

BILL OF MATERIALS

QUANTITIES ARE FOR ONE SHIP

FIND NO.	MMC PART NUMBER	DESCRIPTION	QTY	UOM	SIZE	MATERIAL	SPEC	STANDARD	UNIT WT (LBS)	REMARKS
1	582-01-01000	EXTERIOR DECK SOCKET, FLUSH	AS REQD.	EA	-	SST 316L				W/582-01-0100B RATCHET
2	582-01-01010	INTERIOR DECK SOCKET, RAISED	AS REQD.	EA	-	SST 316L				WELD DOWN & GLUE DOWN W/582-01-0101B RATCHET
3	582-01-03002	14" DOUBLE BITT, WELDED	10	EA	21"W X 64"L X 30"H	STEEL A36				SCHOELLHORN-ALBRECHT
4	582-01-03004	DOUBLE PANAMA CHOCK W/HORNS	6	EA	14" x 10"	STEEL A36				BOLT DOWN AFT DECK SCHOELLHORN-ALBRECHT, GN 11
5	582-01-03005	SINGLE PANAMA CHOCK	6	EA	12" x 10"	STEEL A36				FOREDECK BULWARKS SCHOELLHORN-ALBRECHT, GN 11
6	582-01-03006	DOUBLE PANAMA CHOCK	1	EA	14" x 10"	STEEL A36				CL FRAME 18 SCHOELLHORN-ALBRECHT, GN 11
7	582-01-02000	EXTERIOR AIRCRAFT SOCKET, NAVSEA TYPE XVIII	20	EA	-	ALUM	PH285N-18-1			PECK & HALE OR EQUAL
8	582-01-03000	MOORING LINES, WITH EYES	6	EA	1 1/8" DIAMETER X 600' LONG	HIGH MODULUS POLYETHYLENE	BS 94,500 LBS			SAMPSON QUANTUM 12, GN 15
9	582-01-02001	EXTERIOR DECK SOCKET, SMALL REVERSIBLE PADEYE	34	EA	-	ALUM				PA & E OR EQUAL
10	582-01-0100A	EXTERIOR SOCKET SET SCREW	AS REQD	EA	1"-8UNC	SST 316				SEE DETAIL 53-B
11	582-01-0101A	INTERIOR SOCKET SET SCREW	AS REQD	EA	1/2"-13UNC	SST 316				SEE DETAIL 53-A
12	582-01-03007	BOLT, HEAVY HEX STRUCTURAL	AS REQD	EA	1"-8UNC X 2" LONG	SST 316	GRADE B8M CLASS 2	ASTM A193		TORQUE TO 300 FT-LBS
13	582-01-03008	BOLT, HEAVY HEX STRUCTURAL	AS REQD	EA	1-1/2"-6UNC X 3" LONG	SST 316	GRADE B8M CLASS 2	ASTM A193		TORQUE TO 1581 FT-LBS

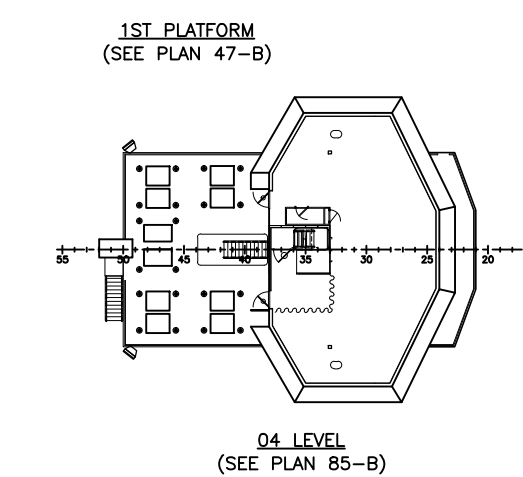
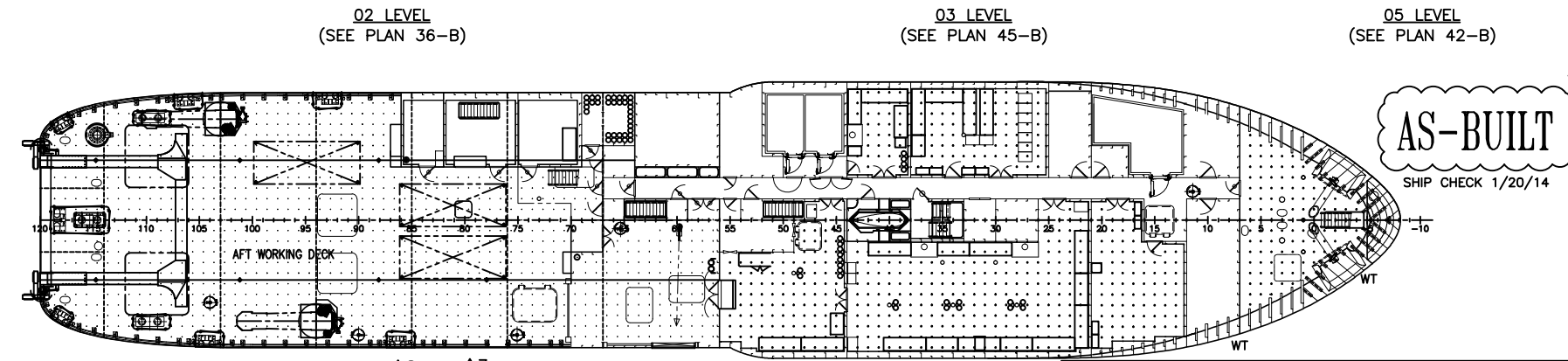
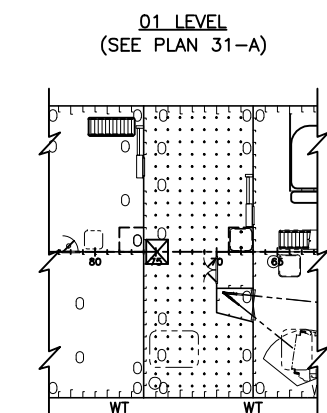
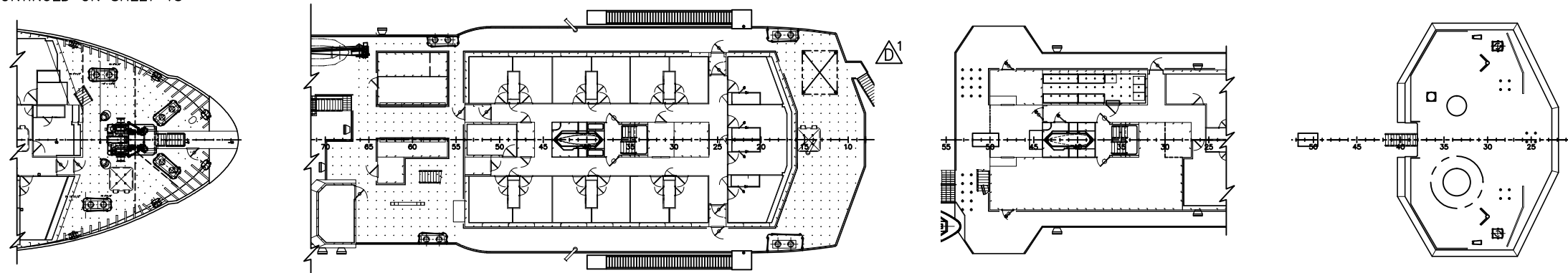
REVISIONS				
SHEET	REV.	DESCRIPTION	DATE	APPROVED
ALL	-	1. THIS DRAWING DEVELOPED FROM GLOSTEN DRAWING 07096-610-01.	03/26/10	J. SLATER
ALL	A	1. ADDED 6' OF LENGTH TO VESSEL (CR19). 2. ADDED SHEETS 11 & 12. 3. INCORPORATE OR ADDRESS ABS COMMENTS. 4. BOW BITTS FRAME 5 MOVED AFT AND OUTBOARD. 5. ADJUST AFT MOORING FIXTURES FOR LONGER VESSEL AND FINAL STRUCTURAL ARRANGEMENT. 6. REVISE TIE DOWN ARRANGEMENT FOR ALUMINUM STRUCTURE. 7. REVISE BOM TO SUIT CHANGES	4/5/2011	J. SLATER

- GENERAL NOTES**
- MOORING FITTINGS (BITTS AND CHOCKS) SHALL BE ARRANGED AND SIZED TO MEET PANAMA CANAL REGULATIONS. FINAL ARRANGEMENT SUBJECT TO U.A.F. APPROVAL.
 - FOUNDATIONS FOR MOORING FITTINGS SHALL MEET ABS REQUIREMENTS.
 - ALL WELDING IN WAY OF MOORING FITTINGS AND DECK TIEDOWNS SHALL BE CONTINUOUS.
 - EXTERIOR STEEL DECK BOLT-DOWN FITTINGS: 7,000 LB. CAPACITY FOR VERTICAL AND 45 DEGREES FROM VERTICAL LOADS.
 - INTERIOR BOLT-DOWN FITTINGS: 750 LB. CAPACITY FOR VERTICAL LOADS.
 - SHARP EDGES AND BREAKS SHALL BE SOFTENED IN WAY OF MOORING FITTINGS.
 - ALL DECK INSERTS FOR BITTS & CHOCKS ARE TO BE HIGH STRENGTH STEEL AH36 OR BETTER.
 - NO MORE THAN TWO BULWARK SECTIONS SHALL BE REMOVED WHEN AT SEA. A SIGN IS TO BE AFFIXED TO THIS EFFECT.
 - CONTAINERS OR OTHER DECK EQUIPMENT ARE NOT TO BE SECURED IN WAY OF ESCAPE ROUTES/DOORWAYS. A SIGN IS TO BE AFFIXED TO THIS EFFECT IN APPROPRIATE LOCATIONS.
 - SUPPORT STRUCTURE AND TOWING FITTINGS DESIGNED FOR LINE BREAKING STRENGTH OF 100,000 LBS., EXCEPT THAT DOUBLE PANAMA CHOCKS ARE DESIGNED FOR LINE BREAKING STRENGTH OF 140,000 LBS.
 - SAFE WORKING LOAD OF BITTS AND SINGLE CHOCKS IS 100,000 LBS. SWL OF REMOVABLE DOUBLE PANAMA CHOCKS IS 140,000 LBS.
 - BEAMS AND BRACKETS SUPPORTING MOORING BITTS MUST BE HIGH STRENGTH STEEL AH36 OR BETTER.
 - PROVIDE 3:1 TRANSITION TAPER ON ALL DECK INSERT PLATES.
 - "COASTAL MARINE" PORTABLE CAPSTAN BOLT LOADING IS NOT TO EXCEED 7,000 LB DECK SOCKET CAPACITY.
 - LINE ARE NOT TO BE DOUBLED ON BITTS OR CHOCKS.
 - EXTERIOR ALUMINUM DECK FITTINGS: 1,000 LB CAPACITY FOR VERTICAL AND 45 DEGREES FROM VERTICAL LOADS.
 - INTERIOR ALUMINUM DECK SOCKET GLUE JOINTS TO HAVE A MINIMUM STRENGTH OF 73 PSI IN TENSION.
 - FINAL HEIGHT AND ANGLE OF 14" PEDESTAL ROLLER FAIRLEAD TO BE DETERMINED AFTER MOCKUP.
 - DESIGN LOAD FOR 14" PEDESTAL ROLLER FOUNDATION WAS ASSUMED TO BE 36,000 LBS.
 - BITTS ARE NOT TO BE LOADED BY MORE THAN ONE MOORING LINE AT ANY TIME.
- GENERAL NOTES CONTINUED ON SHEET 15

- RESERVATIONS**
- DETAILS OF PANAMA CHOCK W/HORNS TO BE VERIFIED WITH VENDOR INFORMATION.
 - SUPPORTING STRUCTURE FOR BITTS & CHOCKS T.B.D.
 - PENDING SELECTION OF CAPSTAN.

- REFERENCES**
- GPA/MMC DWG. NO. 0650-601-01, GENERAL ARRANGEMENT
 - GPA/MMC DWG. NO. 0650-100-02, STRUCTURE 01 LEVEL AND BELOW
 - GPA/MMC DWG. NO. 0650-100-03, STEEL STRUCTURE ABOVE 01 LEVEL
 - GPA/MMC DWG. NO. 0650-167-01, STRUCTURAL CLOSURES HATCHES & BERPS
 - GPA/MMC DWG. NO. 0650-517-01, WASTE HEAT RECOVERY SYSTEM DIAGRAM
 - GPA/MMC DWG. NO. 0650-581-01, ANCHORING SYSTEM
 - GPA/MMC DWG. NO. 0650-623-01, VERTICAL LADDERS & MANHOLES
 - GPA/MMC DWG. NO. 0650-100-06, ALUMINUM STRUCTURE ABOVE 02 LEVEL

CONTINUED ON SHEET 13



REVISIONS CONT'D.

SHEET	REV.	DESCRIPTION	DATE	APPROVED
14	B	1. ADDED SHEET 14.		
9		2. ADDED FLANGE DETAIL TO DRAWING.		
7		3. ADDED SUPPORT STRUCTURE.		
13		4. ADDED SHEET 13.		
7,9		5. MODIFIED DIMENSIONS FOR REMOVABLE PANAMA CHOCKS.	8/8/2011	J. SLATER
1,8,9	C	1. REMOVED RESERVATION 1 FROM DRAWING.		
6		2. REVISED 03 LEVEL TO SHOW SMALL REVERSIBLE PAD-EYE DECK SOCKETS.		
6		3. ADDED DETAIL 46-A.		
10		4. ADDED ELEVATION 74-C, PLAN 76-A, SECTION 74-A, 74-B AND 79-C.		
13		5. ADDED DETAIL 101-A AND 103-A.		
1		6. REVISED GENERAL NOTE 18 AND 17. ADDED GENERAL NOTE 18 AND 19.		
1,3		7. REVISED PLAN VIEW TO MATCH CURRENT CONFIGURATION OF VAN LOCATION.		
4		8. INCREASED THICKNESS OF BRACKETS FOR THE MIDDLE AND AFT 01 LEVEL CHOCKS.	10/3/2011	J. SLATER

*REVISIONS CONTINUED ON SHEET 13 98-C

SHEET INDEX

SHEET NO.	DESCRIPTION
1.	GENERAL NOTES, REFERENCES, BOM, KEY PLAN - INTERIOR AND EXTERIOR DECK TIEDOWN ARRANGEMENT
2.	MAIN DECK FWD DECK SOCKET ARRANGEMENT
3.	MAIN DECK AFT MOORING EQUIPMENT AND DECK SOCKET ARRANGEMENT
4.	01 LEVEL/FOC'SLE DECK MOORING EQUIPMENT, SOCKET ARRANGEMENT AND BULWARK DETAILS
5.	02 LEVEL BITT LOCATIONS AND DECK SOCKET ARRANGEMENT
6.	1ST PLATFORM, 03 & 05 LEVEL DECK SOCKET ARRANGEMENT
7.	CHOCK, BITT & SOCKET DETAILS
8.	REMOVABLE BULWARK DETAILS
9.	CHOCK & BITT DETAILS
10.	MOORING LINE ARRANGEMENT, REMOVABLE CAPSTAN FOUNDATION.
11.	04 LEVEL DECK SOCKET ARRANGEMENT & SOCKET DETAIL.
12.	BITT DETAILS
13.	BILL OF MATERIALS CONTINUED
14.	MAIN DECK & 02 LEVEL VAN DECK SOCKET PLACEMENTS
15.	GENERAL NOTES CONTINUED

GUIDO PERLA & ASSOCIATES, Inc.
701 FIFTH AVENUE, SUITE 1200 SEATTLE, WA. 98104 U.S.A.
Tel: (206) 768-1515 Fax: (206) 768-9700 Email: gpa@gpai.com

MARINETTE MARINE CORPORATION
MARINETTE WISCONSIN 54143

CONTRACT NO: UAF 10-0040

UNIVERSITY OF ALASKA FAIRBANKS
FAIRBANKS, ALASKA

"R/V SIKULIAQ"

**MOORING ARRANGEMENT
& DECK TIEDOWNS**

DATE: APRV: J. SLATER 11/02/2011
APRV: R. VLIES 11/02/2011
CHKD: CLB 04/05/11
DWN: JFM 10/12/10

USCG APVD: DATE: ABS APVD: DATE:

SIZE: D 98042 FSCN CAGE NO: 0650-582-01 DRAWING NO. REV: G
SCALE: 1/16"=1'-0" SHEET 1 OF 15

D

C

B

A

D

C

B

A

INTERIOR DECK SOCKET
LOCATED ON FRAMES
SEE DETAIL 51-A

INTERIOR DECK SOCKET
LOCATED ON FRAMES
SEE DETAIL 51-A

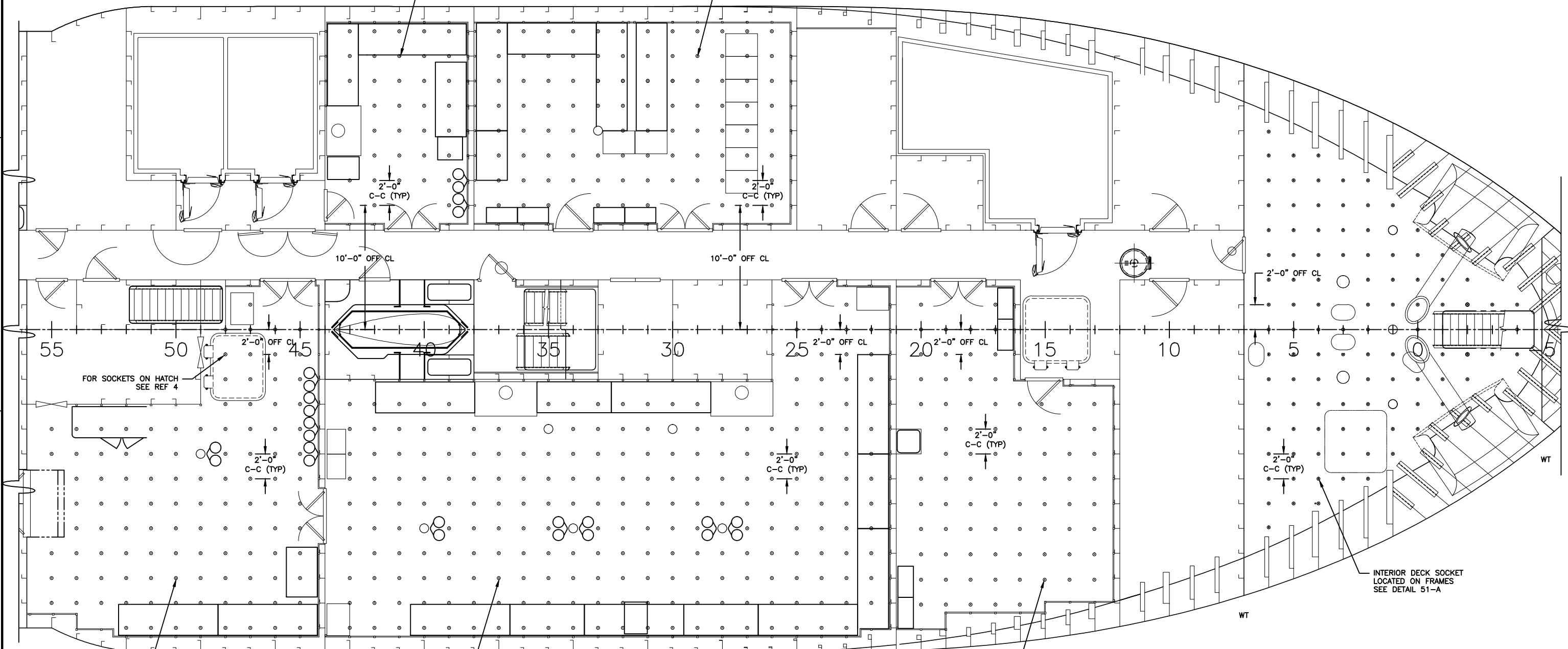
INTERIOR DECK SOCKET
LOCATED ON FRAMES
SEE DETAIL 51-A

INTERIOR DECK SOCKET
LOCATED ON FRAMES
SEE DETAIL 51-A

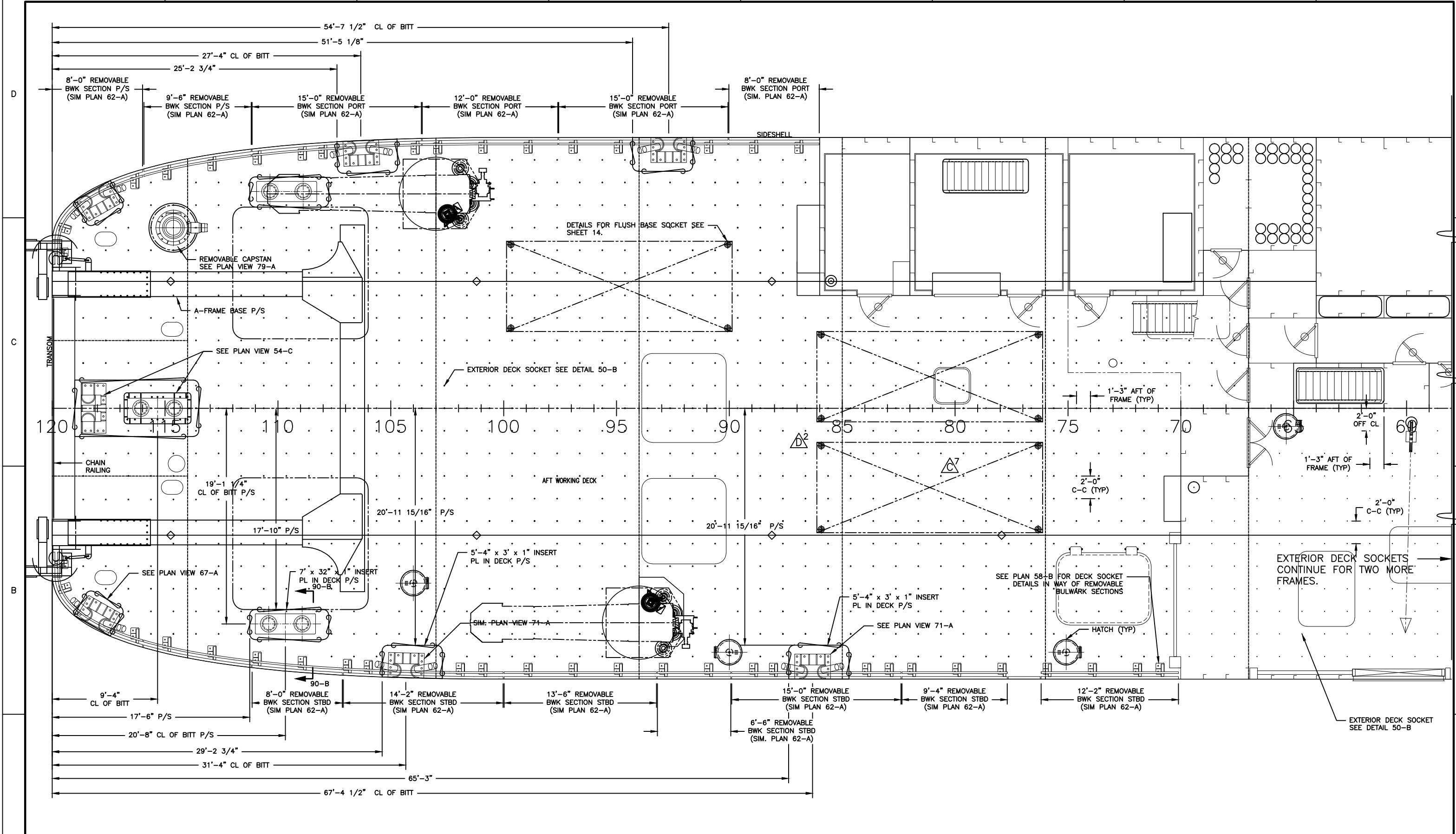
INTERIOR DECK SOCKET
LOCATED ON FRAMES
SEE DETAIL 51-A

INTERIOR DECK SOCKET
LOCATED ON FRAMES
SEE DETAIL 51-A

PLAN 13-B
MAIN DECK FWD
DECK SOCKET ARRANGEMENT

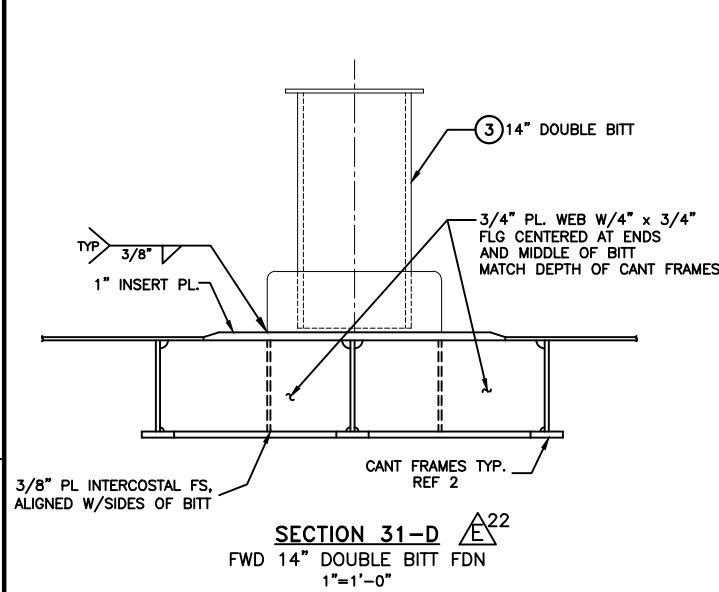


USCG APVD:	DATE:	SIZE	FSCM CAGE NO.	DRAWING NO.	REV
ABS APVD:	DATE:	D	98042	0650-582-01	G
		SCALE 1/4"=1'-0"		SHEET 2 OF 15	

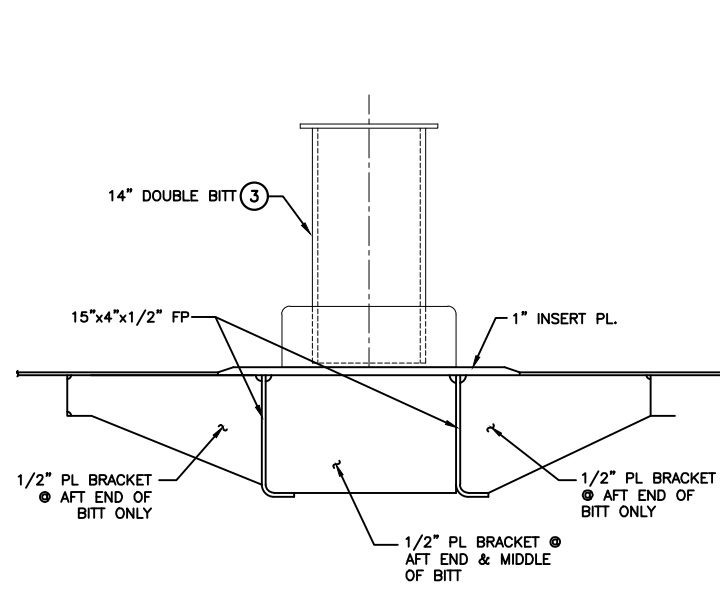


PLAN 21-B ³
 MAIN DECK AFT
 MOORING EQUIPMENT & DECK SOCKET ARRANGEMENT

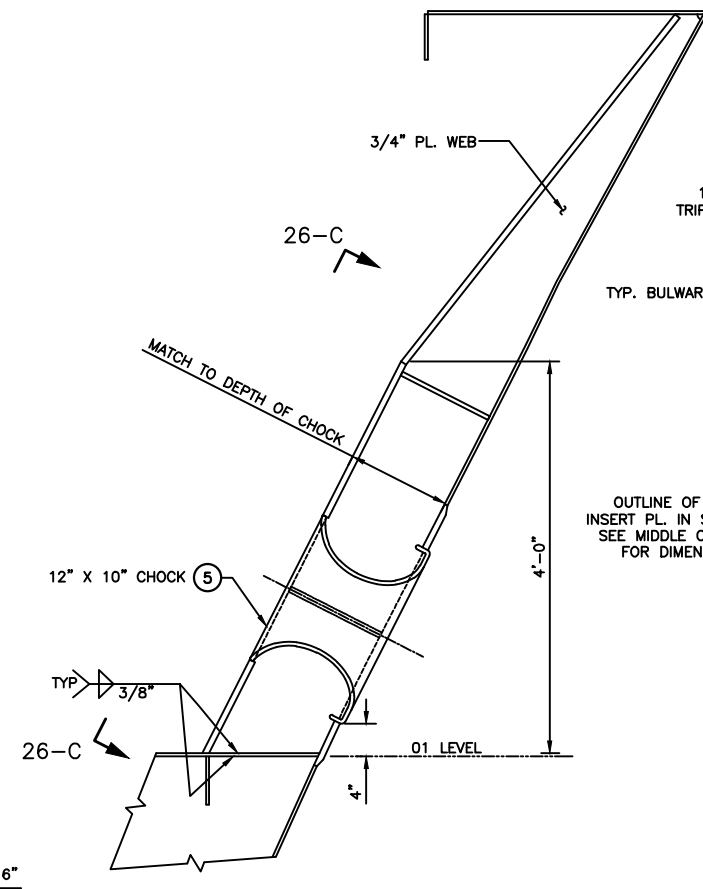
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ABS APVD:	DATE:	D	98042	0650-582-01	G
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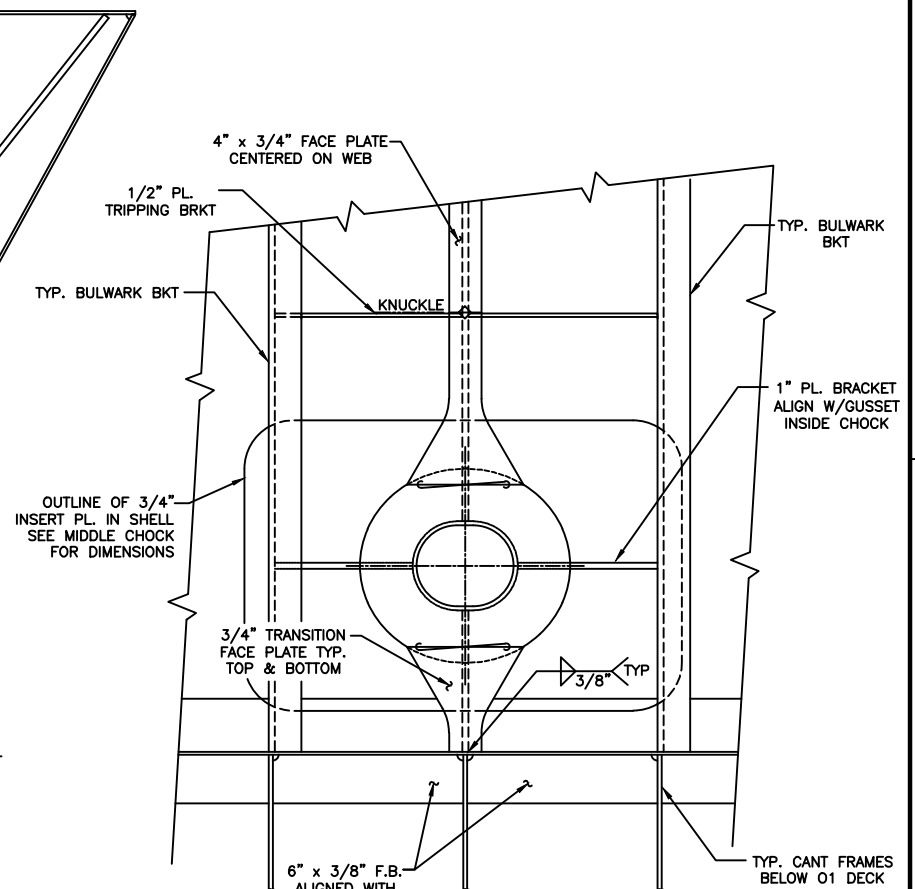
SECTION 31-D Δ^{22}
 FWD 14" DOUBLE BITT FDN
 1"=1'-0"



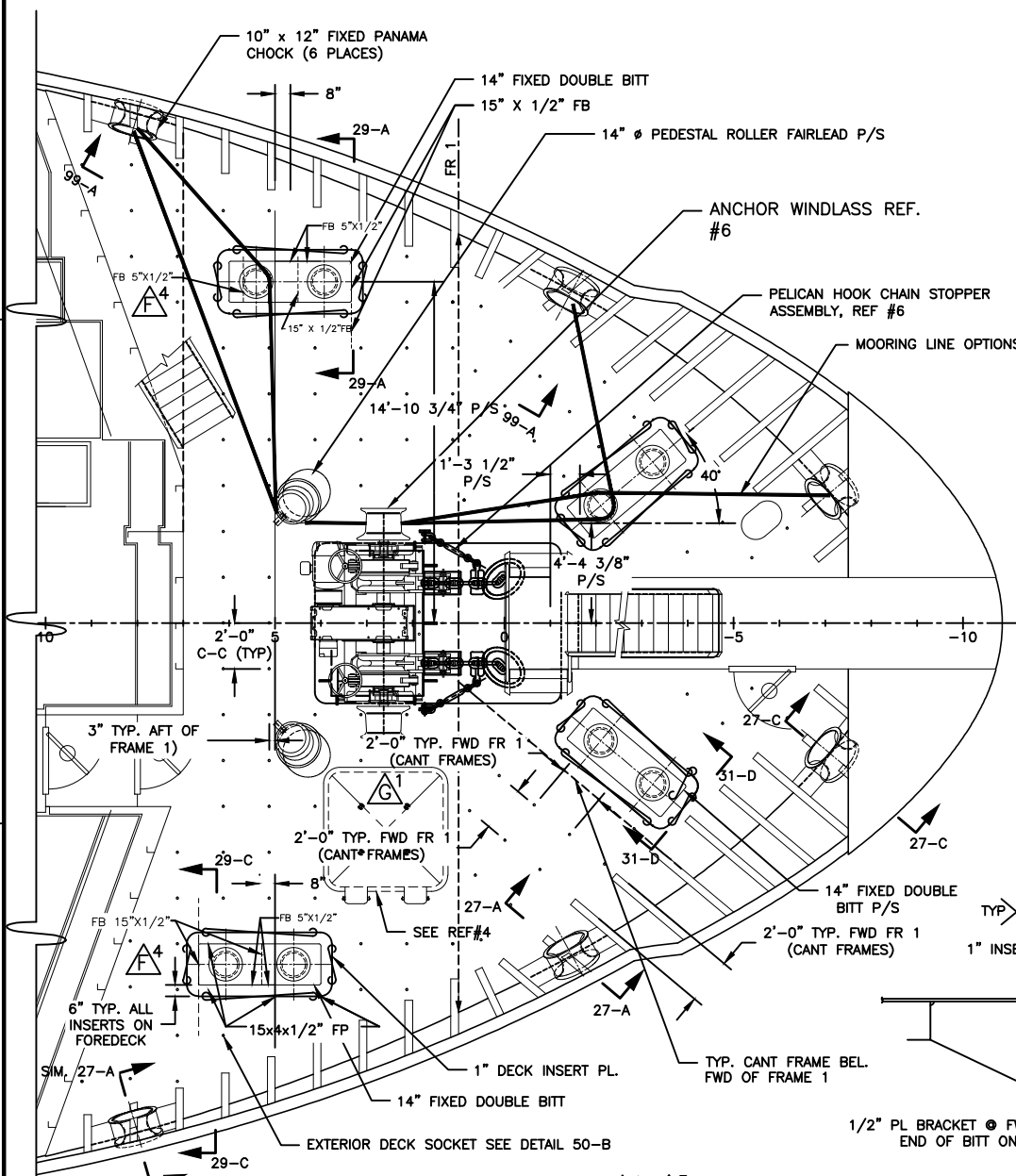
SECTION 29-C
 AFT 14" DOUBLE BITT FDN
 STBD SIDE LKG AFT
 SCALE 1"=1'-0"



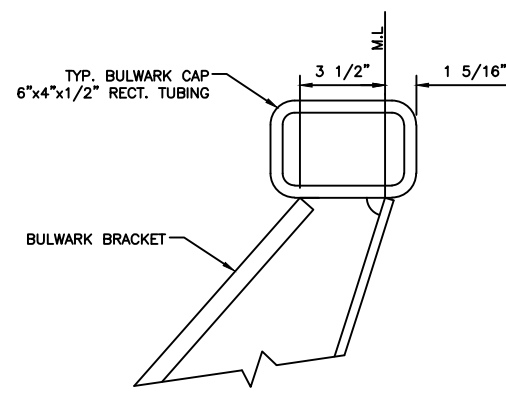
SECTION 27-C Δ^{22}
 FWD BULWARK CHOCK
 STBD SIDE SHOWN LKG FWD, PORT SIM.
 SCALE 1"=1'-0"



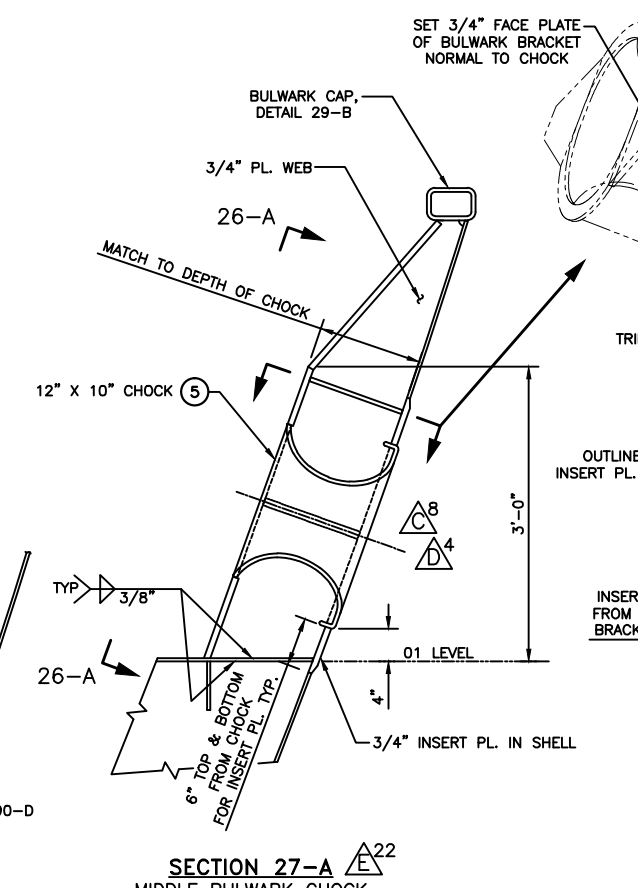
ELEVATION 26-C Δ^{22}
 FWD BULWARK CHOCK
 STBD SIDE SHOWN LKG OTBD, PORT SIM.
 SCALE 1"=1'-0"



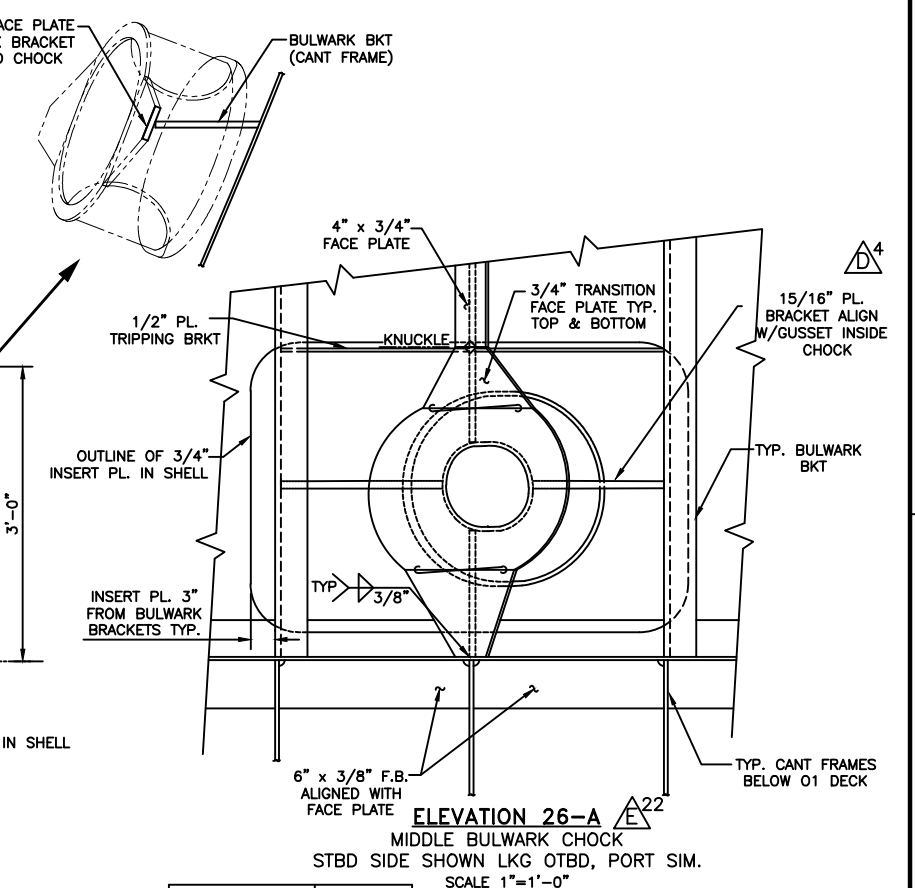
PLAN 31-A Δ^4 Δ^3
 01 LEVEL (FOC'SLE DECK)
 1/4"=1'-0"



DETAIL 29-B
 TYPICAL BULWARK CAP
 3"=1'-0"

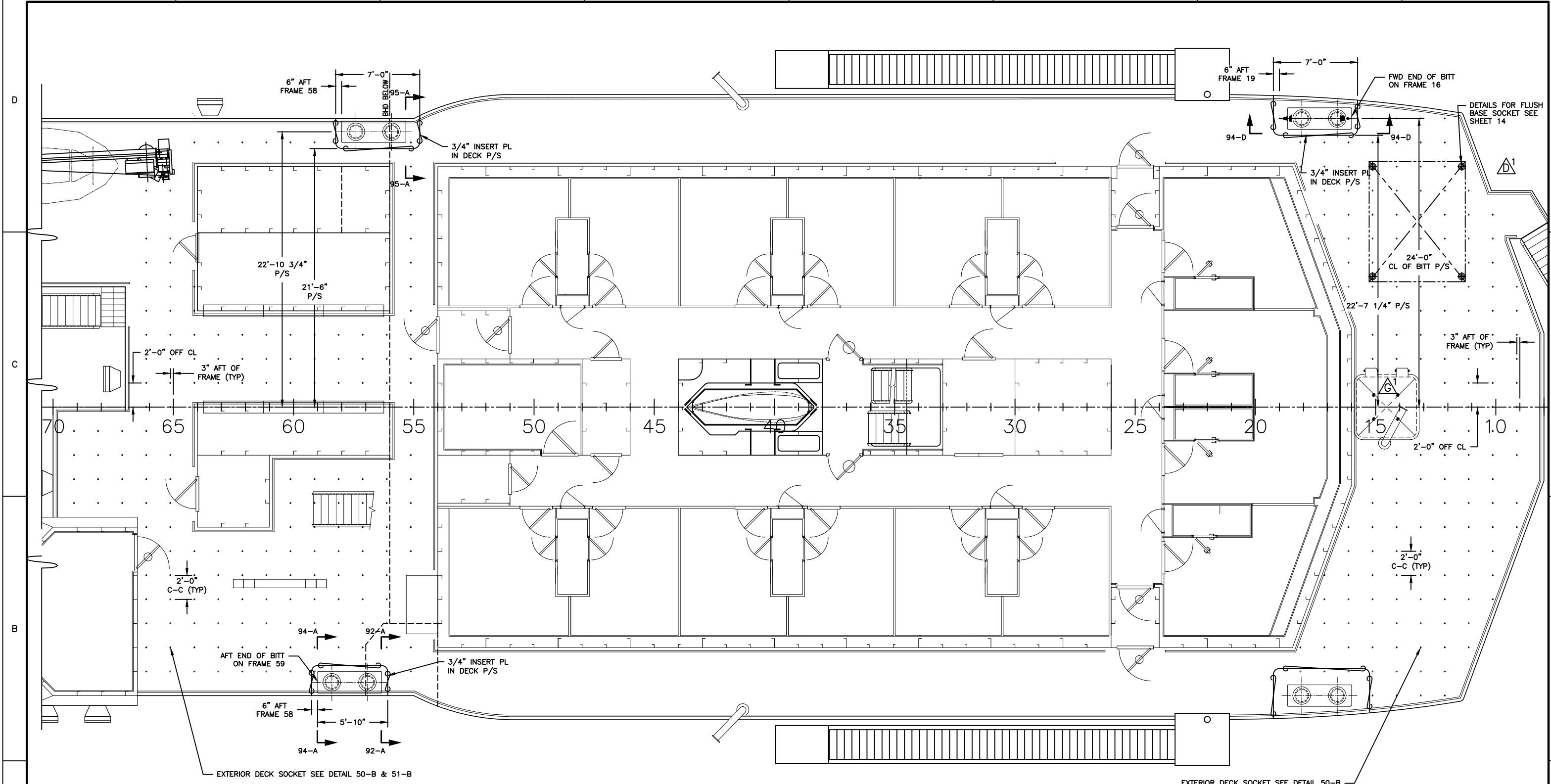


SECTION 27-A Δ^{22}
 MIDDLE BULWARK CHOCK
 STBD SIDE SHOWN LKG FWD, PORT SIM.
 SCALE 1"=1'-0"



ELEVATION 26-A Δ^{22}
 MIDDLE BULWARK CHOCK
 STBD SIDE SHOWN LKG OTBD, PORT SIM.
 SCALE 1"=1'-0"

USCG APVD:	DATE:	SIZE:	FSCM CAGE NO:	DRAWING NO.:	REV:
ABS APVD:	DATE:	D	98042	0650-582-01	G
SCALE:		AS NOTED		SHEET 4 OF 15	



PLAN 36-B
02 LEVEL

USCG APVD:	DATE:	SIZE	FSCM CAGE NO.	DRAWING NO.	REV
ABS APVD:	DATE:	D	98042	0650-582-01	G
		SCALE 1/4" = 1'-0"		SHEET 5 OF 15	

D

C

B

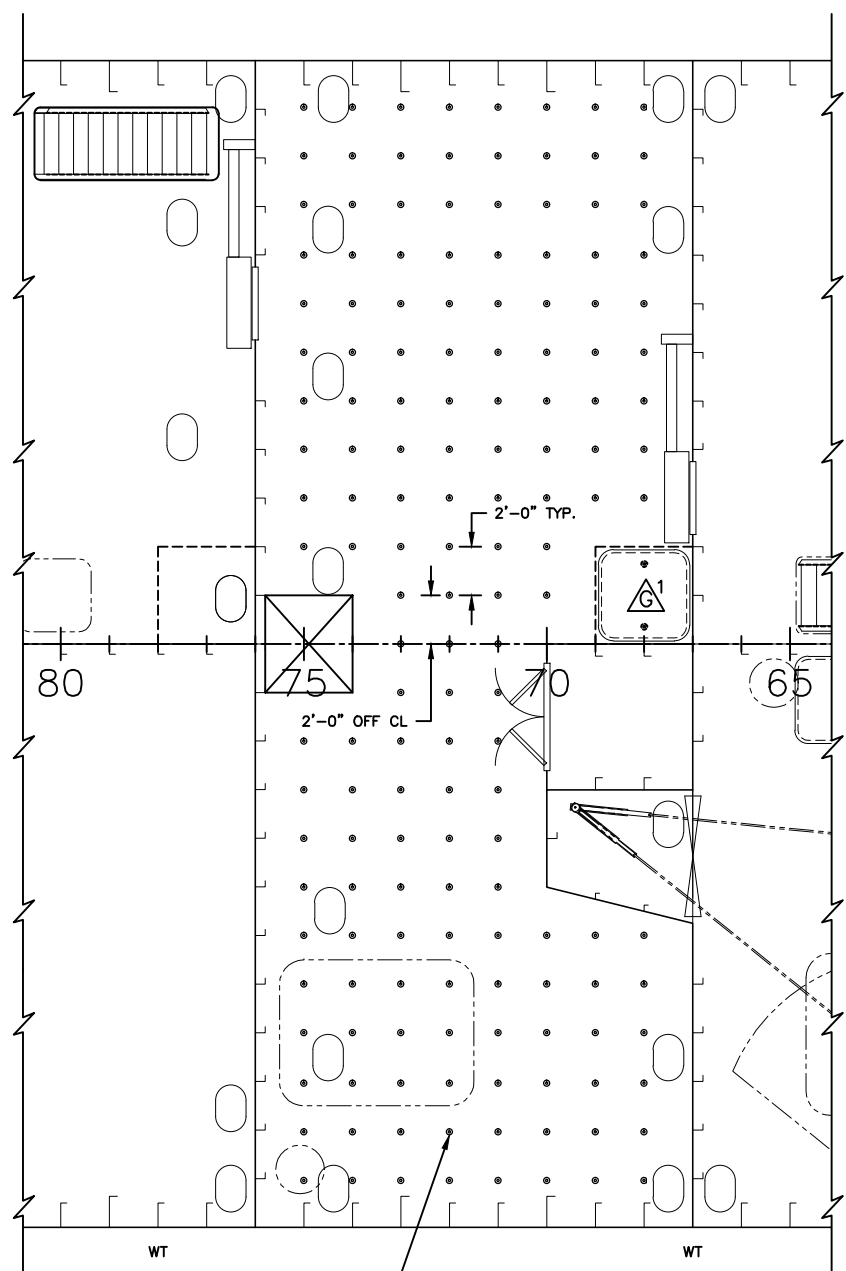
A

D

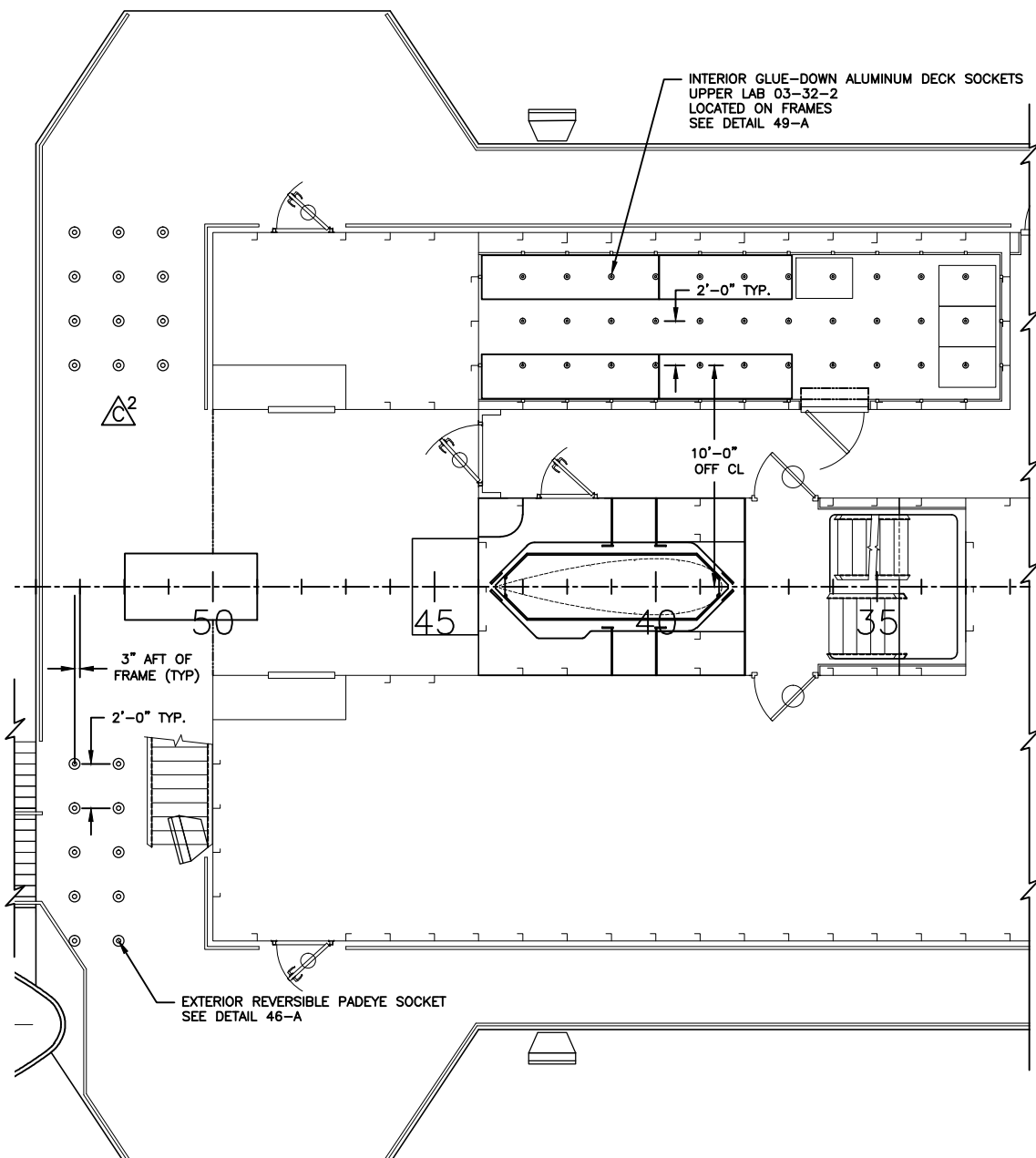
C

B

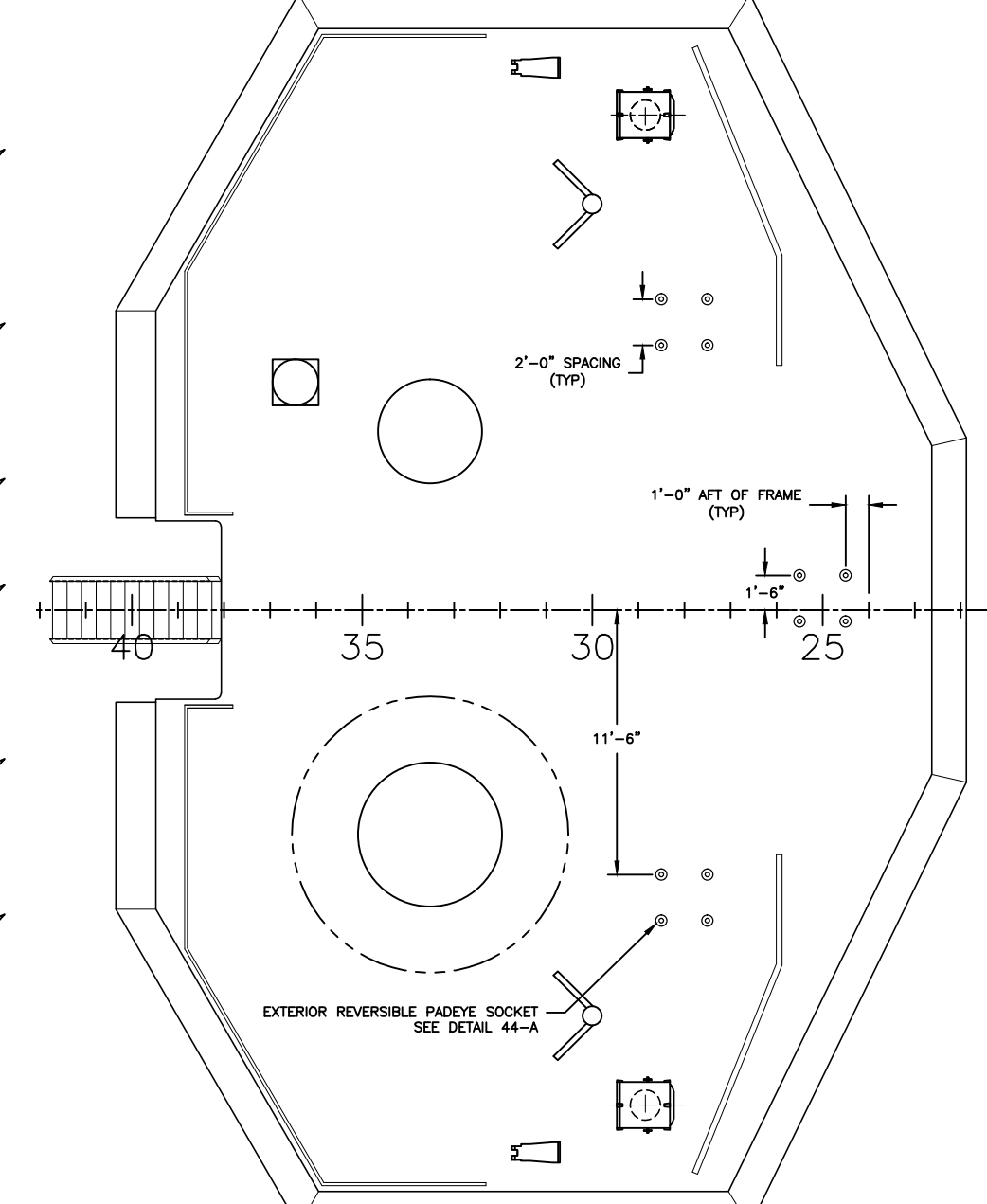
A



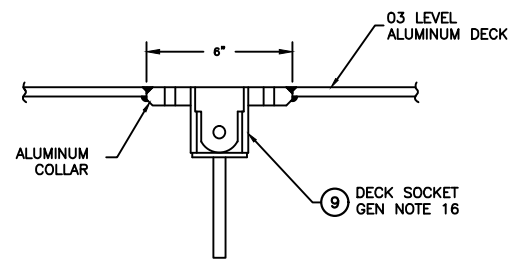
PLAN 47-B
1ST PLATFORM



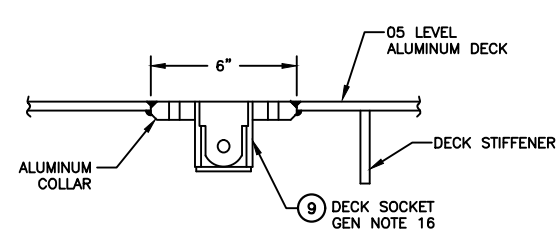
PLAN 45-B
03 LEVEL



PLAN 42-B
05 LEVEL

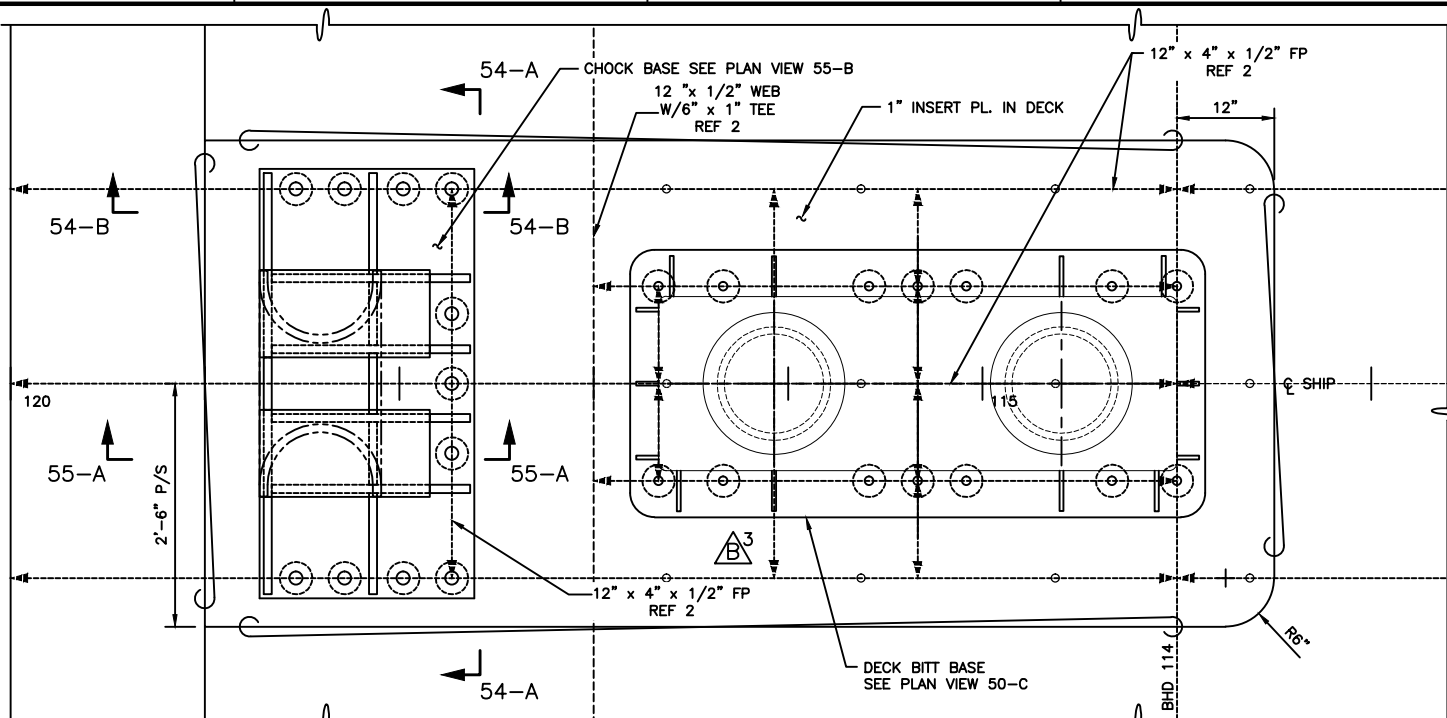


DETAIL 46-A
EXTERIOR REVERSIBLE
PADEYE SOCKET
SCALE: 1"=1'-0"

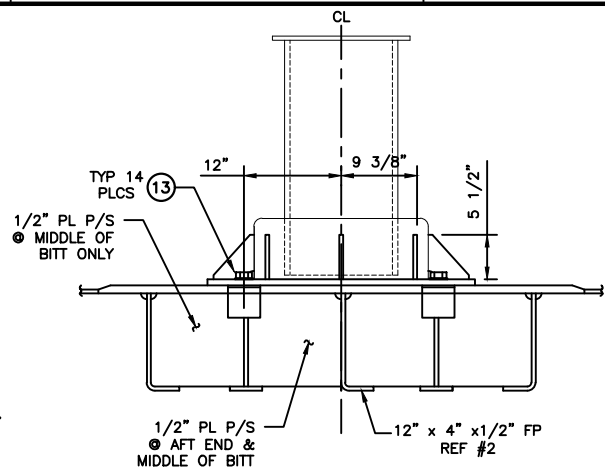


DETAIL 44-A
EXTERIOR REVERSIBLE
PADEYE SOCKET
SCALE: 3"=1'-0"

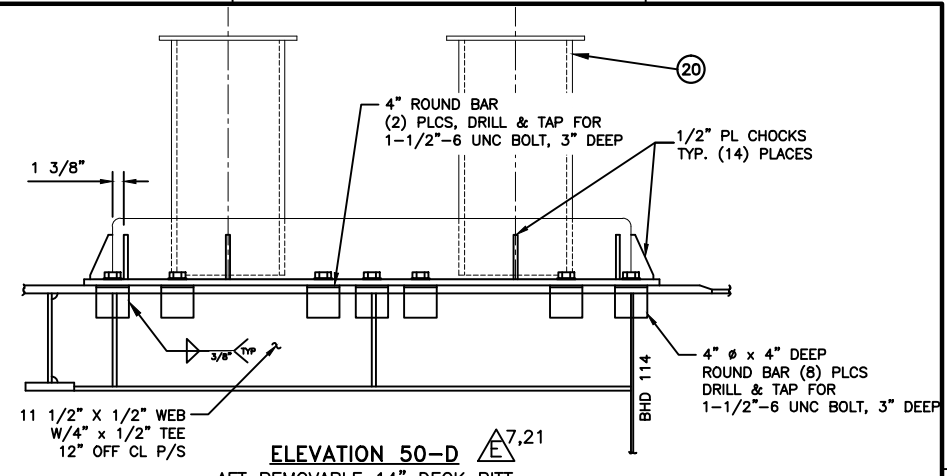
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ABS APVD:	DATE:	D	98042	0650-582-01	G
		SCALE 1/4"=1'-0"		SHEET 6 OF 15	



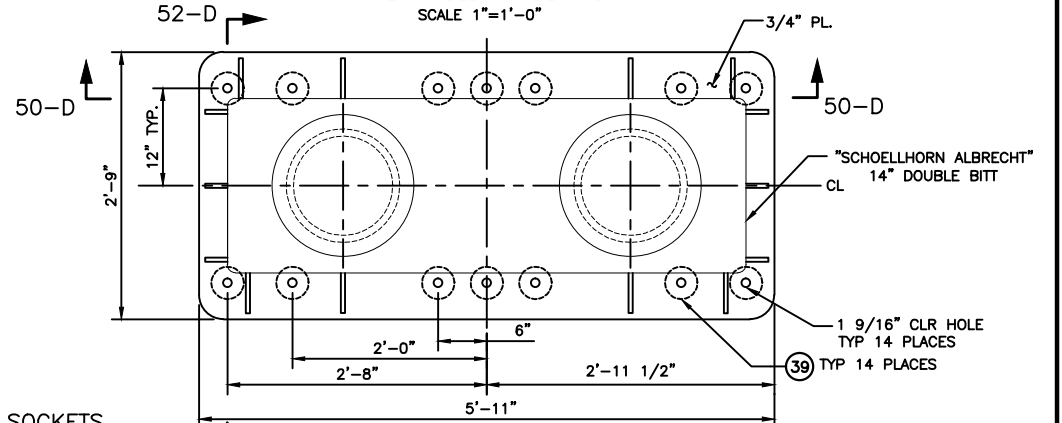
PLAN 54-C Δ^8
AFT REMOVABLE PANAMA CHOCK & DECK BITT
SCALE 1"=1'-0"



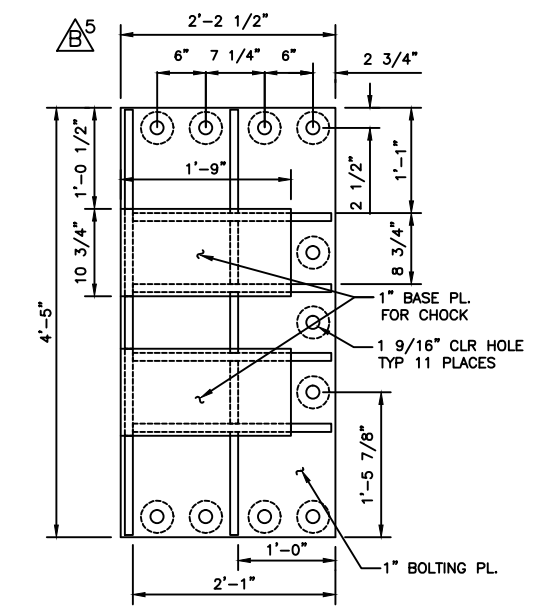
SECTION 52-D Δ^6
AFT REMOVABLE 14" DECK BITT
SCALE 1"=1'-0"



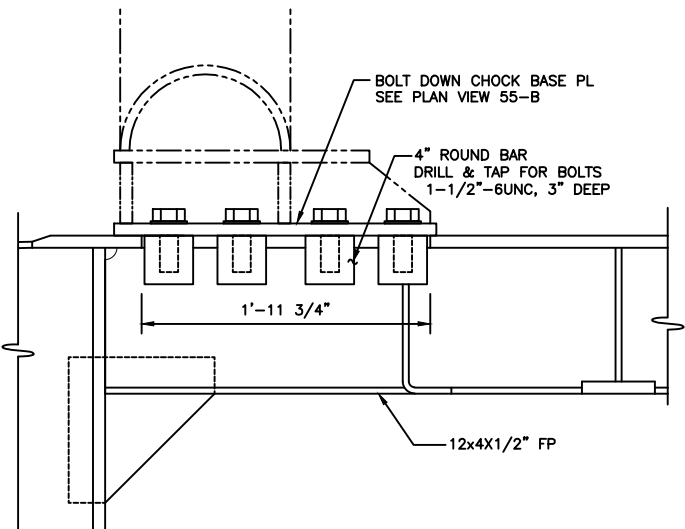
ELEVATION 50-D $\Delta^7,21$
AFT REMOVABLE 14" DECK BITT
SCALE 1"=1'-0"



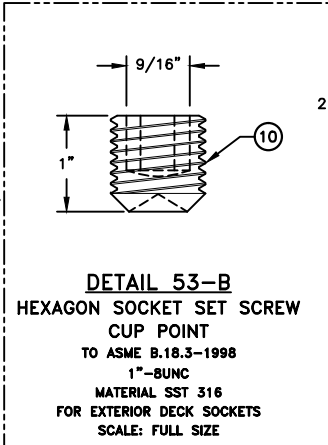
PLAN 50-C $\Delta^8,9$
AFT REMOVABLE 14" DECK BITT
SCALE 1"=1'-0"



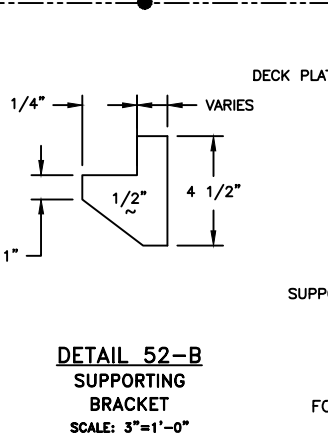
PLAN 55-B Δ^8
DIMENSIONS FOR AFT REMOVABLE PANAMA CHOCK
SCALE 1"=1'-0"



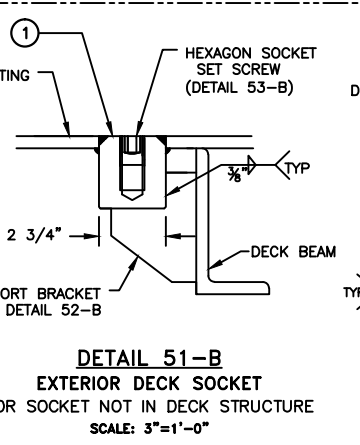
DETAIL 54-B Δ^8
OUTBOARD BOLTING SOCKET
SCALE 1 1/2"=1'-0"



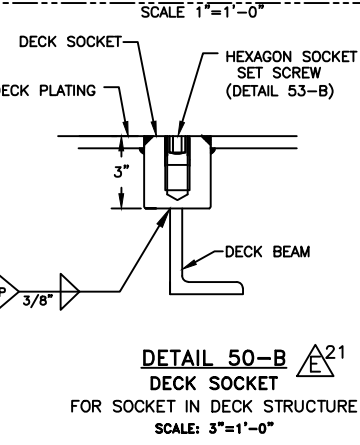
DETAIL 53-B
HEXAGON SOCKET SET SCREW
CUP POINT
TO ASME B.18.3-1998
1"-BUNC
MATERIAL SST 316
FOR EXTERIOR DECK SOCKETS
SCALE: FULL SIZE



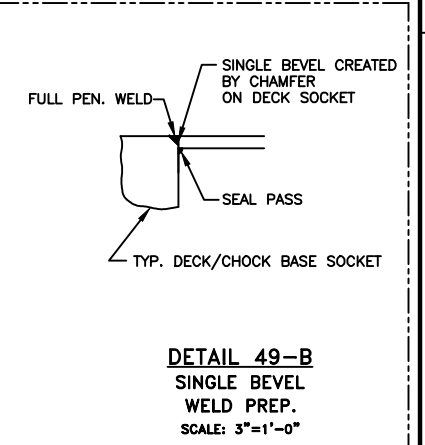
DETAIL 52-B
SUPPORTING BRACKET
SCALE: 3"=1'-0"



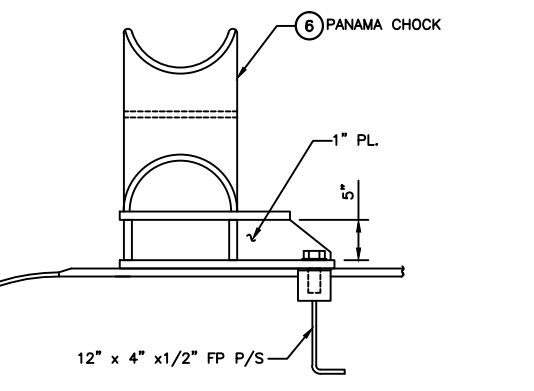
DETAIL 51-B
EXTERIOR DECK SOCKET
FOR SOCKET NOT IN DECK STRUCTURE
SCALE: 3"=1'-0"



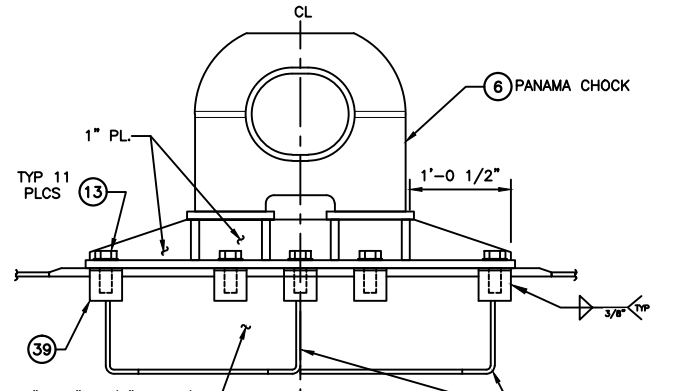
DETAIL 50-B Δ^21
DECK SOCKET
FOR SOCKET IN DECK STRUCTURE
SCALE: 3"=1'-0"



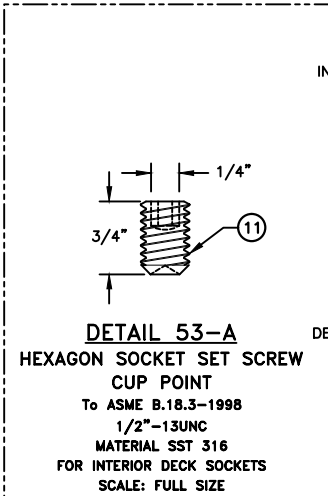
DETAIL 49-B
SINGLE BEVEL WELD PREP.
SCALE: 3"=1'-0"



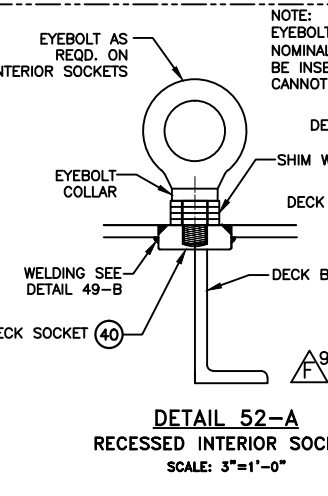
ELEVATION 55-A
LOOKING INBD
SCALE 1"=1'-0"



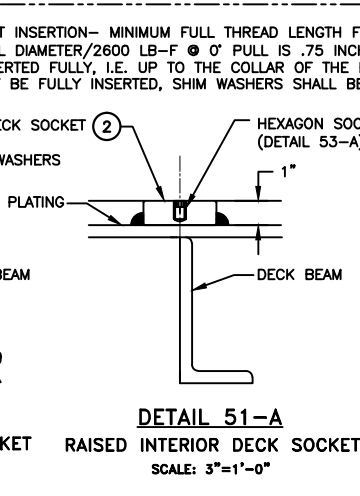
SECTION 54-A $\Delta^5,21$
LOOKING AFT
SCALE 1"=1'-0"



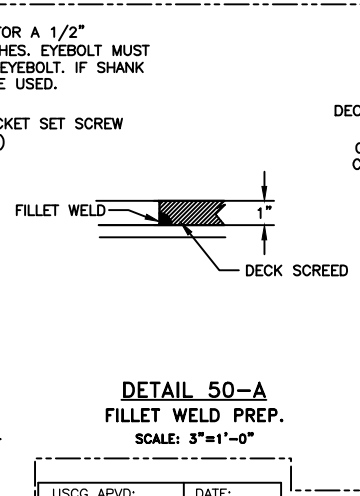
DETAIL 53-A
HEXAGON SOCKET SET SCREW
CUP POINT
TO ASME B.18.3-1998
1/2"-13UNC
MATERIAL SST 316
FOR INTERIOR DECK SOCKETS
SCALE: FULL SIZE



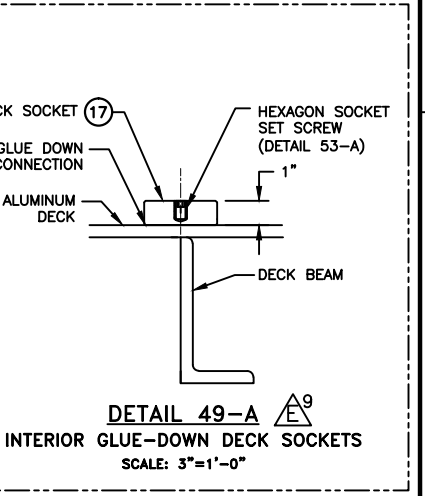
DETAIL 52-A Δ^9
RECESSED INTERIOR SOCKET
SCALE: 3"=1'-0"



DETAIL 51-A
RAISED INTERIOR DECK SOCKET
SCALE: 3"=1'-0"



DETAIL 50-A
FILLET WELD PREP.
SCALE: 3"=1'-0"

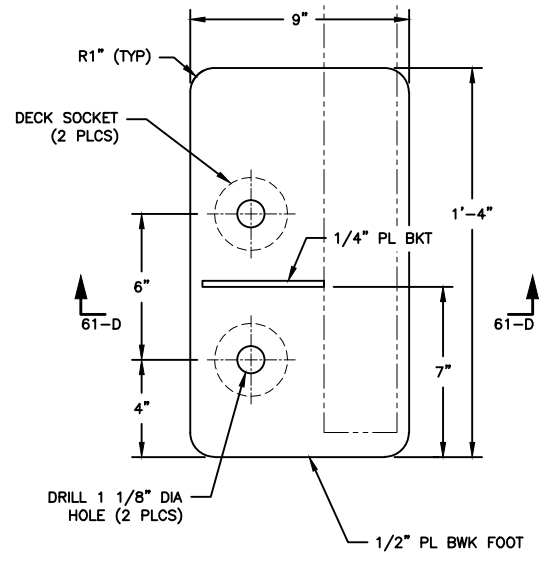


DETAIL 49-A Δ^9
INTERIOR GLUE-DOWN DECK SOCKETS
SCALE: 3"=1'-0"

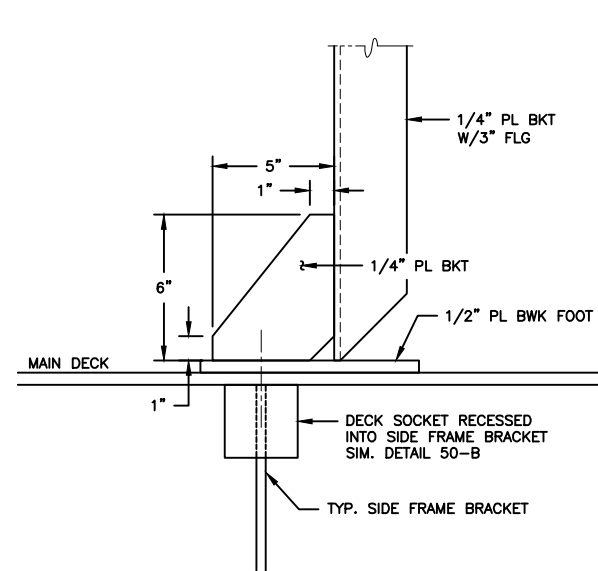
EXTERIOR DECK SOCKETS

INTERIOR DECK SOCKETS

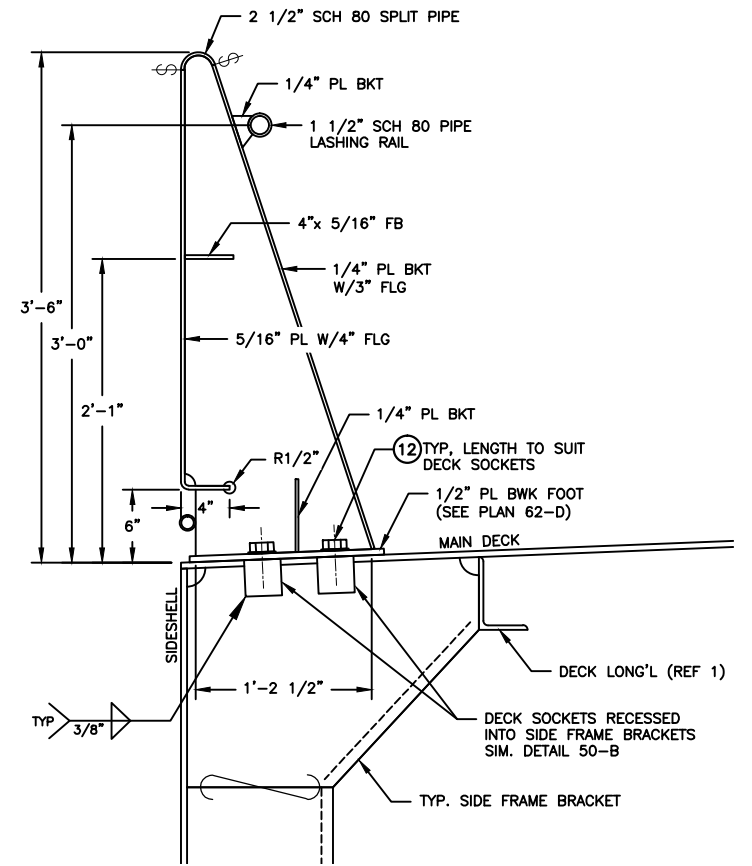
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ABS APVD:	DATE:	D	98042	0650-582-01	G
SCALE: AS NOTED		SHEET 7 OF 15			



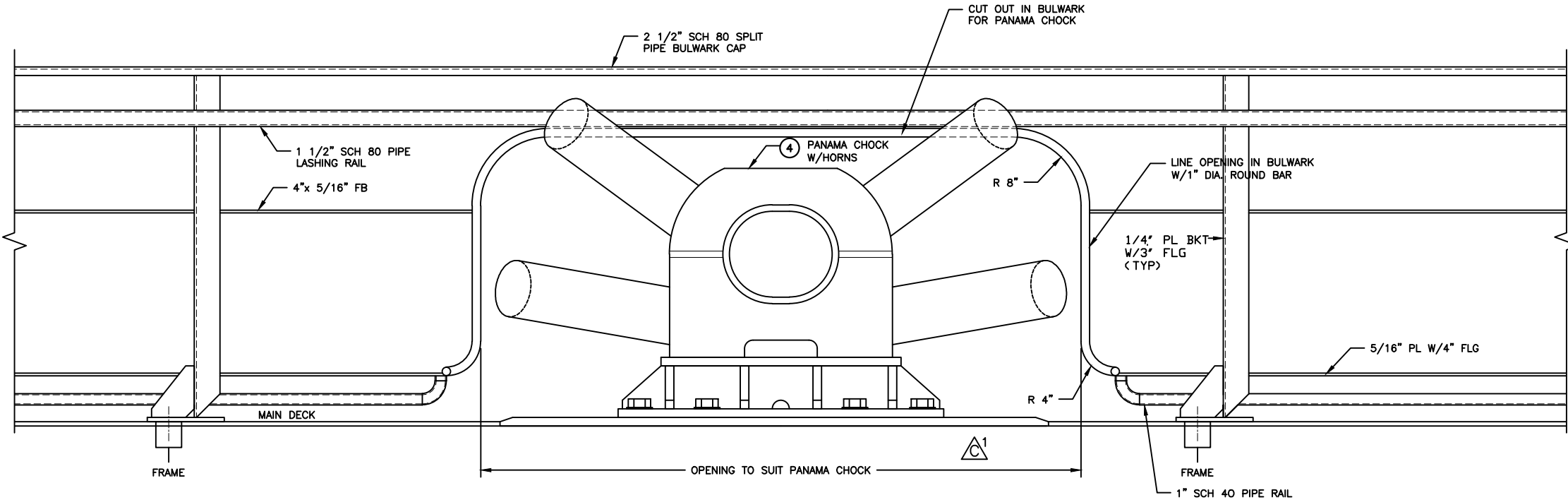
PLAN 62-D
TYPICAL FOOT FOR REMOVABLE BULWARK SECTION
3"=1'-0"



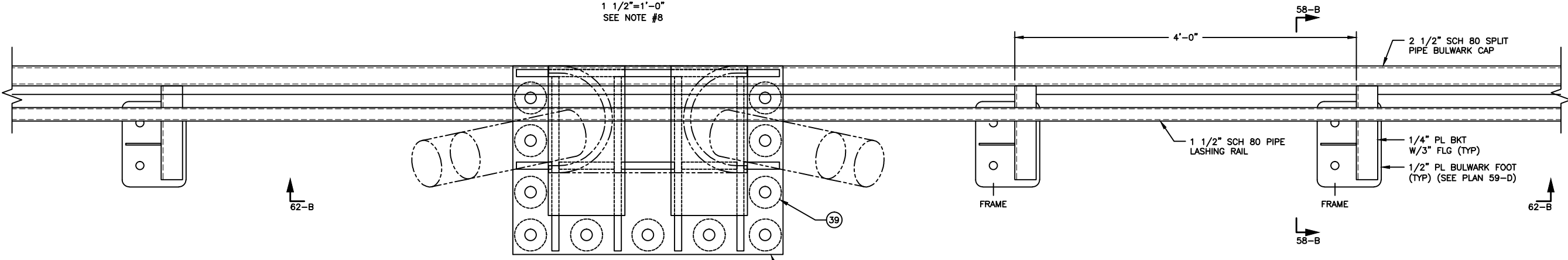
ELEVATION 61-D
TYPICAL FOOT FOR REMOVABLE BULWARK SECTION
3"=1'-0"



SECTION 58-B Δ^{22}
TYPICAL REMOVABLE BULWARK SECTION
1 1/2"=1'-0"

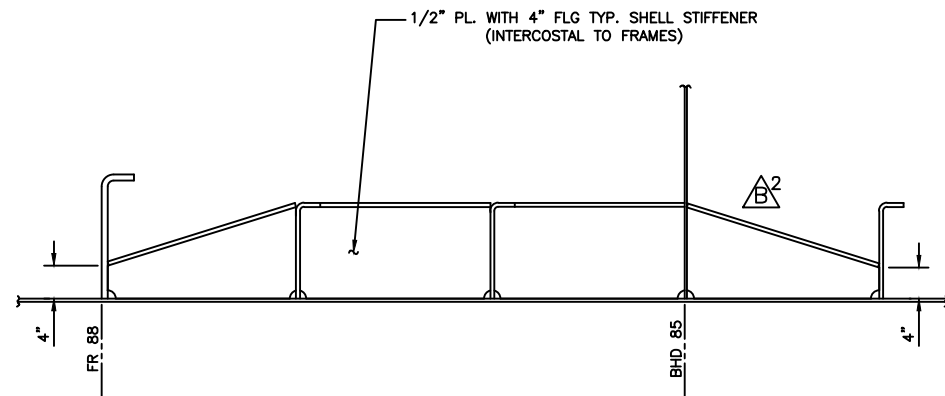


ELEVATION 62-B
TYPICAL REMOVABLE BULWARK SECTION
1 1/2"=1'-0"
SEE NOTE #8

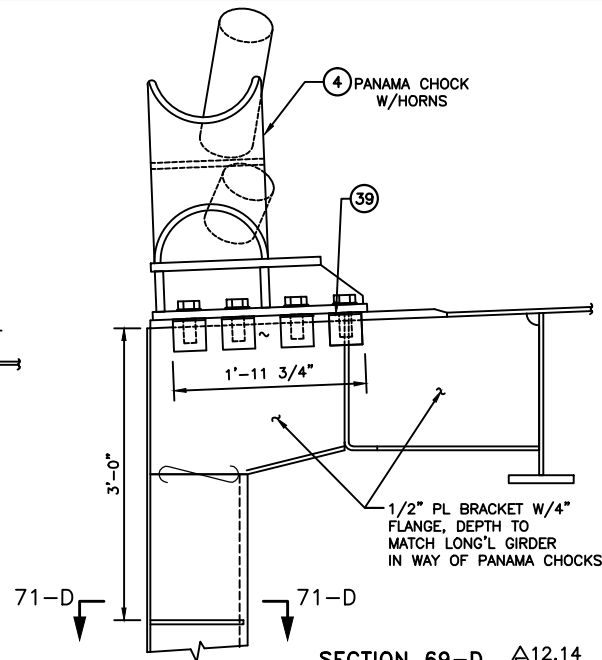


PLAN 62-A $\Delta^{10,11}$
TYPICAL REMOVABLE BULWARK SECTION
1 1/2"=1'-0"

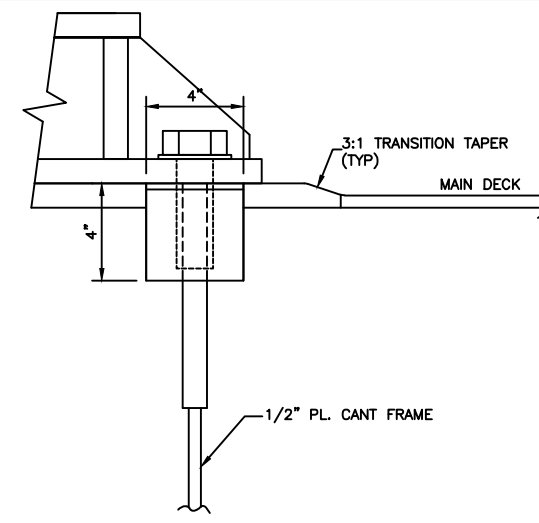
USCG APVD:	DATE:	SIZE	FSCM CAGE NO	DRAWING NO.	REV
ABS APVD:	DATE:	D	98042	0650-582-01	G
SCALE		AS NOTED		SHEET 8 OF 15	



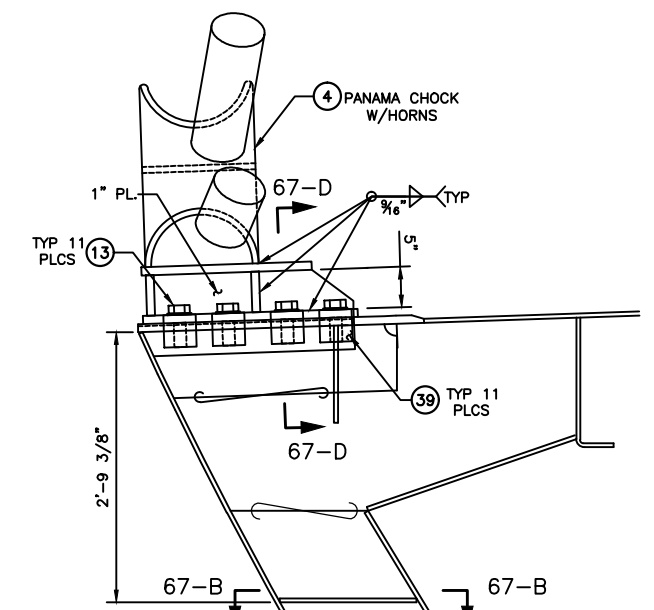
PLAN 71-D
SHELL STIFFENER IN WAY OF PANAMA CHOCK
SCALE 1"=1'-0"



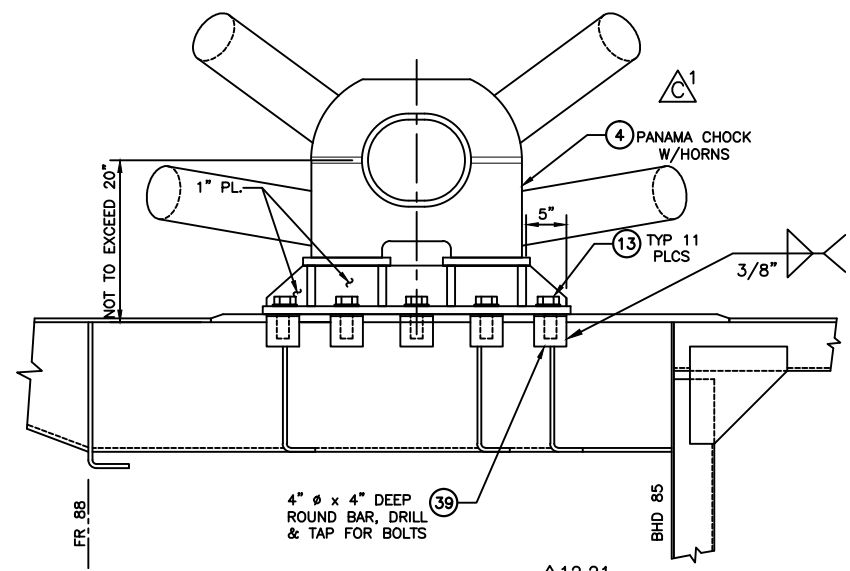
SECTION 69-D Δ 12,14
LOOKING AFT
SCALE 1"=1'-0"



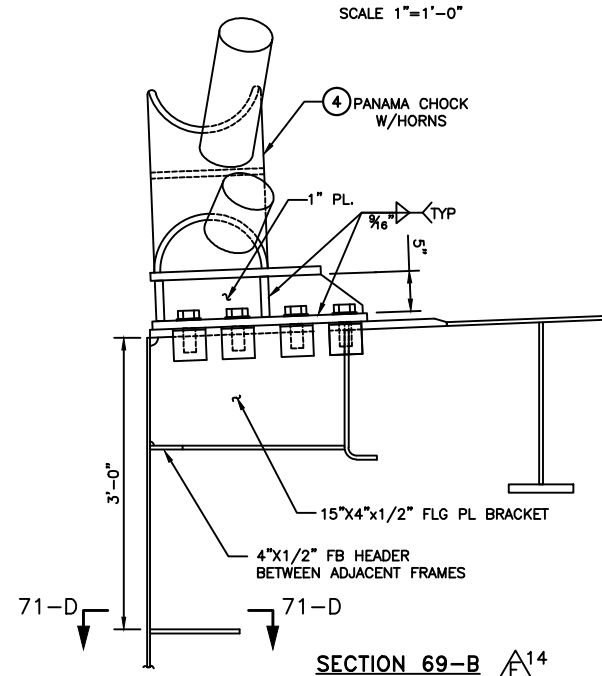
DETAIL 67-D Δ 13,14
BOLTING RING TO CANT FRAME CONNECTION
SCALE 3"=1'-0"



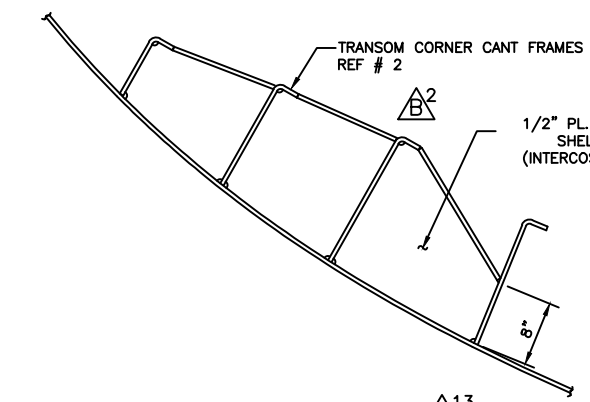
SECTION 65-B Δ 12,14
STBD SIDE LOOKING AFT, PORT SIM.
SCALE 1"=1'-0"



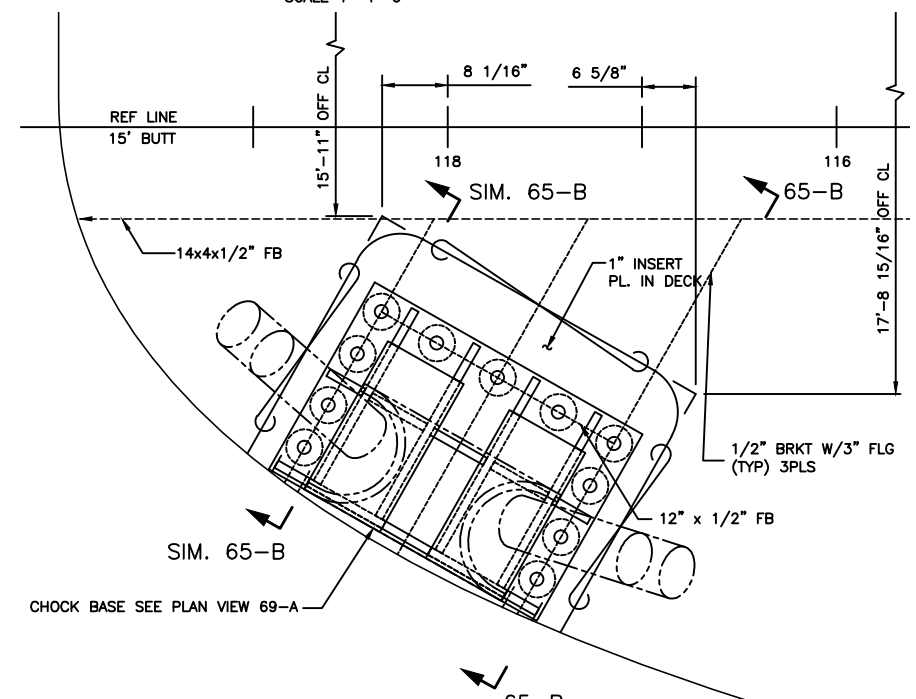
ELEVATION 71-C Δ 12,21
LOOKING INBD
SCALE 1"=1'-0"



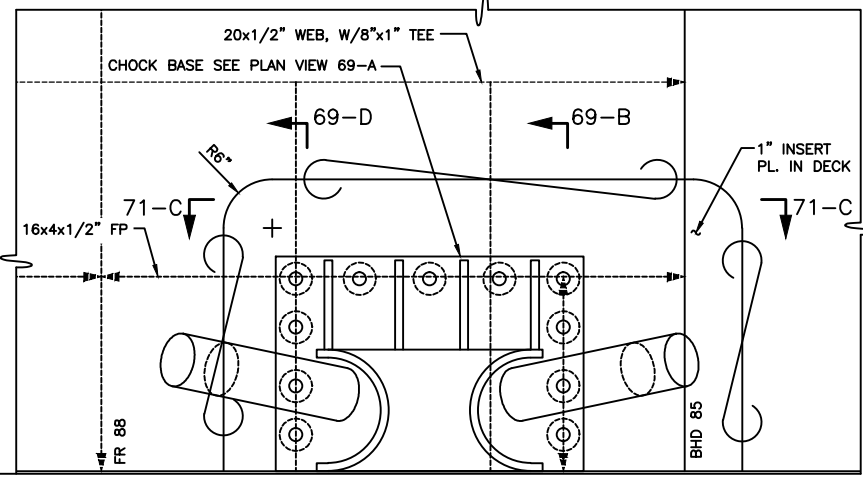
SECTION 69-B Δ 14
LOOKING AFT
SCALE 1"=1'-0"



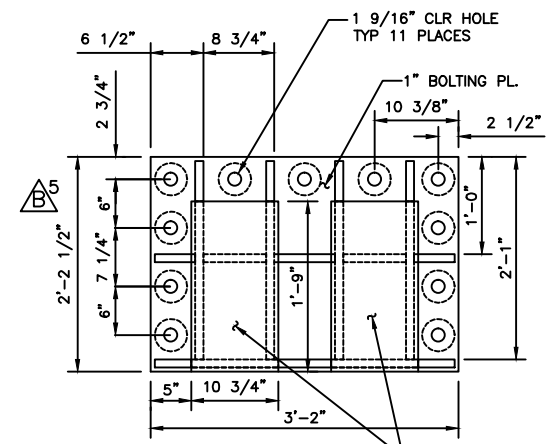
PLAN 67-B Δ 13
SHELL STIFFENER IN WAY OF TRANSOM CORNER CHOCK
SCALE 1"=1'-0"



PLAN 67-A Δ 14
REMOVABLE TRANSOM CORNER CHOCK
STBD SIDE SHOWN PORT SIM.
SCALE 1"=1'-0"

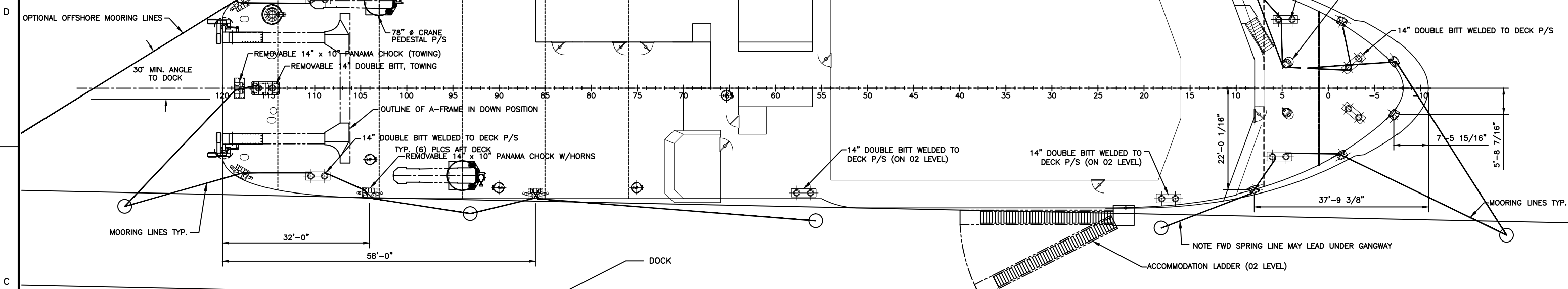


PLAN 71-A Δ 14
REMOVABLE CHOCK AFT MAIN DECK
STBD SIDE SHOWN PORT SIM.
SCALE 1"=1'-0"

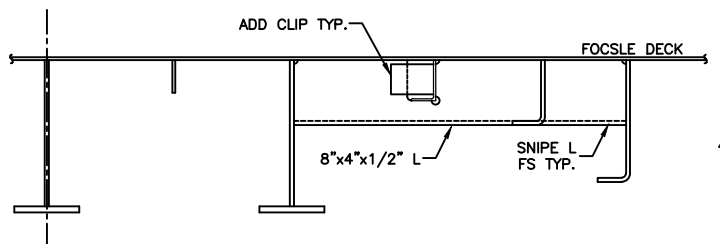


PLAN 69-A Δ 14
TYP. DIMENSIONS FOR REMOVABLE SIDE PANAMA CHOCKS
SCALE 1"=1'-0"

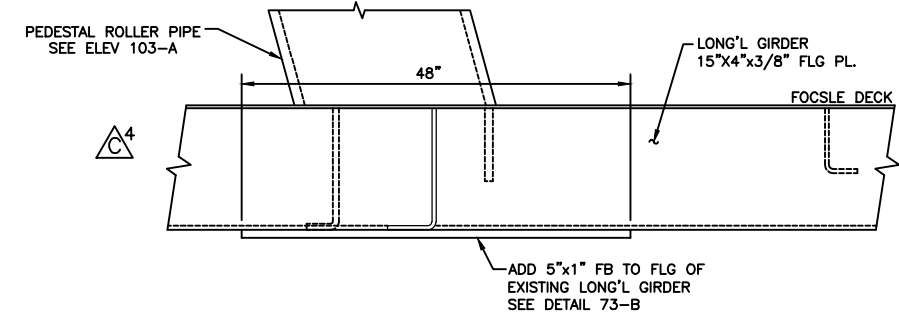
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ABS APVD:	DATE:	D	98042	0650-582-01	G
SCALE:		AS NOTED		SHEET 9 OF 15	



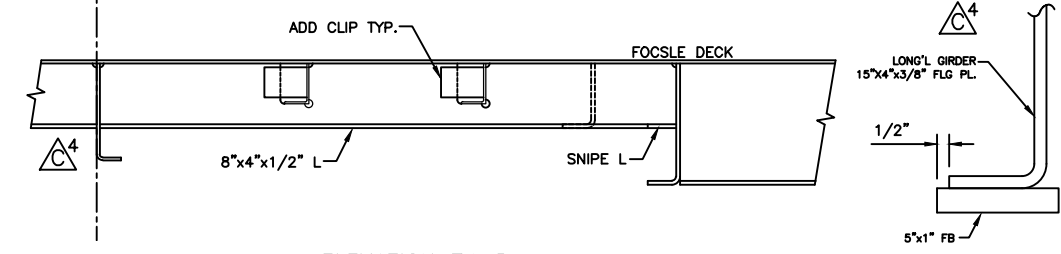
PLAN 76-C - MOORING LINE ARRANGEMENT
SCALE 3/32"=1'-0"



SECTION 79-C
STBD SIDE LOOKING FWD, PORT SIDE OPP HAND
SCALE 1" = 1'-0"

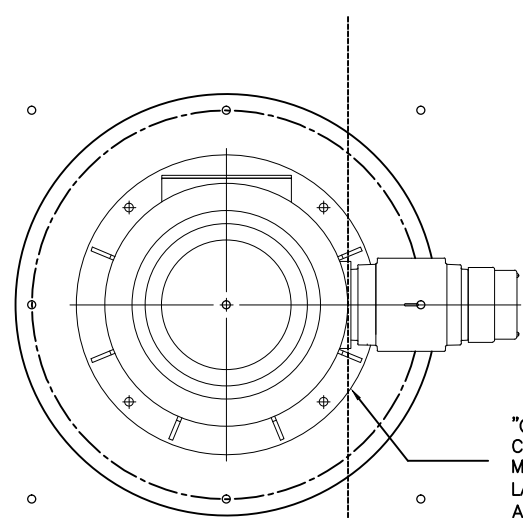


ELEVATION 74-C
LONG'L GIRDER 72" OFF CL
STBD SIDE LOOKING INBD, PORT SIDE OPP HAND
SCALE 1" = 1'-0"



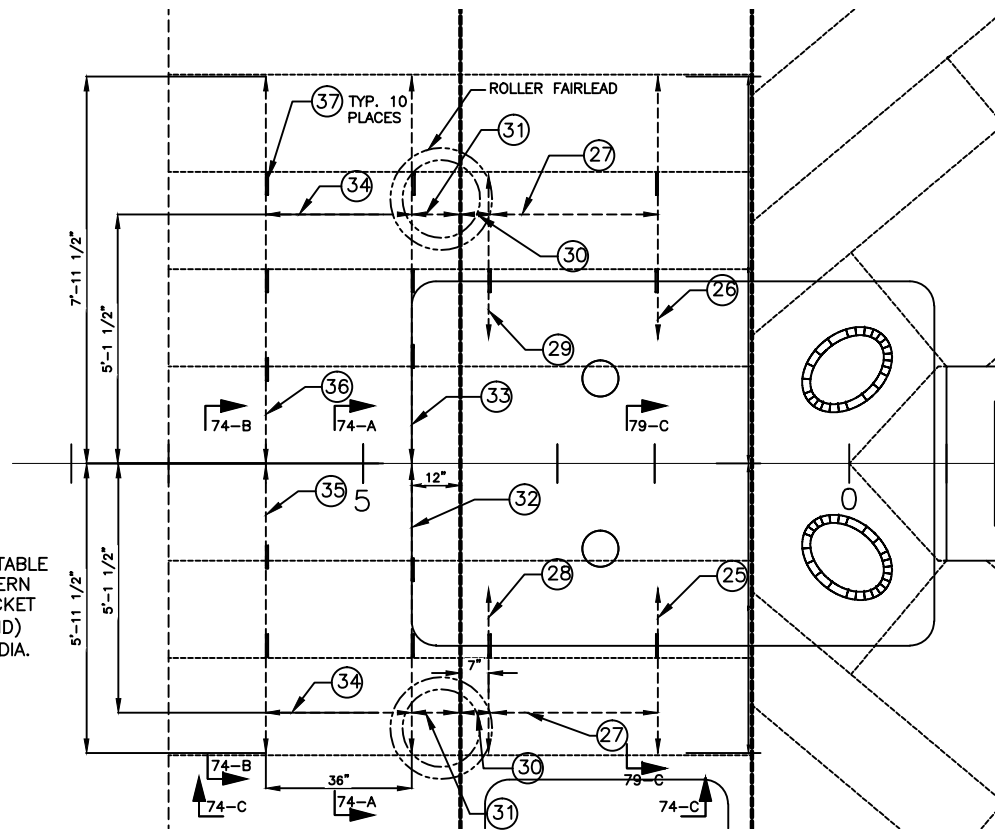
ELEVATION 74-B
FRAME 6
STBD SIDE LOOKING FWD, PORT SIDE OPP HAND
SCALE 1" = 1'-0"

DETAIL 73-B
FB RIDER PLATE ON LONG'L GIRDER
SCALE 3" = 1'-0"

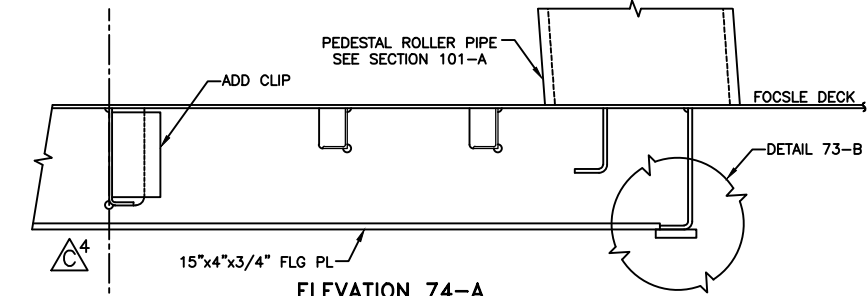


PLAN 79-A
REMOVABLE CAPSTAN FOUNDATION
SCALE 1"=1'-0"

"COASTAL MARINE" PORTABLE
CAPSTAN BOLTING PATTERN
MUST MATCH DECK SOCKET
LAYOUT (48" X 48" GRID)
AND HAVE A MIN. 52" DIA.
BASE PLATE,
SEE GN 14



PLAN 76-A
DECK STRUCTURE IN WAY PEDESTAL ROLLER FAIRLEAD
STBD SIDE SHOW PORT SIDE OPP HAND
SCALE 1/2"=1'-0"



ELEVATION 74-A
FRAME 4+12"
STBD SIDE LOOKING FWD, PORT SIDE OPP HAND
SCALE 1" = 1'-0"

USCG APVD:	DATE:	SIZE	FSCM CAGE NO	DRAWING NO.	REV
ABS APVD:	DATE:	D	98042	0650-582-01	G
SCALE		AS NOTED		SHEET 10 OF 15	

D

C

B

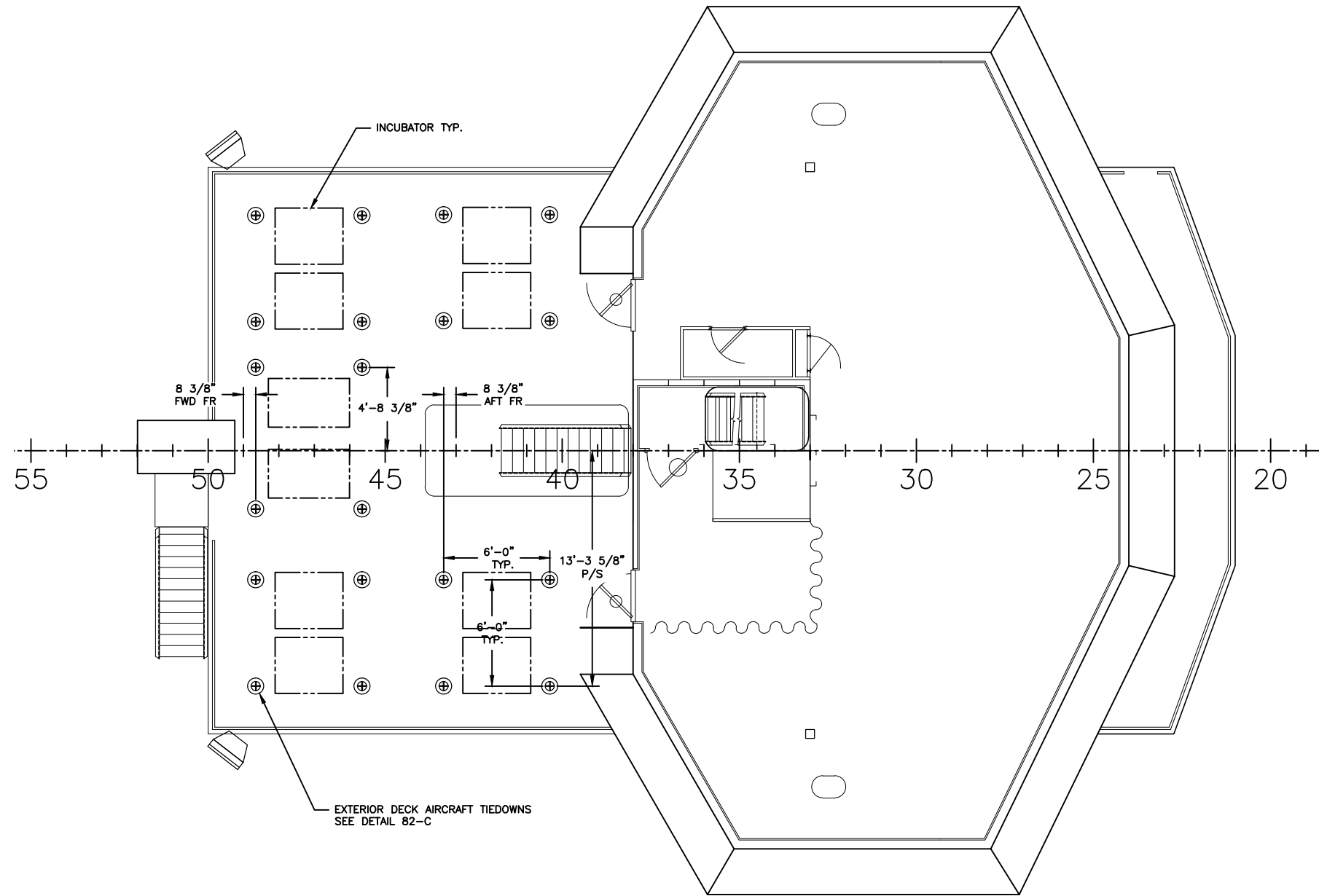
A

D

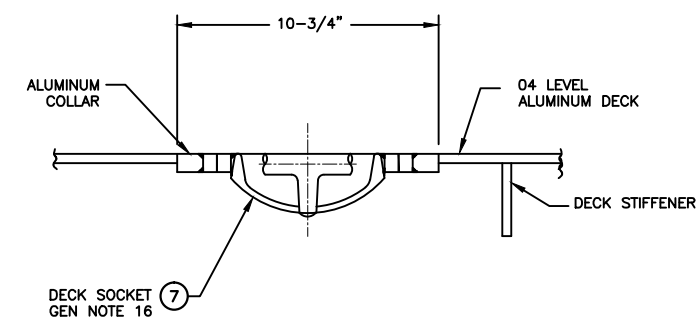
C

B

A

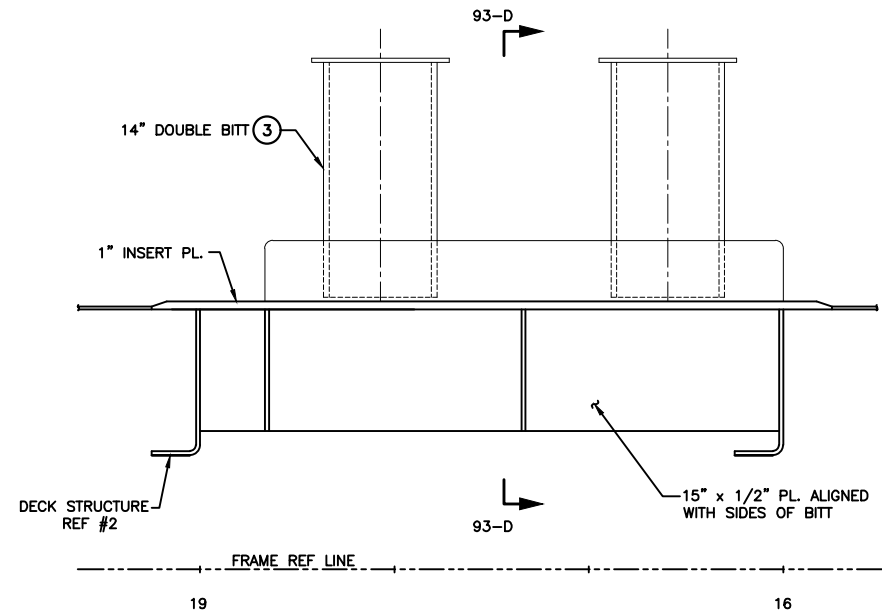


PLAN 85-B
 04 LEVEL
 SCALE: 1/4"=1'-0"

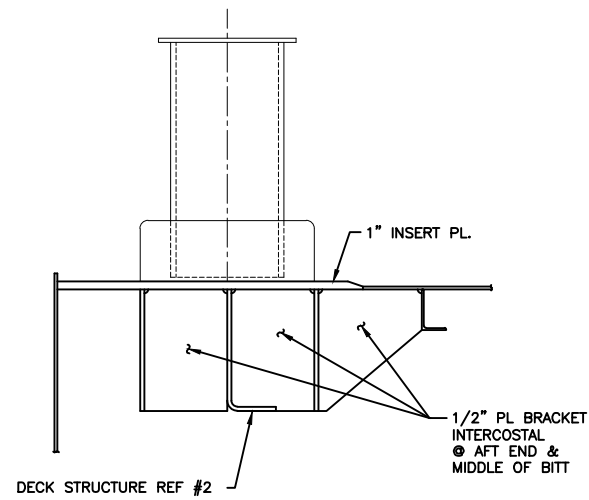


DETAIL 82-C
 AIRCRAFT DECK SOCKET
 NAVSEA TYPE XVIII
 SCALE: 3"=1'-0"

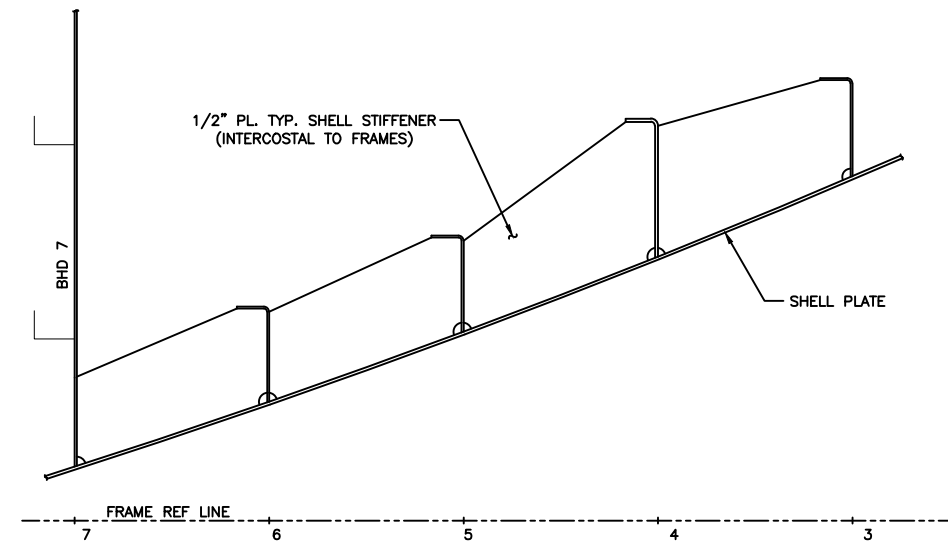
USCG APVD:	DATE:	SIZE	FSCM CAGE NO.	DRAWING NO.	REV
ABS APVD:	DATE:	D	98042	0650-582-01	G
		SCALE	AS NOTED		SHEET 11 OF 15



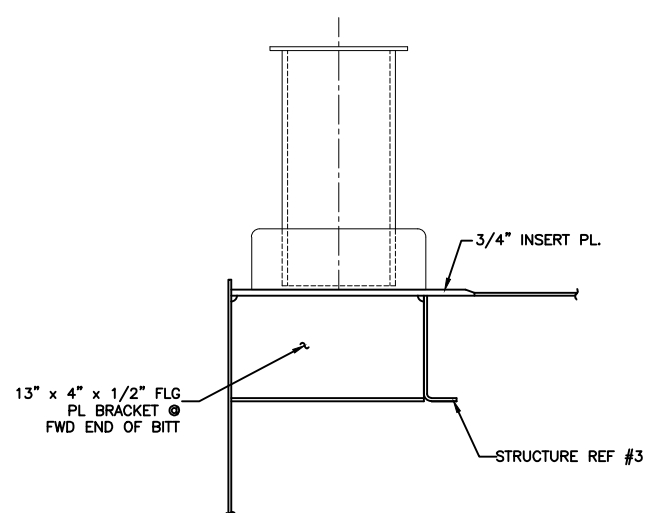
ELEVATION 94-D
 FWD 14" DOUBLE BITT FDN (02 LEVEL)
 PORT SIDE LKG OTBD, STBD SIM.
 SCALE 1"=1'-0"



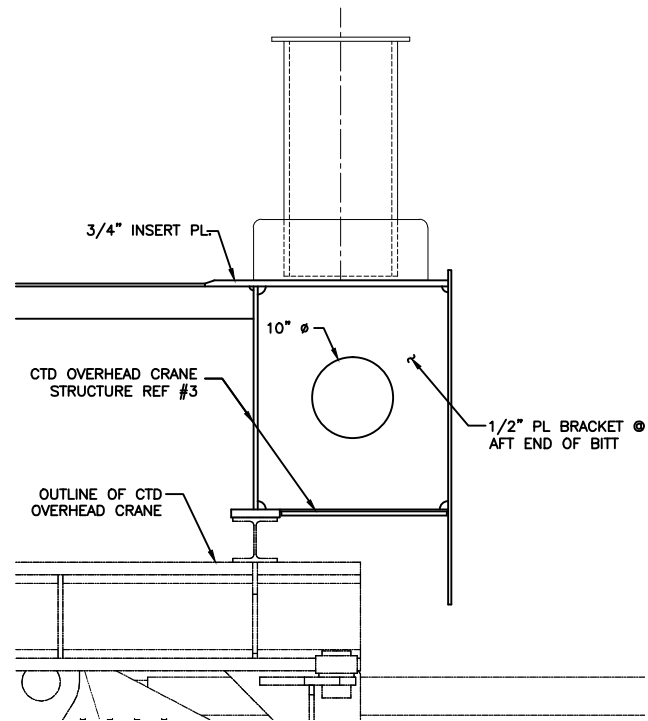
SECTION 93-D
 FWD 14" DOUBLE BITT FDN (02 LEVEL)
 PORT SIDE LKG FWD, STBD SIM.
 SCALE 1"=1'-0"



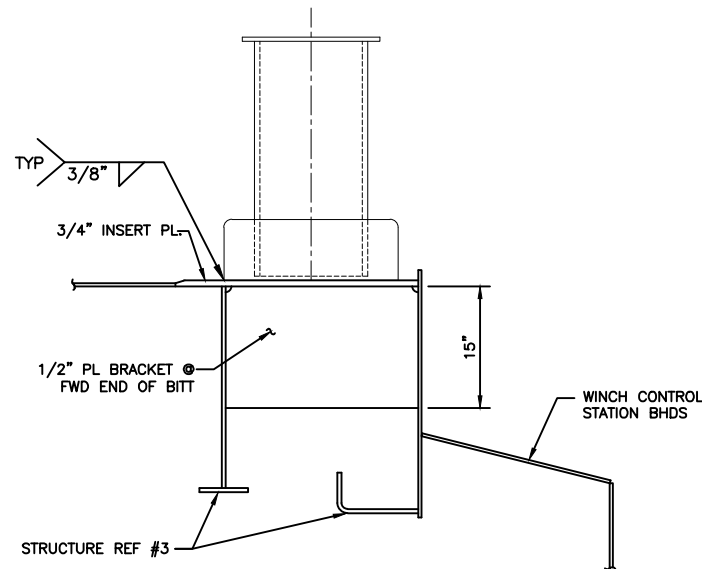
PLAN VIEW 90-D
 SIDE SHELL STRINGER IN WAY
 01 LEVEL (FOC'SLE DECK) AFT BITT
 STBD SIDE SHOWN PORT SIM.
 SCALE 1"=1'-0"



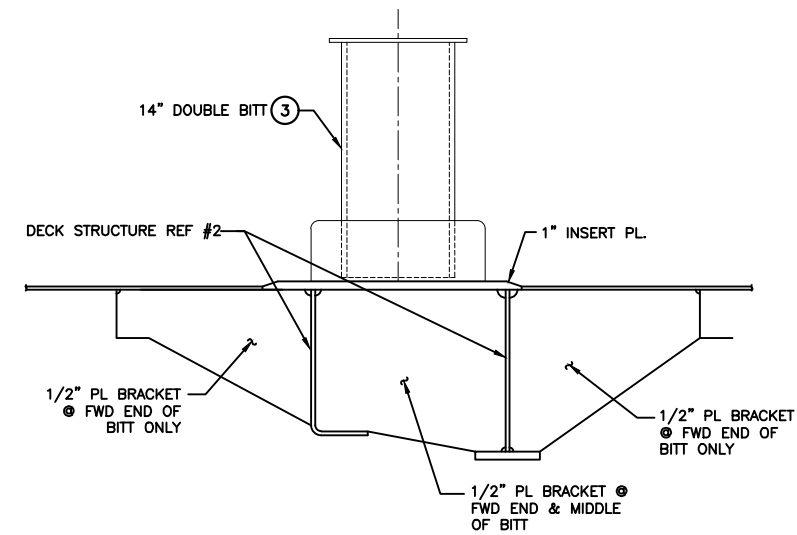
SECTION 95-A
 AFT 14" DOUBLE BITT FDN (02 LEVEL)
 PORT SIDE LKG FWD
 SCALE 1"=1'-0"



SECTION 94-A
 AFT 14" DOUBLE BITT FDN (02 LEVEL)
 STBD SIDE LKG FWD
 SCALE 1"=1'-0"



SECTION 92-A Δ_{E21}
 AFT 14" DOUBLE BITT FDN (02 LEVEL)
 STBD SIDE LKG FWD
 SCALE 1"=1'-0"



SECTION 90-B
 MAIN DECK 14" DOUBLE BITT FDN
 STBD SIDE LKG AFT, PORT SIM.
 SCALE 1"=1'-0"

USCG APVD:	DATE:	SIZE	FSCM CAGE NO	DRAWING NO.	REV
ABS APVD:	DATE:	D	98042	0650-582-01	G
SCALE		AS NOTED		SHEET 12 OF 15	

REVISIONS CONT'D.

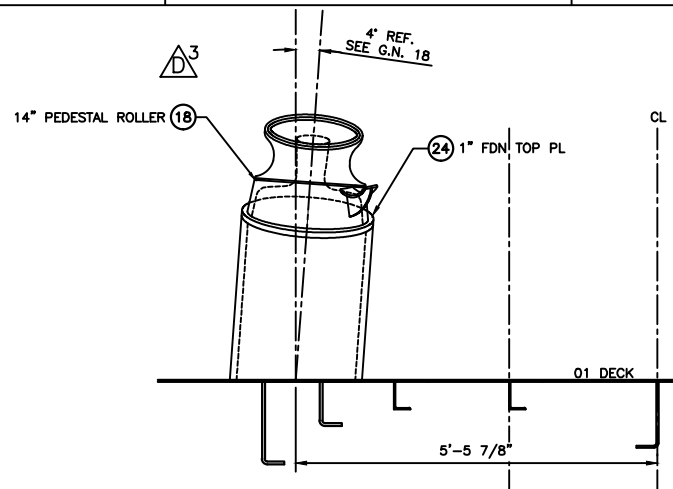
SHEET	REV.	DESCRIPTION	DATE	APPROVED
1,5,14 1,3,14	D	1. RELOCATED FLUSH BREECH BASE SOCKETS O2 LEVEL. 2. RELOCATED FLUSH BREECH BASE SOCKETS ON AFT MAIN WORKING DECK. 3. CHANGED FIND NUMBERS TO REFLECT BILL OF MATERIAL.		
13,14		4. DECREASED HORIZONTAL BRACKETS FOR CHOCKS. 5. ADDED DETAIL 107-A. 6. REVISED PLAN VIEW 76-A. 7. REVISED GENERAL NOTE 10 AND 11. 8. ADDED GENERAL NOTE 20.	11/01/11	J. SLATER
4 14 10 1				
ALL 1	E	MINOR NON-TECHNICAL CHANGES. ADD: 1) AFT SCIENTIFIC VAN TO MAIN DECK. MODIFY: 2) GN 20 DID READ "...LOADED ON BOTH POST SIMULTANEOUSLY." ADD: 3) AFT SCIENTIFIC VAN TO MAIN DECK. ADD: 4) SECTION CALLOUT "99-A" TO PLAN 31-A. ADD: 5) FN 39 TO SECTION 54-A. MODIFY: 6) SECTION 52-D FN WAS 12. 7) ELEVATION 50-D BOLT TAP SIZE FROM 1"-BUNC. 8) PLAN 50-C, 54-C, 55-B, & DETAIL 54-B FROM SOLID BAR TO ROUND BAR. 9) PLAN 50-C FN 39 WAS FN 38, DETAIL 49-A FN 17 WAS FN 2. ADD: 10) FN 39 TO PLAN 62-A. MODIFY: 11) PLAN 62-A FROM SOLID BAR TO ROUND BAR. ADD: 12) FN 39 TO PLAN 69-D, ELEVATION 71-C & SECTION 65-B. MODIFY: 13) DETAIL 67-D WAS 57-D, PLAN 67-B WAS 57-B. 14) SECTION 65-B, 69-B, 69-D, PLAN 67-A, 69-A & 71-A FROM SOLID BAR TO ROUND BAR. ADD: 15) FN 38 & 39, & MATERIAL FOR FN 23 & 25-37 TO BOM. 16) DETAIL 98-A & SECTION 99-A. MODIFY: 17) FN 21 & 22 QTY WAS 12, FN 39 QTY WAS 77. DELETE: 18) FN 38. ADD: 19) AFT SCIENTIFIC VAN TO PLAN 107-B. MODIFY: 20) SECTION 110-A INTERCOSTAL WAS A 4" x 5/16" FB. ADD: 21) WELD SYMBOLS. MODIFY: 22) WELD SYMBOLS.		
3 4 7				
8				
9				
13				
14				
4,7-9, 12&13 4			5/08/12	J. SLATER
SHT 15 SHT 1 SHT 15 SHT 4	F	1. ADD SHEET 15 TO DRAWING. 2. DELETED GENERAL NOTE 10, 11, + 19. 3. ADDED GENERAL NOTES 21-28. 4. ADDED STRUCTURE TO PLAN 31-A FOR THE BITTS BOTH PORT AND STBD TO SATISFY ABS COMMENTS PER ECN 812-01-009. 5. ADDED ROUND BAR TO FREEING PORTS IN DETAIL 98-A TO SATISFY ABS COMMENTS PER ECN 582-01-008. 6. ADDED SECTION ARROWS TO PLAN VIEW 107-B. 7. ADDED FIND NO. 40-44 TO BOM PER ECN 582-01-005 + 582-01-007. 8. ADDED DIMENSION TO PLAN 107-B PER ECN 582-01-006. 9. MODIFIED DETAIL 52-A PER ECN 582-01-005 TO SHOW THE BIGGER DIAMETER INTERIOR DECK SOCKET LOCATED IN THE SCIENCE HOLD. 10. PER ABS COMMENT CHANGED TORQUE VALUE FOR BOLT 582-01-03008.		
SHT 13				
SHT 14 SHT 13,15				
SHT 14				
SHT 7				
SHT 1				
ALL		11. Drawing Revision F Issued "AS-BUILT"	8/15/13	J. SLATER
4-6,14	G	1. ADD HATCH DECK SOCKETS PER UAF COMMENTS	1/20/14	J. SLATER

BILL OF MATERIALS (CONTINUED) Δ 15, 17 & 18

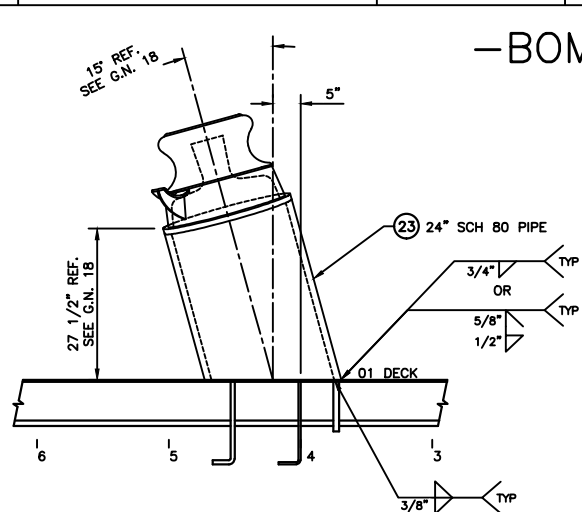
QUANTITIES ARE FOR ONE SHIP

FIND NO.	MMC PART NUMBER	DESCRIPTION	QTY	UOM	SIZE	MATERIAL	SPEC	STANDARD	UNIT WT (LBS)	REMARKS
14	582-01-00001	MOORING CAPSTAN, PORTABLE	1	EA	-					IAW PTS 582-01-1
15	582-01-0100B	RATCHETING BOX WRENCH 1/2" FIXED HEX BIT	12	EA	-					
16	582-01-0101B	RATCHETING BOX WRENCH 1/4" FIXED HEX BIT	12	EA	-					
17	582-01-01030	INTERIOR DECK SOCKET	40	EA	SUITABLE FOR A 1/2" DIAMETER BOLT, NC, MIN THREADED LNTH OF 3/4"	ALUM				EXCESS TO BE KEPT IS SHIPS STORES
18	582-01-03003	14" ROLLER FAIRLEAD-PEDESTAL	2	EA	-					SCHOELLHORN-ALBRECHT
19	582-01-0103A	HEX HEAD SOCKET SET SCREW	40	EA	1/2"-13UNC X 3/4" LONG	ALUM		ASME B.18.3-1998		
20	582-01-03001	14" DOUBLE BITT, BOLTED	1	EA	21" W X 64" L X 30' H	STEEL A36				SCHOELLHORN-ALBRECHT
Δ 3 Δ 3	21	582-01-03011	FLUSH BREECH BASE SOCKET	16	EA	7.08" DIAMETER X 1.25" HIEGHT	CAST STEEL			PECK AND HALE MODEL F700-1-0C
	22	582-01-03012	FLUSH BREECH BASE SOCKET COVER	16	EA	-				
	23	582-01-03013	24" SCH 80 PIPE	2	EA	24" PIPE	ASTM GR 106B			LENGTH 3'
	24	582-01-018	24" DIAMETER X 1" THK PLATE	2	EA	24" DIA X 1" THK	STEEL ABS DH36			FABBED PART
	25	582-01-001	ANGLE	1	EA	L 8" X 4" X 1/2"	STEEL ABS DH36			LENGTH 3'-4 3/4"
	26	582-01-002	ANGLE	1	EA	L 8" X 4" X 1/2"	STEEL ABS DH36			LENGTH 5'-4 3/4"
	27	582-01-003	FLANGE PLATE	2	EA	FLG PL 8" X 4" X 1"	STEEL ABS DH36			LENGTH 3'-4 3/4"
	28	582-01-005	FLAT BAR	1	EA	FB 9" X 1"	STEEL ABS DH36			LENGTH 3'-4 3/4"
	29	582-01-006	FLAT BAR	1	EA	FB 9" X 1"	STEEL ABS DH36			LENGTH 3'-4 3/4"
	30	582-01-007	FLANGE PLATE	2	EA	FLG PL 8" X 4" X 1"	STEEL ABS DH36			LENGTH 7"
	31	582-01-009	FLANGE PLATE	2	EA	FLG PL 8" X 4" X 1"	STEEL ABS DH36			LENGTH 11 1/2"
	32	582-01-011	FLANGE PLATE	1	EA	FLG PL 15" X 4" X 3/4"	STEEL ABS DH36			LENGTH 5'-11 1/8"
	33	582-01-012	FLANGE PLATE	1	EA	FLG PL 15" X 4" X 3/4"	STEEL ABS DH36			LENGTH 7'-11 1/4"
	34	582-01-013	FLANGE PLATE	2	EA	FLG PL 8" X 4" X 1"	STEEL ABS DH36			LENGTH 2'-11 1/4"
	35	582-01-015	ANGLE	1	EA	L 8" X 4" X 1/2"	STEEL ABS DH36			LENGTH 5'-11 1/8"
	36	582-01-016	ANGLE	1	EA	L 8" X 4" X 1/2"	STEEL ABS DH36			LENGTH 7'-11 1/2"
	37	582-01-017	PLATE	10	EA	COLLAR PLATE	STEEL ABS DH36			
	38	582-01-03009	4" ROUND BAR	14	EA	4" DIA X 4" DEEP W/ 1" DIA HOLE				
	39	582-01-03010	4" ROUND BAR	91	EA	4" DIA. X 4" DEEP W/ 1-1/2" DIA. HOLE	STEEL ABS AH36			
	40	582-01-01010MOD	INTERIOR DECK SOCKET	AS REQD.	EA	-	SST			DRILL AND TAP EXISTING DECK SOCKETS FOR A 1"-BUNC BOLT X 7/8" DEPTH

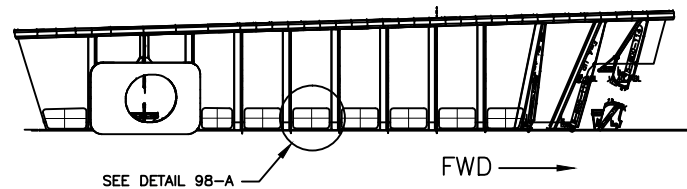
-BOM CON'T ON SHT 15



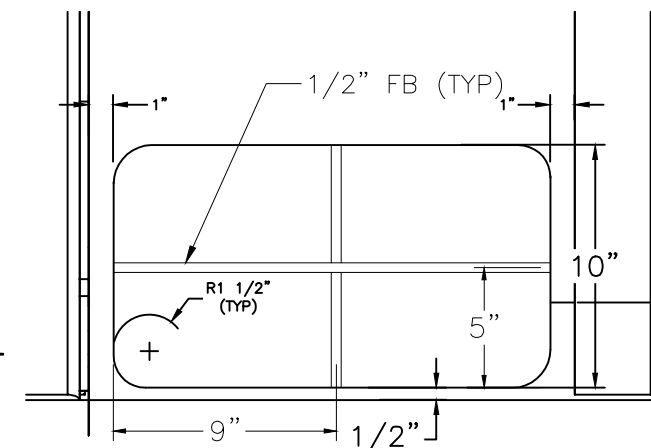
SECTION 103-A Δ 5
PORT SIDE LOOKING FWD, STBD OPP. HAND
SCALE 3/4"=1'-0"



SECTION 101-A Δ 21
PORT SIDE LOOKING OTBD, STBD OPP. HAND
SCALE 3/4"=1'-0"

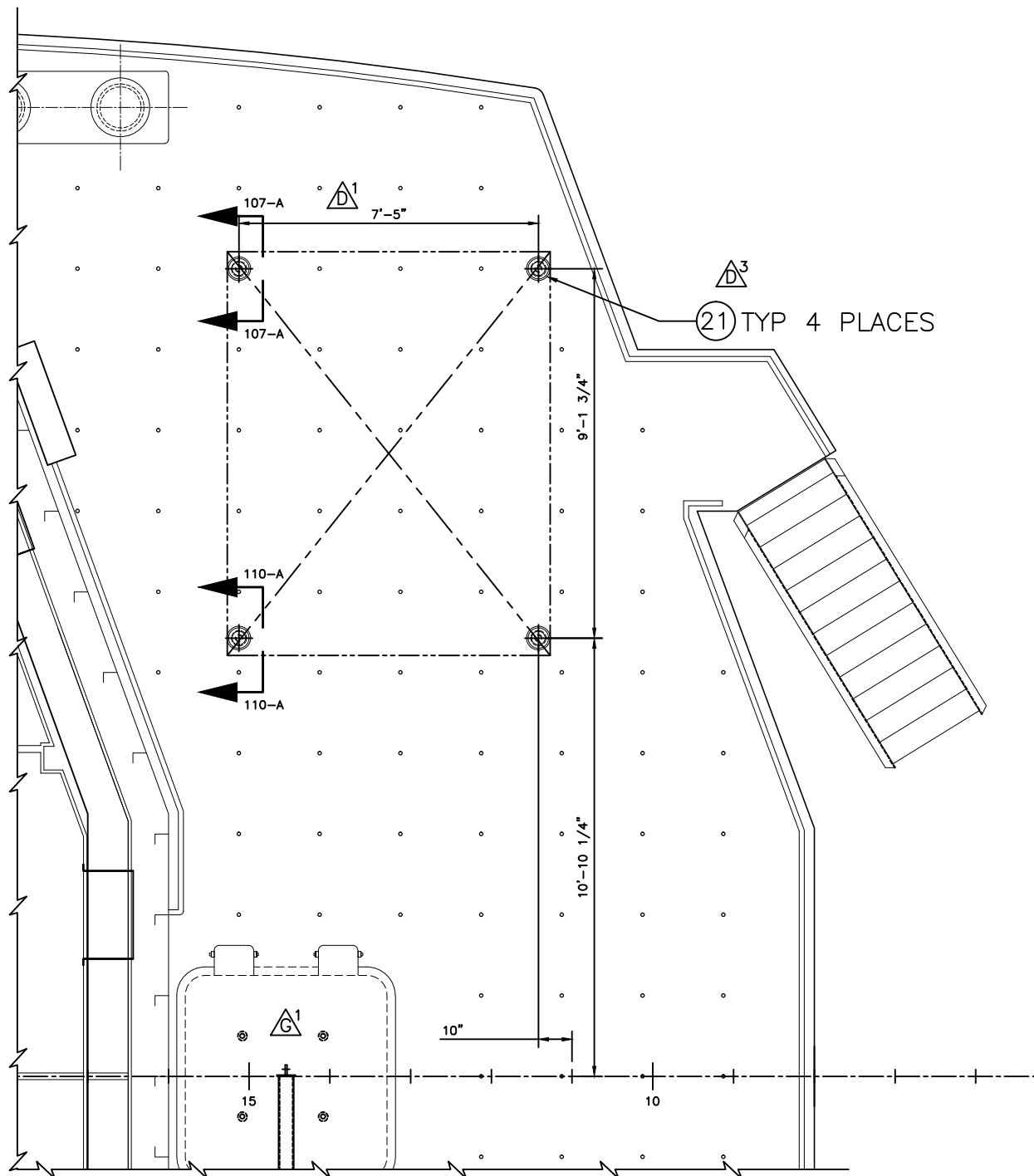


SECTION 99-A Δ 16
PORT SIDE BULWARKS LOOKING OTBD
STBD SIDE SIM BUT OPP.
SCALE 1/4"=1'-0"



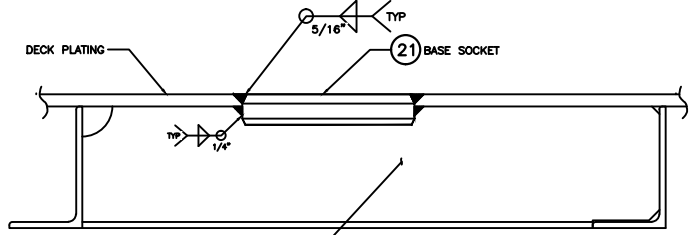
DETAIL 98-A Δ 16 Δ 5
FREEING PORT
SCALE 1:4

USCG APVD:	DATE:	SIZE	FSCM CAGE NO	DRAWING NO.	REV
ABS APVD:	DATE:	D	98042	0650-582-01	G
SCALE AS NOTED			SHEET 13 OF 15		



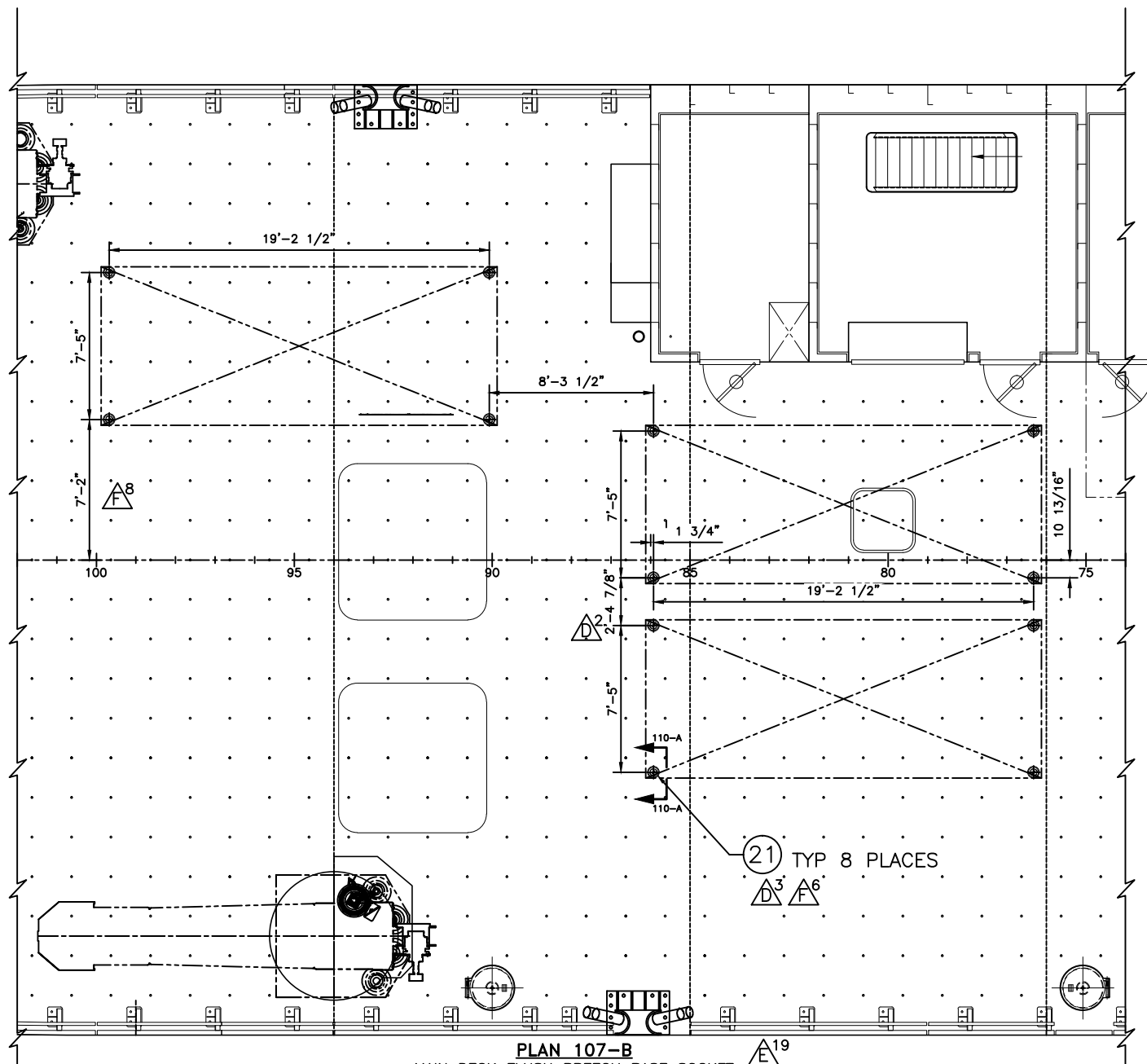
PLAN 111-B

02 DECK
FLUSH BREECH BASE SOCKET
PLACEMENT FOR VAN
SCALE 1/2"=1'-0"



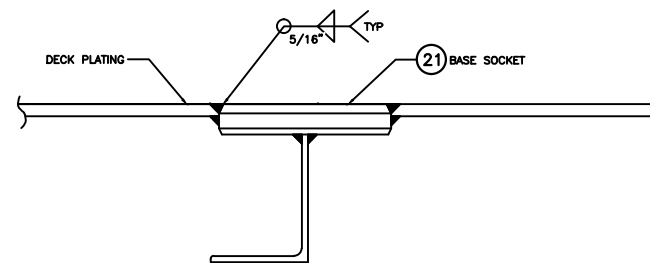
SECTION VIEW 110-A
FLUSH BREECH BASE SOCKET
FOR LOCATING DIMENSIONS
SEE PLAN 111-B
SCALE 1/4"=1'-0"

5" X 3" X 1/4" L TYP FOR PLAN 111-B
6" X 4" X 3/8" L TYP FOR PLAN 107-B
IN WAY OF BASE SOCKETS



PLAN 107-B

MAIN DECK FLUSH BREECH BASE SOCKET
PLACEMENT FOR VANS
SCALE 1/4"=1'-0"



SECTION VIEW 107-A
FLUSH BREECH BASE SOCKET
FOR LOCATING DIMENSIONS
SEE PLAN 111-B
SCALE 1/4"=1'-0"

USCG APVD:	DATE:	SIZE	FSCM CAGE NO	DRAWING NO.	REV
ABS APVD:	DATE:	D	98042	0650-582-01	G
SCALE		AS NOTED		SHEET 14 OF 15	

BILL OF MATERIALS (CONTINUED)

QUANTITIES ARE FOR ONE SHIP

GENERAL NOTES CON'T

FIND NO.	MMC PART NUMBER	DESCRIPTION	QTY	UOM	SIZE	MATERIAL	SPEC	STANDARD	UNIT WT (LBS)	REMARKS
41	582-01-04000	SHOULDER EYEBOLT	12	EA	3/8"-16UNC X 1-1/4" LONG	SST 316L	COML			FOR REM BULWARKS LIFELINES McMASTER-CARR PN 8891T88 OR EQL
42	582-01-04001	HEX NUT, SERRATED FLANGE	12	EA	3/8"-16UNC	SST 316L	COML			FOR REM BULWARKS LIFELINES McMASTER-CARR PN 91343A300 OR EQL
43	582-01-04002	FLAT WASHER	24	EA	3/8" NOM X 1" OD	SST 316L	COML			FOR REM BULWARKS LIFELINES McMASTER-CARR PN 90107A051 OR EQL
44	582-01-04003	SHACKLE, WITH SCREW PIN	4	EA	1/2" DIA PIN	SST 316L	COML			FOR LIFTING REM BULWARKS McMASTER-CARR PN 3583T83 OR EQL

21. THE ROLLER FAIRLEADS ARE TO BE DESIGNED BASED ON THE MAXIMUM HAULING IN FORCE OF THE GYPSY HEAD, 25,600 POUNDS. THE DESIGN LOAD FOR THE "ROLLER BUTTON FEA" WAS APPLIED AT 40" ABOVE THE DECK.
22. THE AFT 02 LEVEL MOORING BITS ARE DESIGNED TO A SWL (MOORING LINE BREAKING STRENGTH) OF 45,200 LBS.
23. THE FWD 02 LEVEL MOORING BITS ARE APPROVED TO A SWL OF 100,000 LBS.
24. ABS REVIEW OF THE UNDER DECK STRUCTURE IN WAY OF THE MOORING EQUIPMENT WAS BASED ON THE MOORING LINE ARRANGEMENT SHOWN IN DETAIL "PLAN 76-C"
25. THE WELDED MAIN DECK MOORING BITS ARE DESIGNED TO A SAFE WORK LOAD (MOORING LINE BREAKING STRENGTH) OF 45,200 LBS.
26. THE MAIN DECK REMOVABLE BOLTED MOORING BITT IS APPROVED TO A SAFE WORKING LOAD (MOORING LINE BREAKING STRENGTH) OF 140,000 LBS.
27. THE 01 LEVEL MOORING BITS ARE TO BE DESIGNED TO A SAFE WORKING LOAD (TOWING LINE BREAKING STRENGTH) OF 116,400 LBS.
28. FLUSH BREECH BASE SOCKETS HAVE BEEN REVIEWED TO SUPPORT A CONTAINER LOAD OF 35,000 LBS OR 8,750 LBS PER SOCKET.



USCG APVD:	DATE:	SIZE	FSCM CAGE NO	DRAWING NO.	REV
ABS APVD:	DATE:	D	98042	0650-582-01	G
SCALE		AS NOTED		SHEET 15 OF 15	