

EQUIPMENT LIST							
PN	QTY	DESCRIPTION	TECHNICAL MANUAL	OVER-ALL DIMENSIONS (mm)			(Kg)
				LENGTH	WIDTH	HEIGHT	
1	2	MAIN ENGINE - MTU 20V4000 20 CYLINDER DIESEL ENGINE	TP-8902	4191	1467	2047	12750
2	2	GENERATOR ENGINE - CUMMINS DWG. NO. 3170646	TP-8912	1466	971	1036	2159
3	2	REDUCTION GEAR	TP-8903	1431	1245	1553	2746
4	2	SHAFT COUPLING, FWD OF REDUCTION GEAR (GEISLINGER)	TP-8903	555	630	630	36
5	2	SHAFT COUPLING, AFT OF REDUCTION GEAR (SKF)	TP-8906	390	435	435	154.7
6	2	SHAFT - MAIN PROPULSION SHAFT	TP-8906	9430	224	224	2486.5
7	2	PROPELLERS	TP-8913	688	1942	1942	950
8	2	RUDDERS - FOIL SHAPED RUDDERS WITH RUDDER STOCK	TP-8907	990	462	3020	696
9	2	STABILIZER FINS - FOIL SHAPED FINS WITH STOCK	TP-8911	2180	378	1722	583
9A	2	FIN STOCK	TP-8911	150	150	950	121
10	1	EMERGENCY GENERATOR SET COMPLETE ON SKID WET	TP-8910	2329	1080	1722	1262
10A	1	ENGINE (TURBO REMOVED)	TP-8910	707	1061	912	454
10B	1	ALTERNATOR	TP-8910	679	799	814	422
10C	1	RADIATOR-WET	TP-8910	1022	548	1574	165
11	1	BOW THRUSTER MOTOR	TP-8905	738	869	1438	700
12	1	FIRE PUMP #1	TP-8908	909	590	424	374
13	1	FIRE PUMP #2	TP-8908	909	590	424	374
14	2	MAIN ENGINE SILENCER	TP-8902	3785	1372	1631	2828
15	2	STABILIZER FIN INTERIOR DRIVE UNIT WITH STOCK	TP-8911	1290	480	1062	355
15A	2	STABILIZER FIN INTERIOR DRIVE UNIT STRIPPED OF STOCK, TILLER, CYLINDERS	TP-8911	1290	480	1062	171
16	1	STABILIZER FIN HPU	TP-8911	1171	671	1140	374
16A	1	STABILIZER FIN HPU UPPER ASSY: TANK & MISC	TP-8911	1171	671	531	130
16B	1	STABILIZER FIN HPU LOWER ASSY: FRAME, PUMP, MOTOR & MISC	TP-8911	1171	671	607	270
17	1	MAIN A/C UNIT COMPLETE COMPRESSOR/CONDENSER ASSEMBLY	TP-8123	1793	600	982	486
17A	1	MAIN A/C UNIT - COMPRESSOR ONLY	TP-8123	768	564	527	233
17B	1	MAIN A/C UNIT - CONDENSER ONLY	TP-8123	1740	600	245	105
17C	1	MAIN A/C UNIT - LOOSE PIPING, ELECTRICAL, VALVES, GAUGES, & SKID	TP-8123	1500	200	210	162
18	2	SWINEL HOIST RING 5/8" - 11 X 1-1/4" THREADED LENGTH 4000# RATING	N/A	N/A	N/A	N/A	N/A
19	2	MAIN ENGINE INTERCOOLER	TP-8902	1462	620	845	770
19B	2	MAIN ENGINE INTERCOOLER CORE	TP-8902	1391	547	399	398
20	8	MAIN ENGINE TURBOCHARGER	TP-8902	510	590	590	215
21	2	MAIN ENGINE OIL COOLER	TP-8902	610	400	422	230

OPENINGS FOR EQUIPMENT REMOVAL						
OPENING	QTY	DECK	DESCRIPTION	OVER-ALL DIMENSIONS (mm)		
				LENGTH	WIDTH	HEIGHT
A	2	MAIN DECK	MAIN DIESEL ENGINE REMOVAL OPENING AT MAIN DECK	5398	2390	
B	2	O1 LEVEL	W.E.R.P.-MDE REMOVAL OPENING AT O1 LEVEL	4767	2035	
C	2	MAIN DECK	B.E.R.P.-GENERATOR REMOVAL OPENING AT MAIN DECK	2605	1110	
D	2	MAIN DECK	HATCH-STEERING COMPARTMENT	685	685	
E	1	MAIN DECK	HATCH-BOW THRUSTER COMPARTMENT	762	762	
F	1	STBD SIDE	B.E.R.P.-EMERGENCY GENERATOR REMOVAL	1110	1530	TALL
G	1	MAIN DECK	HATCH-ENGINE ROOM	685	685	

GENERAL NOTES

- BERPS SHALL BE SECURED BY METHODS WHICH DO NOT POSE TRIPPING HAZARDS.
- LIFTING GEAR NECESSARY FOR SERVICING, REMOVAL, AND OVERHAUL OF MACHINERY AND MAJOR PIPING COMPONENTS (MORE THAN 100 POUNDS) SHALL BE PROVIDED FOR SHORESIDE MAINTENANCE.
- LIFTING RIGS & PADEYES TO BE SIZED & LOCATED TO ALLOW MOVEMENT OF EQUIPMENT AT ANY POINT ALONG THE REMOVAL ROUTE.
- PADEYES TO BE ORIENTED SO THAT THE LOAD IS IN THE PLANE OF THE PADEYE PER COR 611-2.3. WHERE MINOR SIDE LOADING IS NECESSARY, PADEYES TO BE DESIGNED ACCORDINGLY.
- PADEYES TO BE LABELED WITH SAFE WORKING LOAD CAPACITY.
- THREE PORTABLE PADEYES TO BE PROVIDED PER COR 611-2.2 SEE DETAIL 40-E.
- SEE REF 14,15 & 16 FOR PADEYE LOCATIONS.
- PROVIDED IS A DETAIL OF AN OIL COOLER LIFTING ARM SEE DETAIL 38-D.
- FURNISHED IS ITEM 625078 (SLING WEB VERTICAL WWL 1600LB CHOKER WWL 1280 BASKET WWL 3200 SYNTHETIC POLYESTER 1 PLY TYPE 3 W/FLAT EYES EACH END) TO BE USED AS NEEDED TO AVOID STRUCTURAL OBSTRUCTIONS.
- ALL DIMENSIONS IN MILLIMETERS UNLESS NOTED OTHERWISE.
- LIFTING DEVICE TO BE FABRICATED AND INSTALLED ON VESSEL WHEN NEEDED FOR REMOVAL OF EQUIPMENT.
- FOR ADDITIONAL INFORMATION FOR EQUIPMENT REMOVAL REFER TO FRC-B TECHNICAL MANUALS IN EQUIPMENT LIST.

REVISIONS					
REV	SHT	ZONE	ITEM	DESCRIPTION	DATE
E	8	58-C		REVISED INTERCOOLER LIFT AND TURBOCHARGER LIFT INSTRUCTIONS.	4/5/17 4/5/17
F	5	40-E	1 2	DELETED DETAILS 40-E, 39-E, 38-E, 37-E ADDED DETAIL 40-E.	1/15/18 3/1/18
				THIS REVISION INCORPORATES FRC-ECN3390A REV-2	4/27/17 JRK /S/ JRM /S/ CTM /S/

REVISIONS					
REV	SHT	ZONE	ITEM	DESCRIPTION	DATE
A	1	3-A	1	UPDATED REV STATUS BLOCK.	
	2	16-G	1	REVISED CALLOUT OF HARDWARE.	
				THIS REVISION CLOSURES FRC-ECN1505.	12/19/12
B	1	5-H	1	ADDED GENERAL NOTE 9.	
				THIS REVISION CLOSURES FRC-ECN1840.	3/22/14
C	1	3-A	1	UPDATED REV STATUS BLOCK.	
	7-G	2	1	UPDATED EQUIPMENT LIST TABLE DIMENSIONS.	
	7-E	3	1	CHANGED CALLOUT FOR OPENING "B" FROM B.E.R.P. TO W.E.R.P.	
	6	VAR	1	REVISED VIEW TO DEPICT NEW THRUSTER MOTOR.	
				THIS REVISION CLOSURES FRC-ECN2020A & TO SUIT USCG COMMENT LETTER: 085-ID-4302 DATED 29 APRIL 2015.	5/8/15
D	1	5-C	1	ADDED GEN NOTE 11 & 12.	
	7-H	2	1	ADDED TECHNICAL MANUAL COLUMN TO EQUIP. LIST.	
		3	1	CORRECTED DESCRIPTION & WEIGHT OF PN 4 & 5.	
		4	1	LENGTH & WEIGHT OF PN 6, & WEIGHT OF PN 7.	
		4	1	UPDATED PN 17 DESC. & ADDED COMPONENT DATA.	
	2,3	VAR	1	ADDED NOTE "SEE GEN NOTE 11".	
	5	VAR	2	CORRECTED SKF COUPLING & PN 5 CALLOUTS.	
		25-E	1	ADDED CALLOUT FOR GEN NOTE 11.	
		27-H	2	ADDED MAIN A/C UNIT REMOVAL INSTRUCTIONS.	
		29-H	3	ADDED PORT A/C COMPRESSOR TO PLAN VIEW 29-E.	
		30-C	4	REMOVED AIR FILTER FROM SECTION 32-A.	
		36-A	1	UPDATED RUDDER REMOVAL FROM TEMP. PADEYE TO CHOKER SLING PER TECHNICAL MANUAL TP-8907.	
		37-A	1	ADDED PORTABLE PADEYE, DET 37-E, 38-E, 39-E.	
		40-E	3	UPDATED PORTABLE PADEYE.	
		38-G	4	CORRECTED SHAFT LENGTH FROM 9432 TO 9430.	
		34-H	5	ADDED NOTE FOR PROPELLER REMOVAL.	
		54-B	1	DETAILED SHAFT REMOVAL & RECD CLEARANCE.	
		58-D	1	ADDED NOTE NUMBER 3 FOR WELDING.	
		58-C	2	ADDED INSTRUCTIONS TO LIFT THE INTERCOOLER AND TURBOCHARGER.	
		VAR	3	REVISED THE PADEYE LIFTING HOLE DIAMETER, DET. 60-C, 60-D, 60-E.	
		VAR	4	REVISED AND ADDED THE SLOTS IN THE TRANSVERSE TUBING FOR ALIGNMENT, DET. 60-C, 60-D, 60-E.	
		63-G	5	ADDED NOTE TO SEE DETAIL 62-F.	
		60-H	6	ADDED DETAIL 62-F.	
		62-F	6	ADDED DETAIL 62-F.	
		61-G	6	ADDED PLATE BELOW TUBING AND WELD CALLOUT.	
		59-B	6	CHANGED 1952 DIMENSION TO MATCH MARK AND DRILL.	
		GEN	9	ADDED NOTE FOR WELDING IN HEADING.	
				THIS REVISION INCORPORATES FRC-ECN2287 REV 1 & ADDRESSES USCG DRAWING DISAPPROVAL LETTER: HSCG23-08-C-2FR125, 085-ID-4656, DATED 9 DECEMBER 2015.	7/18/16 7/18/16 7/28/16

FOUNDATION A&D MODULE		DESCRIPTION	DRAWING NO
17	FOUNDATION A&D MODULE 60		154-WPC-180-260
16	FOUNDATION A&D MODULE 20		154-WPC-180-220
15	FOUNDATION A&D MODULE 10		154-WPC-180-210
14	EXHAUST SYSTEMS INSTALLATION		154-WPC-259-201
13	MAIN ENGINE INTERCOOLER & TURBO LIFTING FRAME		154-WPC-993-205
12	OIL COOLER LIFTING ARM		154-WPC-993-204
11	EDG ENGINE SPREADER BAR		154-WPC-993-206
10	FIRE PUMP REMOVAL LIFTING SKID		154-WPC-993-202
9	MAIN ENGINE SPREADER BAR		154-WPC-993-201
8	SCHEDULE OF DOORS, MANHOLES, AND HATCHES		154-WPC-167-301
7	WATERTIGHT BULKHEADS AND TRANSVERSE FRAMES		154-WPC-222-301
6	RUDDER A & D		154-WPC-562-201
5	PROPULSION SHAFT A & D		154-WPC-243-201
4	MACHINERY ARRANGEMENT		154-WPC-200-301
3	SCANTLING SUPERSTRUCTURE		154-WPC-151-301
2	SCANTLINGS MAIN DECK		154-WPC-131-301
1	GENERAL ARRANGEMENT		154-WPC-601-302

REFERENCE PLANS	
TITLE	DRAWING NO
SPECIAL NOTATIONS	
LIMITED RIGHTS NOTICE	

(A) THESE DATA ARE SUBMITTED WITH LIMITED RIGHTS UNDER GOVERNMENT CONTRACT NUMBER: HSCG23-08-C-2FR125 FOR THE FAST RESPONSE CUTTER (FRC). THESE DATA MAY BE REPRODUCED AND USED BY THE GOVERNMENT WITH THE EXPRESS LIMITATION THAT THEY WILL NOT, WITHOUT WRITTEN PERMISSION OF THE CONTRACTOR, BE USED FOR PURPOSES OF MANUFACTURE NOR DISCLOSED OUTSIDE THE GOVERNMENT, EXCEPT THAT THE GOVERNMENT MAY DISCLOSE THESE DATA OUTSIDE THE GOVERNMENT FOR THE FOLLOWING PURPOSES, PROVIDED THAT THE GOVERNMENT MAKES SUCH DISCLOSURE SUBJECT TO PROHIBITION AGAINST FURTHER USE AND DISCLOSURE:

- THE OPERATION, MAINTENANCE, DIAGNOSIS, AND REPAIR OF THE FAST RESPONSE CUTTER BY THE COAST GUARD OR SUPPORT CONTRACTORS.
- THE DEVELOPMENT OF OPERATIONS, MAINTENANCE, DIAGNOSIS, AND REPAIR DOCUMENTATION (TRADITIONAL AND ELECTRONIC) IN SUPPORT OF THE FRC SYSTEM BY THE COAST GUARD OR SUPPORT CONTRACTORS.
- THE TRAINING OF OPERATORS, MAINTAINERS, DIAGNOSTICIANS, AND REPAIRERS OF THE FRC SYSTEM BY THE COAST GUARD OR SUPPORT CONTRACTORS.
- THE DEVELOPMENT OF TRAINING MATERIALS (TRADITIONAL AND ELECTRONIC) IN SUPPORT OF THE FRC SYSTEM BY THE COAST GUARD OR SUPPORT CONTRACTORS.

(B) THIS NOTICE SHALL BE MARKED ON ANY REPRODUCTION OF THESE DATA, IN WHOLE OR IN PART.

END OF NOTICE

BOLLINGER SHIPYARDS LOCKPORT, LLC
8365 HWY 308 SOUTH
LOCKPORT, LA 70374
PHONE: (985) 532-2554
CONTRACT/PO NO.
HSCG23-08-C-2FR125

UNITED STATES COAST GUARD WASHINGTON, D.C. 20593
OFFICE OF NAVAL ENGINEERING
154FT FAST RESPONSE CUTTER
EQUIPMENT REMOVAL PLAN

DESIGNED: NC /S/ 9/18/12
DRAWN: NC /S/ 9/18/12
CHECKED: GH /S/ 9/18/12
APPROVED: GH /S/S/ 9/18/12

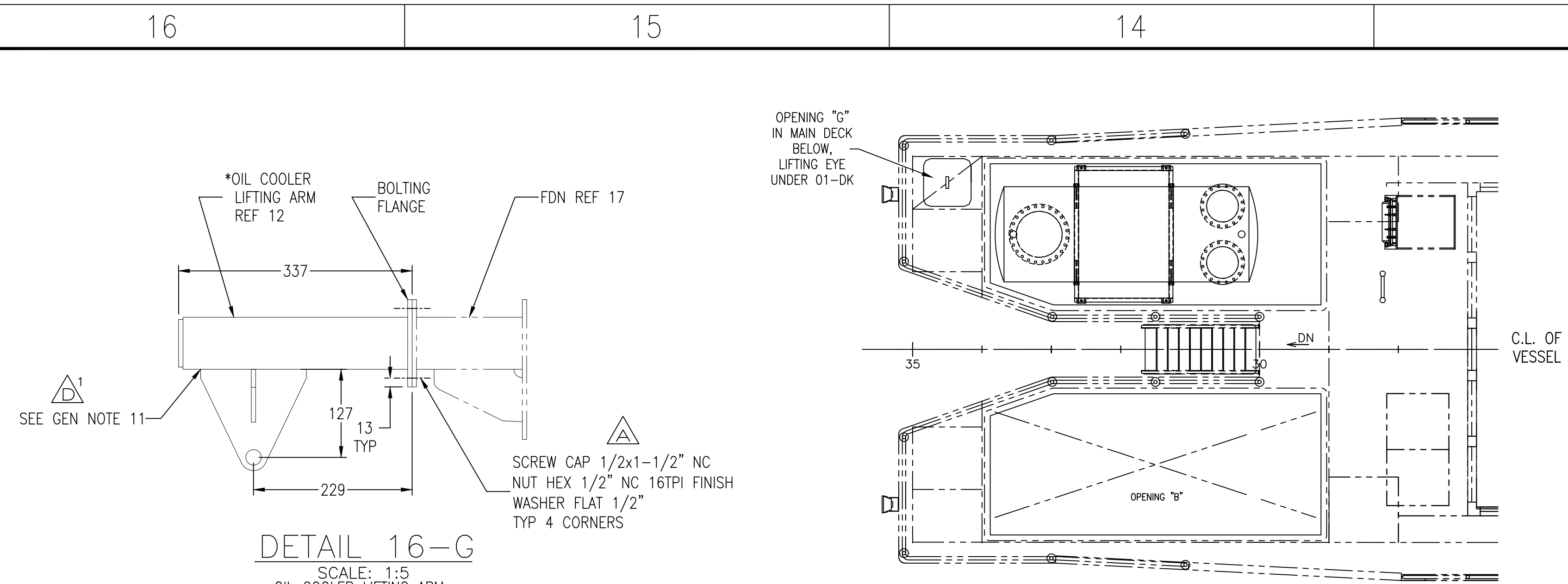
U.S.C.G. APPROVAL 12/13/12
J P HICKEY /S/

CDR USCG

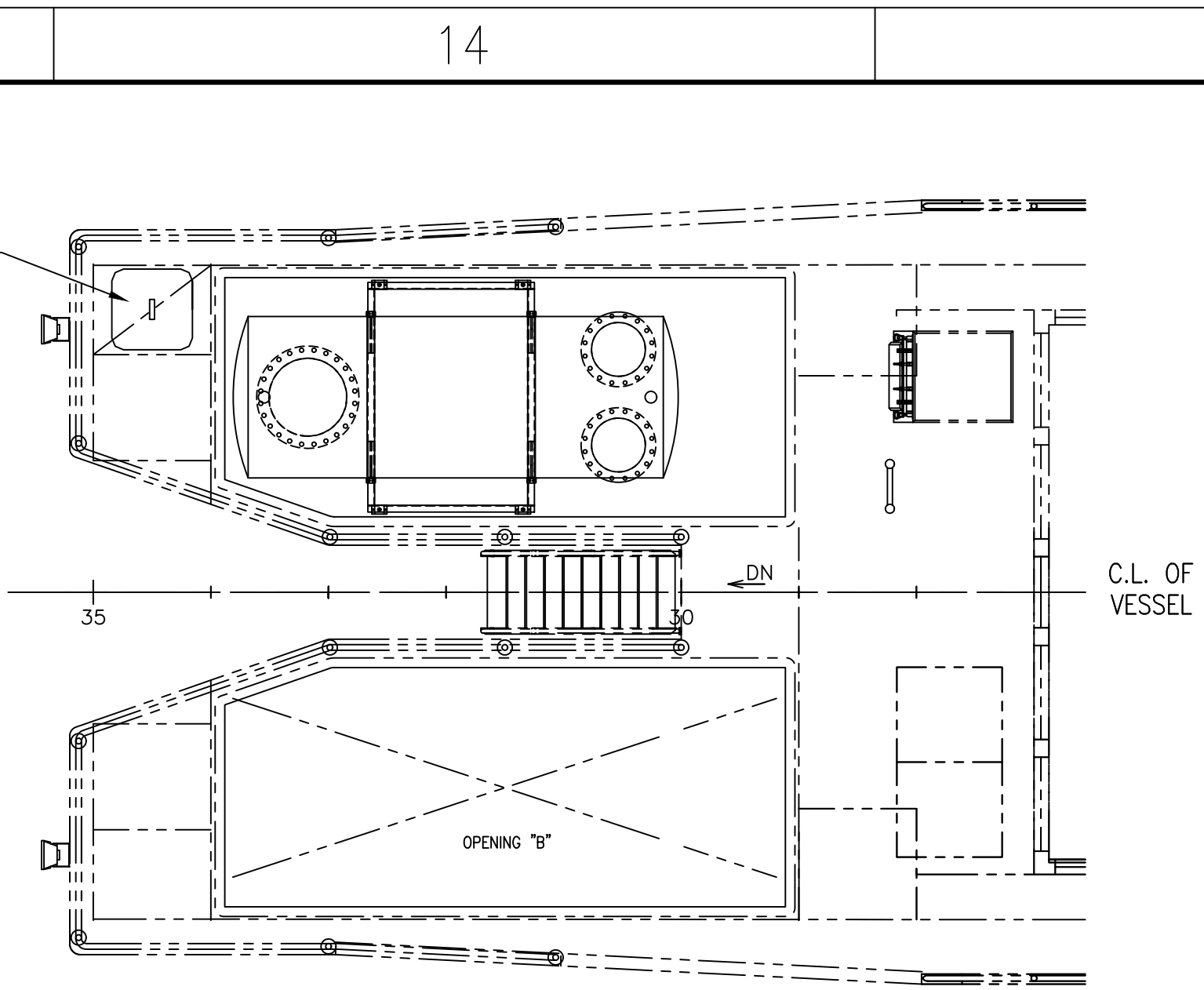
SIZE ALL
PLAN-SET HULLS

SCALE: AS NOTED 10:42 50 FT SHEET 1 OF 8

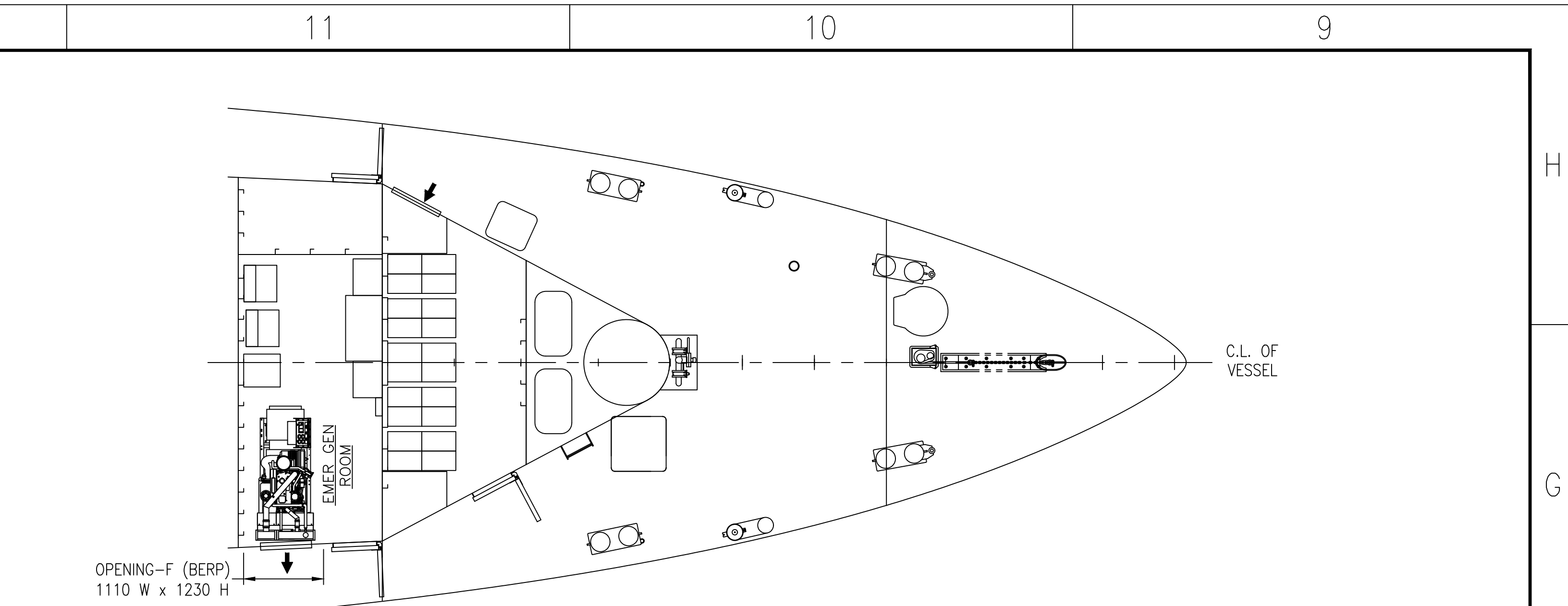
APPLICABILITY	
REV	STATUS
8	E
7	D
6	C
5	F
4	D
3	D
2	D
1	F



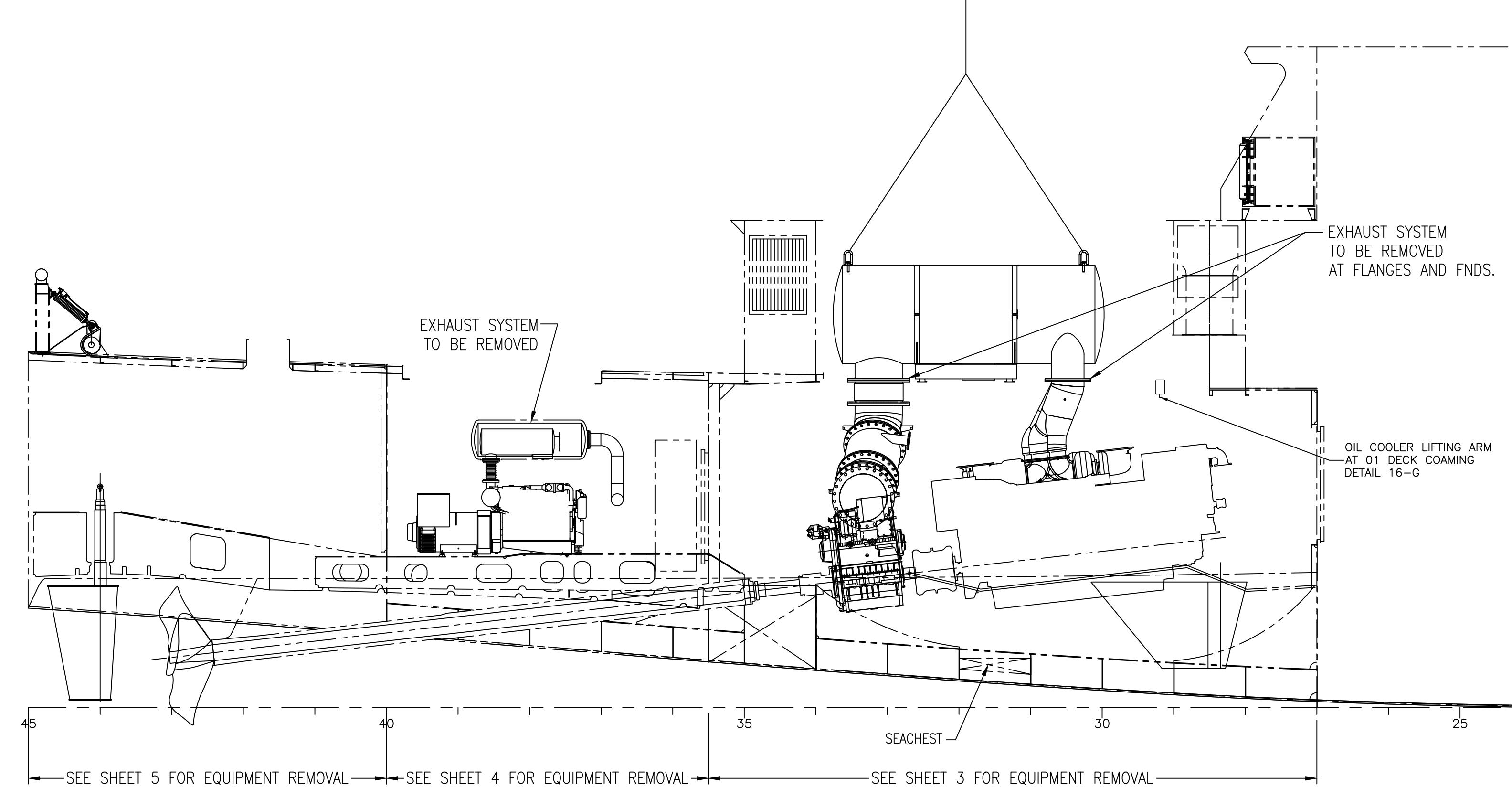
DETAIL 16-G
SCALE: 1:5
OIL COOLER LIFTING ARM
SEE REF 12



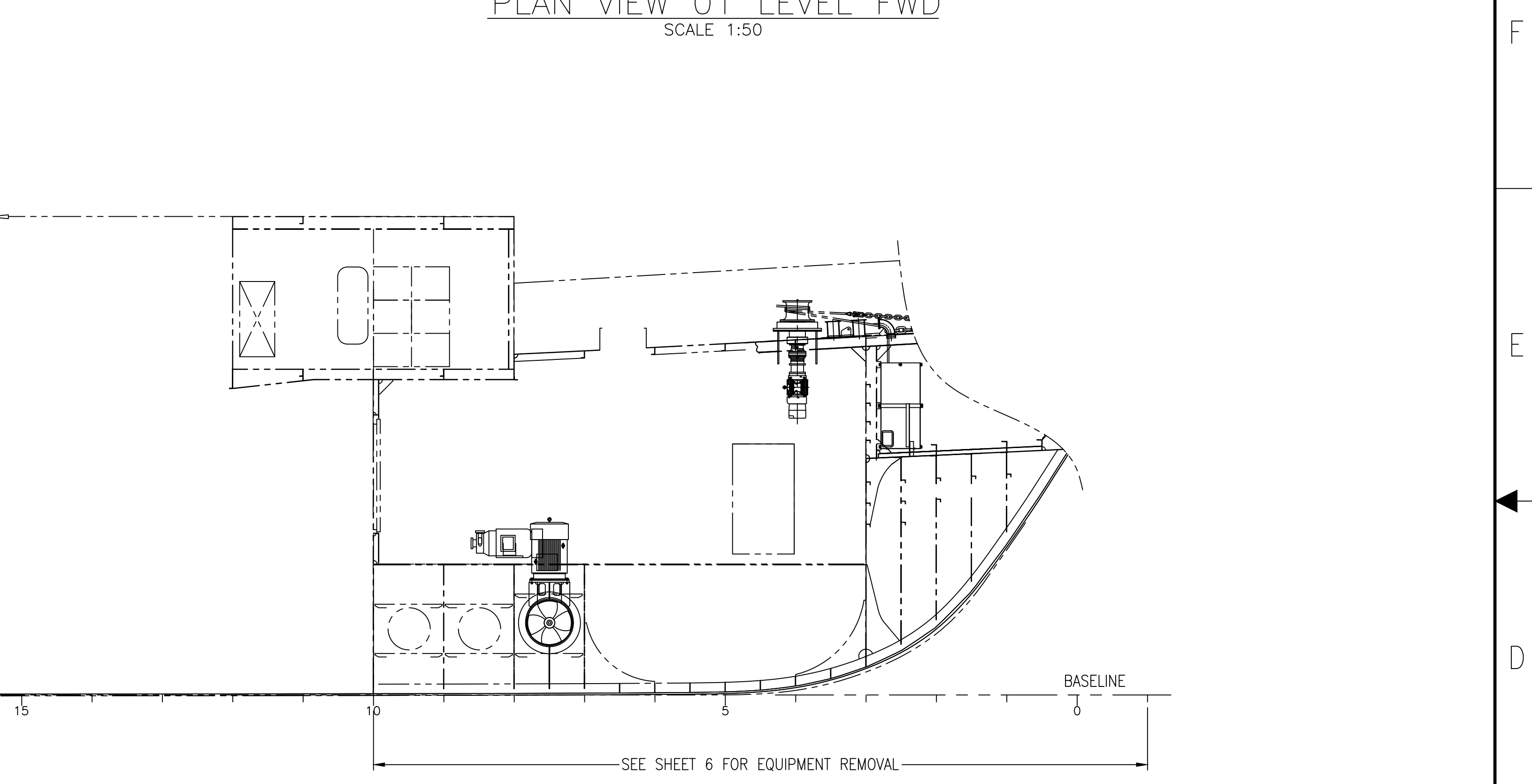
PLAN VIEW 01 LEVEL AFT
SCALE 1:50



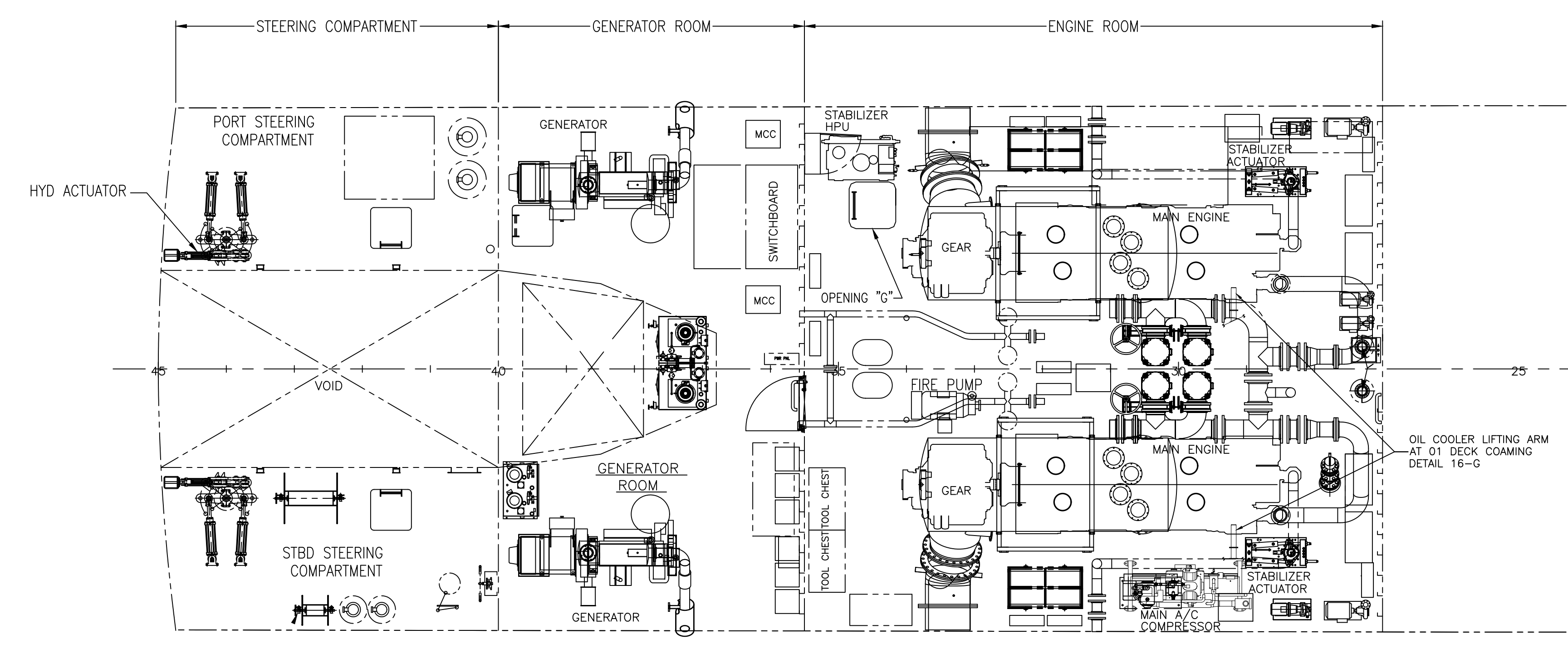
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SCALE 1:50



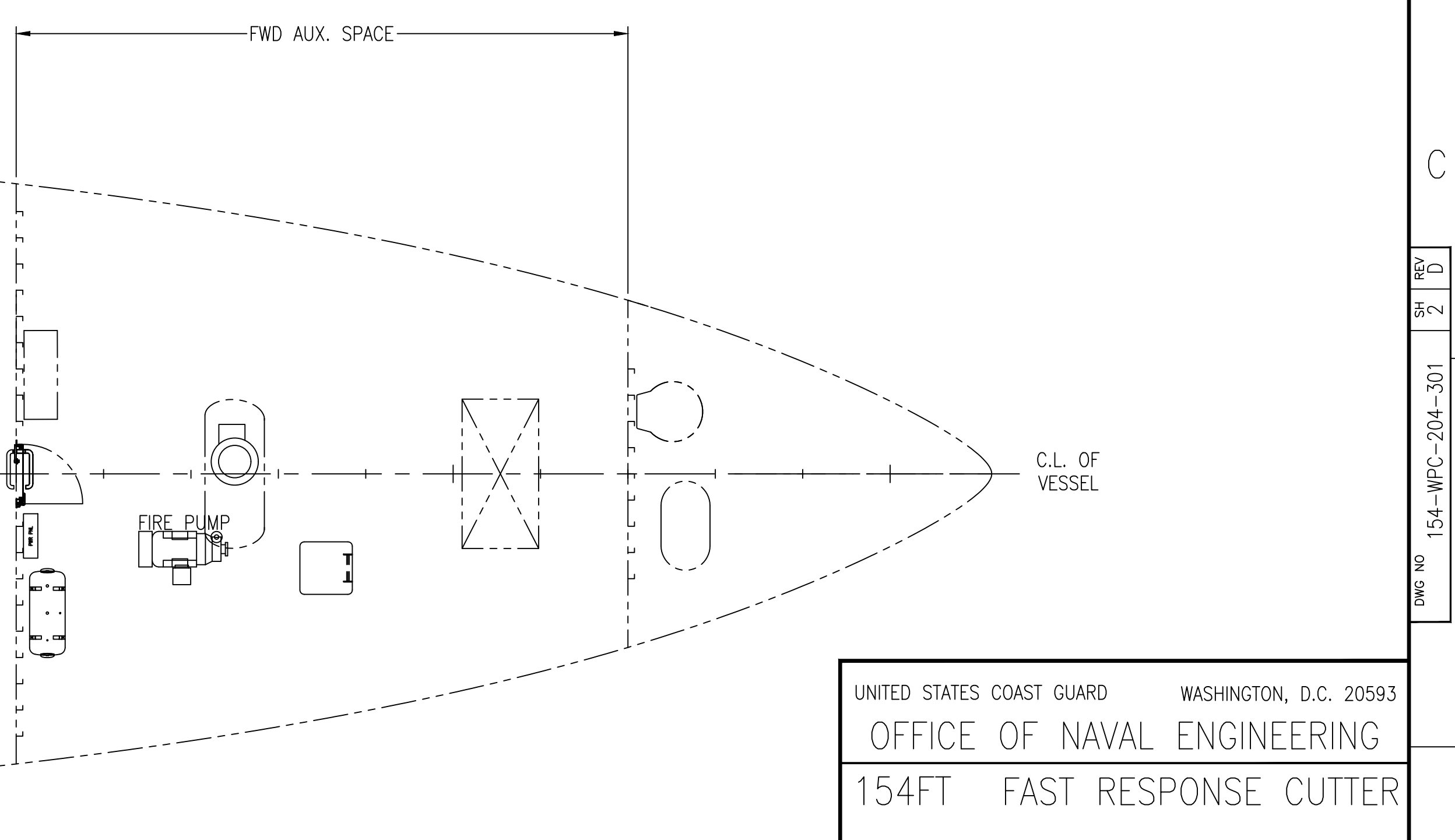
ELEVATION VIEW
SCALE 1:50
LAYOUT OF EQUIPMENT/MACHINERY



SEE SHEET 6 FOR EQUIPMENT REMOVAL



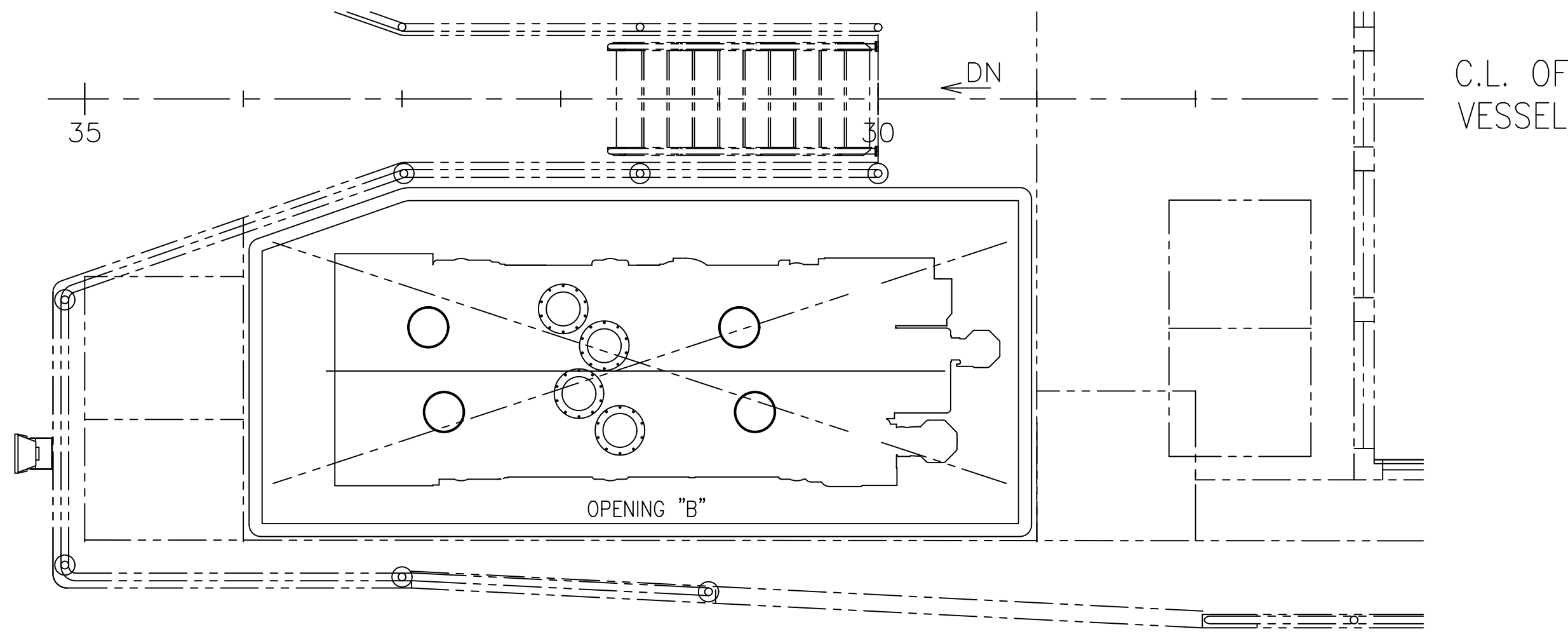
PLAN VIEW
SCALE 1:50
LAYOUT OF EQUIPMENT/MACHINERY



UNITED STATES COAST GUARD		WASHINGTON, D.C. 20593	
OFFICE OF NAVAL ENGINEERING			
154FT FAST RESPONSE CUTTER			
EQUIPMENT REMOVAL PLAN			
SIZE	FSCM CAGE NO	U.S.C.G. DRAWING NO.	REV
H	81340	154-WPC-204-301	D
SCALE:	AS NOTED	10.42 SQ FT	SHEET 2 OF

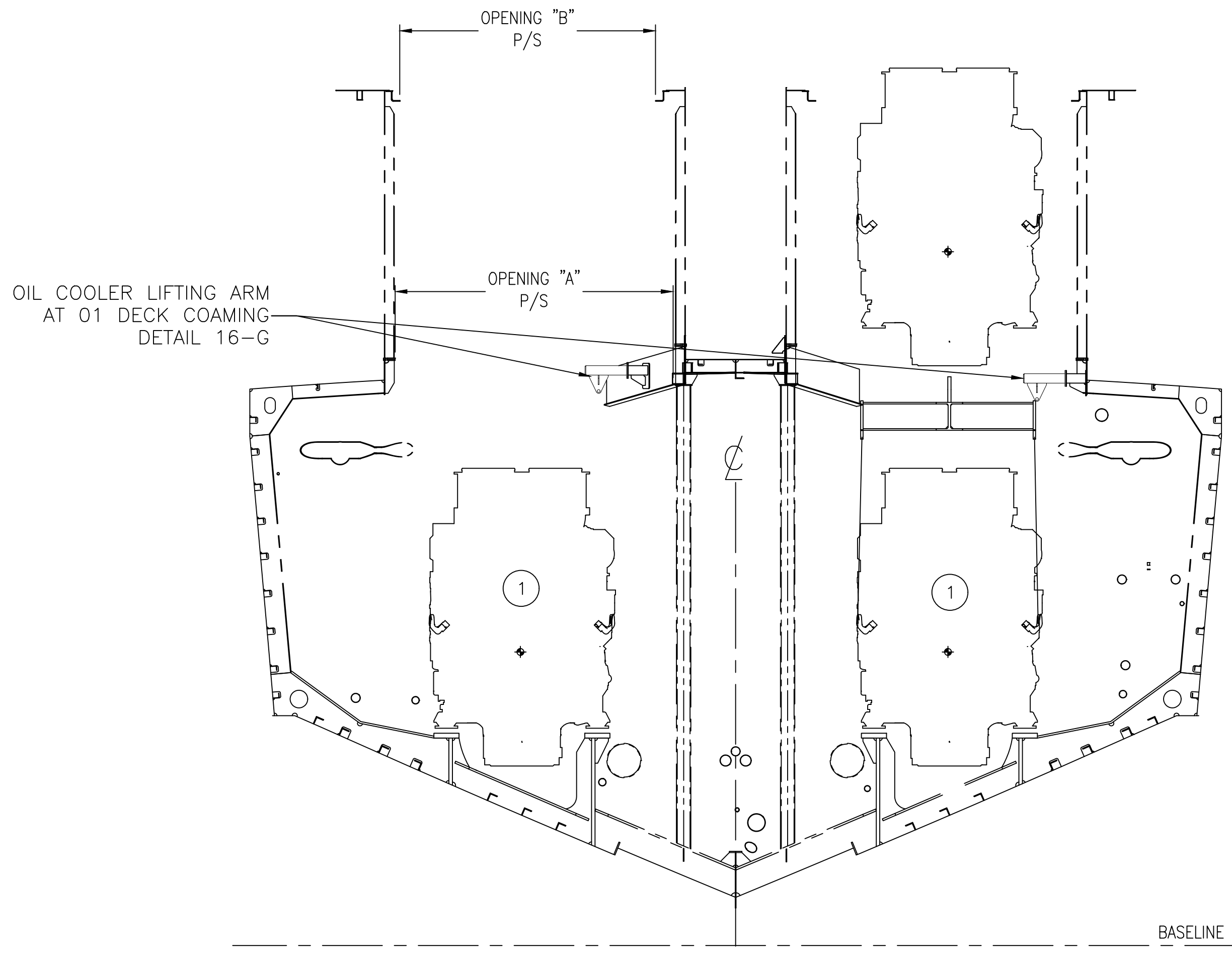
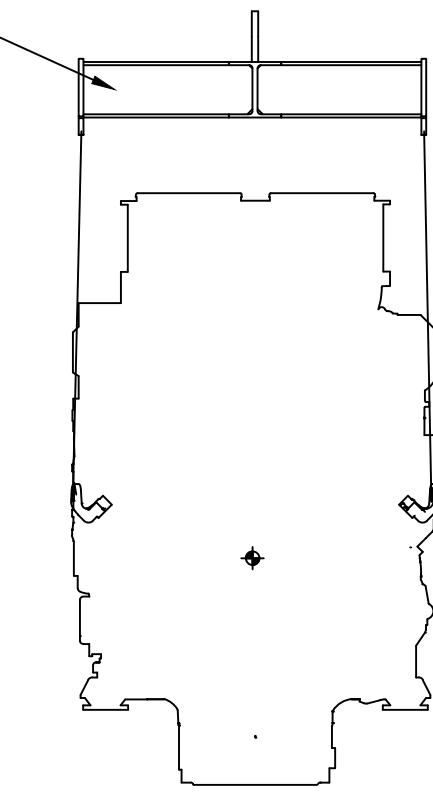
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 PLOT TIME: 01:28:43 PM
 PLOT BY: 09000057
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 FILE NAME: 154-WPC-204-301-1-FRM

DWG NO 154-WPC-204-301
 BY D
 Z

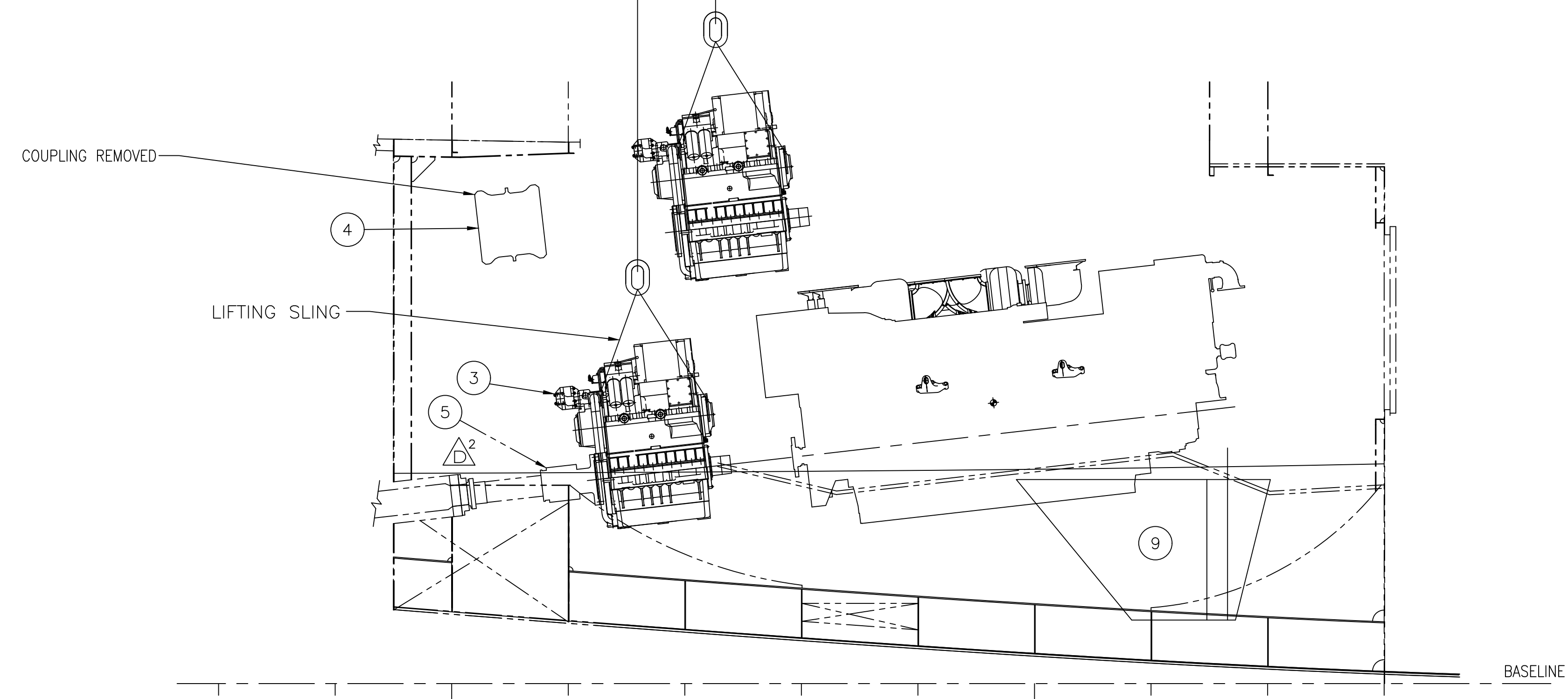


PLAN VIEW 23-F
SCALE: 1:30
01 LEVEL AFT DECK
STBD OPENING SHOWN
PORT OPPOSITE

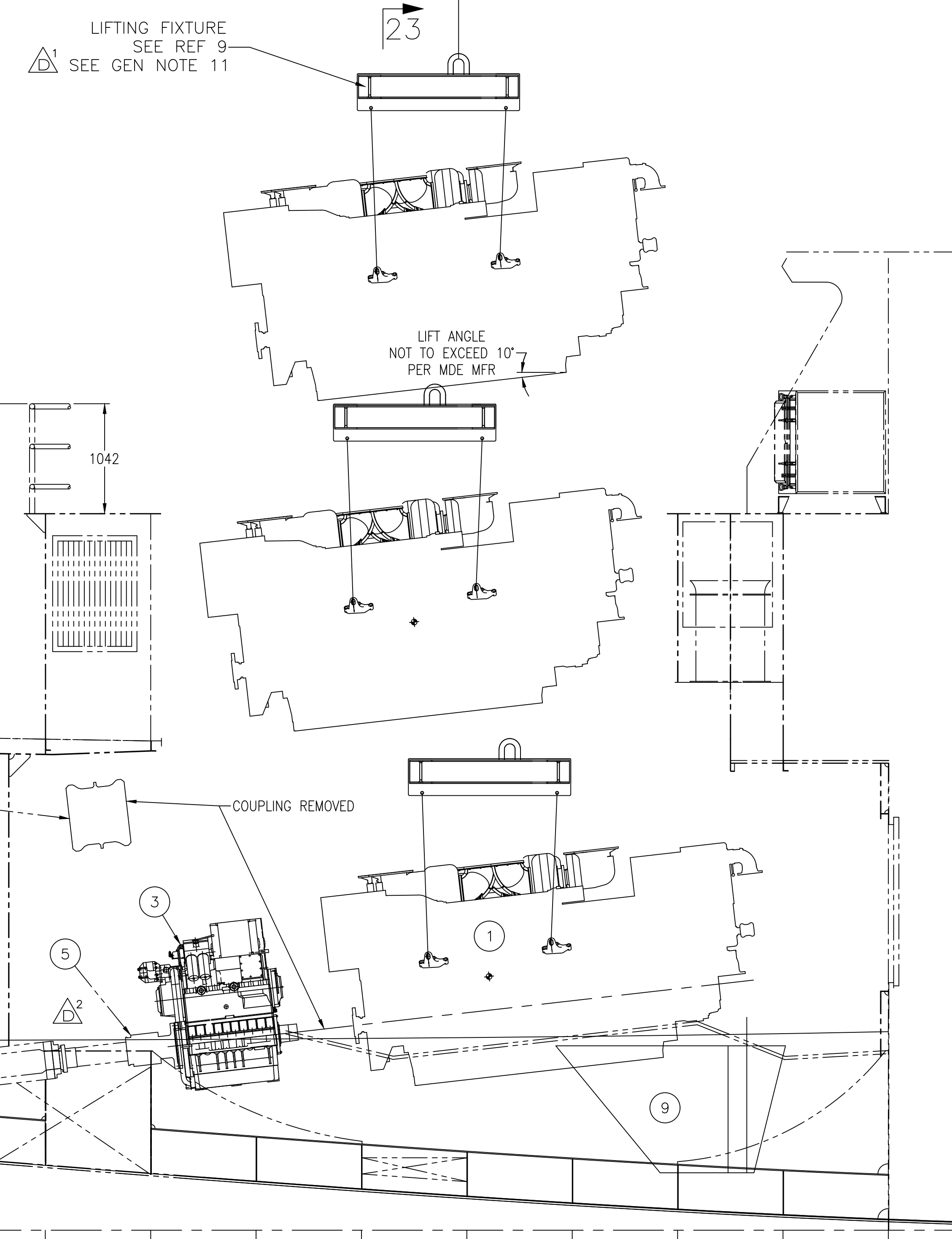
LIFTING FIXTURE
SEE REF 9
SEE GEN NOTE 11



SECTION 23-A
SCALE: 1:30
VIEW AT FR 31 LKG FWD
DIMS. AND CALLOUTS TYP P/S U.N.O



ELEVATION 20-F
SCALE: 1:30
MAIN GEAR REMOVAL
STBD SHOWN
PORT SIMILAR

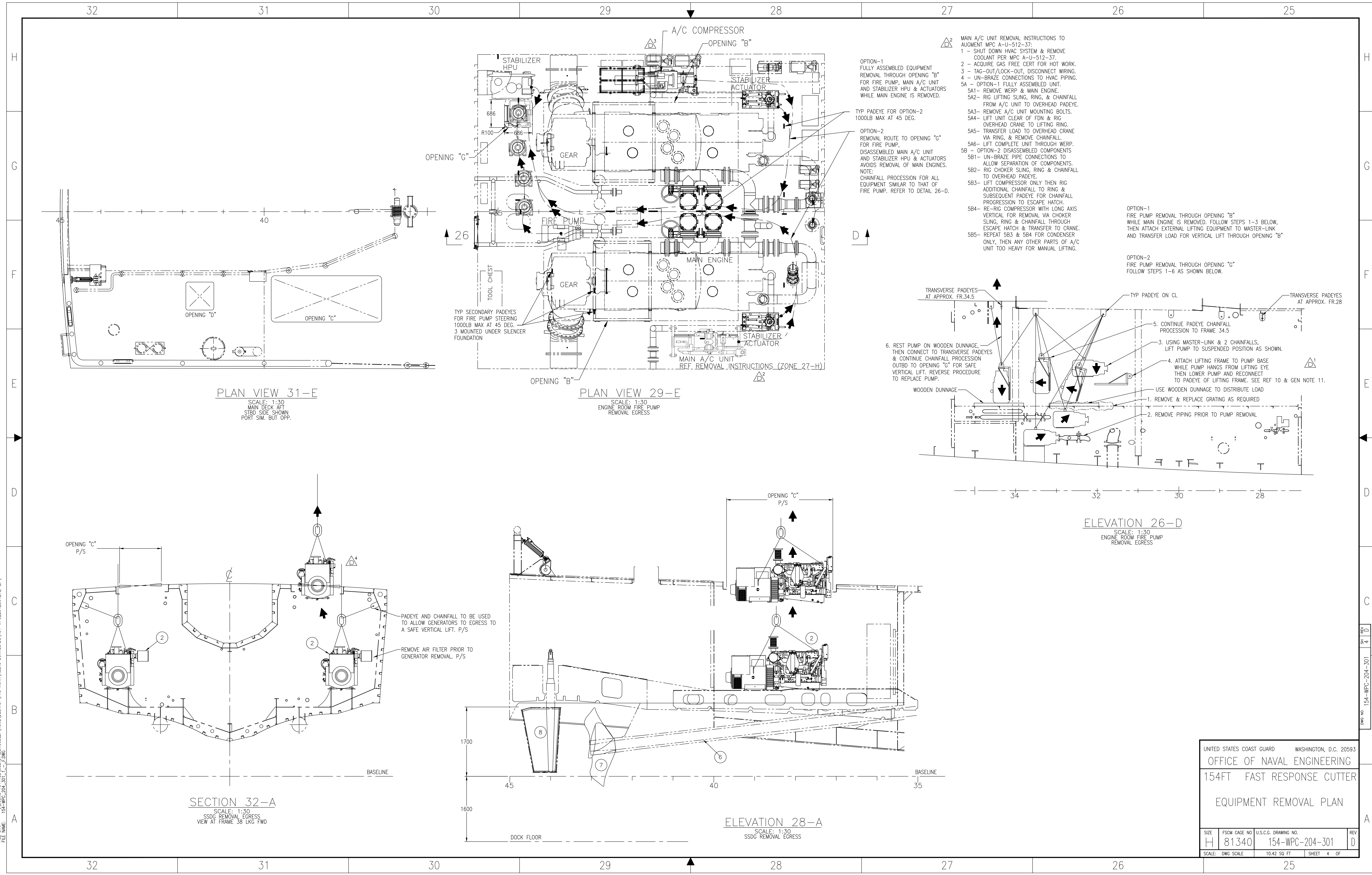


ELEVATION 20-A
SCALE: 1:30
MAIN ENGINE REMOVAL
STBD SHOWN
PORT SIMILAR

UNITED STATES COAST GUARD		WASHINGTON, D.C. 20593	
OFFICE OF NAVAL ENGINEERING			
154FT FAST RESPONSE CUTTER			
EQUIPMENT REMOVAL PLAN			
SIZE H	FSCM CAGE NO 81340	U.S.C.G. DRAWING NO. 154-WPC-204-301	REV D
SCALE: AS NOTED		10.42 SQ FT	SHEET 3 OF

PLOT DATE: November 13 2019
 PLOT TIME: 01:28:47 PM
 PLOT BY: BRUNO LEE
 FILE NAME: 154-WPC-204-301-FRMC

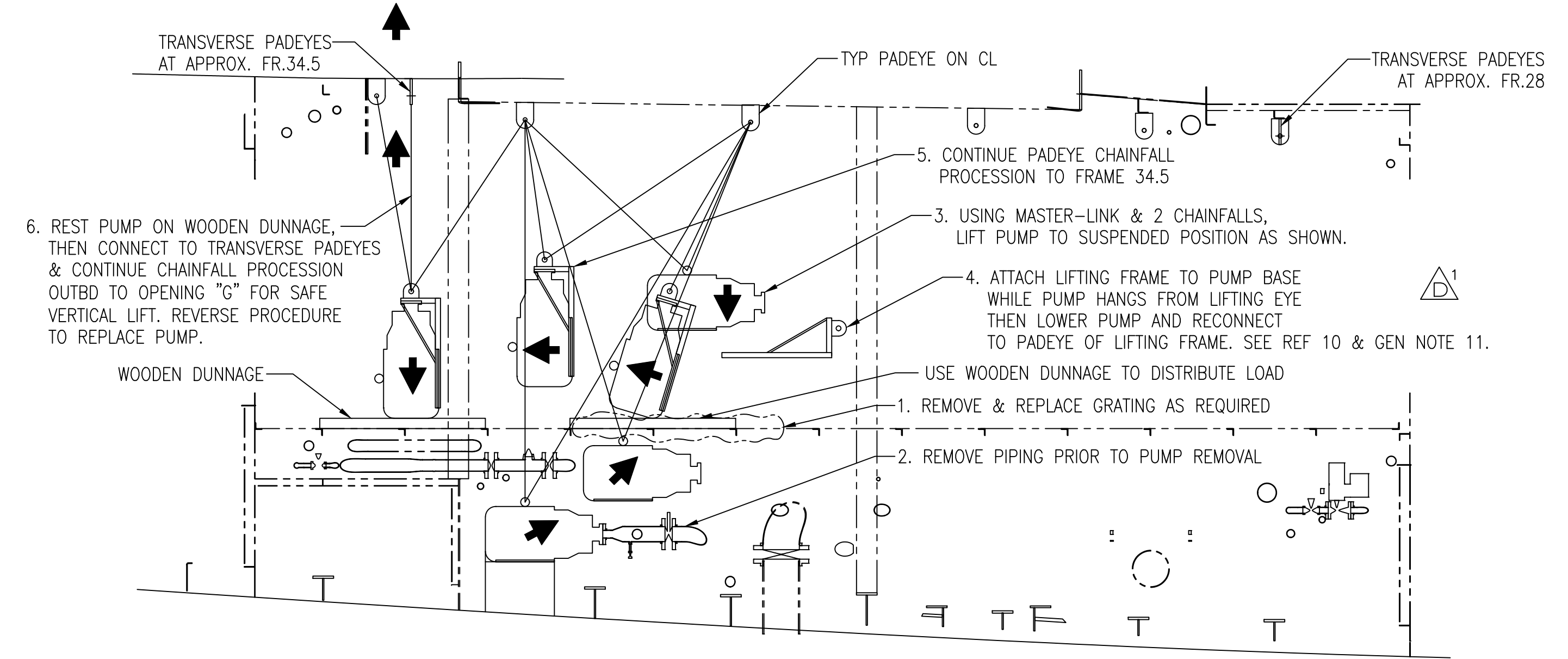
DMC NO 154-WPC-204-301 3 2H 18A



- OPTION-1
FULLY ASSEMBLED EQUIPMENT
REMOVAL THROUGH OPENING "B"
FOR FIRE PUMP, MAIN A/C UNIT
AND STABILIZER HPU & ACTUATORS
WHILE MAIN ENGINE IS REMOVED.
- OPTION-2
REMOVAL ROUTE TO OPENING "G"
FOR FIRE PUMP,
DISASSEMBLED MAIN A/C UNIT
AND STABILIZER HPU & ACTUATORS
AVOIDS REMOVAL OF MAIN ENGINES.
NOTE:
CHAINFALL PROCESSION FOR ALL
EQUIPMENT SIMILAR TO THAT OF
FIRE PUMP. REFER TO DETAIL 26-D.

- MAIN A/C UNIT REMOVAL INSTRUCTIONS TO
AUGMENT MPC A-U-512-37:
1 - SHUT DOWN HVAC SYSTEM & REMOVE
COOLANT PER MPC A-U-512-37.
2 - ACQUIRE GAS FREE CERT FOR HOT WORK.
3 - TAG-OUT/LOCK-OUT, DISCONNECT WIRING.
4 - UN-BRAZE CONNECTIONS TO HVAC PIPING.
5A - OPTION-1 FULLY ASSEMBLED UNIT
5A1 - REMOVE WERP & MAIN ENGINE.
5A2 - RIG LIFTING SLING, RING, & CHAINFALL
FROM A/C UNIT TO OVERHEAD PADEYE.
5A3 - REMOVE A/C UNIT MOUNTING BOLTS.
5A4 - LIFT UNIT CLEAR OF FDN & RIG
OVERHEAD CRANE TO LIFTING RING.
5A5 - TRANSFER LOAD TO OVERHEAD CRANE
VIA RING, & REMOVE CHAINFALL.
5A6 - LIFT COMPLETE UNIT THROUGH WERP.
5B - OPTION-2 DISASSEMBLED COMPONENTS
5B1 - UN-BRAZE PIPE CONNECTIONS TO
ALLOW SEPARATION OF COMPONENTS.
5B2 - RIG CHOKER SLING, RING & CHAINFALL
TO OVERHEAD PADEYE.
5B3 - LIFT COMPRESSOR ONLY THEN RIG
ADDITIONAL CHAINFALL TO RING &
SUBSEQUENT PADEYE FOR CHAINFALL
PROGRESSION TO ESCAPE HATCH.
5B4 - RE-RIG COMPRESSOR WITH LONG AXIS
VERTICAL FOR REMOVAL VIA CHOKER
SLING, RING & CHAINFALL THROUGH
ESCAPE HATCH & TRANSFER TO CRANE.
5B5 - REPEAT 5B3 & 5B4 FOR CONDENSER
ONLY, THEN ANY OTHER PARTS OF A/C
UNIT TOO HEAVY FOR MANUAL LIFTING.

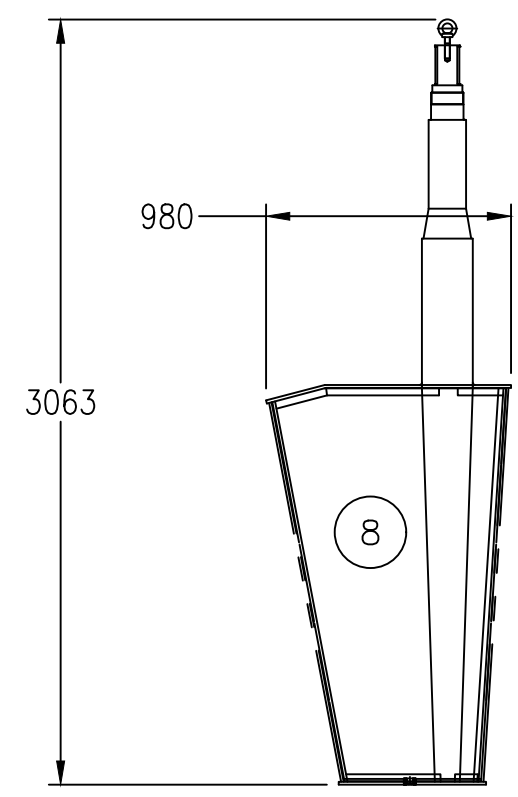
- OPTION-1
FIRE PUMP REMOVAL THROUGH OPENING "B"
WHILE MAIN ENGINE IS REMOVED. FOLLOW STEPS 1-3 BELOW,
THEN ATTACH EXTERNAL LIFTING EQUIPMENT TO MASTER-LINK
AND TRANSFER LOAD FOR VERTICAL LIFT THROUGH OPENING "B"
- OPTION-2
FIRE PUMP REMOVAL THROUGH OPENING "G"
FOLLOW STEPS 1-6 AS SHOWN BELOW.



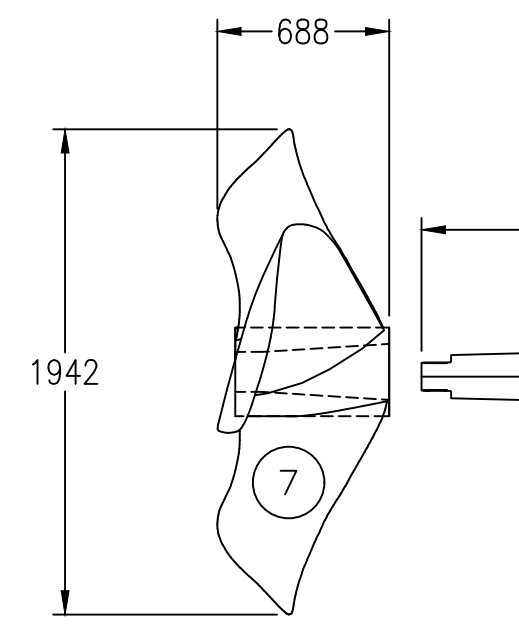
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 PLOT TIME: 01:28:53 PM
 PLOT BY: 890000LEJ
 FILE NAME: 154-WPC-204-201-FRMC

DWG NO: 154-WPC-204-301
 SHEET: 4 OF 4

UNITED STATES COAST GUARD		WASHINGTON, D.C. 20593	
OFFICE OF NAVAL ENGINEERING			
154FT FAST RESPONSE CUTTER			
EQUIPMENT REMOVAL PLAN			
SIZE	FSCM CAGE NO	U.S.C.G. DRAWING NO.	REV
H	81340	154-WPC-204-301	D
SCALE: DWG SCALE		10.42 SQ FT	SHEET 4 OF



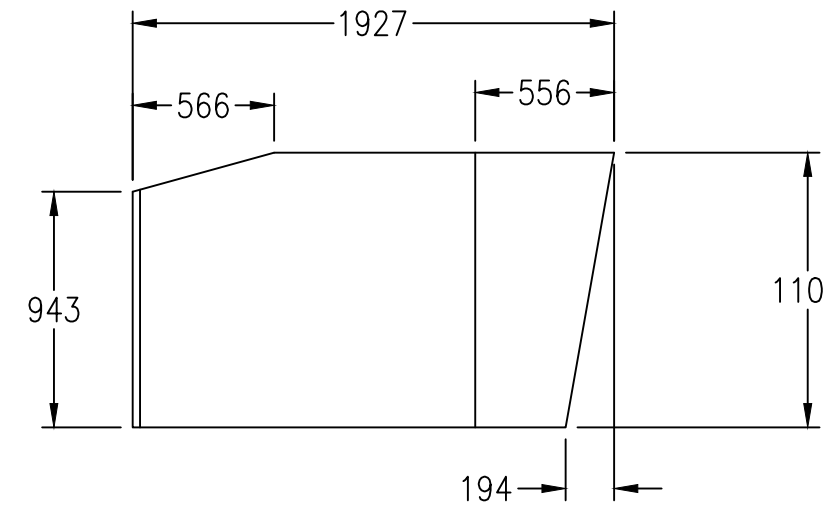
SECTION 40-G
SCALE: 1:30
RUDDER DIMENSIONS
2 LIKE



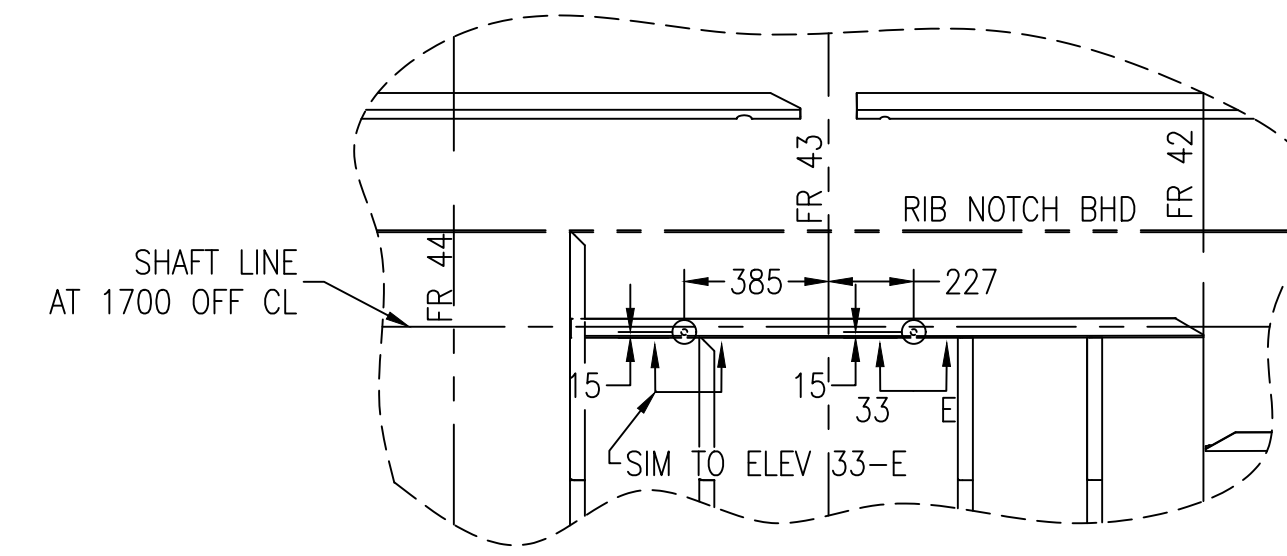
SECTION 39-G
SCALE: 1:30
PROP DIMENSIONS
2 LIKE

SECTION 38-G

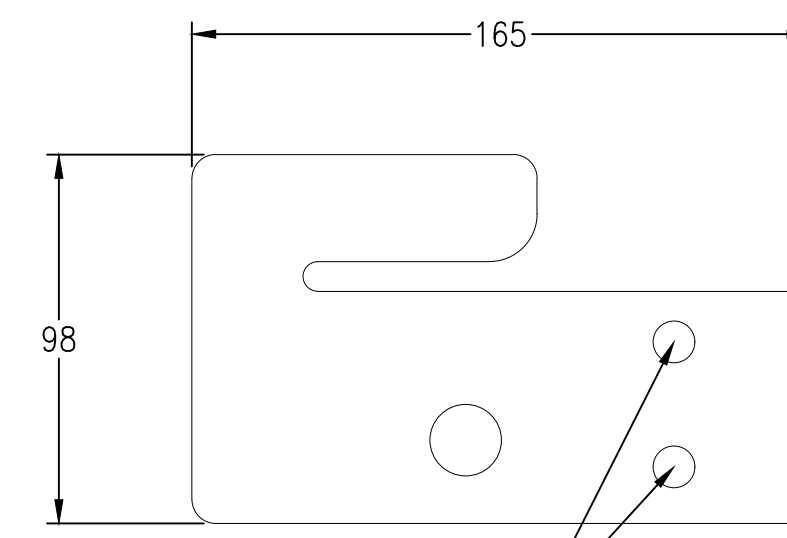
SCALE: 1:30
SHAFT LENGTH
2 LIKE



DETAIL 36-G
SCALE: 1:30
STABILIZER FIN DIMENSIONS

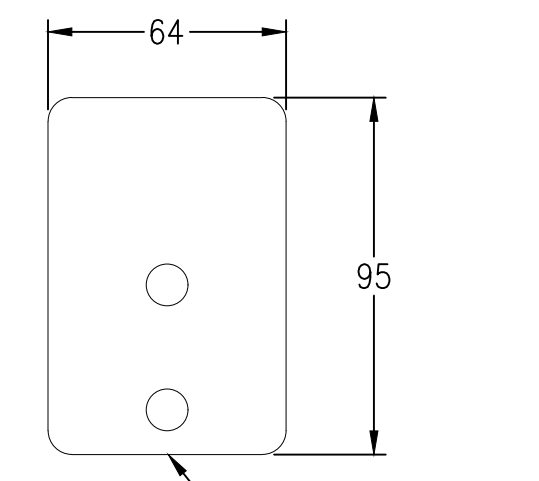


PLAN 36-F
SCALE: 1:20
PROPELLER REMOVAL EGRESS
STBD SIDE SHOWN, PORT SIDE SIM BUT OPP.

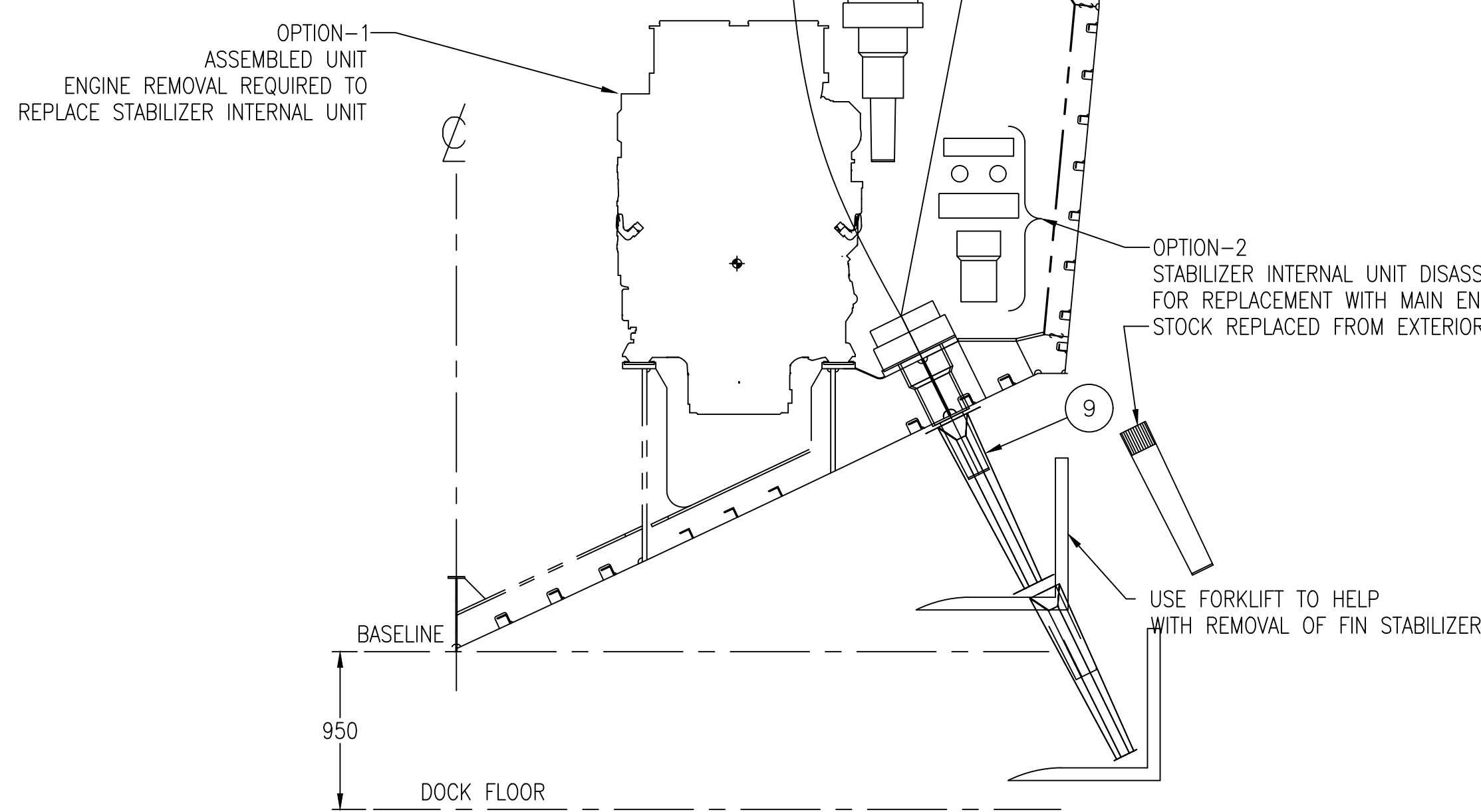


DETAIL 40-E

SCALE: 1:2
PORTABLE PADEYE

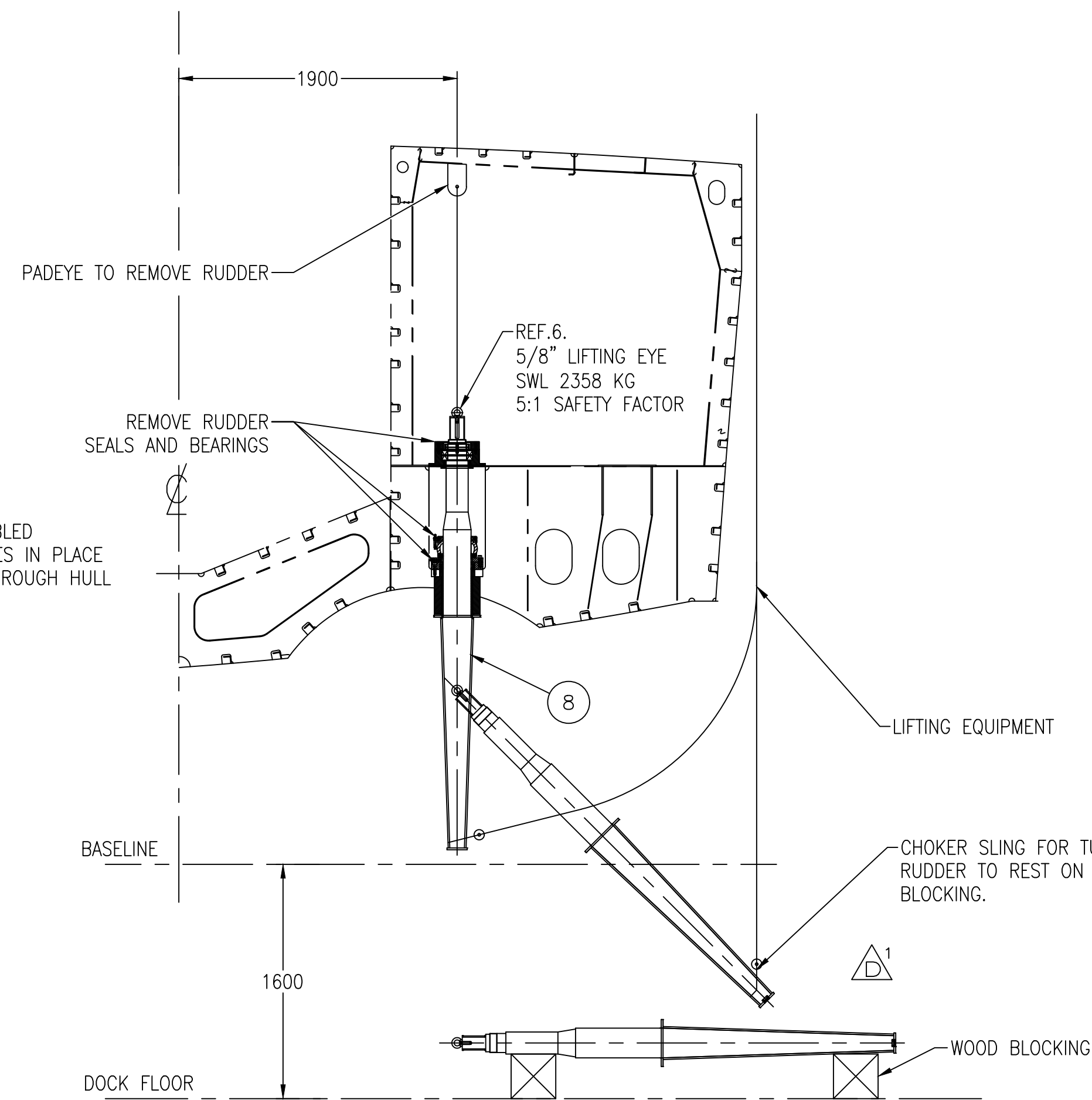


3/8" THK PLATE



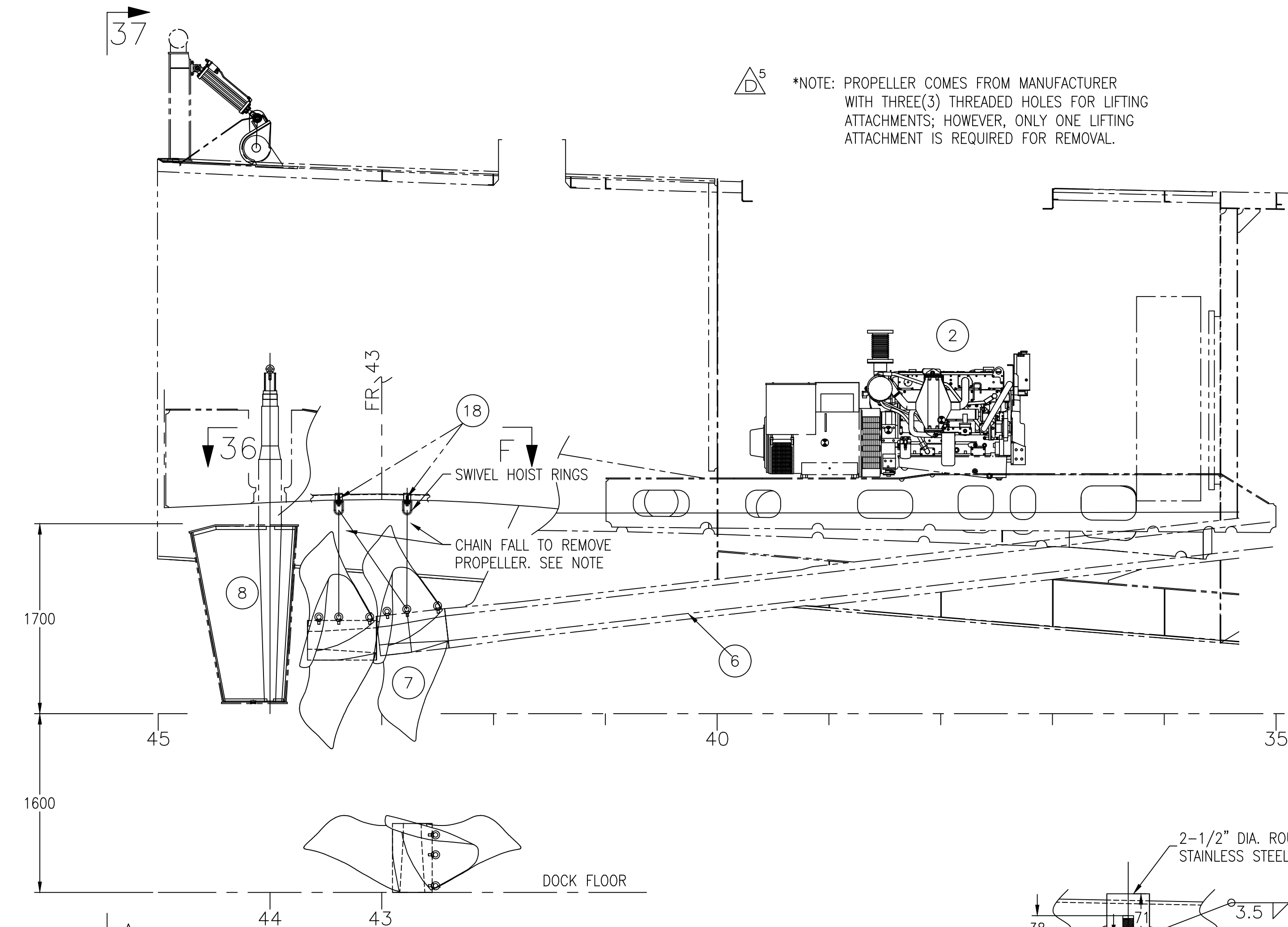
SECTION 39-A

SCALE: 1:30
VIEW AT FR 29 LRG FWD
STBD SHOWN PORT SIM
BUT OPPOSITE



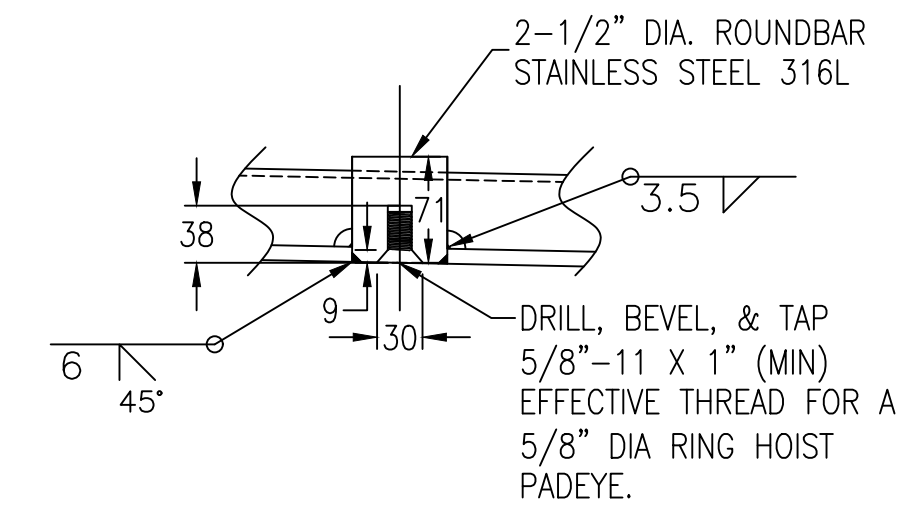
SECTION 37-A

SCALE: 1:30
VIEW AT FR 44 LRG FWD
STBD SHOWN PORT SIM
BUT OPPOSITE



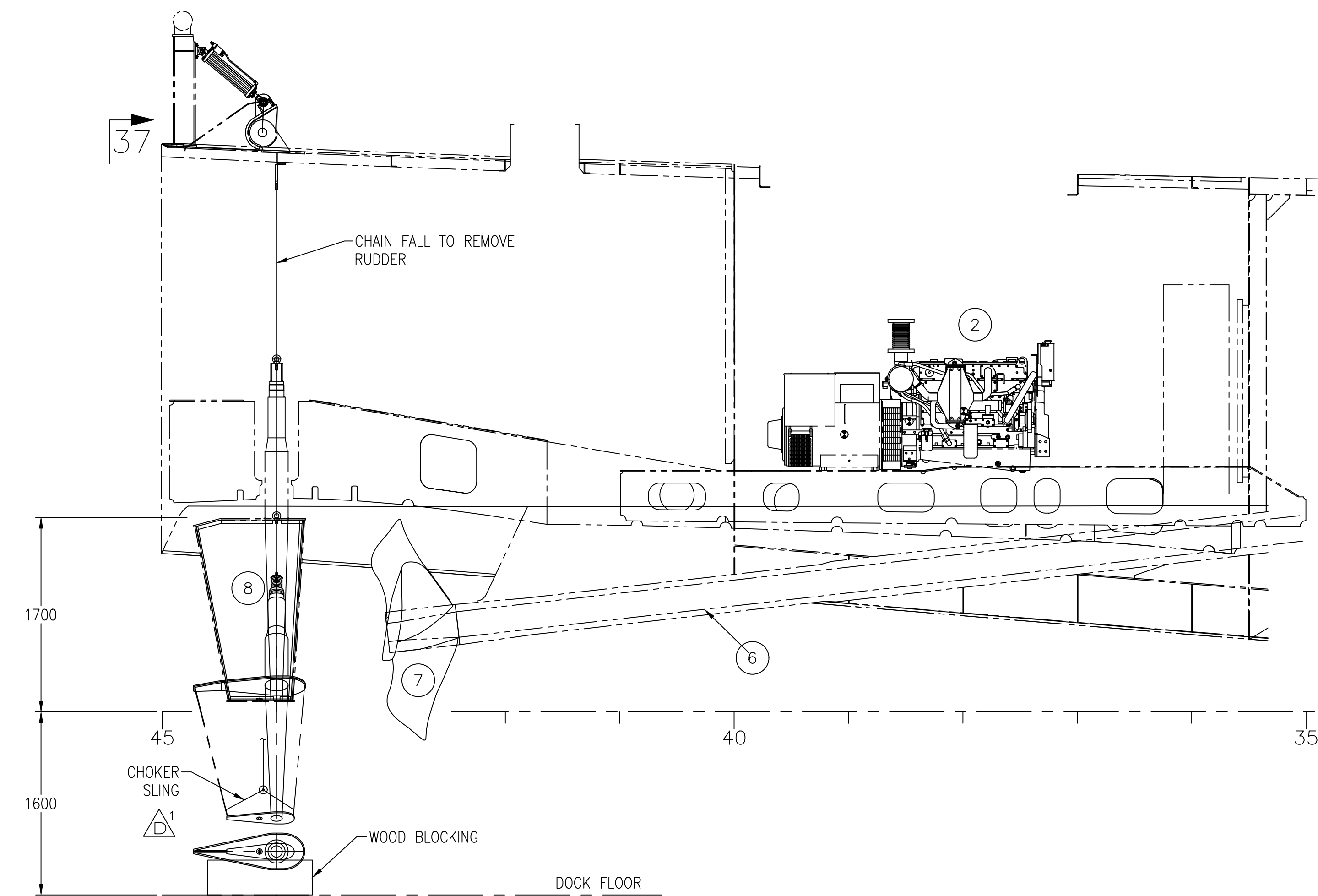
ELEVATION 34-E

SCALE: 1:30
PROPELLER REMOVAL EGRESS
STBD SIDE SHOWN, PORT SIDE SIM BUT OPP.



ELEVATION 33-E

SCALE: 1:5
THREADED INSERT
4 PER HULL

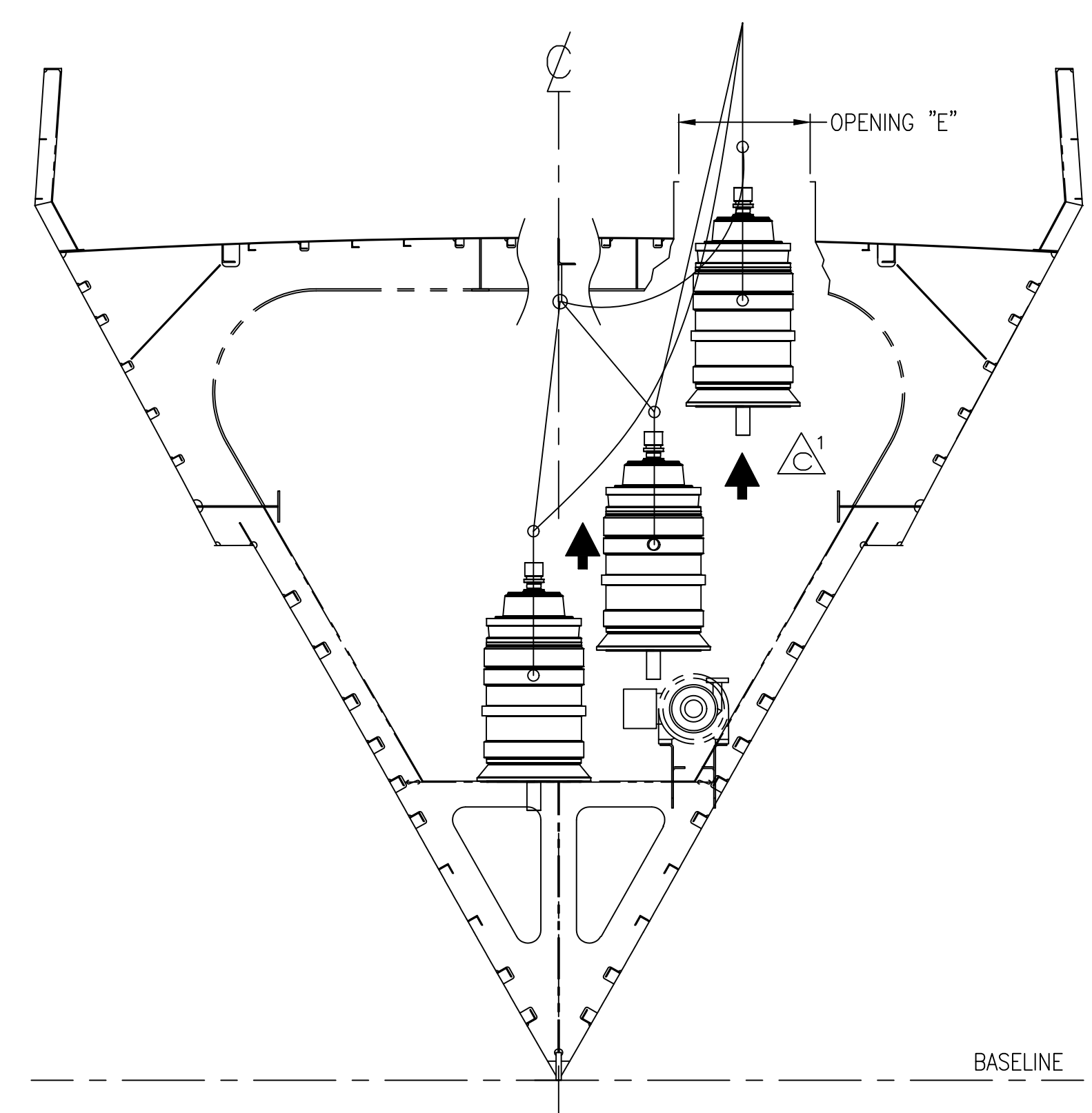


ELEVATION 35-A

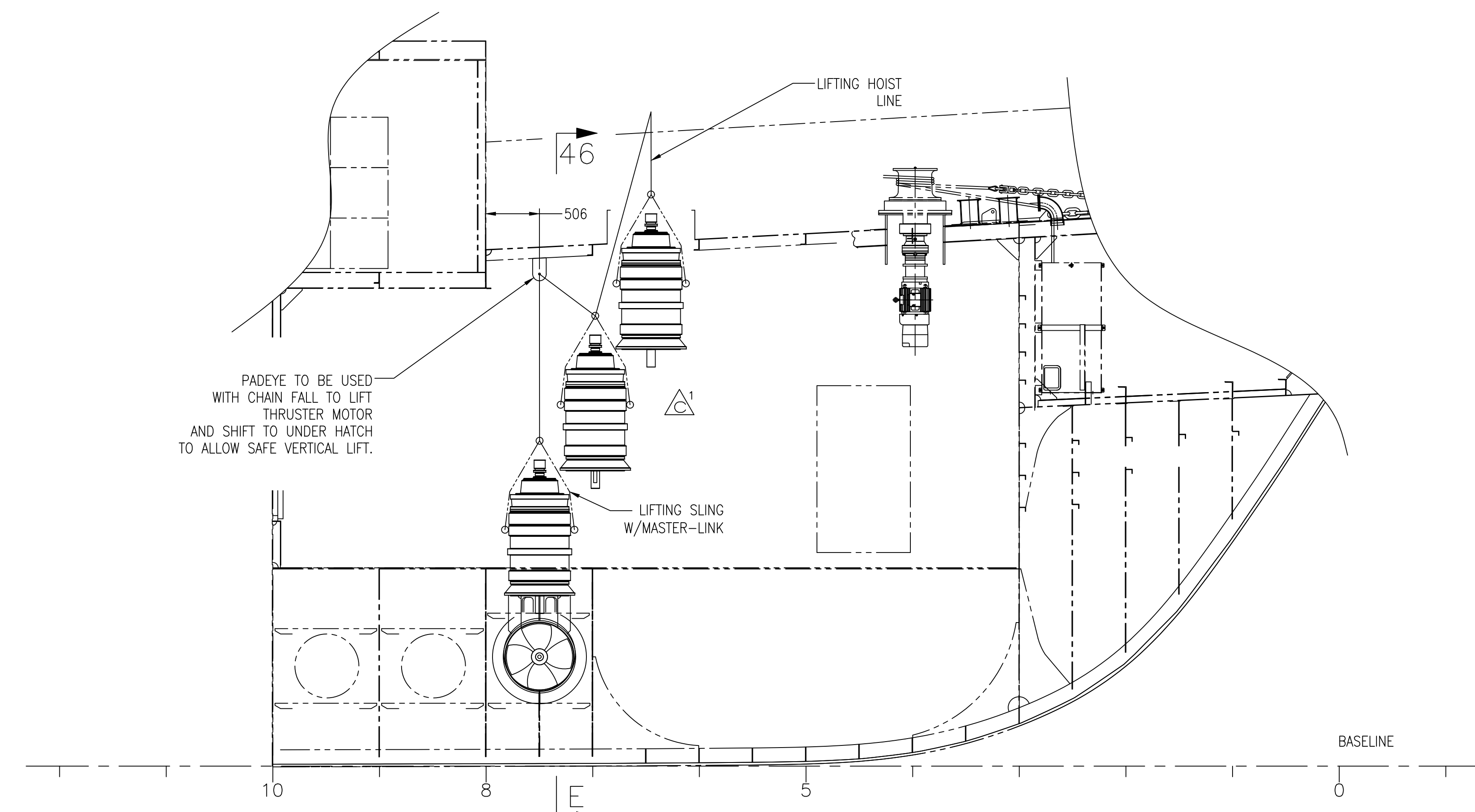
SCALE: 1:30
RUDDER REMOVAL EGRESS
STBD SHOWN LRG INBD
PORT OPPOSITE

*NOTE: PROPELLER COMES FROM MANUFACTURER WITH THREE(3) THREADED HOLES FOR LIFTING ATTACHMENTS; HOWEVER, ONLY ONE LIFTING ATTACHMENT IS REQUIRED FOR REMOVAL.

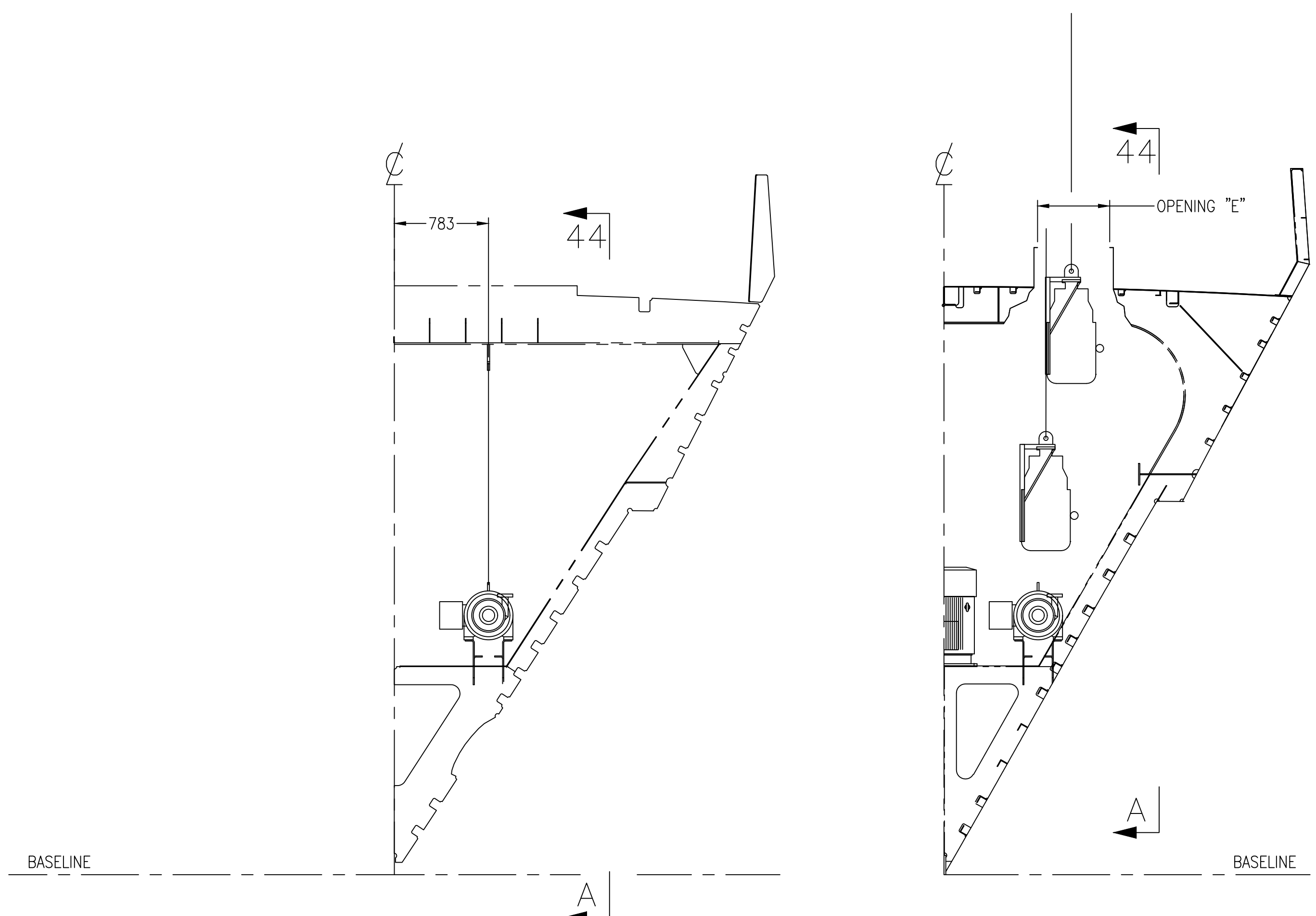
UNITED STATES COAST GUARD		WASHINGTON, D.C. 20593	
OFFICE OF NAVAL ENGINEERING			
154FT FAST RESPONSE CUTTER			
EQUIPMENT REMOVAL PLAN			
SIZE	FSCM CASE NO	U.S.C.G. DRAWING NO.	REV
H	81340	154-WPC-204-301	F
SCALE: DWG SCALE	10.42 SQ FT	SHEET	5 OF



SECTION 46-E
 SCALE: 1:30
 VIEW AT FR 7 LKG FWD

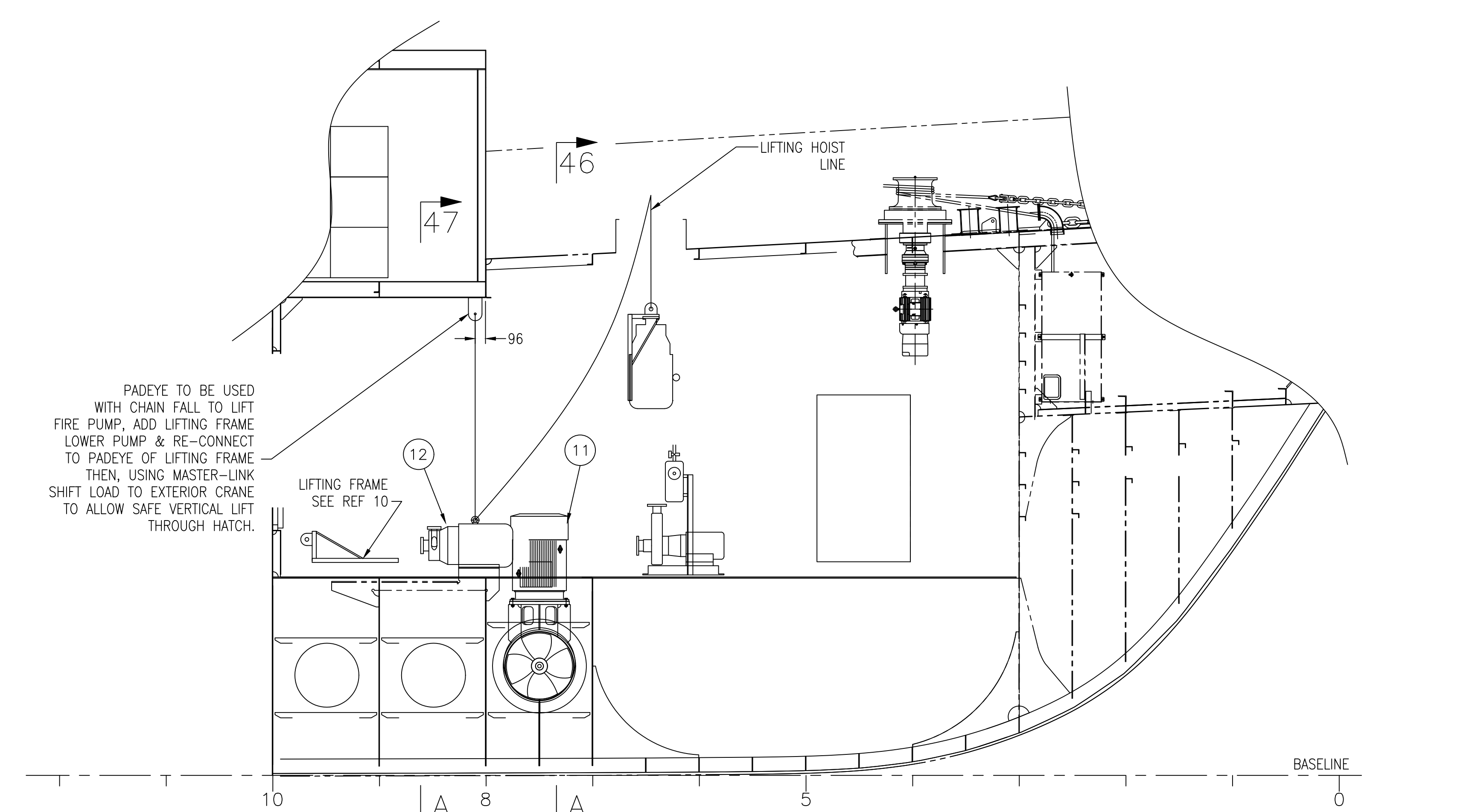


ELEVATION 44-E
 SCALE: 1:30
 VIEW STBD LKG TO PORT
 FWD MACHINERY SPACE
 THRUSTER MOTOR REMOVAL EGRESS



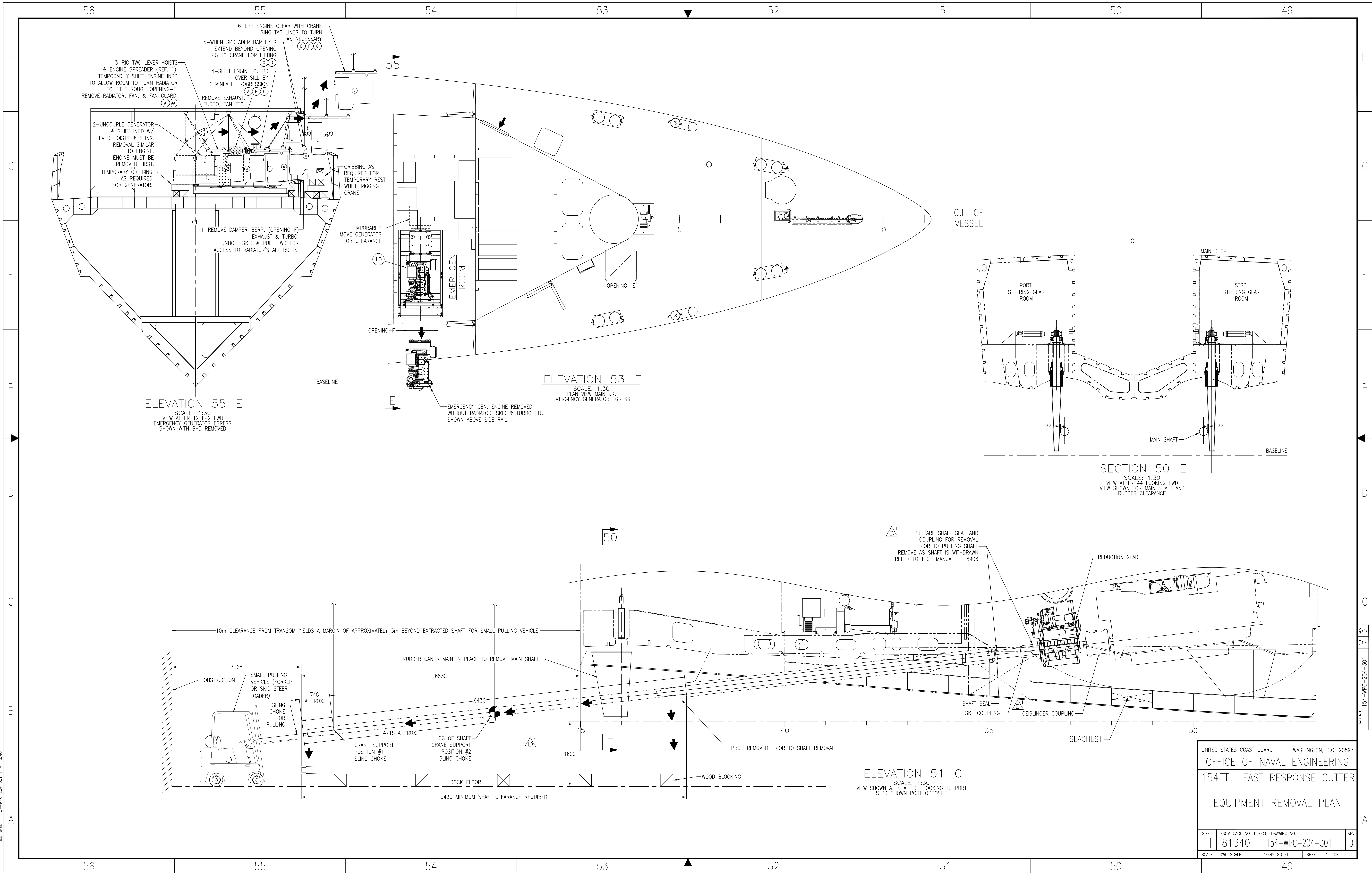
SECTION 47-A
 SCALE: 1:30
 VIEW AT FR 8 LKG FWD
 LIFTING PADEYE LOCATION

SECTION 46-A
 SCALE: 1:30
 VIEW AT FR 7 LKG FWD

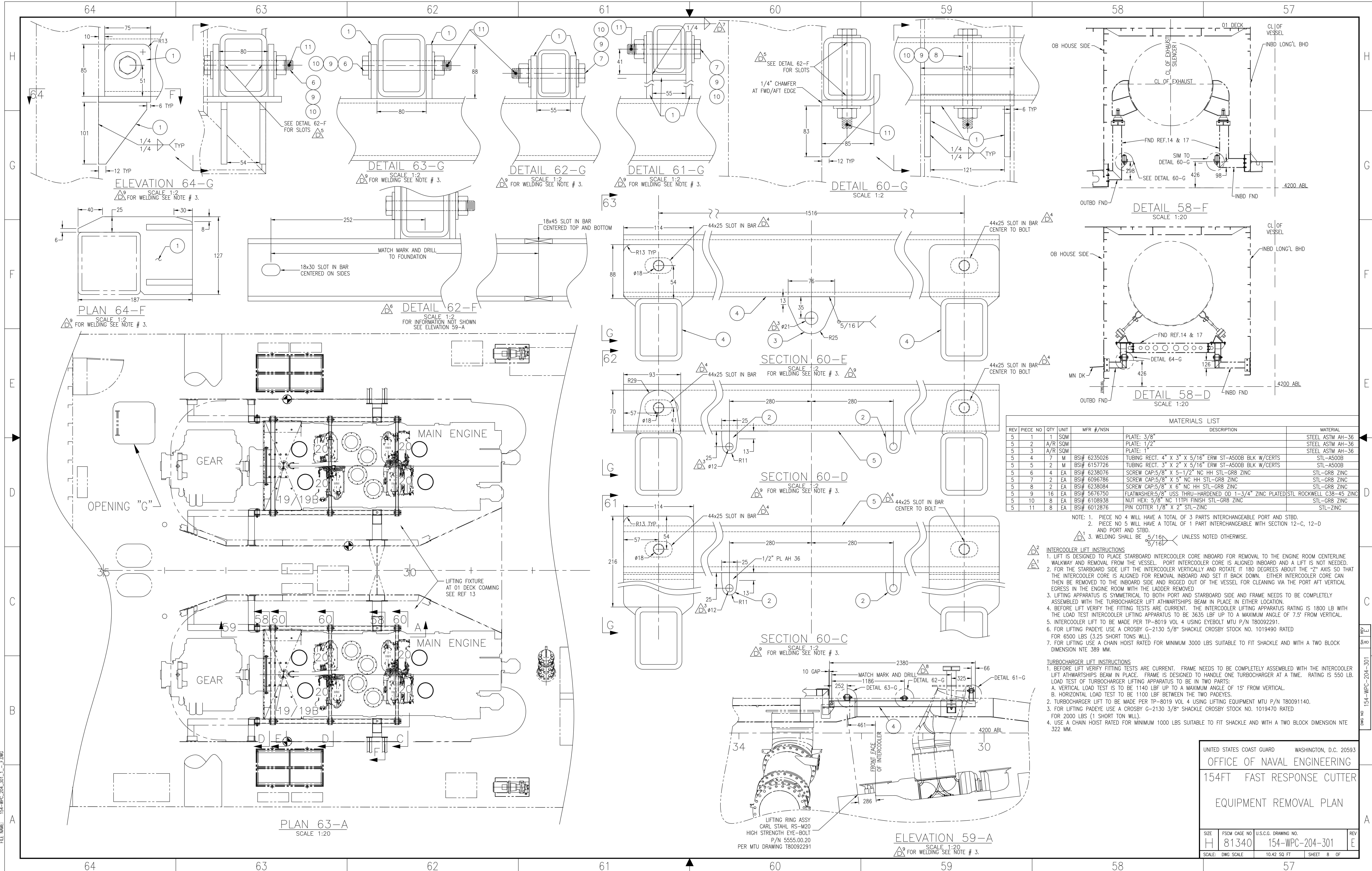


ELEVATION 44-A
 SCALE: 1:30
 VIEW STBD LKG TO PORT
 FWD MACHINERY SPACE
 FIRE PUMP REMOVAL EGRESS

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154FT FAST RESPONSE CUTTER			
EQUIPMENT REMOVAL PLAN			
SIZE	FSCM CAGE NO	U.S.C.G. DRAWING NO.	REV
H	81340	154-WPC-204-301	C
SCALE: DMC SCALE		10.42 SQ FT	SHEET 6 OF



UNITED STATES COAST GUARD		WASHINGTON, D.C. 20593	
OFFICE OF NAVAL ENGINEERING			
154FT FAST RESPONSE CUTTER			
EQUIPMENT REMOVAL PLAN			
SIZE	FSCM CAGE NO	U.S.C.G. DRAWING NO.	REV
H	81340	154-WPC-204-301	D
SCALE: DWG SCALE		10.42 SQ FT	SHEET 7 OF



MATERIALS LIST				DESCRIPTION	MATERIAL
REV	PIECE NO	QTY	UNIT	MFR #/NSN	
5	1	1	SOM		PLATE: 3/8"
5	2	A/R	SOM		PLATE: 1/2"
5	3	A/R	SOM		PLATE: 1"
5	4	7	M	BS# 6235026	TUBING RECT. 4" X 3" X 5/16" ERW ST-A500B BLK W/CERTS
5	5	2	M	BS# 6157226	TUBING RECT. 3" X 2" X 5/16" ERW ST-A500B BLK W/CERTS
5	6	4	EA	BS# 6238076	SCREW CAP-5/8" X 5-1/2" NC HH STL-GR8 ZINC
5	7	2	EA	BS# 6096786	SCREW CAP-5/8" X 5" NC HH STL-GR8 ZINC
5	8	2	EA	BS# 6238084	SCREW CAP-5/8" X 6" NC HH STL-GR8 ZINC
5	9	16	EA	BS# 5676750	FLATWASHER-5/8" USS THRU-HARDENED OD 1-3/4" ZINC PLATED
5	10	8	EA	BS# 6108938	NUT HEX: 5/8" NC 11TP1 FINISH STL-GR8 ZINC
5	11	8	EA	BS# 6012876	PIN COTTER 1/8" X 2" STL-ZINC

NOTE: 1. PIECE NO 4 WILL HAVE A TOTAL OF 3 PARTS INTERCHANGEABLE PORT AND STBD.
 2. PIECE NO 5 WILL HAVE A TOTAL OF 1 PART INTERCHANGEABLE WITH SECTION 12-C, 12-D AND PORT AND STBD.
 3. WELDING SHALL BE 5/16" UNLESS NOTED OTHERWISE.

INTERCOOLER LIFT INSTRUCTIONS
 1. LIFT IS DESIGNED TO PLACE STARBOARD INTERCOOLER CORE INBOARD FOR REMOVAL TO THE ENGINE ROOM CENTERLINE WALKWAY AND REMOVAL FROM THE VESSEL. PORT INTERCOOLER CORE IS ALIGNED INBOARD AND A LIFT IS NOT NEEDED.
 2. FOR THE STARBOARD SIDE LIFT THE INTERCOOLER VERTICALLY AND ROTATE IT 180 DEGREES ABOUT THE "Z" AXIS SO THAT THE INTERCOOLER CORE IS ALIGNED FOR REMOVAL INBOARD AND SET IT BACK DOWN. EITHER INTERCOOLER CORE CAN THEN BE REMOVED TO THE INBOARD SIDE AND RIGGED OUT OF THE VESSEL FOR CLEANING VIA THE PORT AFT VERTICAL EGRESS IN THE ENGINE ROOM WITH THE LADDER REMOVED.
 3. LIFTING APPARATUS IS SYMMETRICAL TO BOTH PORT AND STARBOARD SIDE AND FRAME NEEDS TO BE COMPLETELY ASSEMBLED WITH THE TURBOCHARGER LIFT ATHWARTSHIPS BEAM IN PLACE IN EITHER LOCATION.
 4. BEFORE LIFT VERIFY THE FITTING TESTS ARE CURRENT. THE INTERCOOLER LIFTING APPARATUS RATING IS 1800 LB WITH THE LOAD TEST INTERCOOLER LIFTING APPARATUS TO BE 3635 LBF UP TO A MAXIMUM ANGLE OF 7.5° FROM VERTICAL.
 5. INTERCOOLER LIFT TO BE MADE PER TP-8019 VOL 4 USING EYEBOLT MTU P/N T80092291.
 6. FOR LIFTING PADYEY USE A CROSBY G-2130 5/8" SHACKLE CROSBY STOCK NO. 1019490 RATED FOR 6500 LBS (3.25 SHORT TONS WLL).
 7. FOR LIFTING USE A CHAIN HOIST RATED FOR MINIMUM 3000 LBS SUITABLE TO FIT SHACKLE AND WITH A TWO BLOCK DIMENSION NTE 389 MM.

TURBOCHARGER LIFT INSTRUCTIONS
 1. BEFORE LIFT VERIFY FITTING TESTS ARE CURRENT. FRAME NEEDS TO BE COMPLETELY ASSEMBLED WITH THE INTERCOOLER LIFT ATHWARTSHIPS BEAM IN PLACE. FRAME IS DESIGNED TO HANDLE ONE TURBOCHARGER AT A TIME. RATING IS 550 LB.
 LOAD TEST OF TURBOCHARGER LIFTING APPARATUS TO BE IN TWO PARTS:
 A. VERTICAL LOAD TEST IS TO BE 1140 LBF UP TO A MAXIMUM ANGLE OF 15° FROM VERTICAL.
 B. HORIZONTAL LOAD TEST TO BE 1100 LBF BETWEEN THE TWO PADYEYS.
 2. TURBOCHARGER LIFT TO BE MADE PER TP-8019 VOL 4 USING LIFTING EQUIPMENT MTU P/N T80091140.
 3. FOR LIFTING PADYEY USE A CROSBY G-2130 3/8" SHACKLE CROSBY STOCK NO. 1019470 RATED FOR 2000 LBS (1 SHORT TON WLL).
 4. USE A CHAIN HOIST RATED FOR MINIMUM 1000 LBS SUITABLE TO FIT SHACKLE AND WITH A TWO BLOCK DIMENSION NTE 322 MM.

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 OFFICE OF NAVAL ENGINEERING
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SIZE	FSCM CASE NO	U.S.C.G. DRAWING NO.	REV
H	81340	154-WPC-204-301	E
SCALE: DWG SCALE		10.42 SQ FT	SHEET 8 OF

DATE: November 13 2019
 PLOT TIME: 01:02:02 PM
 PLOT BY: 680005LE
 PLOT ID: 154-WPC-204-301-1-F1
 FILE NAME: 154-WPC-204-301-F1.DWG