

GENERAL NOTES:

1. THE VESSEL SHALL BE CLASSIFIED UNDER ABS MALTESE CROSS A1, CIRCLE E, UNRESTRICTED SERVICE AND ICE CLASS CO.
2. ALL MATERIAL SHALL BE ORDINARY STRENGTH STEEL, GRADE A, UNLESS OTHERWISE NOTED.
3. WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE "NOAA STATEMENT OF REQUIREMENTS" AND ACCEPTABLE COMMERCIAL MARINE QUALITY.
4. ALL WELDING SHALL BE IN ACCORDANCE WITH REFERENCE NO. 6
5. COPES, SNIPES AND DRAINS SHALL BE IN ACCORDANCE WITH HMI STANDARDS, REFERENCE NO. 5.
6. ANCHOR CHAIN SHALL BE GRADE 3.
7. ANCHOR CHAIN TO BE PAINTED AND MARKED AS FOLLOWS.
 - A. ONE LINK EACH SIDE OF THE 15 FATHOM DETACHABLE LINK TO BE PAINTED WHITE.
 - B. TWO LINKS EACH SIDE OF THE 30 FATHOM DETACHABLE LINK TO BE PAINTED WHITE.
 - C. THREE LINKS EACH SIDE OF THE 45 FATHOM DETACHABLE LINK TO BE PAINTED WHITE.
 MARKING MUST CONTINUE IN THIS FASHION UNTIL THE BITTER END.
 - D. 15 FATHOM DETACHABLE LINK TO BE PAINTED RED.
 - E. 30 FATHOM DETACHABLE LINK TO BE PAINTED WHITE.
 - F. 45 FATHOM DETACHABLE LINK TO BE PAINTED BLUE.
 - G. 60 FATHOM DETACHABLE LINK TO BE PAINTED RED.
 SUBSEQUENT DETACHABLE LINKS MUST BE PAINTED IN COLORS THAT CONTINUE THIS COLOR SEQUENCE.
8. THE FIRST LINK AT EACH SIDE OF THE 15 FATHOM DETACHABLE LINK MUST HAVE 1 TURN OF GALVANIZED WIRE TIGHTLY WOUND AROUND THE STUD. THE SECOND LINK AT EACH SIDE 30 FATHOM DETACHABLE LINK MUST HAVE 2 TURNS OF GALVANIZED WIRE TIGHTLY WOUND AROUND THE STUD. THE THIRD LINK AT EACH SIDE OF THE 45 FATHOM DETACHABLE LINK MUST HAVE 3 TURNS OF GALVANIZED WIRE TIGHTLY WOUND AROUND THE STUD. WIRE MARKING MUST CONTINUE IN THIS FASHION TO THE BITTER END OF THE CHAIN.
9. PLATES AND SHAPES ARE IN IMPERIAL UNITS. DIMENSIONS ARE IN METRIC UNITS.
10. ABS EQUIPMENT No. IS 660.
11. ANCHOR CHAIN SHALL BE SECURED WITH THE CHAIN STOPPERS MOUNTED INTEGRALLY TO THE WINDLASS FRAME.

MATERIAL LIST

ITEM	DESCRIPTION	MATERIAL	SPEC.	UNIT	QTY	REMARKS
1	16" SCH 80 PIPE	STEEL	ABS GRADE A	LF	20	(FOR ANCHOR BOLSTER ONLY)
2	1/2" PLATE	STEEL	ABS GRADE A	SF	12	(FOR ANCHOR BOLSTER ONLY)
3	3/4" PLATE	STEEL	ABS GRADE A	SF	18	(FOR ANCHOR BOLSTER ONLY)
4						

REVISIONS

REV	ZONE	DESCRIPTION	DATE	APPROVED
1	5-A	1. SHT 1, REFERENCES: REVISED REFERENCE 7 TO REFLECT CHANGE IN ANCHOR WINDLASS VENDOR FROM AMCLYDE TO MCELROY AND CHANGED DRAWING NUMBER TO SUIT.	1/29/04 AGE	1/30/04 AGE
	15-C	2. SHT 2, PLAN 15-C: REVISED ANCHOR WINDLASS FOUNDATION FOOTPRINT TO SUIT NEW MCELROY WINDLASS.		
	VAR	3. SHT 2, SECT. 13-A & C, ELEV. 15-A: DELETED EXISTING ANCHOR WINDLASS AND ADDED NEW ANCHOR WINDLASS; REVISED FOUNDATION TO SUIT NEW WINDLASS FOOTPRINT. REVISED REF LOCATION DIM FROM 406 TO 420 FROM FRONT OF FDN TO DRUM CL.		
	9-A	4. SHT. 2, DET. 9-A: IDENTIFIED PEAR-SHAPED JOINING LINK AT TOP OF CHAIN ASSY, AND ADDED SWIVEL AND PEAR-SHAPED JOINING LINK AT BOTTOM OF CHAIN ASSY. ADDITIONS IS TO MATCH WHAT WAS PURCHASED. ITEM 1 - 3 PER REWORK #741-0005 ITEM 4 PER ENGINEERING DEVELOPMENT		
2		1. EXTENDED HULL APPLICABILITY TO INCLUDE HULL 1956. ITEM 1 PER ENGINEERING DEVELOPMENT.	4/18/05 AGE	4/20/05 FH
3		1. EXTENDED HULL APPLICABILITY TO INCLUDE HULL 1957. 2. THIS REVISION REFLECTS AS-BUILT CONDITIONS FOR HULL 1953. ITEM 1 & 2 PER ENGINEERING DEVELOPMENT.	8/14/06 MDP	8/31/06 SM
4		1. SHT 2, PLAN 15-C: ADDED DEVILS CLAW FWD OF ANCHOR WINDLASS. 2. SHT 2, DETAIL 10-A: ADDED DEVILS CLAW DETAILS. 3. SHT 2, DETAIL 11-B: ADDED DETAIL FOR DEVIL CALW PLATE. ITEM 1 THRU 3 PER YARD ENGINEERING CHANGE THIS REVISION APPLICABLE TO M283 & M284 ONLY	8/14/06 MDP	

AS-BUILT

DOCUMENT DISTRIBUTION RECORD											
DATE IN ROOM	9/8/03	9/5/03	2/3/04	1/30/04	4/20/05	8/31/06	1/4/06				
ISSUE DATE											
REV#	0	1	2	3	4						
PROJECT ENG	1	1	1								
PROJECT MGR	1	1	1								
ABS	10										
USPH											
USCG											
HMP PC	12	12	12	1	1						
PROD DESIGN GROUP	1(3)	1(3)									
HULL MGR											
HULL LEAD	(1)	(1)	(1)	1	1						
HVAC											
JOINER											
HPG PC	3	3	3	1	1						
NOISE CONT											
CHAND LLC	1	1									
ISSUED BY	AE	AE	AE	SM							

NO.	TITLE	DRAWING NUMBER
8	MISCELLANEOUS FOUNDATION BOOKLET	M282-180-FH43
7	36mm WINDLASS - GENERAL ARRANGEMENT	MCDW-36MM-40EB
6	WELDING BOOKLET	M282-504-FH90
5	TYPICAL STRUCTURAL DETAILS	M282-100-FH67
4	HULL MID BODY SCANTLINGS	M282-110-FH03
3	HULL FOREBODY SCANTLING, STEM - FR 19	M282-110-FH02
2	SCANTLING CALCULATIONS	M282-110-FC26
1	GENERAL ARRANGEMENT	M282-101-FA02

HULL APPLICABILITY	
M282 HULL 1953	2 ¹
M283 HULL 1956	3 ¹
M284 HULL 1957	

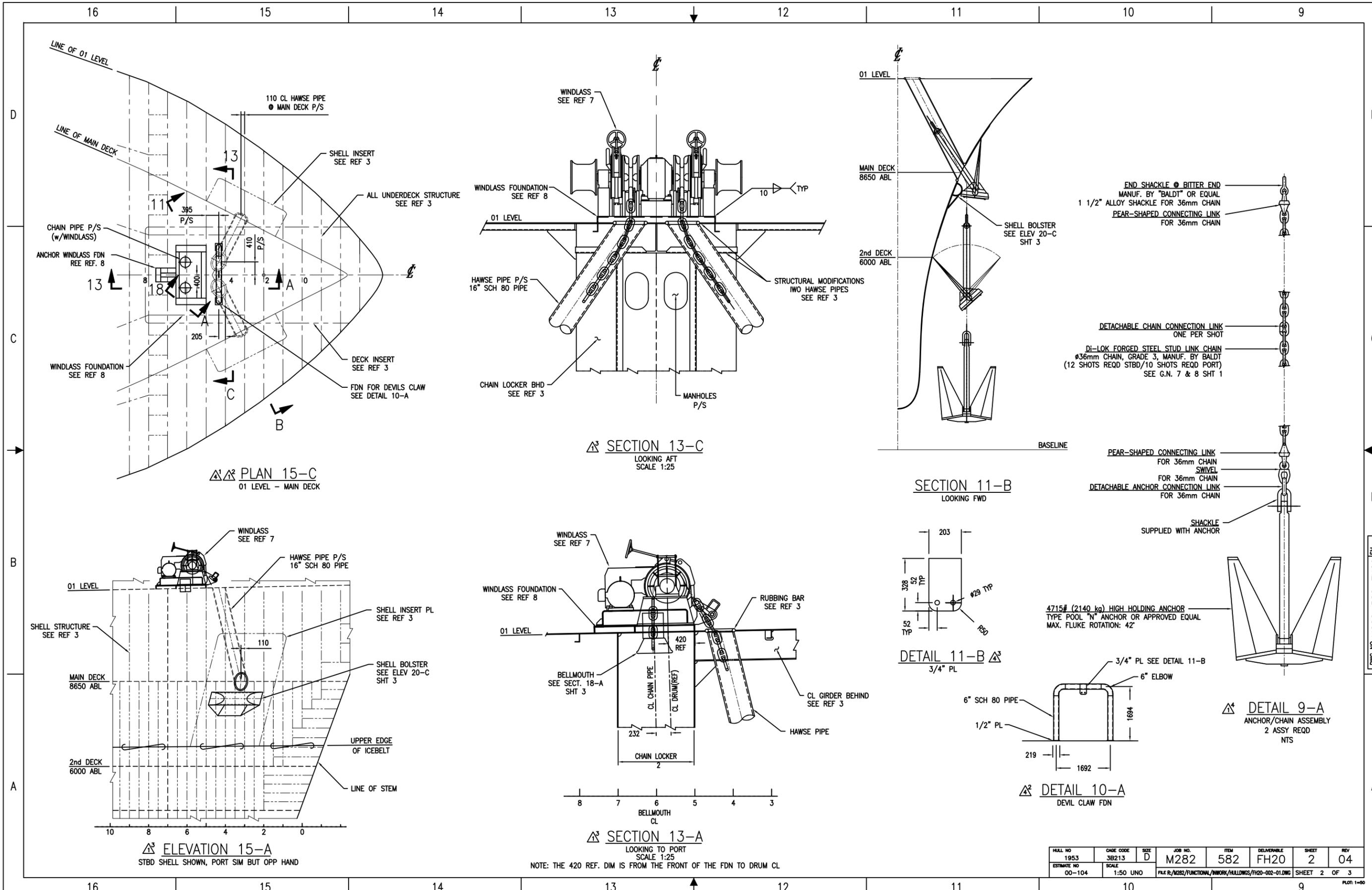
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VT Halter Marine, Inc.		Vision Technologies Systems	
DRAWN BY	RW 8/25/03	ABS APPV	
CHECKED BY	AE 8/27/03	USCG APPV	
APPROVED BY	JCO 8/27/03	OWNER APPV	
HULL NO	3B213	SCALE	D
ESTIMATE NO	00-104	SCALE	NONE

VESSEL		FRV40 CLASS 63m FISHERIES RESEARCH VESSEL	
TITLE		ANCHOR STORAGE AND HANDLING LAYOUT AND DETAILS	
JOB NO.	ITEM	DELIVERABLE	SHEET
M282	582	FH20	001
REV			04
FILE R:\M282\FUNCTIONALDESIGN\INWORK\HULLDWS		SHEET 1 OF 3	

SH	DESCRIPTION
3	WINDLASS FDN/BOLSTER/BELLMOUTH/BITTER END
2	ANCHOR HANDLING KEY PLAN & DETAILS
1	TITLE, GENERAL NOTES, RESERVATIONS

DWS NO. M282-582-FH20 SH 1



PLAN 15-C
01 LEVEL - MAIN DECK

SECTION 13-C
LOOKING AFT
SCALE 1:25

SECTION 11-B
LOOKING FWD

ELEVATION 15-A
STBD SHELL SHOWN, PORT SIM BUT OPP HAND

SECTION 13-A
LOOKING TO PORT
SCALE 1:25

DETAIL 11-B
3/4" PL

DETAIL 10-A
DEVIL CLAW FDN

DETAIL 9-A
ANCHOR/CHAIN ASSEMBLY
2 ASSY REQD
NTS

END SHACKLE @ BITTER END
MANUF. BY "BALDT" OR EQUAL
1 1/2" ALLOY SHACKLE FOR 36mm CHAIN
PEAR-SHAPED CONNECTING LINK
FOR 36mm CHAIN

DETACHABLE CHAIN CONNECTION LINK
ONE PER SHOT

DI-LOK FORGED STEEL STUD LINK CHAIN
#36mm CHAIN, GRADE 3, MANUF. BY BALDT
(12 SHOTS REQD STBD/10 SHOTS REQD PORT)
SEE G.N. 7 & 8 SHT 1

PEAR-SHAPED CONNECTING LINK
FOR 36mm CHAIN
SWIVEL
FOR 36mm CHAIN
DETACHABLE ANCHOR CONNECTION LINK
FOR 36mm CHAIN

SHACKLE
SUPPLIED WITH ANCHOR

4715# (2140 kg) HIGH HOLDING ANCHOR
TYPE POOL "N" ANCHOR OR APPROVED EQUAL
MAX. FLUKE ROTATION: 42°

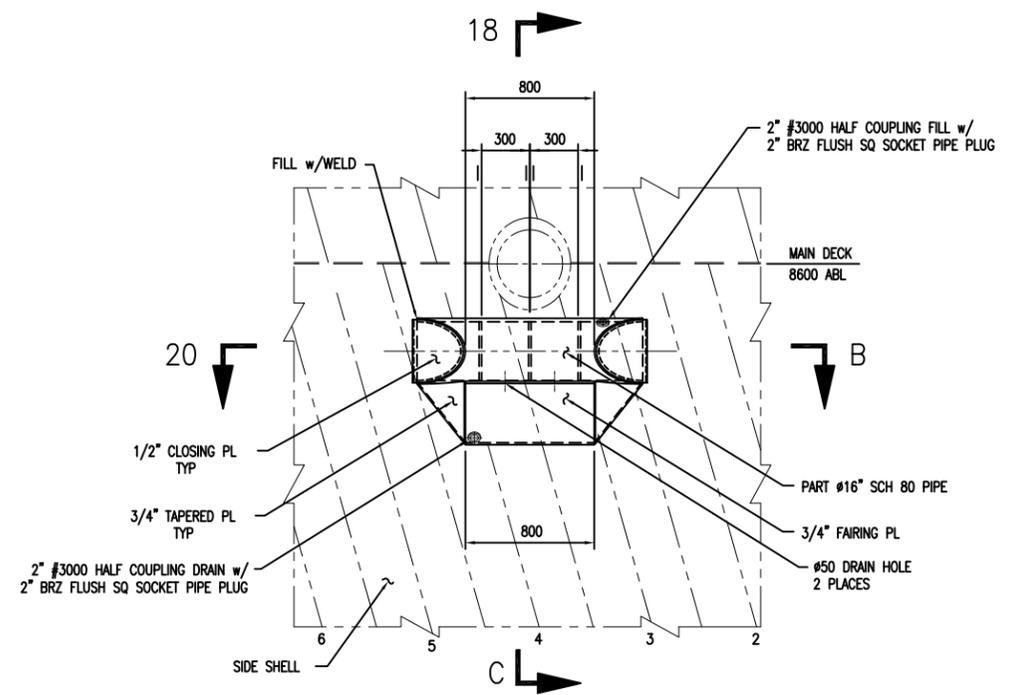
NOTE: THE 420 REF. DIM IS FROM THE FRONT OF THE FDN TO DRUM CL

HULL NO 1953	DATE CODE 3B213	SIZE D	JOB NO. M282	ITEM 582	DELIVERABLE FH20	SHEET 2	REV 04
ESTIMATE NO 00-104	SCALE 1:50 UNO		FILE R/M282/FUNCTIONAL/WORK/HULLDWS/FH20-002-01.DWG	SHEET 2	OF 3		

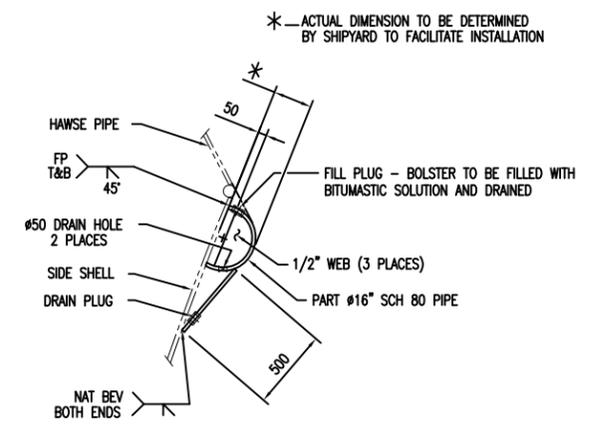
DWG NO. M282-582-FH20 B1/2

PLT: 1-90

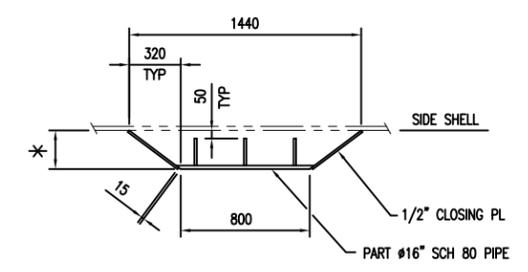
24 23 22 21 20 19 18 17



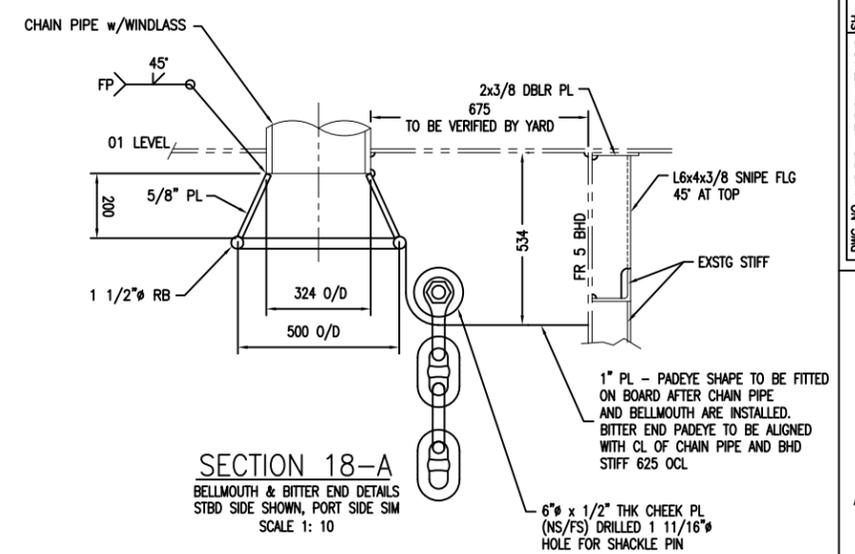
ELEVATION 20-C
STBD SHELL BOLSTER
TRUE VIEW ON SHELL
PORT SIDE SIM BUT OPP HAND



SECTION 18-C
LOOKING FWD



PLAN 20-B
* - ACTUAL DIMENSION TO BE DETERMINED
BY SHIPYARD TO FACILITATE INSTALLATION



SECTION 18-A
BELLMOUTH & BITTER END DETAILS
STBD SIDE SHOWN, PORT SIDE SIM
SCALE 1: 10

HULL NO 1953	DATE CODE 3B213	SIZE D	JOB NO. M282	ITEM 582	DELIVERABLE FH20	SHEET 3	REV 0
ESTIMATE NO 00-104	SCALE 1:20 UNO		FILE R/M282/FUNCTIONAL/ISSUED/HULLDWS/FH20-003-00.DWG	SHEET 3	OF 3		

24 23 22 21 20 19 18 17

DWG NO. M282-582-FH20 BH3

PLT: 1-20