

# 'R' CLASS ICEBREAKER

## JOINER AND INSULATION DETAILS HULLS 221/2

### GENERAL NOTES

FOR GENERAL ARRANGEMENT OF INSULATION, SEE INSULATION PLAN, DWG. # 221-H-80 SHEET 1 AND 2.

ALL INSULATION IS ATTACHED BY WELDED-ON TYPE NELSON STUDS, THE STUDS ARE TO BE FASTENED PRIOR TO PAINTING.,  
INSULATION APPLIED TO THE SHELL PLATING TO BE CEMENTED WITH SPOT APPLICATION OF 230-34 FLINTKOTE ADHESIVE, AND

FASTENED WITH WELDED ON TYPE NELSON STUDS.

ALL JOINTS IN THE INSULATION VAPOUR BARRIER TO BE TAPED.

FOR LOCATION OF LININGS AND DIVISIONAL JOINER BULKHEADS, SEE GENERAL ARRANGEMENT OF LININGS, DWG. # 221-H-81 SHEET 1 AND 2

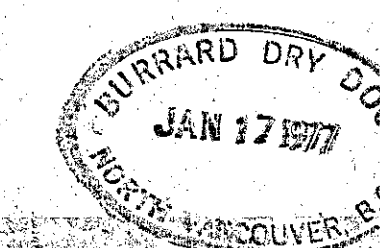
FOR GENERAL ARRANGEMENT OF DECK COVERING SEE DWG. # 221-H-79 SHEET 1 AND 2

ALL STEELWORK CONCEALED BY INSULATION TO BE GIVEN TWO COATS OF I-GP-48A WITH THE EXCEPTION OF COMMUNAL WASHROOMS GALLEY  
LAUNDRY, REFRIG. COMP'S HATCH COVERS AND EXPOSED INSULATION WHICH ARE TO BE COATED WITH INTERTAR AS STATED IN THE PAINTING SCHEDULE DWG. 221-H-85 REV 1

DEPARTMENT OF SUPPLY AND SERVICES  
PROVISIONALLY APPROVED  
DATE 10/2/77  
TECHNICAL SERVICES DIVISION  
MARINE & INDUSTRIAL MACHINERY PRODUCT CENTRE

SUBJECT TO APPROVAL  
OF C.S.I.

SUBJECT TO NOTATIONS  
IN RED AS MARKED



No.	REVISION	BY	DATE
DISTRIBUTION			
DEPARTMENT	QTY.	DEPARTMENT	QTY.
Owners	2-2	Yard Manager	Shipwright
Classification	1-1	New Const. Supt.	Rigger
Steamship Inspection	1-1	Outfit. Supt.	Joiner
Owners	5-1	Repair Supt.	Pipe Fitter
		Steel Supt.	Machine Shop
			Patternmaker
Hull D.O.	1-1		Blacksmith
Machinery D.O.	1-1	Electric	Sheet Metal
Electrical D.O.	1-1	Plaster	Electric Shop
Welding Engineer	1-1	Welder	Engine Fitter



BURRARD DRY DOCK CO. LTD.  
SHIPBUILDERS • SHIPREPAIRERS • GENERAL ENGINEERS  
NORTH VANCOUVER, B.C. CANADA

DIVISION HULL  
HULL 221/222 JOB NO. 240 340 390  
OWNERS: MINISTRY OF TRANSPORT

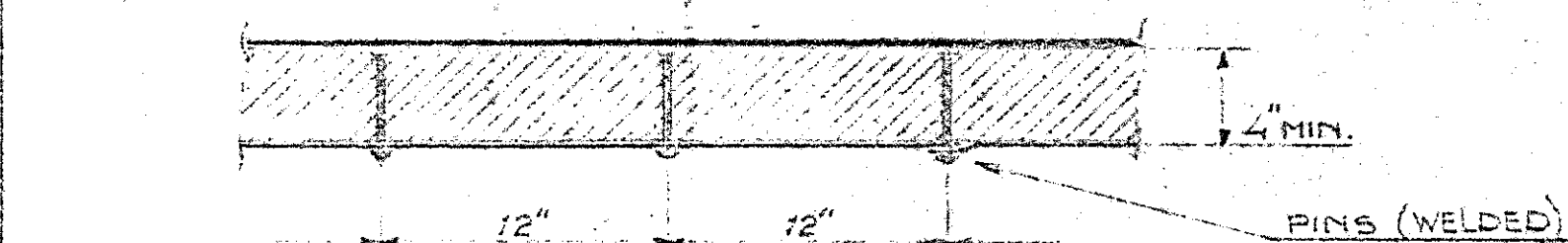
TITLE  
JOINER AND INSULATION DETAILS

APPROVALS	REPRESENTS	DATE	DRAWN	CHECKED	APPROVED	SCALE	DATE	REV.
D.S.S.	R.HALL	5 Nov 76	B. EVERS				221-H-82	221-H-82
							DWG. No. SHEETS A-F	1-2a A

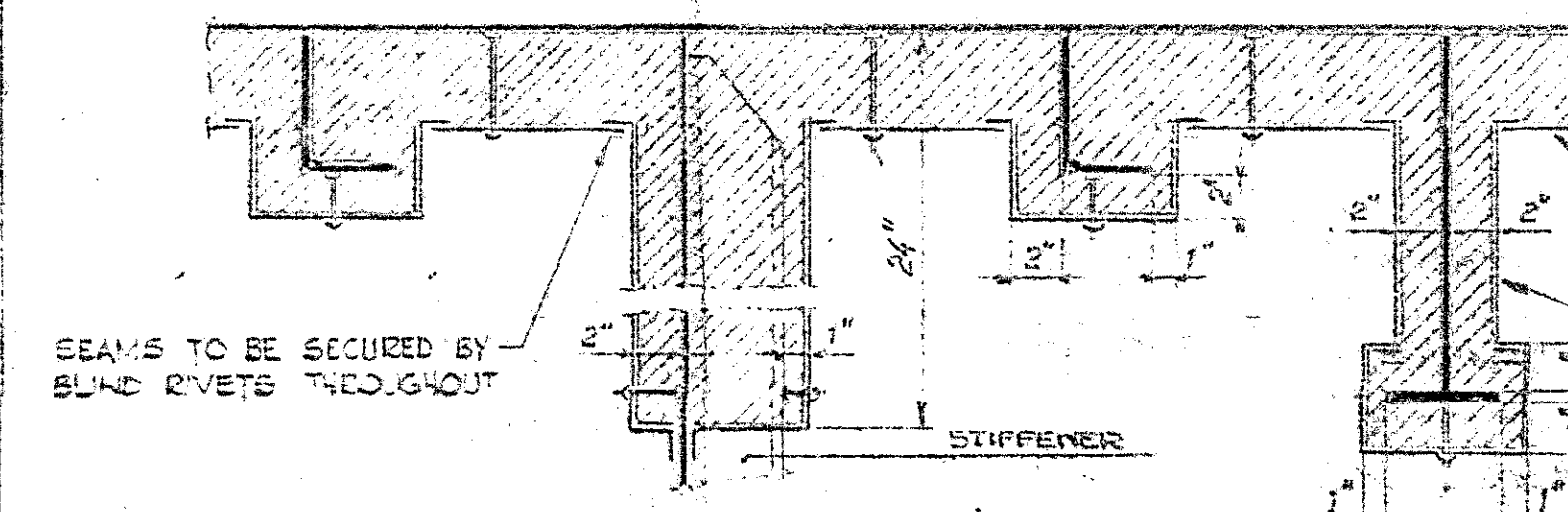


# THERMAL AND ACOUSTIC INSUL.

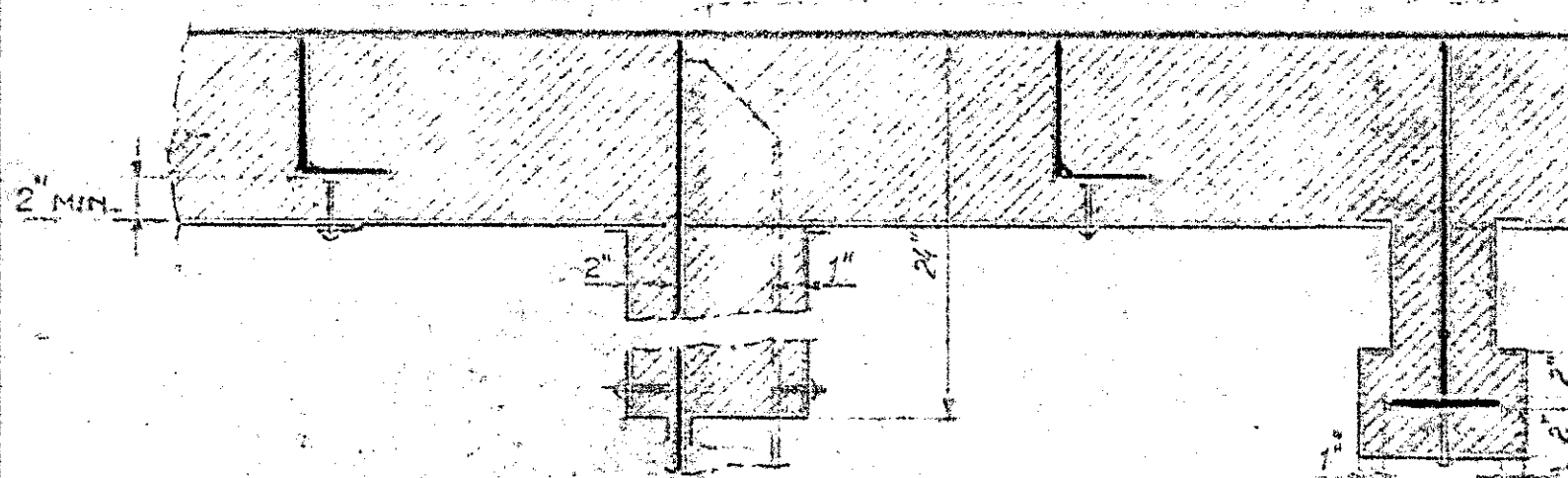
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SEAMS AND BUTTS IN VAPOUR BARRIER TO BE TAPED

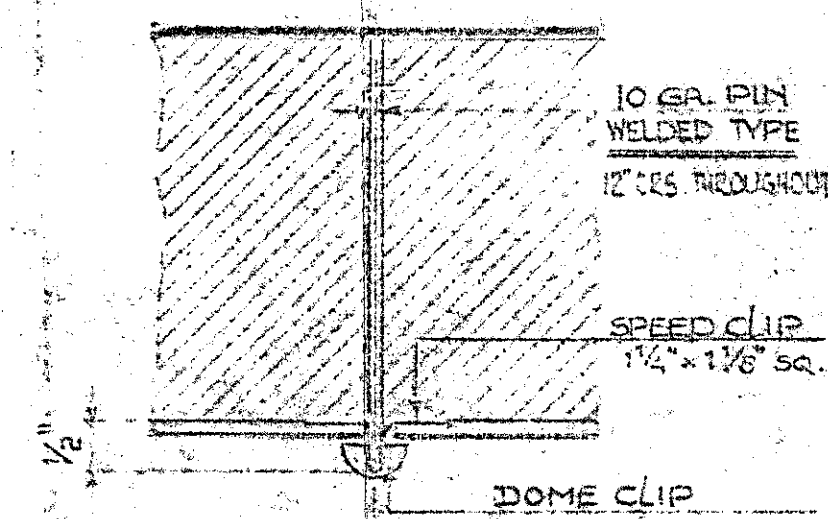


SEAMS TO BE SECURED BY BLIND RIVETS THROUGHOUT



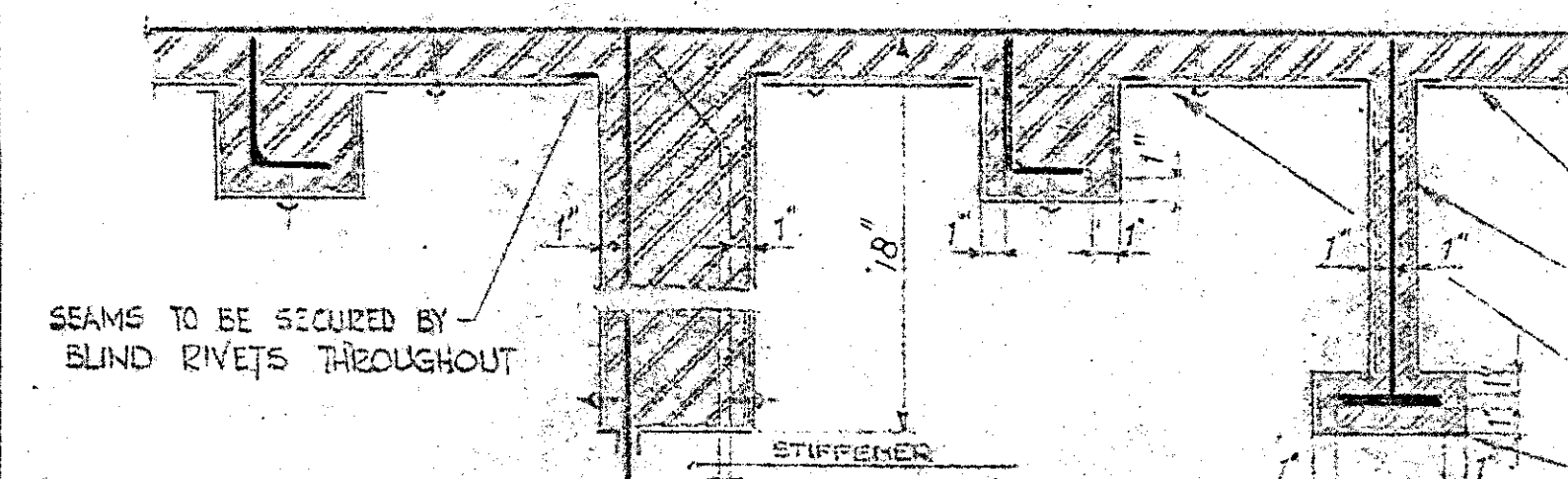
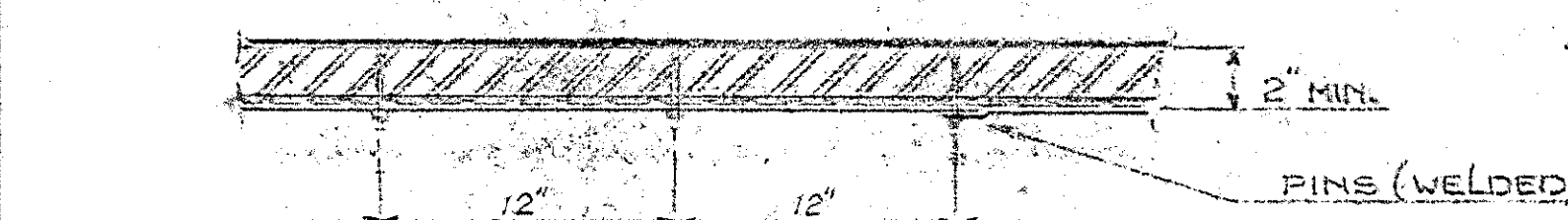
FIBRE GLASS TYPE PF 335 WITH ALUM. PIGMENTED VINYL VAPOUR BARRIER

EXPANDED ALUM. SHEATHING DRAMEX 358-14F .064" THK.

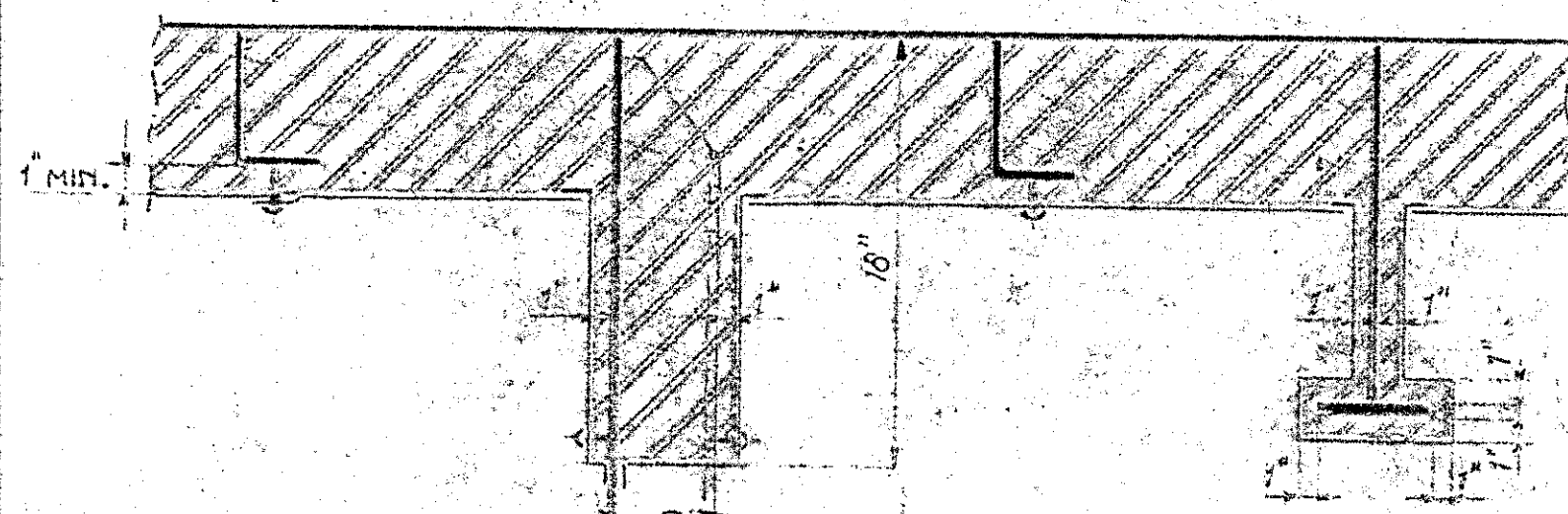


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## FIRE INSULATION



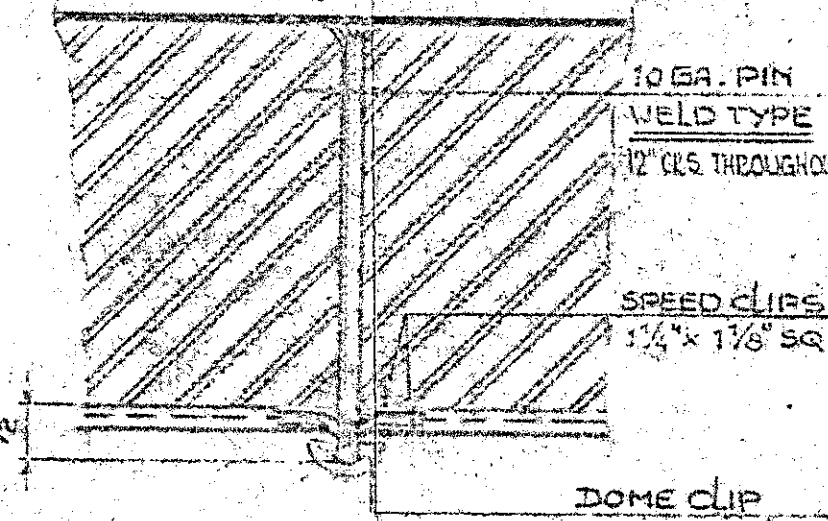
SEAMS TO BE SECURED BY BLIND RIVETS THROUGHOUT



Rockwool FIRE BATT WITH ALUM. CRAFT BARRIER

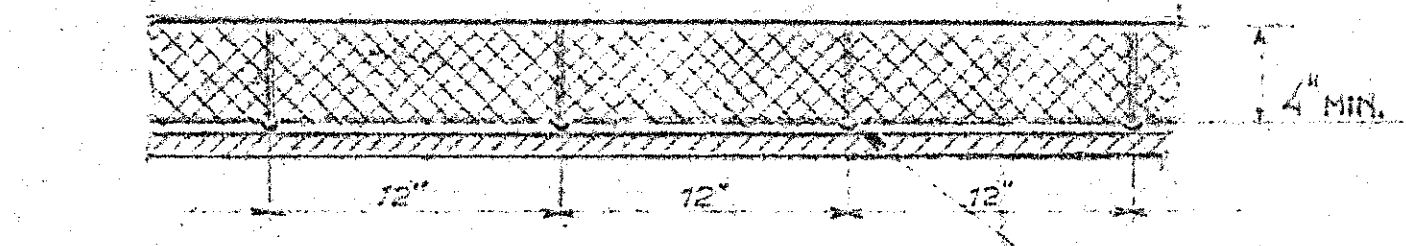
GALV. LATH (2.5 lbs/sq yd)

EXPANDED ALUM. SHEATHING DRAMEX 358-14F .064" THK.

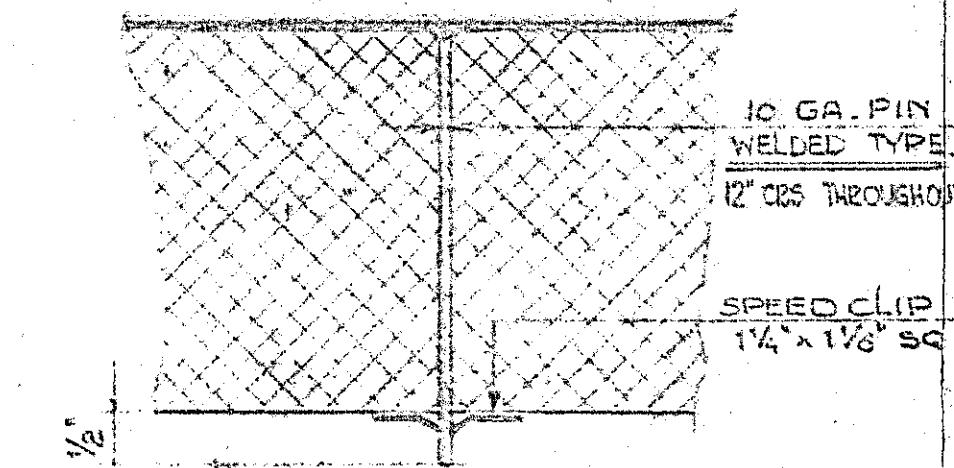
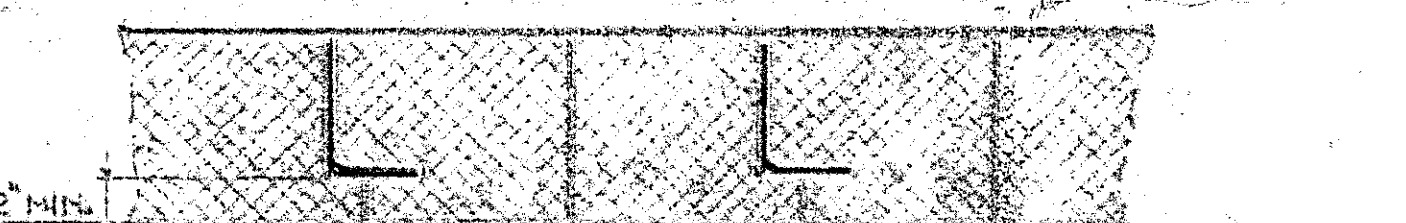
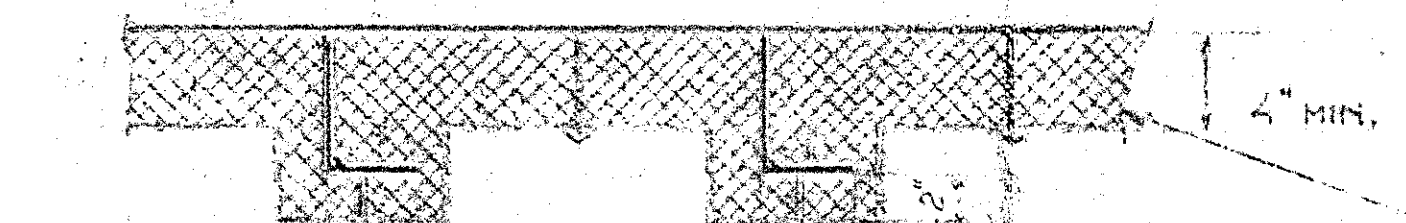


# THERMAL INSULATION

2



SEAMS AND BUTTS IN VAPOUR BARRIER TO BE TAPED



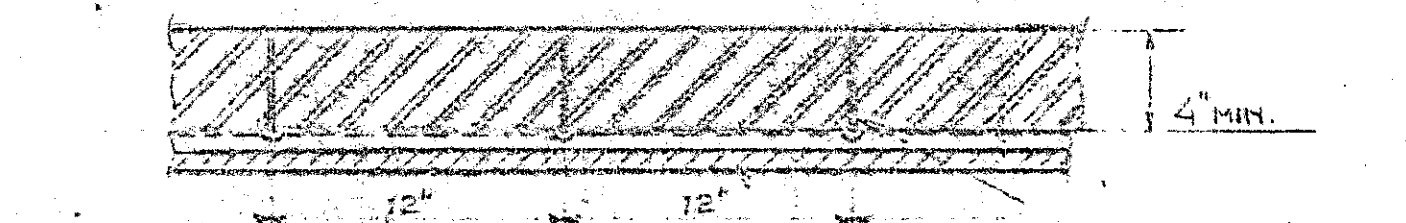
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LINING, 3/4" T.A.C. BOARD WITH ARBORITE FACING

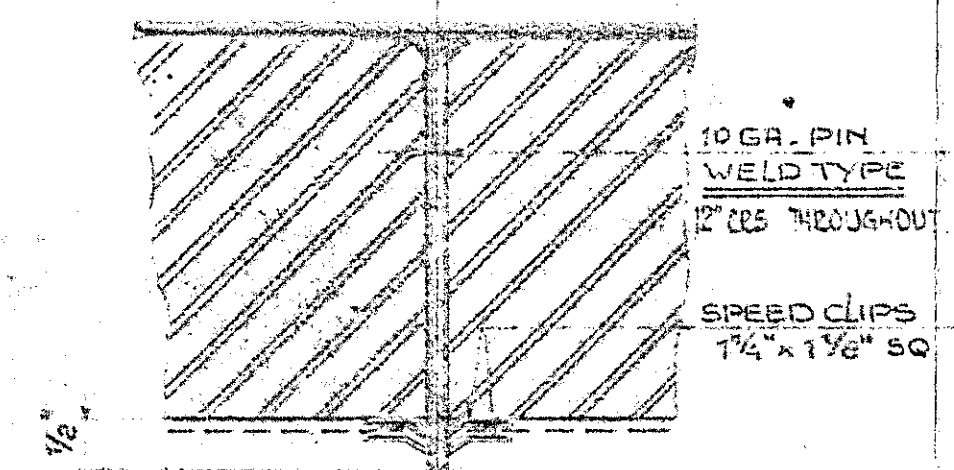
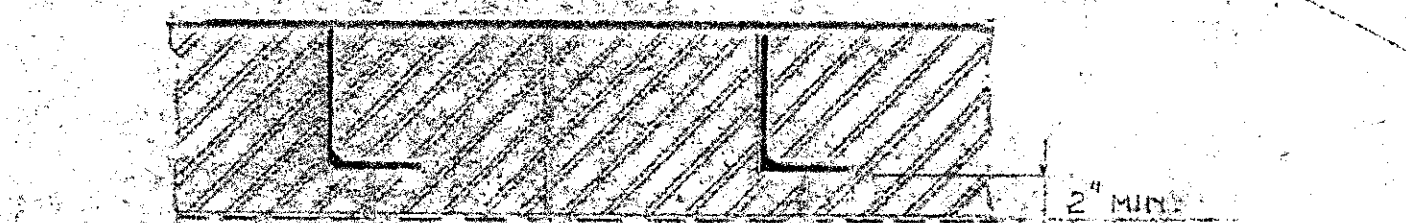
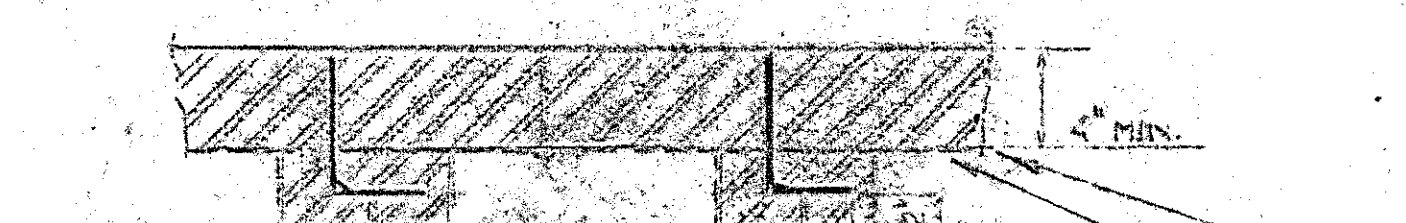
OR SUSPENDED CEILING

## FIRE AND THERMAL INSUL.

4



SEAMS AND BUTTS IN VAPOUR BARRIER TO BE TAPED



Rockwool FIRE BATT WITH ALUM. CRAFT BARRIER

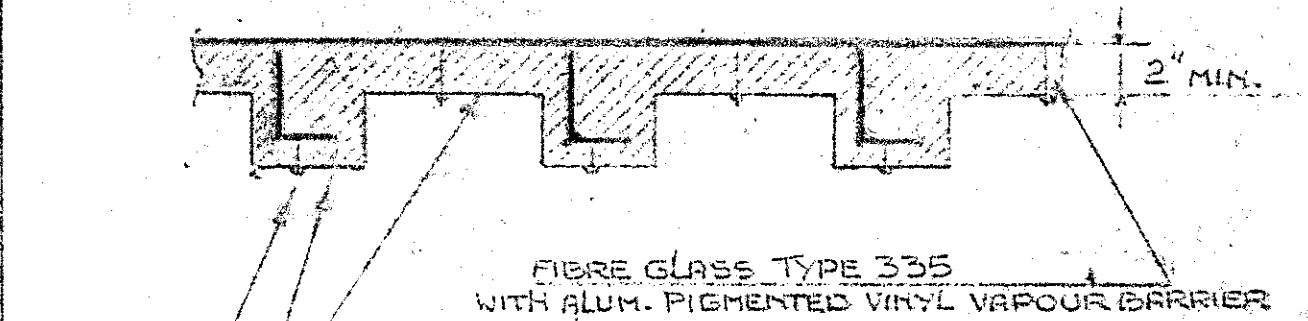
GALV. LATH (2.5 lbs/sq yd)

LINING, 3/4" T.A.C. BOARD WITH ARBORITE FACING

OR SUSPENDED CEILING

# THERMAL INSULATION

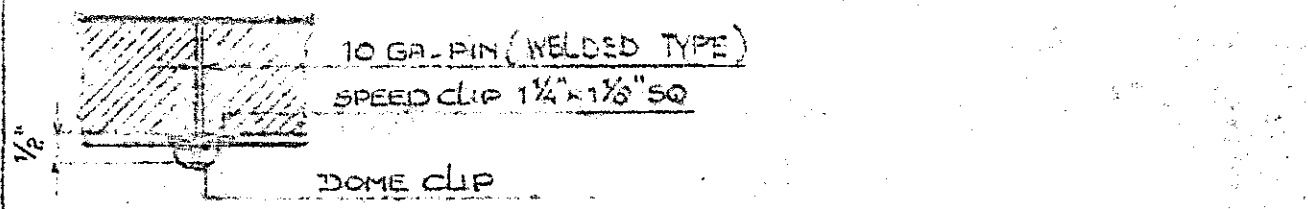
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FIBRE GLASS TYPE 335 WITH ALUM. PIGMENTED VINYL VAPOUR BARRIER

EXPANDED ALUM. SHEATHING DRAMEX 358-14F .064" THK.

FASTENINGS AND DETAILS AS FOR 1

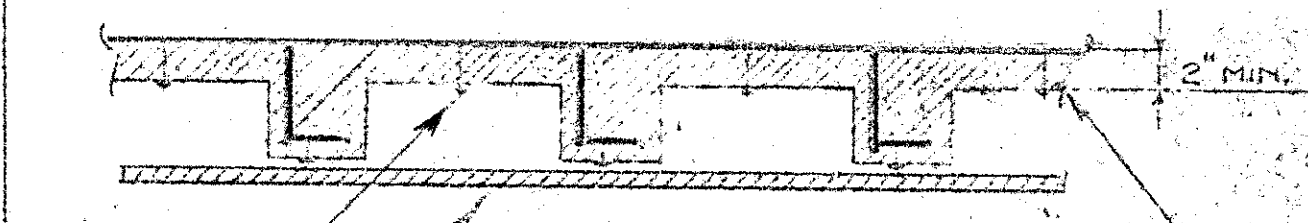


10 GA. PIN (WELDED TYPE) SPEED CLIP 1 1/4" x 1 1/8" SQ

DOME CLIP

## THERMAL AND ACOUSTIC INSUL.

6

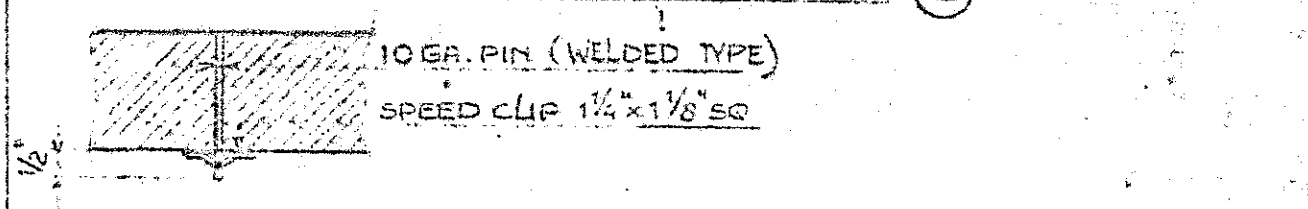


FIBRE GLASS TYPE PF 335 WITH REINFORCED ALUM. FOIL VAPOUR BARRIER

LINING, 3/4" T.A.C. BOARD WITH ARBORITE FACING

OR SUSPENDED CEILING

FASTENINGS AND DETAILS AS FOR 2

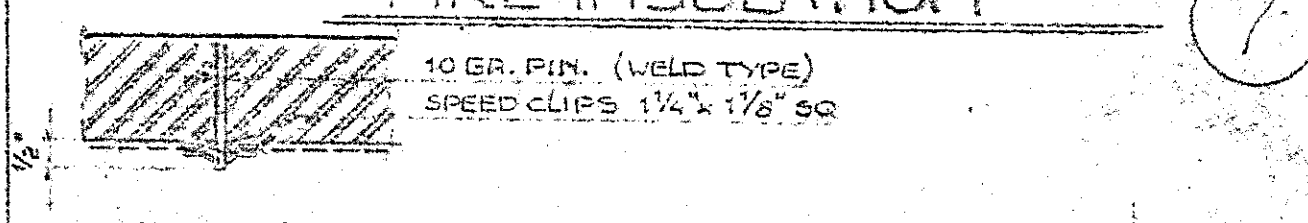


10 GA. PIN (WELDED TYPE) SPEED CLIP 1 1/4" x 1 1/8" SQ

DOME CLIP

## FIRE INSULATION

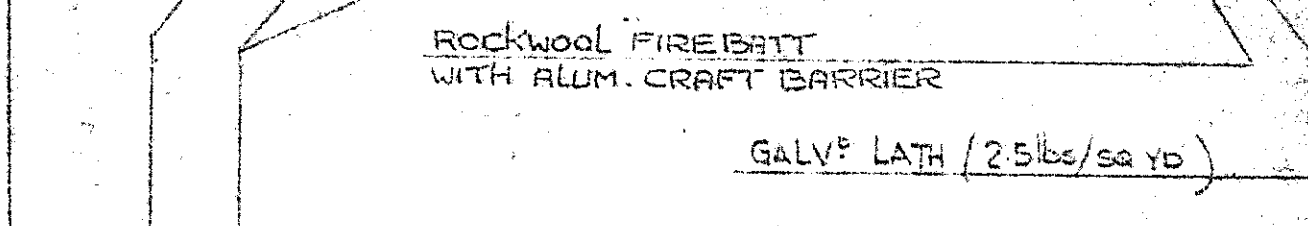
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10 GA. PIN (WELDED TYPE) SPEED CLIPS 1 1/4" x 1 1/8" SQ

DOME CLIP

FASTENINGS AND DETAILS AS FOR 4



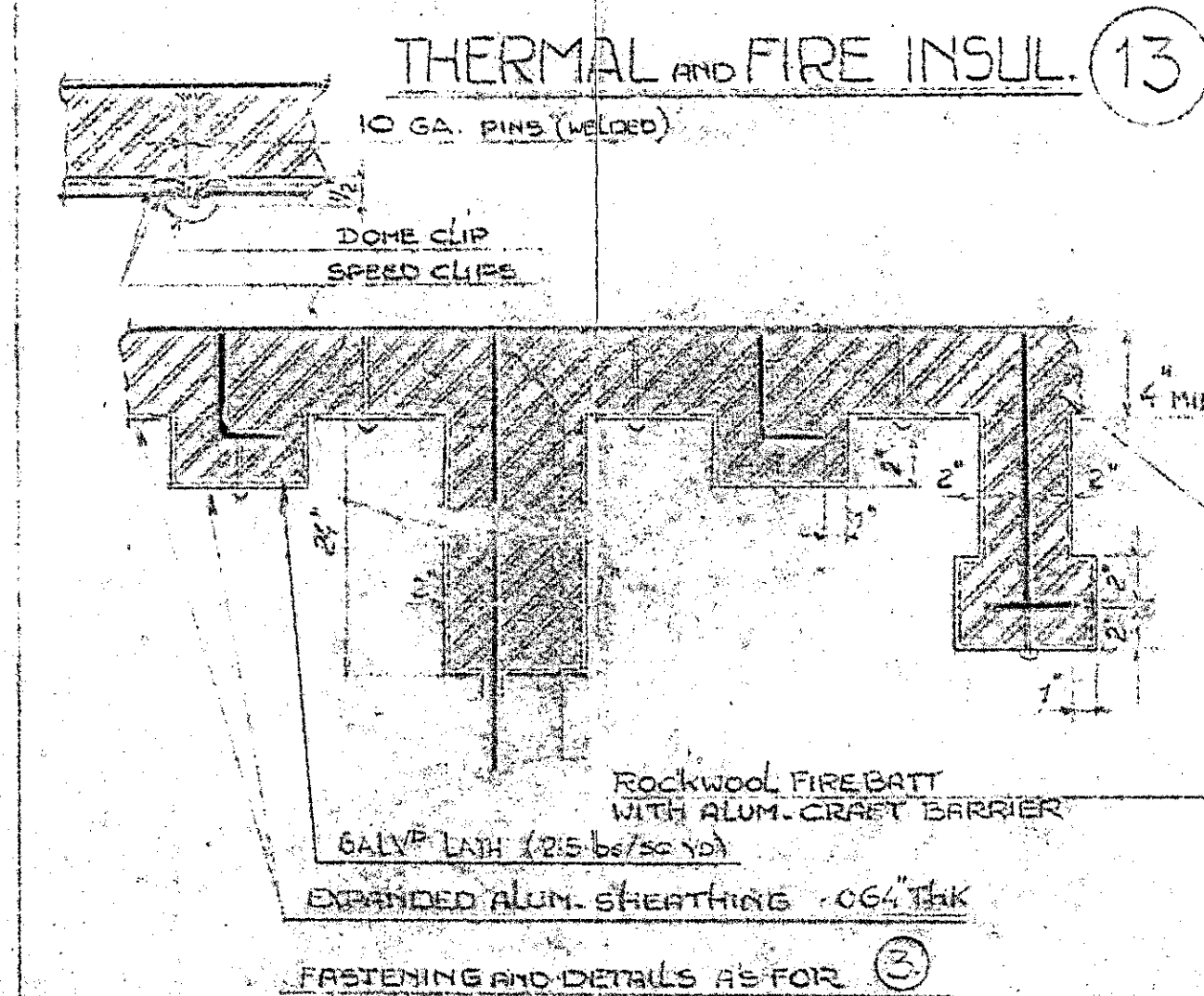
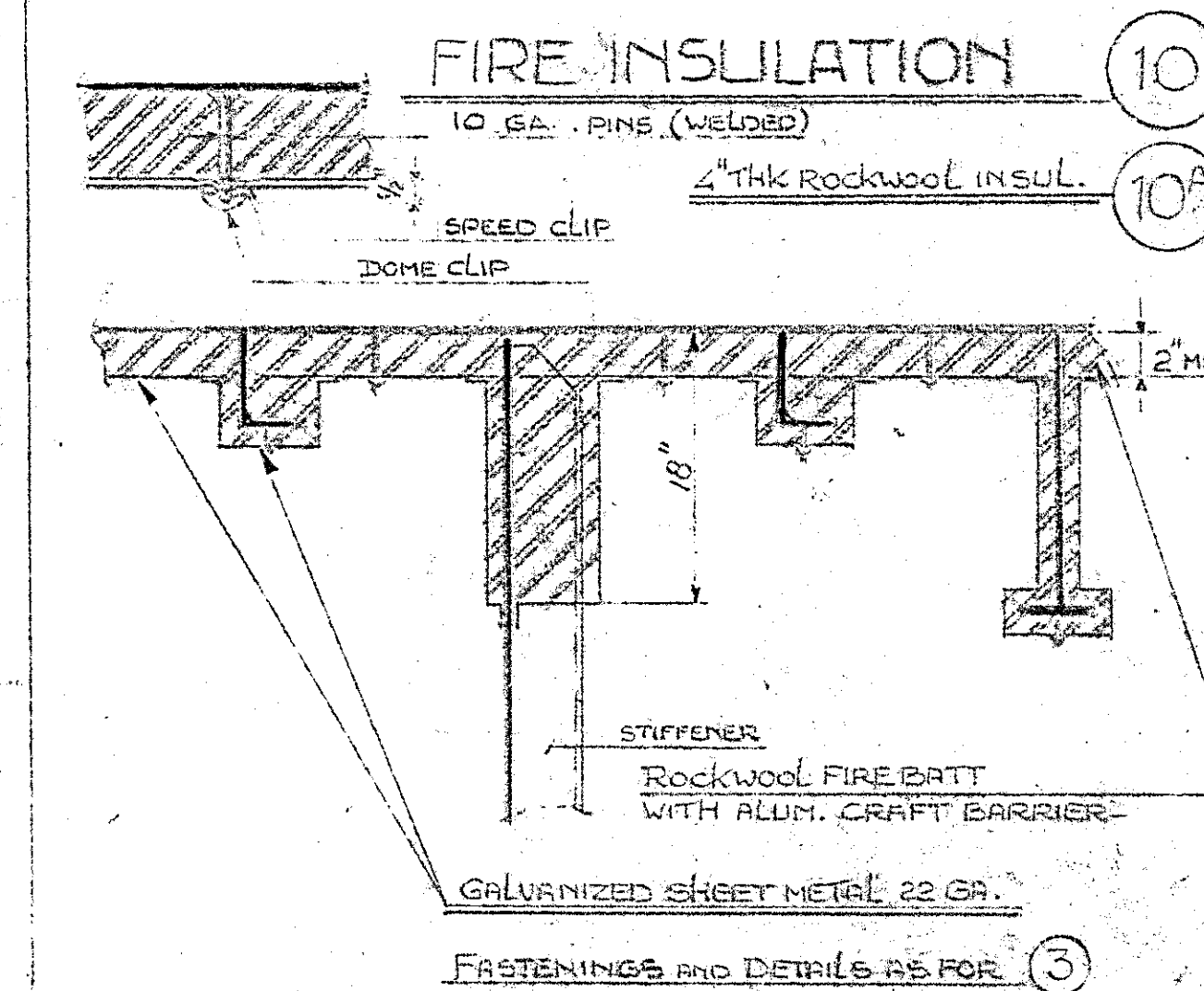
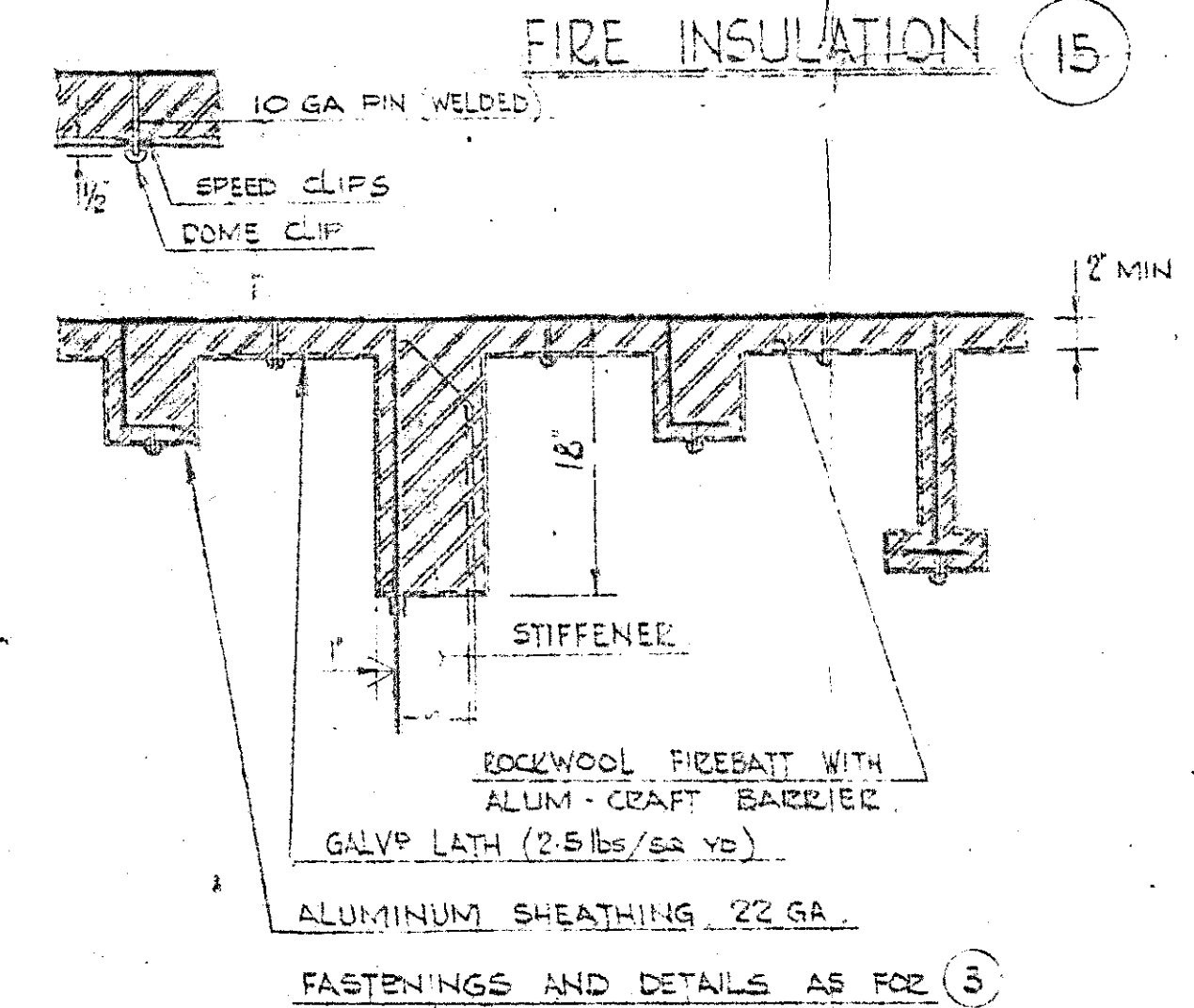
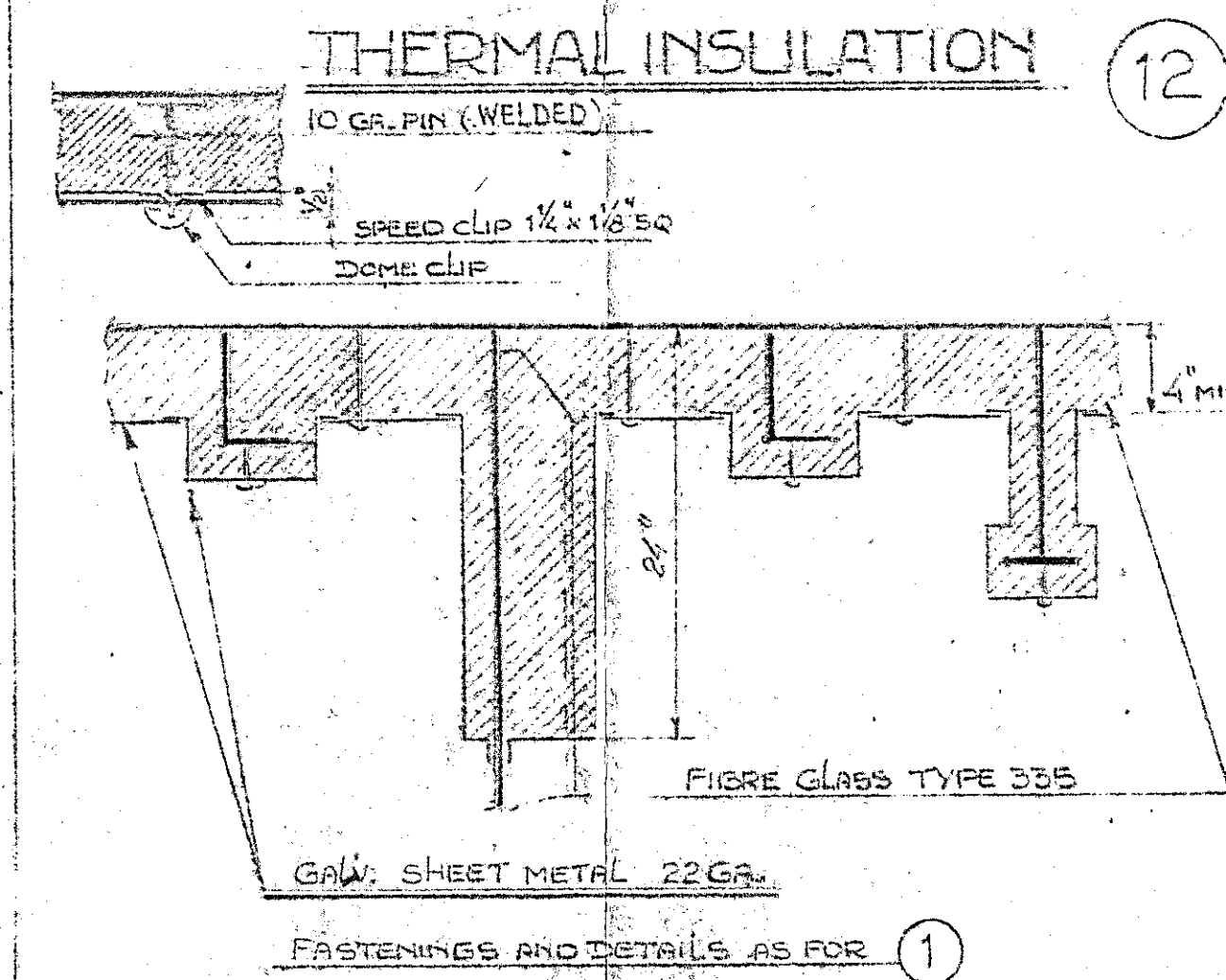
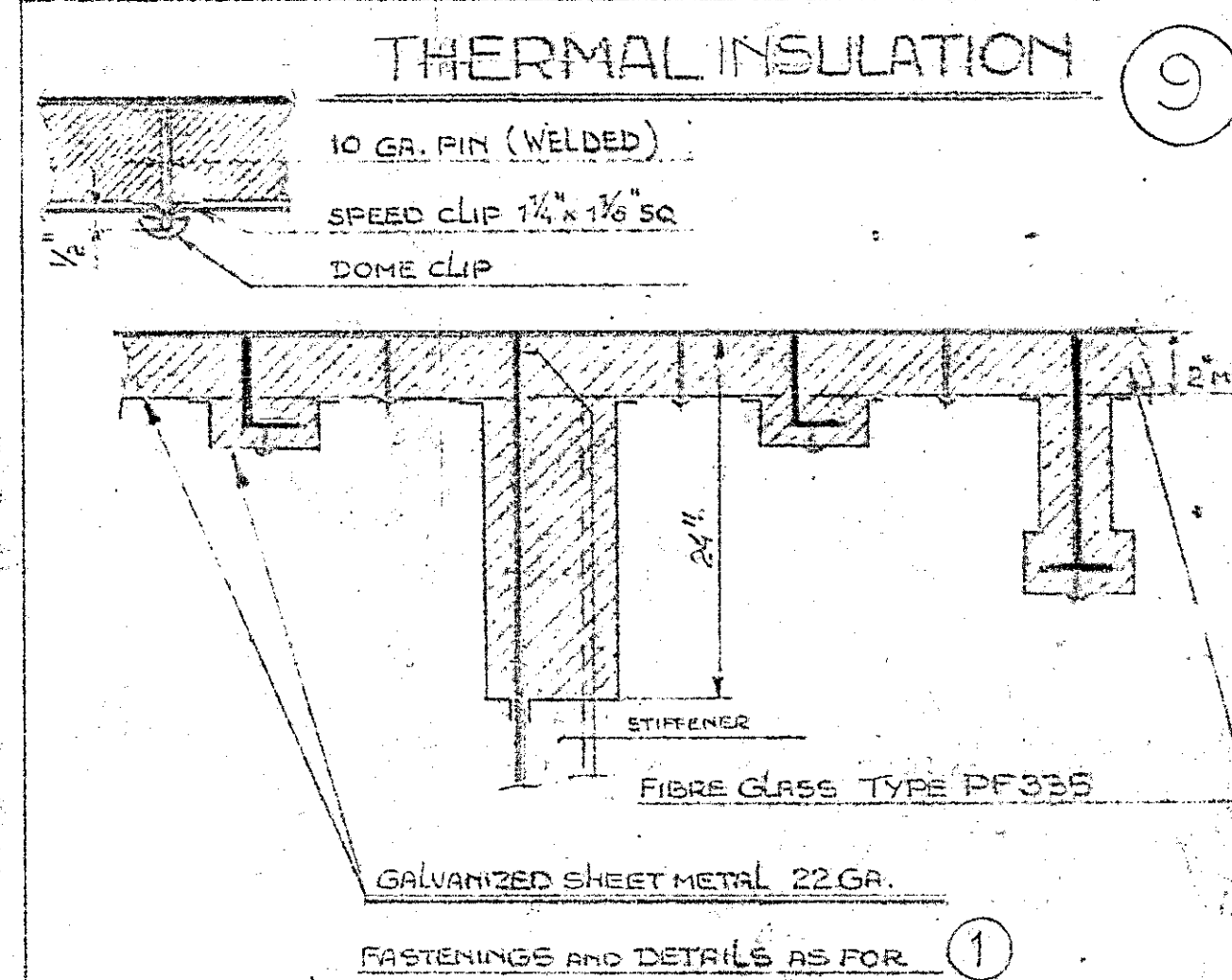
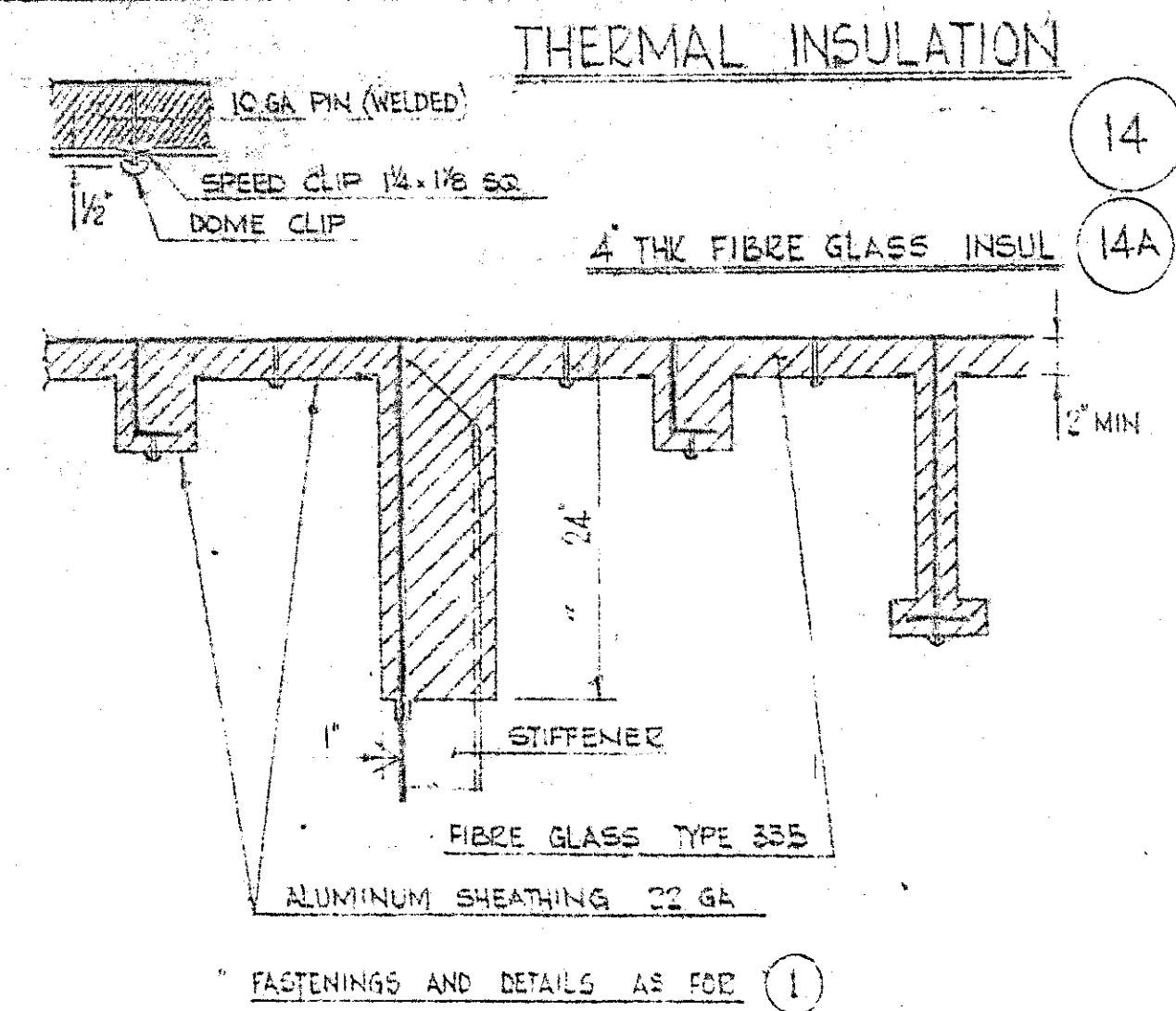
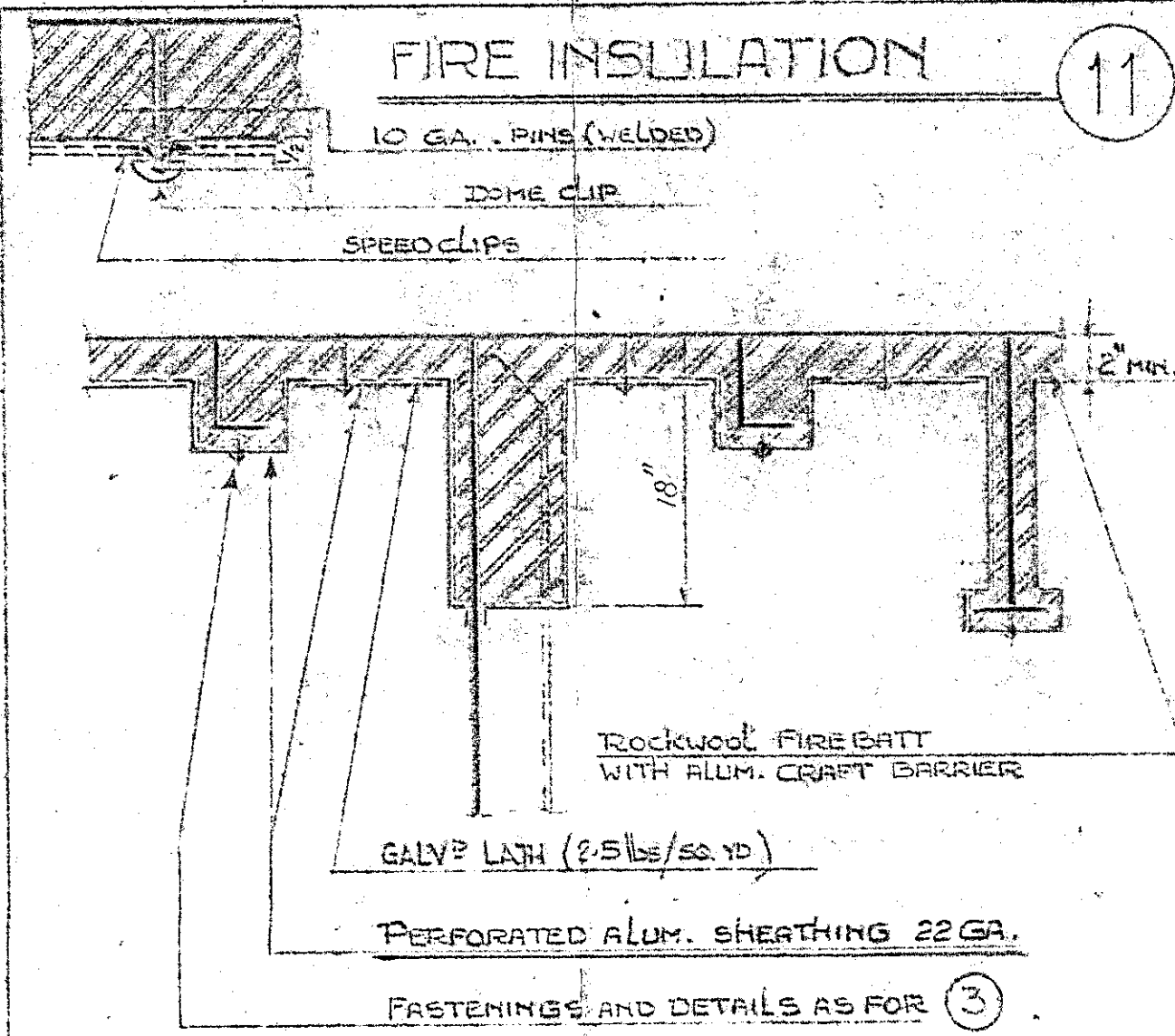
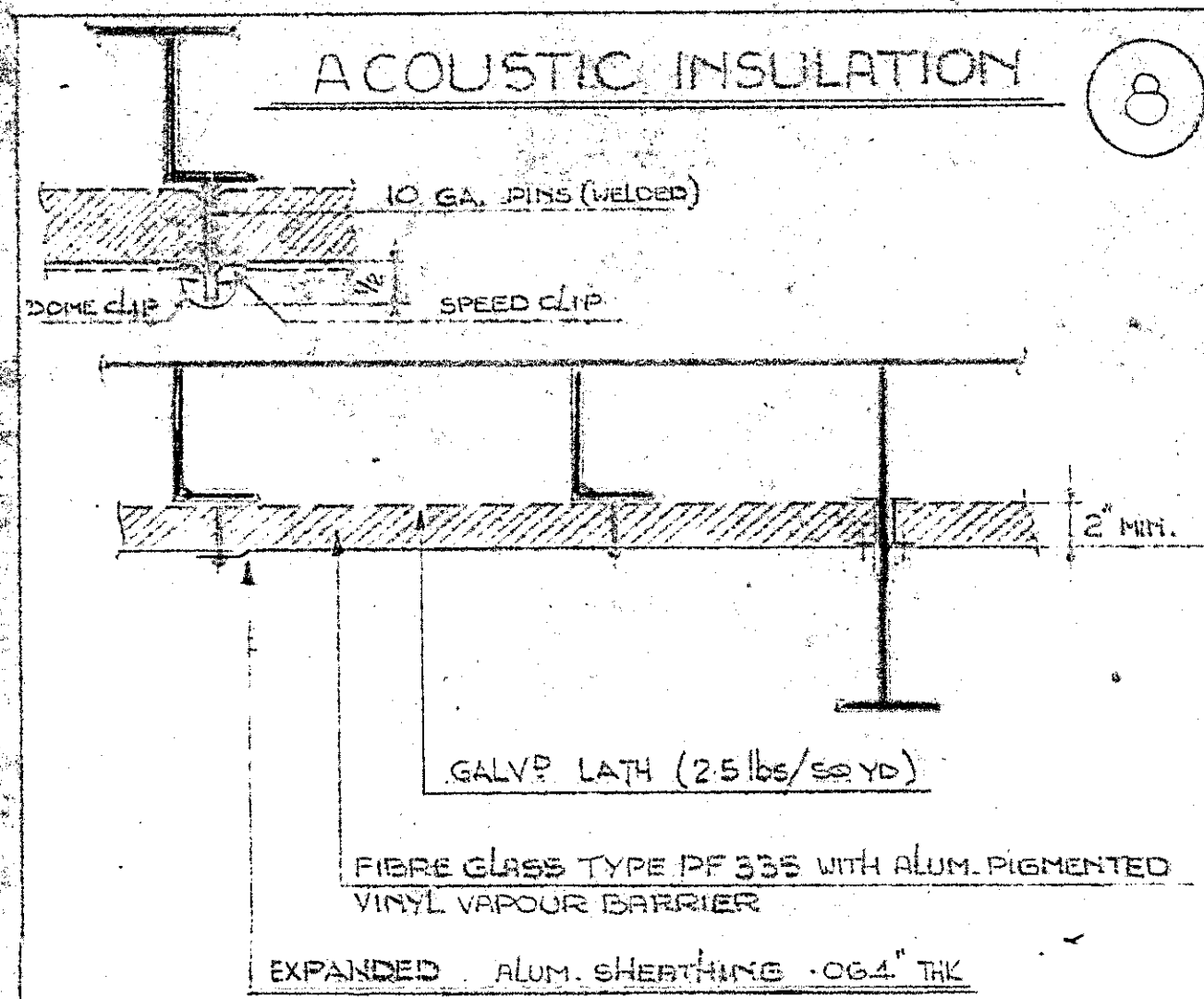
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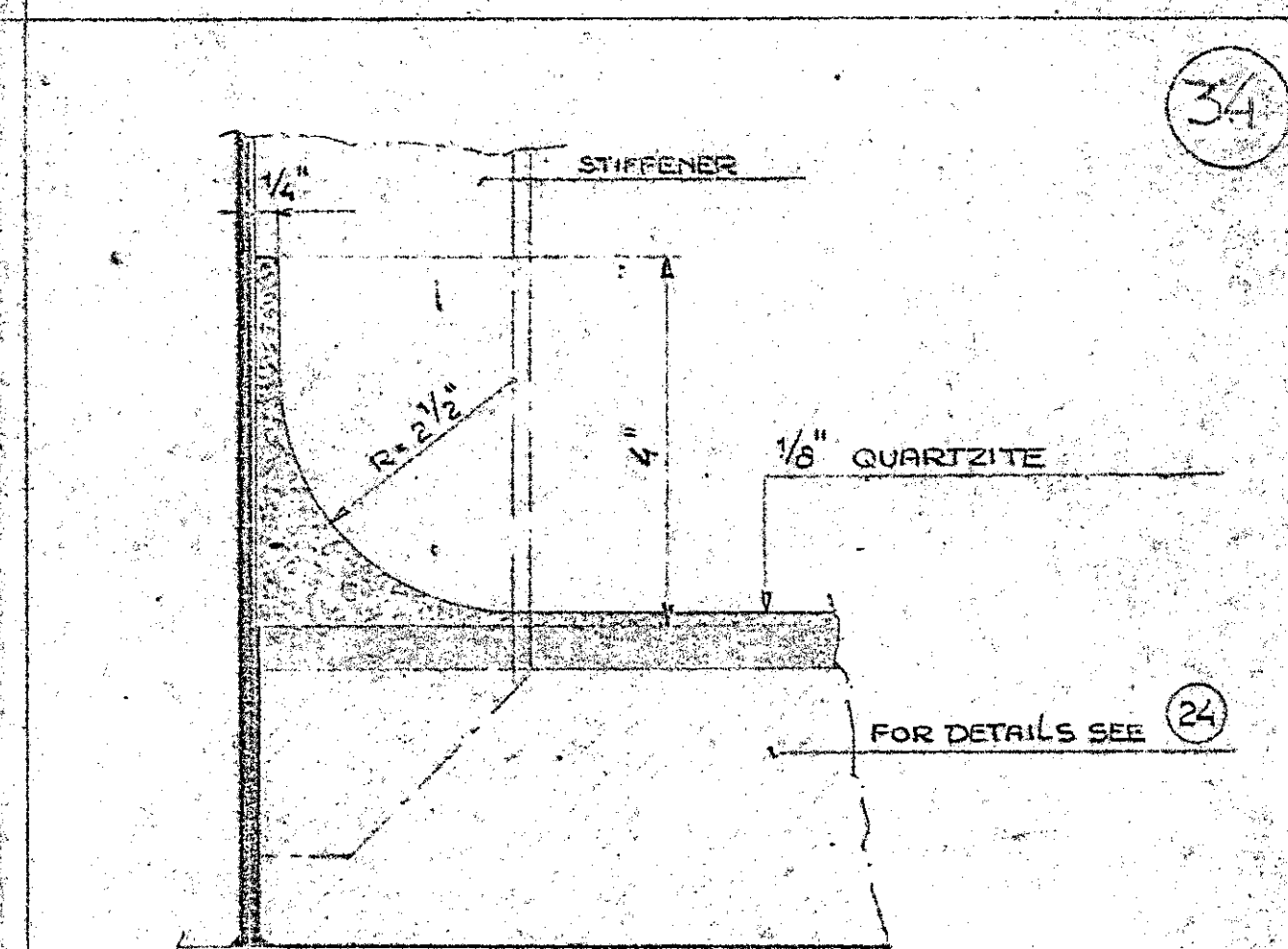
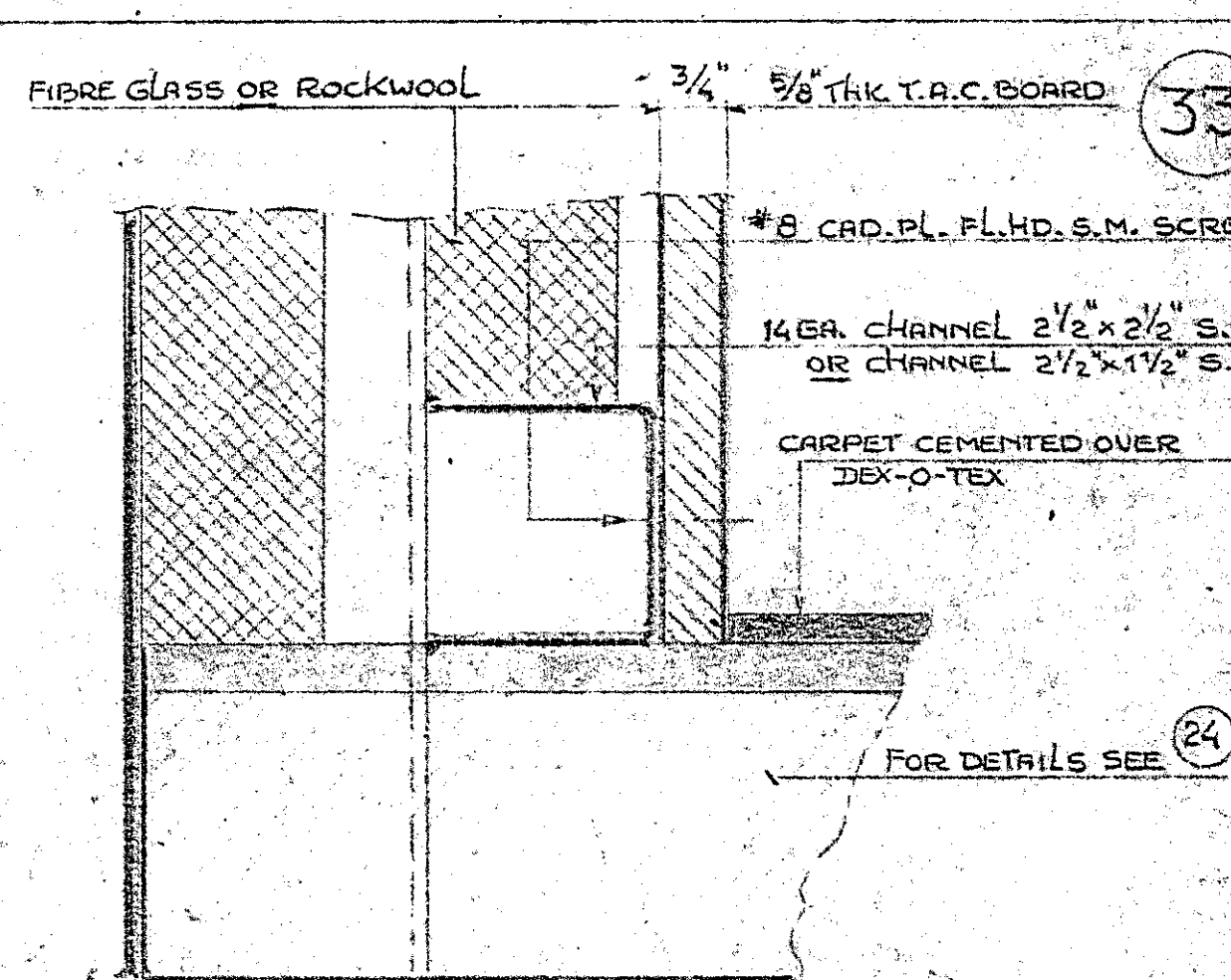
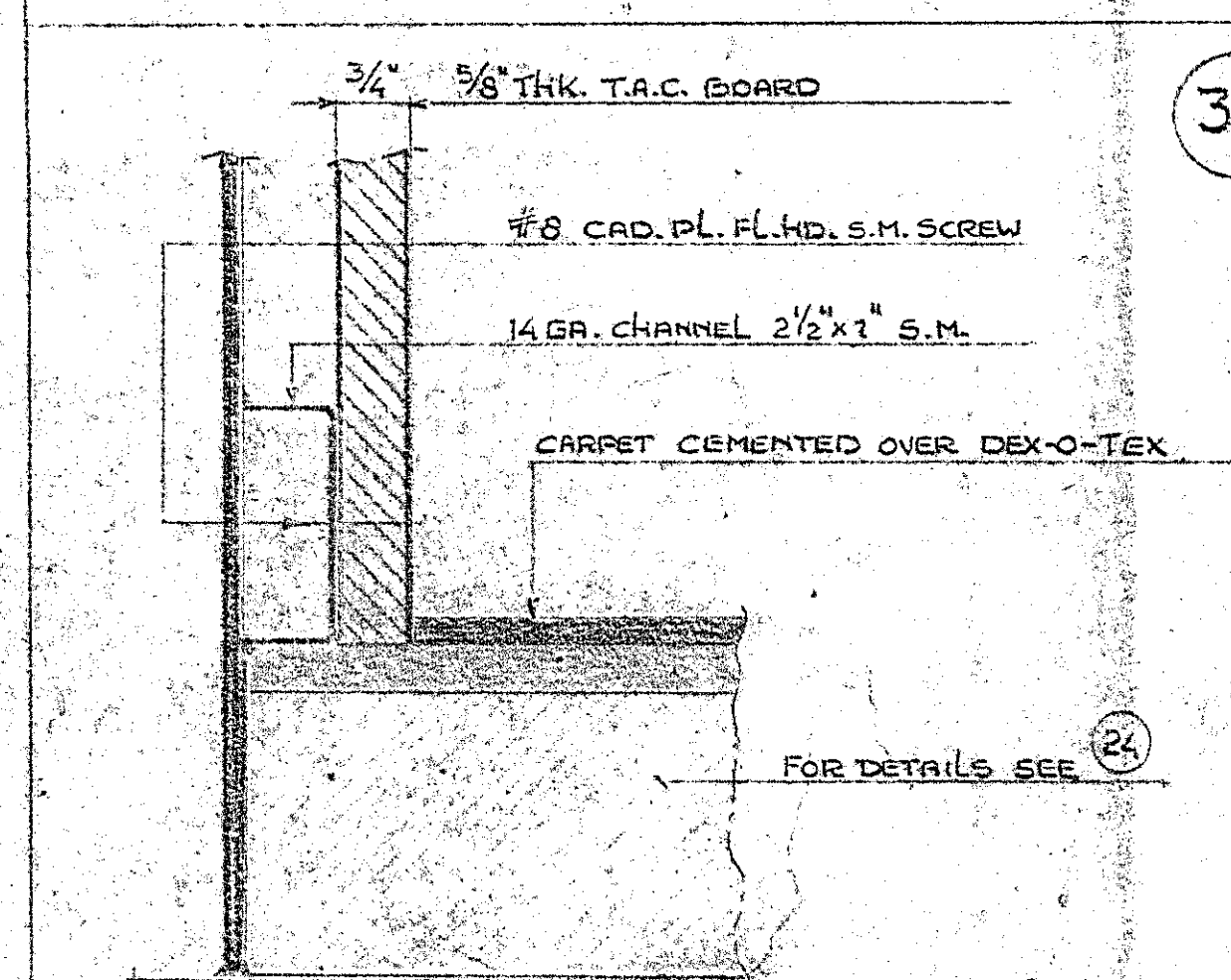
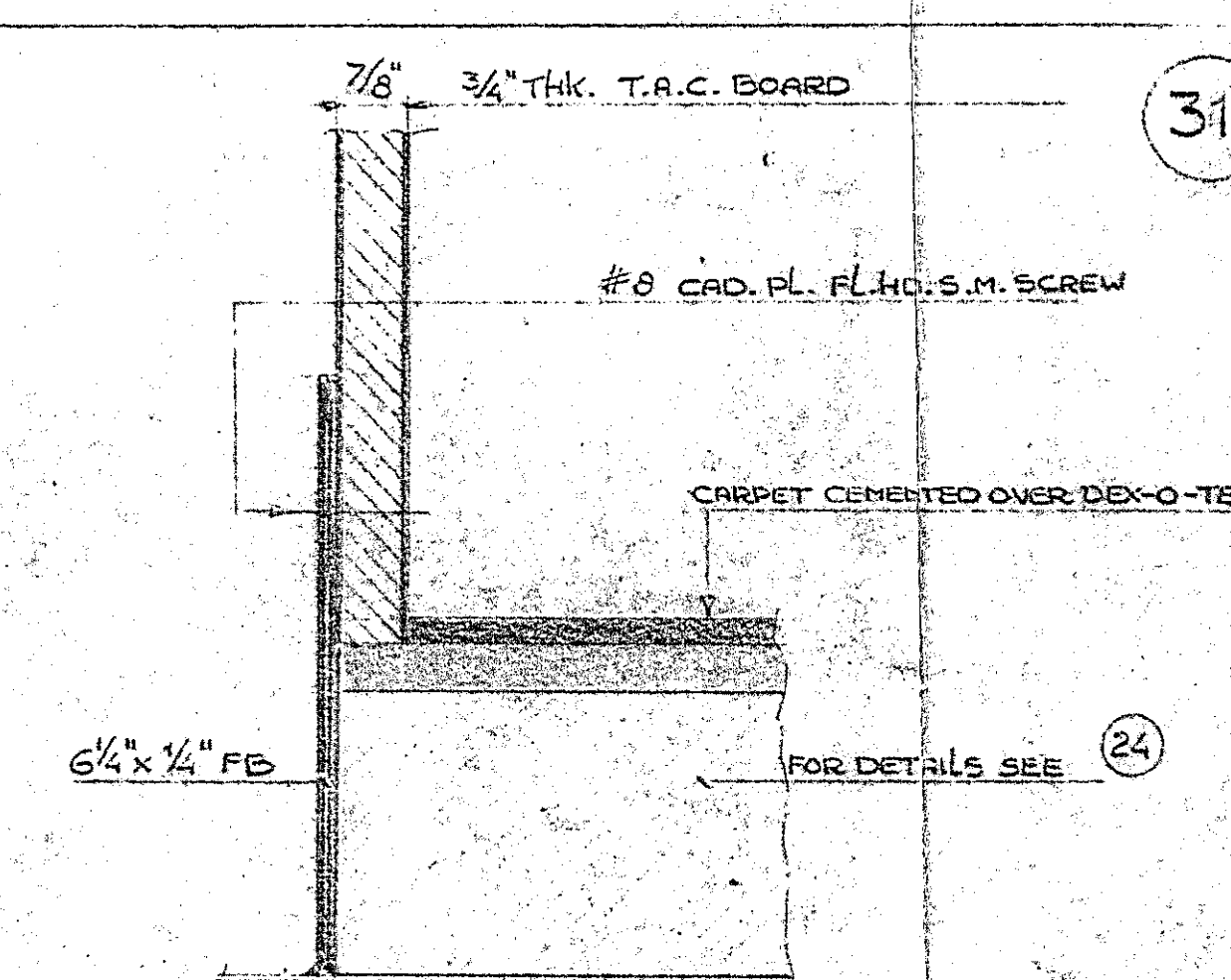
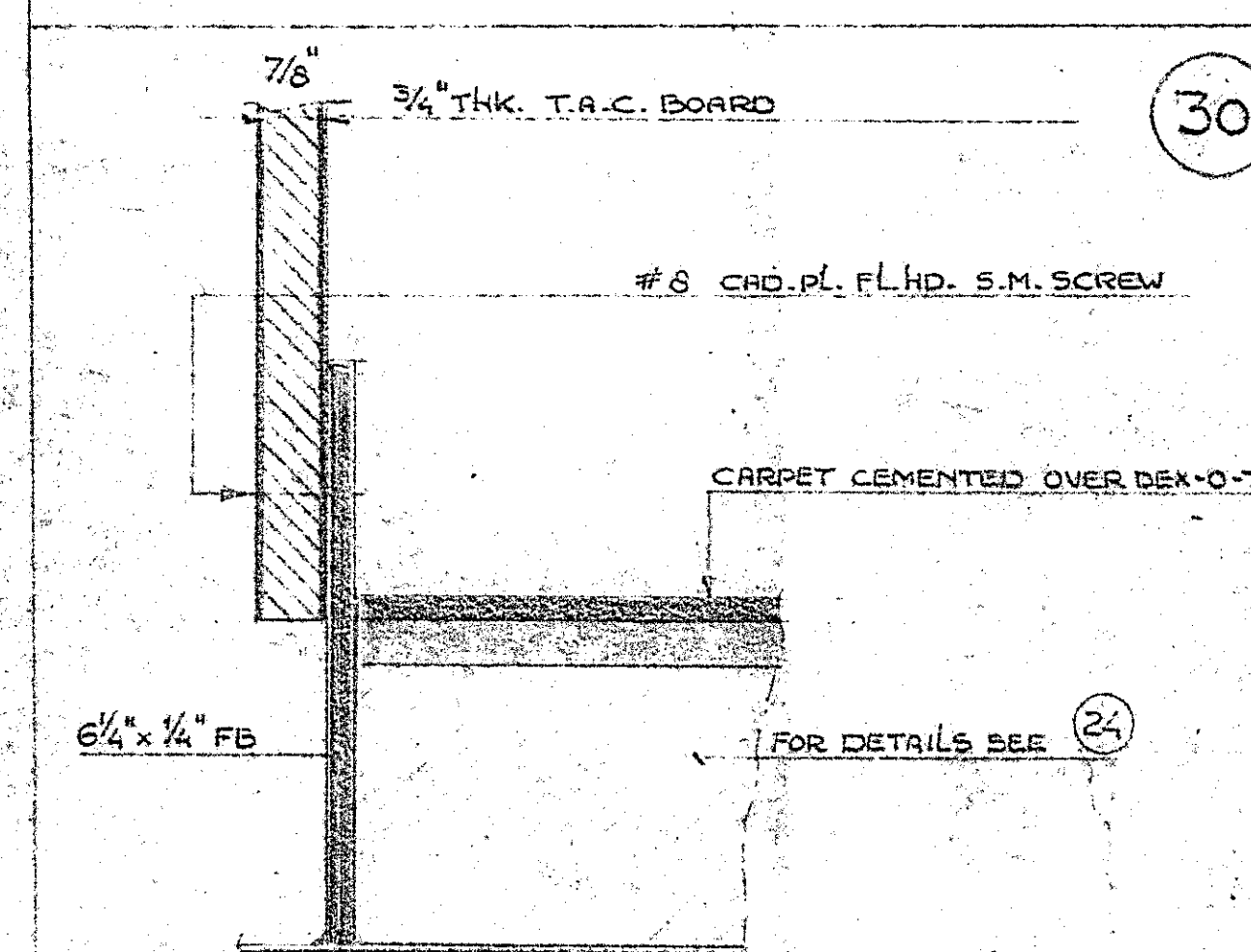
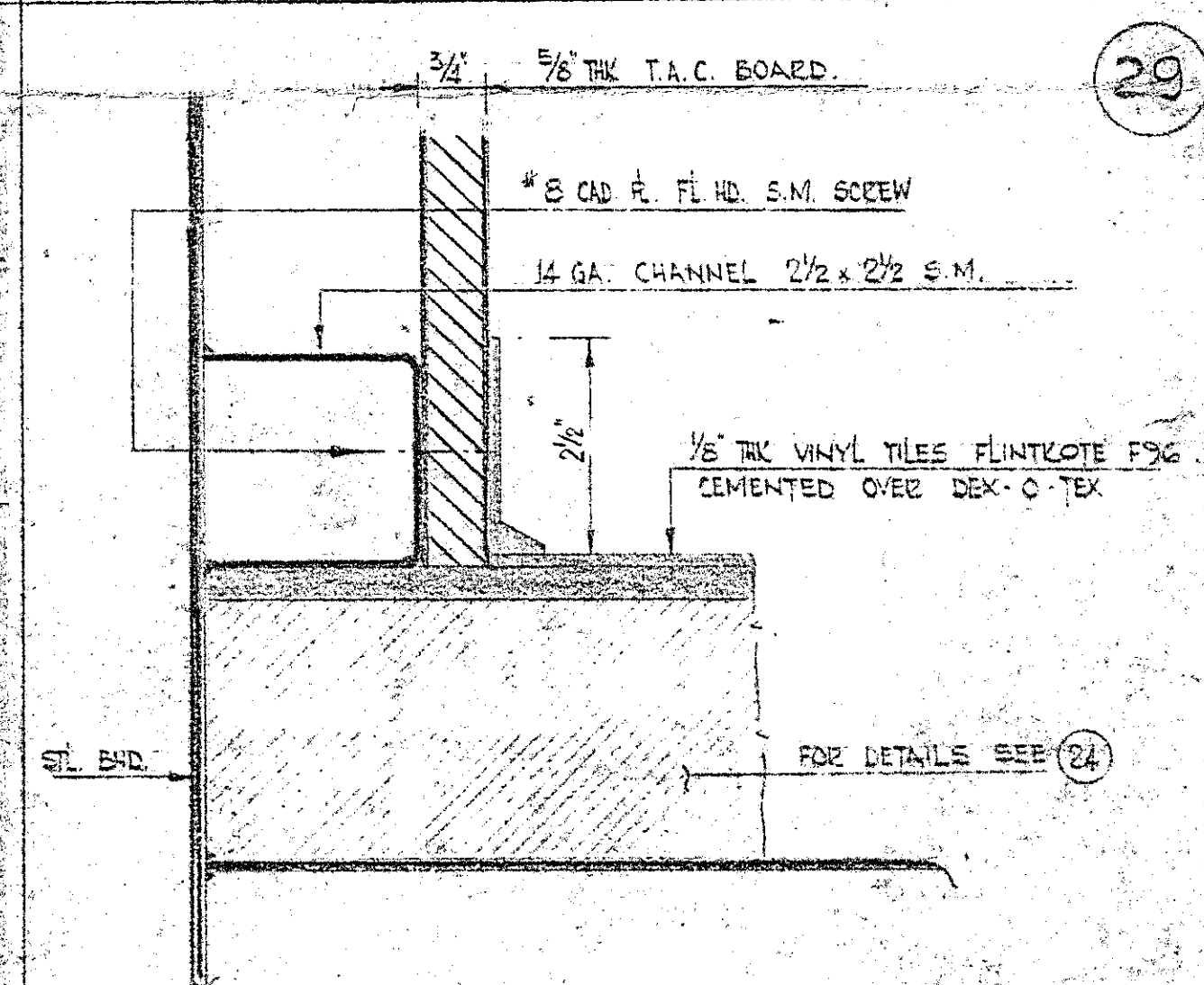
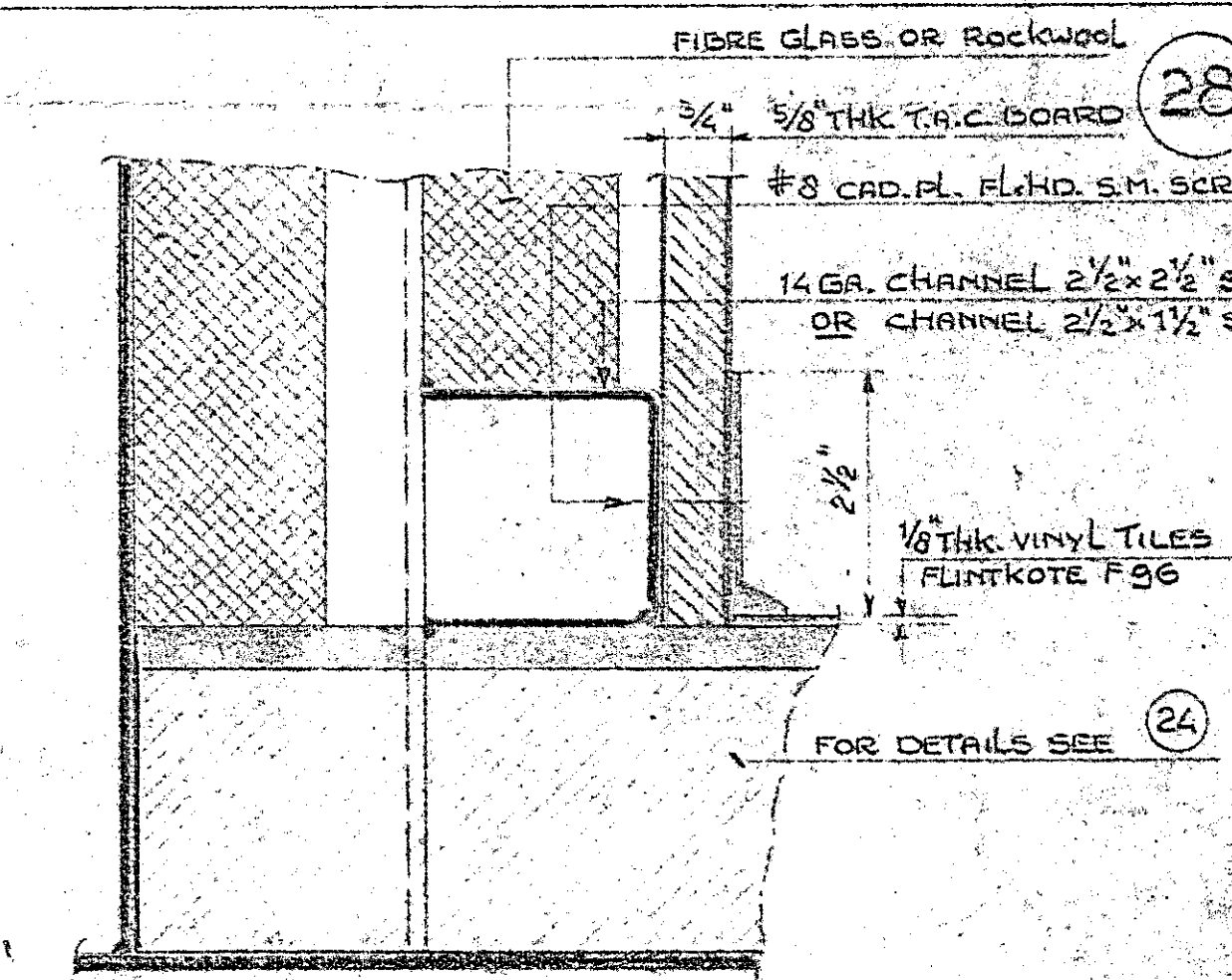
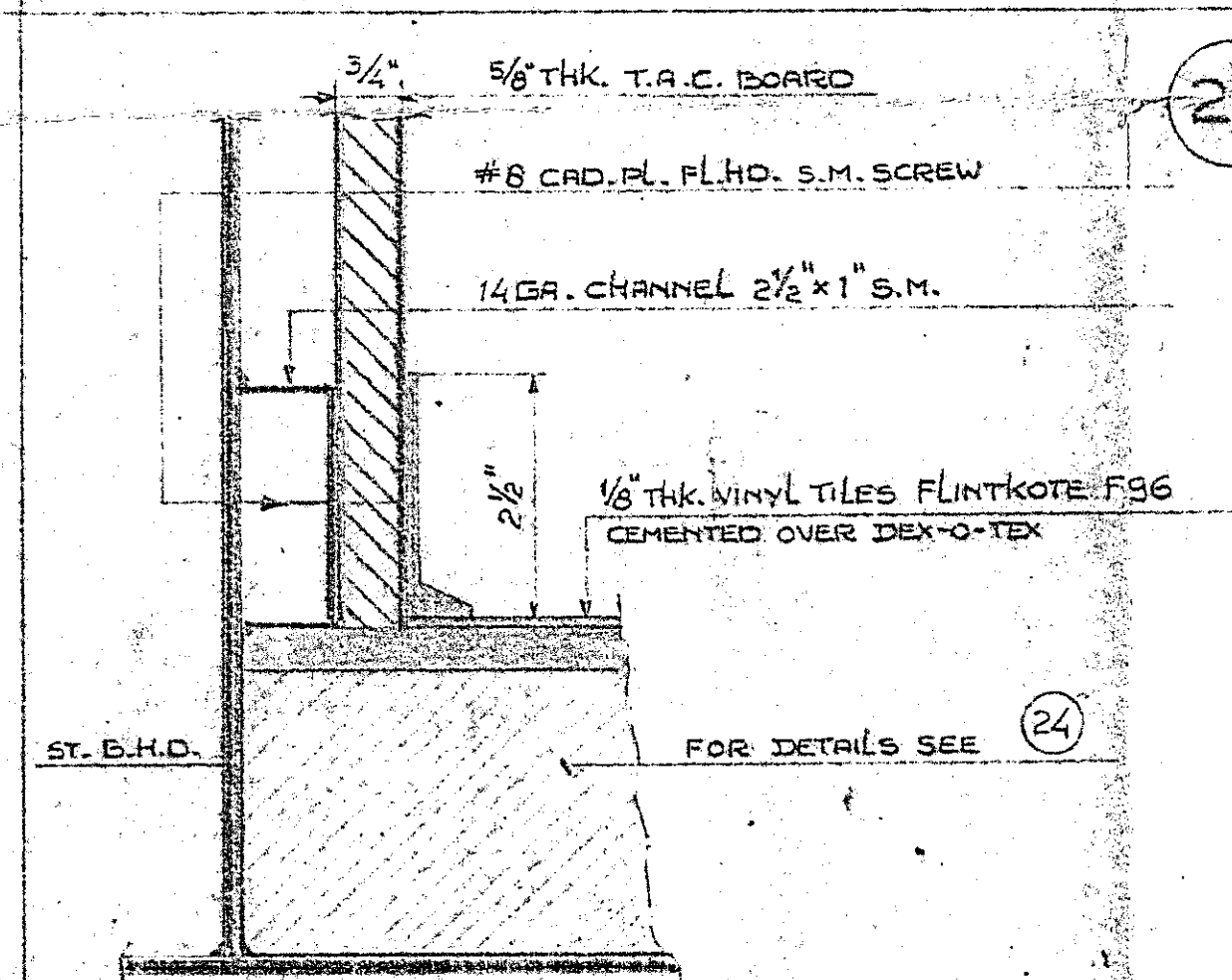
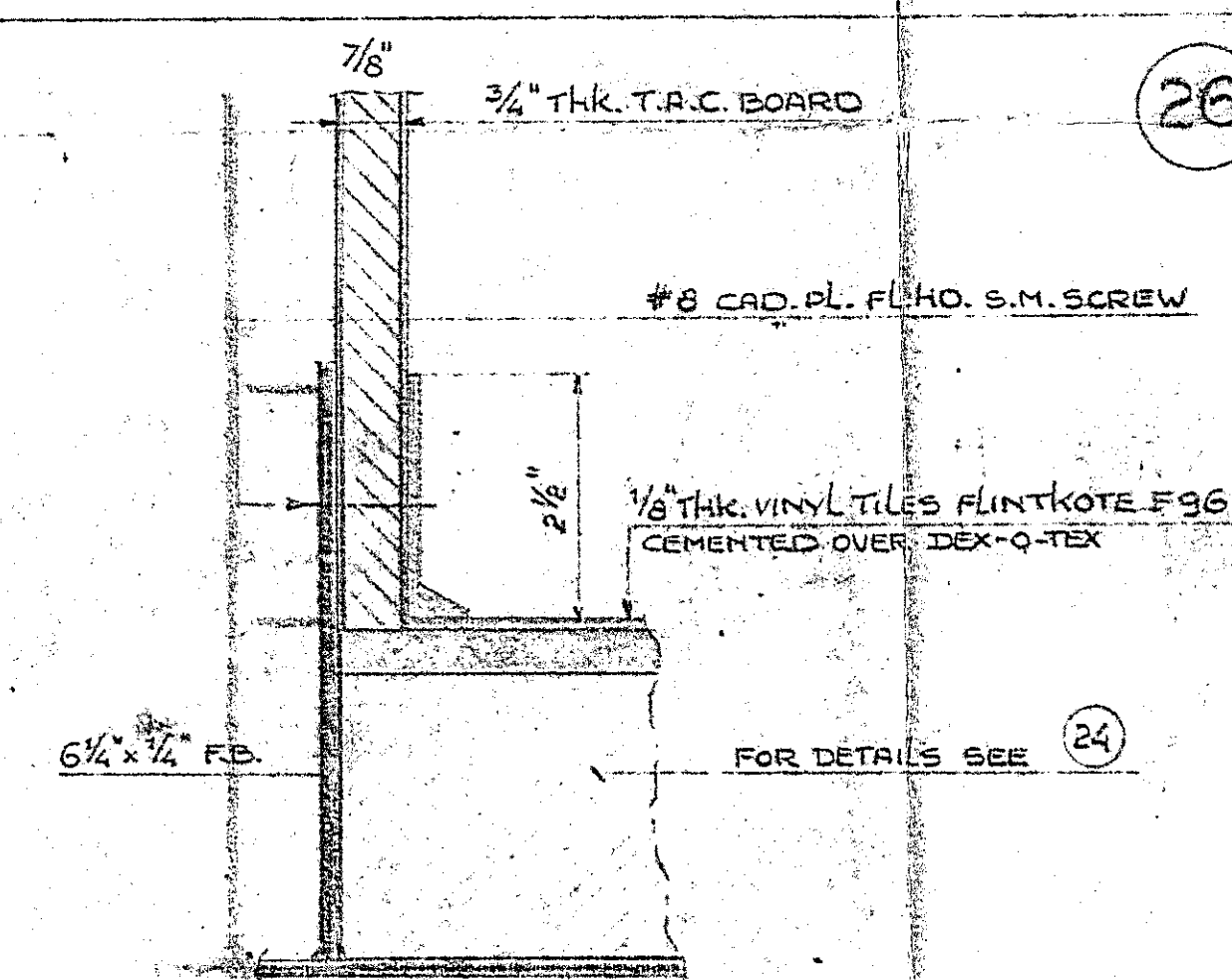
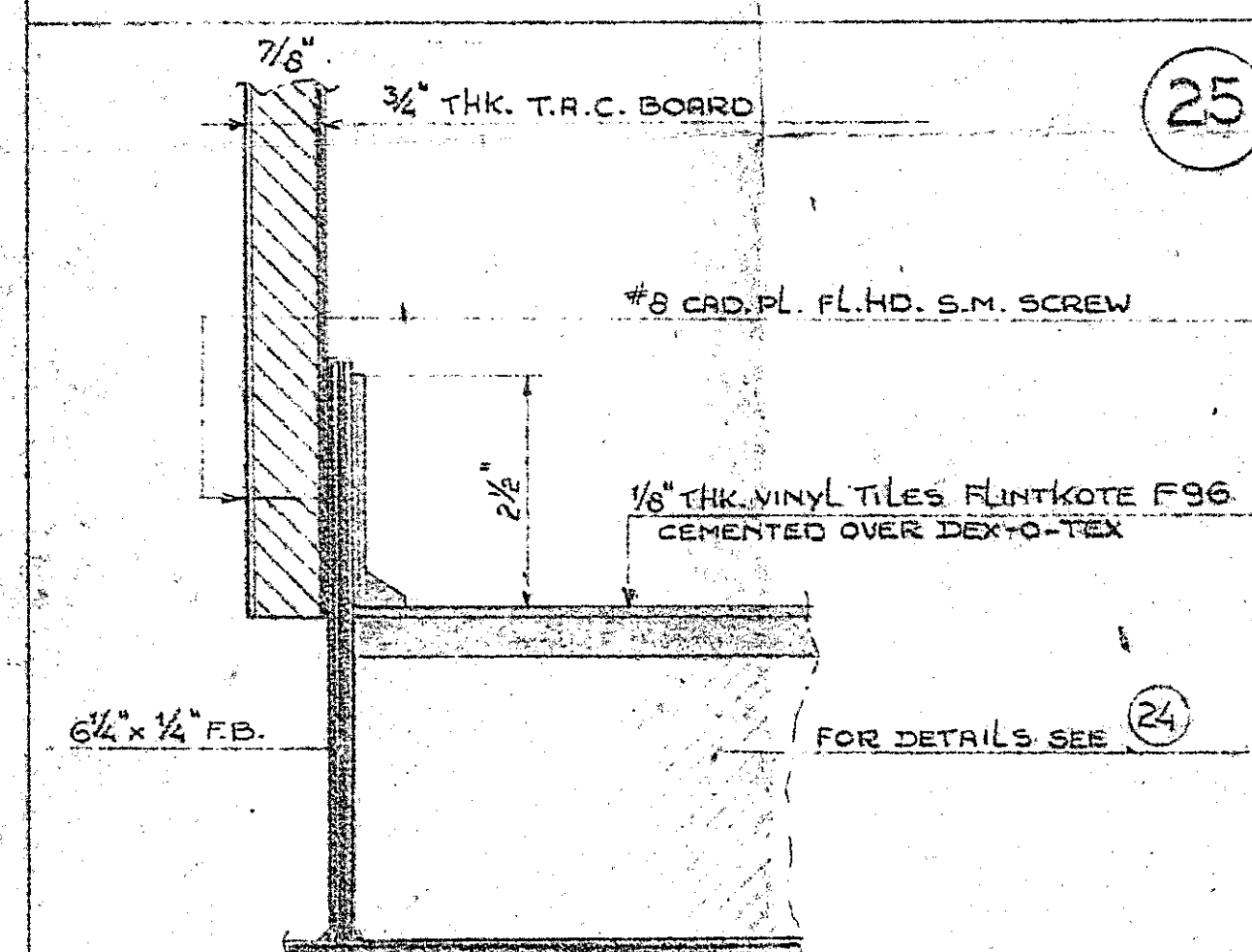
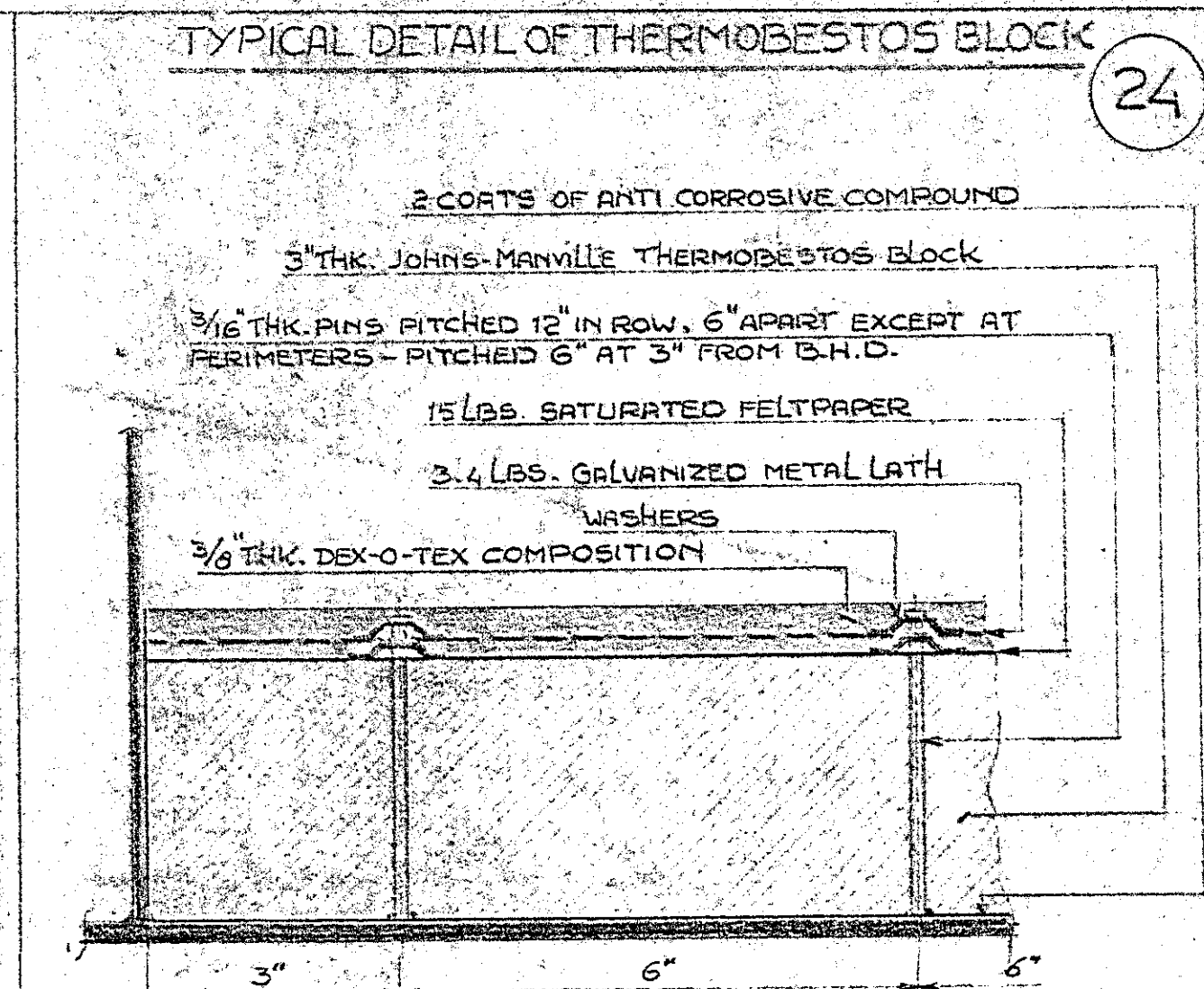
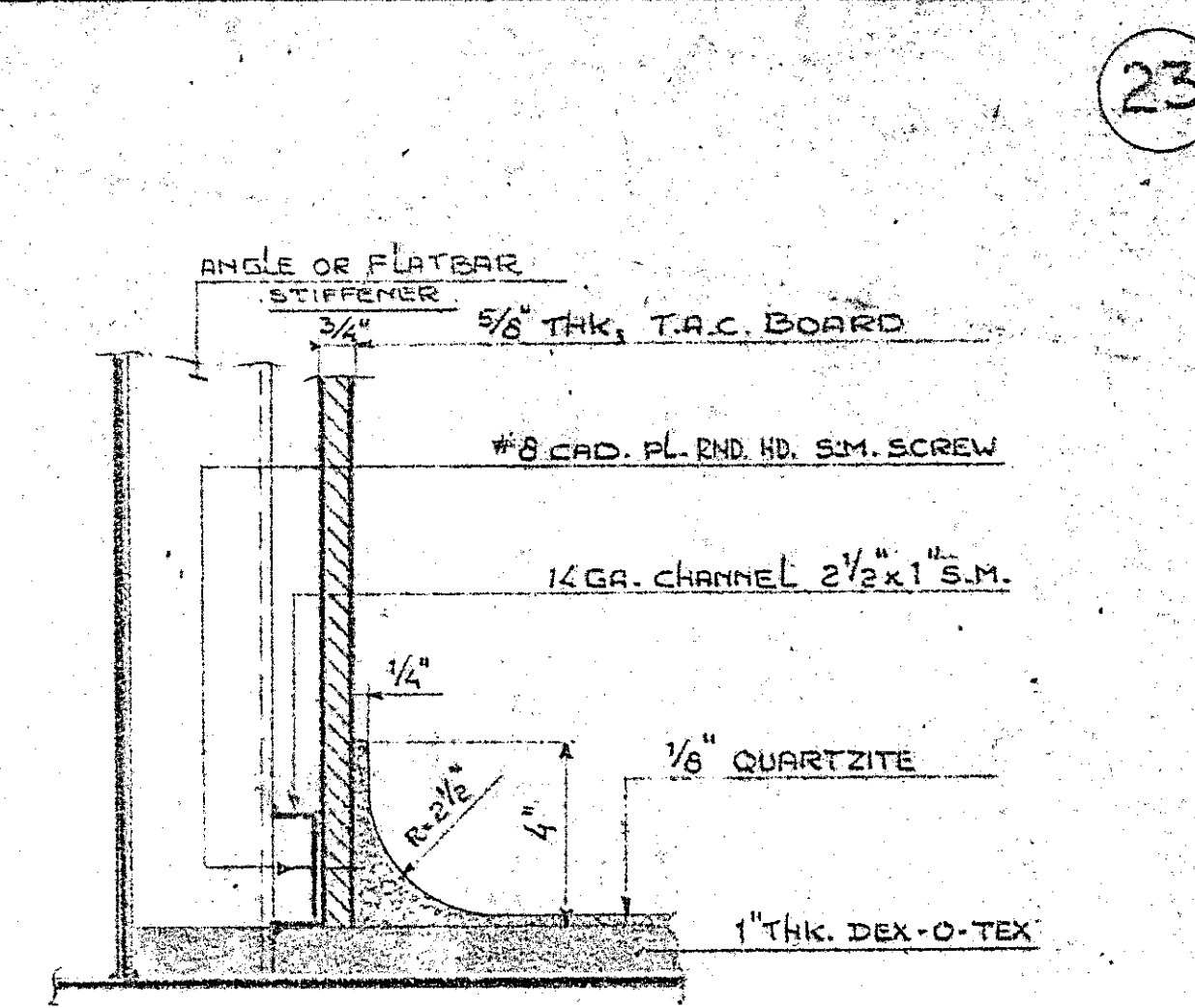
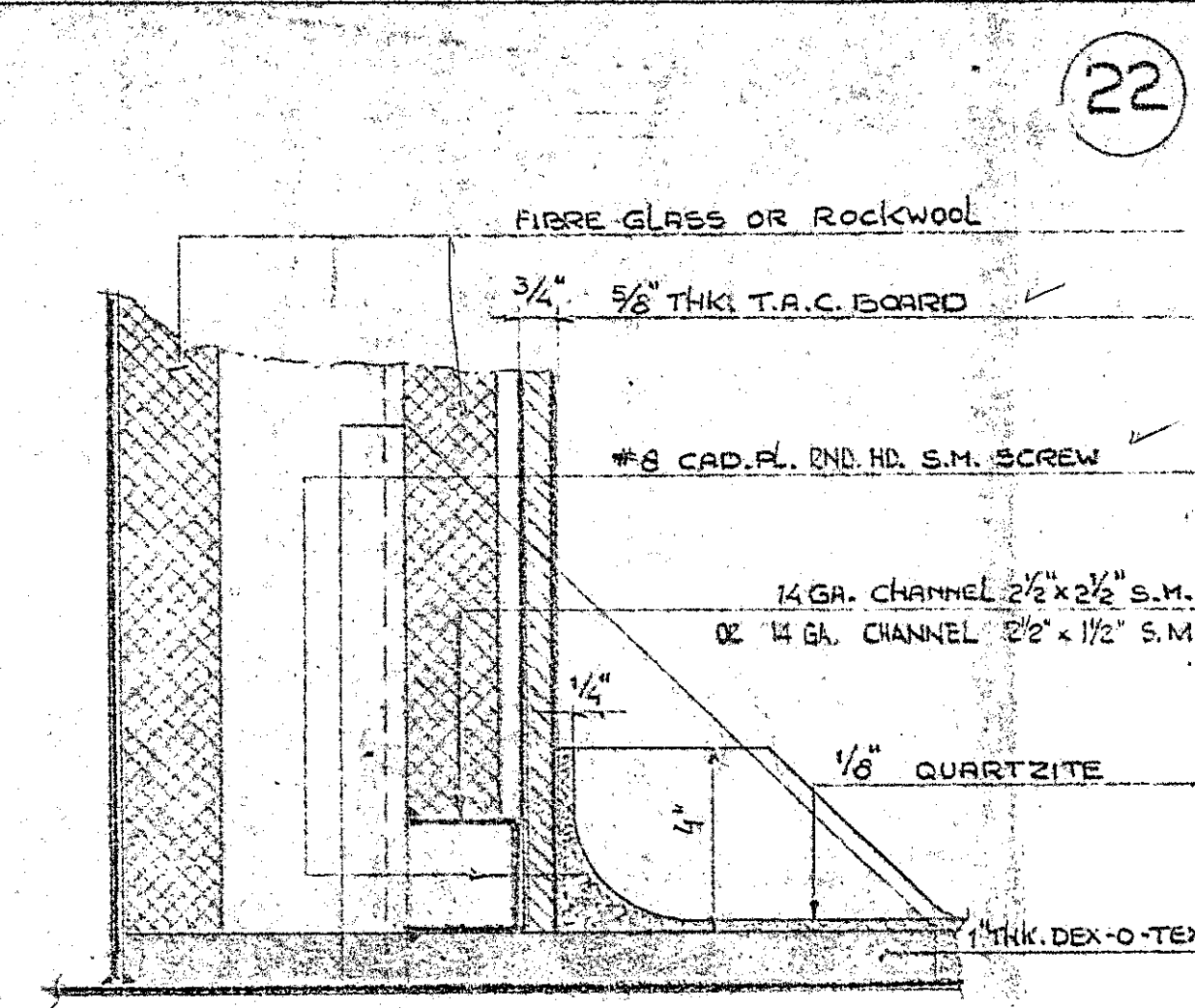
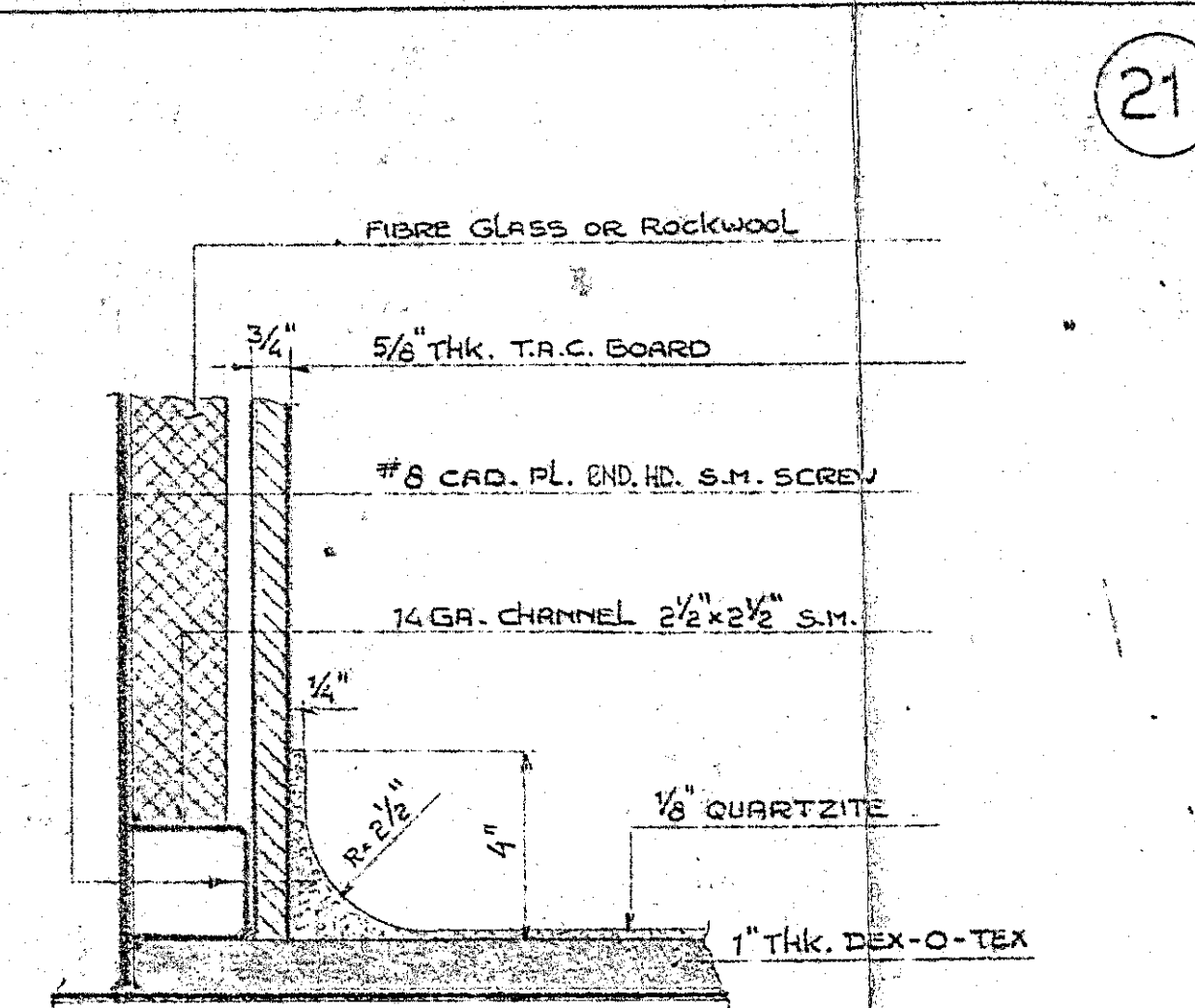
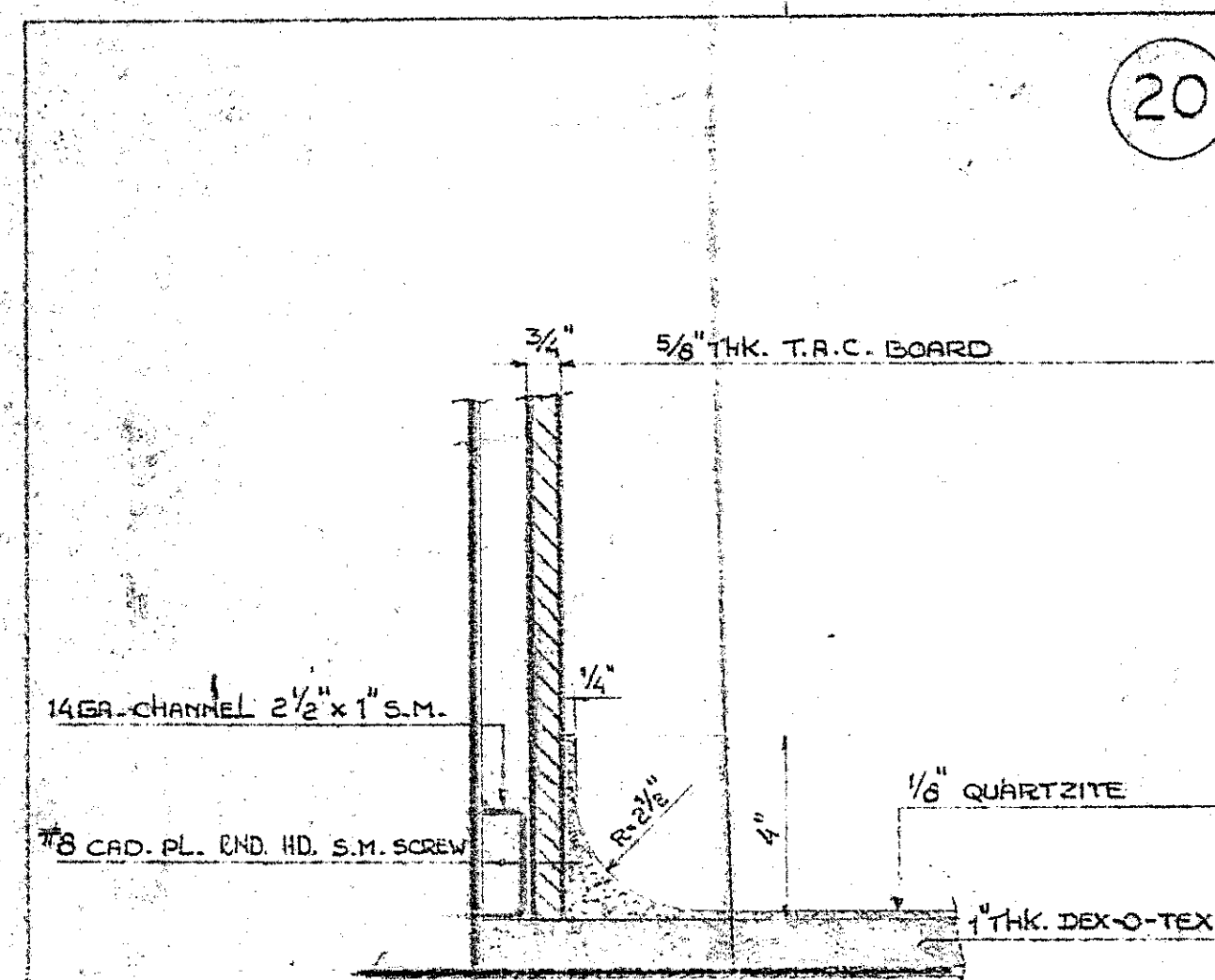
OR SUSPENDED CEILING



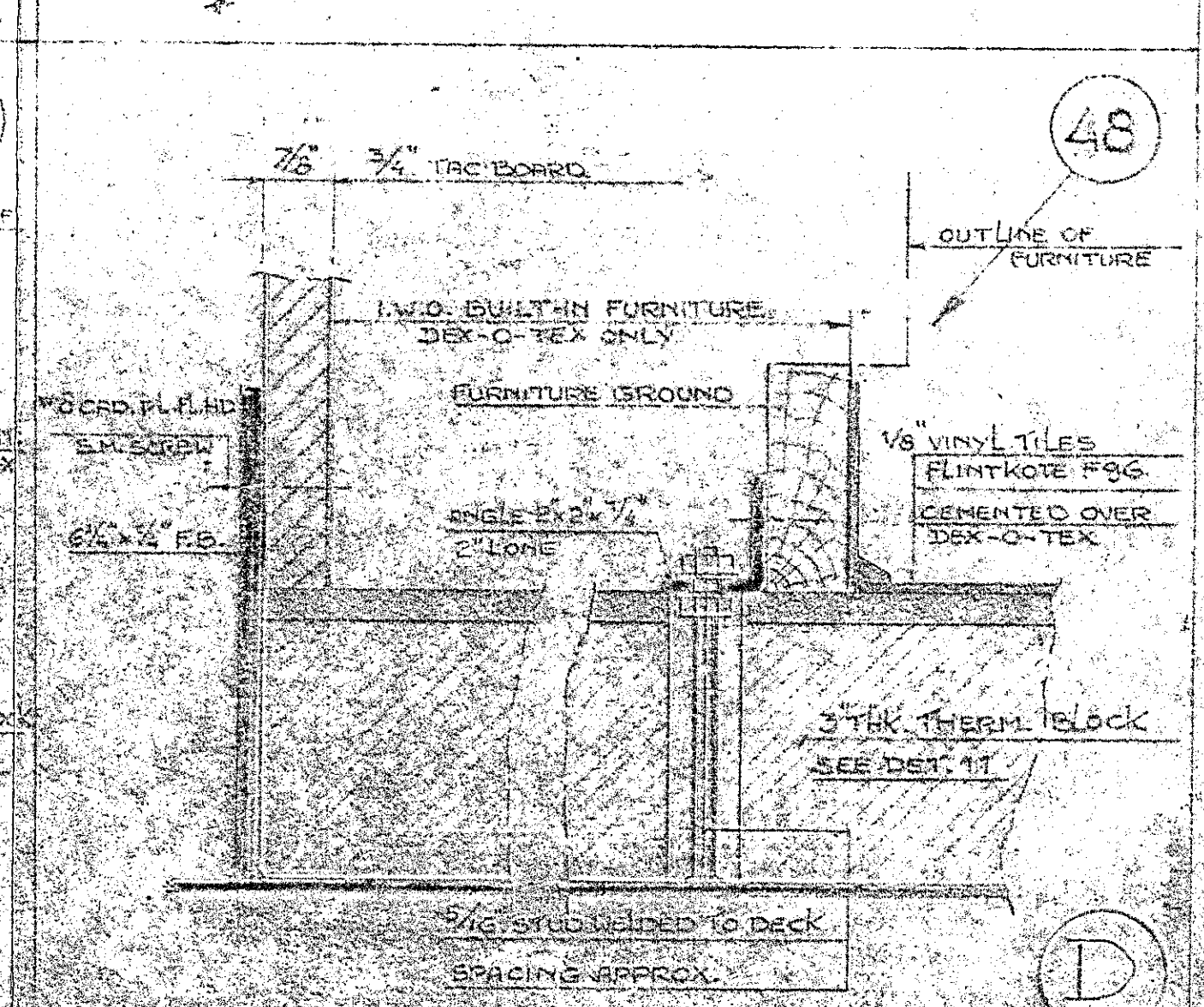
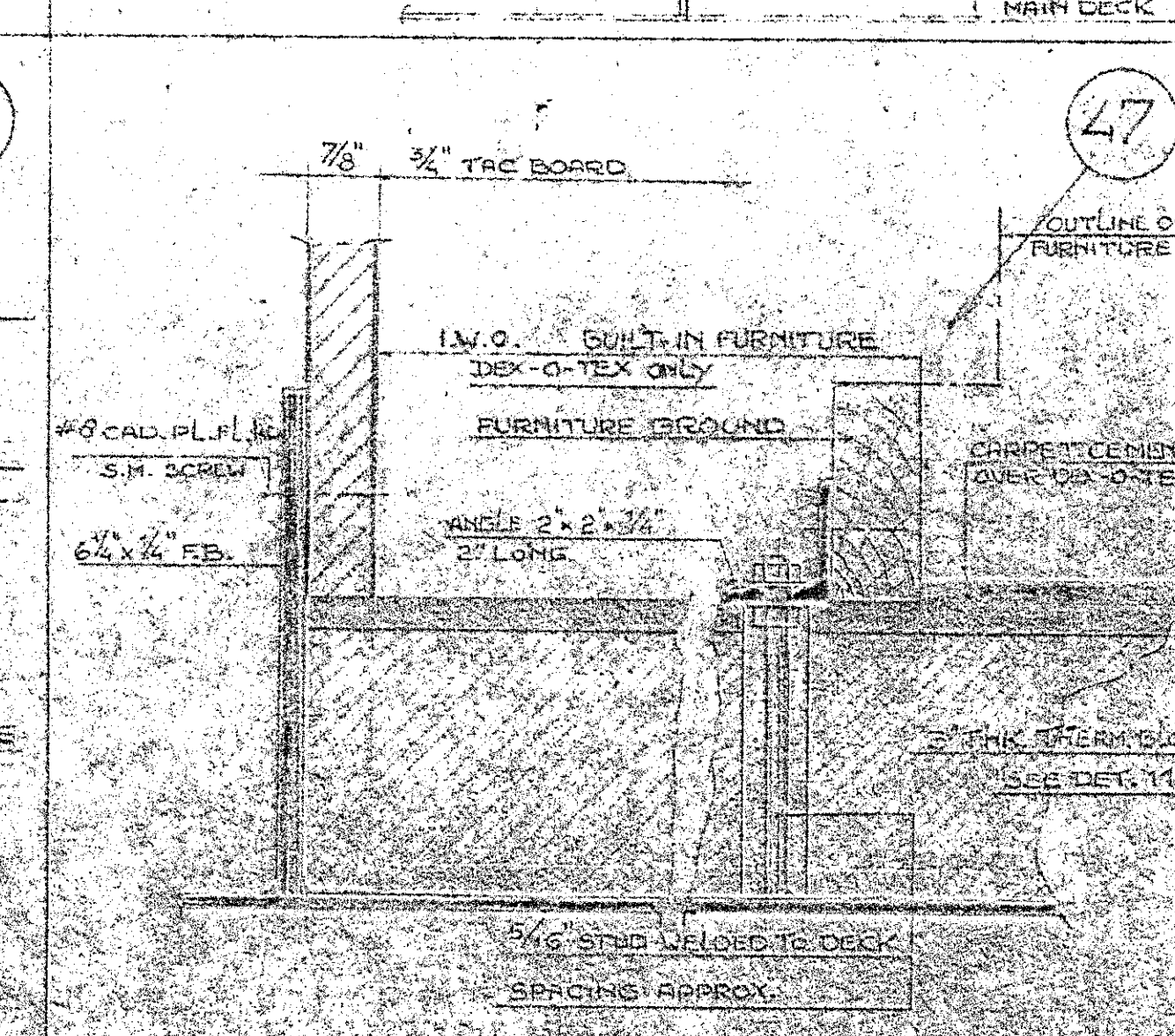
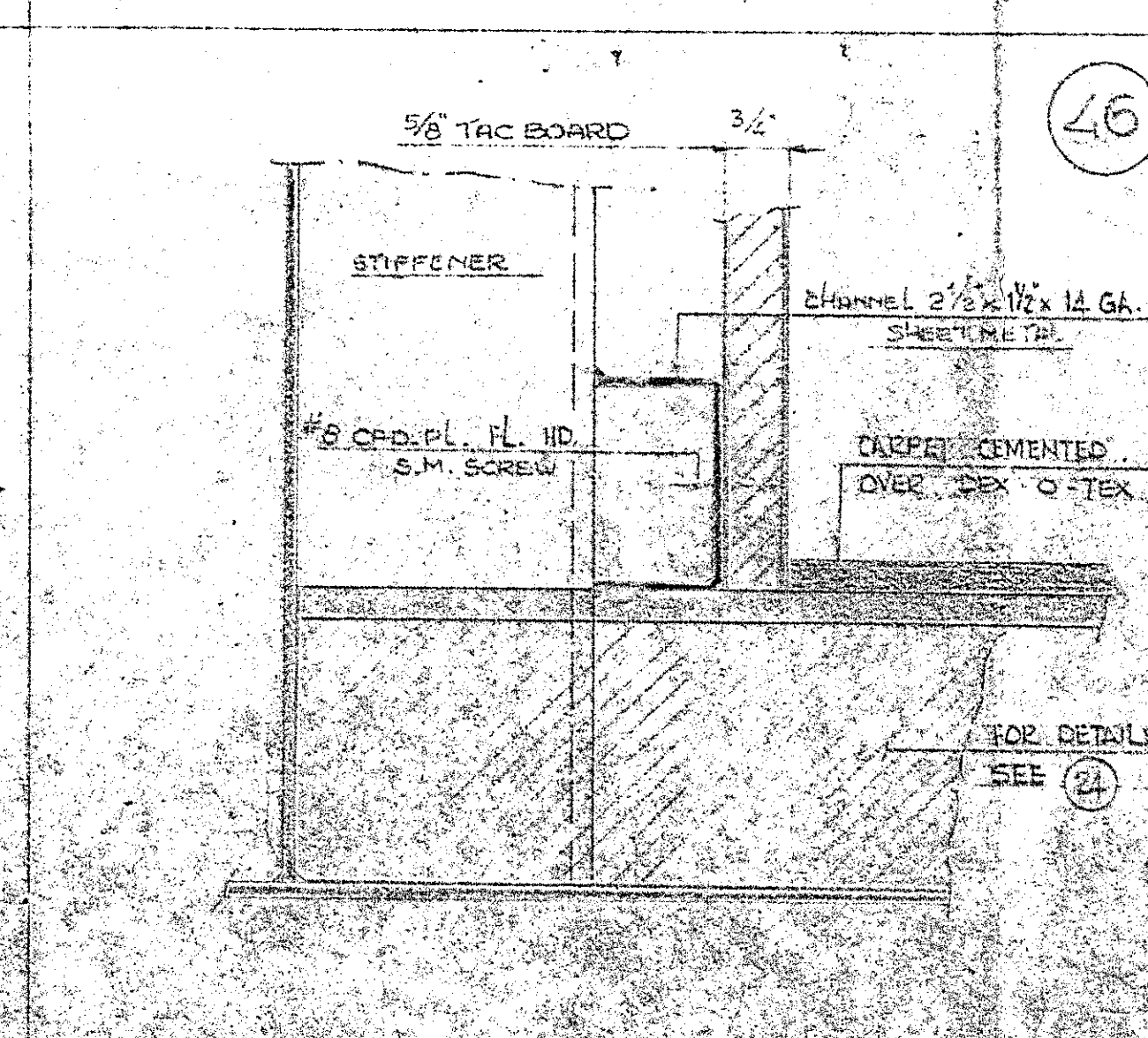
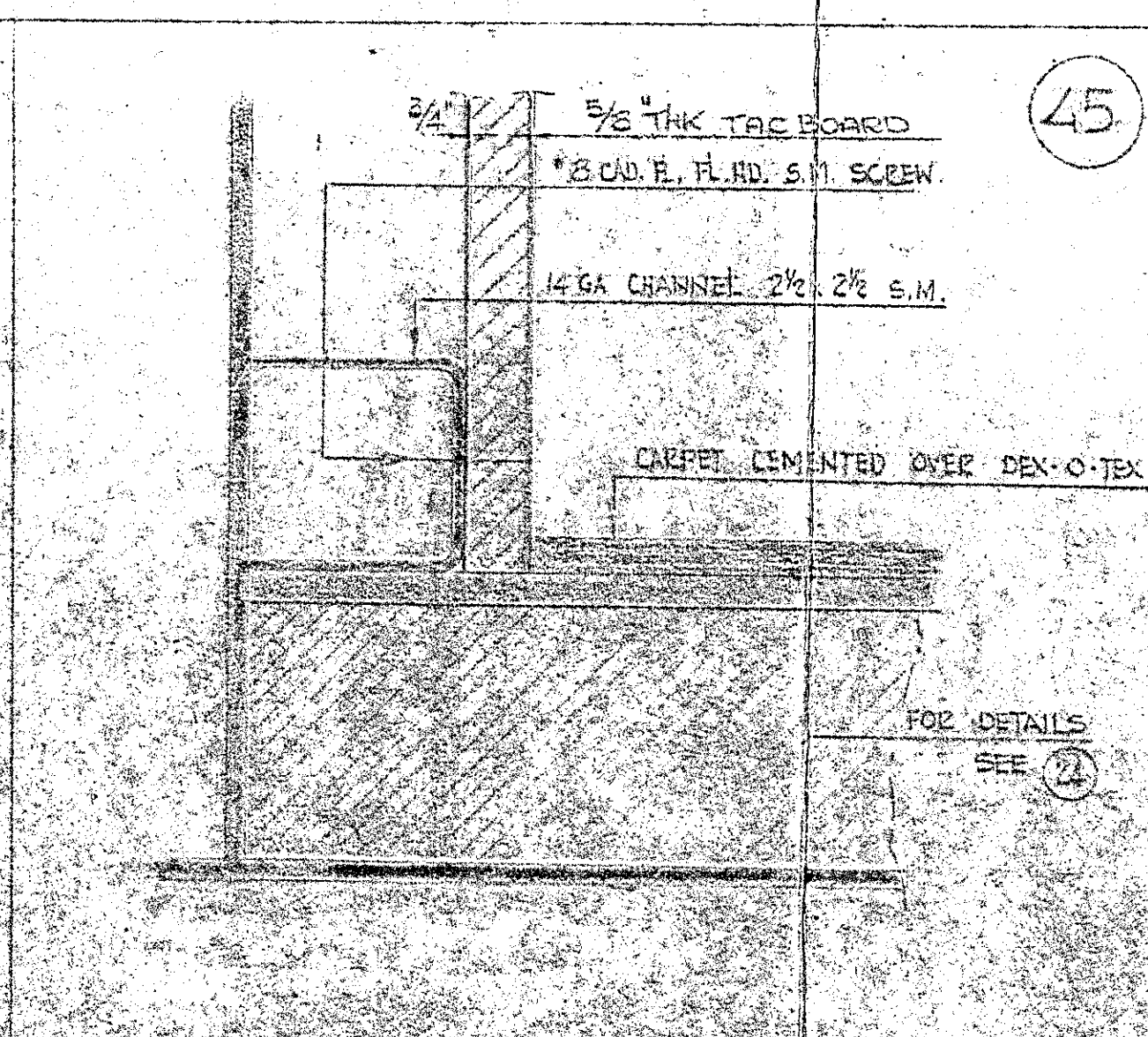
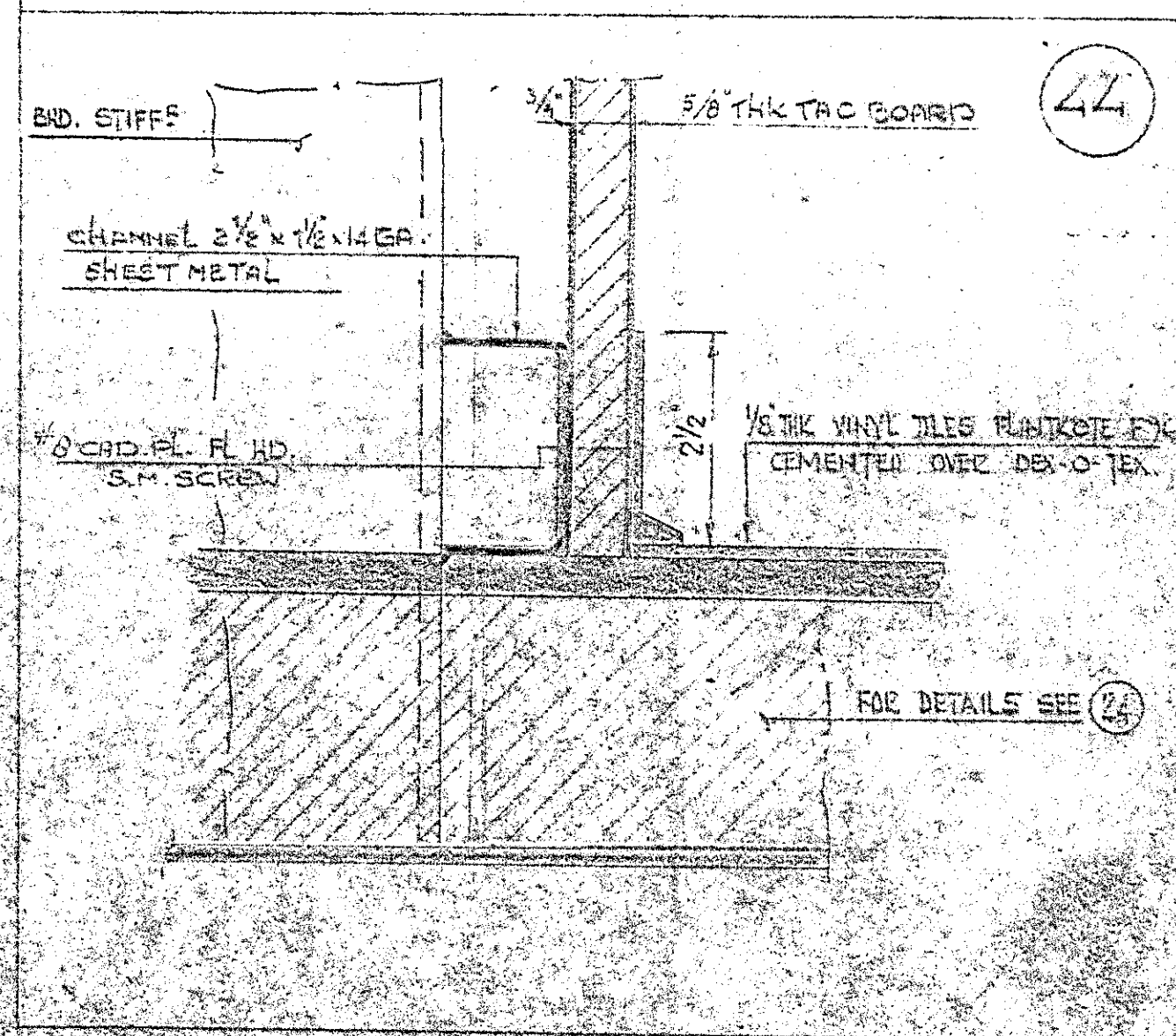
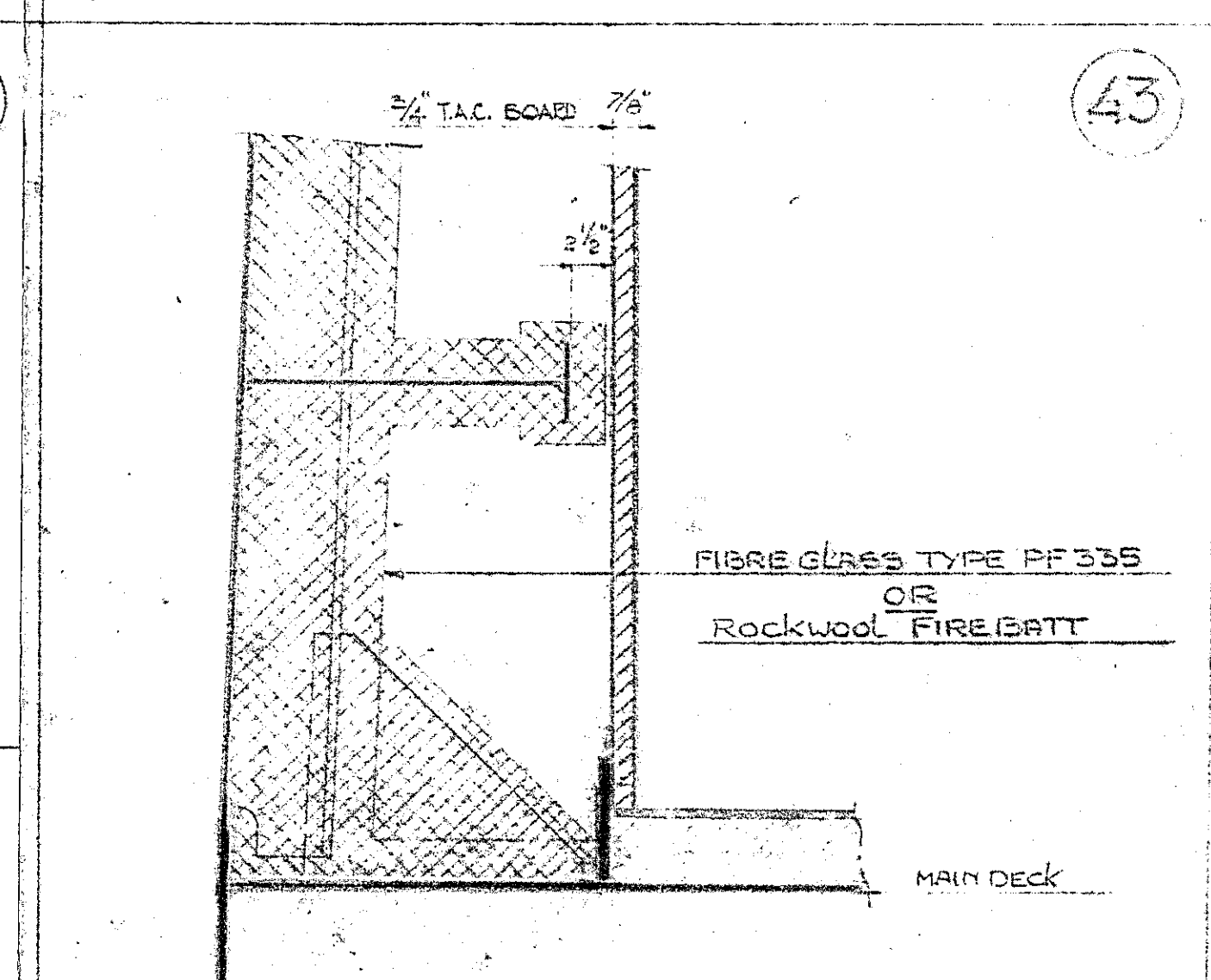
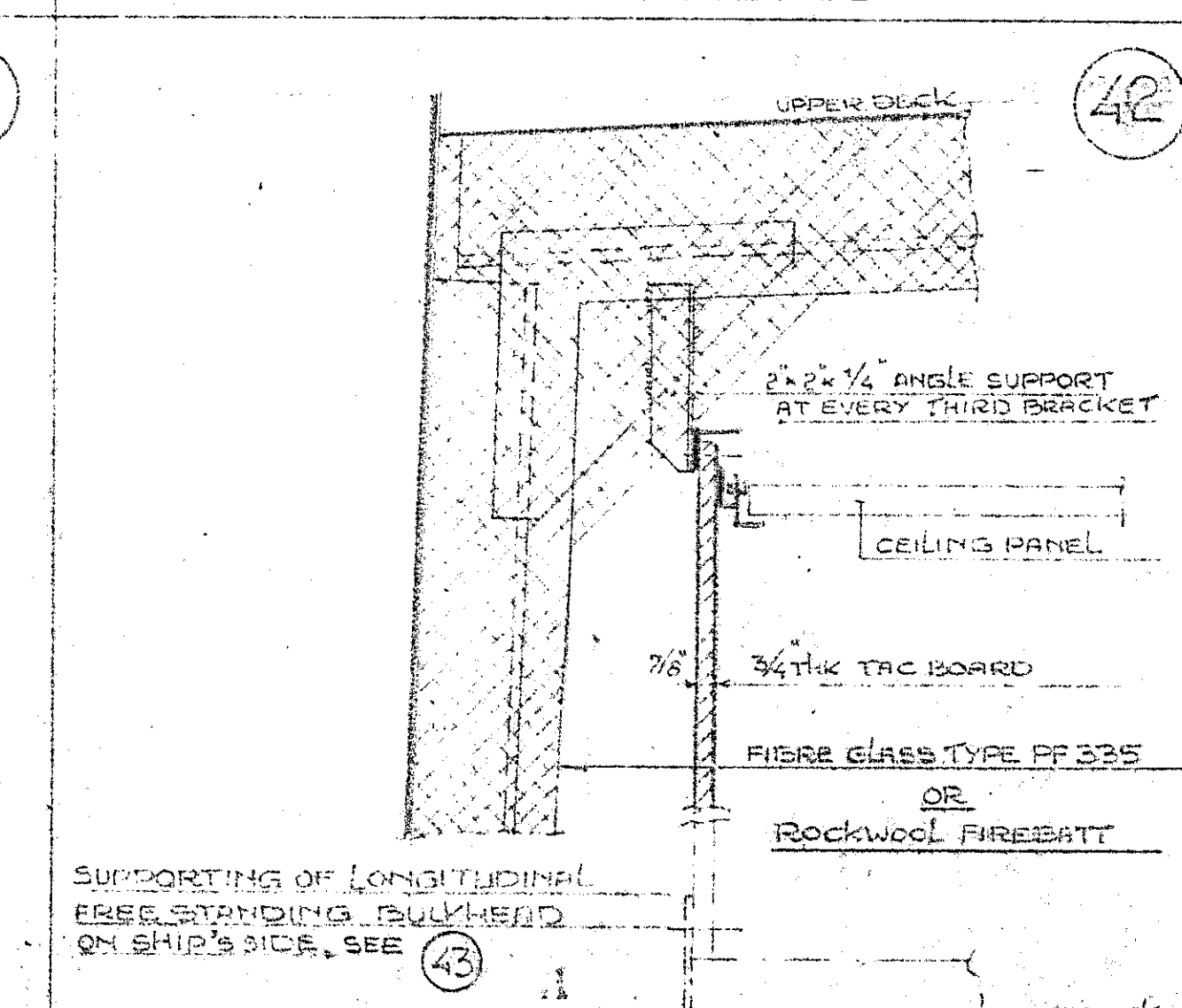
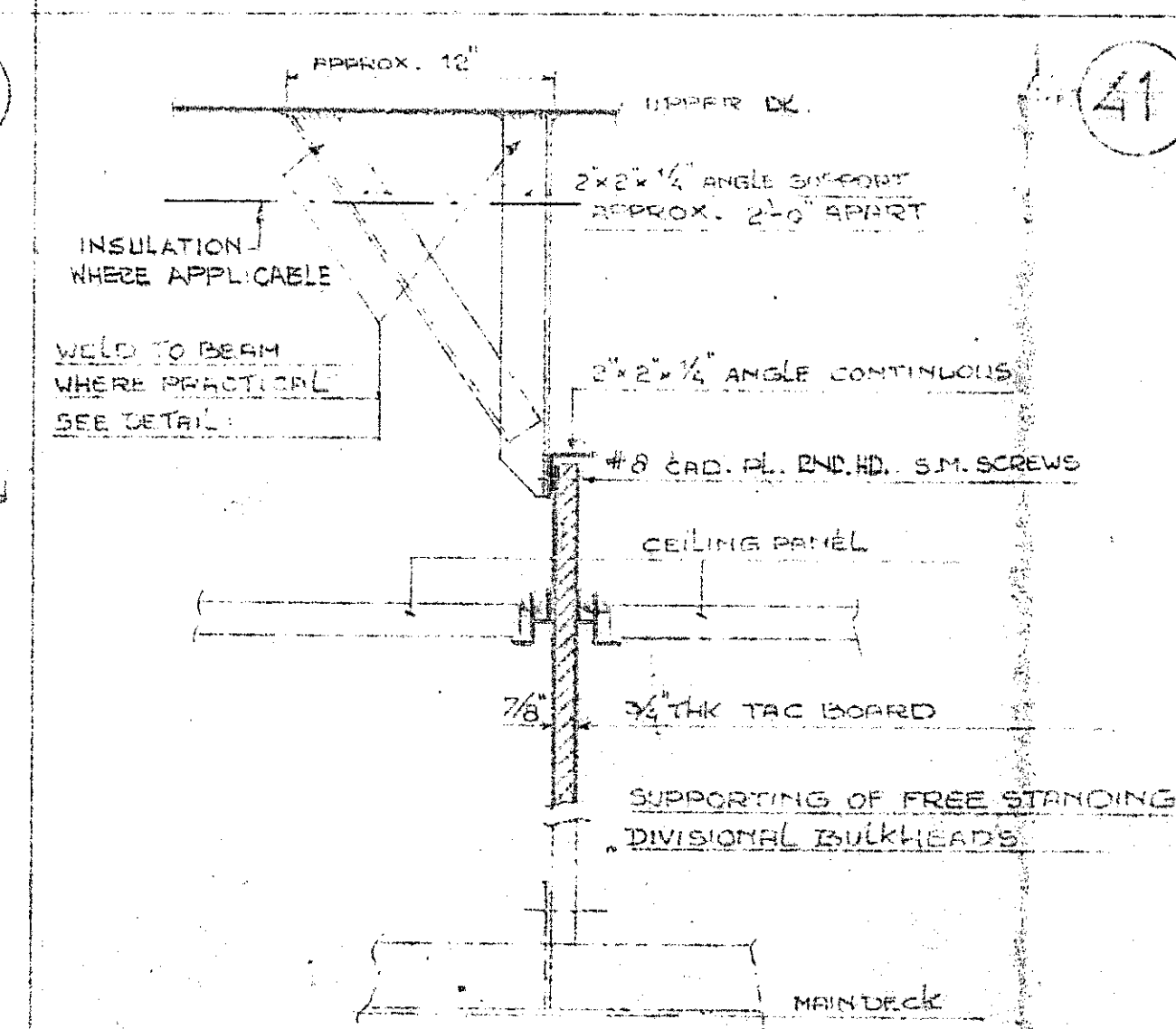
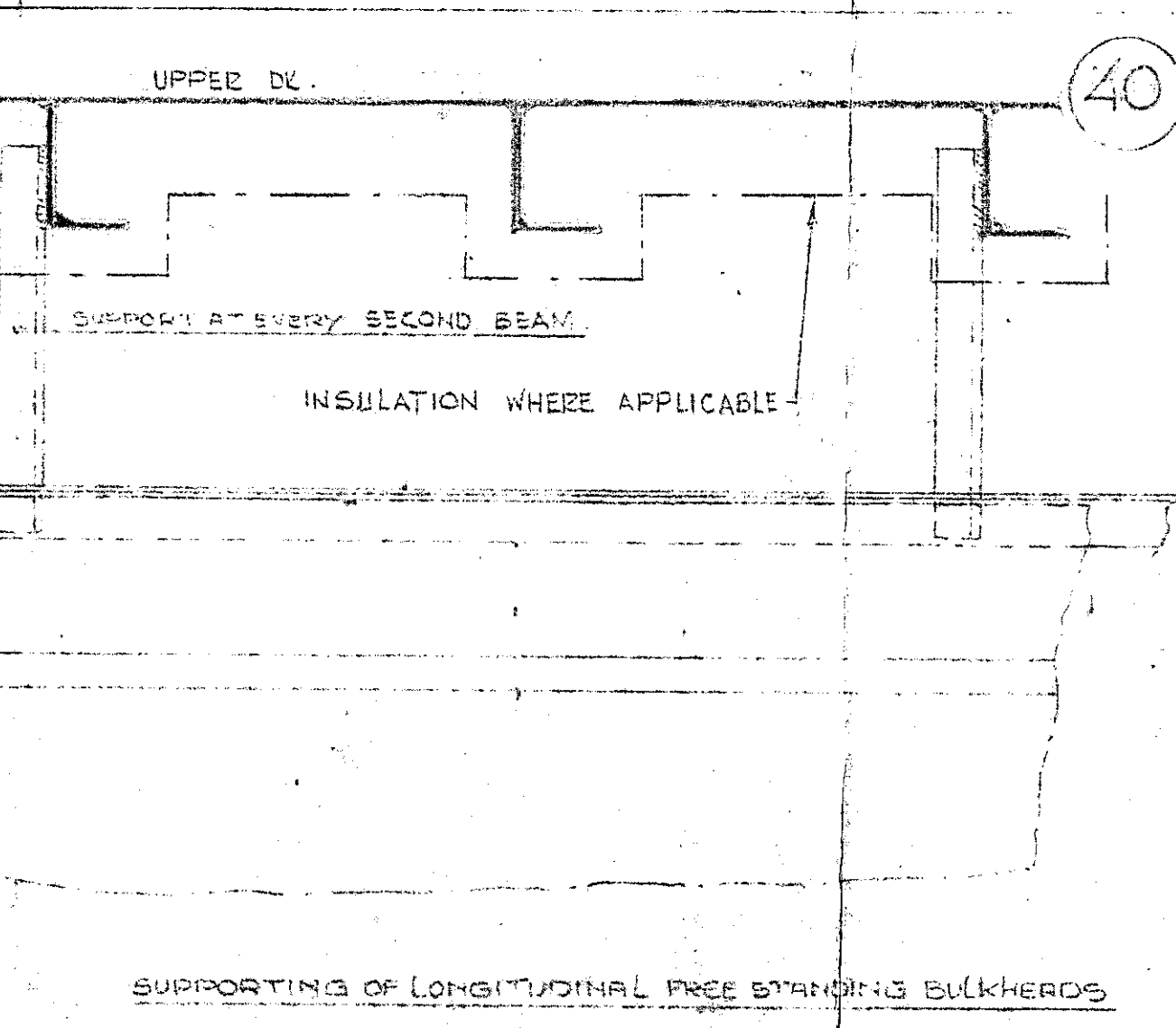
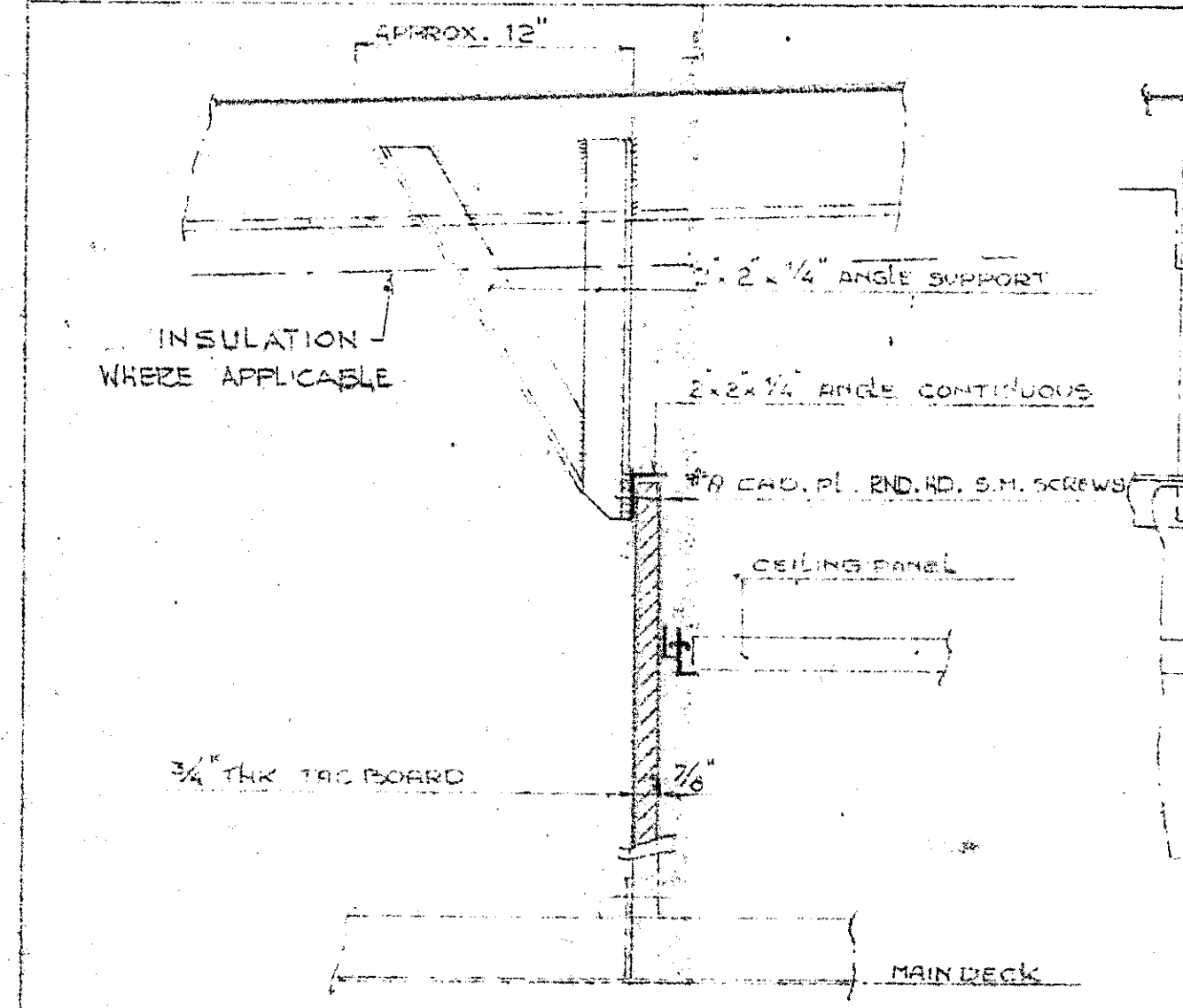
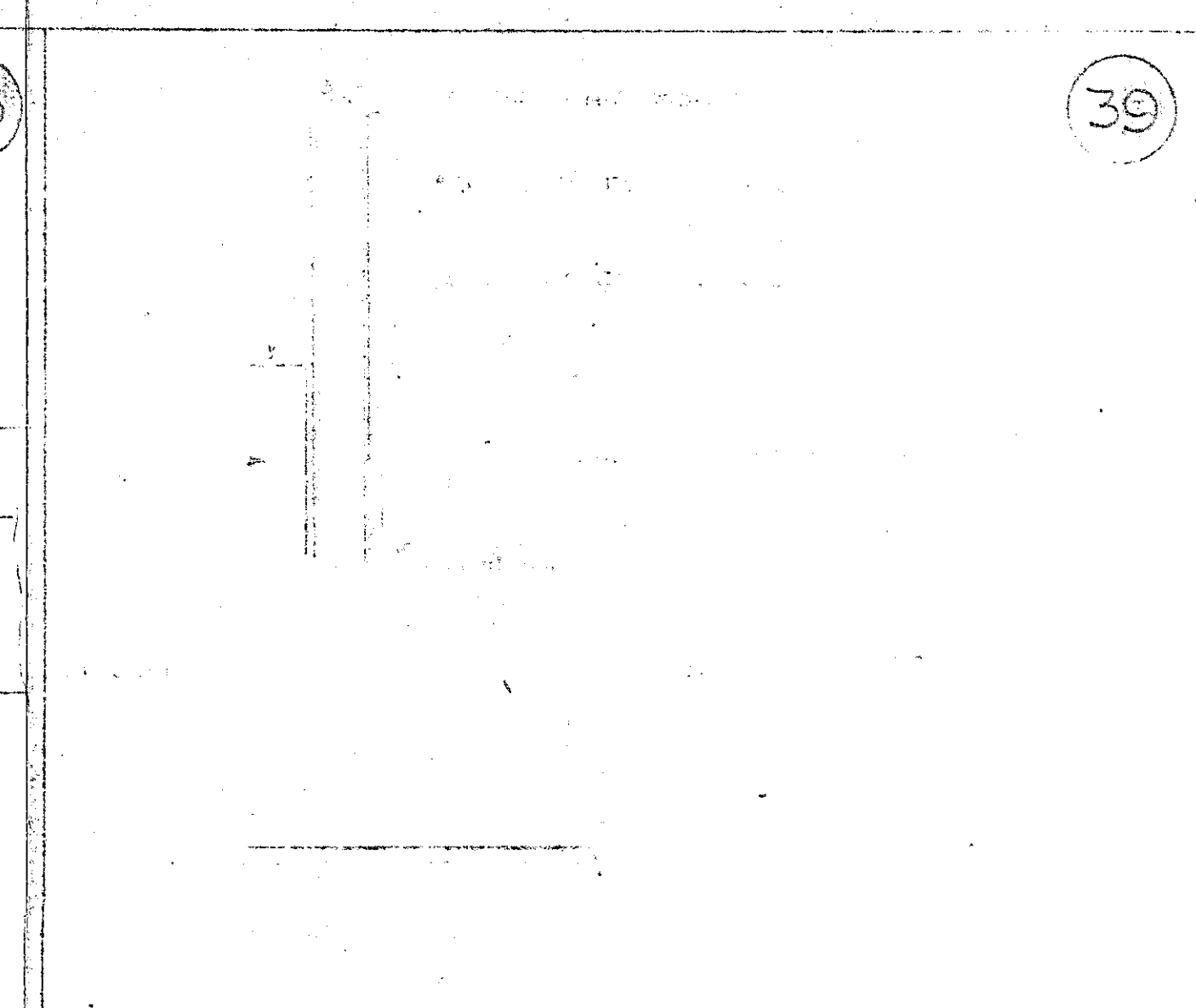
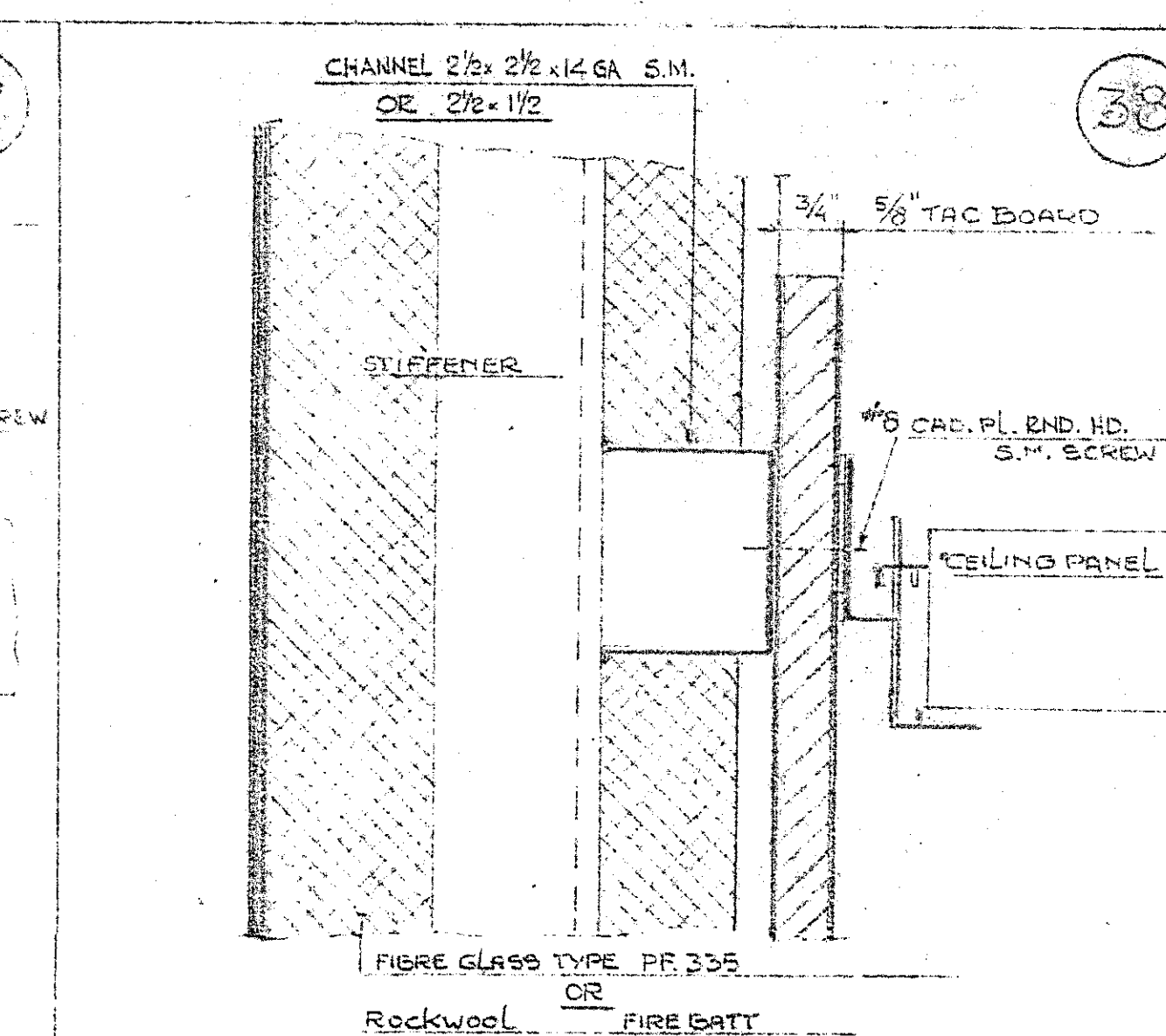
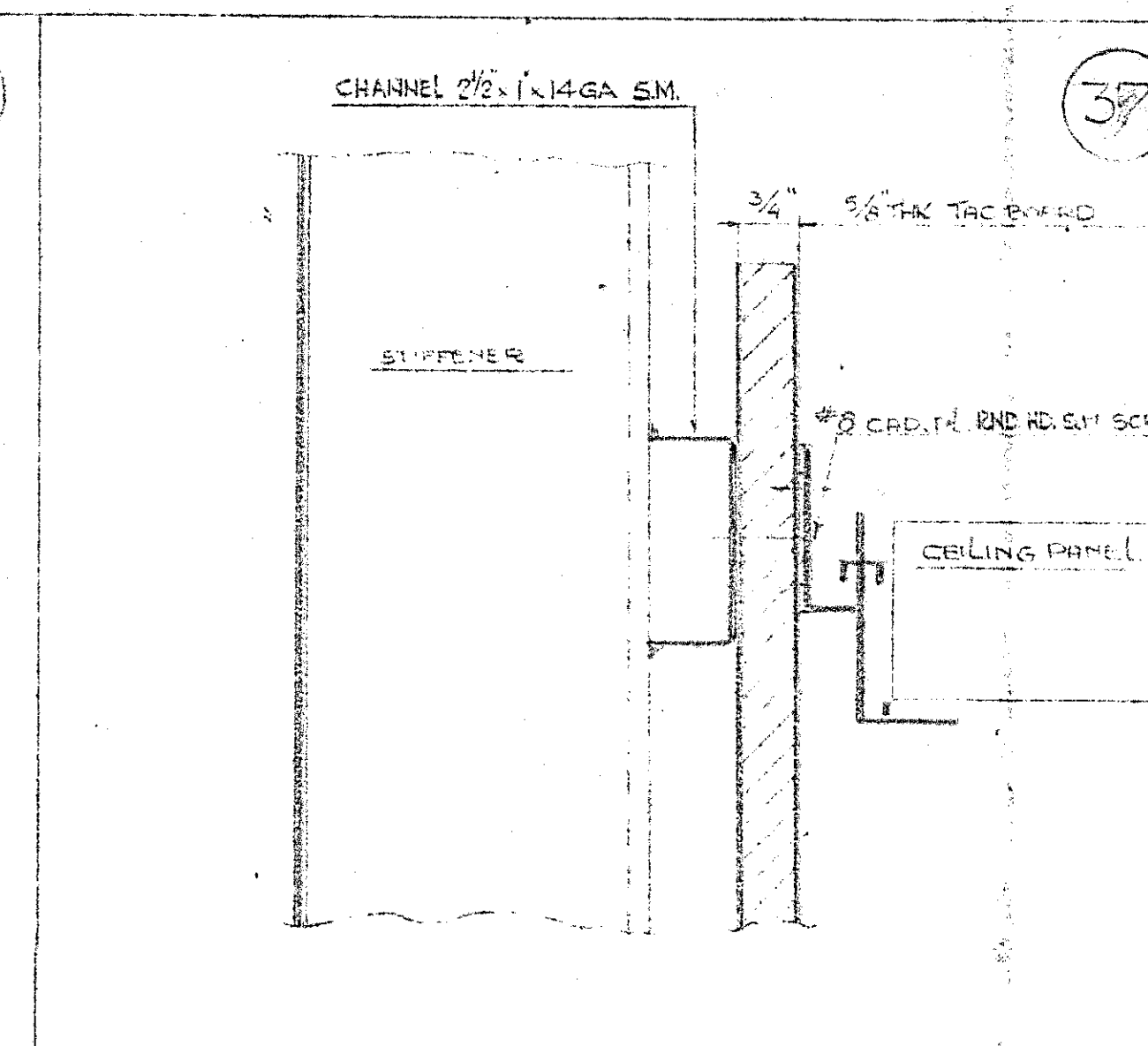
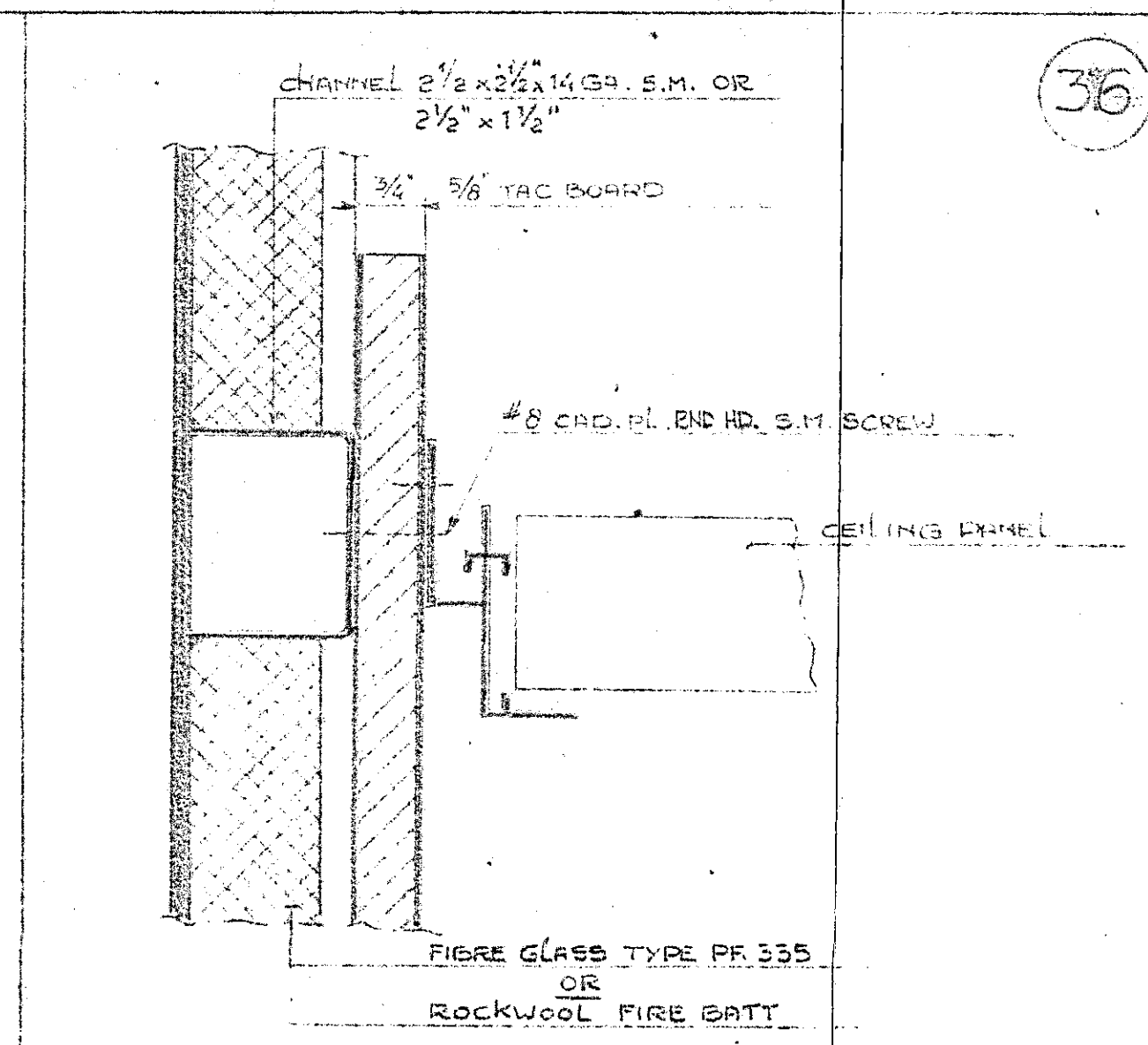
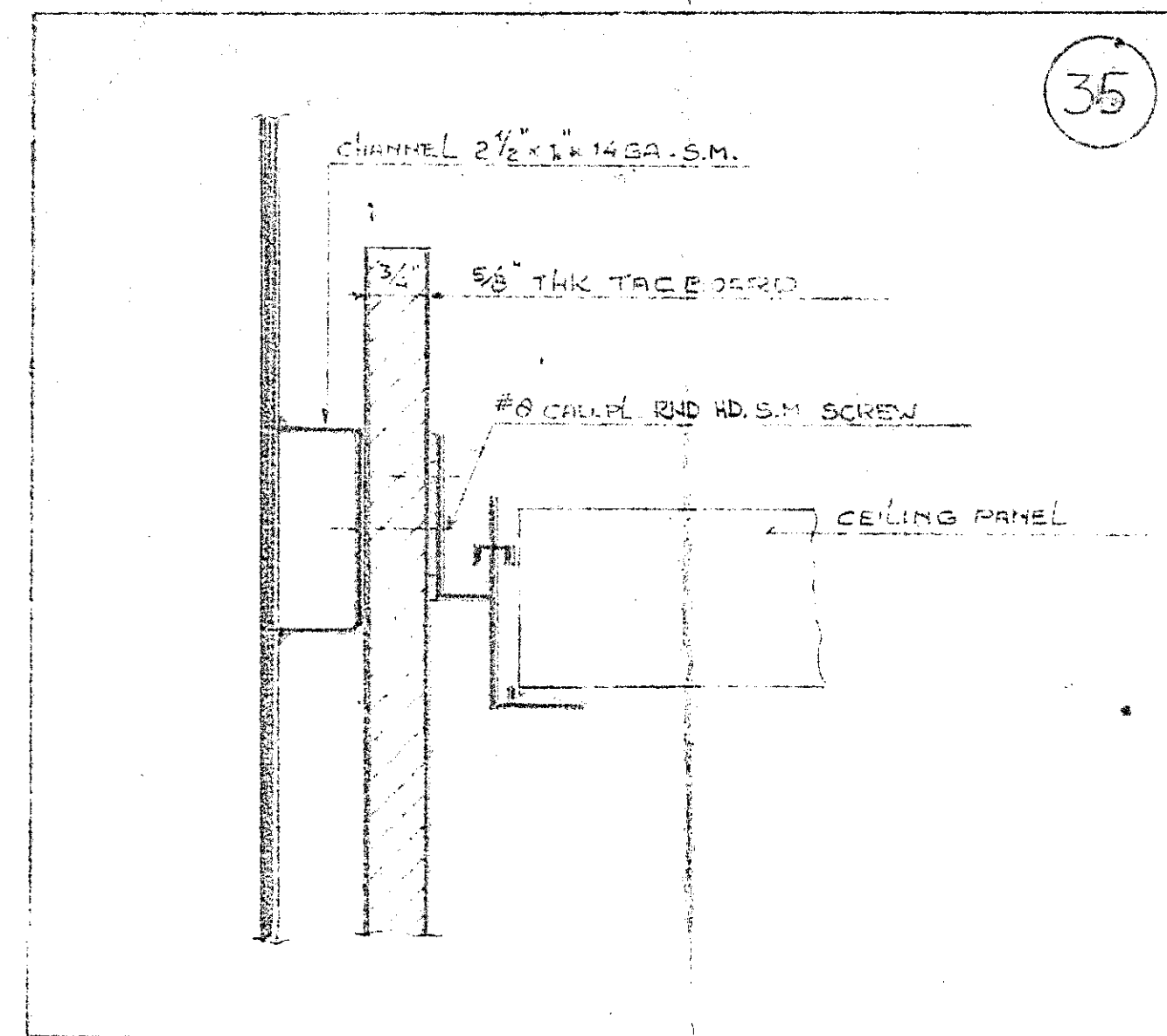


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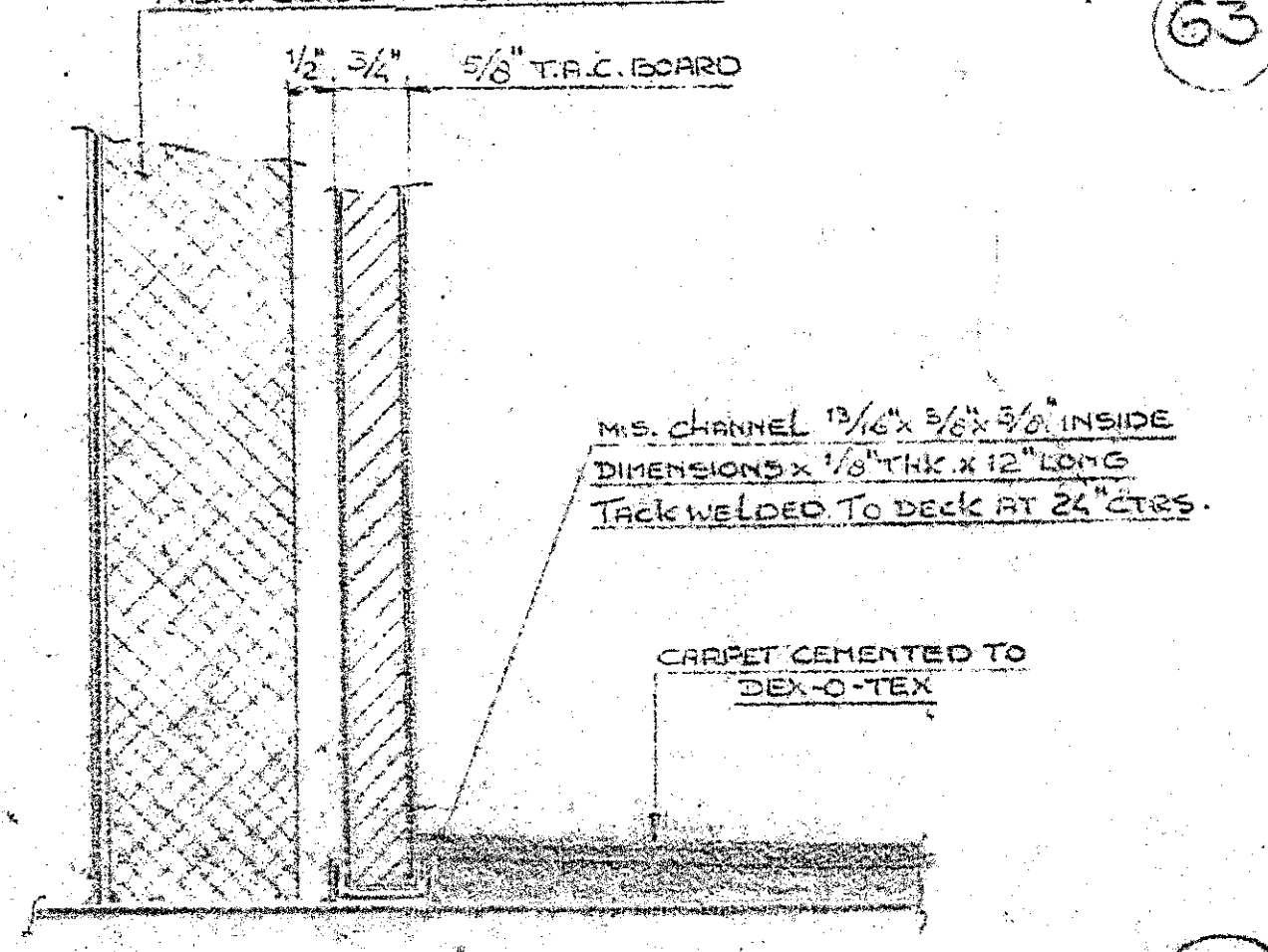
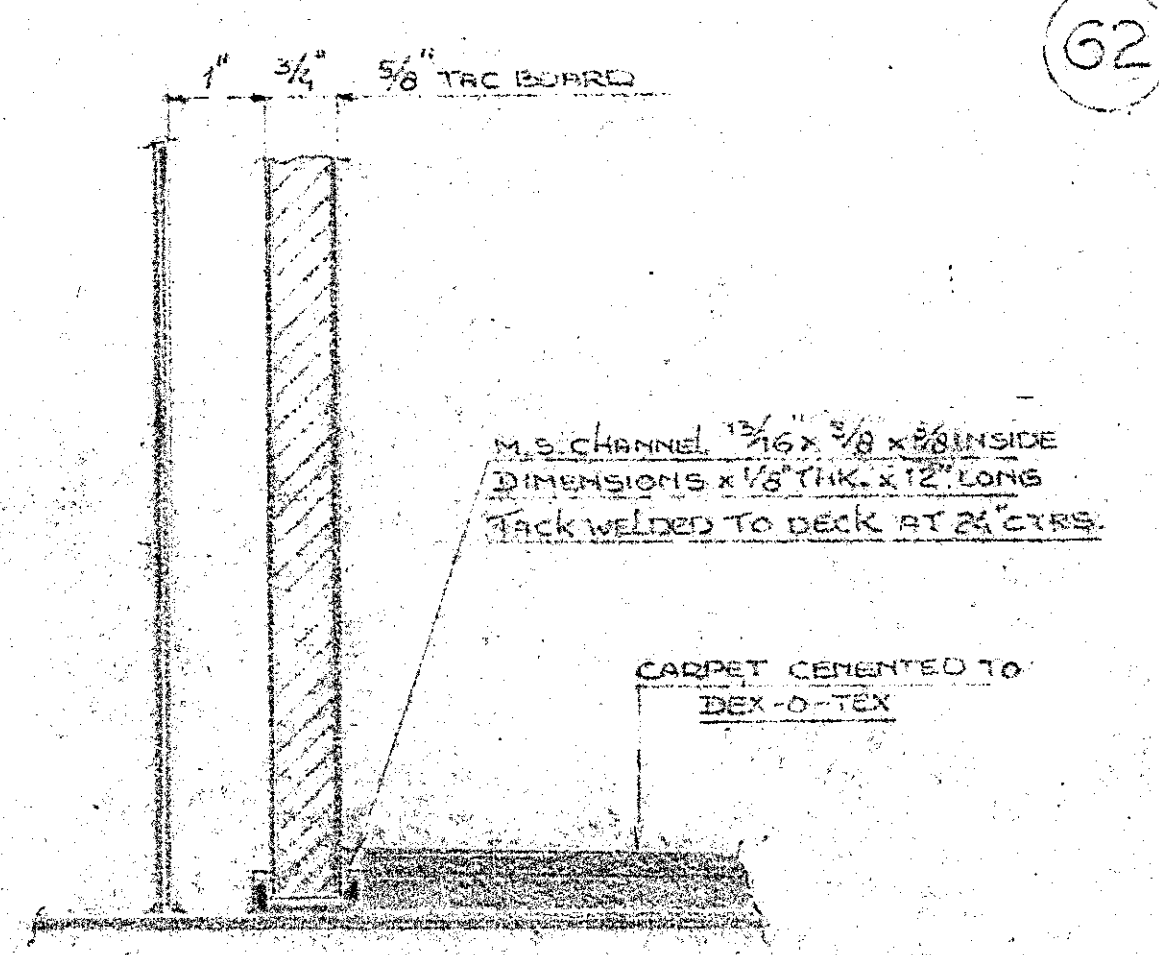
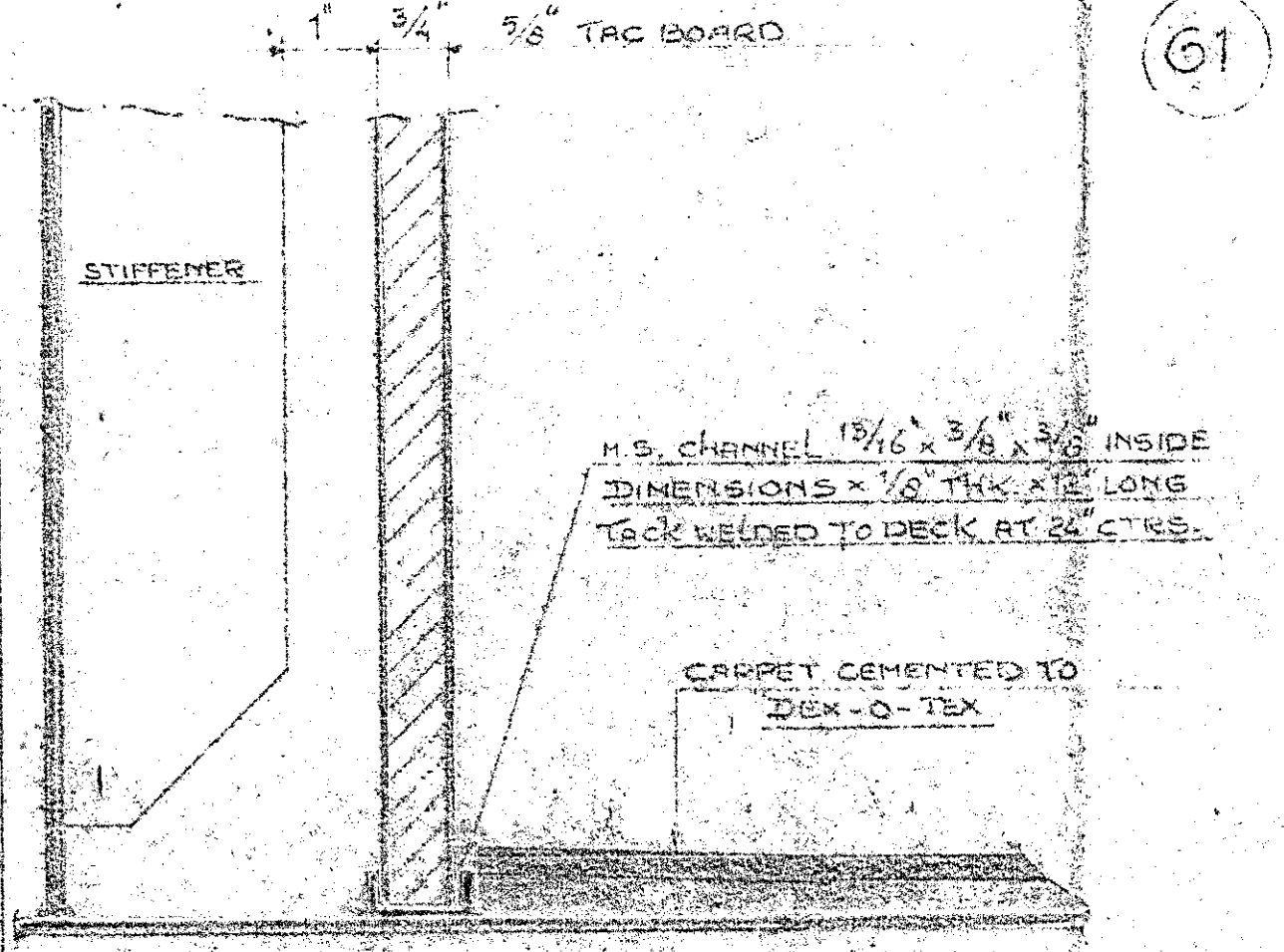
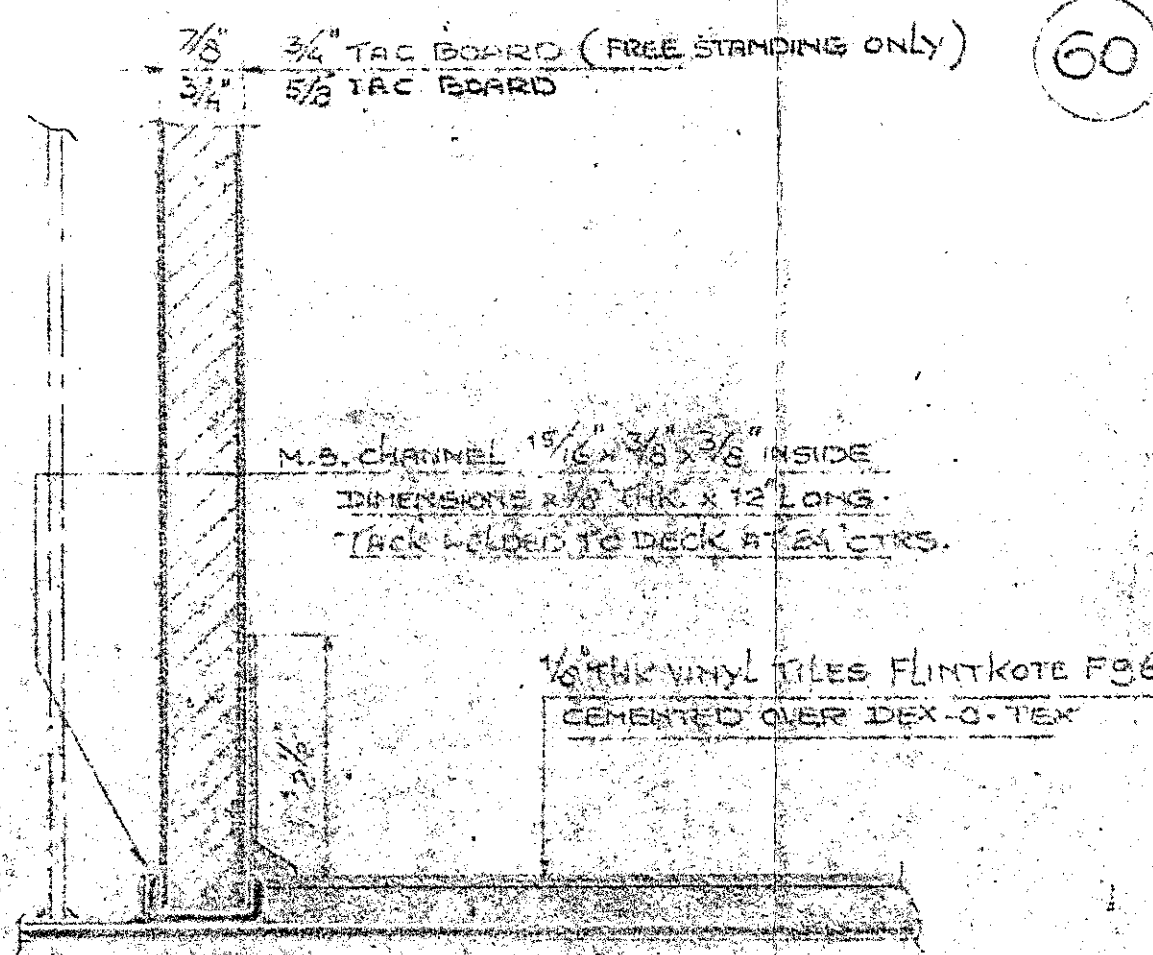
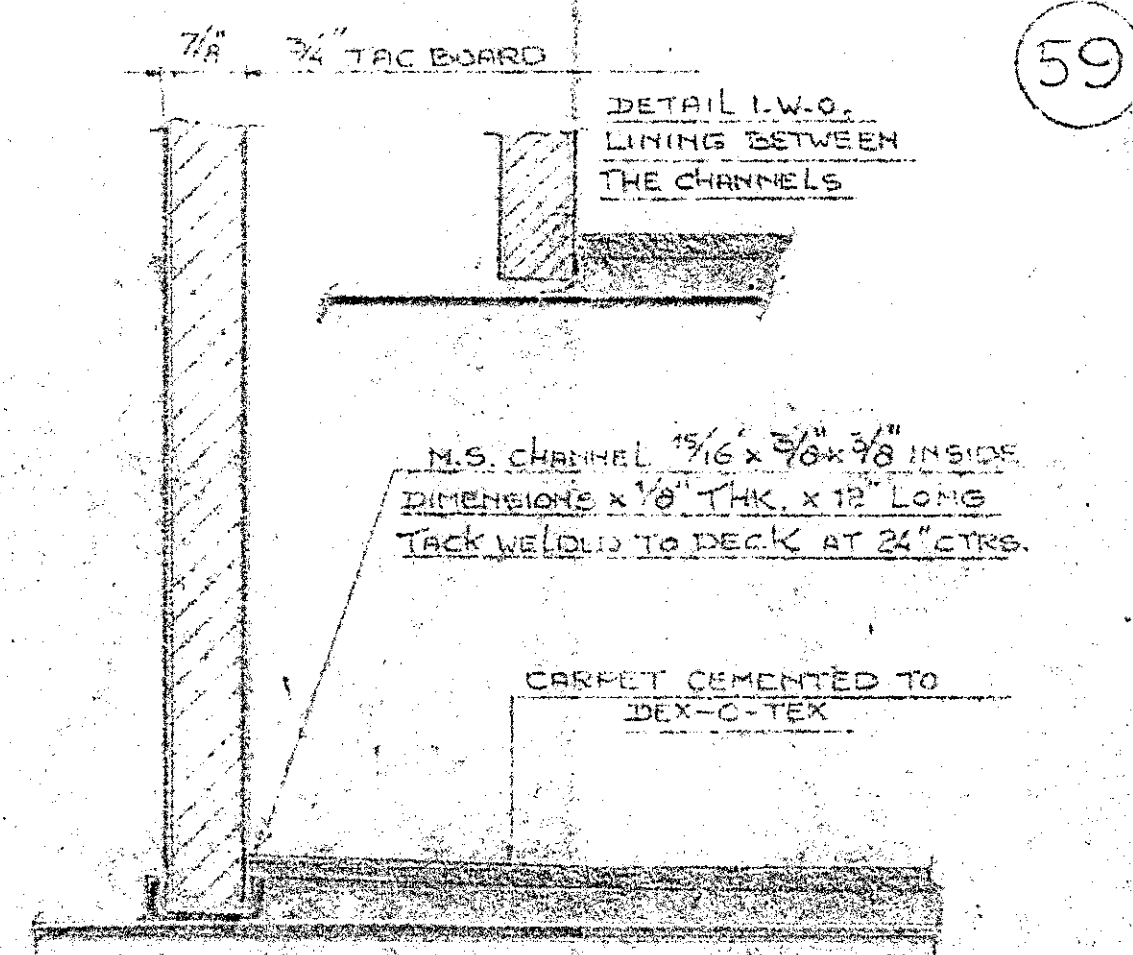
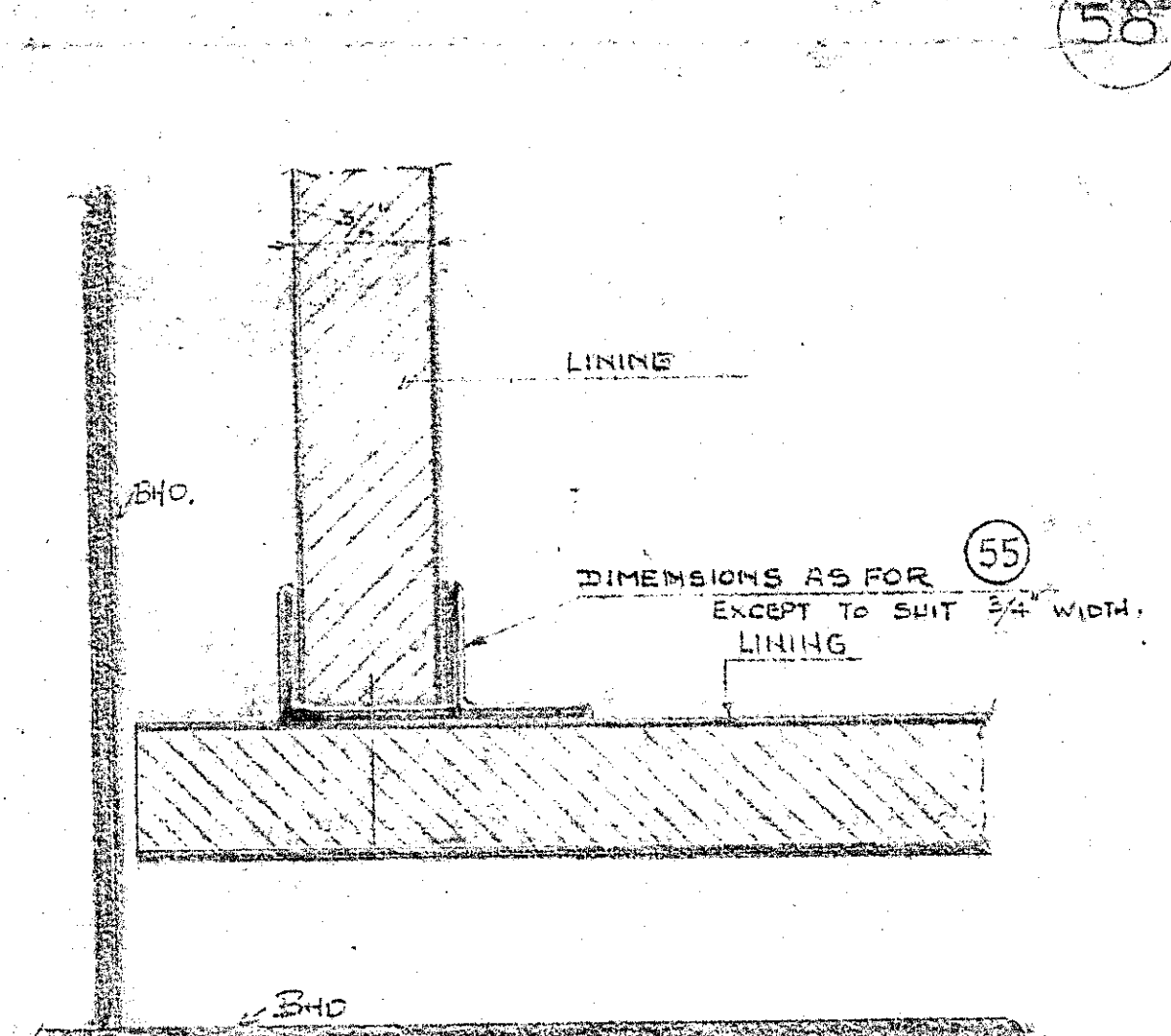
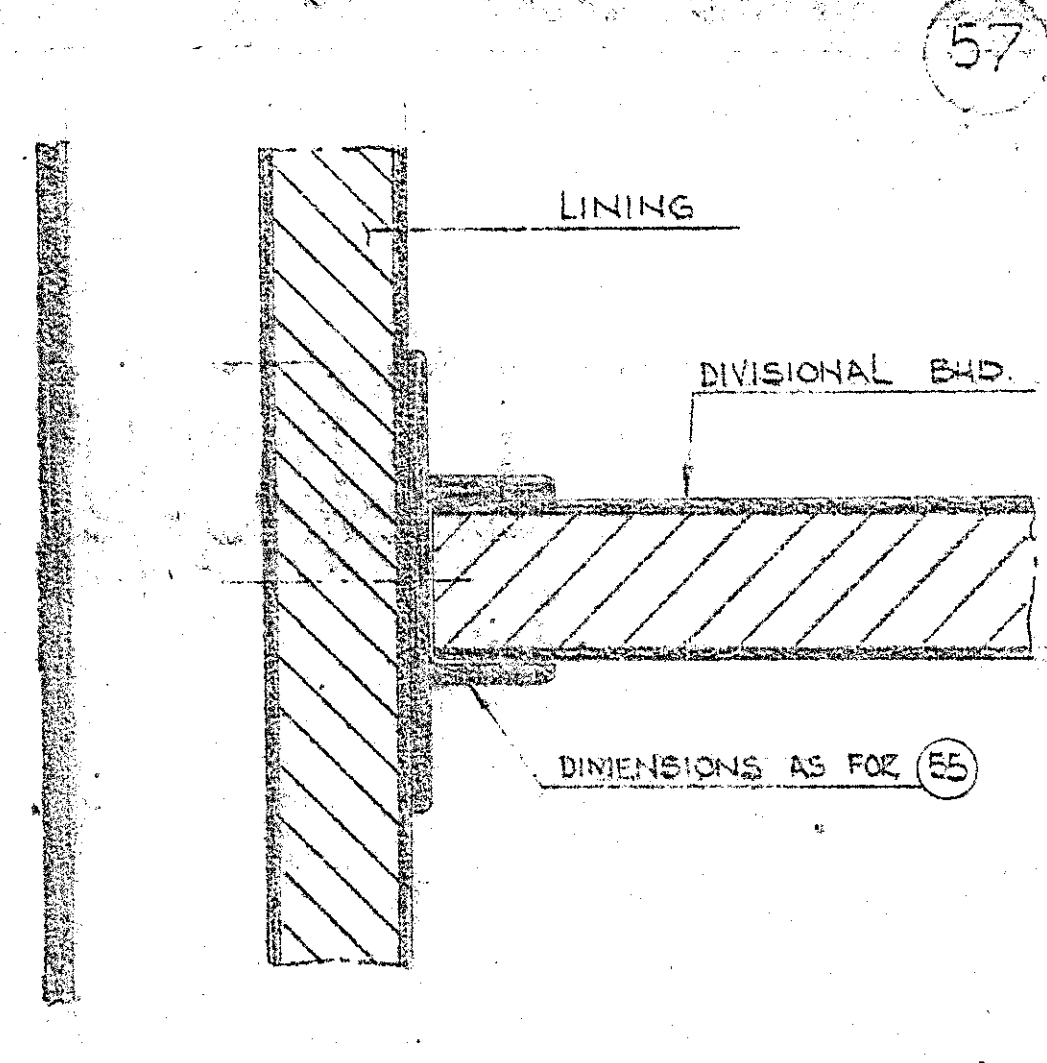
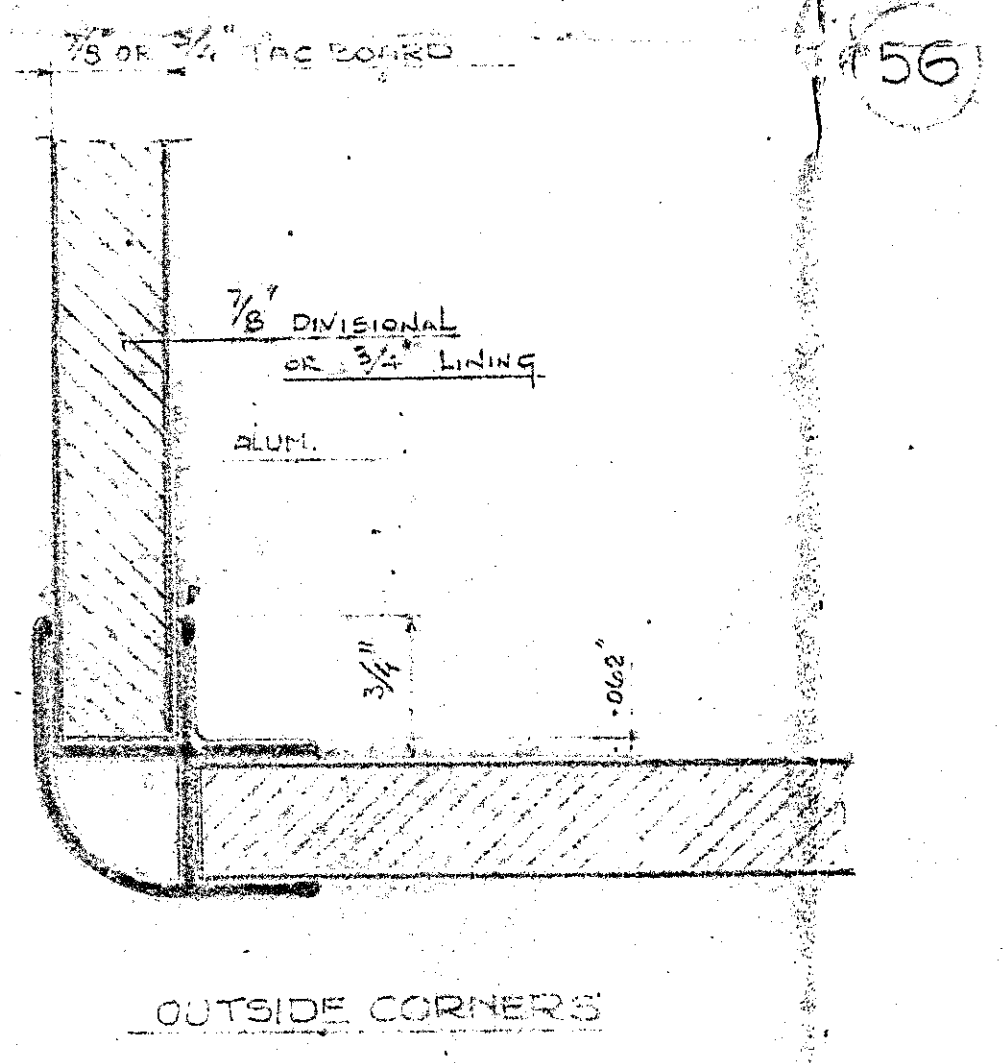
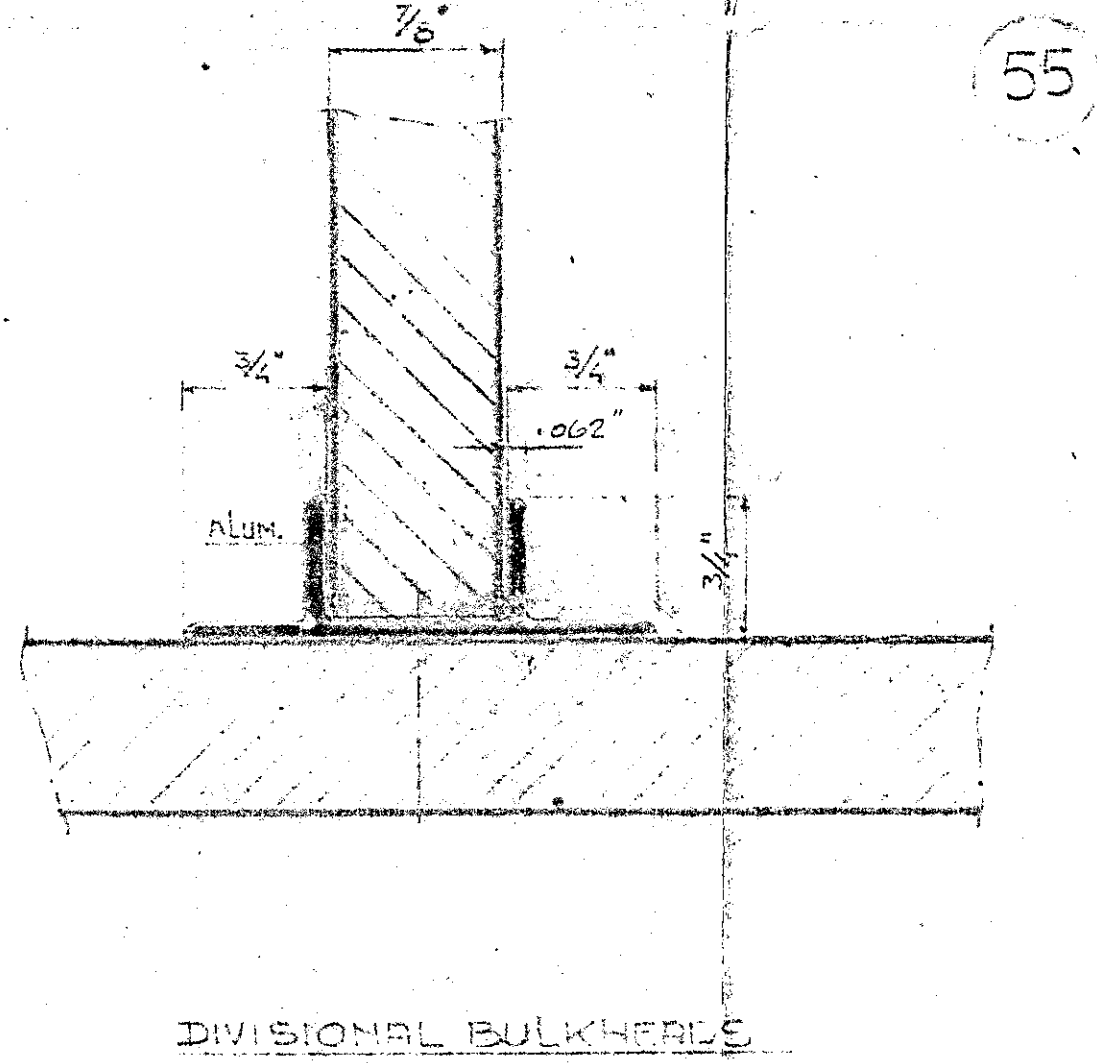
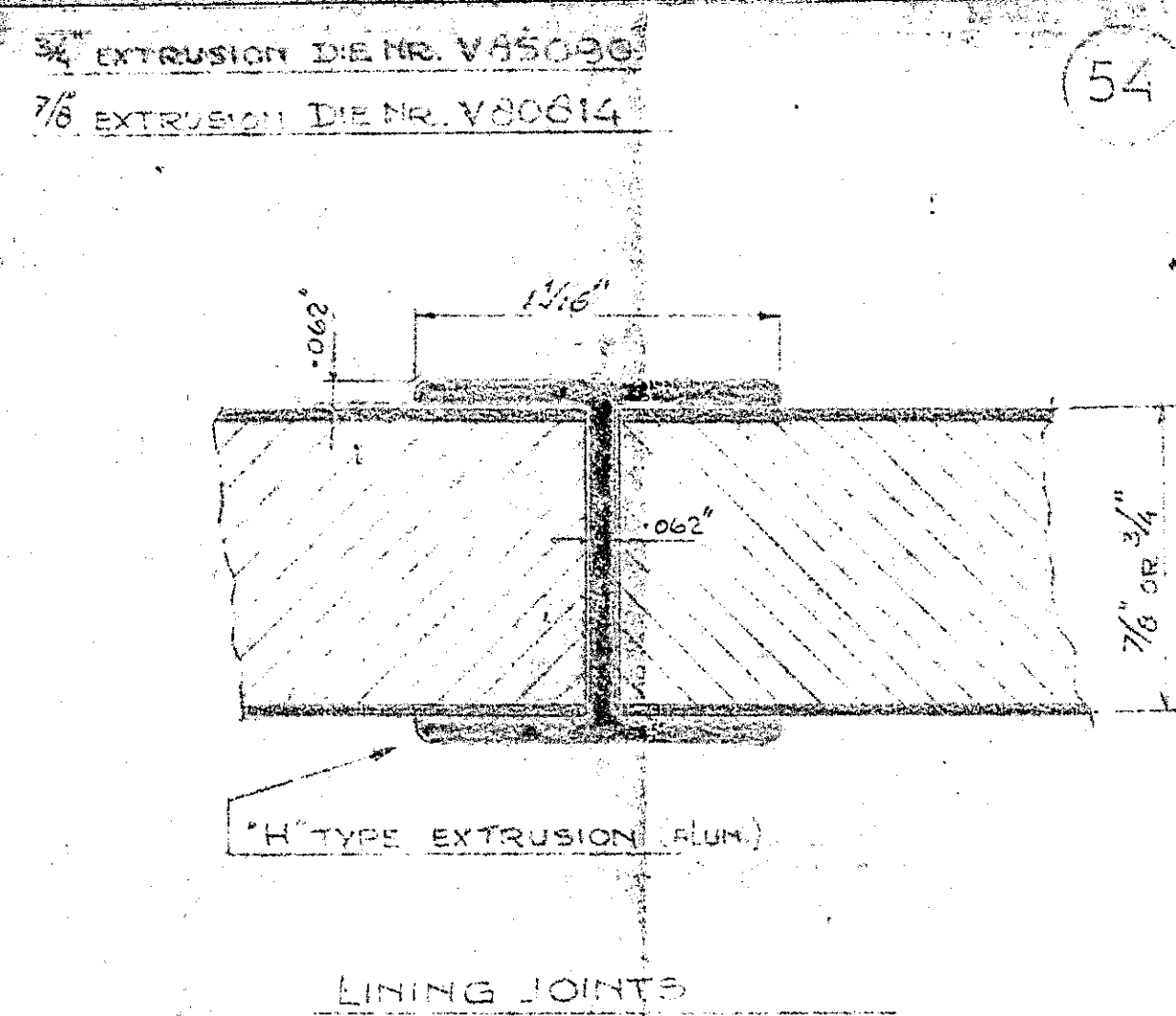
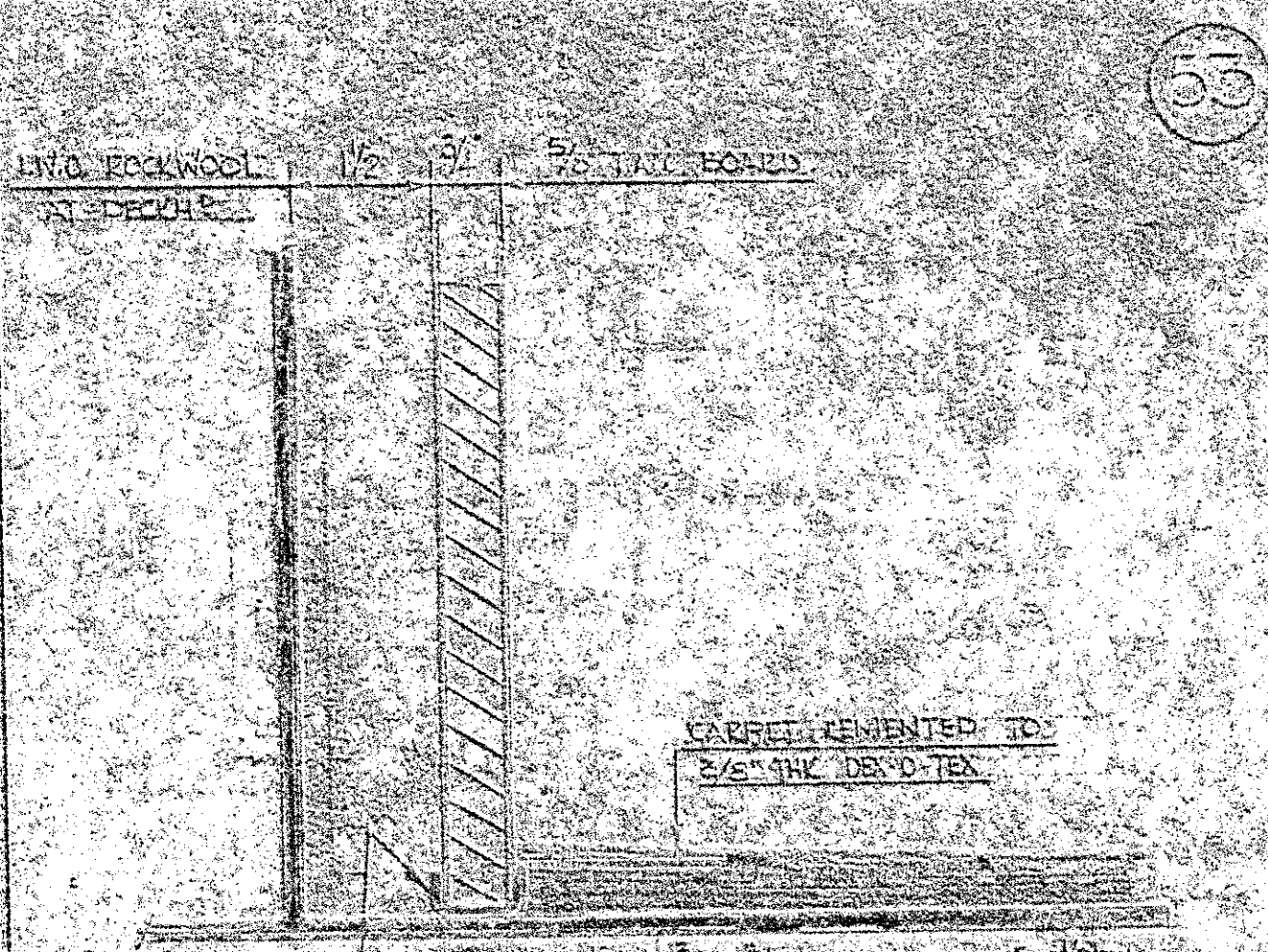
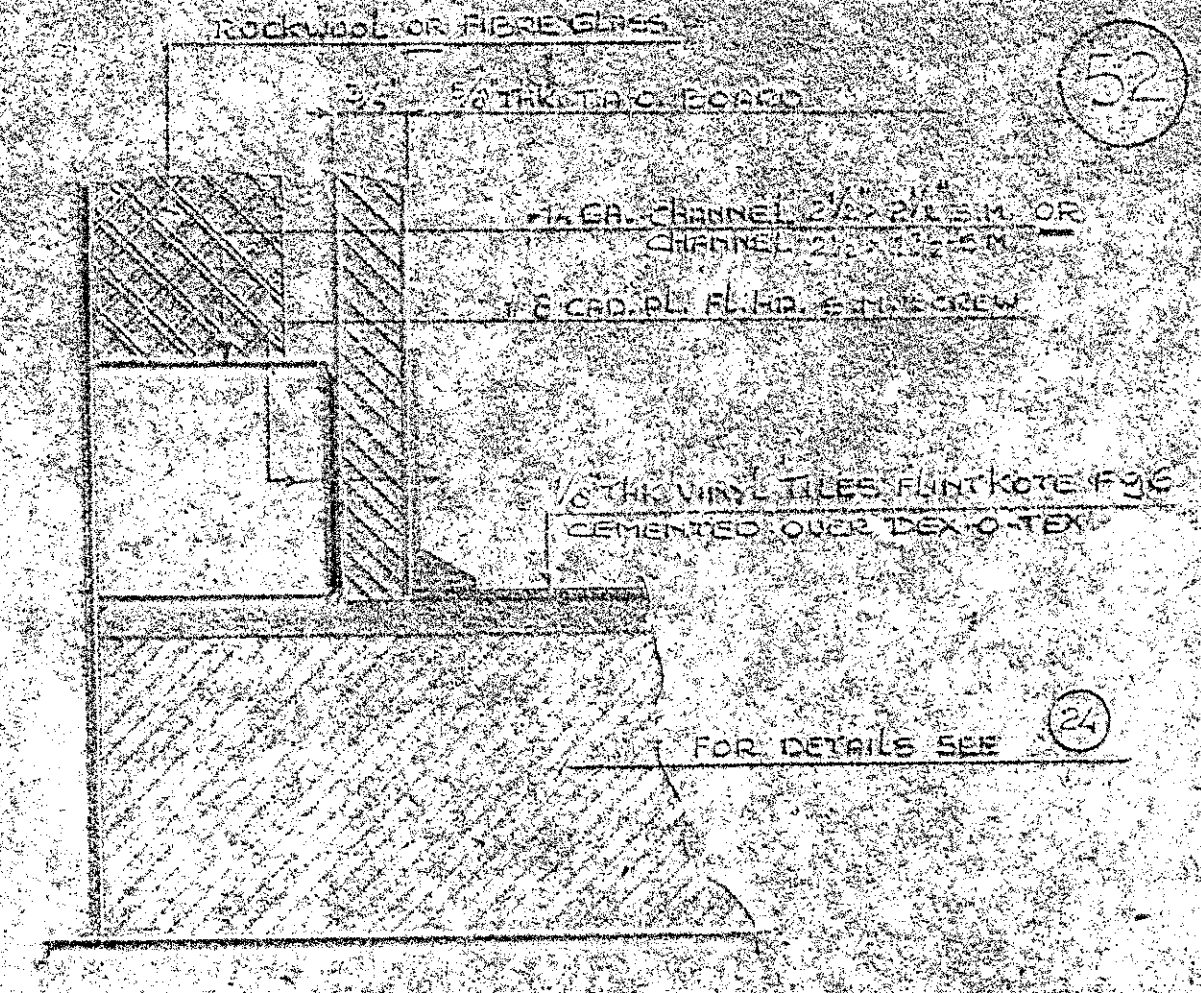
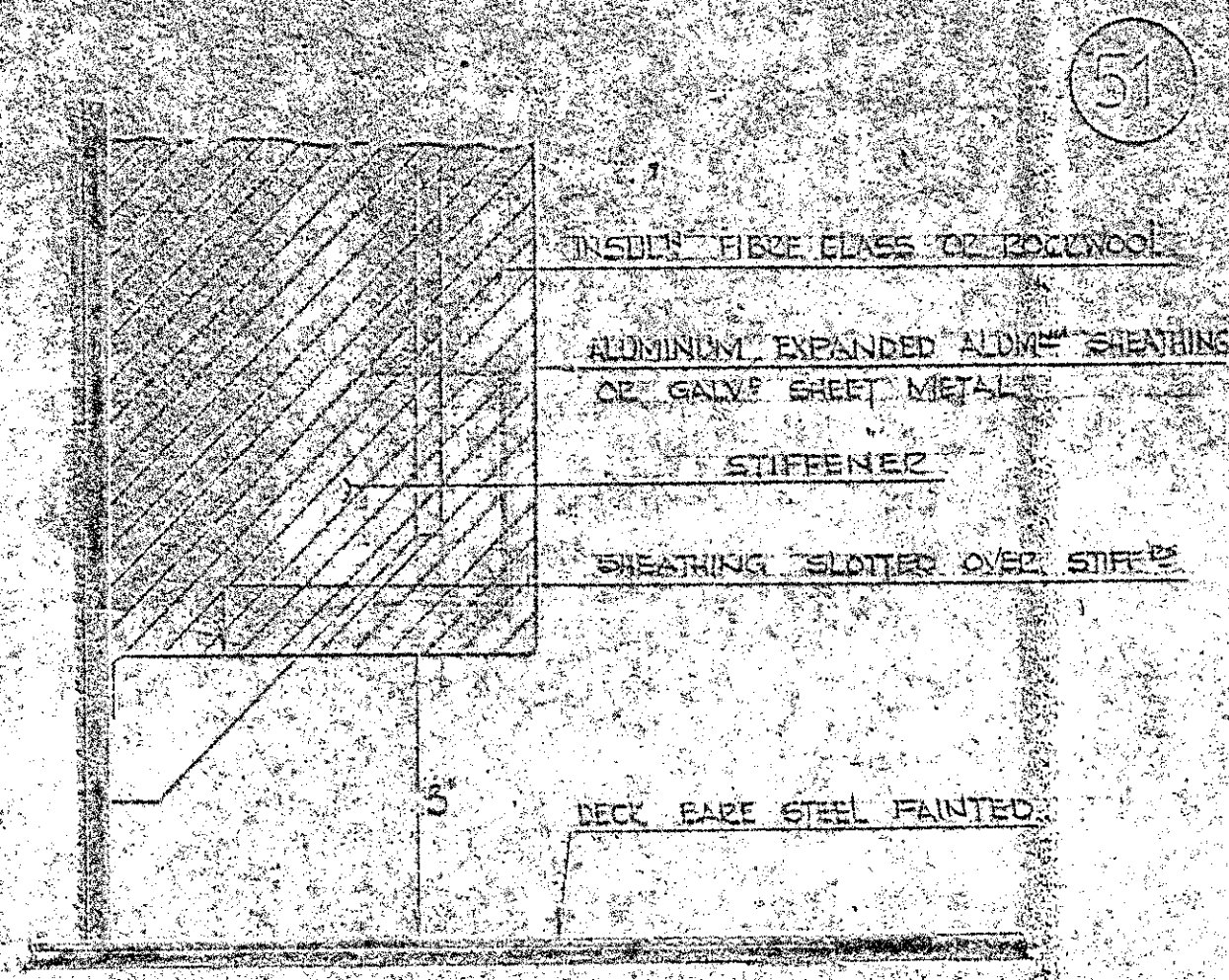
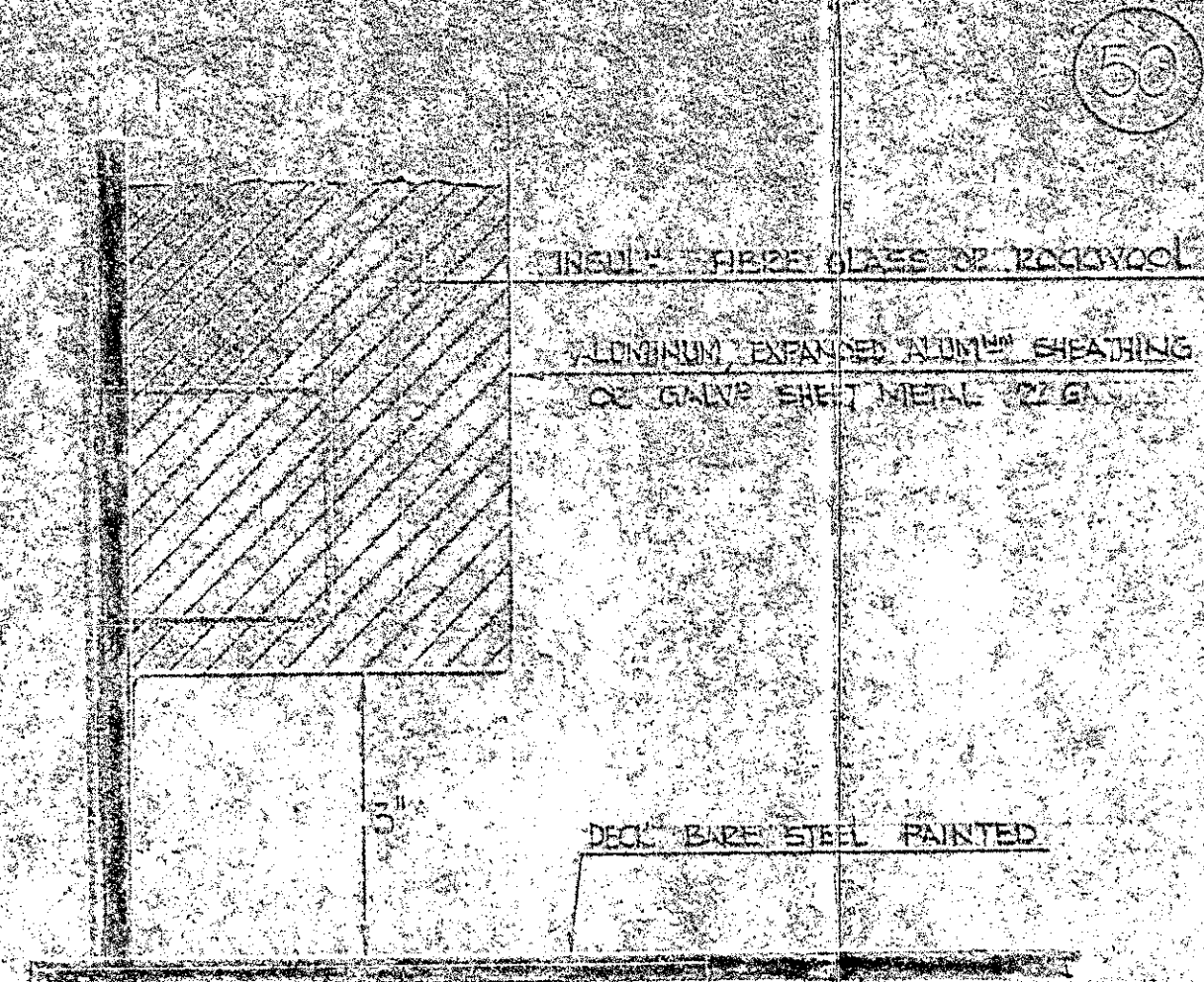
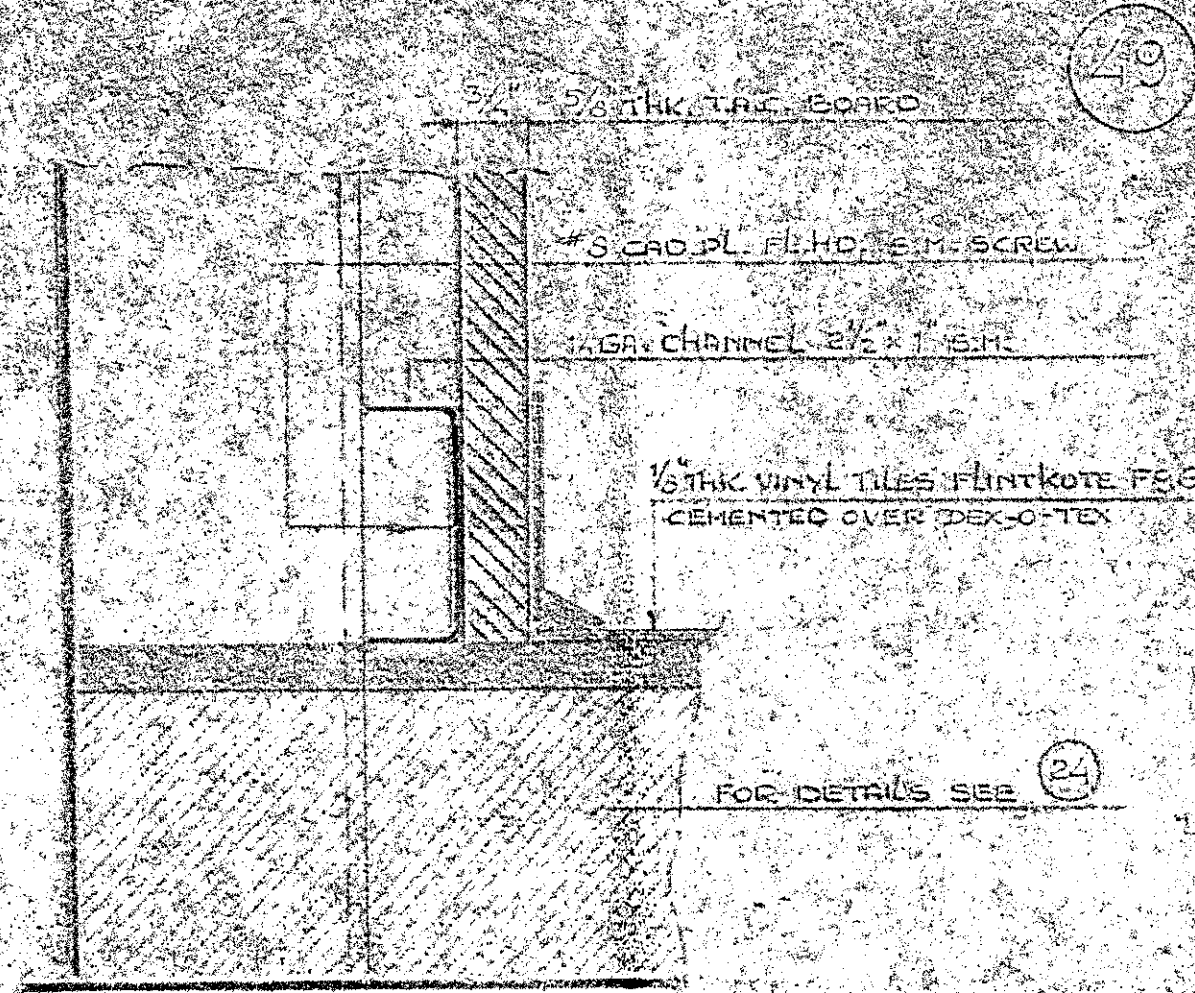




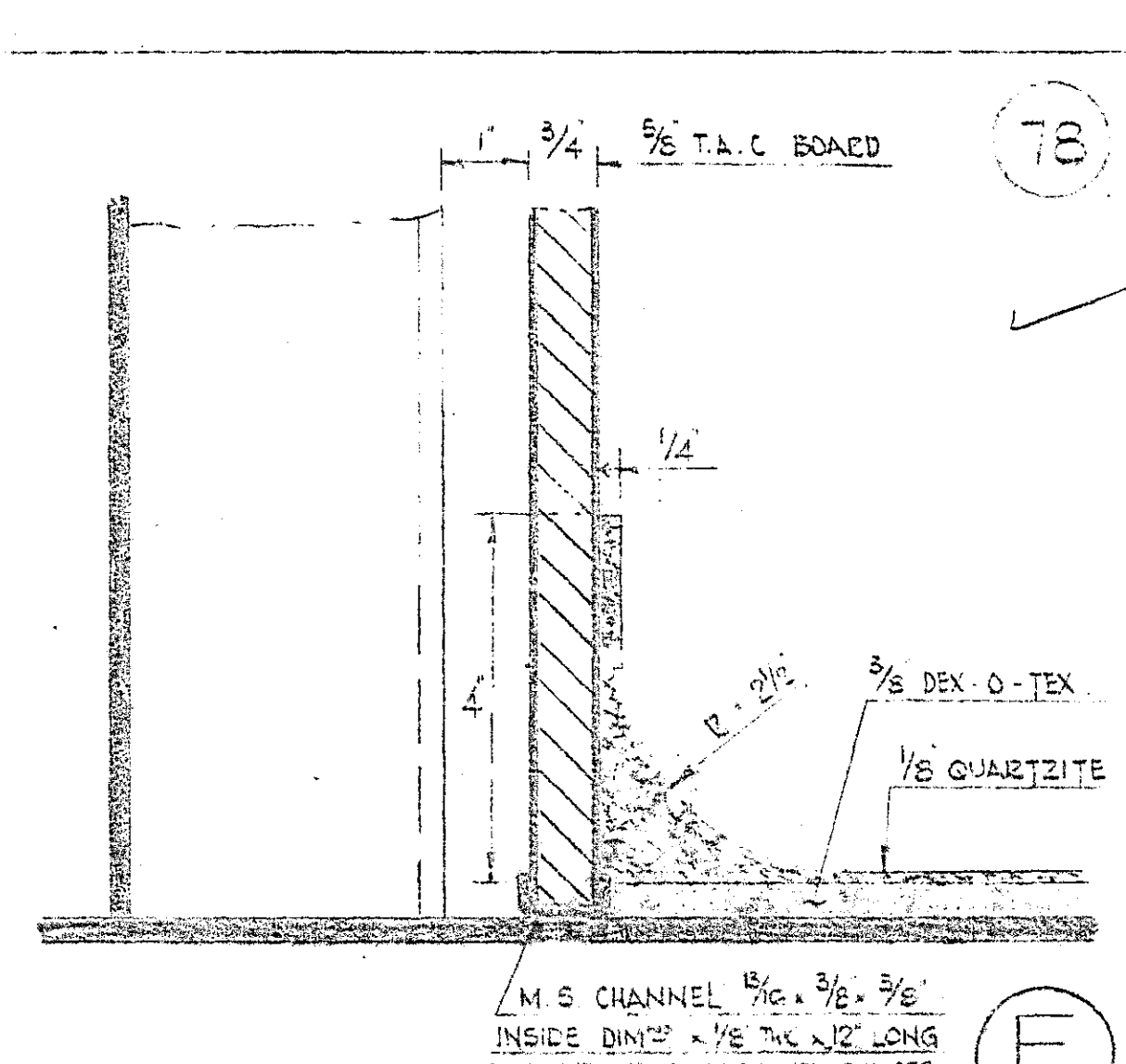
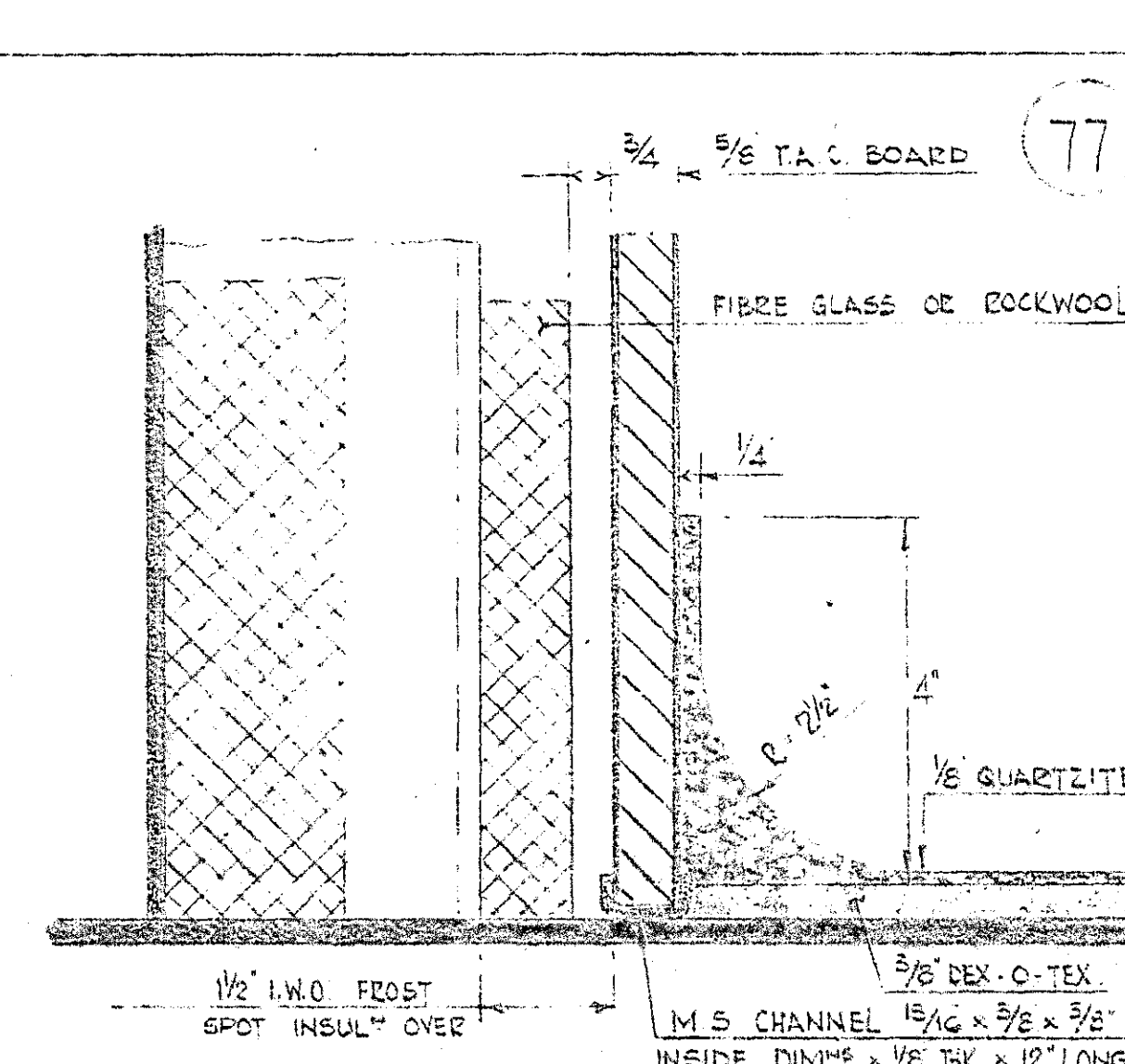
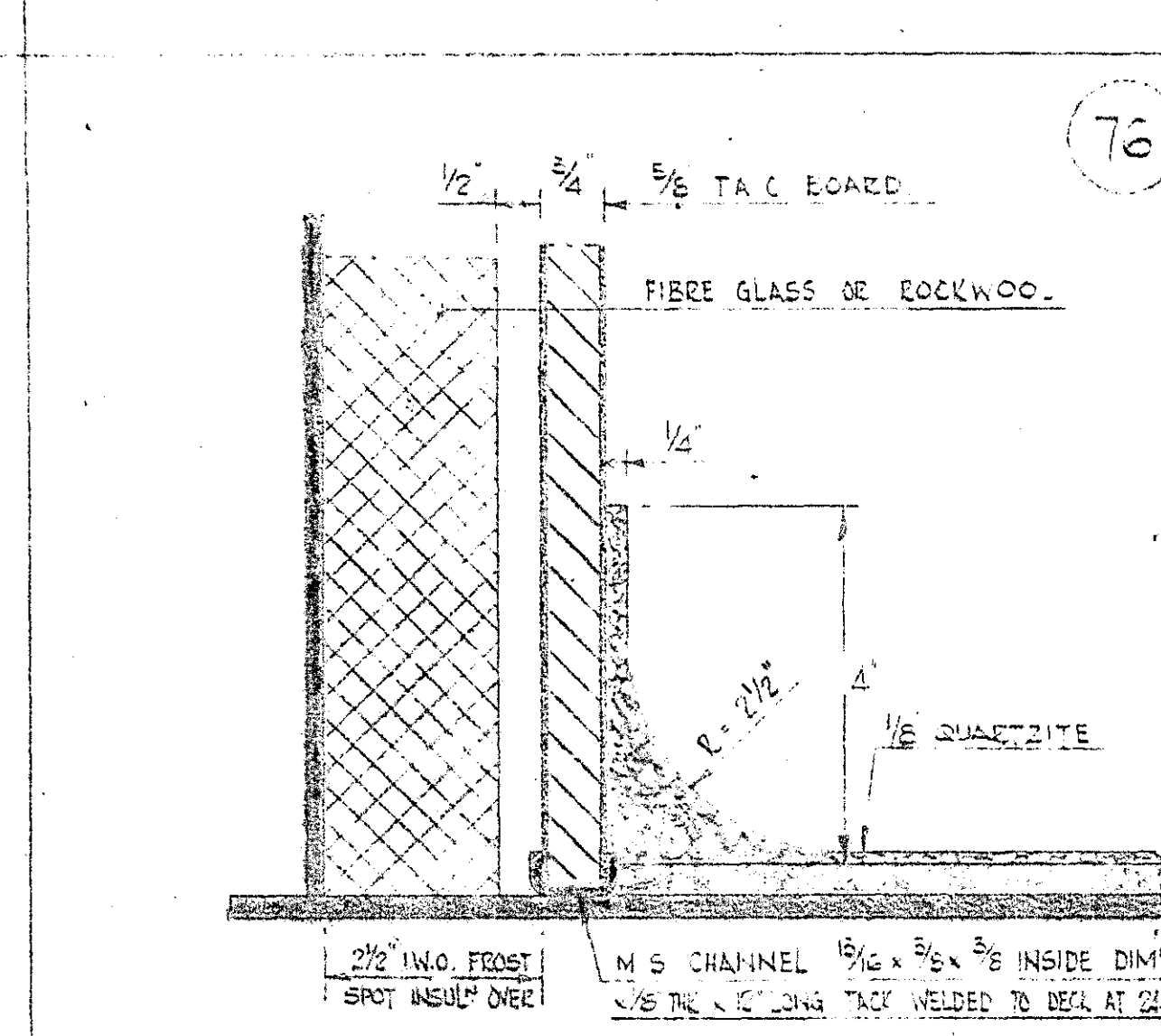
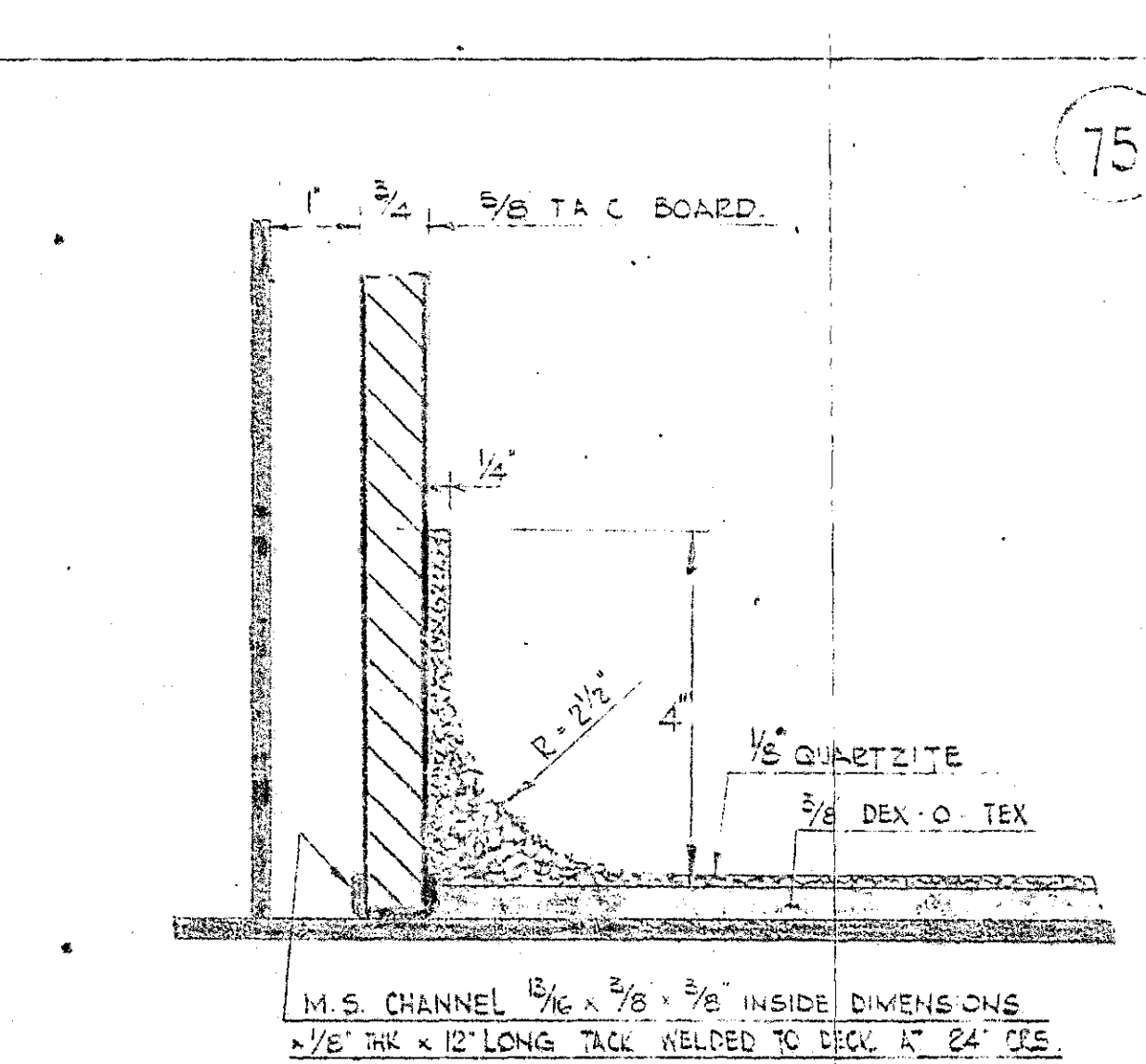
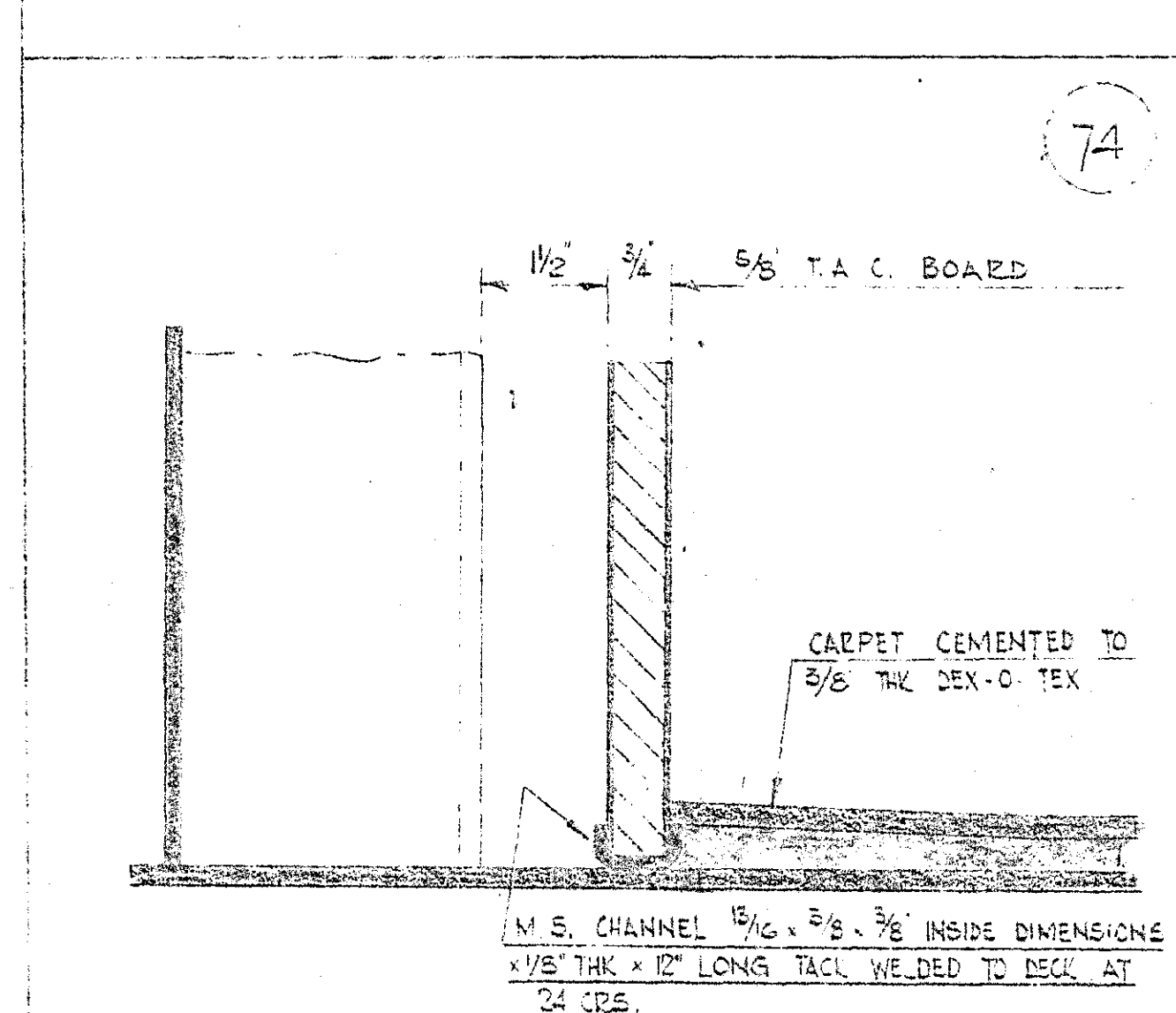
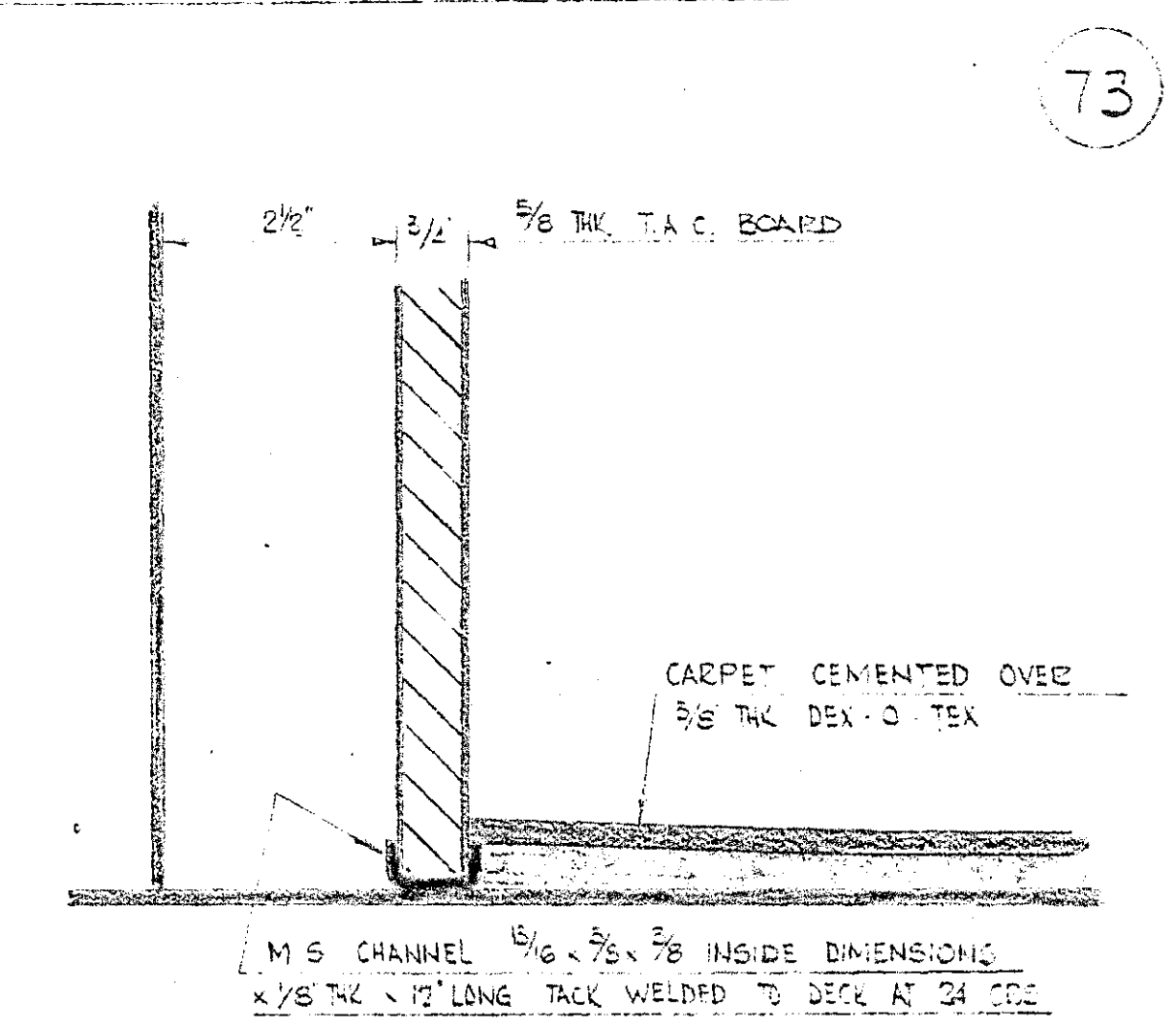
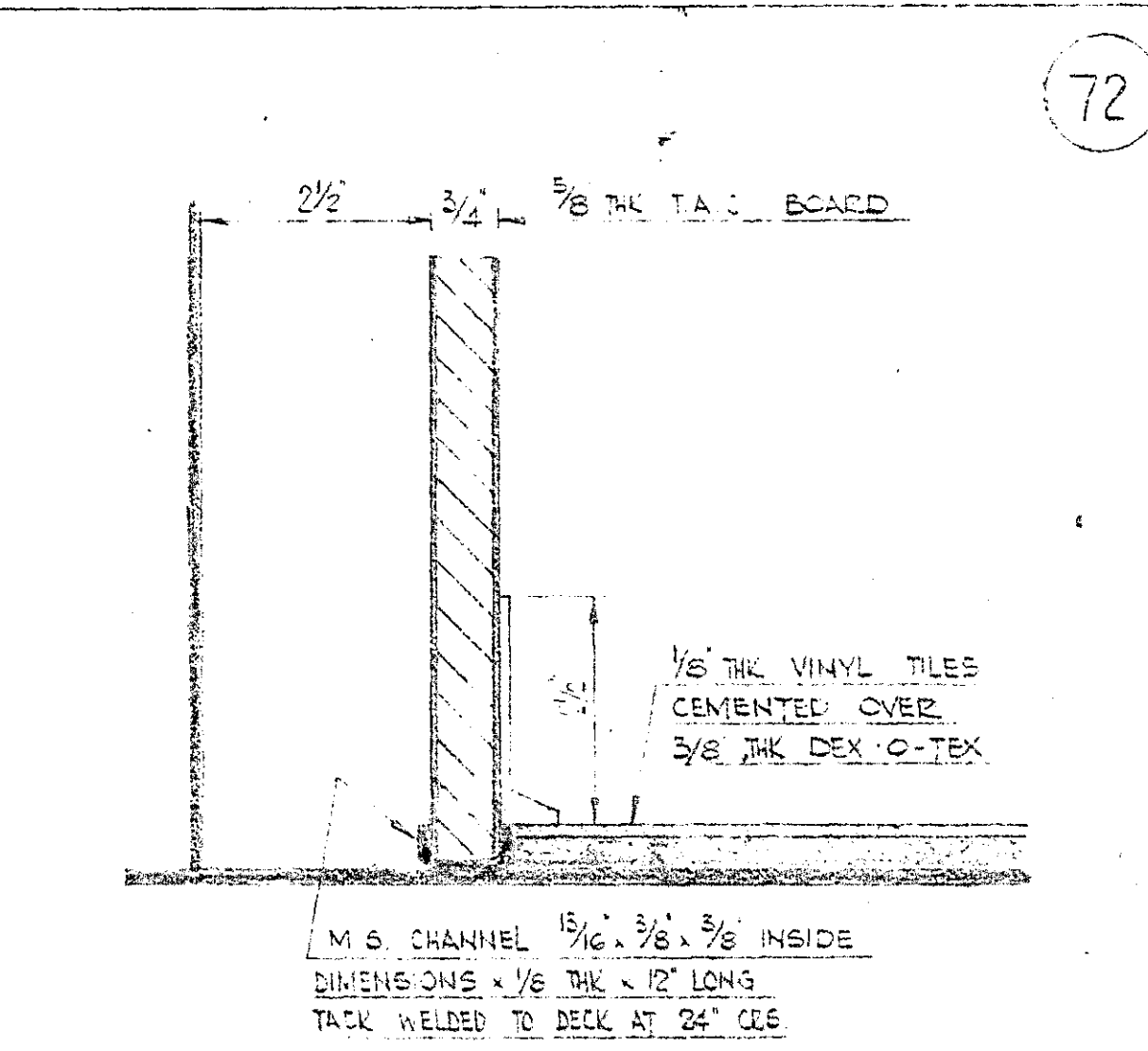
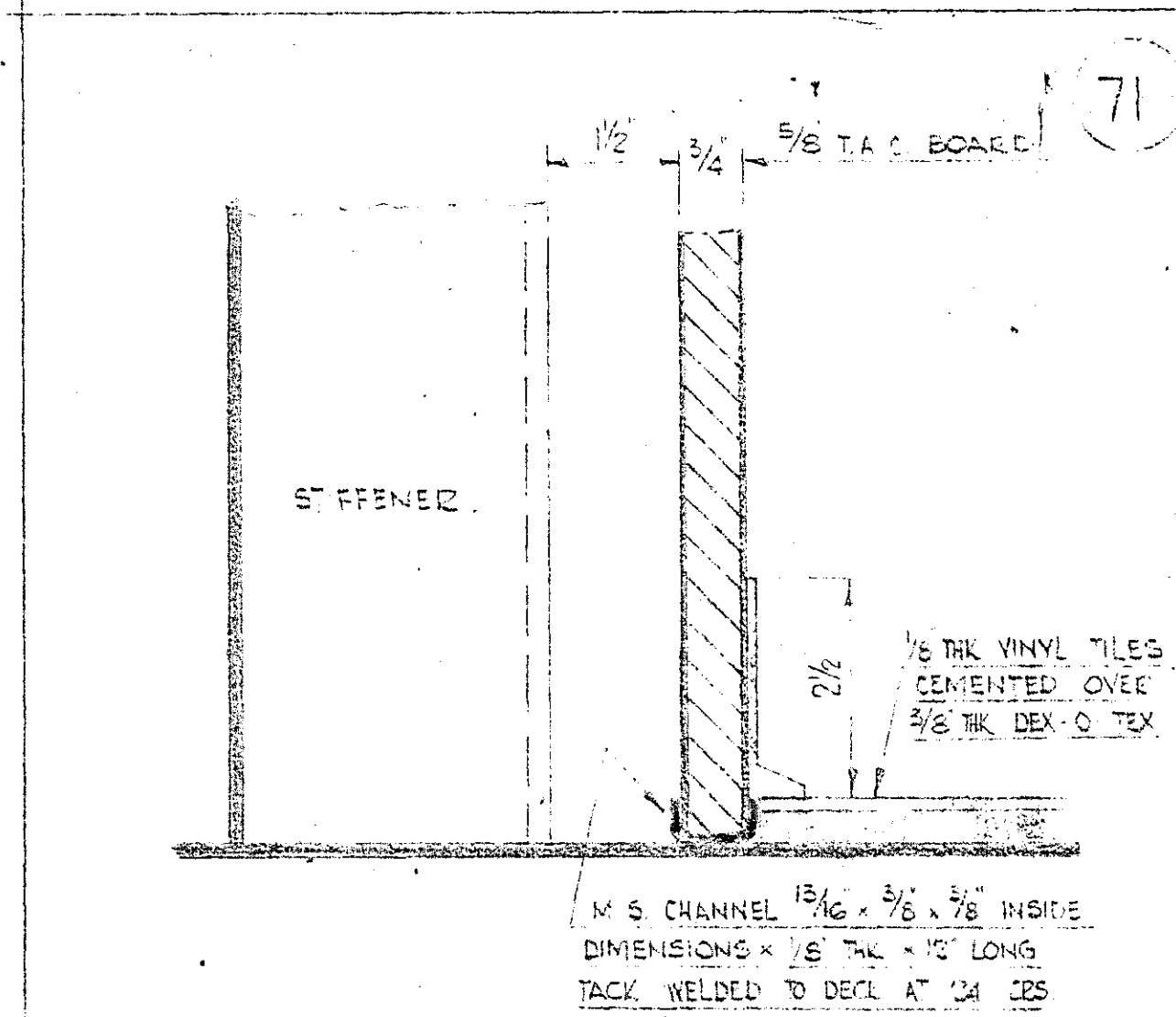
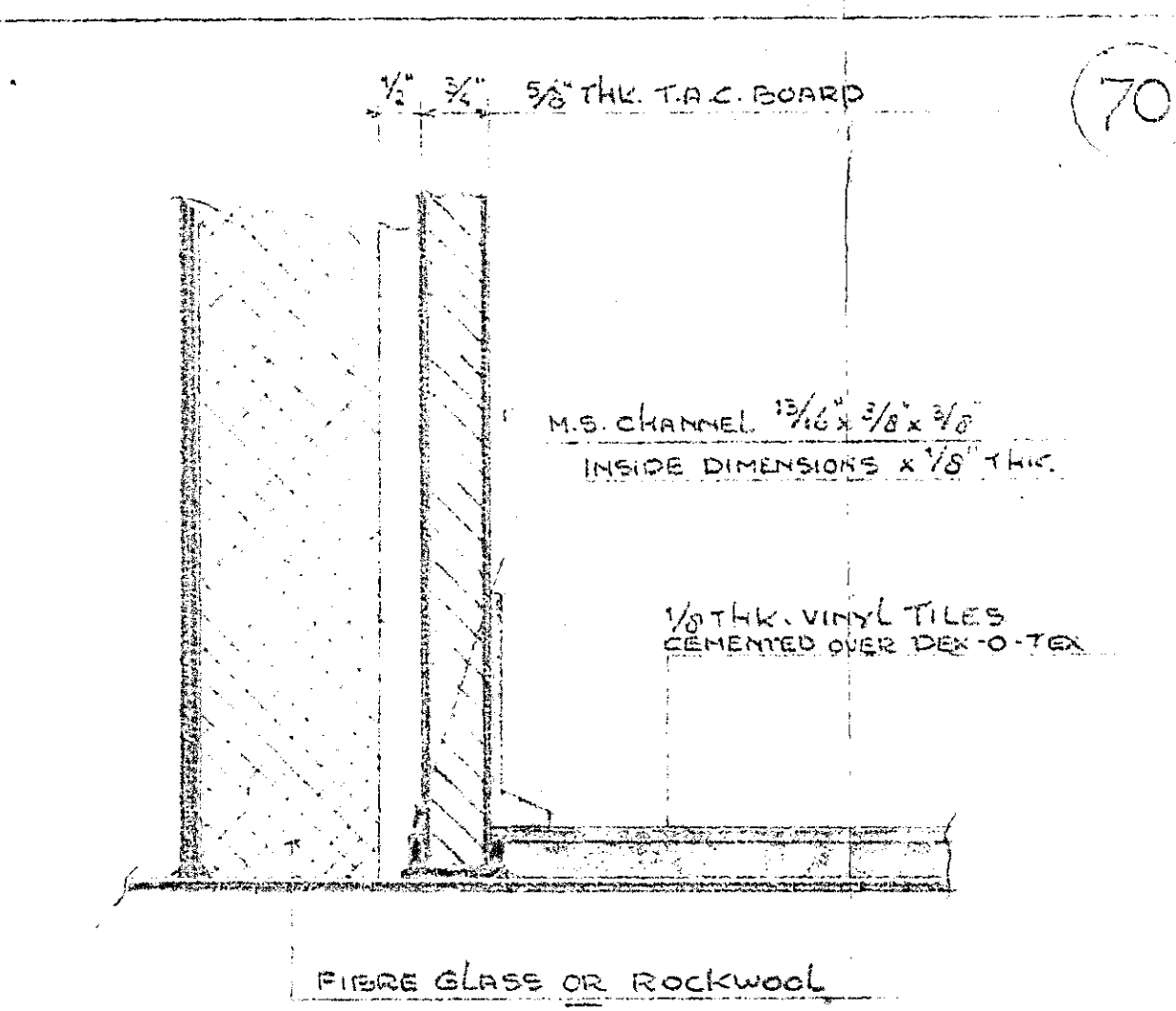
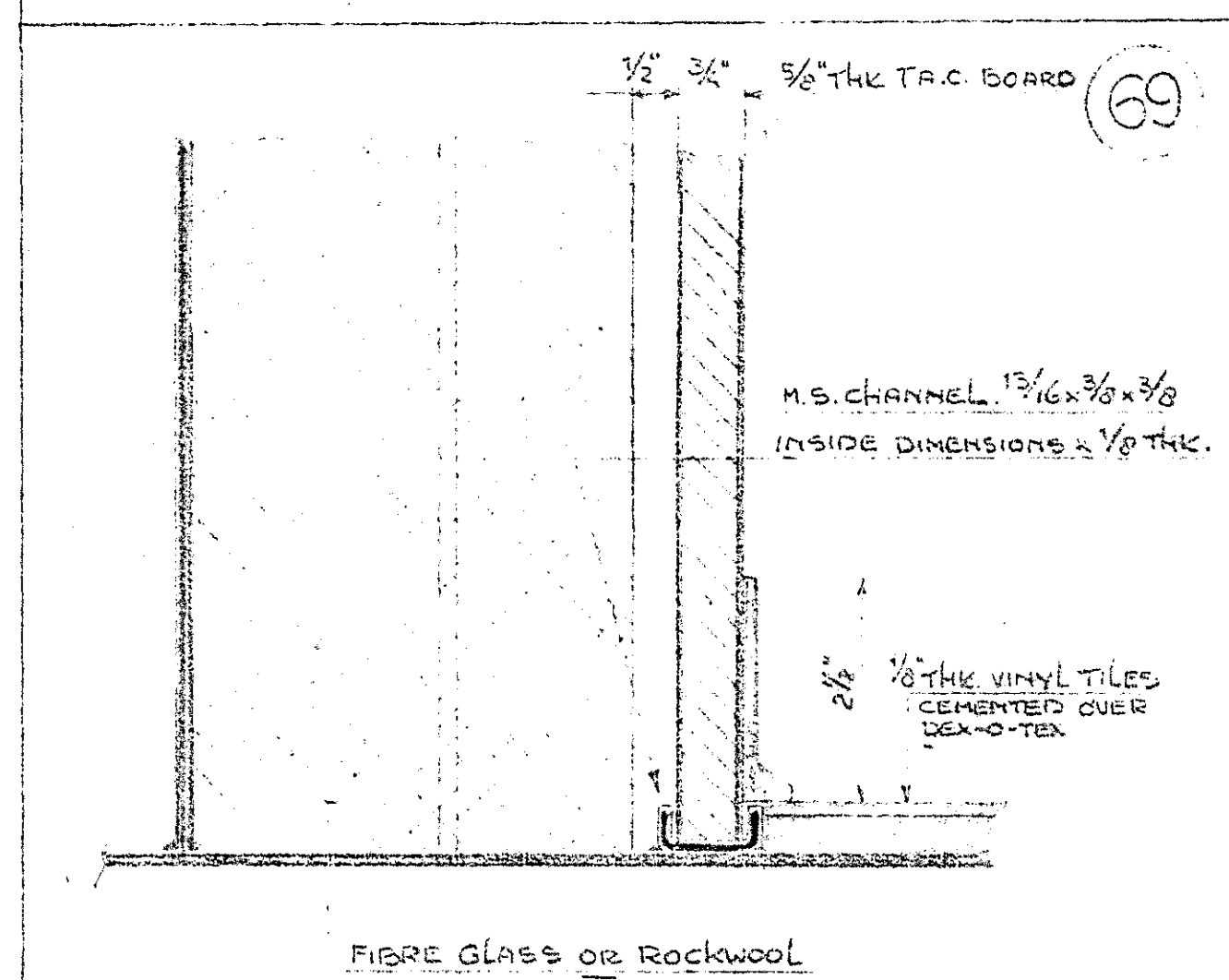
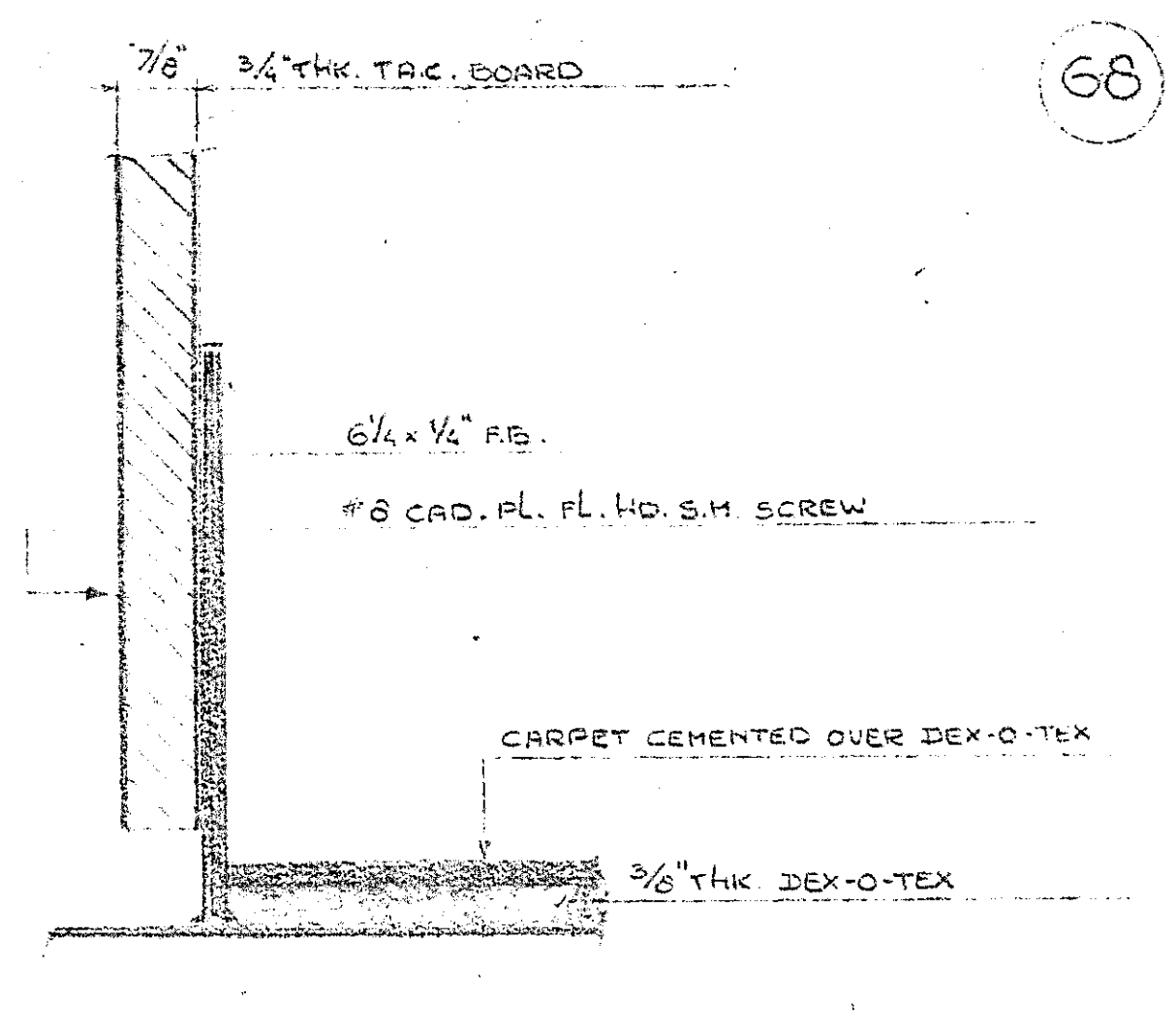
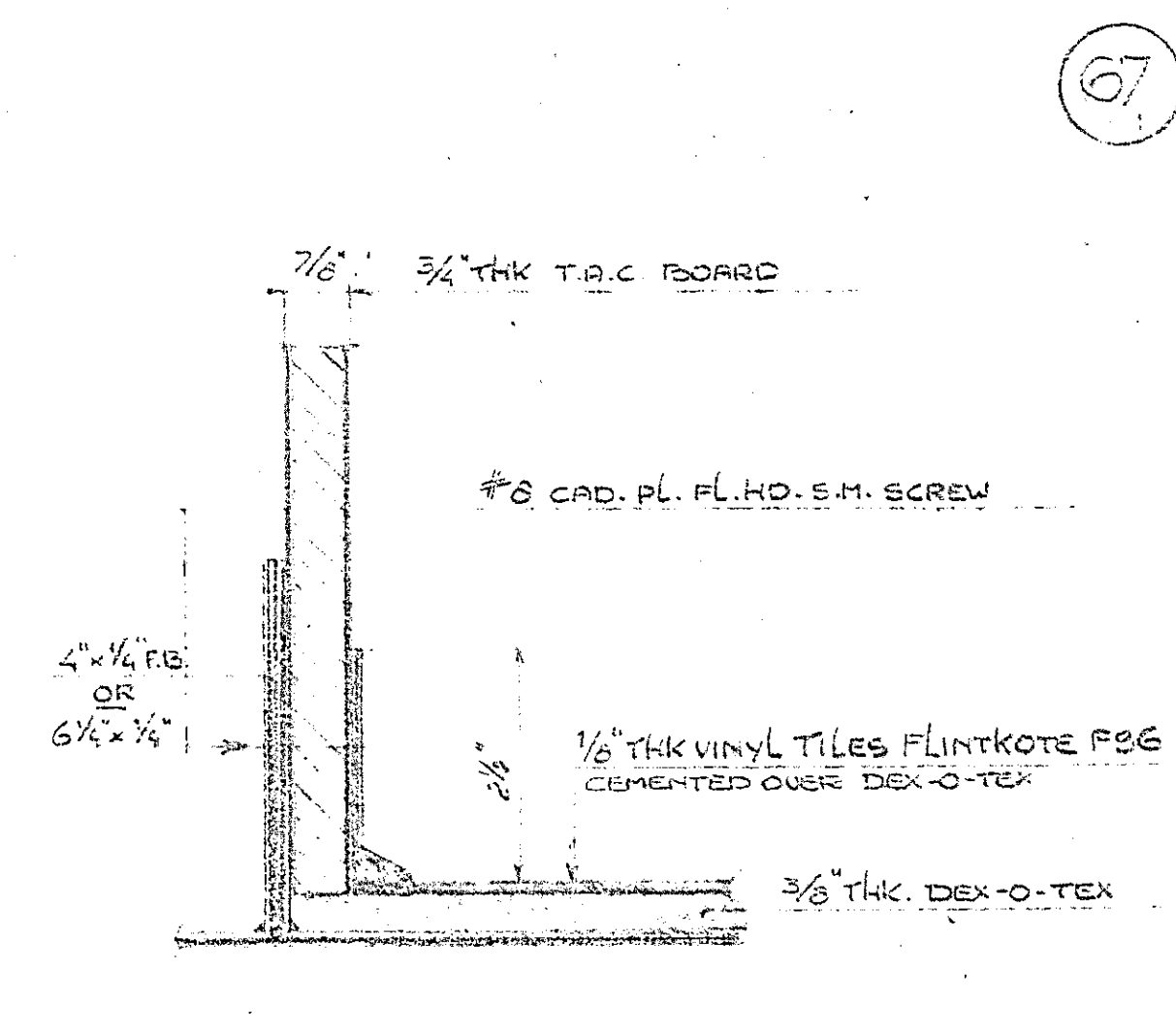
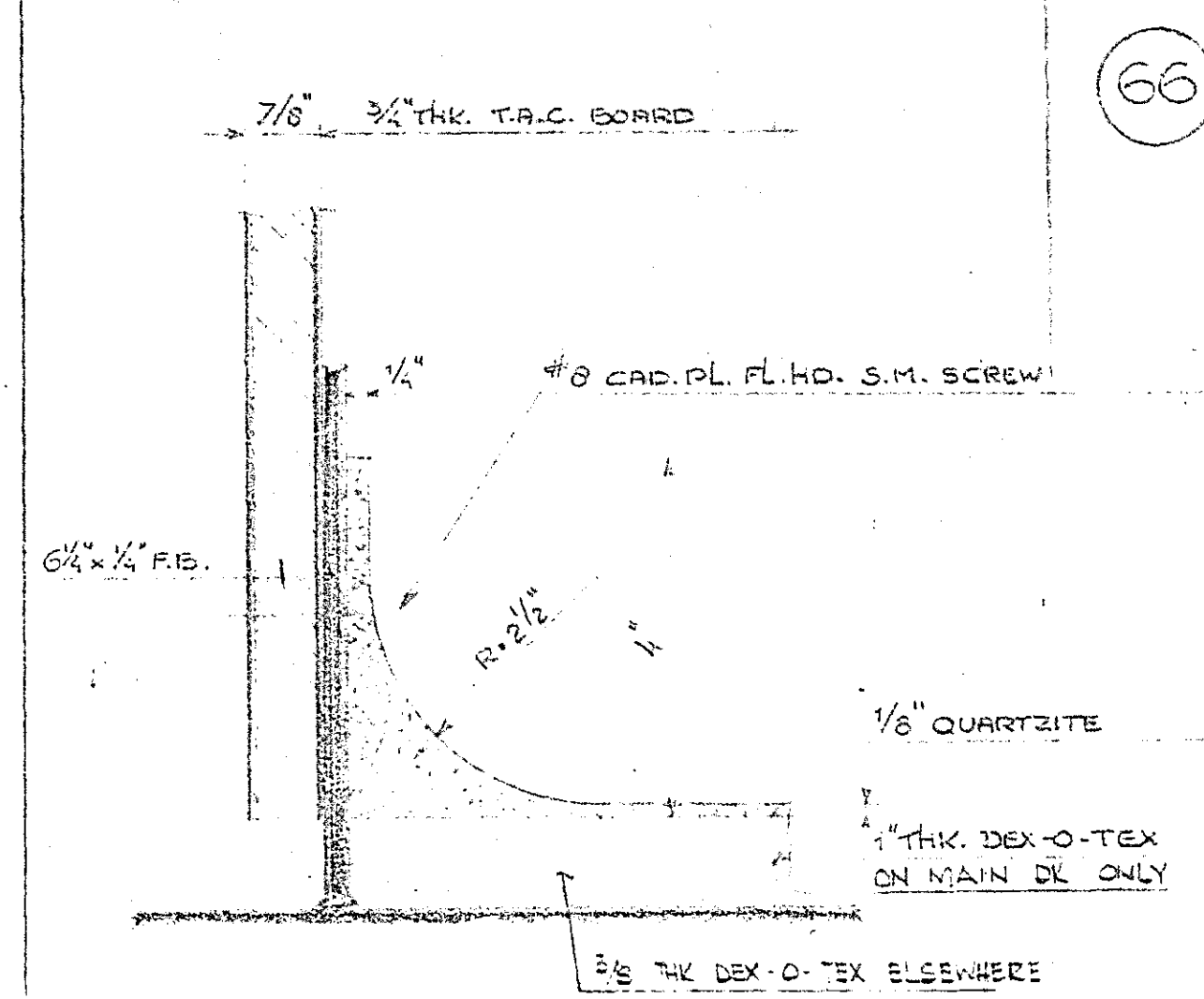
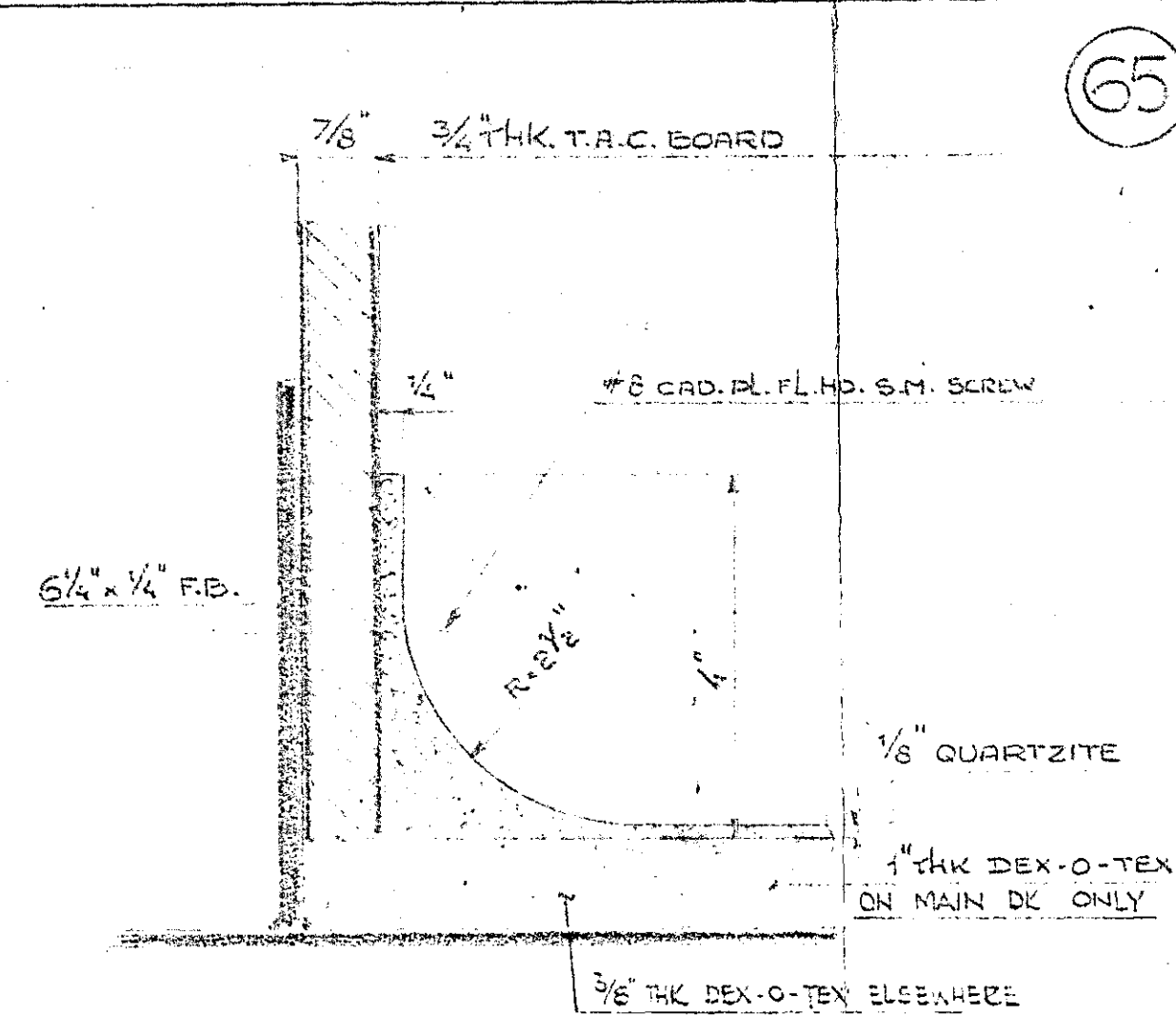
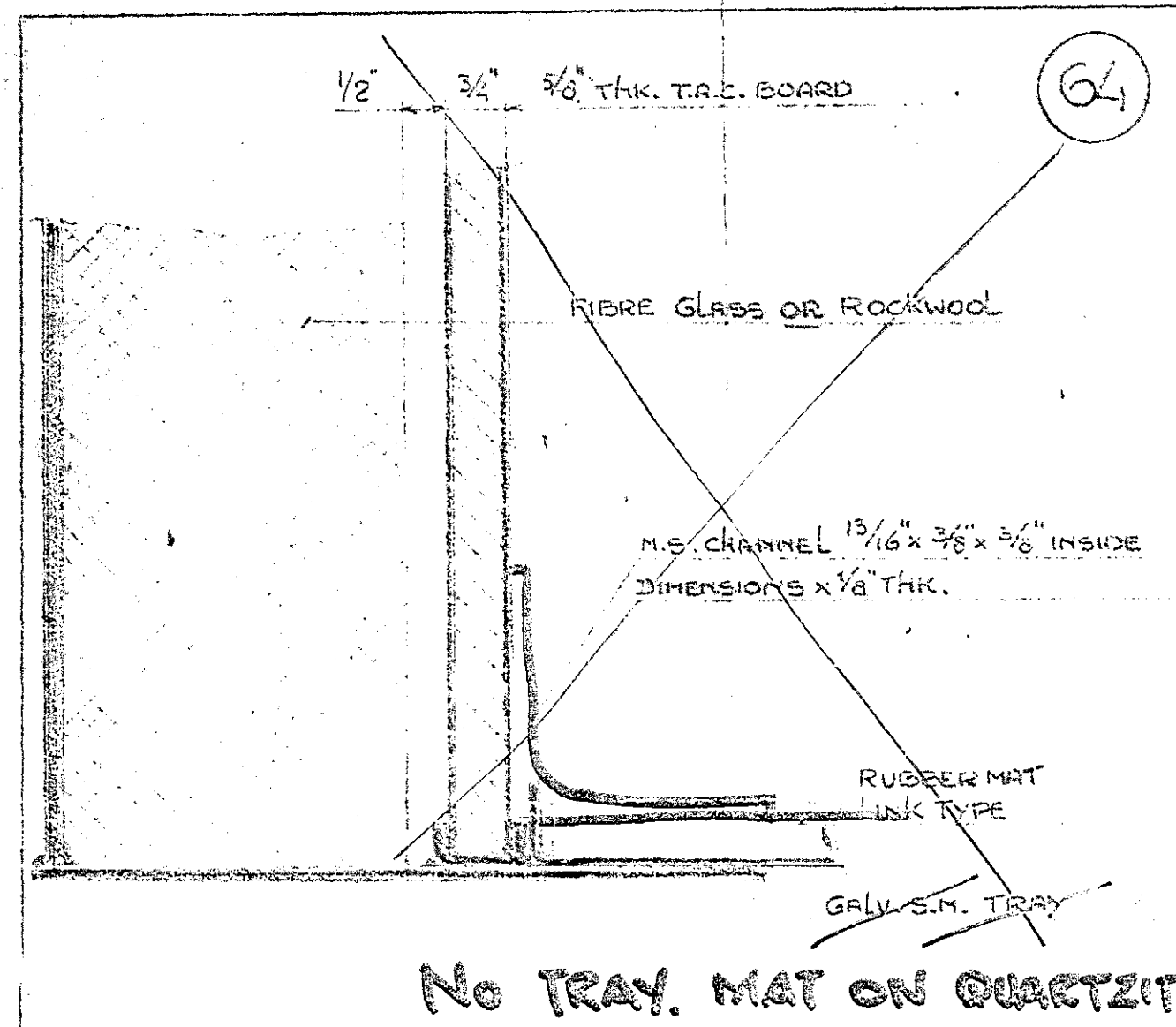




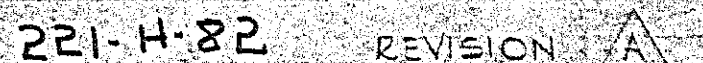




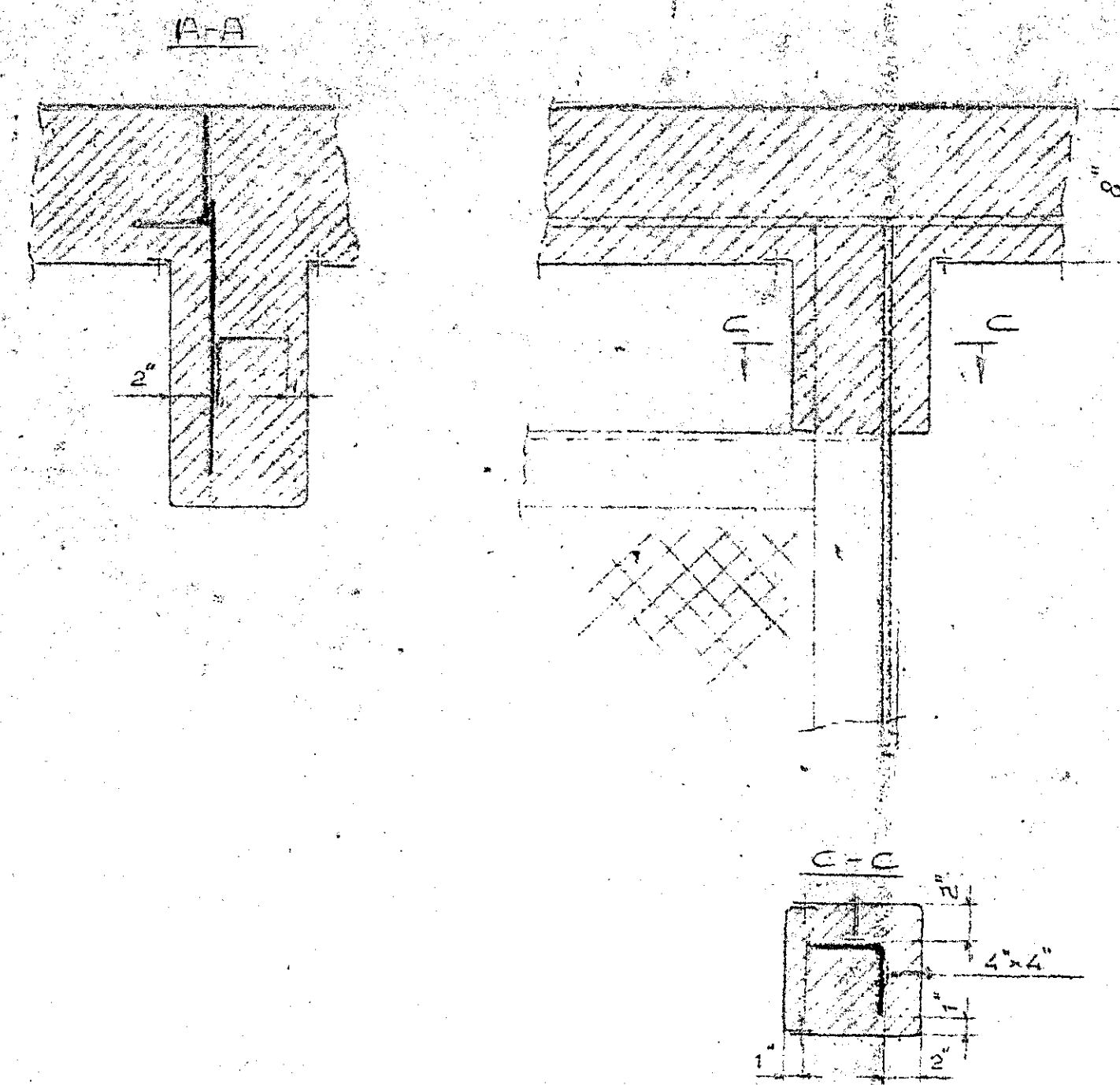
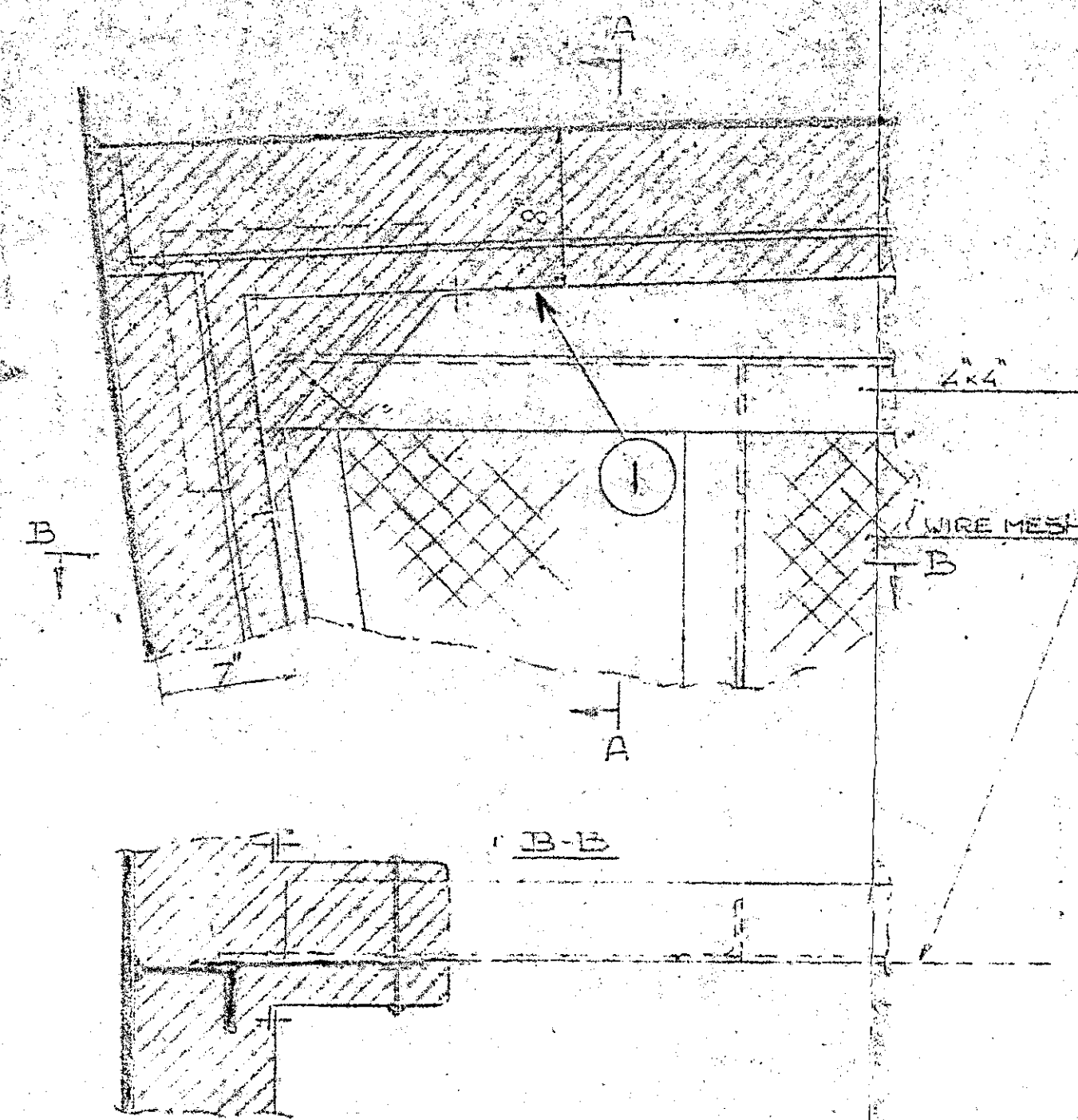
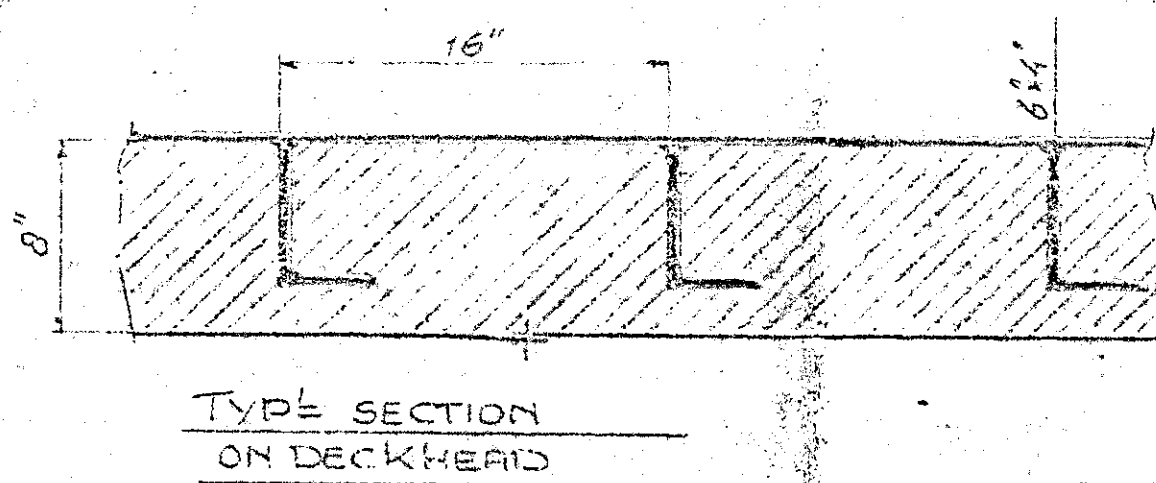
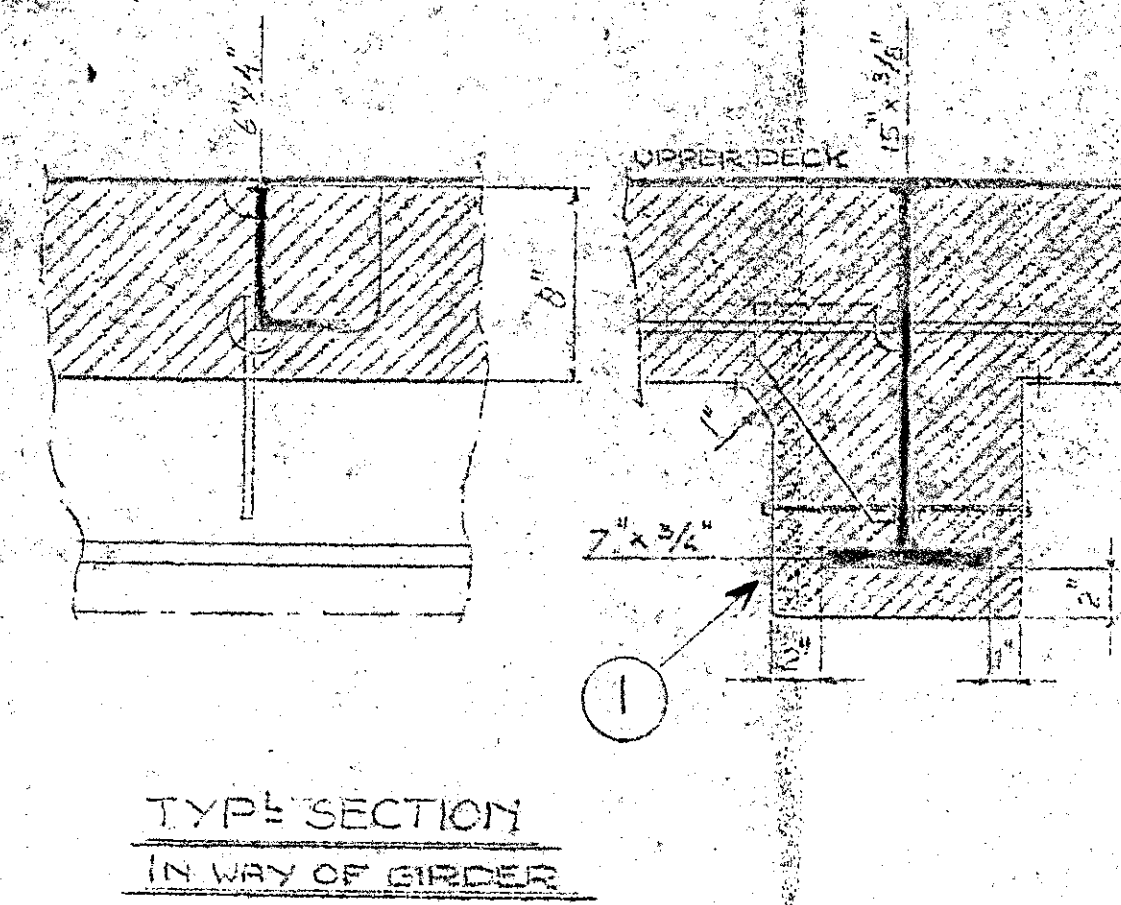




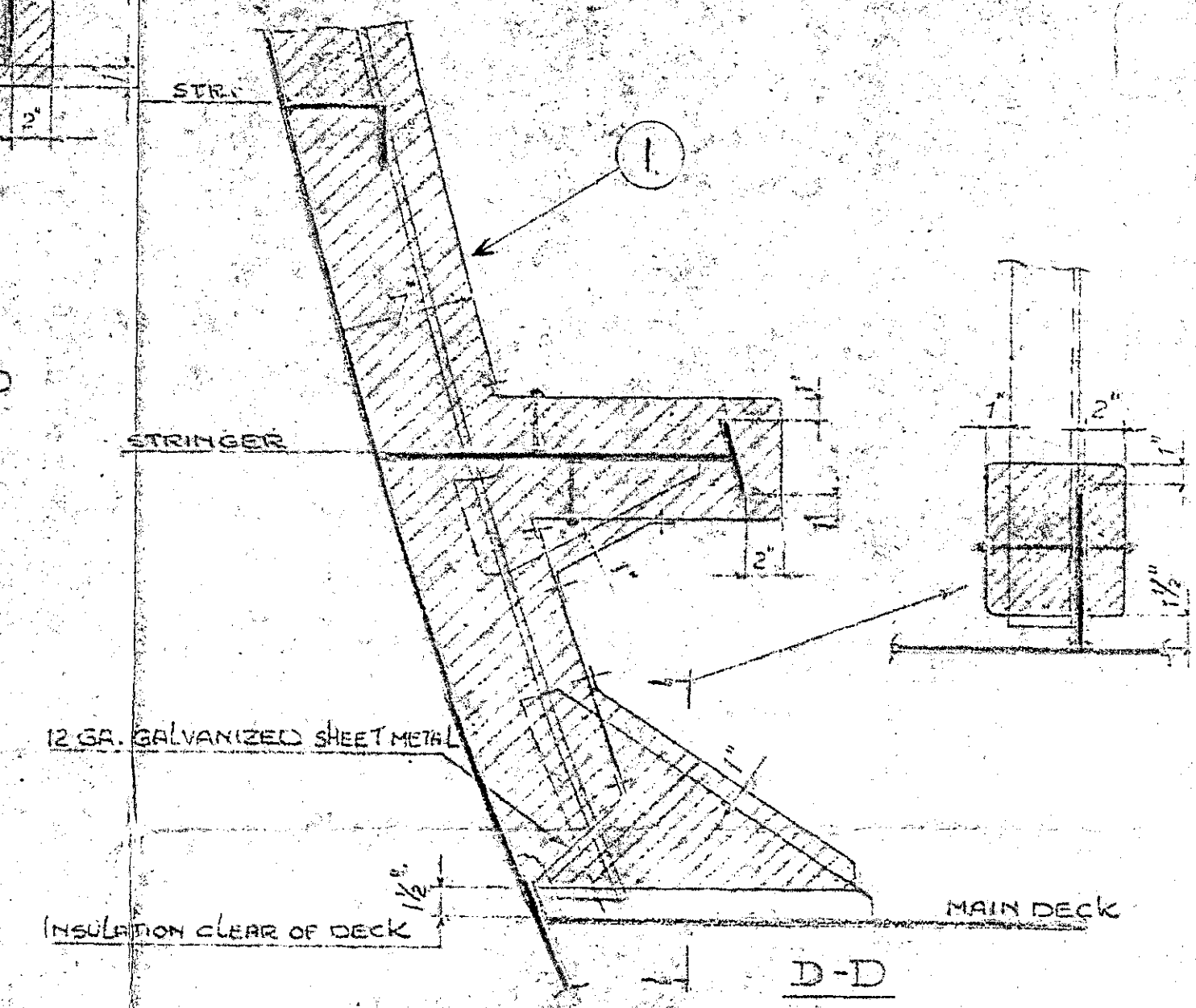
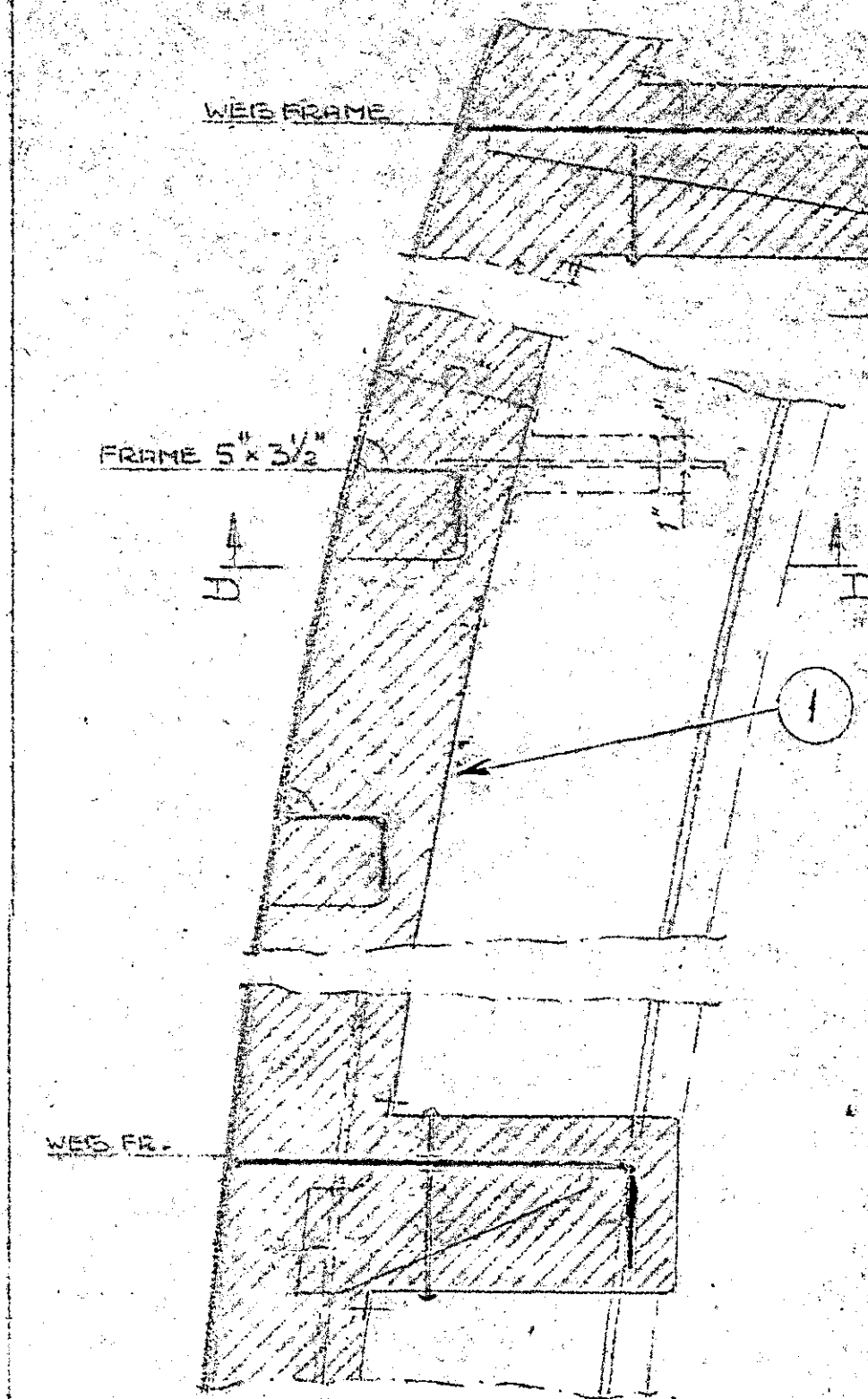




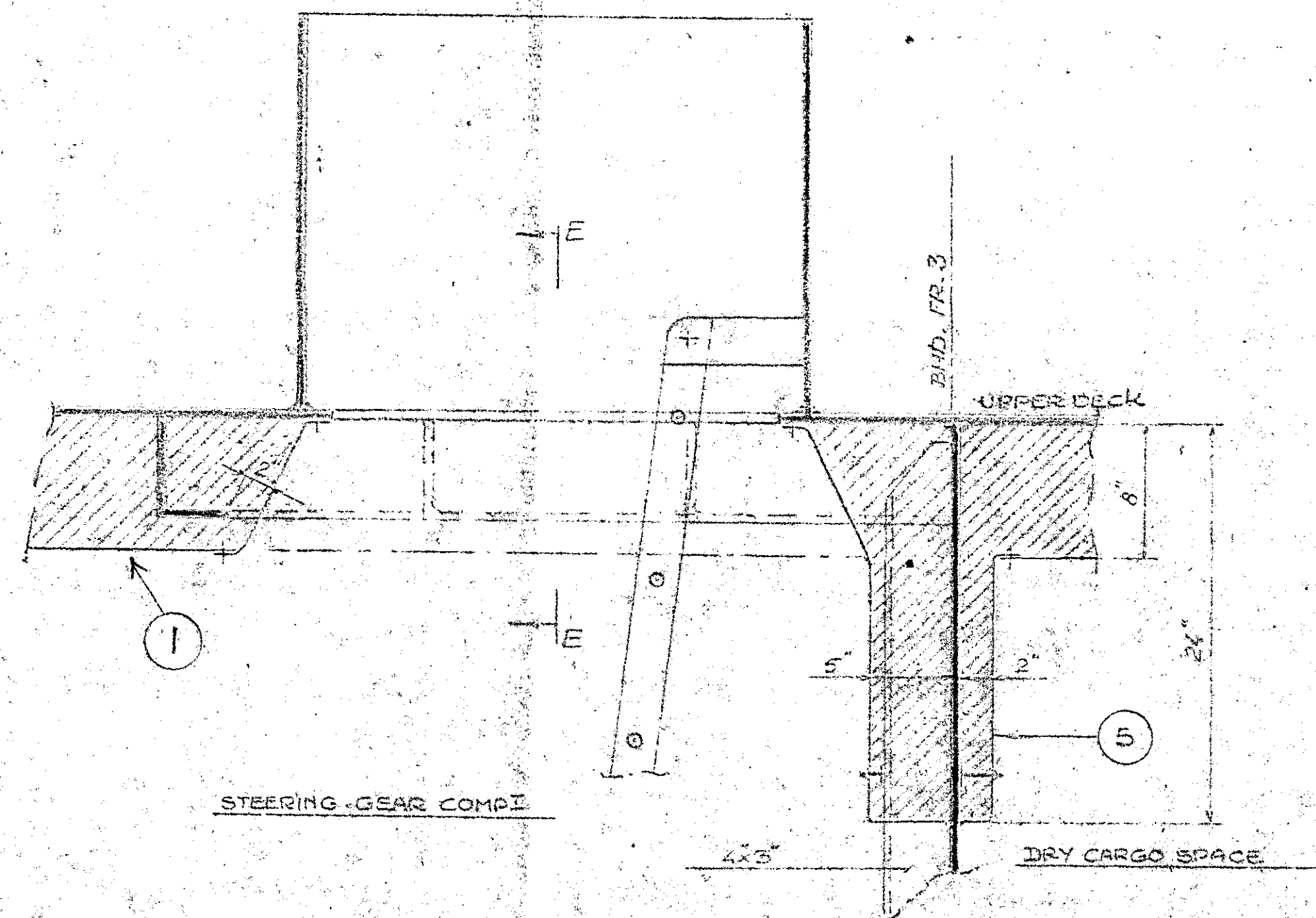




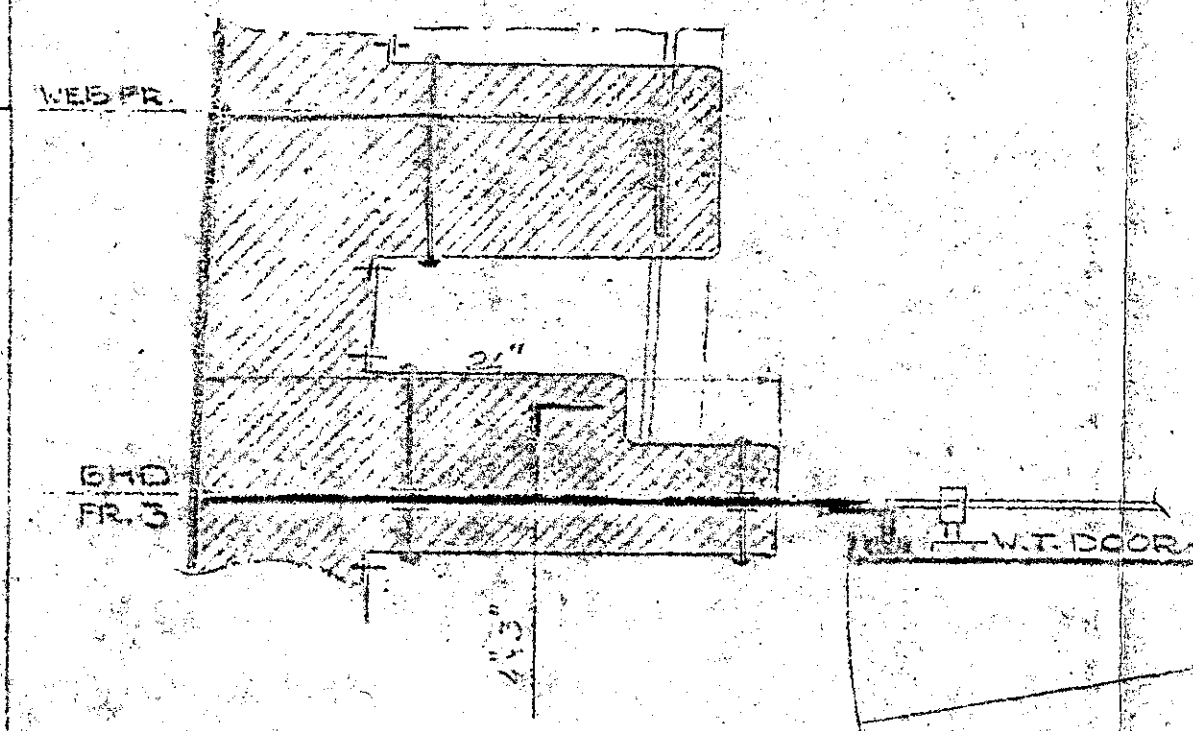
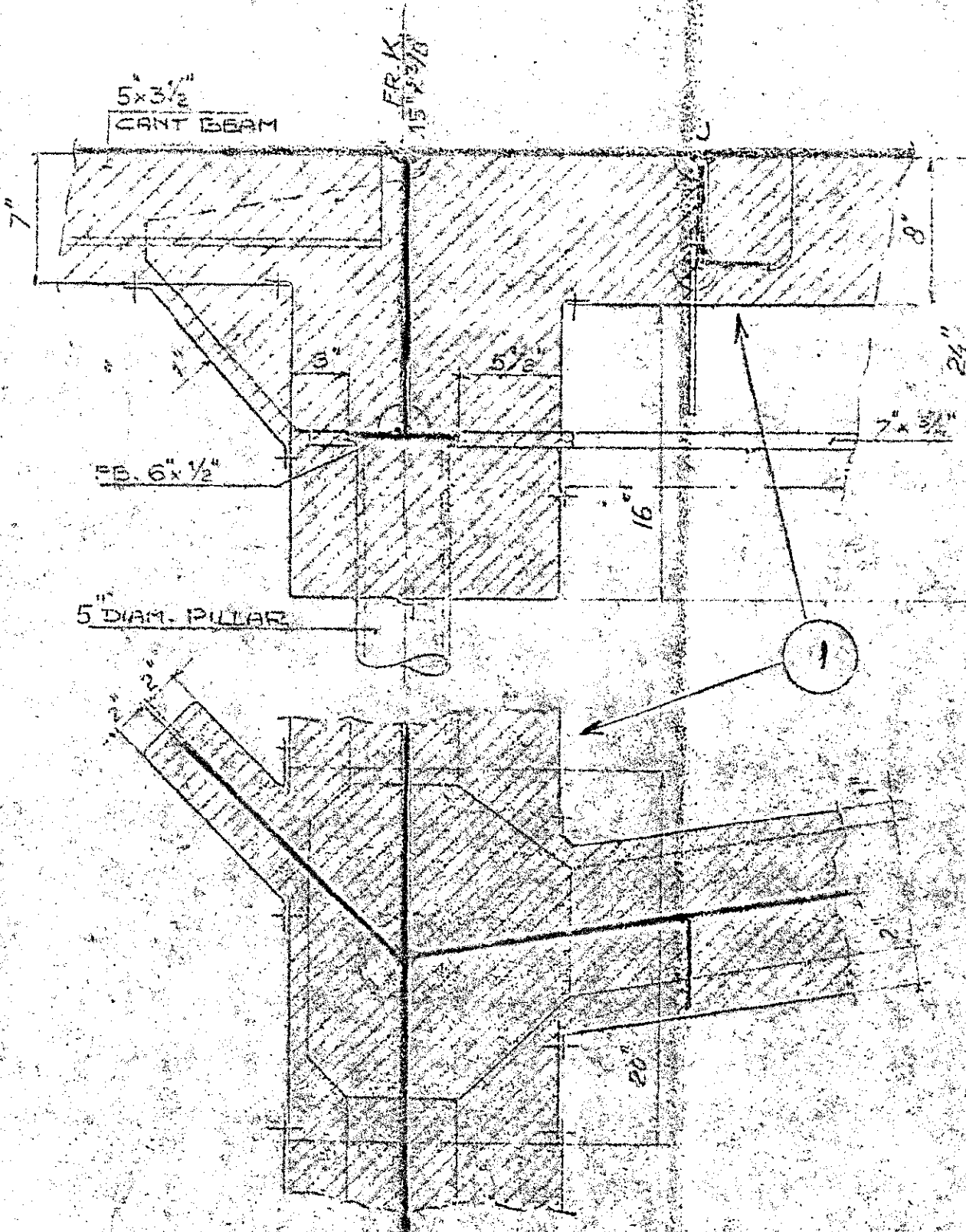
INSULATION I.W.O. STOW



INSULATION I.W.O. FRAMES AND STRINGERS



INSULATION I.W.O. HATCH COMING

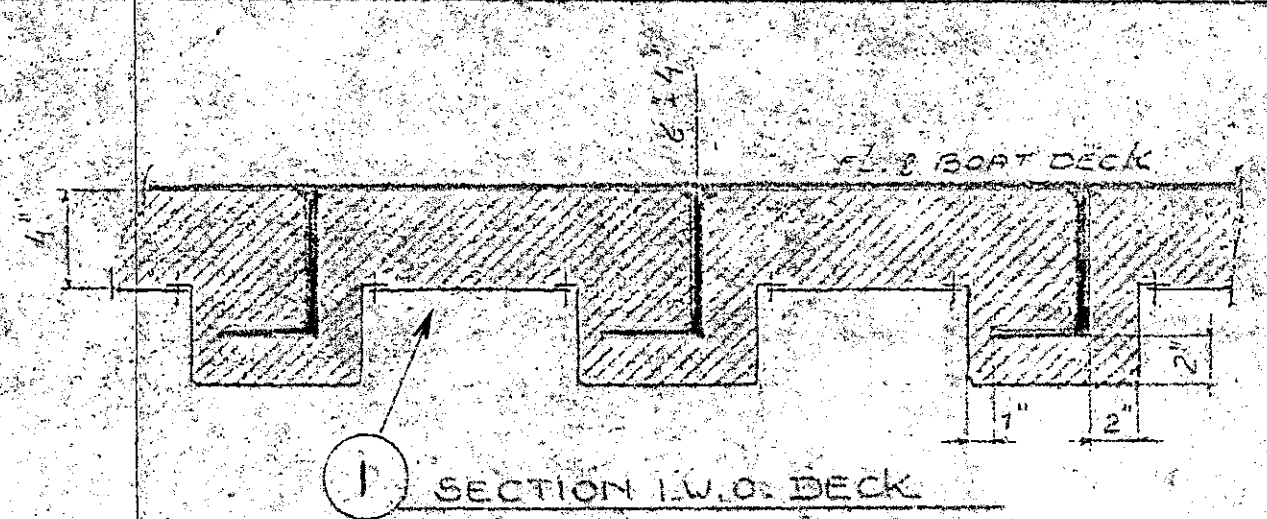
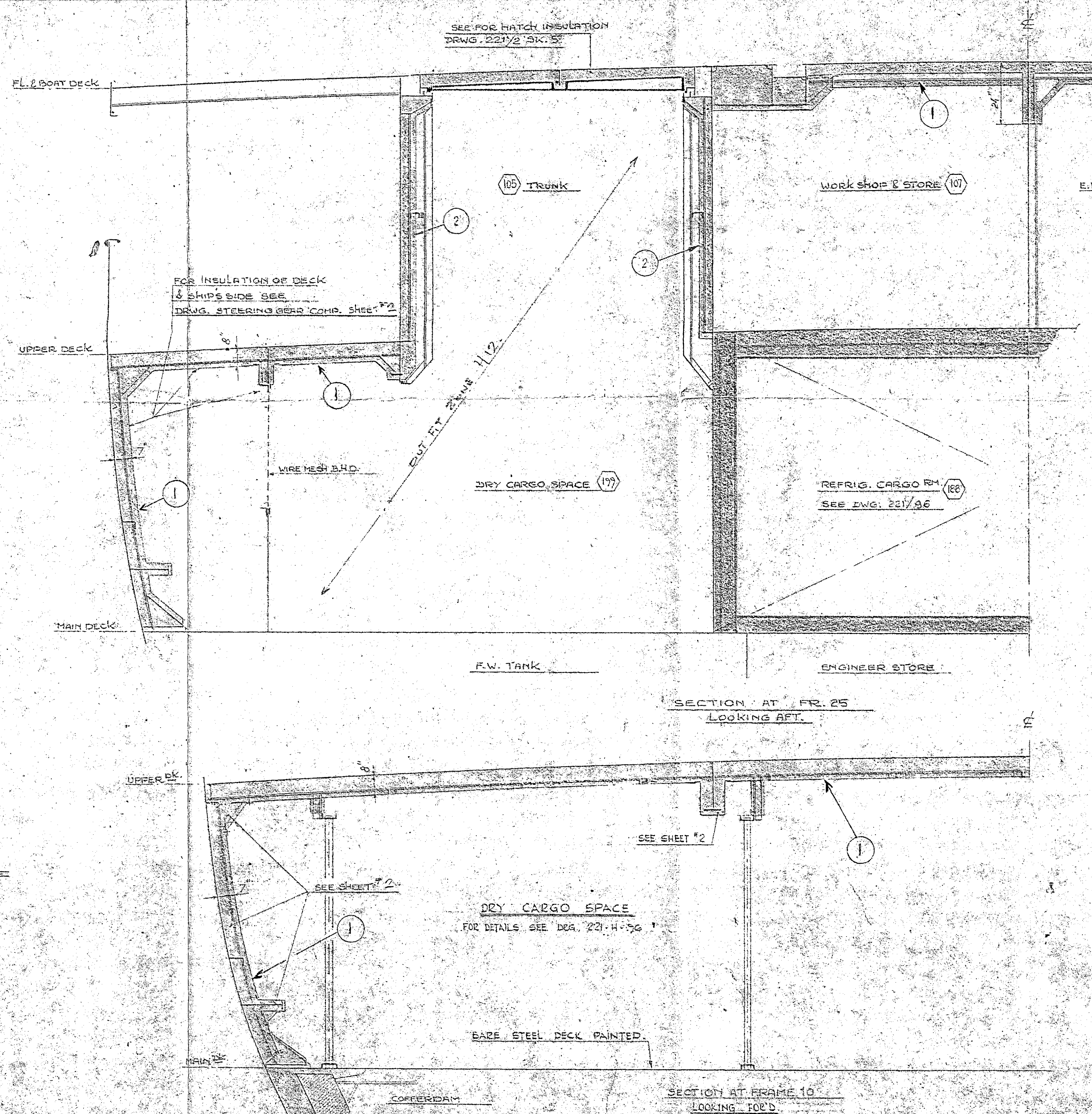
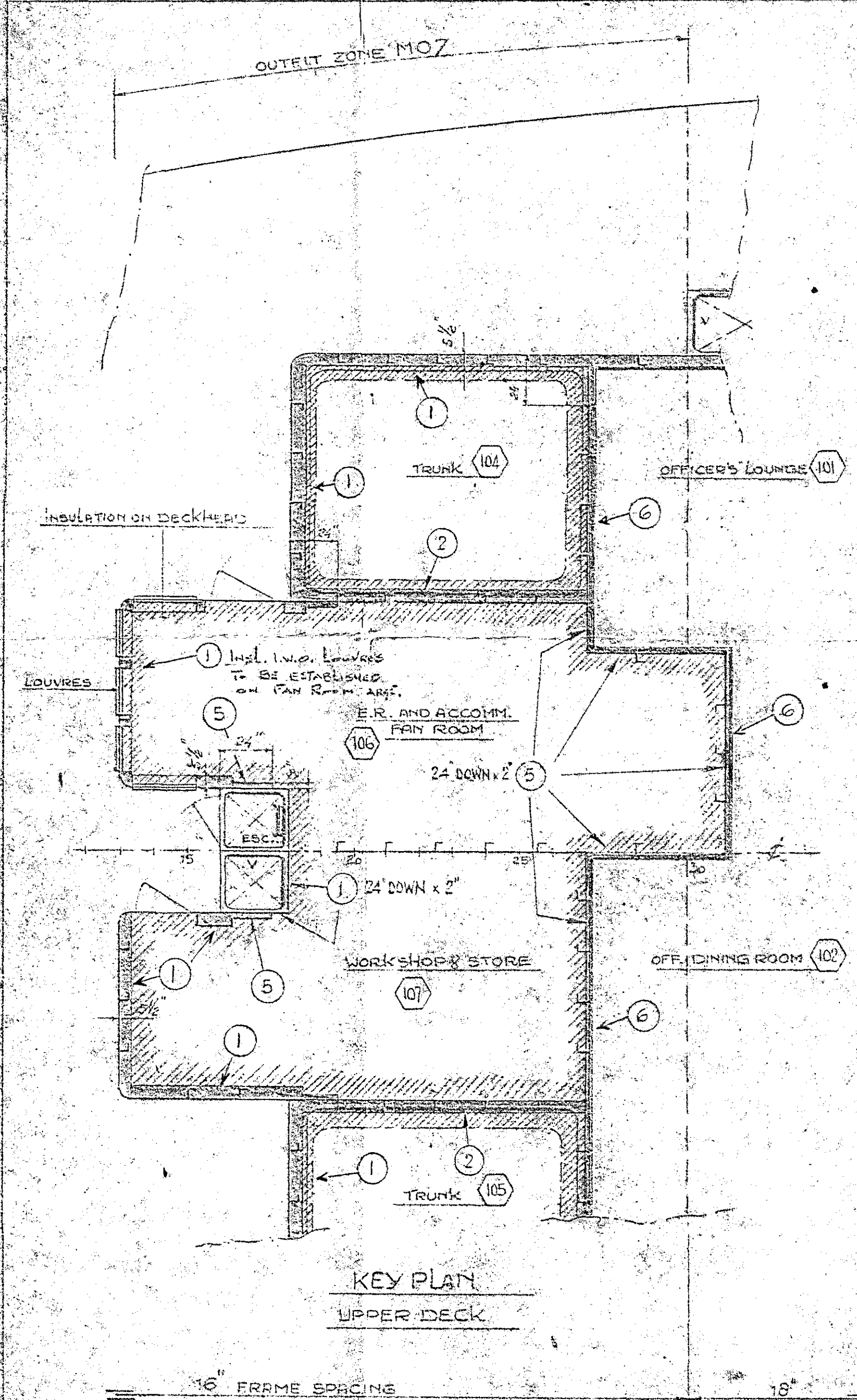


TYPICAL DETAIL FOR  
STEERING GEAR COMP. AND DRY CARGO SPACE

INSULATION: "FIBRE GLASS" PF 335  
WITH ALUMINUM PIGMENTED VINYL VAPOUR BARRIER  
COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS

DETAILS IN STEERING GEAR COMPARTMENT  
SCALE 1/8" = 1'  
STERN - FR. 3  
OUT FIT ZONE H13





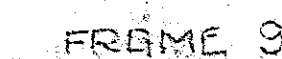
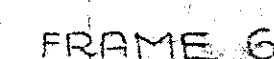
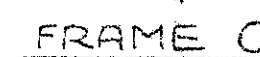
INSULATION: FIBRE GLASS PF335  
WITH ALUMINUM PIGMENTED VINYL VAPOUR BARRIER  
COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS

REFRIG. INSULATION

DETAILS BETWEEN MAIN & FL. BOATDECK  
FROM FR. 13-27

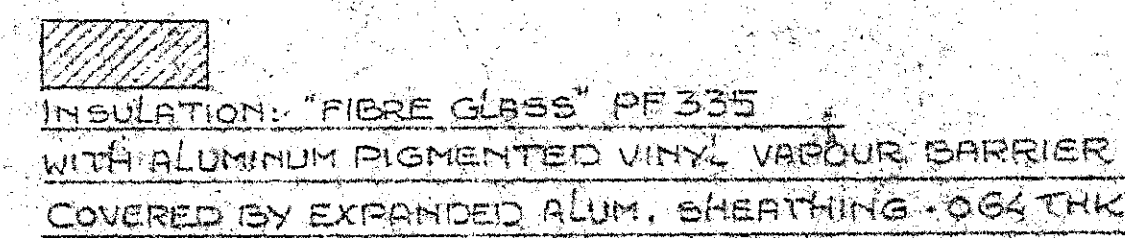
OUTLET ZONES H12 & MO7





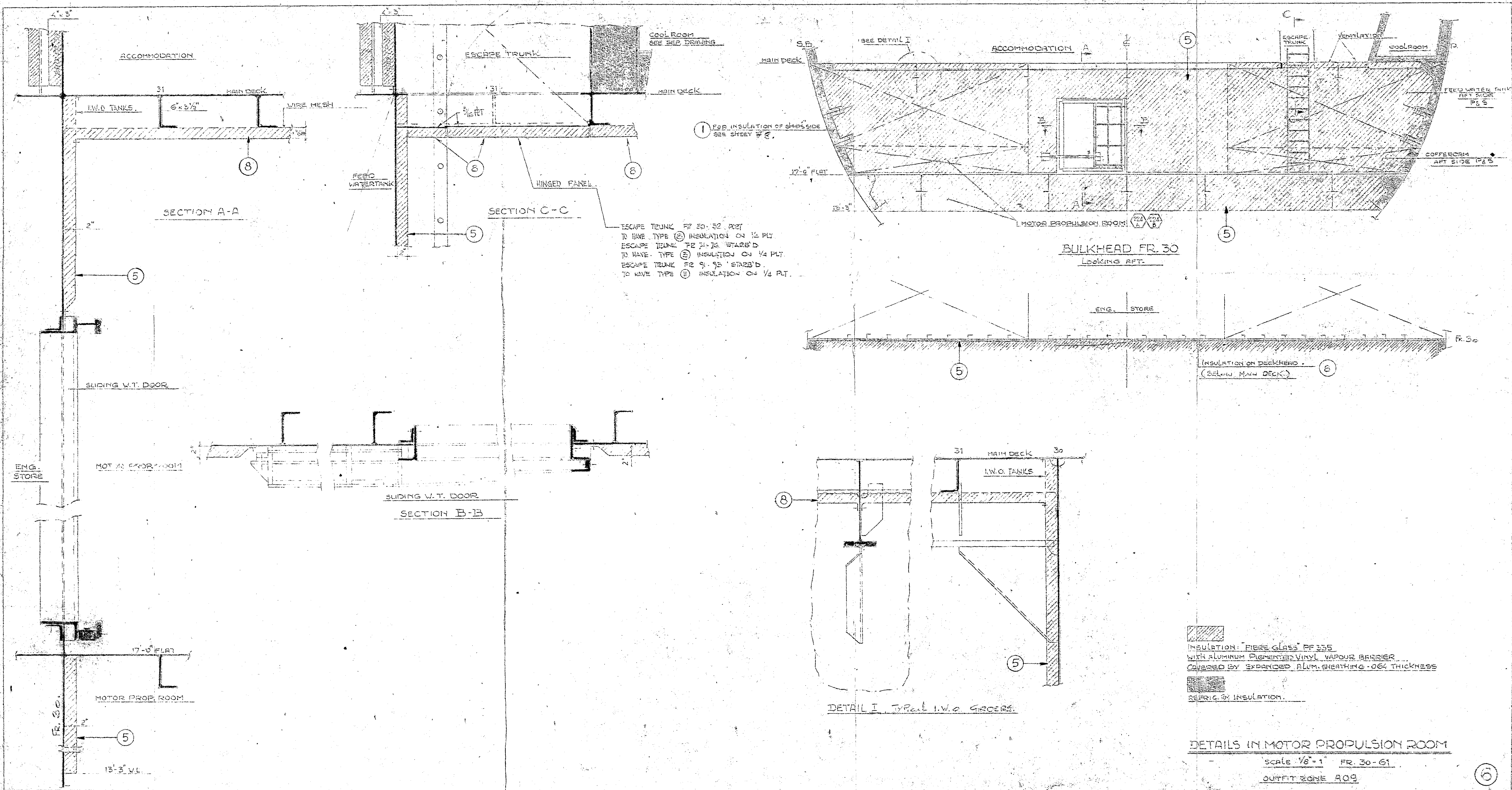
COFFERDAM HELICOPTER FUELTANK (FR-0-13)  
OUTFIT ZONE E-11



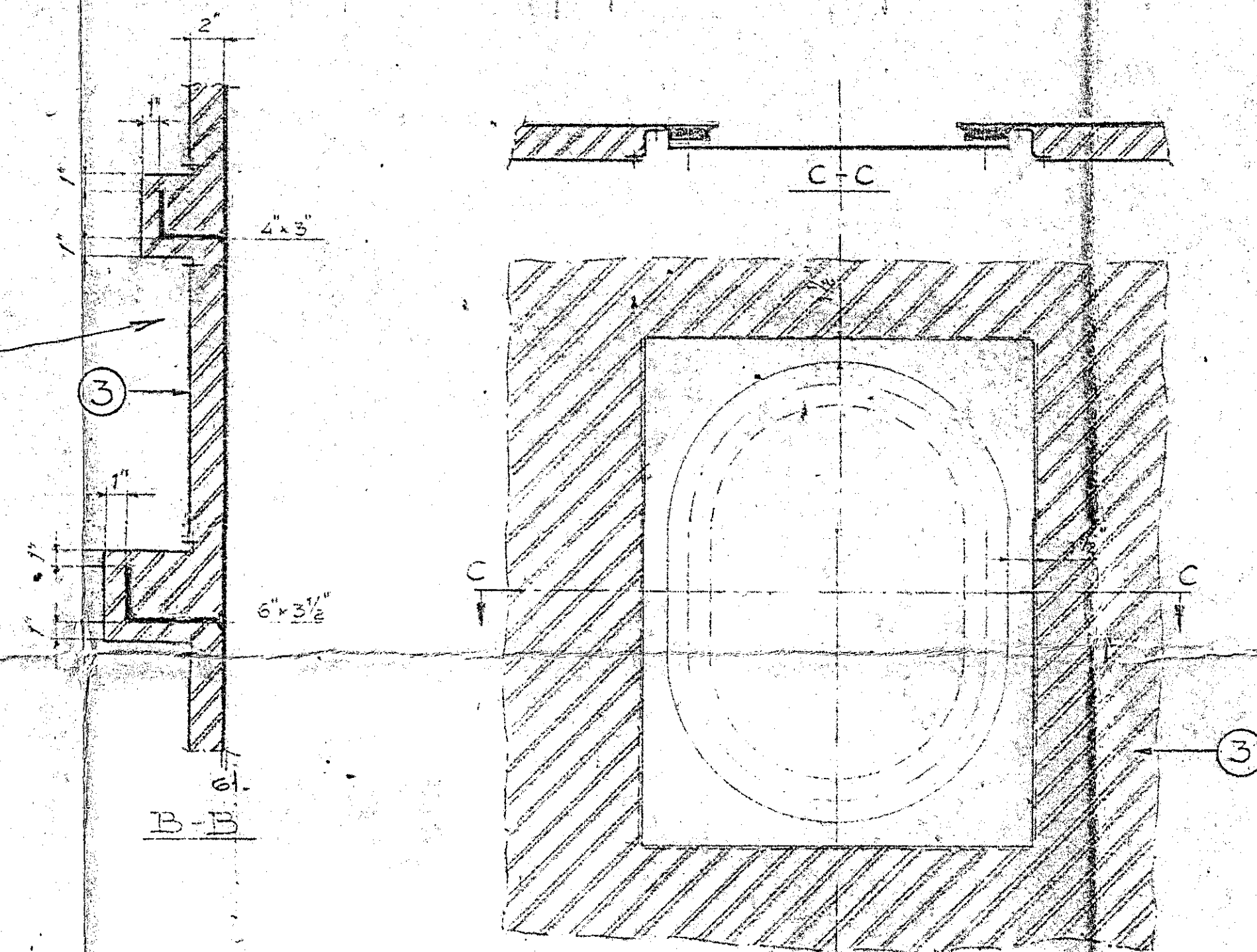
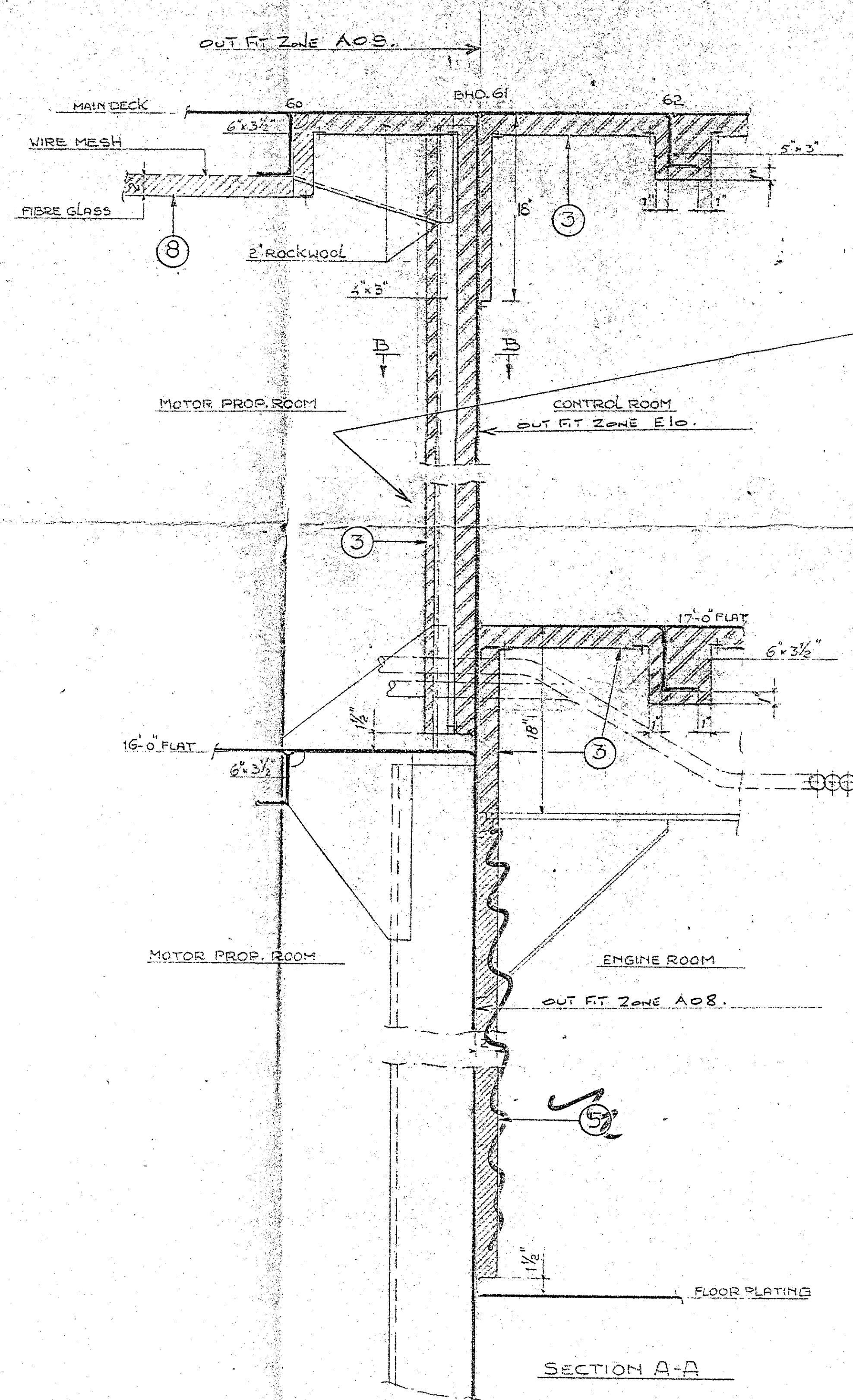


OUTFIT ZONE E-11

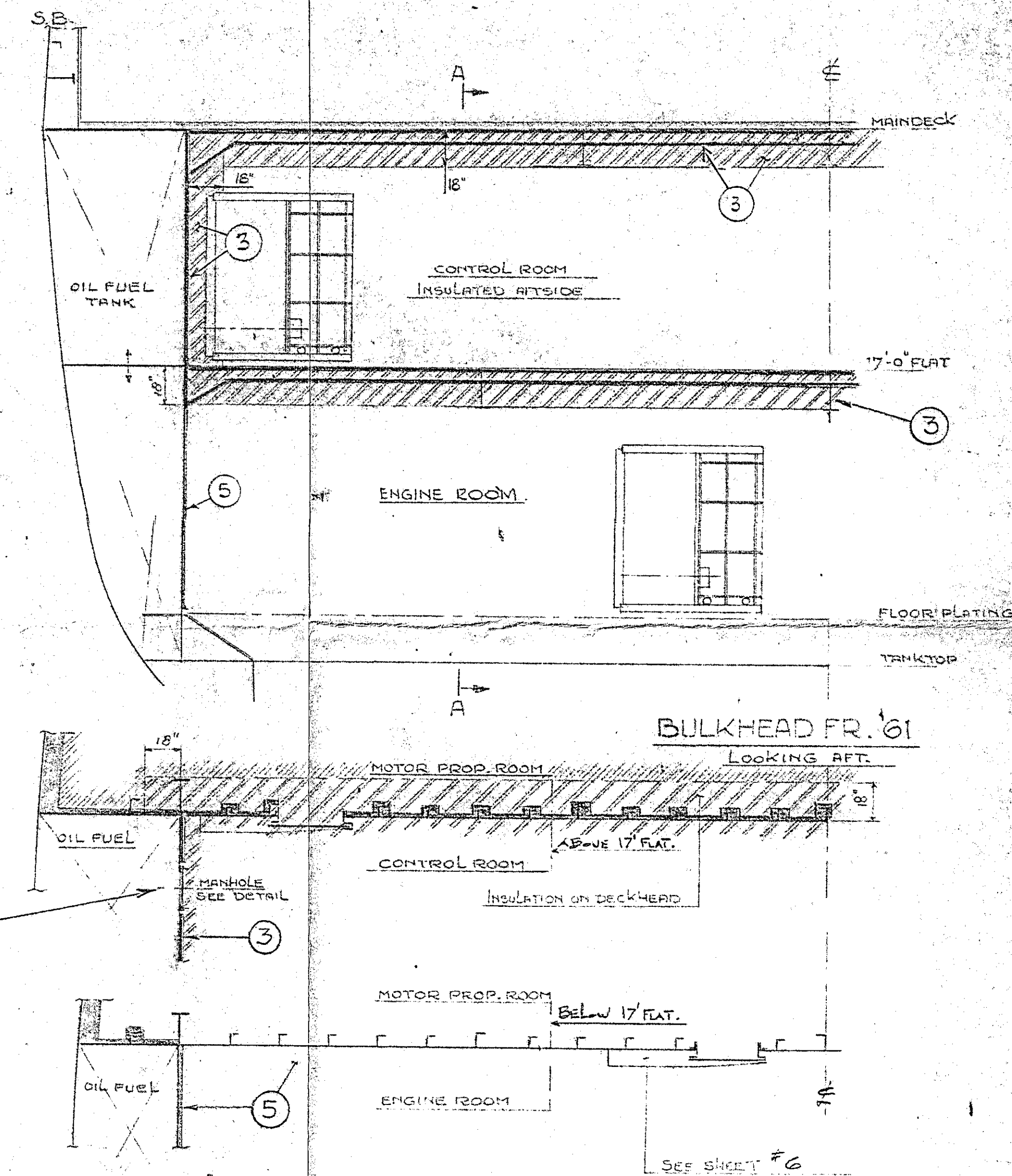
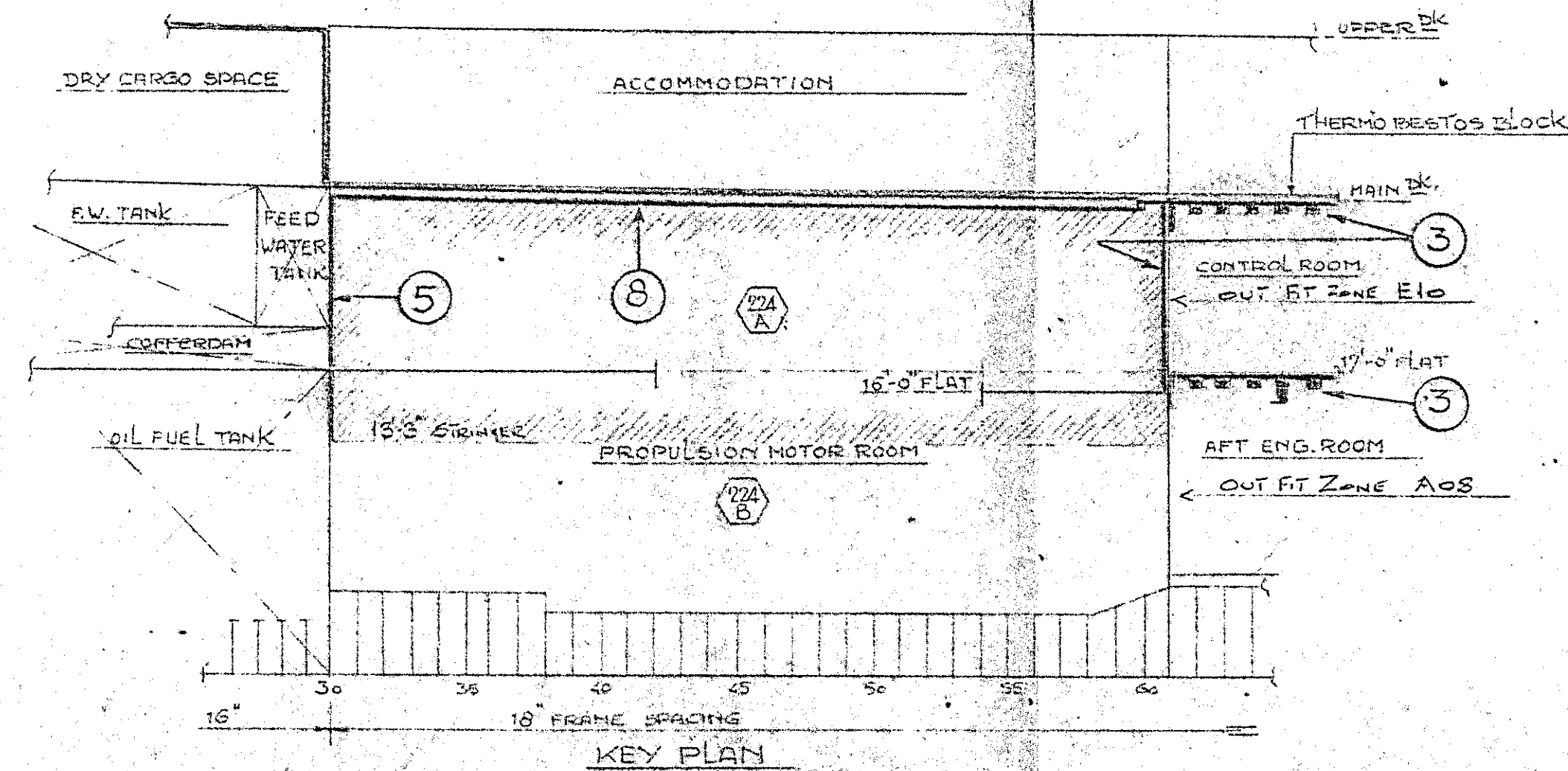








TYPICAL DETAIL OF INSULATION  
AROUND MANHOLE ON LONGITUDINAL BHD.



INSULATION: "FIBRE GLASS" PF 335  
WITH ALUMINUM PIGMENTED VINYL VAPOR BARRIER  
COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS

INSULATION "ROCKWOOL"  
COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS

DETAILS FROM FR. 30-61

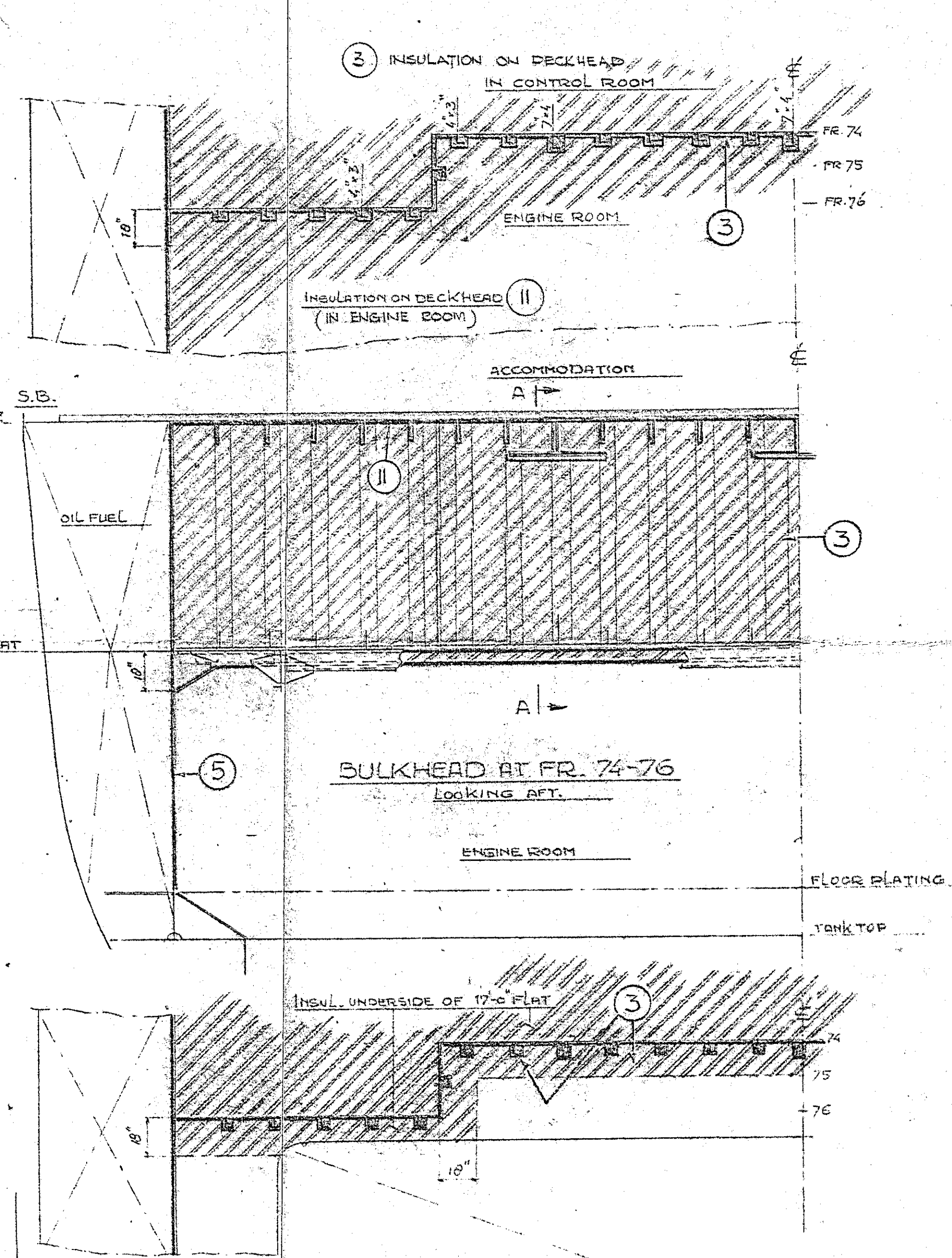
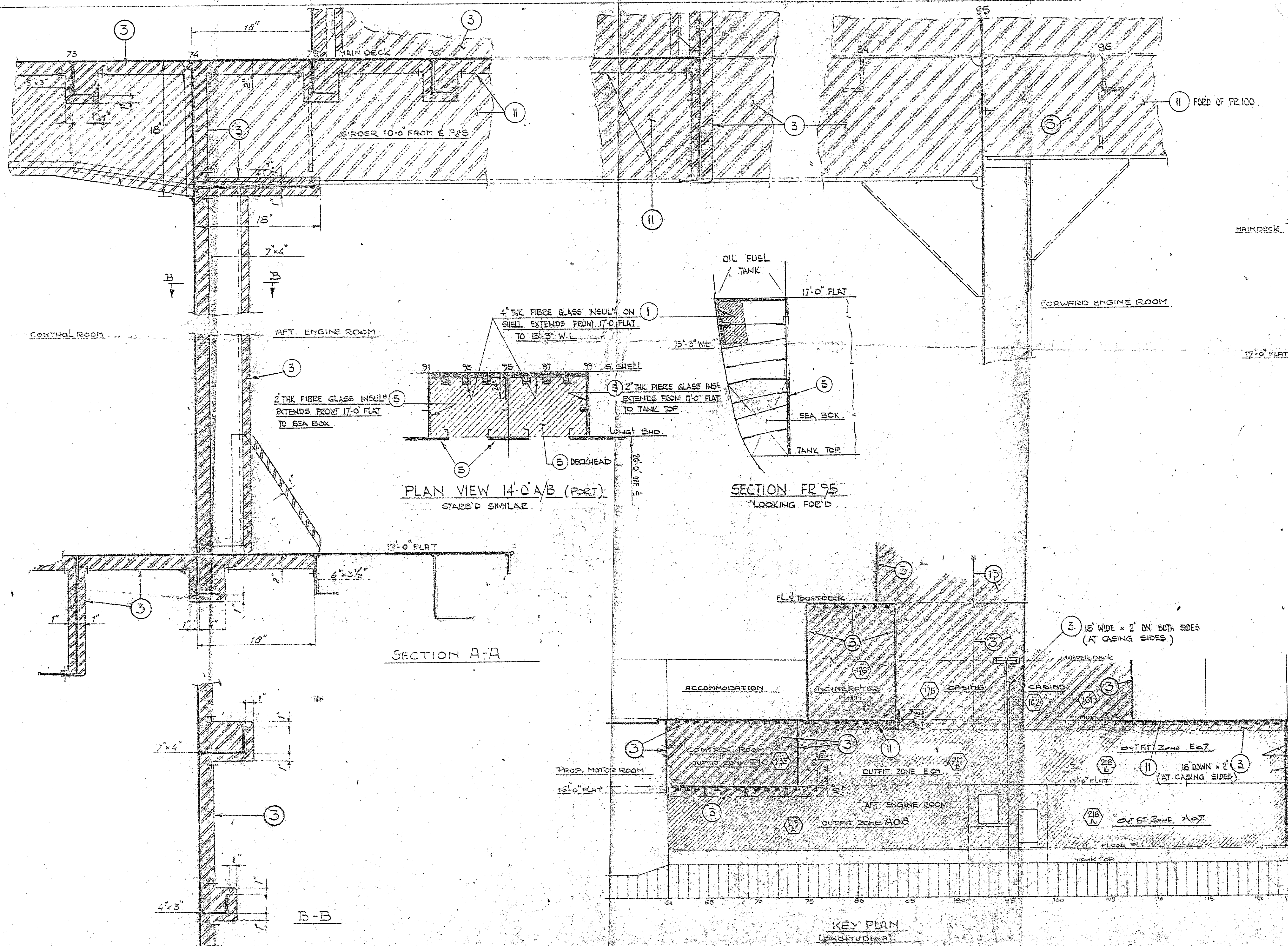
SCALE 1/8" = 1"

OUTFIT ZONE A09









NOTE: BULKHEAD FR. 95, NOT INSULATED.  
EXCEPT AT CASING SIDES AS INDICATED

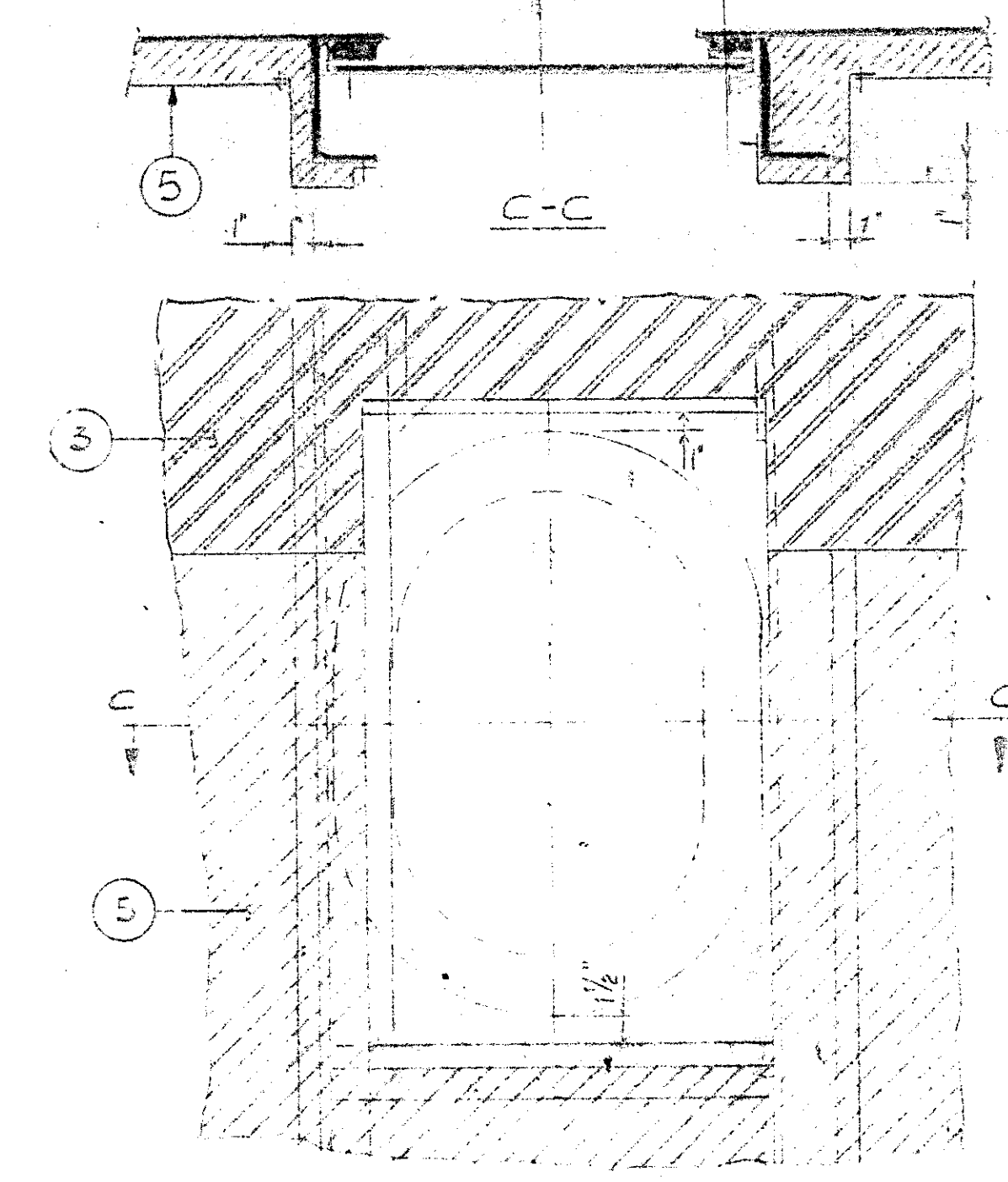
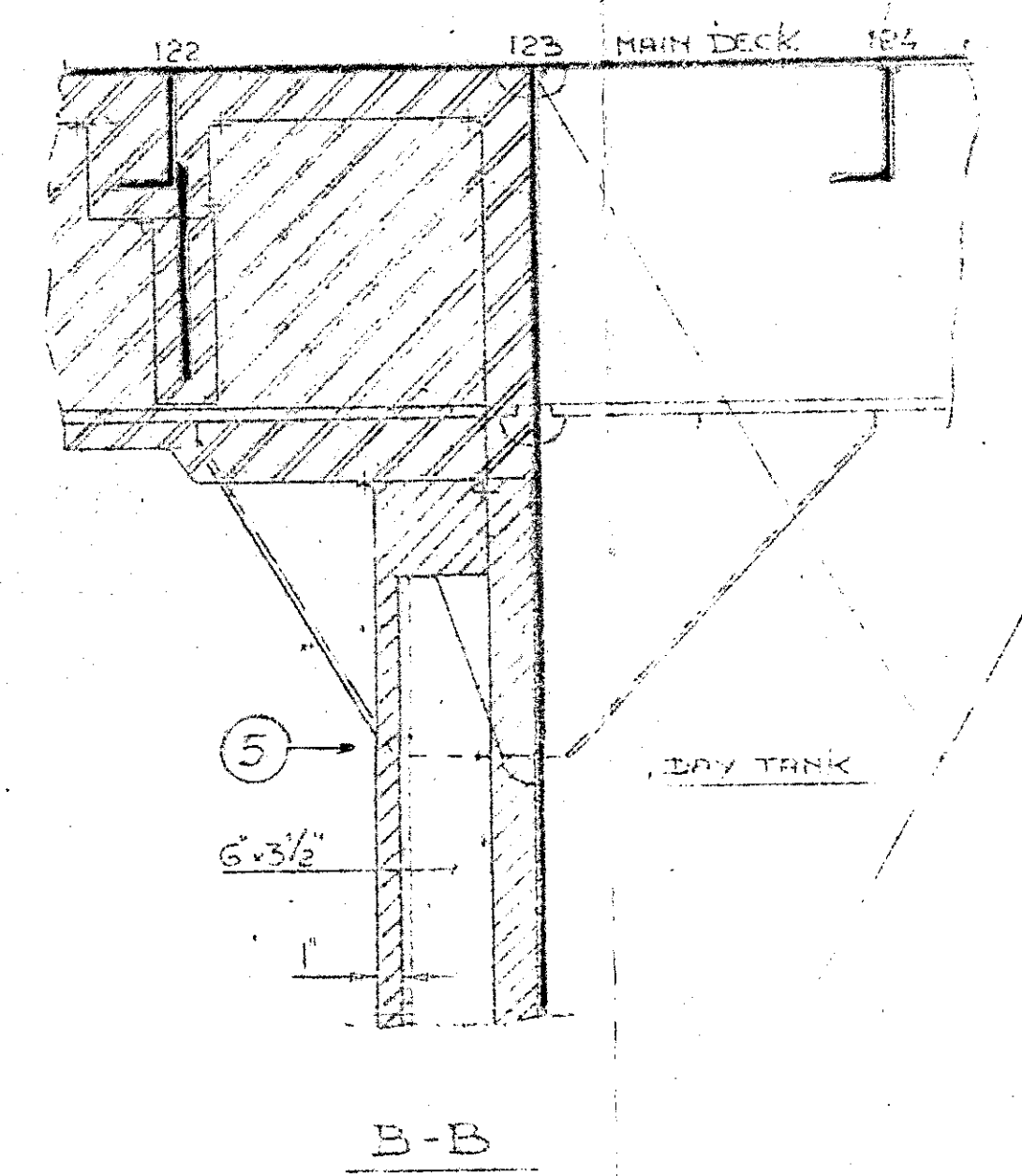
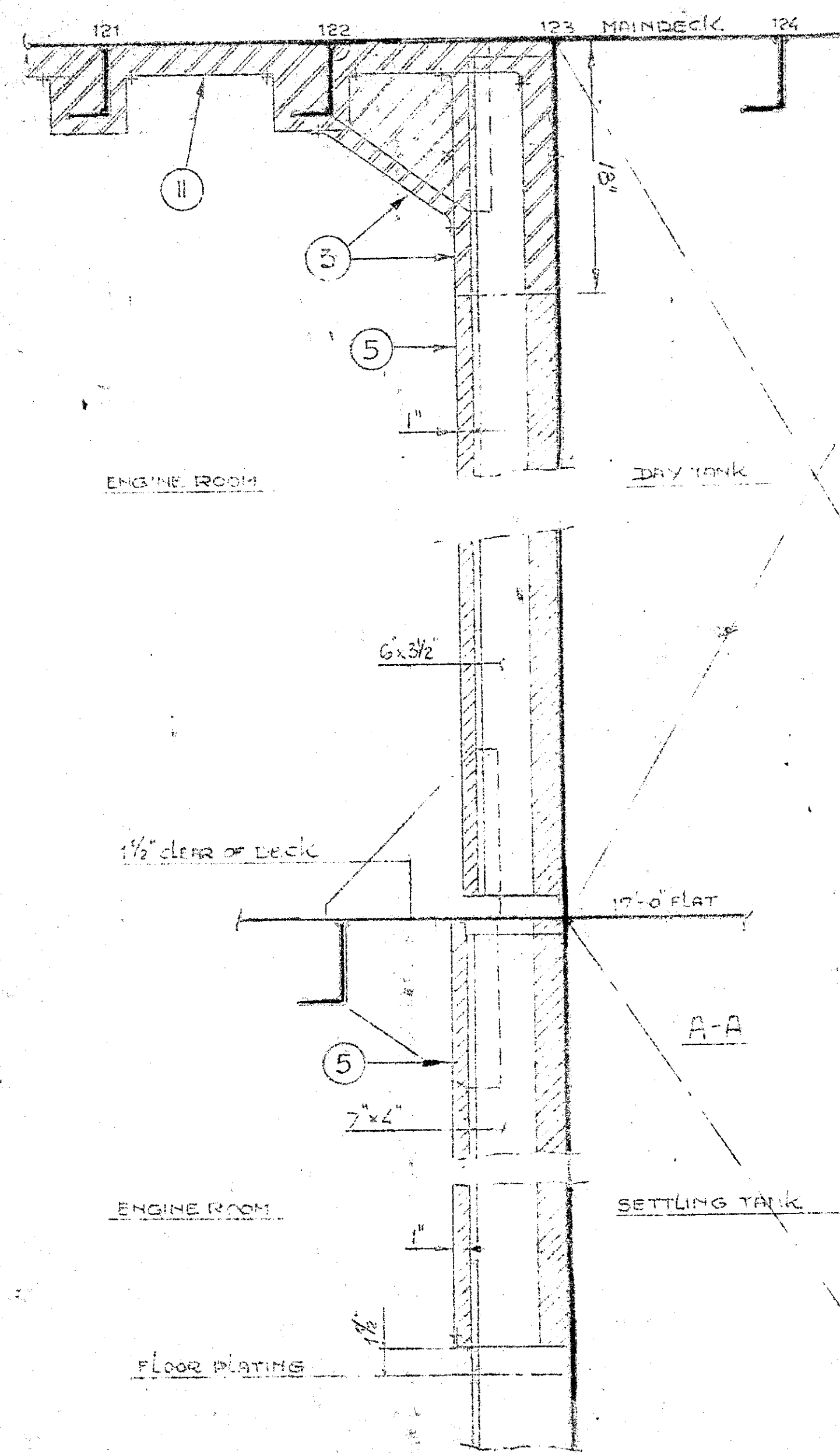
INSULATION: "FIBRE GLASS" PF 335  
WITH ALUMINUM PIGMENTED VINYL VAPOUR BARRIER  
COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS

INSULATION: "ROCKWOOL"  
COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS  
OR BY PERFORATED ALUM. SHEATHING 22 GA. (SEE DETAILS)

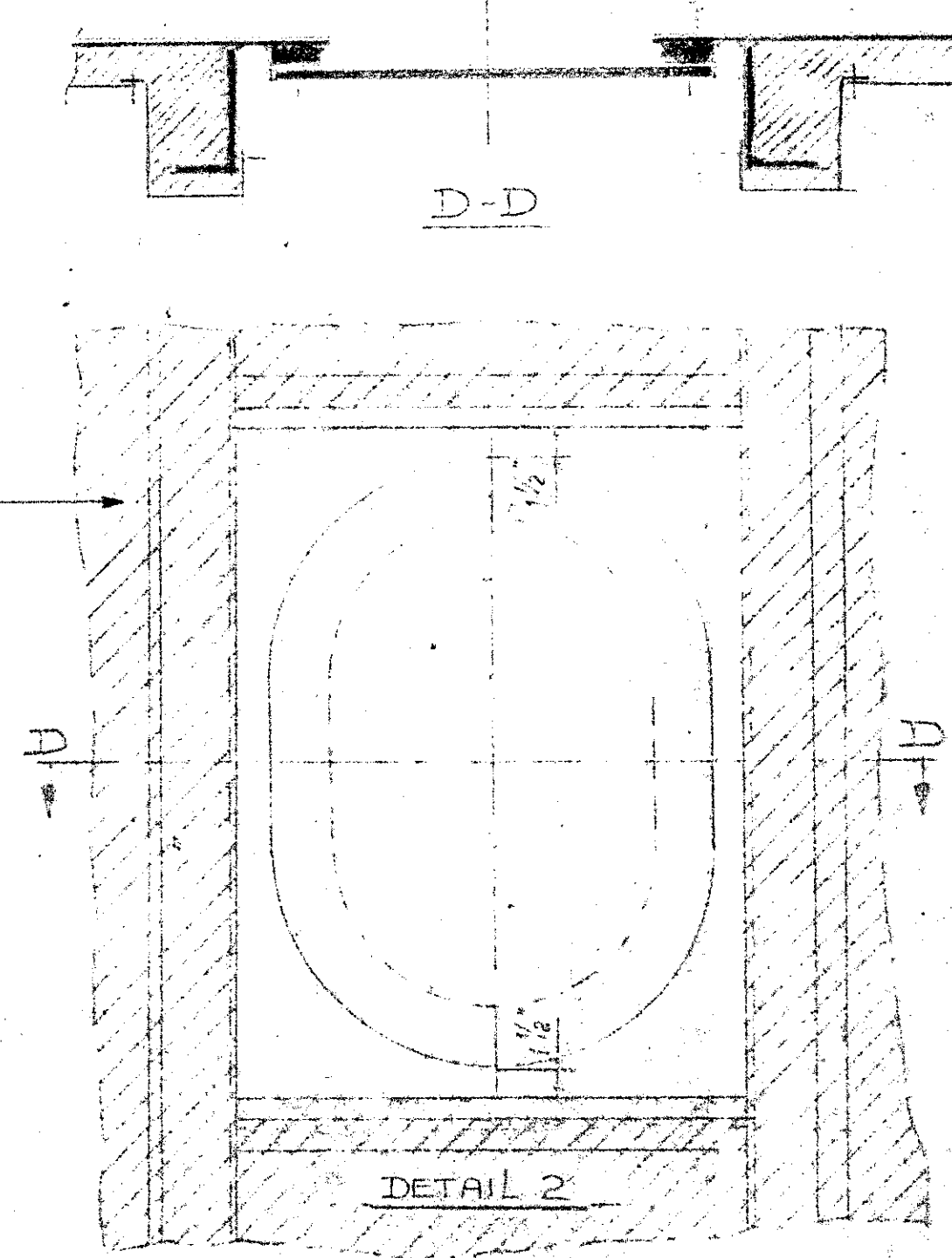
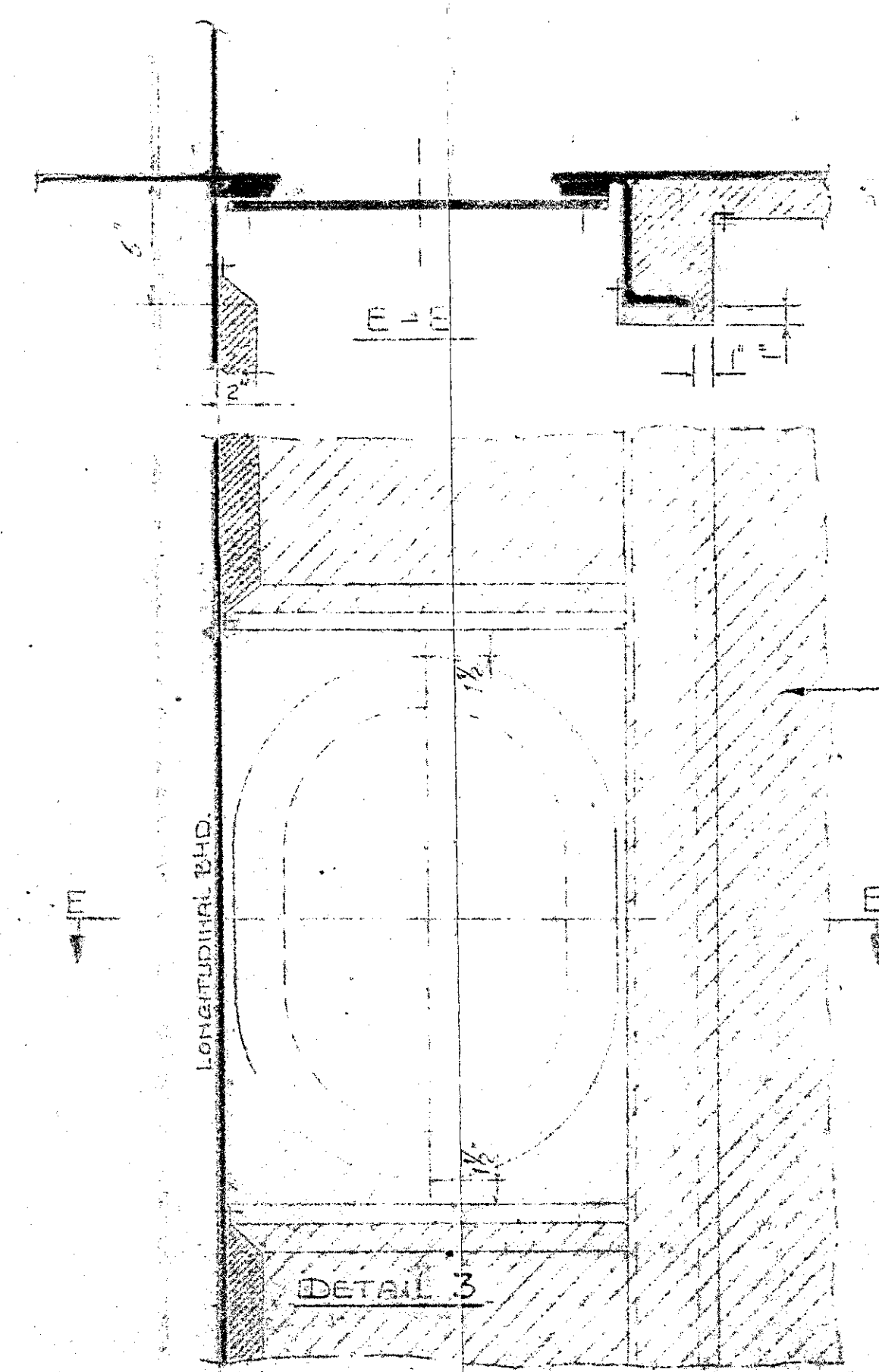
DETAILS FROM FR. 73-123

SCALE 1/8"=1'  
OUTFIT ZONES E10, E08, E07, A08 & A07.



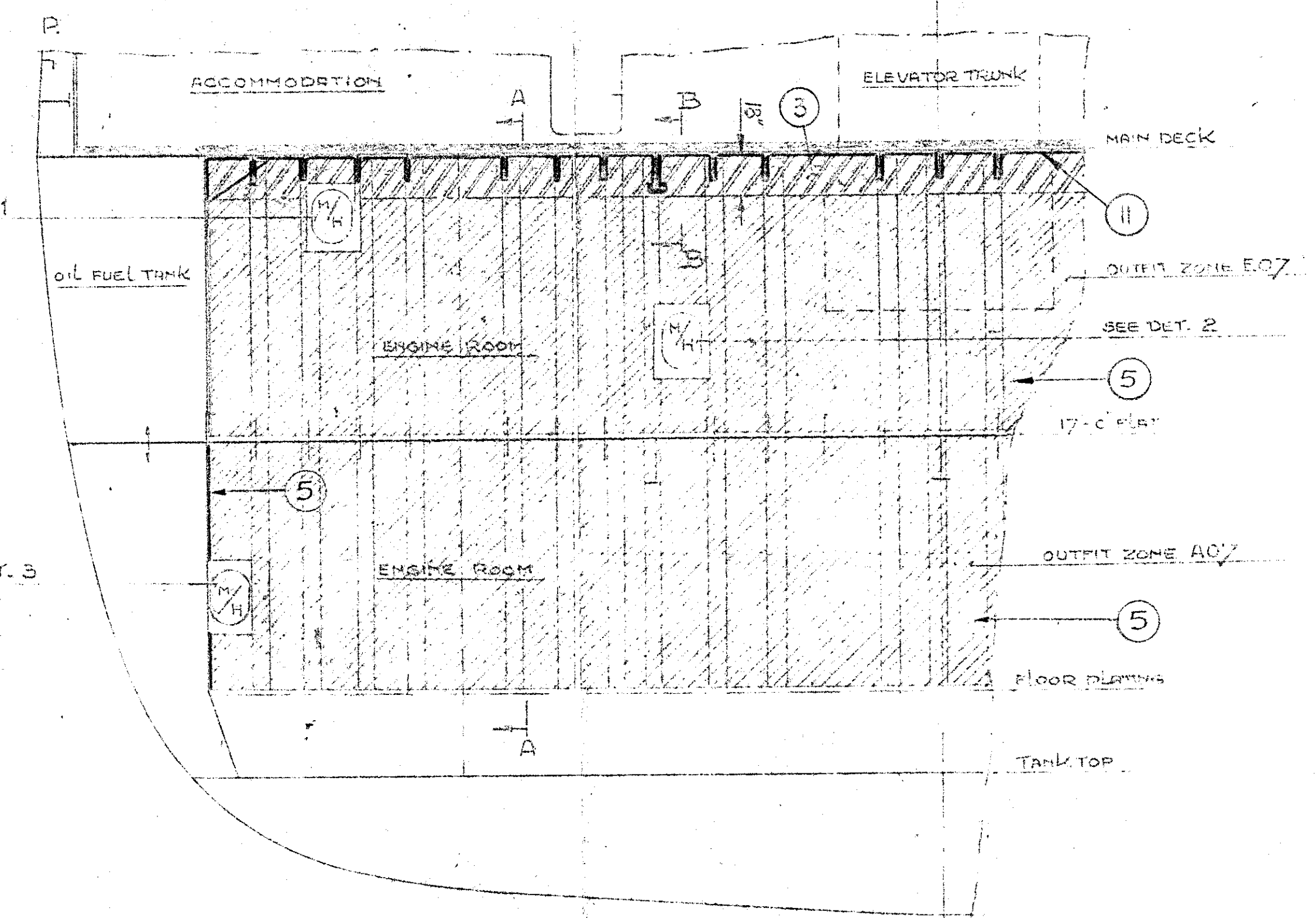


DETAIL 1

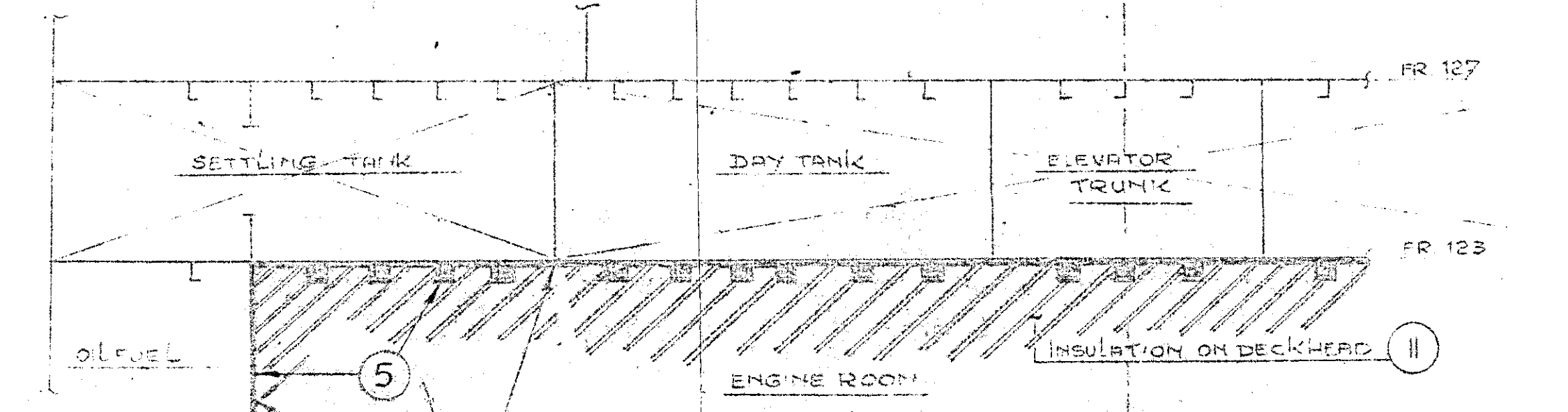


DETAIL 2

SEE DET. 1  
SEE DET. 3



BULKHEAD AT FR. 123  
LOOKING FORWARD



STRIP 18x2 THE  
DOWN FROM DECK

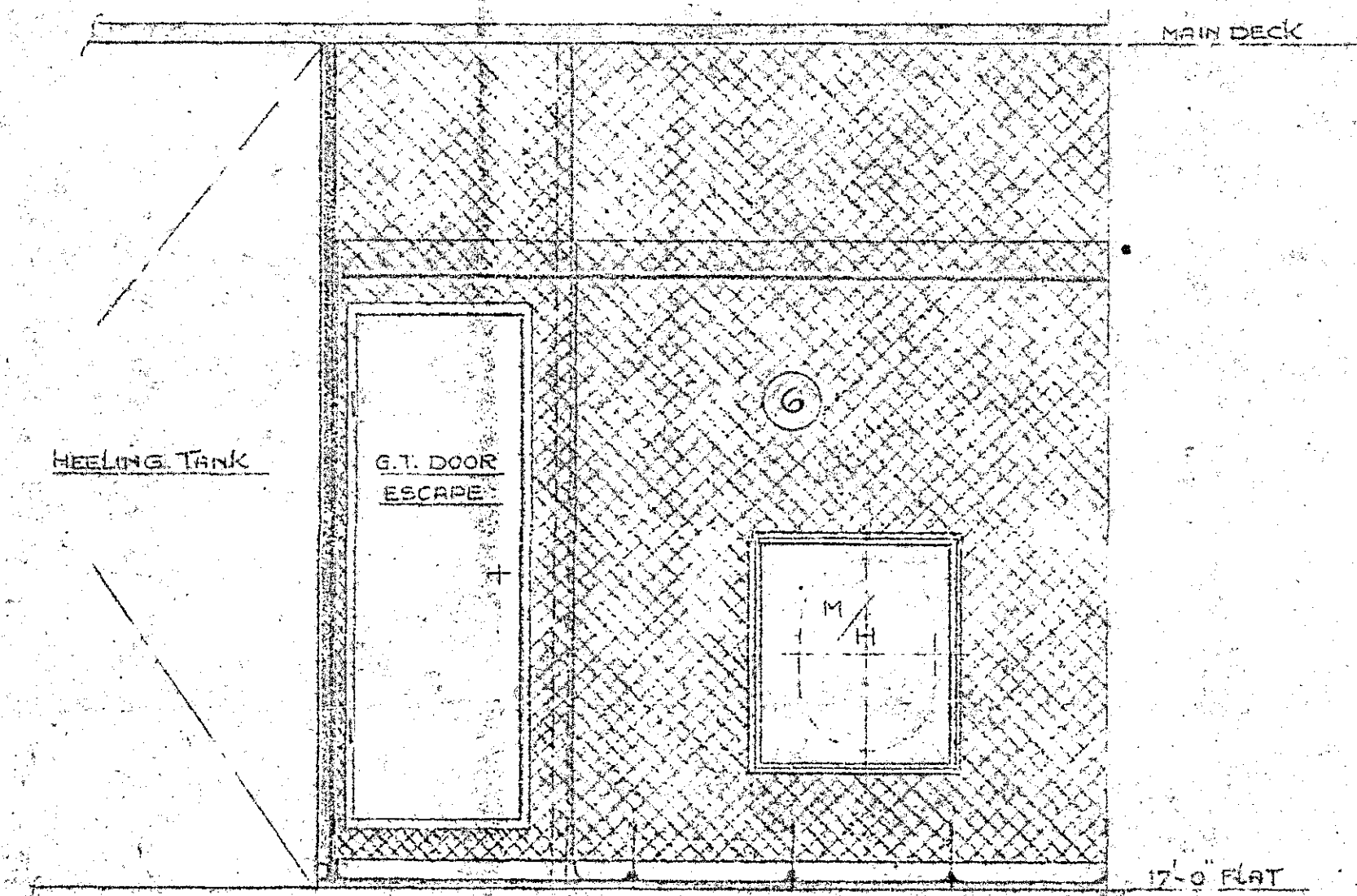
INSULATION "ROCKWOOL"  
COVERED BY EXPANDED ALUM. SHEATHING 0.064 THK  
OR BY PERFORATED ALUM. SHEATHING 22 GA. (SEE DETAILS)

INSULATION "FIBRE GLASS" PR 375  
COVERED BY EXPANDED ALUM. SHEATHING 0.064 THK  
OR BY PERFORATED ALUM. SHEATHING 22 GA. (SEE DETAILS)

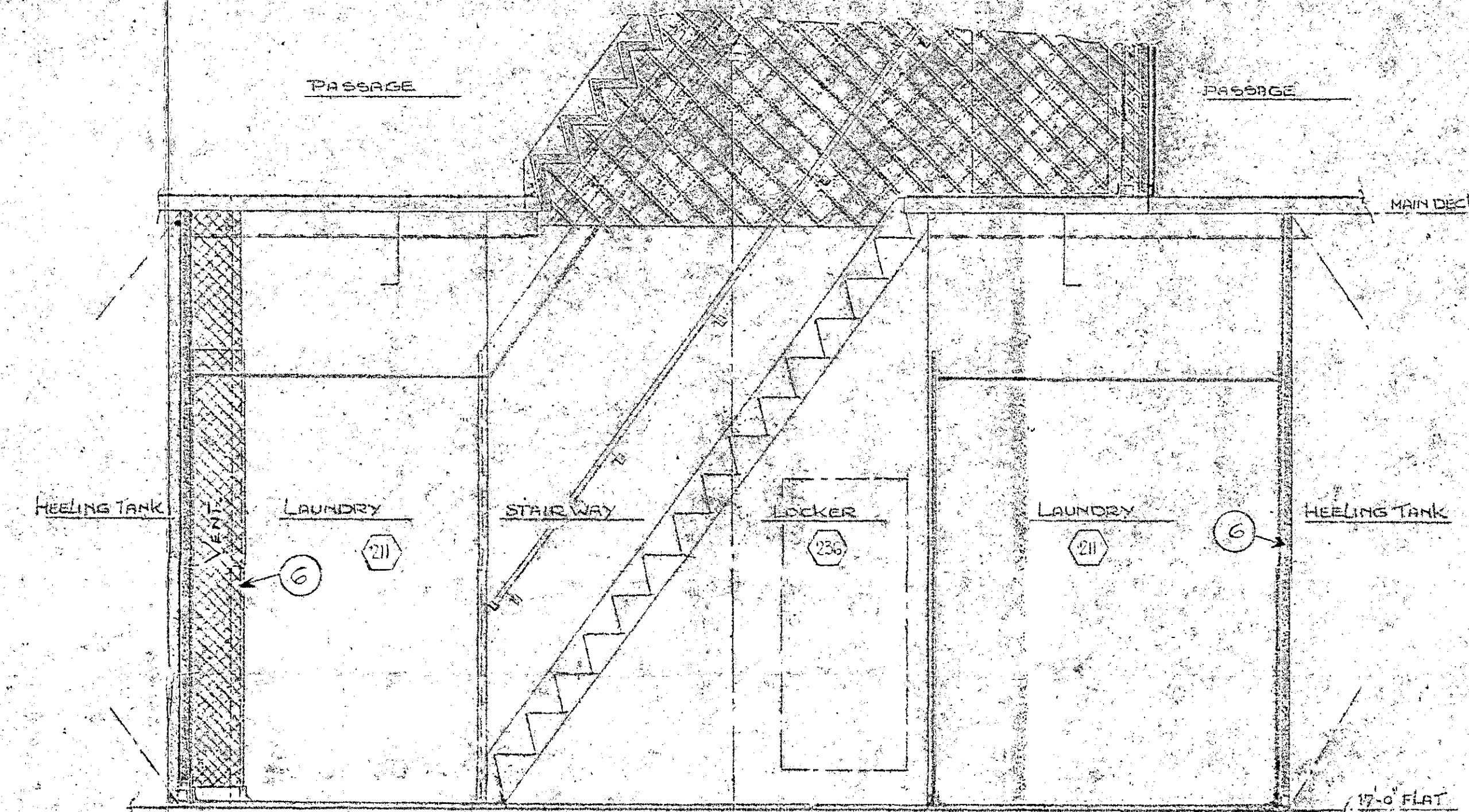
DETAILS FROM FR. 96-123

OUT FIT ZONES A07 & E07

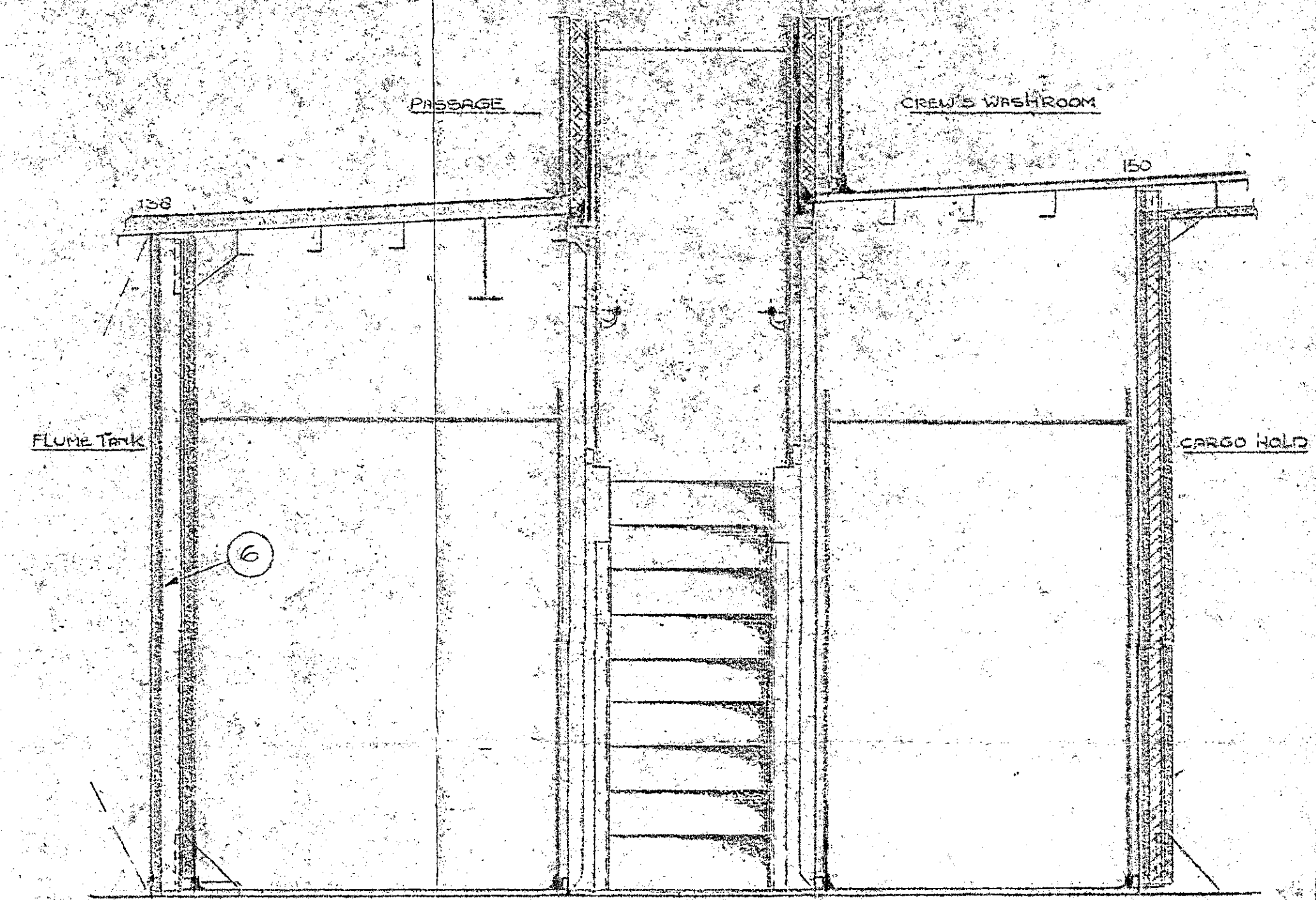




BULKHEAD AT FR. 138  
LOOKING AFT.



SECTION THROUGH STAIRWAY  
LOOKING FORWARD



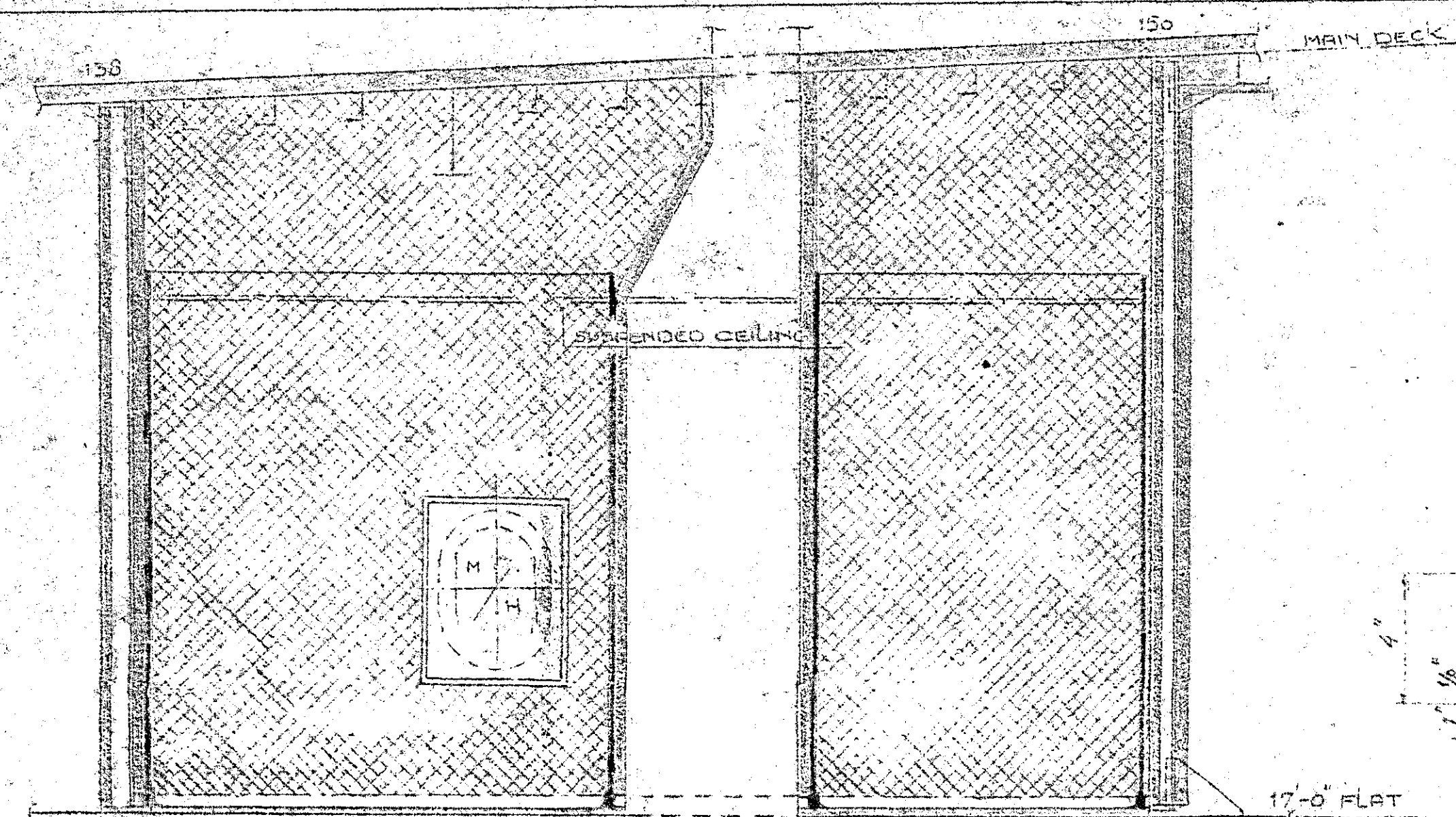
SECTION OVER C  
LOOKING TO PORT

INSULATION: FIBRE GLASS PF 325  
WITH REINFORCED ALUMINUM FOIL VAPOUR BARRIER

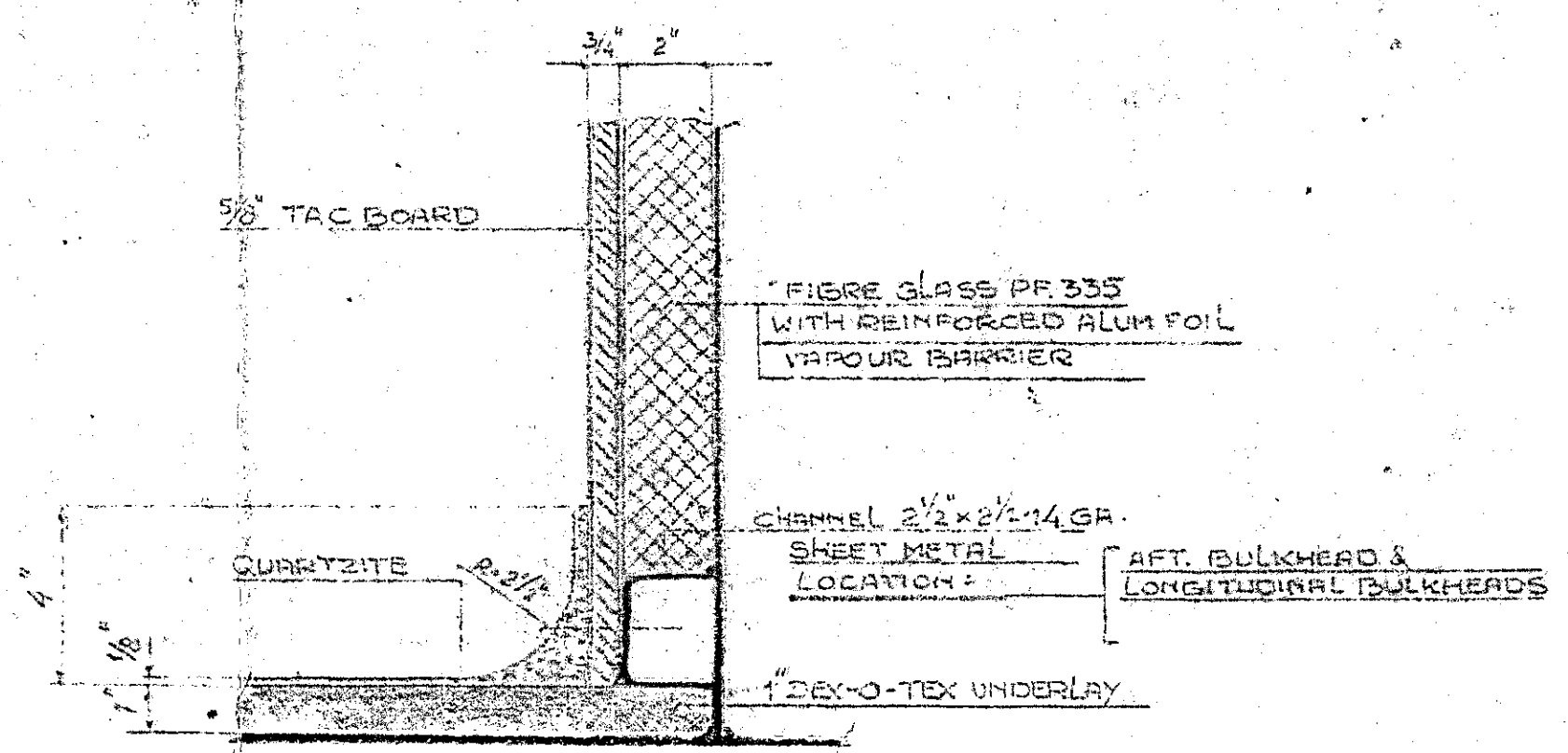
INSULATION: ROCKWOOL ONLY

LAUNDRY (FR. 138-150)  
SASIE VEST  
OUTFIT ZONE E06

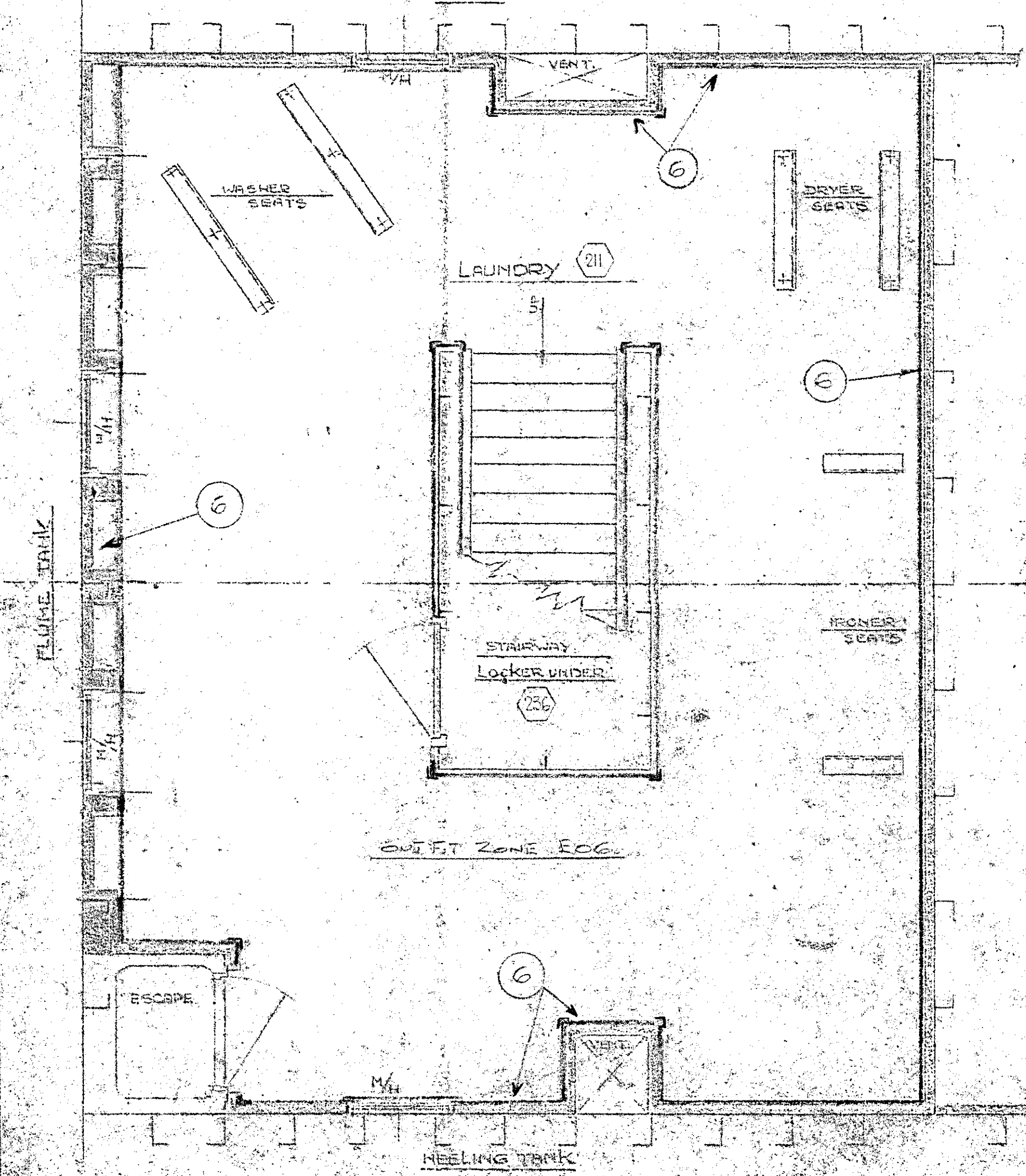




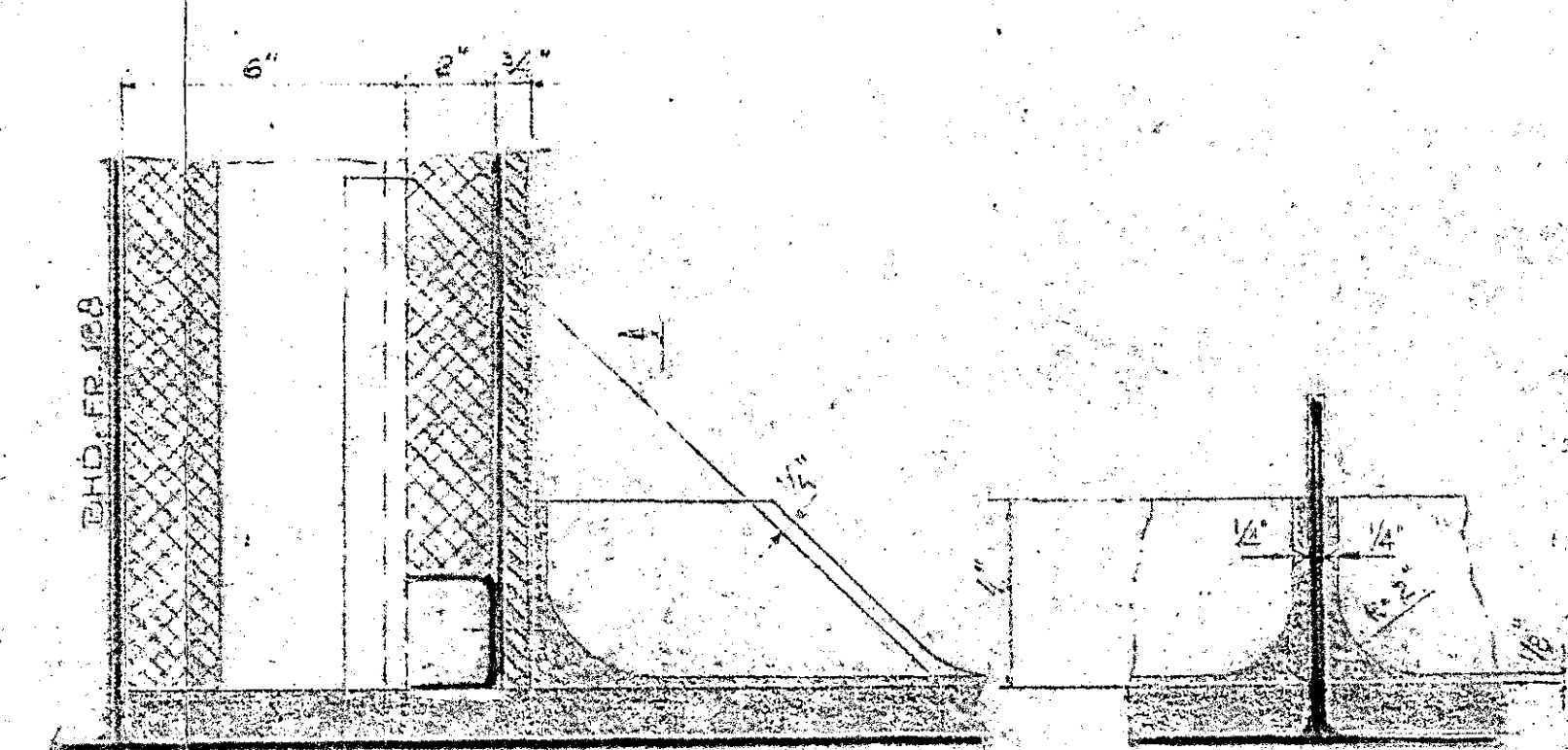
ELEVATION LOOKING TO PORT  
1/2" = 1'



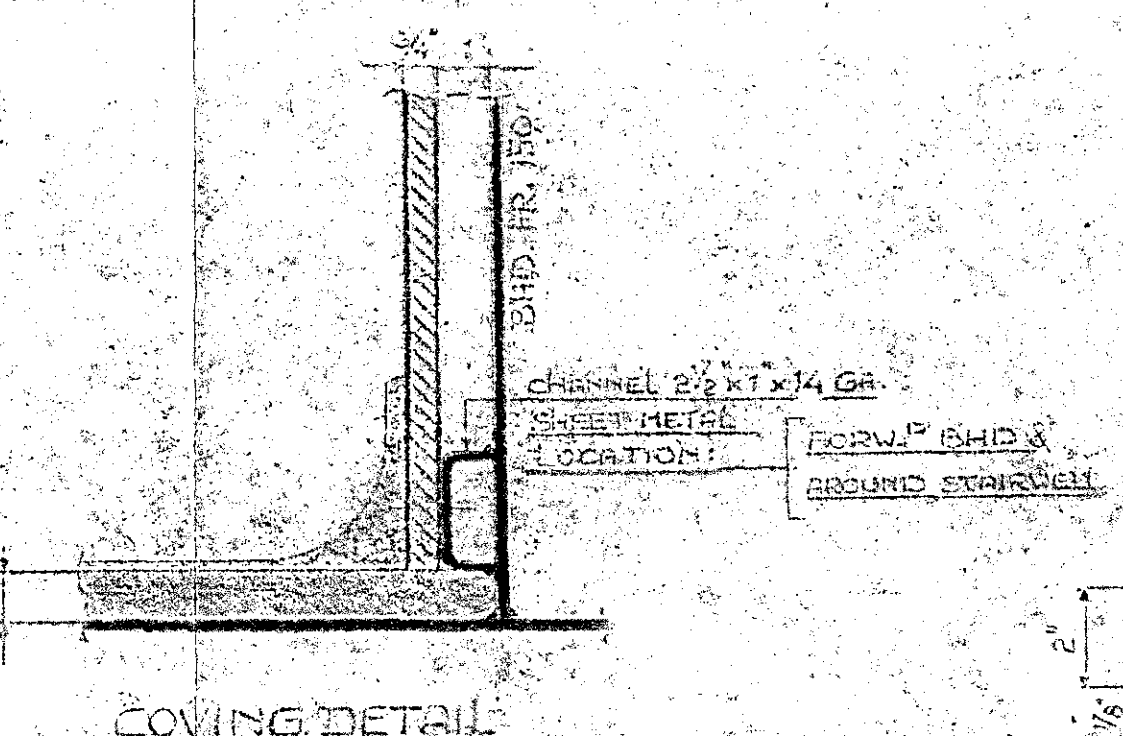
COVING DETAIL  
1/4" = 1"



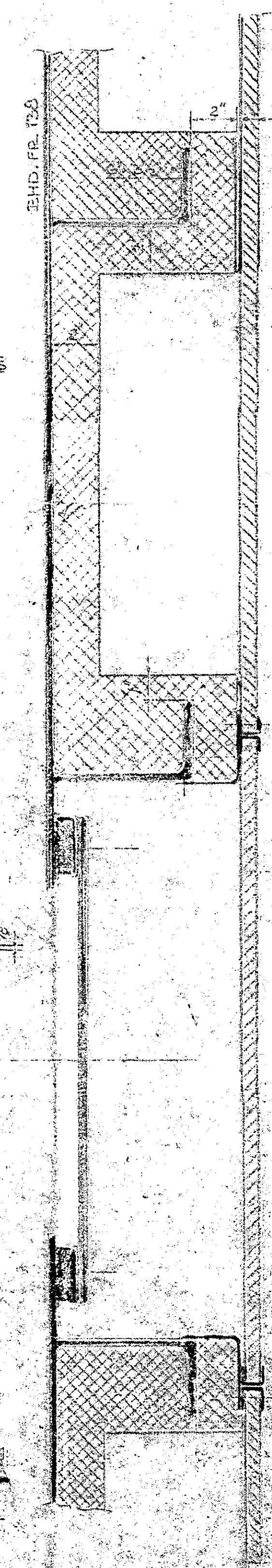
CARGO HOLD



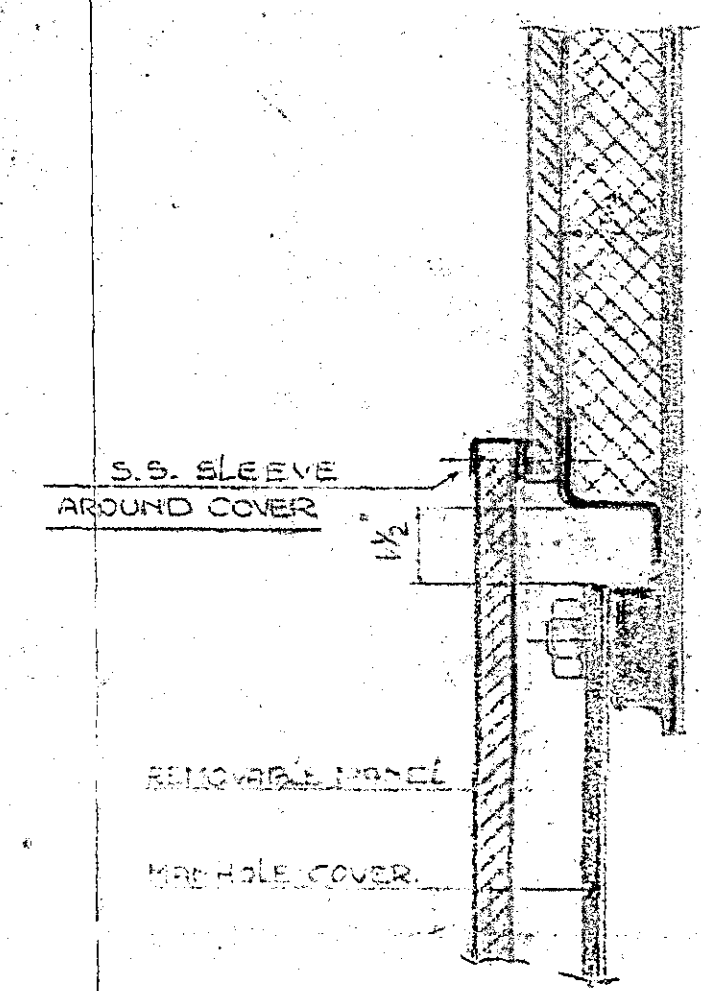
COVING DETAIL L.W.O. BRACKETS  
1/4" = 1"



COVING DETAIL  
1/4" = 1"



SECTION THROUGH MANHOLE  
1/4" = 1"



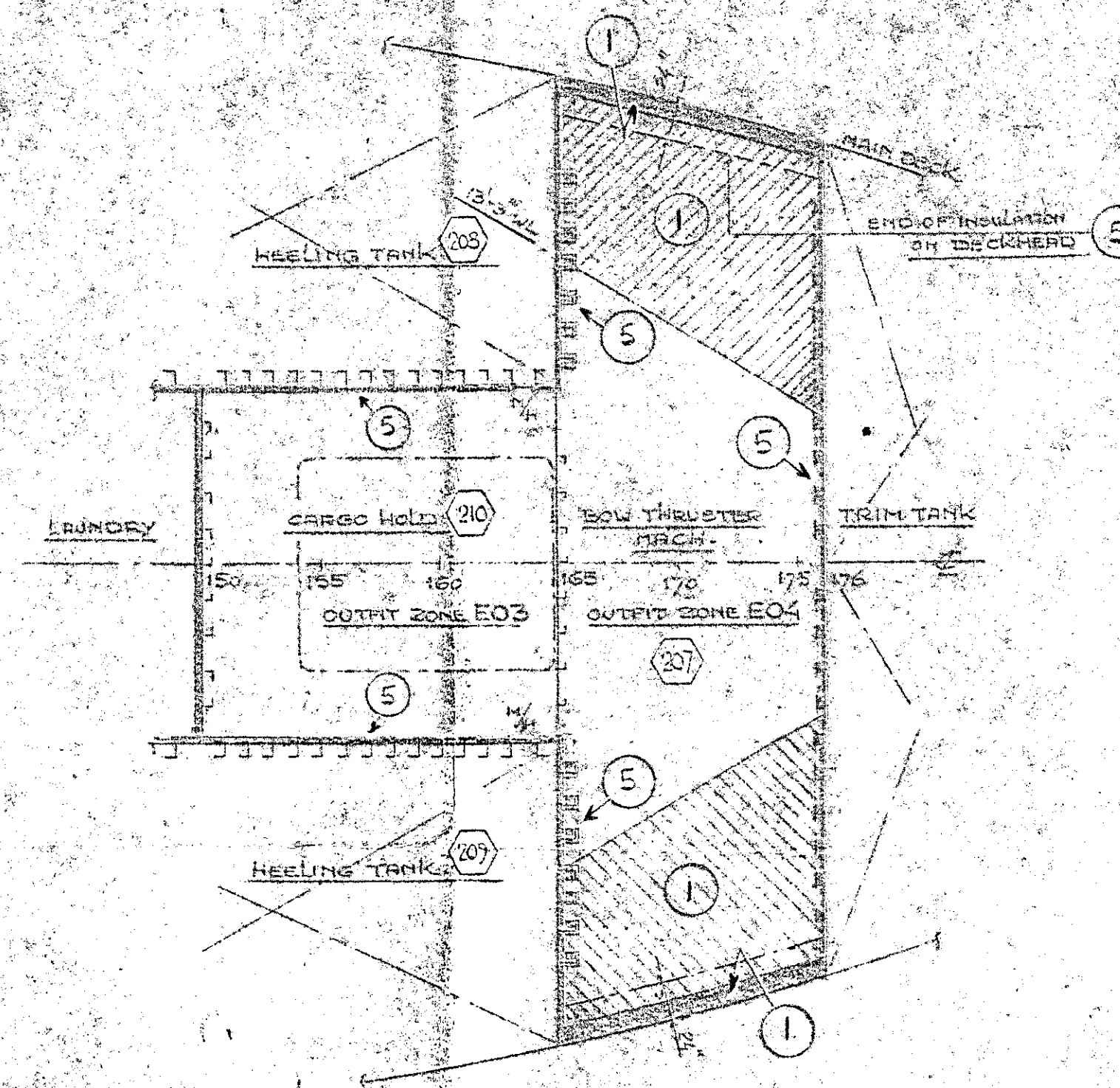
DETAIL OF MANHOLE COVER  
IN LONGITUDINAL BHD. P. 5

INSULATION: FIBRE GLASS PF 335 WITH REINFORCED ALUM. FOIL VAPOUR BARRIER

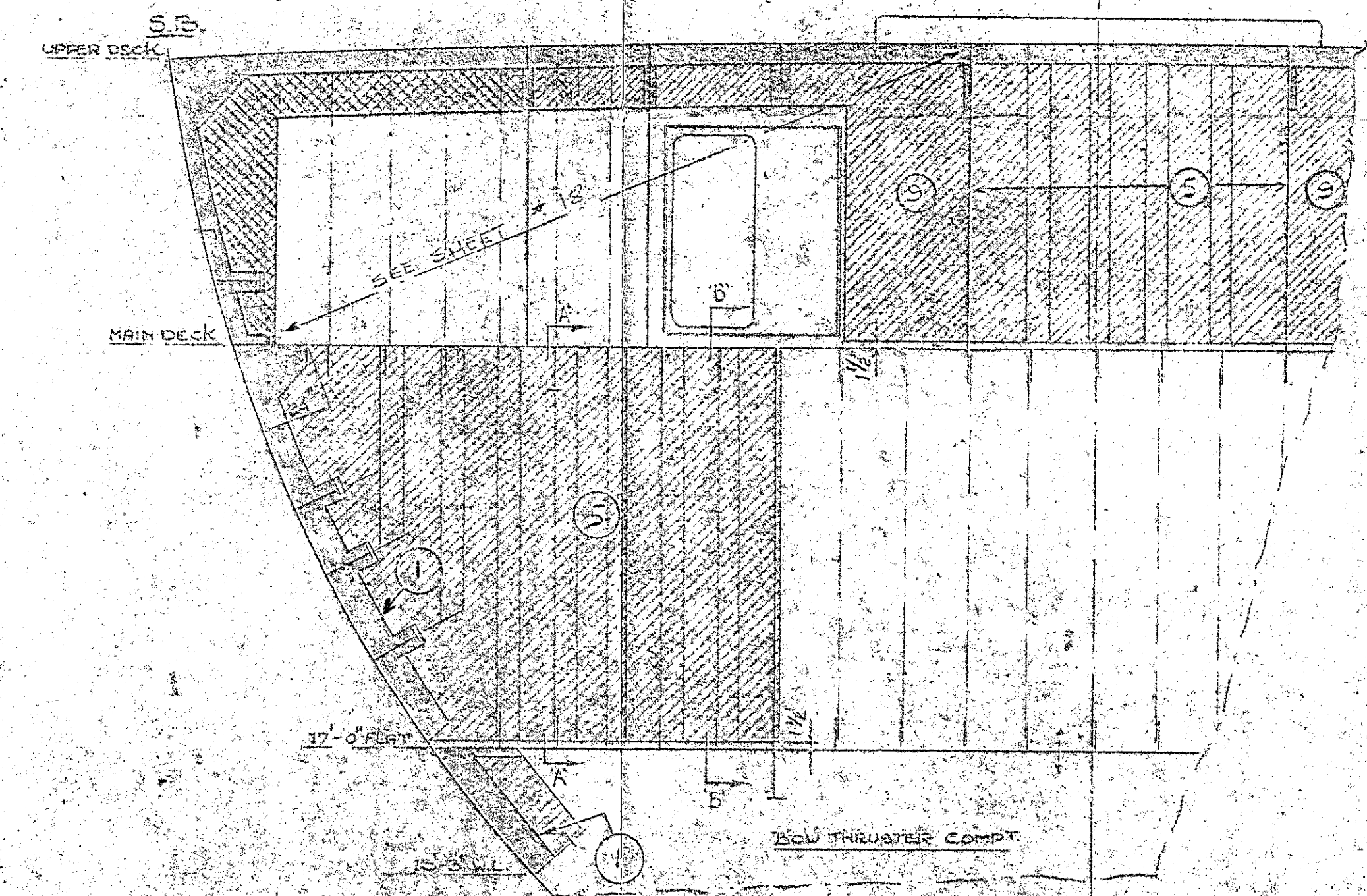
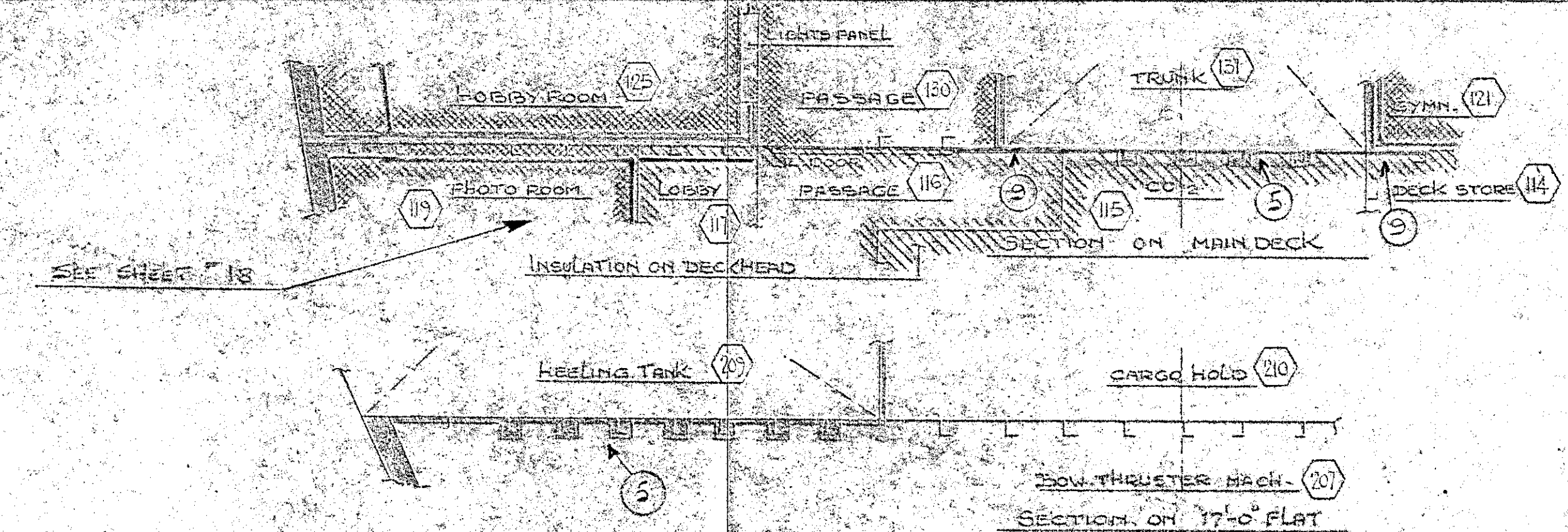
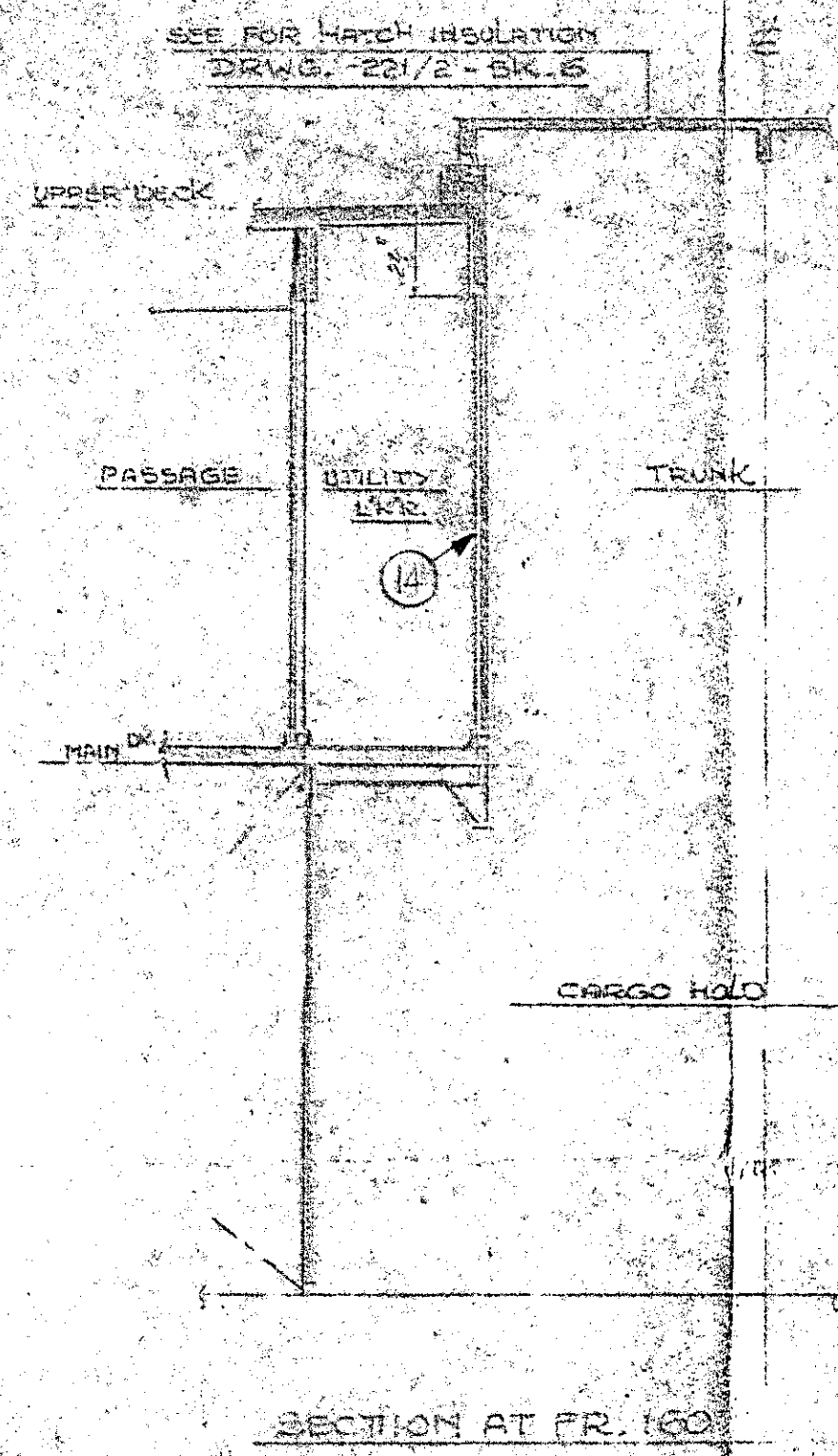
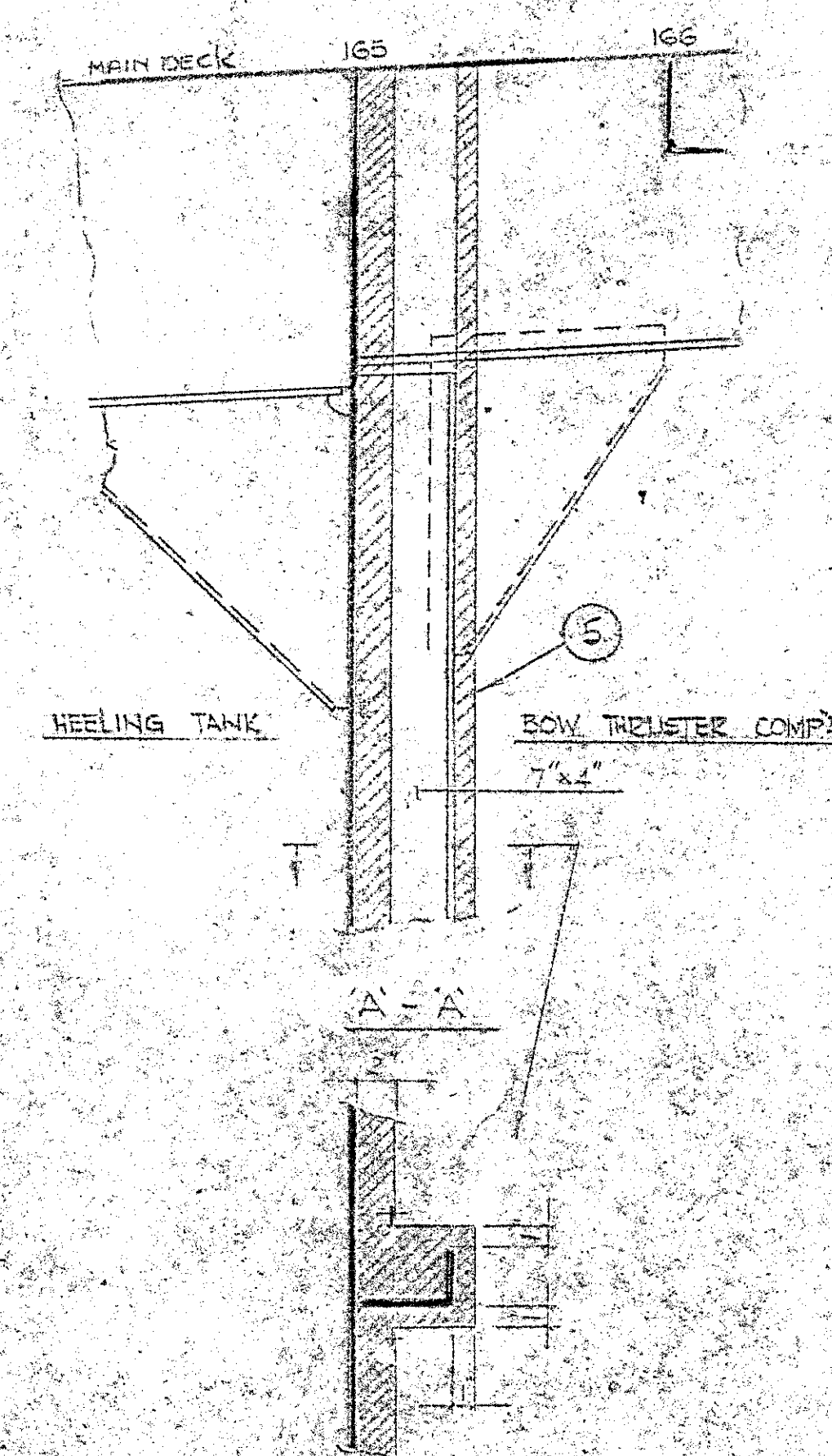
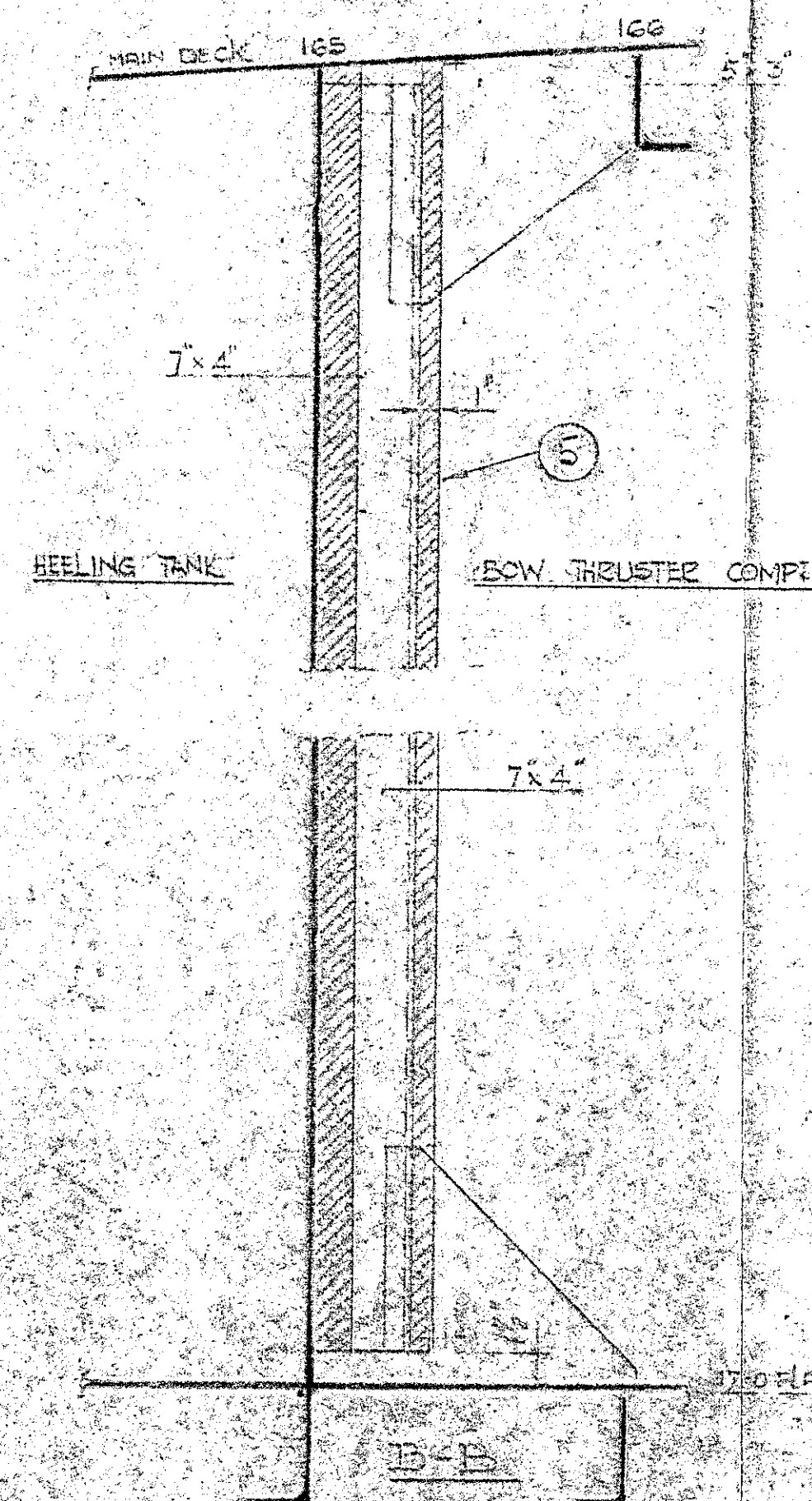
DETAILS IN LAUNDRY (FR 138-150)

OUTFIT ZONE EOG





KEY PLAN

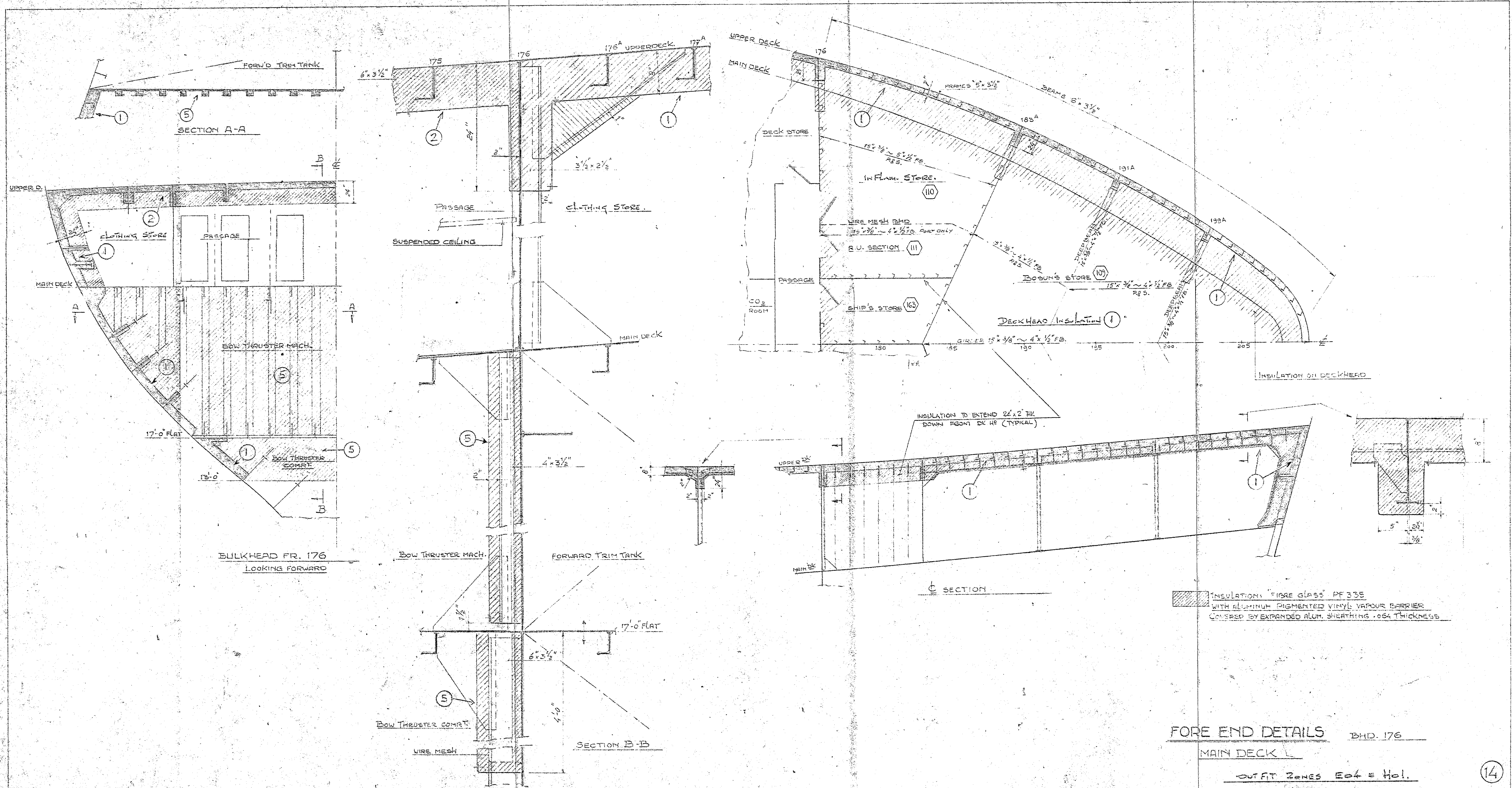


- INSULATION: FIBRE GLASS PF 335  
WITH ALUMINUM PIGMENTED VINYL VAPOUR BARRIER  
COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS.
- INSULATION: FIBRE GLASS PF 335  
WITH REINFORCED ALUM. FOIL VAPOUR BARRIER
- INSULATION: FIBRE GLASS PF 335  
COVERED BY GALVANIZED SHEATHING

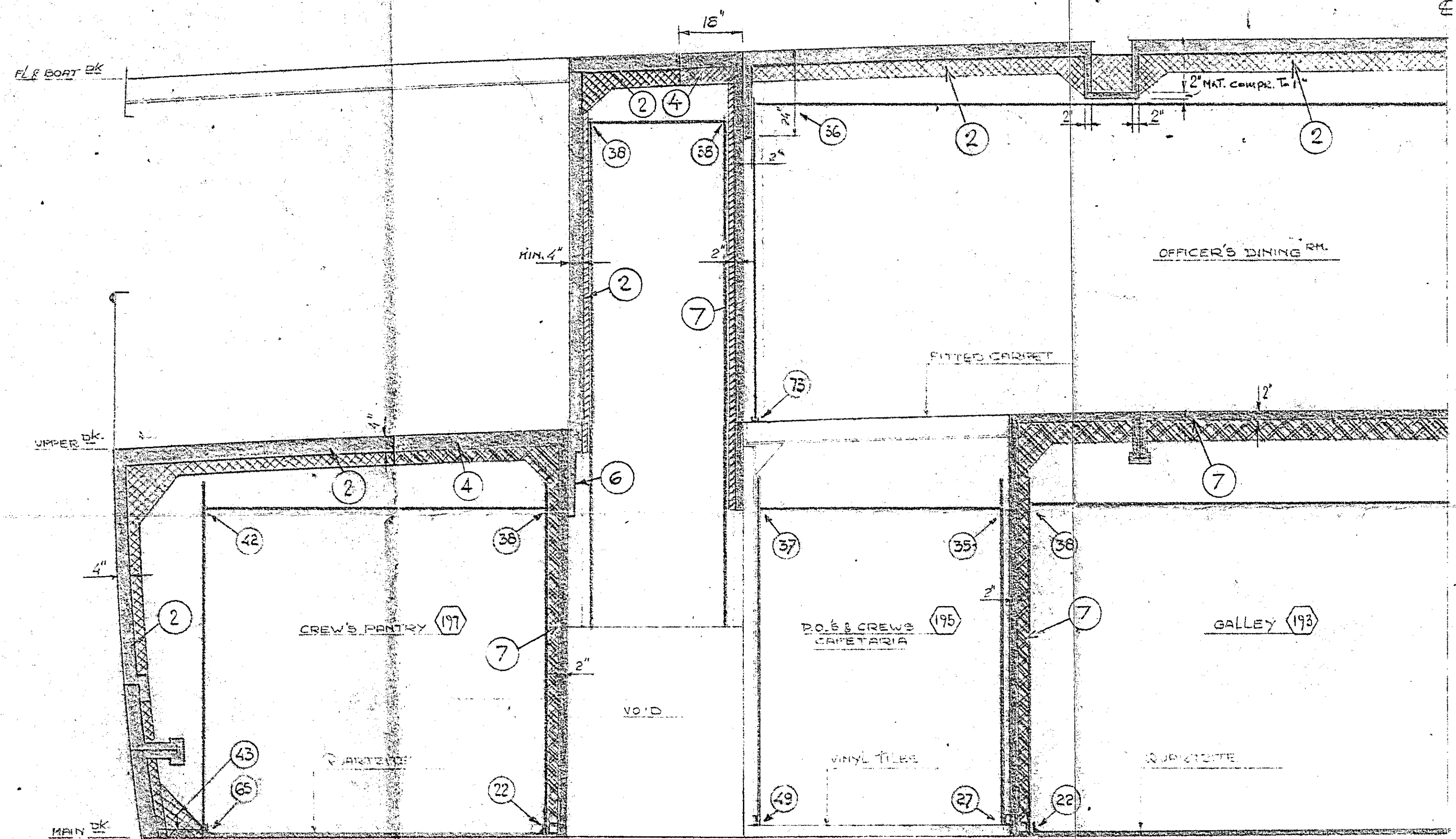
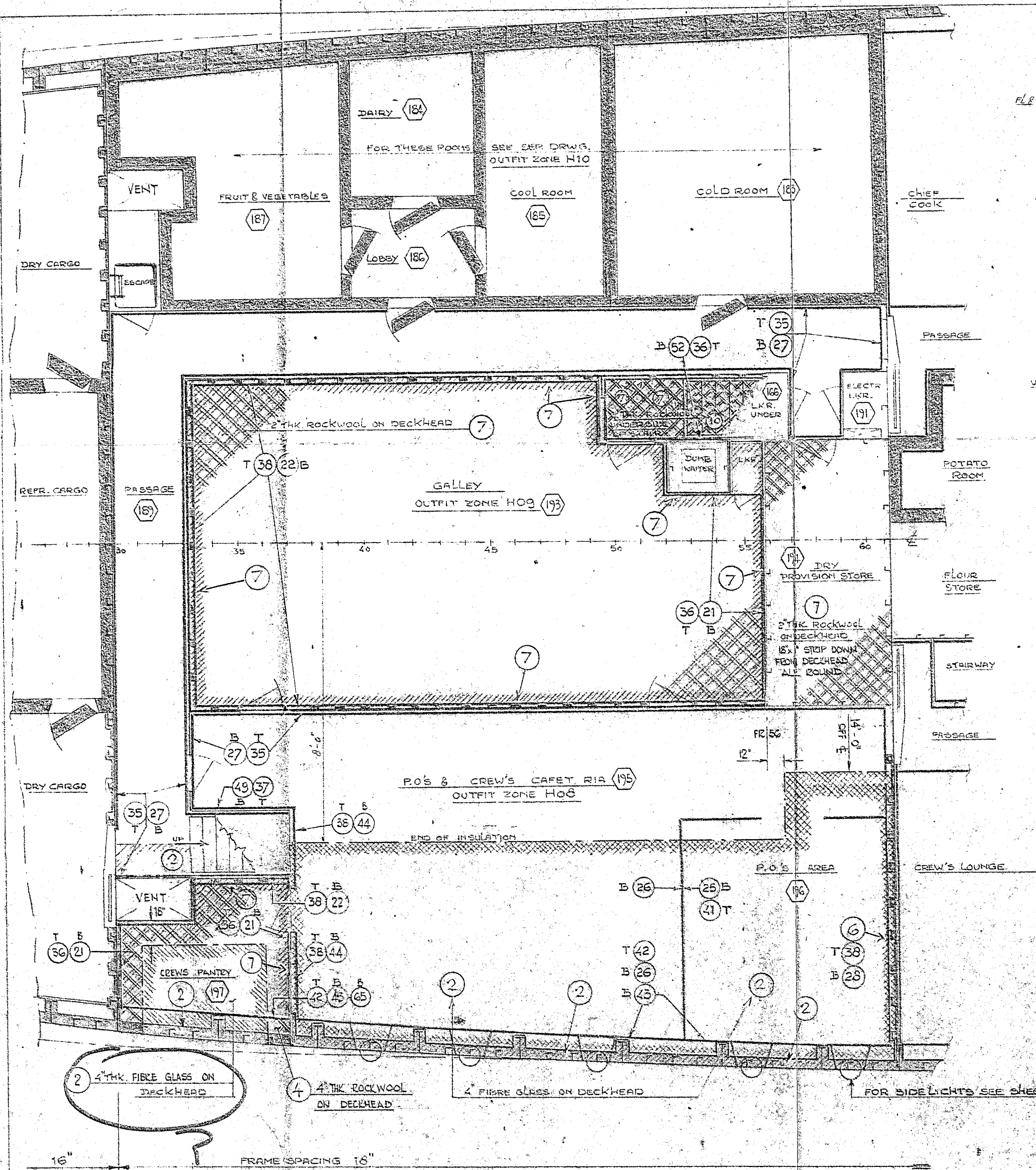
DETAILS IN CARGO HOLD AND BOW THRUSTER COMP.  
(FR. 150-165)

OUTFIT ZONES EO3 & EO4


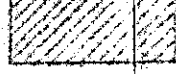










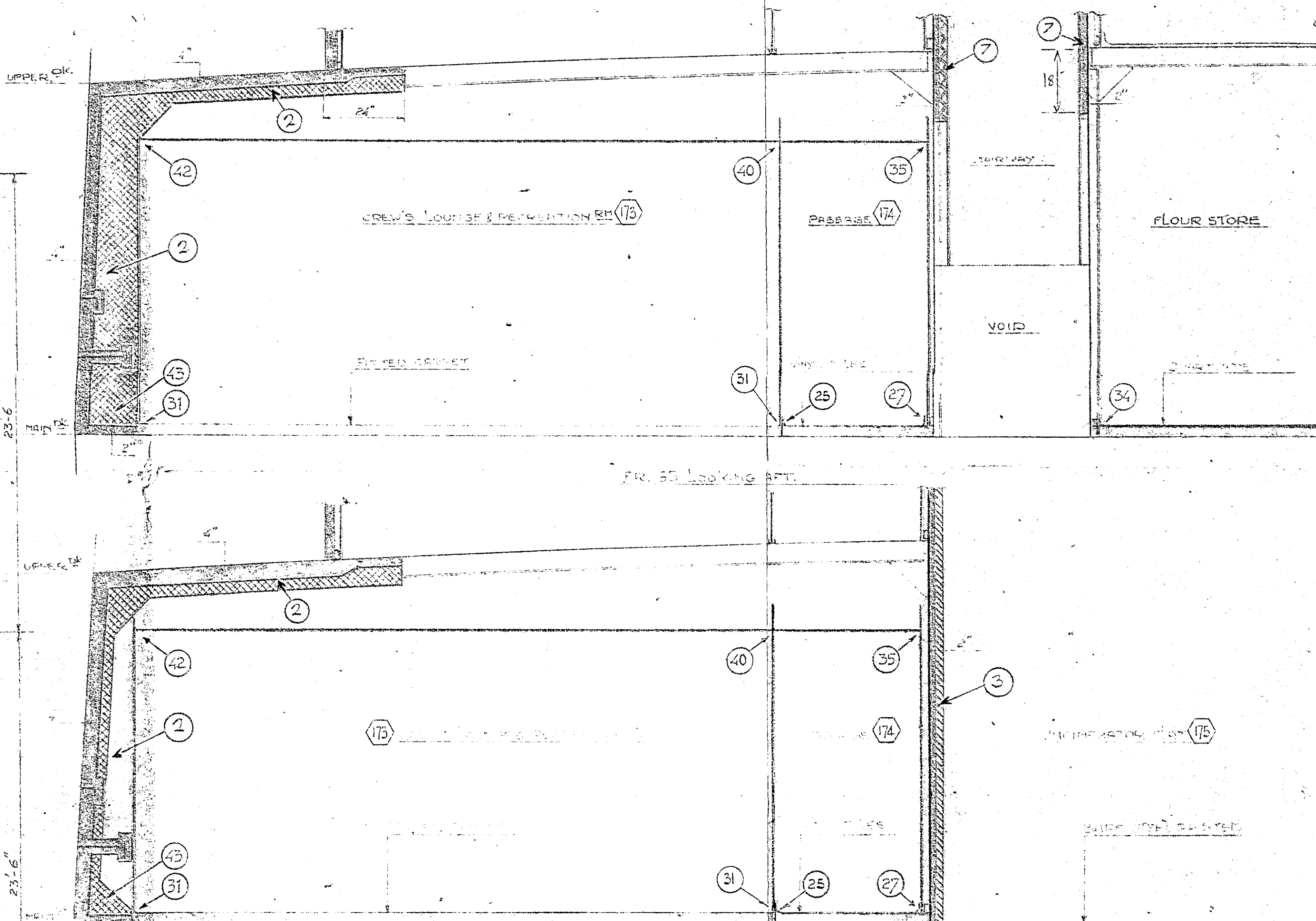
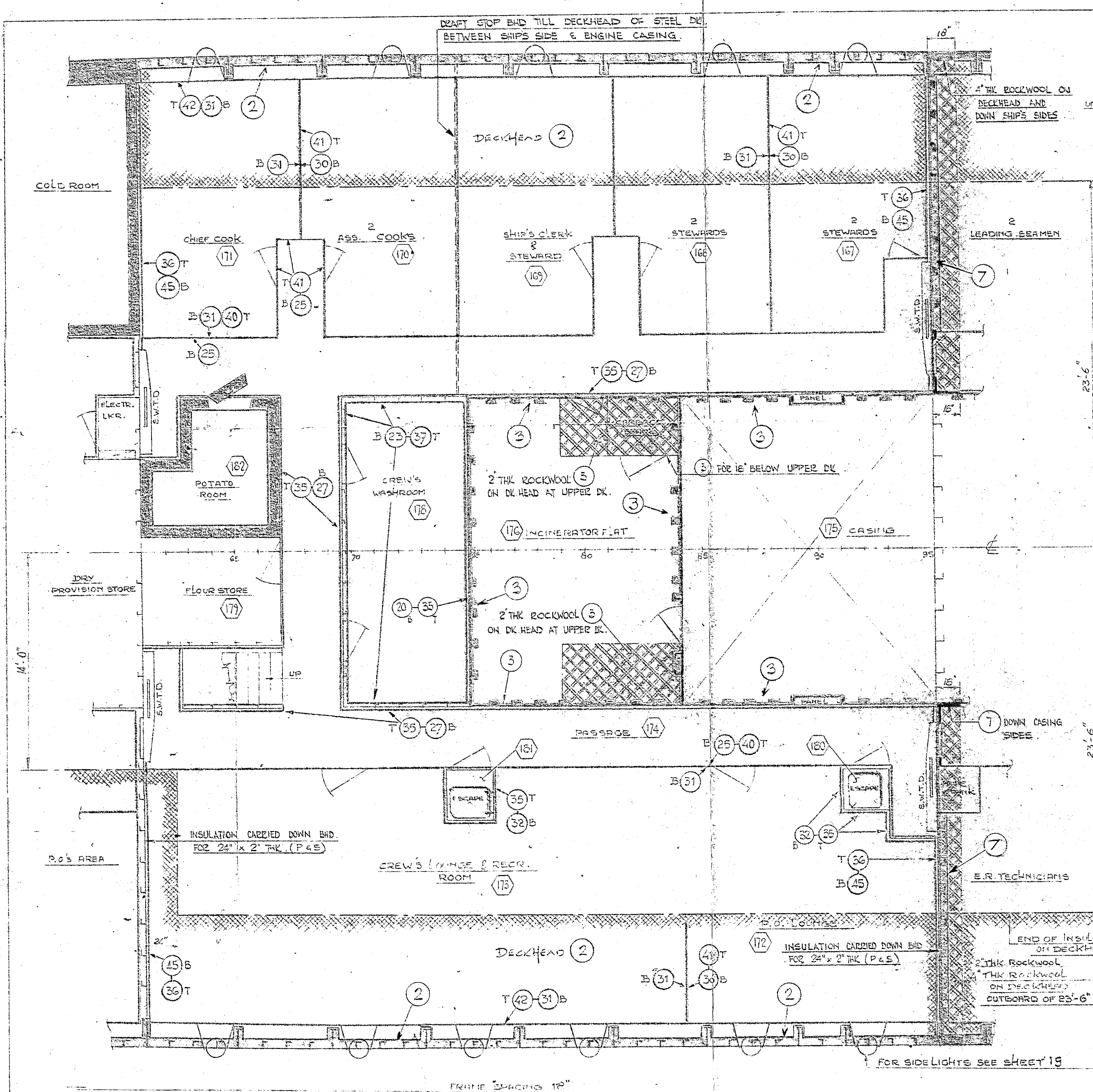
FR. 35 Looking Aft.

-  INSULATION: FIBRE GLASS PF 335 WITH REINFORCED ALUM. FOIL VAPOUR BARRIER
-  INSULATION: FIBRE GLASS PF 335 WITH ALUMINUM PIGMENTED VINYL VAPOUR BARRIER COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS
-  REFRIGERATION INSULATION
-  INSULATION: ROCKWOOL ONLY

MAIN DECK (FR. 30-61)

OUTFIT ZONES H08 H09 & H10.





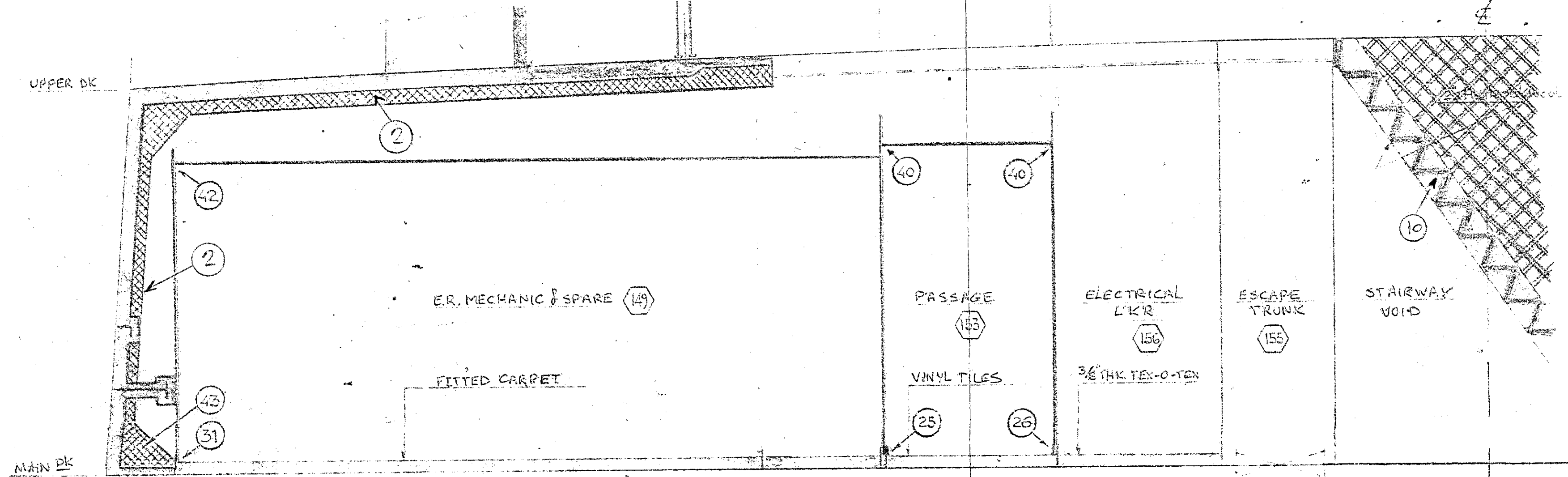
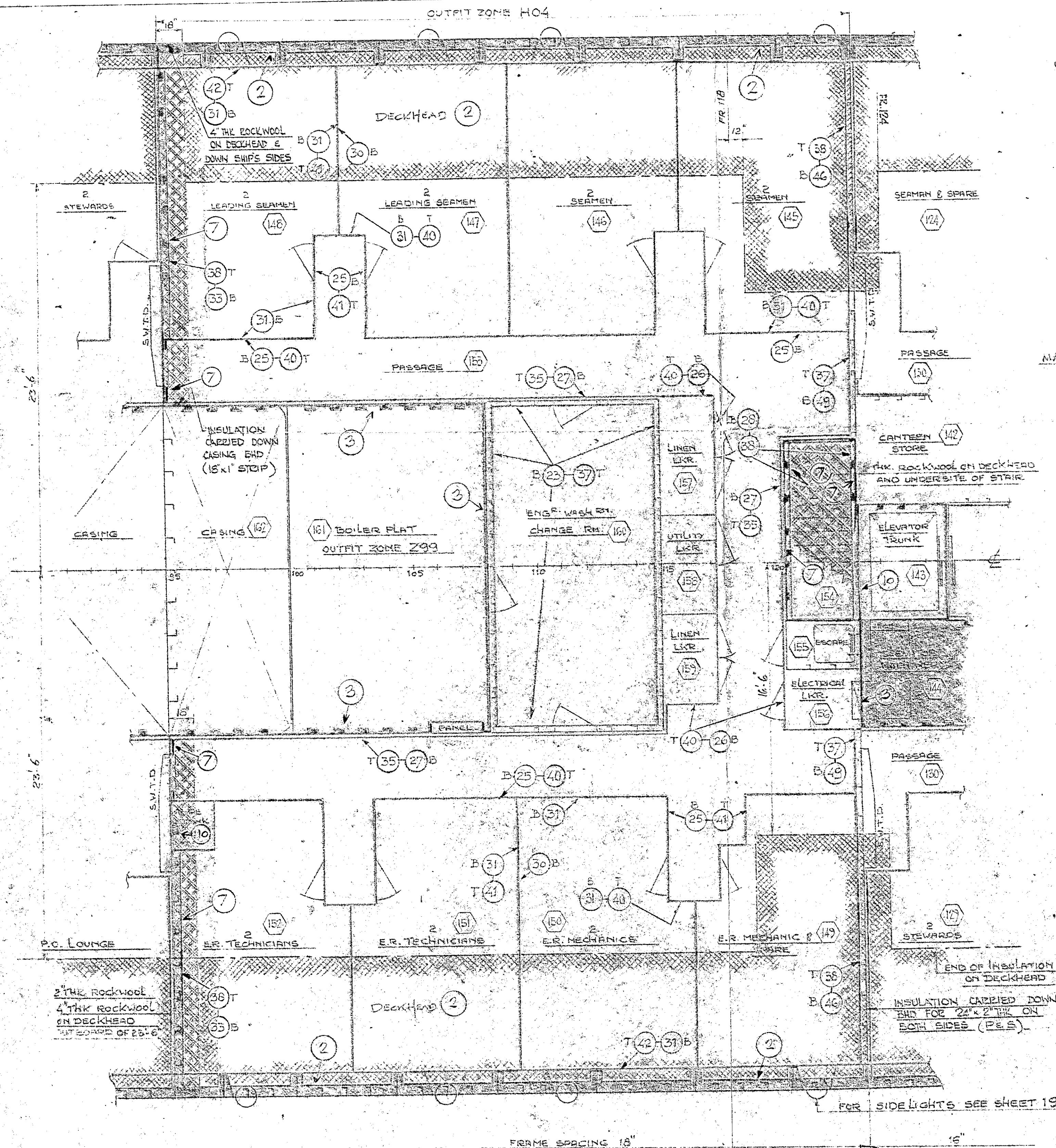
- INSULATION: "FIBRE GLASS" PF 335 WITH REINFORCED ALUM. FOIL VAPOR BARRIER
- INSULATION: "Rockwool" COVERED BY EXPANDED ALUM. SHEATHING - .064 THK.
- INSULATION: "Rockwool only"
- REFRIG. INSULATION

MAIN DECK (FR. 51-35)

OUTFIT ZONES HOT, HOG & ZEG.

16





FR. 121 Looking AFT.

- INSULATION: "FIBRE GLASS" PF 335  
WITH REINFORCED ALUM. FOIL VAPOUR BARRIER
- INSULATION: "Rockwool"  
COVERED BY EXPANDED ALUM. SHEATHING - 0.064 THK.
- INSULATION: "Rockwool only"

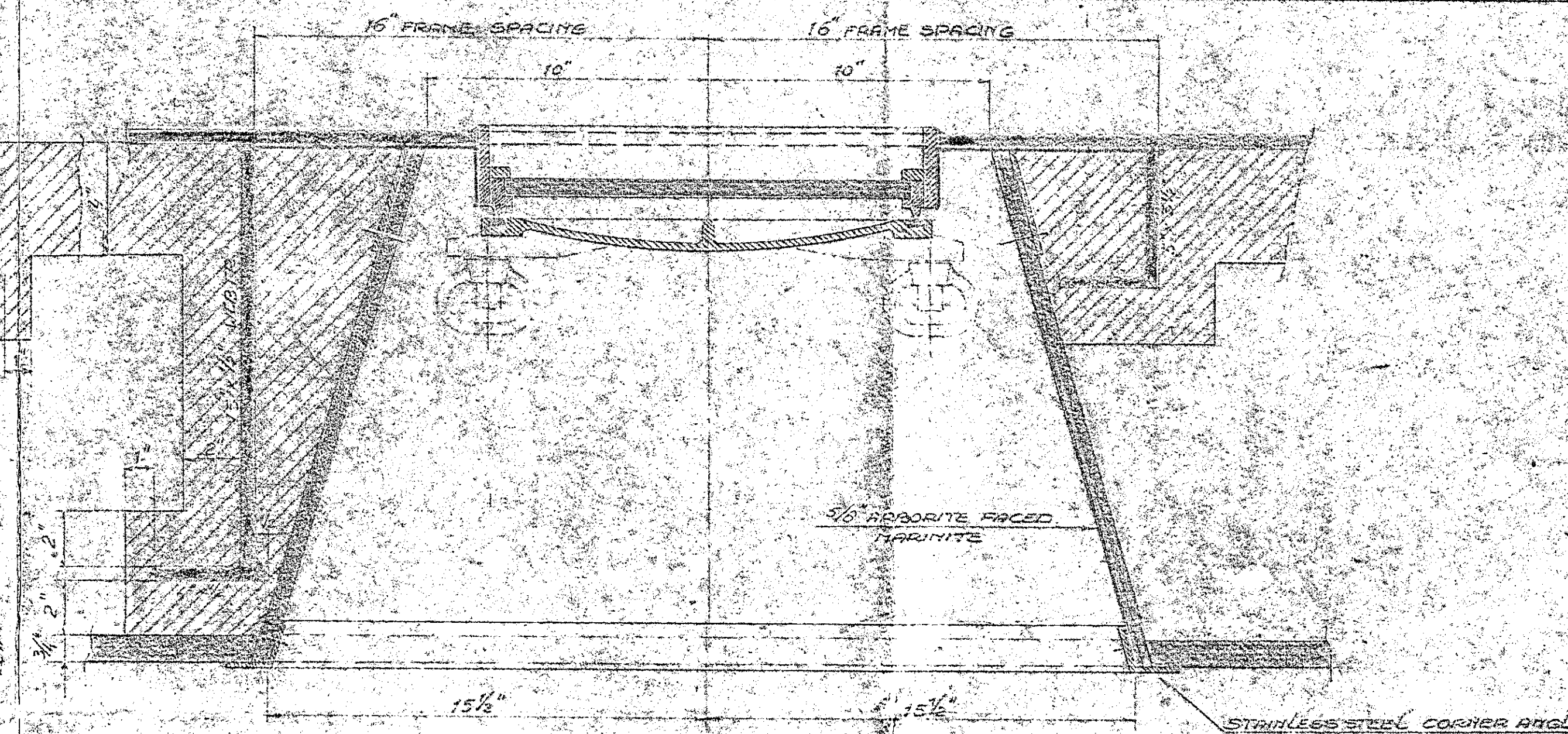
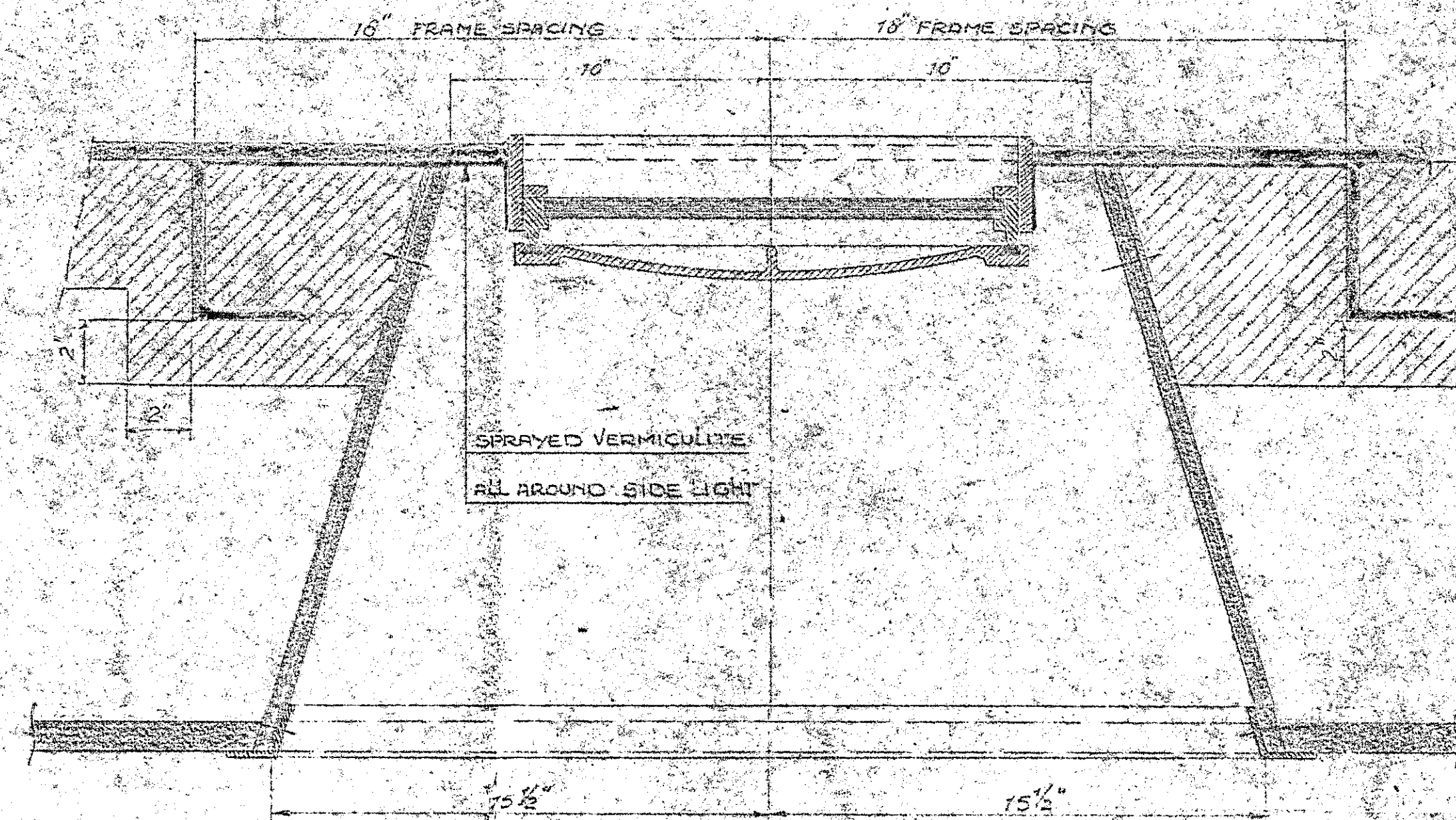
MAIN DECK (FR. 95-123)

OUTFIT ZONES HO4 & Z99.

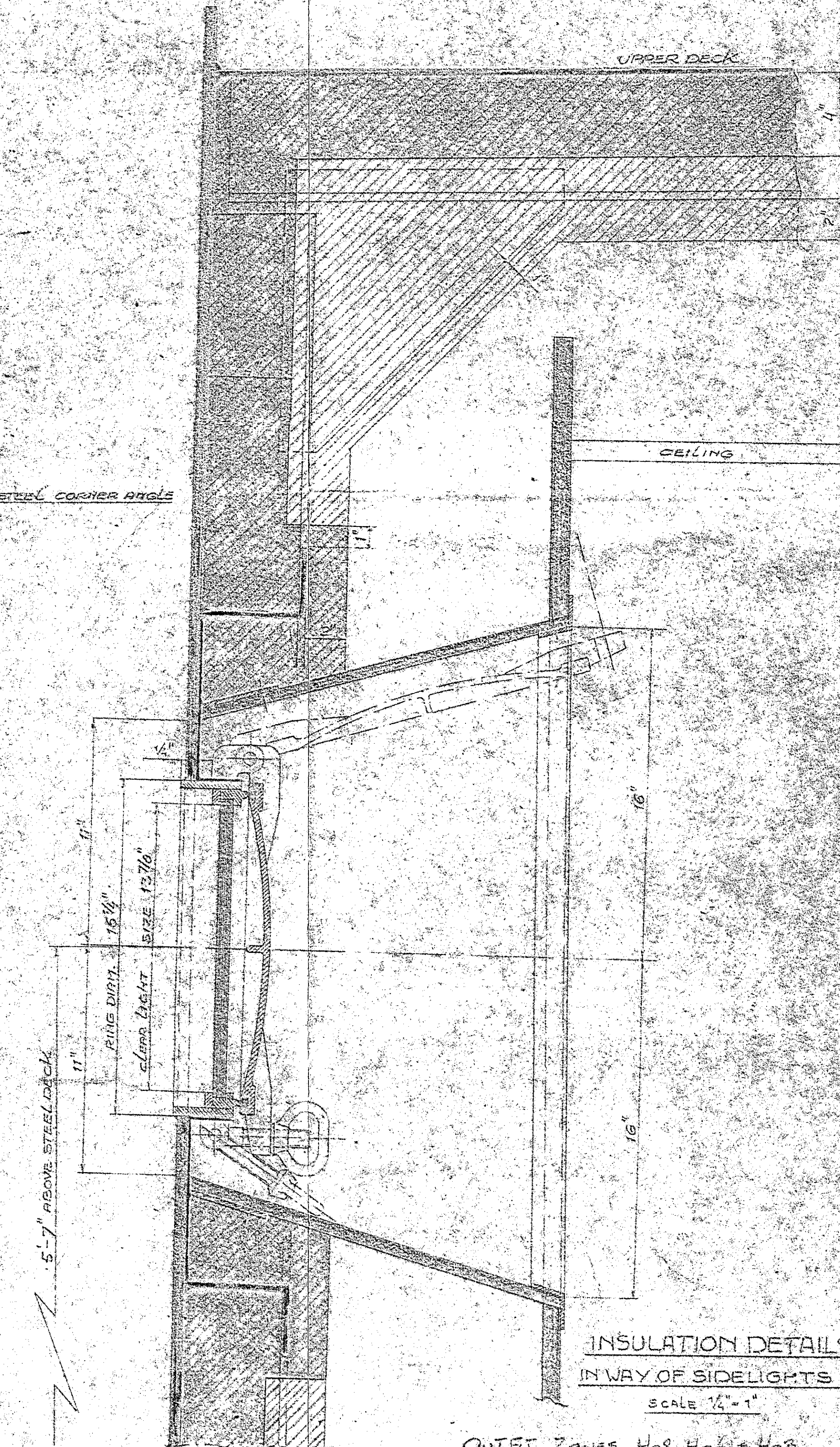
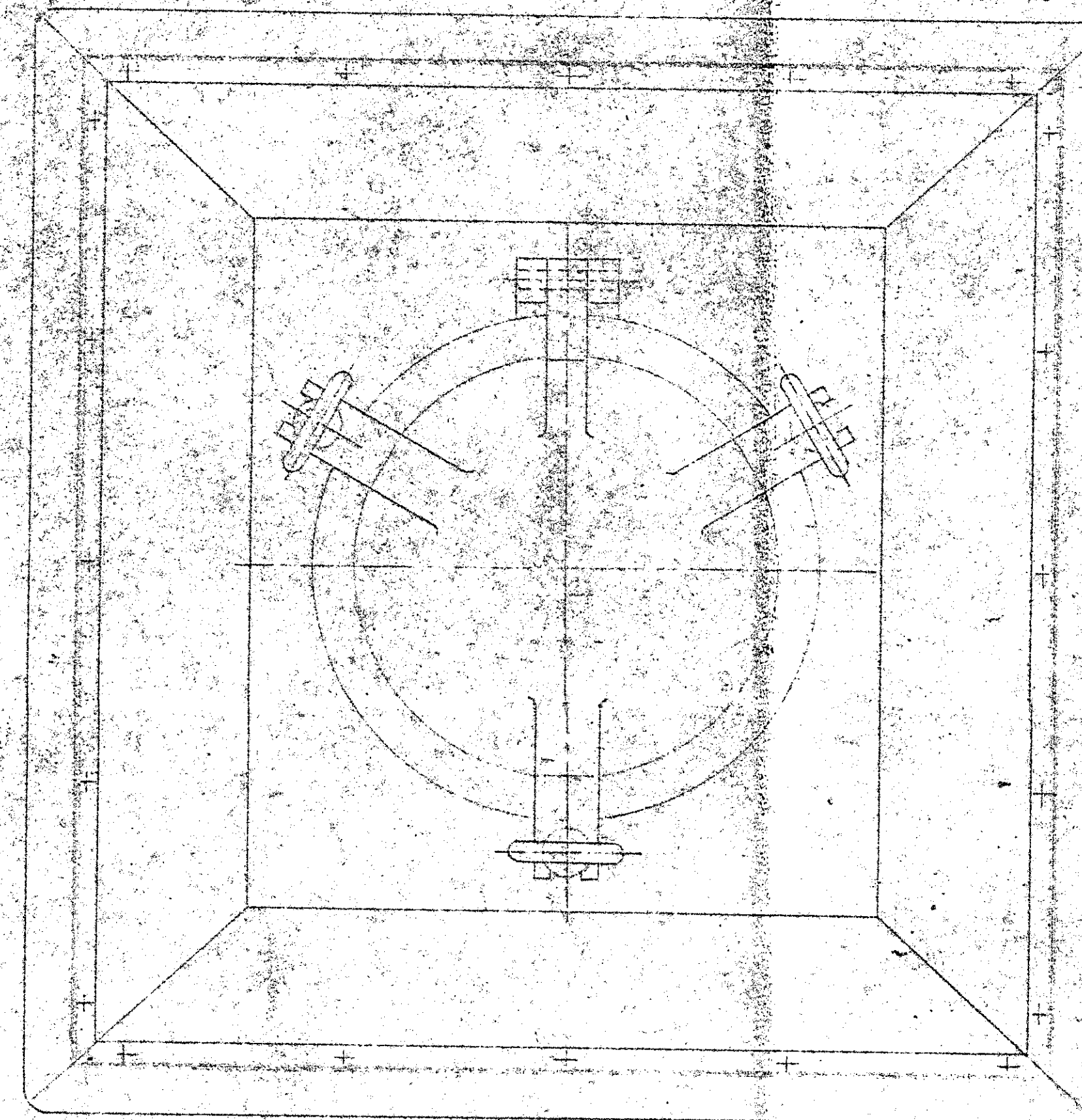
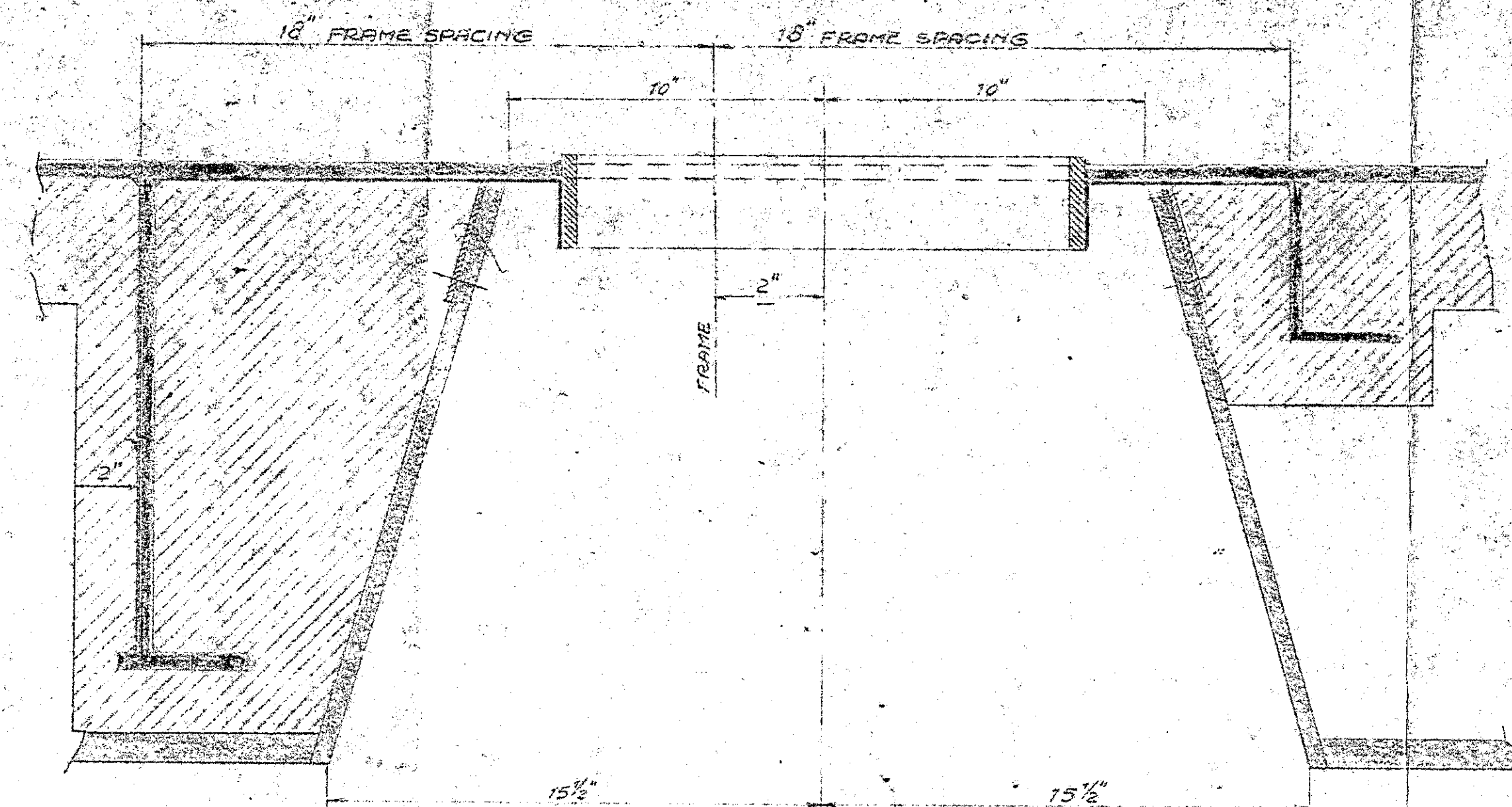








NOTE : FOR EXACT CENTER LOCATION OF SIDELIGHTS  
SEE D.W.G. NO 221-H-77 WINDOW AND SIDELIGHT SCHEDULE



OUTLET ZONES H08, H04, H03

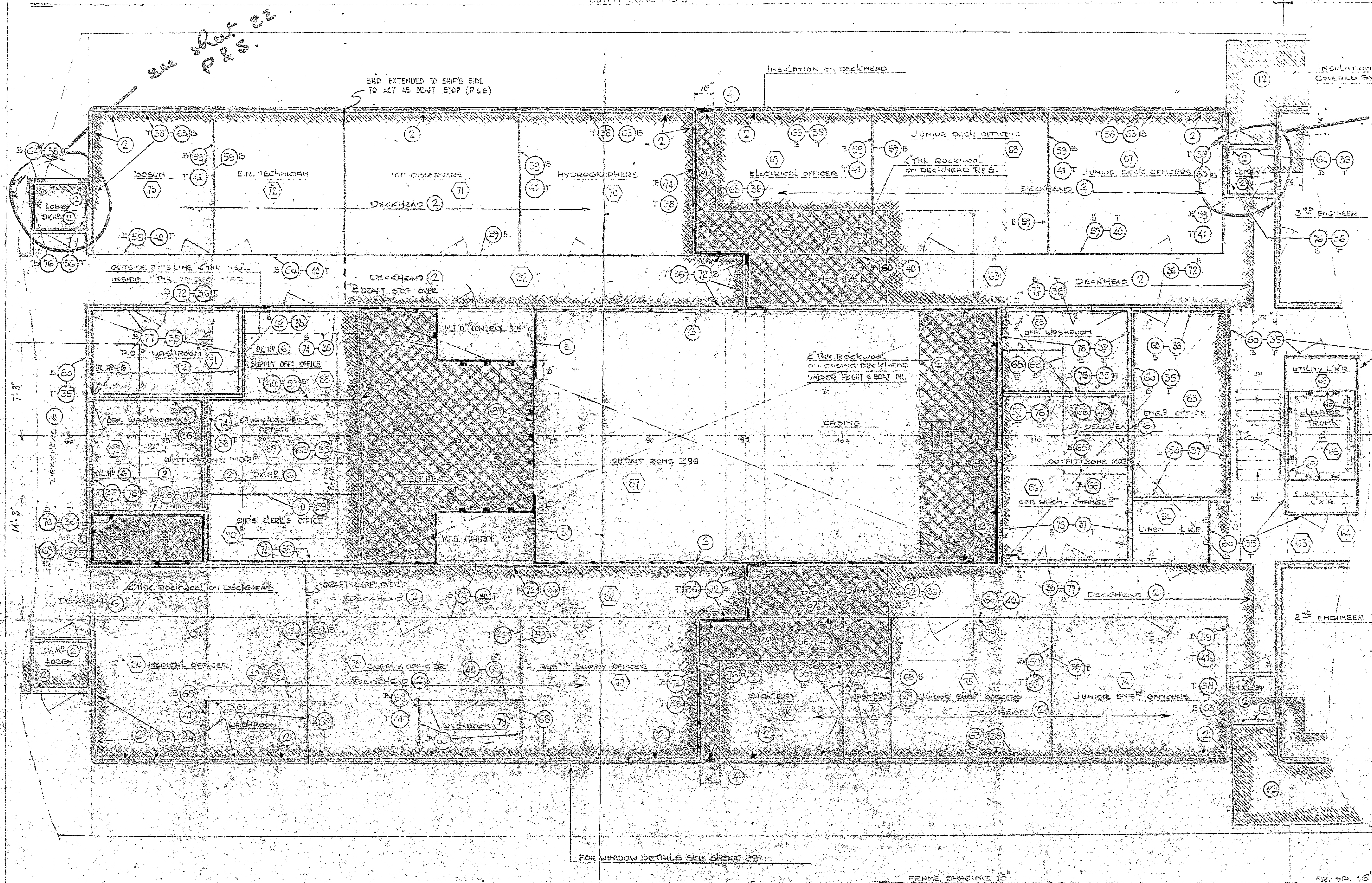
221-H-82

19

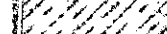











22  
25

 INSULATION: "FIBRE GLASS" PF 335  
WITH ALUMINUM PIGMENTED VINYL VAPOUR BARRIER  
COVERED BY GALVANIZED SHEET METAL 14" X 24"

 INSULATION: "FIBRE GLASS" PF 335  
WITH REINFORCED ALUM. FOIL VAPOUR BARRIER

 INSULATION: "Rockwool"

INSULATION: FIBRE GLASS PF 335  
WITH REINFORCED ALUM. FOL VAPOUR BARRIER




INSULATION: "Rockwool"

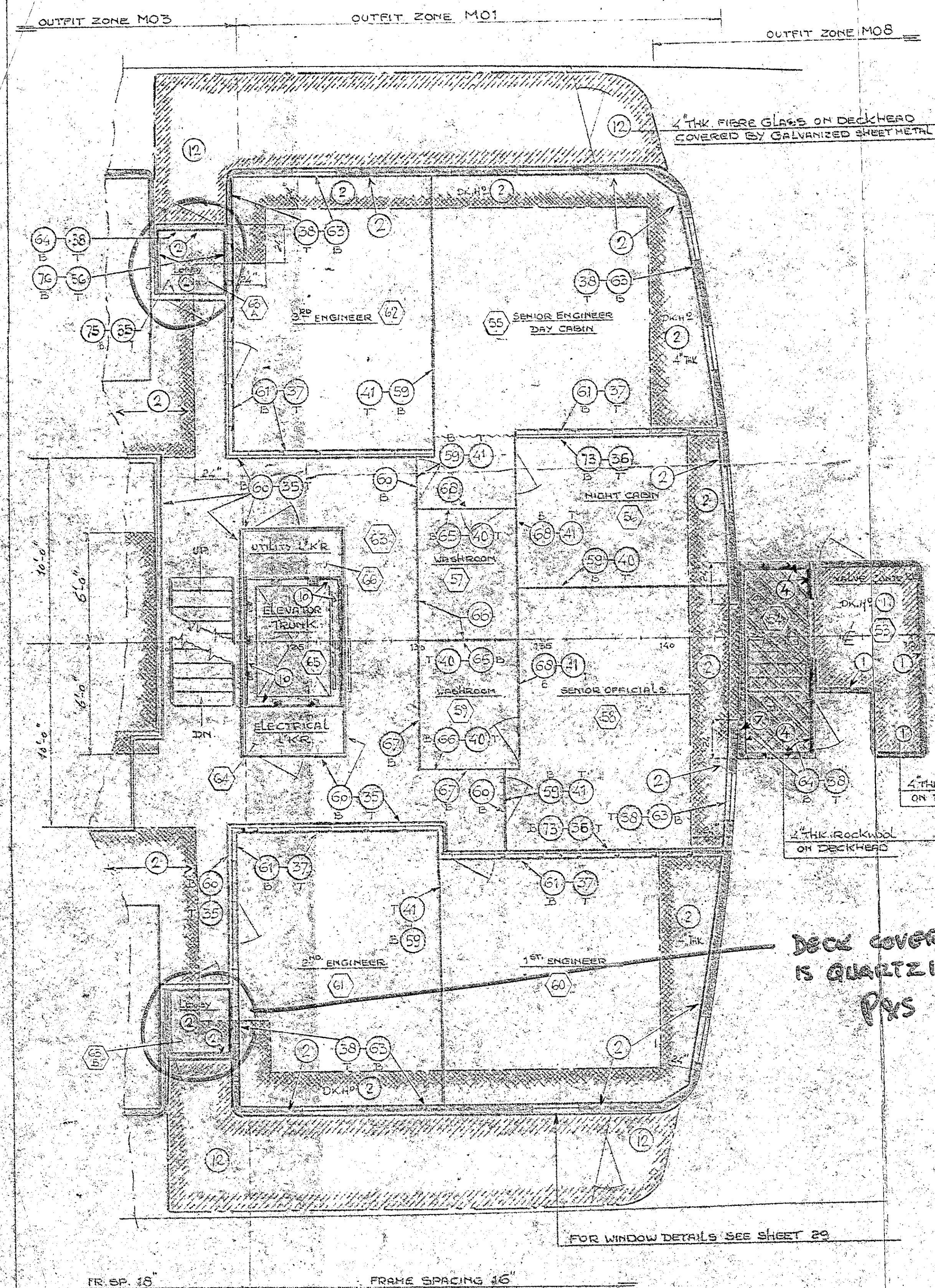
UPPER DECK (FR. 61-123)

OUTFIT ZONE Mo3. & Mo2.

221-H-82

REVISION 





INSULATION: "FIBRE GLASS" PF 335  
WITH ALUMINUM PIGMENTED VINYL VAPOUR BARRIER  
COVERED BY GALVANIZED SHEET METAL THK. 12 GA.

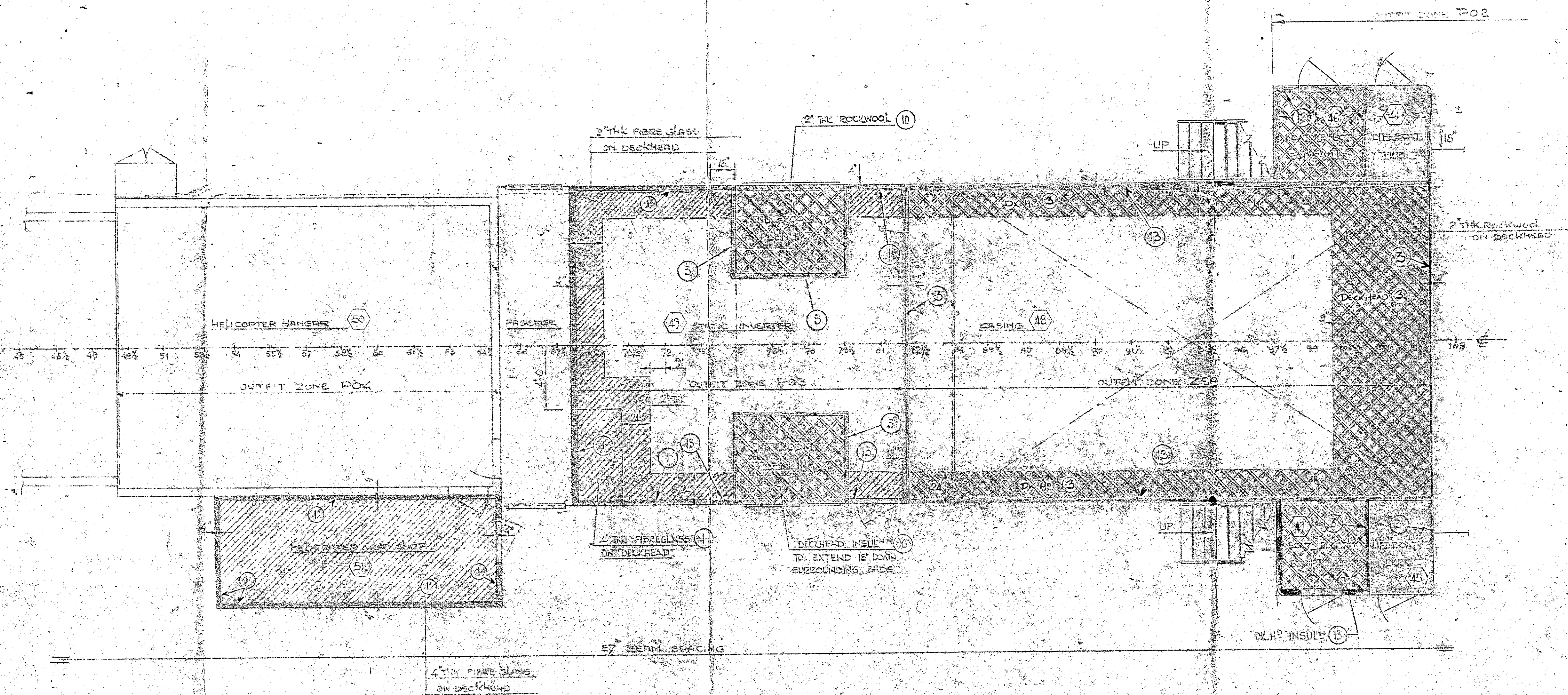
INSULATION: "FIBRE GLASS" PF 335  
WITH REINFORCED ALUM. FOIL VAPOUR BARRIER



INSULATION: "Rockwool"

UPPER DECK (FR. 123-150)

OUTFIT ZONE M01





-  INSULATION: "FIRE GLASS" PF335  
 WITH ALUMINUM PIGMENTED VINYL VAPOUR BARRIER  
 COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS
-  INSULATION: ROCKWOOL  
 COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS

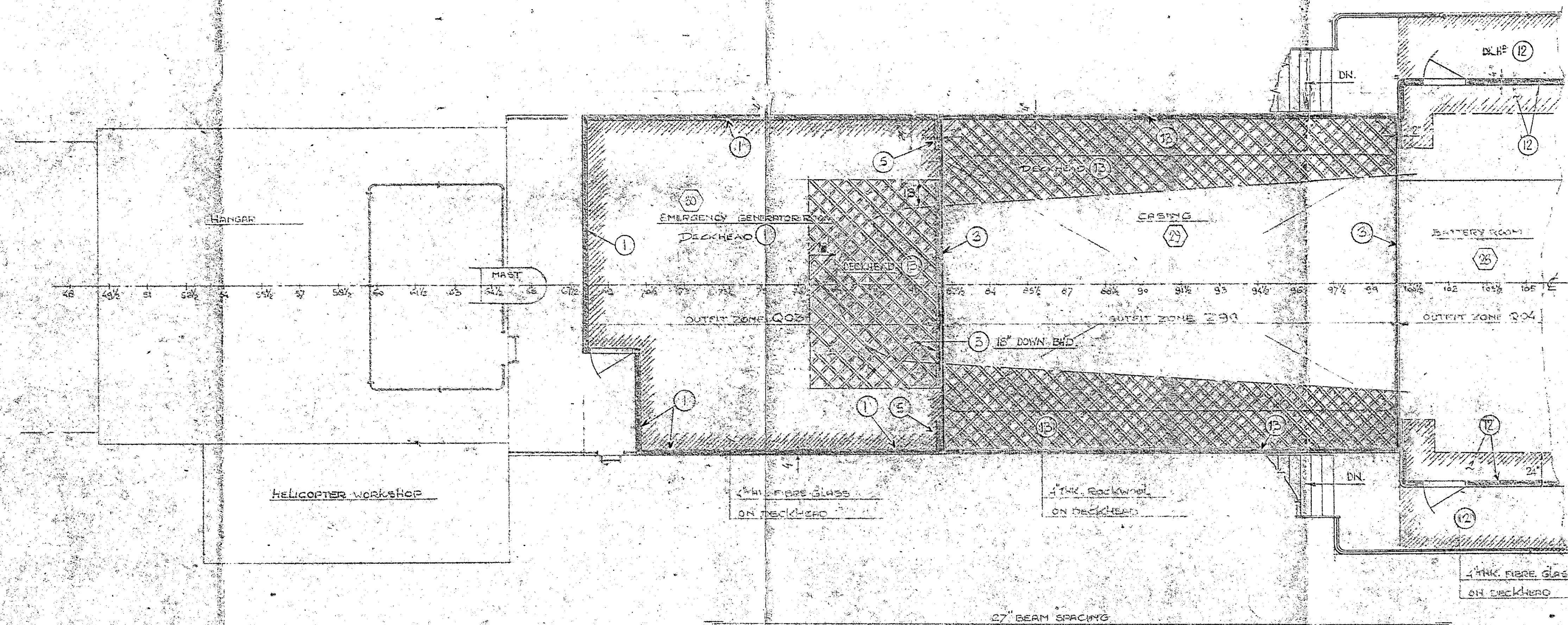
FLIGHT AND BOATDECK (FR. 49½ - 103½)

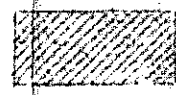

OUTLET ZONES PO4, PO5, Z03 & PO2









-  INSULATION: "FIBRE GLASS" PF 335  
WITH ALUMINUM DIAMINATED VINYL VAPOR BARRIER  
COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS
-  INSULATION: Rockwool  
COVERED BY EXPANDED ALUM. SHEATHING .064 THICKNESS

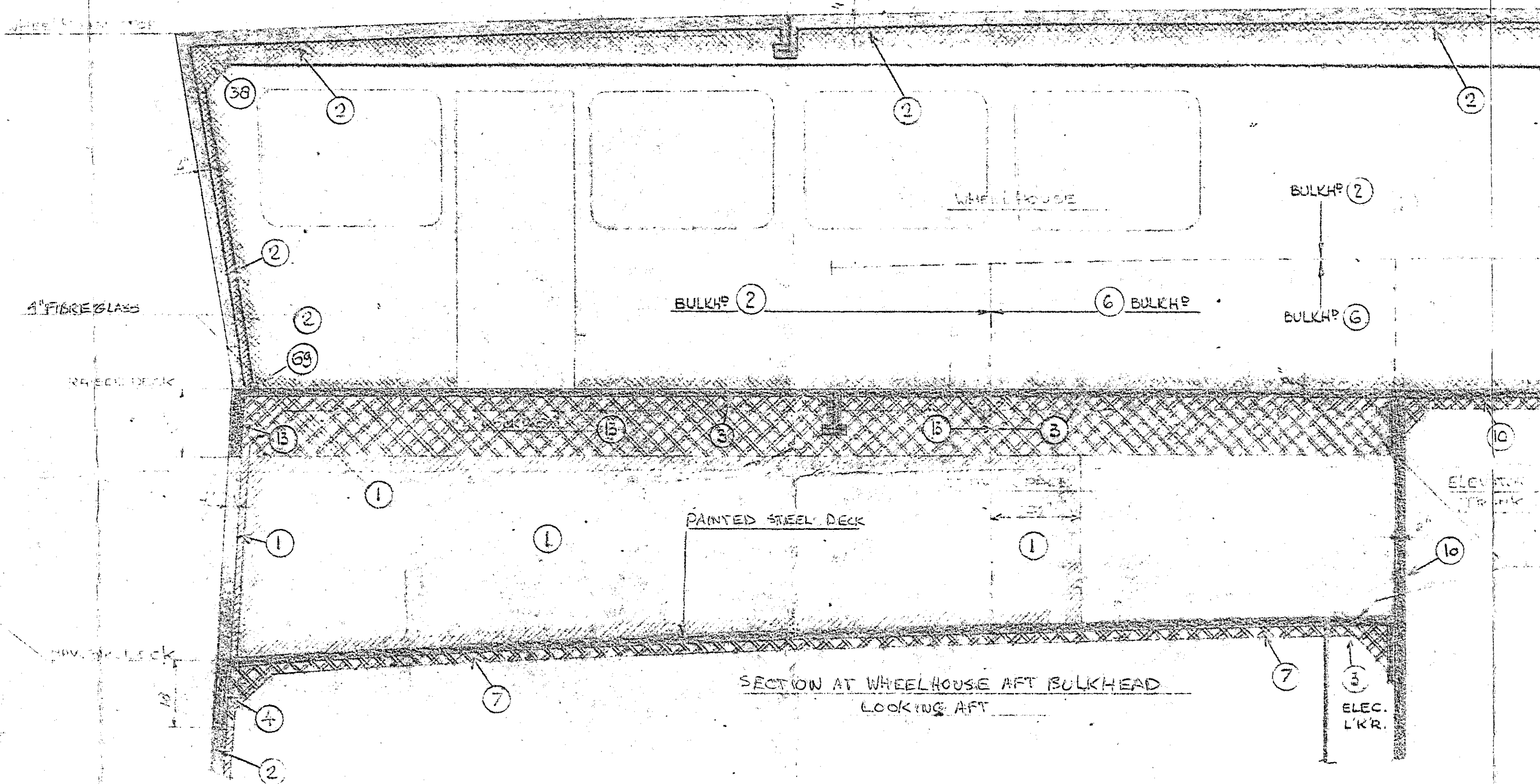
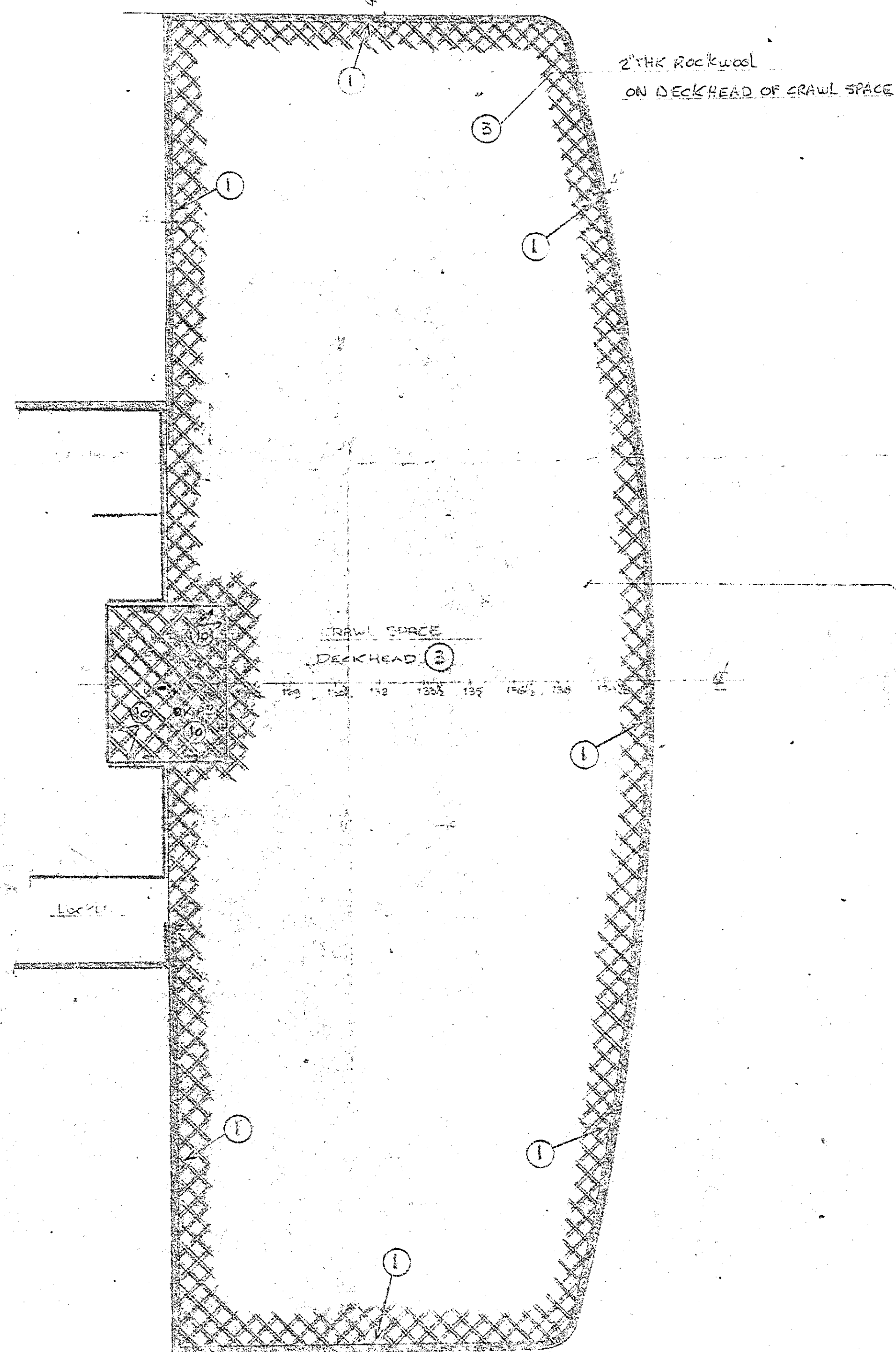
OFFICER'S DECK (FR. 48-100)

OUTFIT ZONES Q03 Z03 Q04












HOUSE TOP AFT SIDE

2" THK ROCKWOOL CARRIED 18" DOWN  
AT BHD'S AND SHIP SIDES. INCREASED  
TO 4" WHERE STEEL EXPOSED TO WEATHER

-  INSULATION: "FIBRE GLASS" PF335  
WITH ALUM. PIGMENTED VINYL VAPOUR BARRIER
-  INSULATION: "FIBRE GLASS" PF335  
WITH REINFORCED ALUM. VAPOUR BARRIER
-  INSULATION: Rockwool

NAVIGATING BRIDGE DECK

OUTFIT ZONE R01.

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