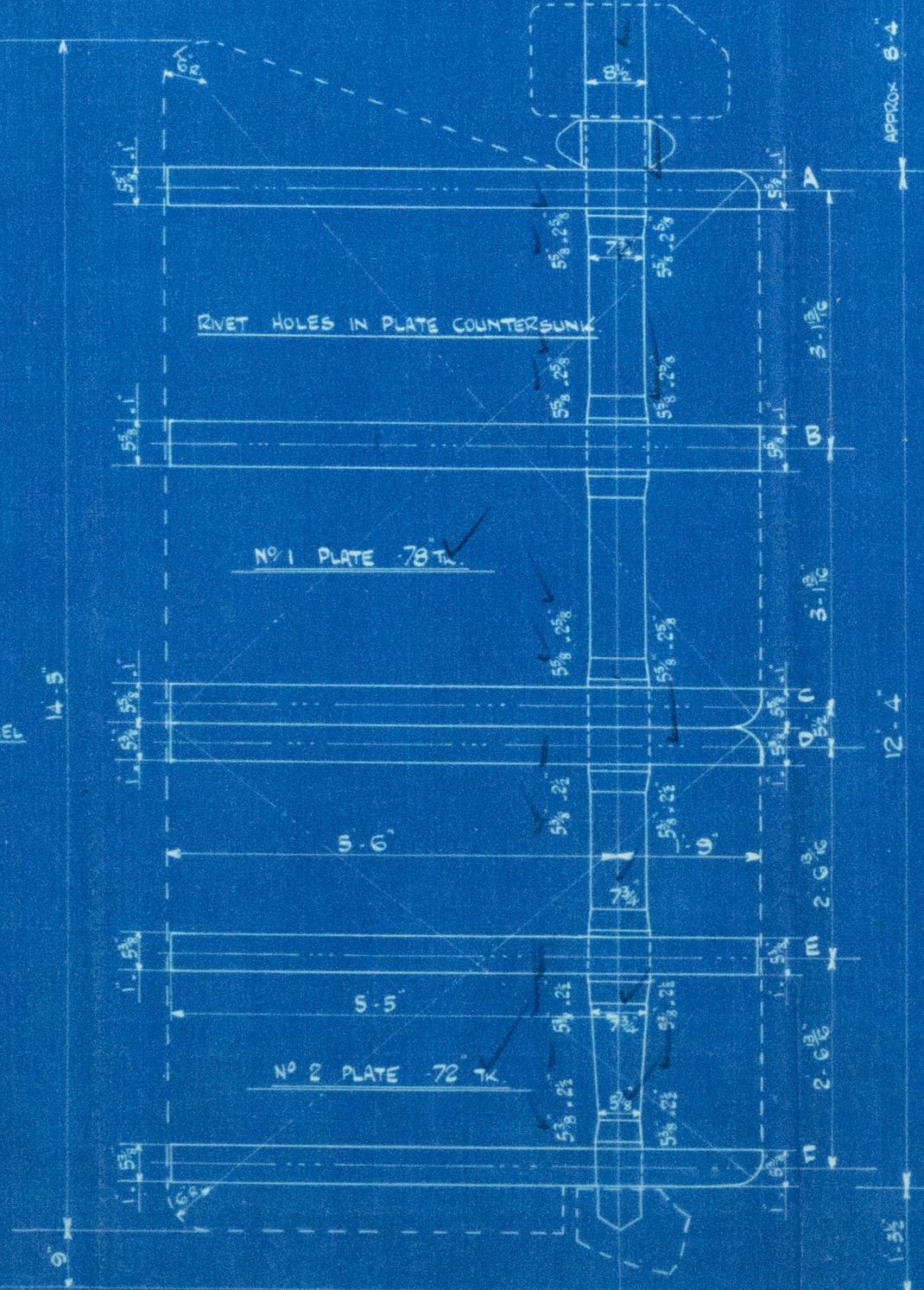
SCALE - 1/2" = ONE FOOT

Depth

$$.9 \times 2.75 = 2.5$$

PARTICULARS OF KEYWAYS & SMOOTH TURNING
 OF UPPER STOCK TO BE SENT LATER

ARMS SHUNK AND KEVED
 ON TO MAINPIECE



NOTES

DIMENSIONS GIVEN ARE TO BE CAREFULLY WORKED TO & NOT EXCEEDED

AS WE ONLY PAY ON WEIGHTS CALCULATED TO THESE DIMENSIONS

ALL MACHINING & DRILLING TO BE DONE BY MAKERS

FRAME NOT TO BE PAINTED BUT TO HAVE A COAT OF OIL

CENTRE LINE OF MAINPIECE TO BE SQUARE TO BASE LINE

WEIGHT OF FRAME TO BE PAINTED ON BEFORE DESPATCH

5/16" BRASS LINER TO BE CAST & GROOVED ON. GROOVES TO BE 5/8" WIDE . 1/8" DEEP

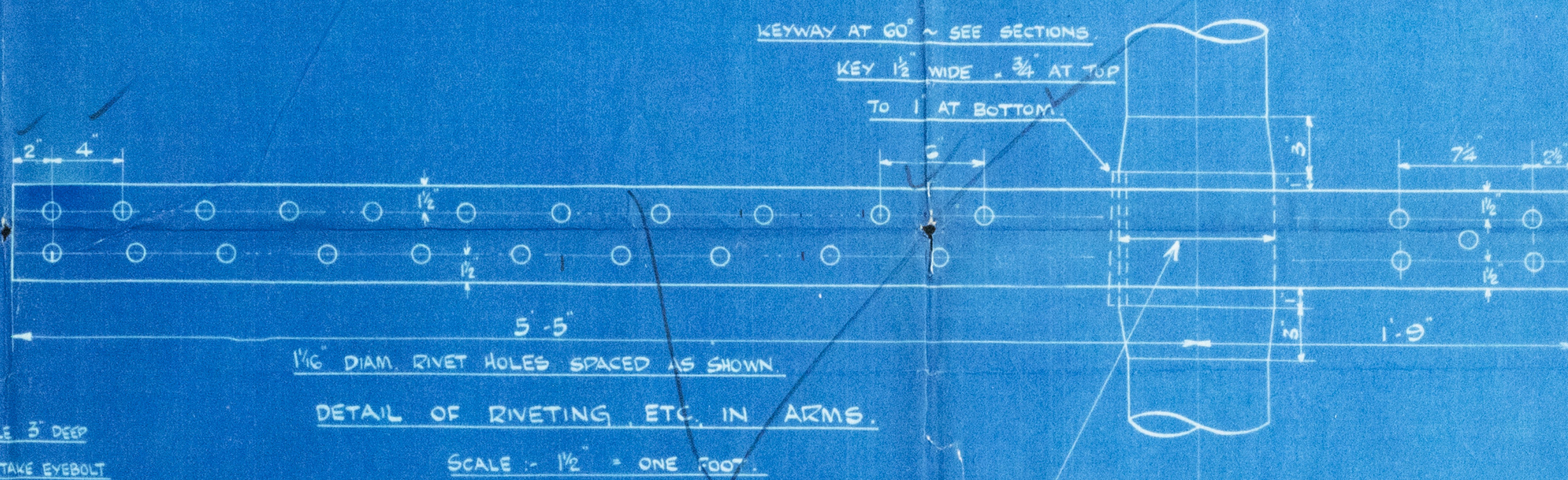
STOCK TO BE INCREASED 3/4" IN DIAM. IN WAY OF ARMS. THE INCREASE TO BE UNIFORM

& EXTEND ABOVE & BELOW EACH ARM, EXCEPT THE BOTTOM OF THE LOWER ARM FOR A
 DISTANCE OF 1', & THEN TAPERED OVER A DISTANCE OF 3' INTO THE NORMAL DIAM.

RUDDER PLATES & SHEATHING TO BE FITTED BY SHIPBUILDERS

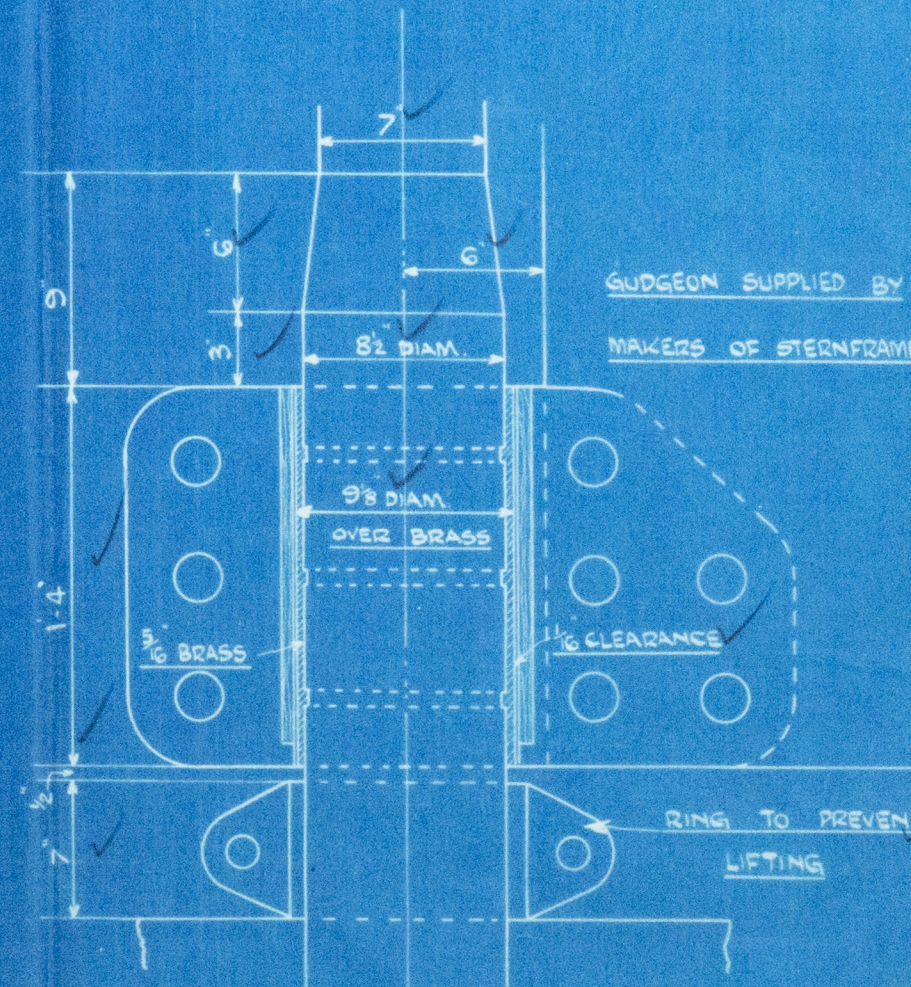
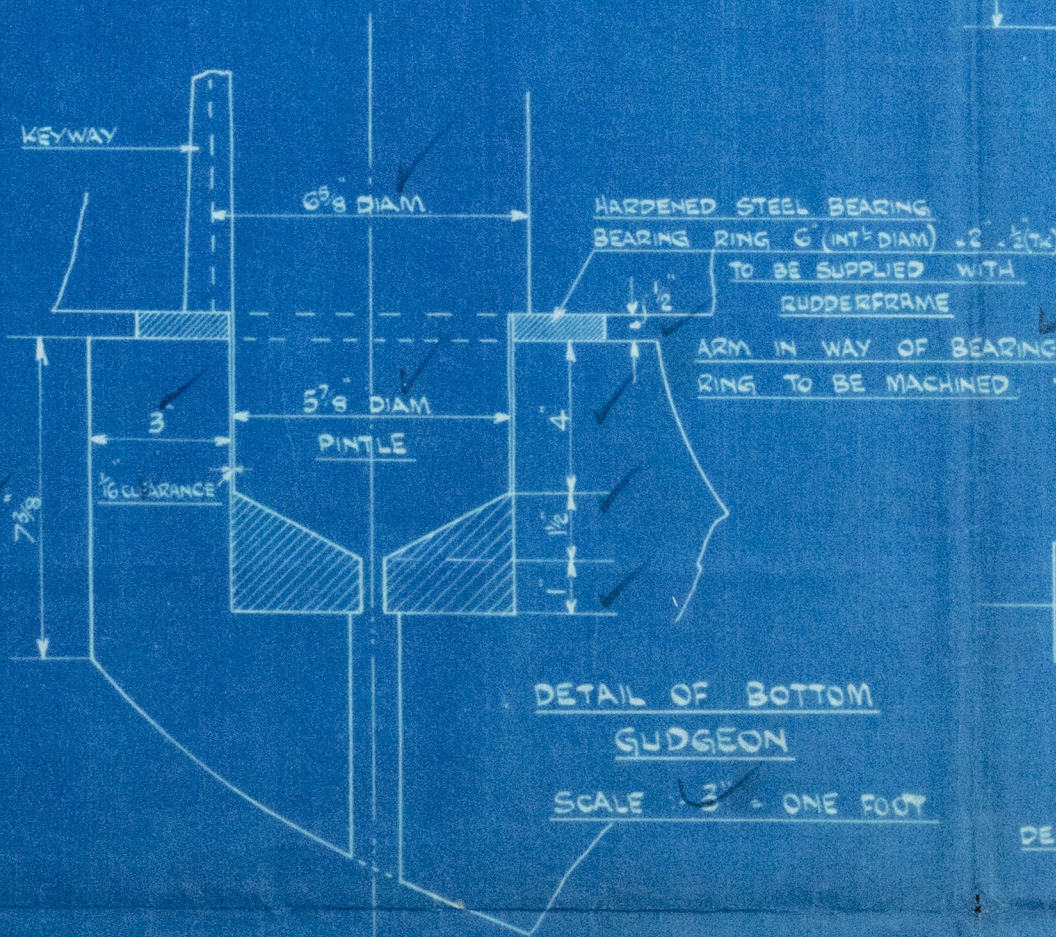
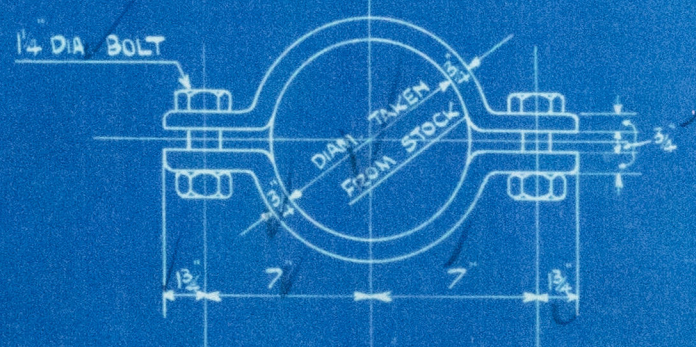
NO SHEATHING TO BE FITTED ABOVE ARM 'A' OR BELOW ARM 'F'

DETAILS OF SHEATHING & PROTECTION PLATES ON SEPARATE PLAN



DETAIL OF RING TO PREVENT LIFTING

SCALE - 1/2" = ONE FOOT



DETAIL OF BEARING GUDGEON

SCALE 1/2" = ONE FOOT



DESIGN SUPPLIED BY -
 BALANCED REACTION RUDDER CO. LTD.

11 PARK TERRACE

SUNDERLAND

10. + 11

Balanced Reaction Rudder.

Swan Hunter & W.R.

1331 + 1337.

1 - 11 - 27.

1331. "Lavaldoc"

1337. ^WWroisdoc.

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To be fitted in Barclay Curles No.

629. 30-1-2

Wrois



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Lloyd's Register
Foundation

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