

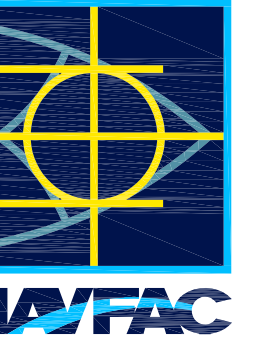
# STANDARD BROWS AND PLATFORMS

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## ORIGINAL SOURCE OF DRAWING

DEPARTMENT OF THE NAVY  
WASHINGTON, D.C. 20350  
NAVAL FACILITIES ENGINEERING COMMAND  
STANDARD BROWS AND PLATFORMS  
NAVFAC NO. 1404694 THRU 1404725



GENERAL REVISIONS	DATE	APPR
1	7/12	

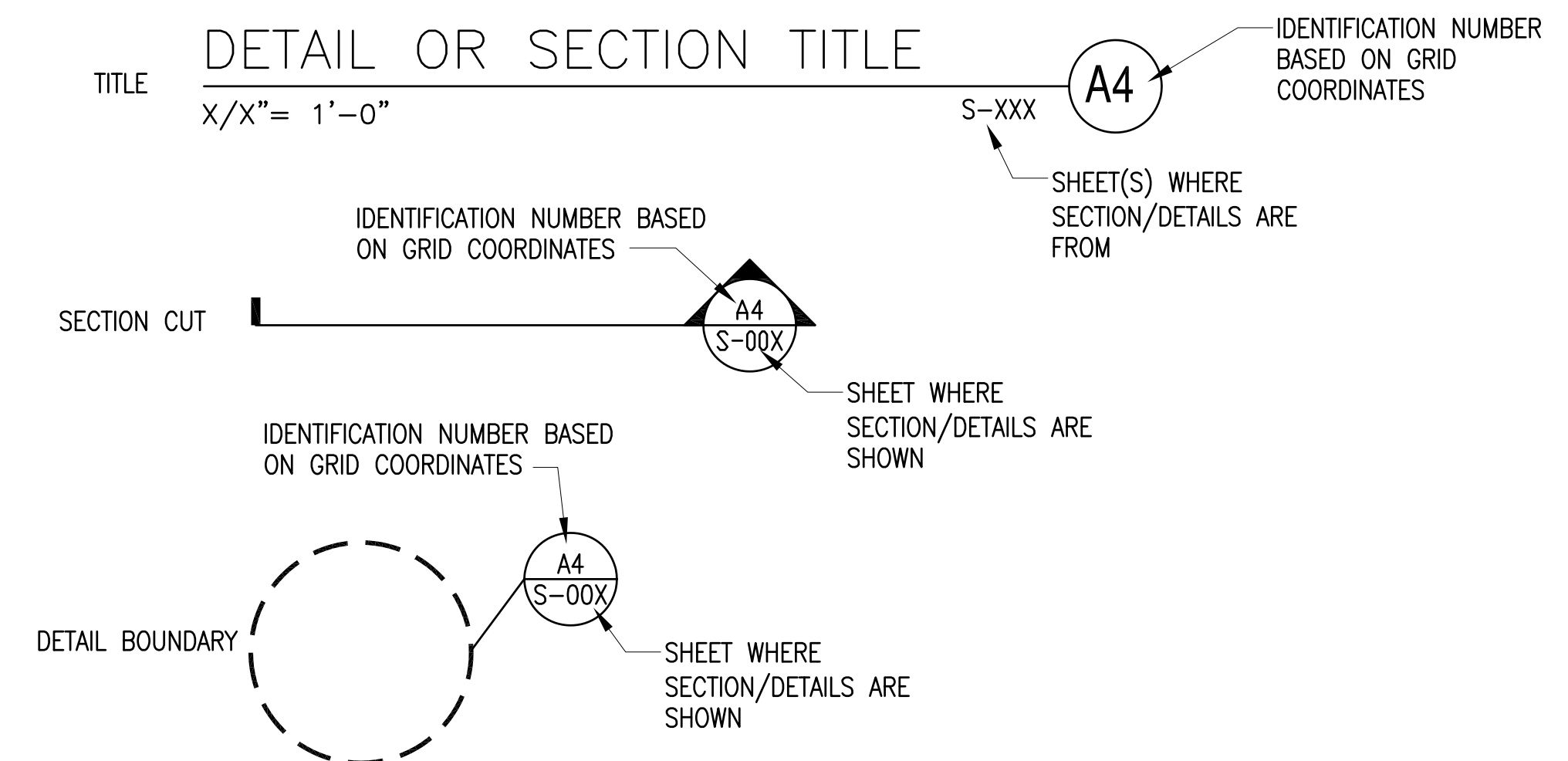
DESCRIPTION	SYM

APPROVED
FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO
DES DBC DRW DBC CHK FBC
PM/DM F. B. COLE
BRANCH MANAGER
CHIEF ENG/ARCH E. J. GALLAHER
FIRE PROTECTION

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC  
STANDARD DRAWINGS  
BROWS AND PLATFORMS  
INDEX OF DRAWINGS

SCALE	AS NOTED
PROJECT NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	SD1405000
SHEET	1 OF 42
<b>GI001</b>	

## SHEET SYMBOLS



METRIC PROPERTIES OF STRUCTURAL SHAPES (ANGLES)	
METRIC (mm)	ENGLISH (in.)
ANGLE - 38 x 38 x 5	ANGLE - 1-1/2 x 1-1/2 x 0.187
ANGLE - 51 x 38 x 6	ANGLE - 2 x 1-1/2 x 0.25
ANGLE - 51 x 51 x 3	ANGLE - 2 x 2 x 0.125
ANGLE - 51 x 51 x 5	ANGLE - 2 x 2 x 0.187
ANGLE - 51 x 51 x 6	ANGLE - 2 x 2 x 0.25
ANGLE - 51 x 51 x 10	ANGLE - 2 x 2 x 0.375
ANGLE - 64 x 51 x 5	ANGLE - 2-1/2 x 2 x 0.187
ANGLE - 64 x 51 x 6	ANGLE - 2-1/2 x 2 x 0.25
ANGLE - 64 x 64 x 5	ANGLE - 2-1/2 x 2-1/2 x 0.187
ANGLE - 64 x 64 x 6	ANGLE - 2-1/2 x 2-1/2 x 0.25
ANGLE - 64 x 51 x 10	ANGLE - 2-1/2 x 2 x 0.375
ANGLE - 76 x 51 x 6	ANGLE - 3 x 2 x 0.25
ANGLE - 76 x 64 x 6	ANGLE - 3 x 2-1/2 x 0.25
ANGLE - 76 x 76 x 6	ANGLE - 3 x 3 x 0.25
ANGLE - 76 x 76 x 8	ANGLE - 3 x 3 x 0.313
ANGLE - 89 x 89 x 13	ANGLE - 3-1/2 x 3-1/2 x 0.5
ANGLE - 89 x 64 x 10 x 64	ANGLE - 3-1/2 x 2-1/2 x 0.375 x 2-1/2
ANGLE - 89 x 64 x 10 x 1448	ANGLE - 3-1/2 x 2-1/2 x 0.375 x 4'-9"
ANGLE - 89 x 76 x 6	ANGLE - 3-1/2 x 3 x 0.25
ANGLE - 89 x 76 x 8	ANGLE - 3-1/2 x 3 x 0.313
ANGLE - 89 x 89 x 6	ANGLE - 3-1/2 x 3-1/2 x 0.25
ANGLE - 89 x 89 x 8	ANGLE - 3-1/2 x 3-1/2 x 0.313
ANGLE - 102 x 76 x 6	ANGLE - 4 x 3 x 0.25
ANGLE - 102 x 89 x 8	ANGLE - 4 x 3-1/2 x 0.313
ANGLE - 102 x 89 x 10 x 1346	ANGLE - 4 x 3-1/2 x 0.375 x 4'-5"
ANGLE - 102 x 102 x 8	ANGLE - 4 x 4 x 0.313
ANGLE - 102 x 102 x 10	ANGLE - 4 x 4 x 0.375
ANGLE - 102 x 102 x 12	ANGLE - 4 x 4 x 0.5
ANGLE - 102 x 102 x 16	ANGLE - 4 x 4 x 0.625
ANGLE - 127 x 76 x 13	ANGLE - 5 x 3 x 0.5
ANGLE - 127 x 127 x 10	ANGLE - 5 x 5 x 0.375
ANGLE - 152 x 102 x 10	ANGLE - 6 x 4 x 0.375
ANGLE - 152 x 152 x 12	ANGLE - 6 x 6 x 0.5

METRIC PROPERTIES OF STRUCTURAL SHAPES (OAK RUBS)	
METRIC (mm)	ENGLISH (in.)
51 x 152	2" x 6"

METRIC PROPERTIES OF STRUCTURAL SHAPES (PINS - DIAMETER)	
METRIC (mm)	ENGLISH (in.)
25	1"
51	2"

METRIC PROPERTIES OF STRUCTURAL SHAPES (PLATES)	
METRIC (mm)	ENGLISH (in.)
3	1/8"
5	3/16"
6	1/4"
8	5/16"
10	3/8"
13	1/2"
13 x 152	1/2" x 6"
13 x 203	1/2" x 8"
19	3/4"
19 x 152	3/4" x 6"
25	1"
50 x 100 x 6	2" x 4" x 1/4"
51 x 5	2" x 1/2"
51 x 8	2" x 5/16"
57 x 11	2-1/4" x 7/16"
76 x 10	3" x 3/8"
89 x 13	3-1/2" x 1/2"
89 x 64 x 6	3-1/2" x 2-1/2" x 1/4"
102 x 6 x 102	4" x 1/4" x 4"
102 x 13 x 178	4" x 1/2" x 7"
102 x 19 x 102	4" x 3/4" x 4"
102 x 102 x 16	4" x 4" x 5/8"
102 x 152 x 10	4" x 6" x 3/8"
140 x 29 x 140	5-1/2" x 1-1/8" x 5-1/2"
152 x 13 x 152	6" x 1/2" x 6"
152 x 13 x 356	6" x 1/2" x 1'-2"
152 x 51 x 3	2-1/2" x 2" x 1/8"
162 x 51 x 3	6" x 2" x 1/8"
203 x 51 x 3	8" x 2" x 1/8"
203 x 203	8" x 8"
229 x 51 x 3	9" x 2" x 1/8"
254 x 13 x 32	10" x 1/2" x 1-1/4"
254 x 51 x 3	10" x 2" x 1/8"
305 x 29 x 305	12" x 1-1/8" x 12"
305 x 51 x 3	12" x 2" x 1/8"
305 x 51 x 5	12" x 2" x 3/16"
380 x 152 x 10	15" x 6" x 3/8"
610 x 25 x 610	24" x 1" x 24"

METRIC PROPERTIES OF STRUCTURAL SHAPES (RINGS - DIAMETER)	
METRIC (mm)	ENGLISH (in.)
19	3/4"

METRIC PROPERTIES OF STRUCTURAL SHAPES (PIPES - DIAMETER)	
METRIC (mm)	ENGLISH (in.)
38	1-1/2"
51	2"
64	2-1/2"
76	3"
89	3-1/2"
102	4"
127	5"
152	6"

METRIC PROPERTIES OF STRUCTURAL SHAPES (RIVETS - DIAMETER)	
METRIC (mm)	ENGLISH (in.)
13	1/2"

METRIC PROPERTIES OF STRUCTURAL SHAPES (RODS - DIAMETER)	
METRIC (mm)	ENGLISH (in.)
6	1/4"
38	1-1/2"
51	2"
64	2-1/2"
153	6-1/32"

METRIC PROPERTIES OF STRUCTURAL SHAPES (STEEL ROLLERS - DIAMETER)	
METRIC (mm)	ENGLISH (in.)
153	6-1/32"

METRIC PROPERTIES OF STRUCTURAL SHAPES (STUDS - DIAMETER)	
METRIC (mm)	ENGLISH (in.)
19	3/4"

METRIC PROPERTIES OF STRUCTURAL SHAPES (TAP SCREWS - DIAMETER)	
METRIC (mm)	ENGLISH (in.)
10	3/8"

METRIC PROPERTIES OF STRUCTURAL SHAPES (TIMBERS)	
METRIC (mm)	ENGLISH (in.)
64 x 356 x 914	2'-6" x 14" x 3'-0"

METRIC PROPERTIES OF STRUCTURAL SHAPES (TREADS)	
METRIC (mm)	ENGLISH (in.)
23 x 1219	9" x 4'-0"

METRIC PROPERTIES OF STRUCTURAL SHAPES (W SHAPES)	
METRIC (mm x kg/m)	ENGLISH (in. x Lb/Ft.)
W 75 x 2.11	W 3 x 1.42
W 150 x 6.4	W 6 x 4.3
W 250 x 13.04	W 10 x 8.76

METRIC PROPERTIES OF STRUCTURAL SHAPES (BARS - DIAMETER)	
METRIC (mm)	ENGLISH (in.)
44	1-3/4"

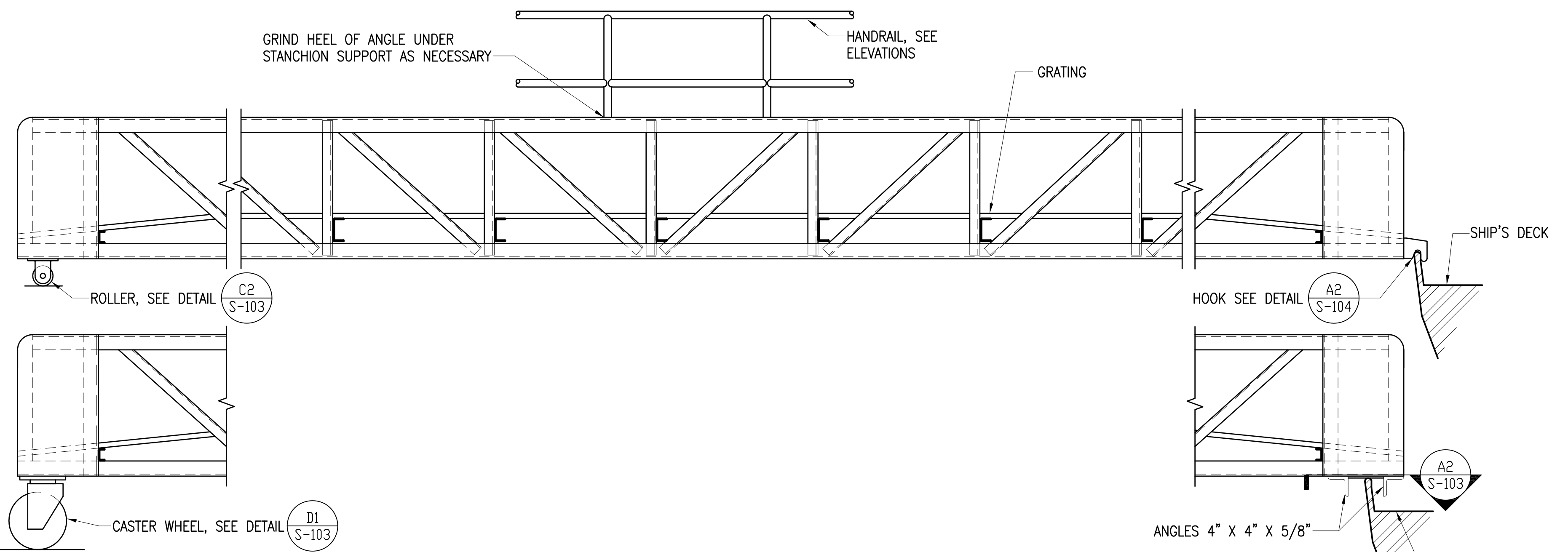
METRIC PROPERTIES OF STRUCTURAL SHAPES (BOLTS - DIAMETER)	
METRIC (mm)	ENGLISH (in.)
6	1/4"
10	3/8"
13	1/2"
16	5/8"
19	3/4"
32	1-1/4"

METRIC PROPERTIES OF STRUCTURAL SHAPES (CHANNELS)	
METRIC (mm x kg/m)	ENGLISH (in. x Lb/Ft)
C 75	C 3
C 75 x 2.11	C 3 x 1.42
C 130 x 4.76	C 5 x 3.11
C 150	C 6
C 150 x 12	C 6 x 8.2
C 150 x 4.21	C 6 x 2.83
C 200	C 8
C 200 x 6.32	C 8 x 4.25
C 200 x 7.07	C 8 x 4.75
C 230 x 6.85	C 9 x 4.6
C 230 x 7.72	C 9 x 5.19
C 230	C 9
C 250	C 10
C 250 x 7.86	C 10 x 5.28
C 250 x 10.28	C 10 x 6.91
C 310 x 11.03	C 12 x 7.41
C 310 x 12.86	C 12 x 8.64
C 310 x 15.43	C 12 x 10.37
C 310 x 45	C 12 x 30
C 310 x 60	C 12 x 40
C 380	C 15
C 380 x 38	C 15 x 25.72

WELD SCHEDULE	
METRIC (mm)	ENGLISH (in.)
3	1/8"
5	3/16"
6	1/4"
8	5/16"
10	3/8"
11	7/16"
19	3/4"
38	1-1/2"

METRIC PROPERTIES OF STRUCTURAL SHAPES (WASHERS)	
METRIC (mm)	ENGLISH (in.)
3	1/8"
10	3/8"
13	1/2"

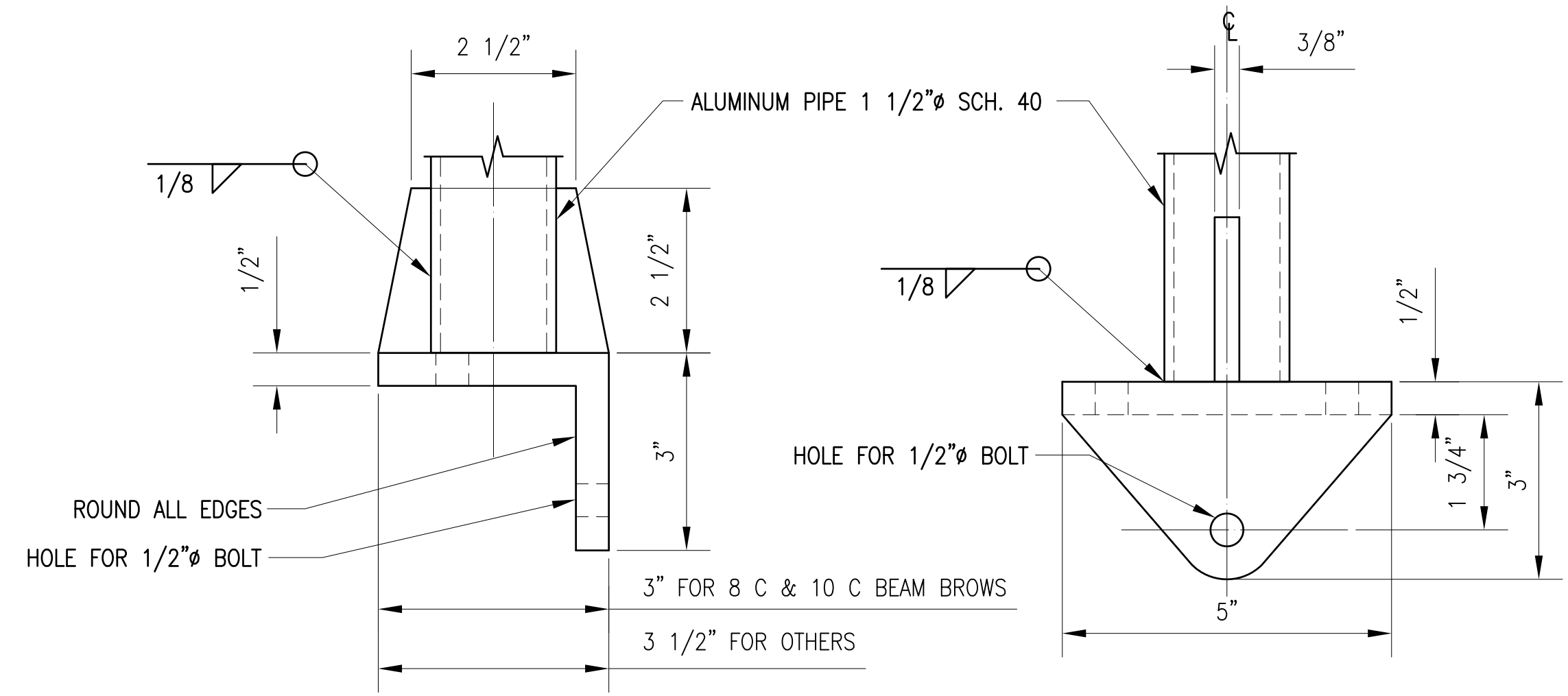
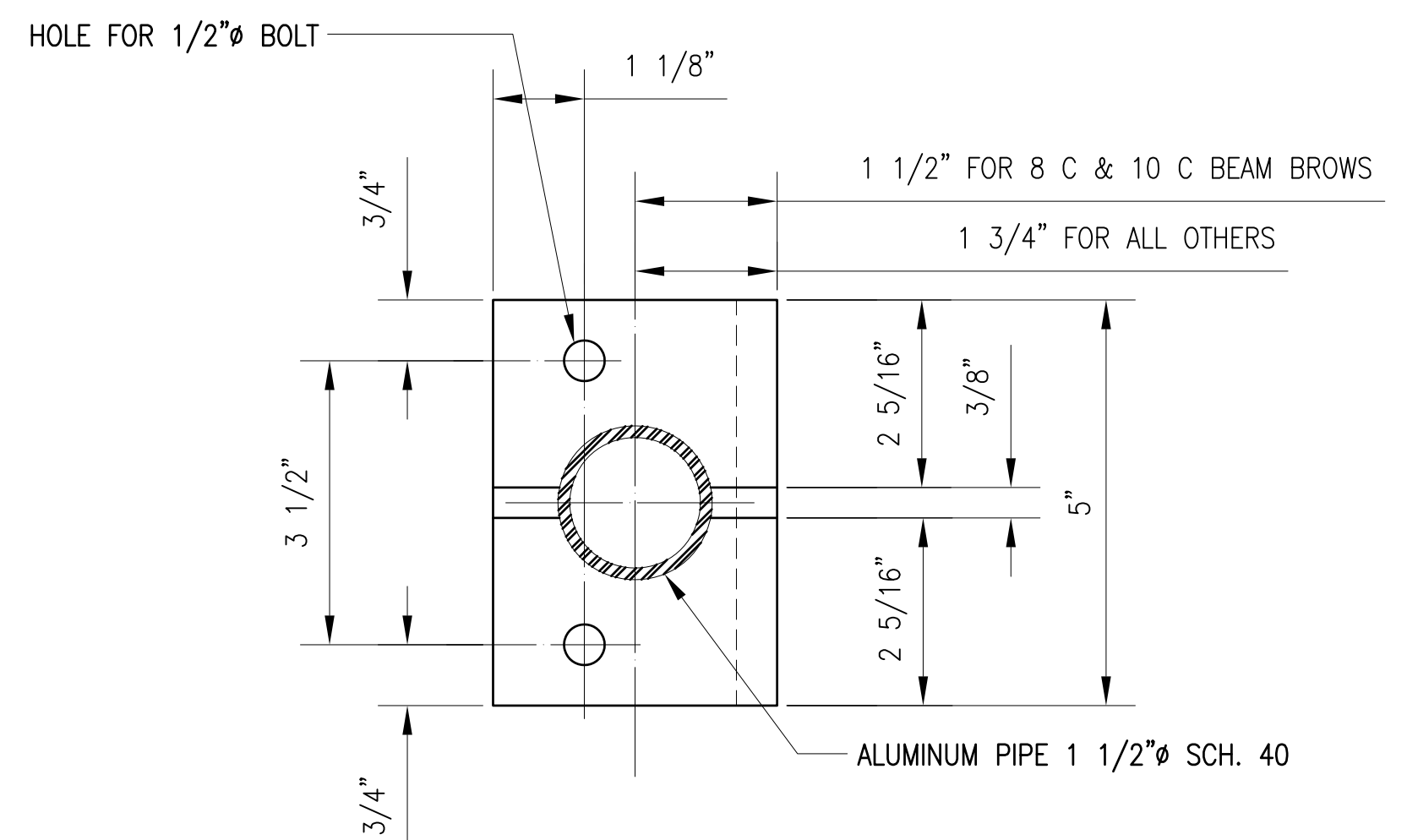
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	GENERAL REVISIONS		
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SEAL			
A/E INFO			
APPROVED			
FOR COMMANDER NAVFAC			
ACTIVITY			
SATISFACTORY TO			
DES	DBC	DRW	CHK
F. B. COLE		FBC	
PW/DM			
BRANCH MANAGER			
CHIEF ENG/ARCH			
E. J. GALLAHER			
FIRE PROTECTION			
NAVFACILITIES ENGINEERING COMMAND			
NAVFACILITIES ENGINEERING COMMAND ATLANTIC			
NORFOLK, VIRGINIA			
STANDARD DRAWINGS			
BROWS AND PLATFORMS			
METRIC/IMPERIAL TABLES			
SCALE: AS NOTED			
PROJECT NO.			
CONSTR. CONTR. NO.			
NAVFAC DRAWING NO.			
SD1405001			
SHEET	2	OF	42
GI002			
DRAWING REVISION: 10 MARCH 2009			



**SHORE CONNECTIONS**  
SCALE: 3/4" = 1' - 0"

**SHIP CONNECTIONS**  
SCALE: 3/4" = 1' - 0"

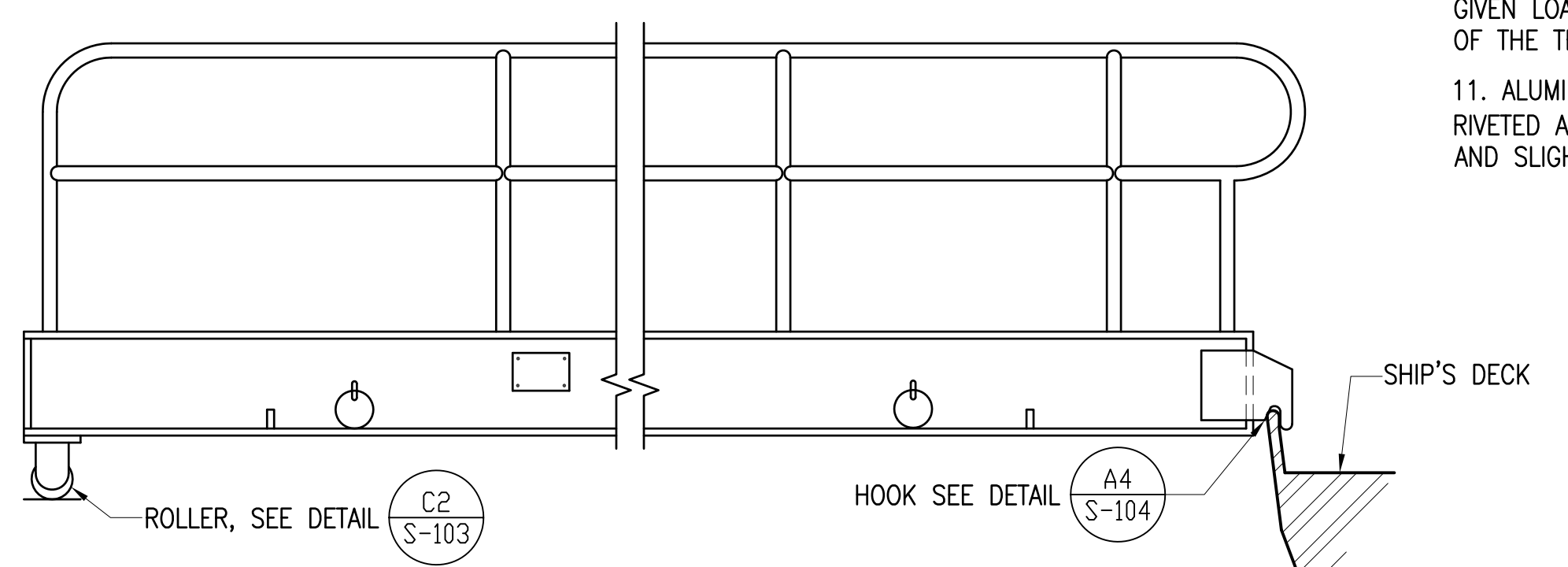
**TYPICAL TRUSS BROW**  
SCALE: 3/4" = 1' - 0"



**TYPICAL STANCHION SUPPORT DETAIL**  
SCALE: 6" = 1' - 0"

S-102, S-114, S-115, S-116, S-117, S-119

A1



**SHORE CONNECTIONS**  
SCALE: 3/4" = 1' - 0"

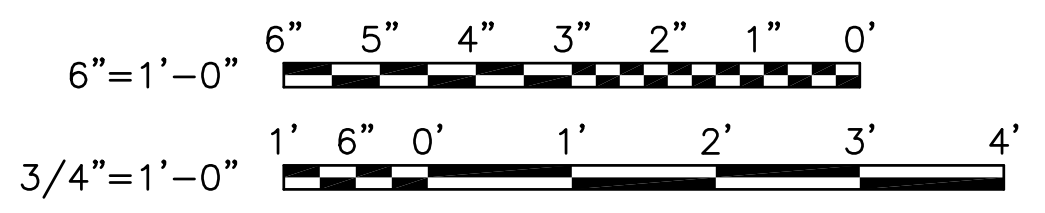
**TYPICAL BEAM BROW**  
SCALE: 3/4" = 1' - 0"

**SHIP CONNECTIONS**  
SCALE: 3/4" = 1' - 0"

**GENERAL NOTES:**

- DESIGN CODES:  
DESIGN AND CONSTRUCTION SHALL CONFORM TO THE LATEST SPECIFICATION OF THE FOLLOWING:  
GENERAL ALUMINUM WELDING ALUMINUM  
UFC 4-152-01, MIL-DTL-22342F & MIL-P-23210F  
ALUMINUM DESIGN MANUAL  
AWS D1.2
- MATERIALS:  
ALUMINUM 6061-T6, T6511  
WELDING FILLER ALLOY 4043, (5356 FOR ANODIZED HANDRAILS)  
FLOOR GRATING 6063-T6  
STAINLESS STEEL SERIES 300
- DESIGN LOADS:  
LIVE LOAD 75 PSF  
HANDRAIL LOAD 200 POUNDS  
WIND LOAD 110 MPH
- TEST LOAD 100 PSF
- THE MIDSPAN DEFLECTION SHALL NOT EXCEED  $L/360$  BY MORE THAN 15%. AFTER THE TEST LOAD IS REMOVED, THE BROW SHALL HAVE NO PERMANENT DEFLECTION GREATER THAN 15% OF  $L/360$ .
- BROW DESIGNATION SUCH AS 5-50 INDICATES A GRATING WIDTH OF 5' AND A SPAN OF 50'. ONLY THE 5' WIDE BROWS ARE SHOWN, TO CONSTRUCT THE 3' AND 4' WIDE BROWS, USE THE MEMBER SIZES SHOWN, BUT ALTER THE WIDTH DIMENSIONS. MEMBER FORCE INFORMATION ON ALL TRUSS BROWS IS SHOWN ON SHEET S-106 & S-107.
- ALUMINUM PLATFORMS ARE SHOWN ON SHEETS S-126 THRU S-139.
- BROW LIGHTING SHOWN ON SHEET E-100.
- USE THE LATEST REVISION OF MIL-DTL-22342 FOR CONSTRUCTION.
- MEMBER FORCES ARE BASED ON A UNIFORM DEAD LOAD PLUS A UNIFORM LIVE LOAD POSITIONED TO PRODUCE THE MAXIMUM FORCE IN THE MEMBER UNDER CONSIDERATION. (INFLUENCE LINE METHOD).
- UNLESS OTHERWISE NOTED (UNO), ALL DETAILS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR ALUMINUM STRUCTURES BY THE ALUMINUM ASSOCIATION. WHEN TOP AND BOTTOM CHORD SPLICES ARE NECESSARY, THEY SHALL BE DESIGNED FOR THE GIVEN LOADS AND SHALL BE MADE NEAR PANEL POINTS OTHER THAN AT THE CENTERLINE OF THE TRUSS.
- ALUMINUM GRATING SHALL HAVE SERRATED BEARING BARS 3/4" APART AND BE RIVETED AT 3 1/2" ON CENTER. THE CRIMPED CROSS MEMBER SHALL BE SERRATED AND SLIGHTLY RAISED ABOVE THE TOP SURFACE.

**GRAPHIC SCALES:**



FBC						APPR
	7/12					DATE
1	GENERAL REVISIONS					DESCRIPTION
						SYM
						SEAL
APPROVED: _____ FOR COMMANDER NAVFAC						
SATISFACTORY TO: DES DBC    DRW DBC    CHK FBC PW/DW F. B. COLE BRANCH MANAGER CHIEF ENG/ARCH E J GALLAHER FIRE PROTECTION						
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NORFOLK, VIRGINIA LANT CAPITAL IMPROVEMENTS <b>STANDARD DRAWINGS          BROWS AND PLATFORMS</b> BEAM AND TRUSS BROWS - NOTES AND DETAILS						
SCALE: AS NOTED PROJECT NO. CONSTR. CONTR. NO. NAVFAC DRAWING NO. SD1405002 SHEET 3 OF 42						
<b>S-101</b> DRAWING REVISION: 10 MARCH 2009						

1

2

3

4

5

D

C

B

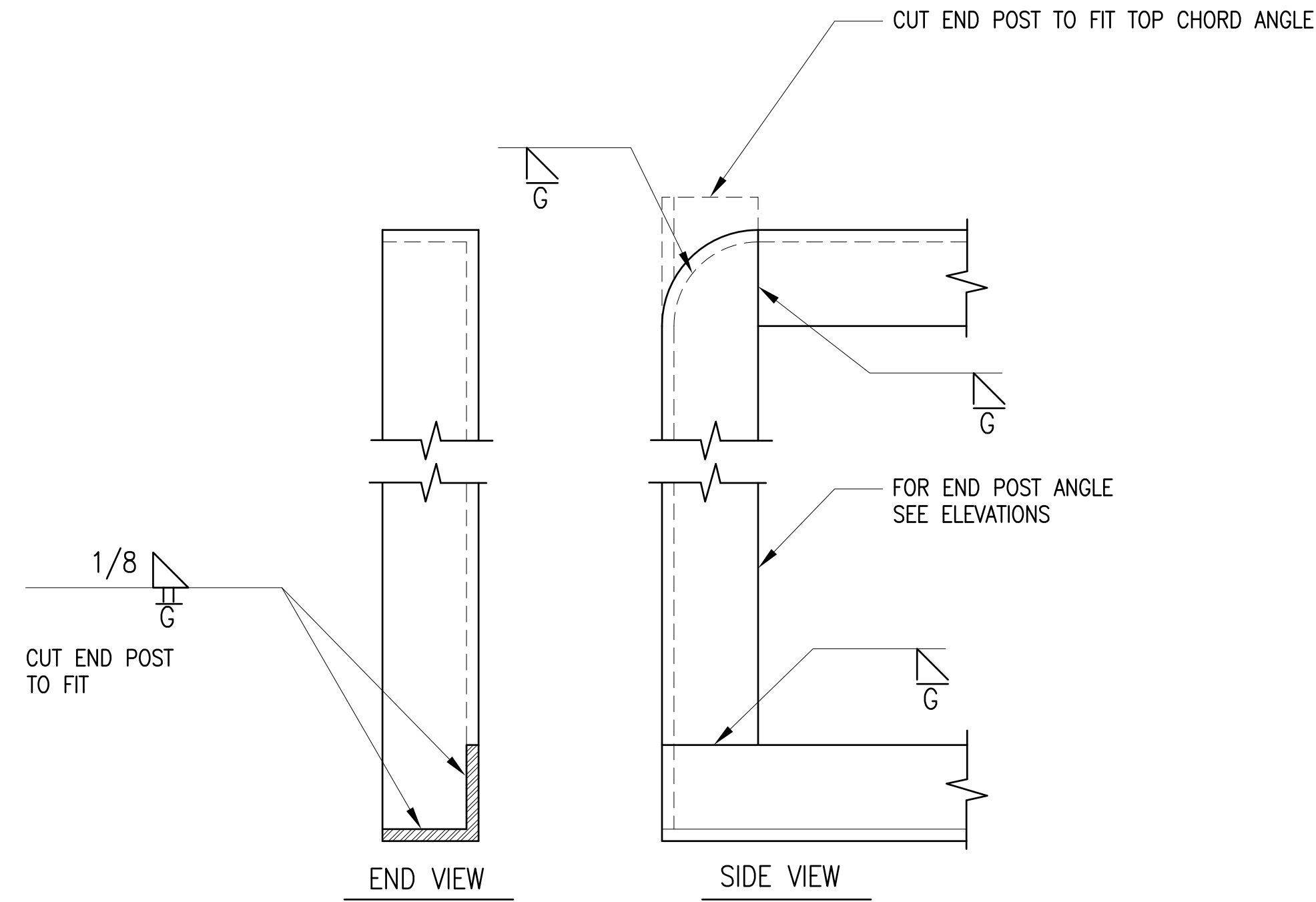
A

D

C

B

A

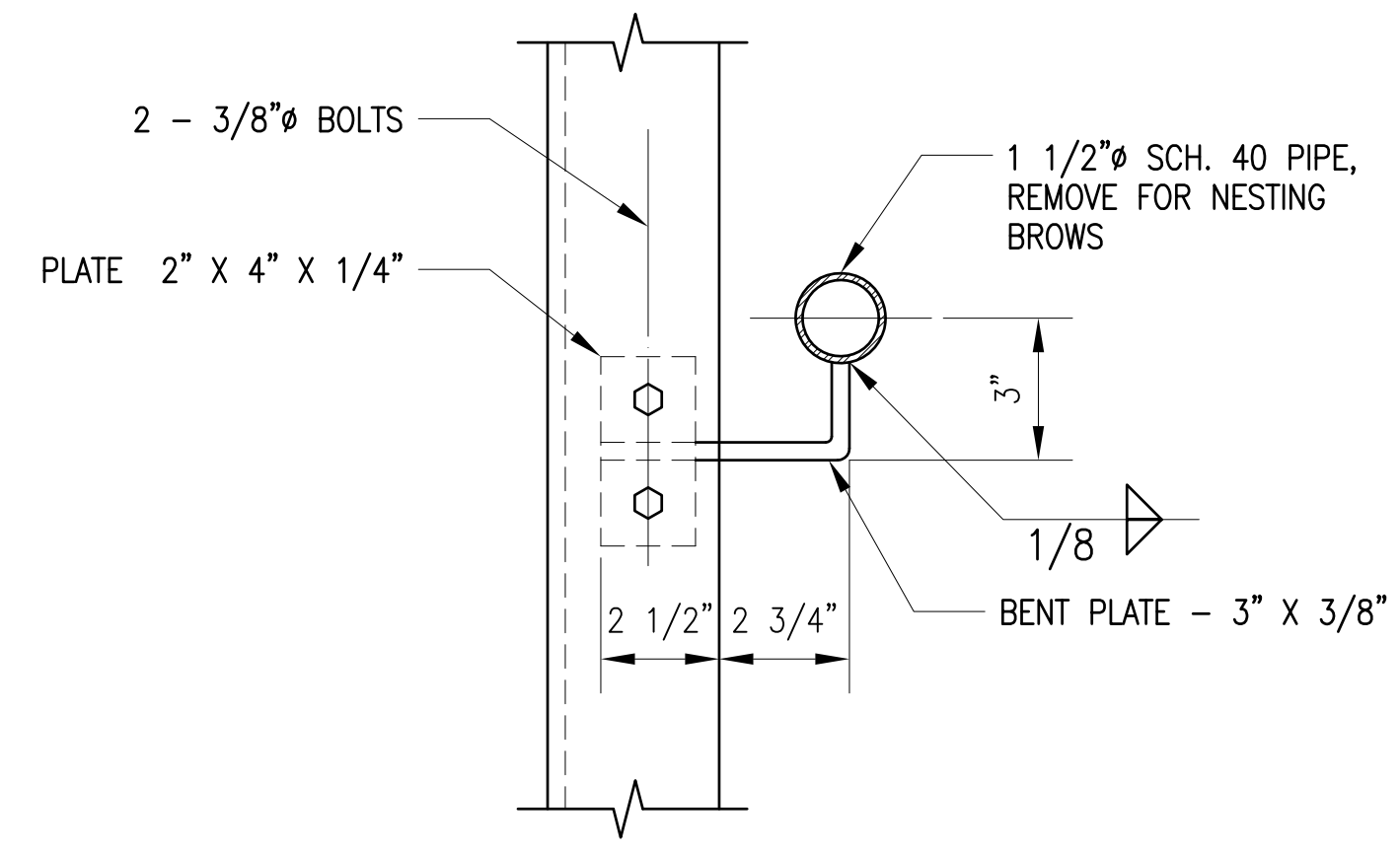


TYPICAL END POST DETAIL

N.T.S.

S-104, S-105

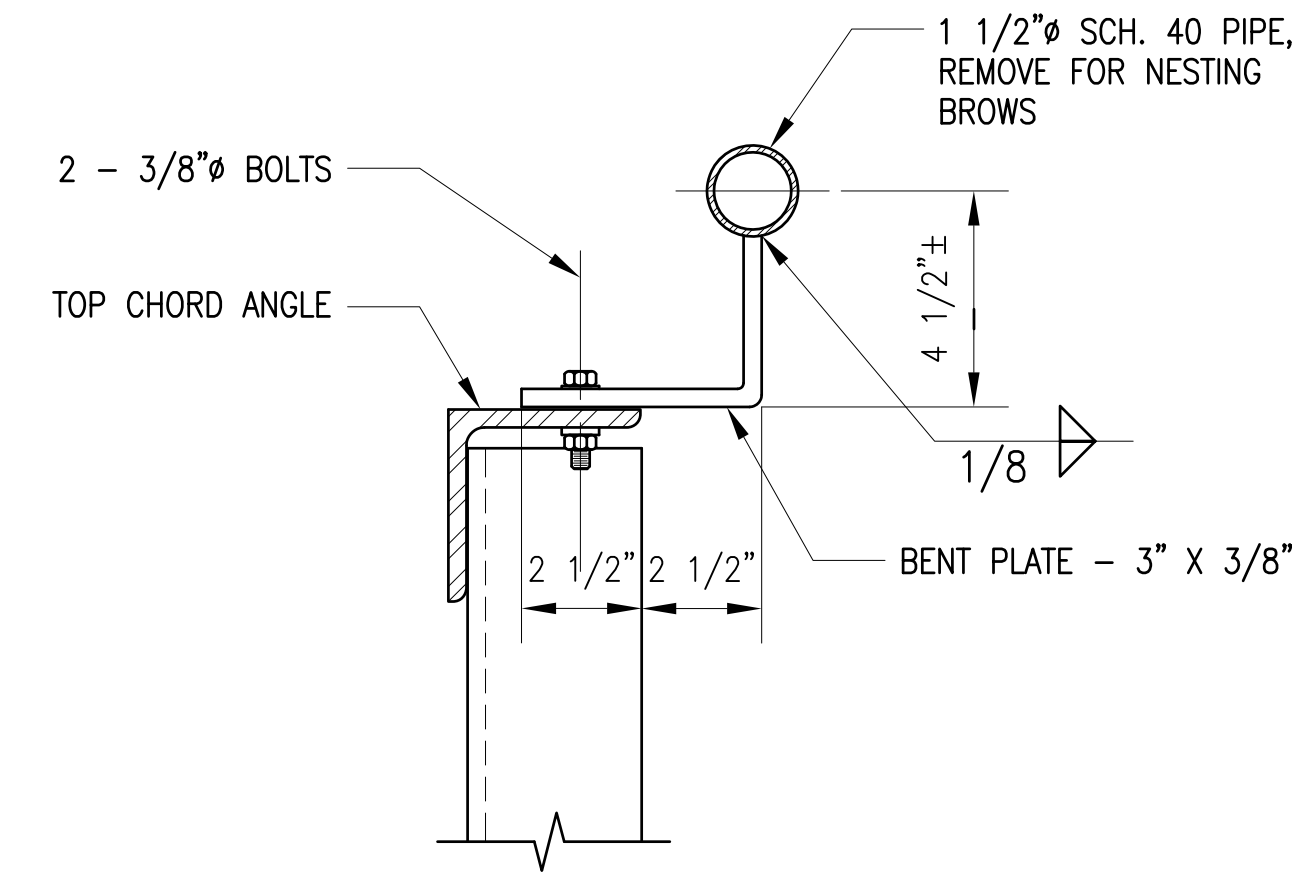
C1



SECTION

SCALE: 3"=1'-0" S-119, S-120, S-121, S-122, S-123

C2

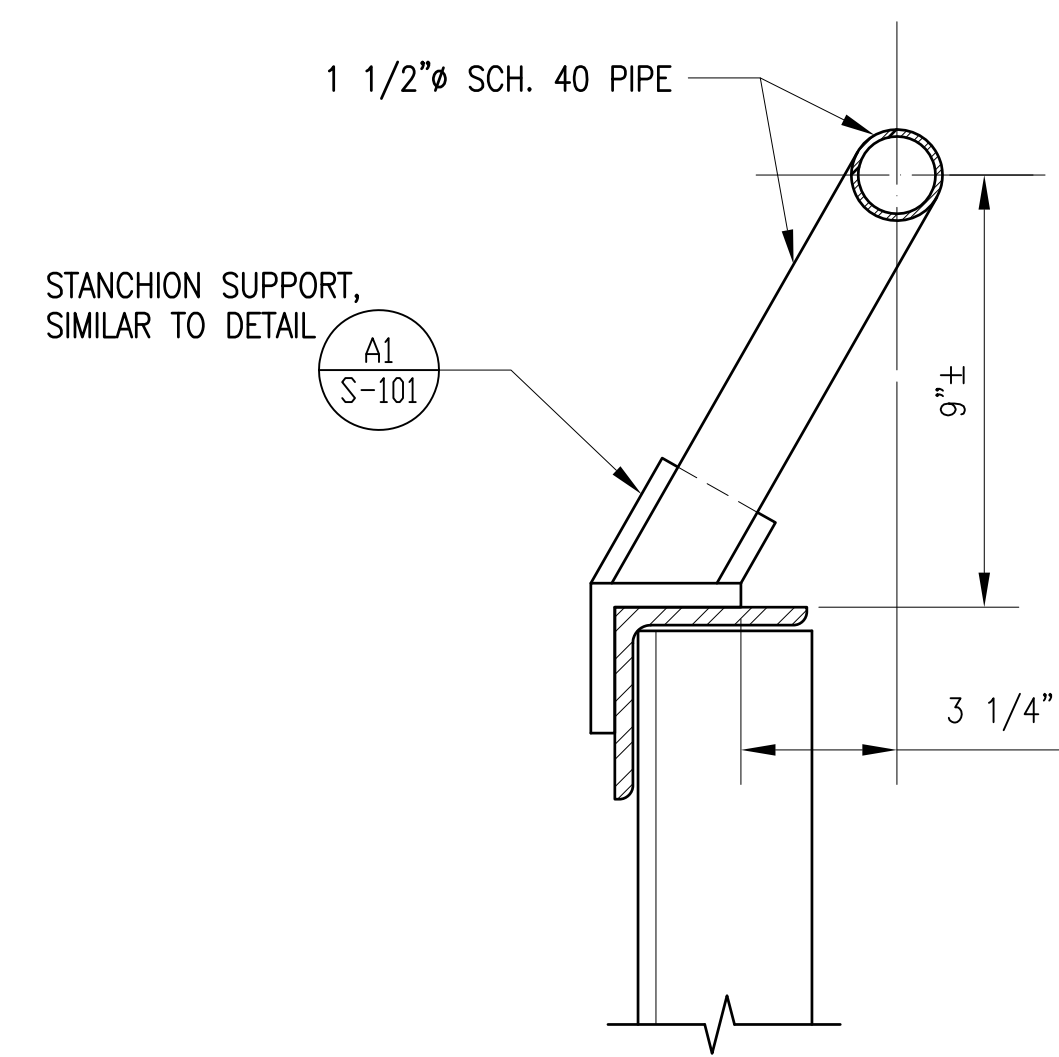


SECTION

SCALE: 3"=1'-0"

S-120

A1



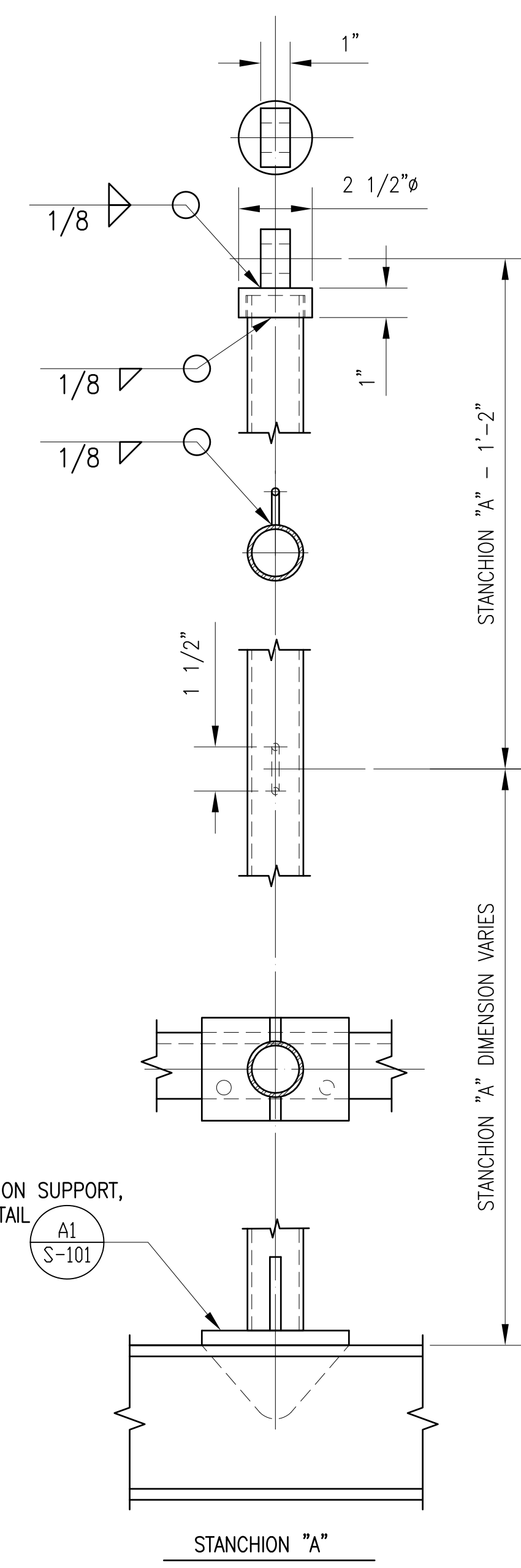
STANCHION SUPPORT, SIMILAR TO DETAIL

SECTION

SCALE: 3"=1'-0"

S-120

A2

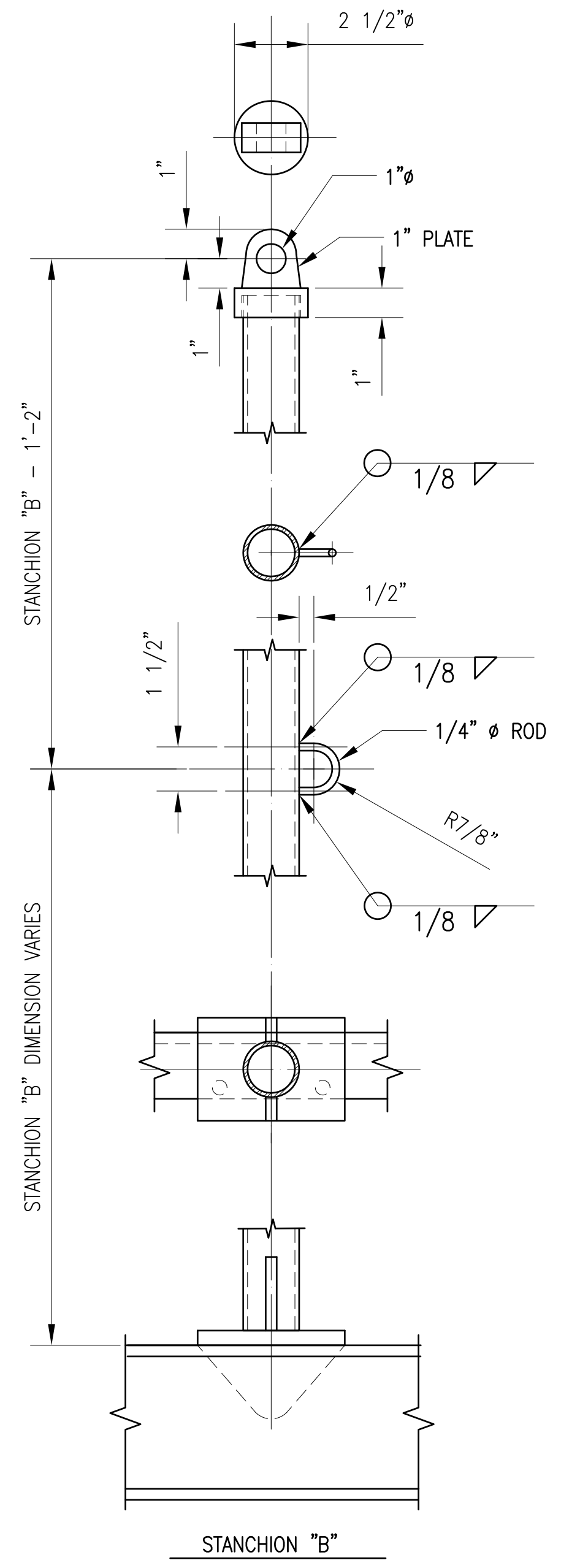


STANCHIONS

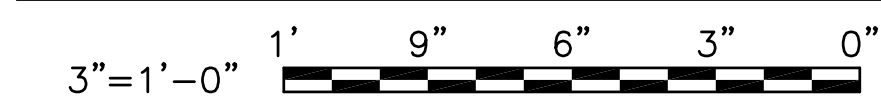
SCALE: 3"=1'-0"

S-108, S-110, S-112

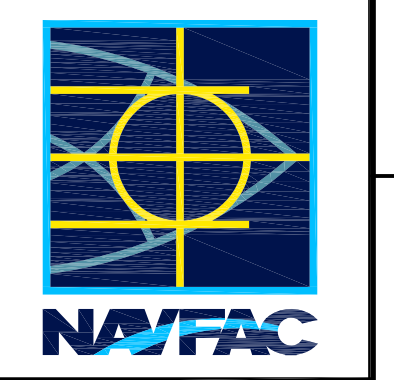
A4



GRAPHIC SCALES:



1	GENERAL REVISIONS	7/12	FBC
1			



APPROVED: \_\_\_\_\_  
FOR COMMANDER NAVFAC

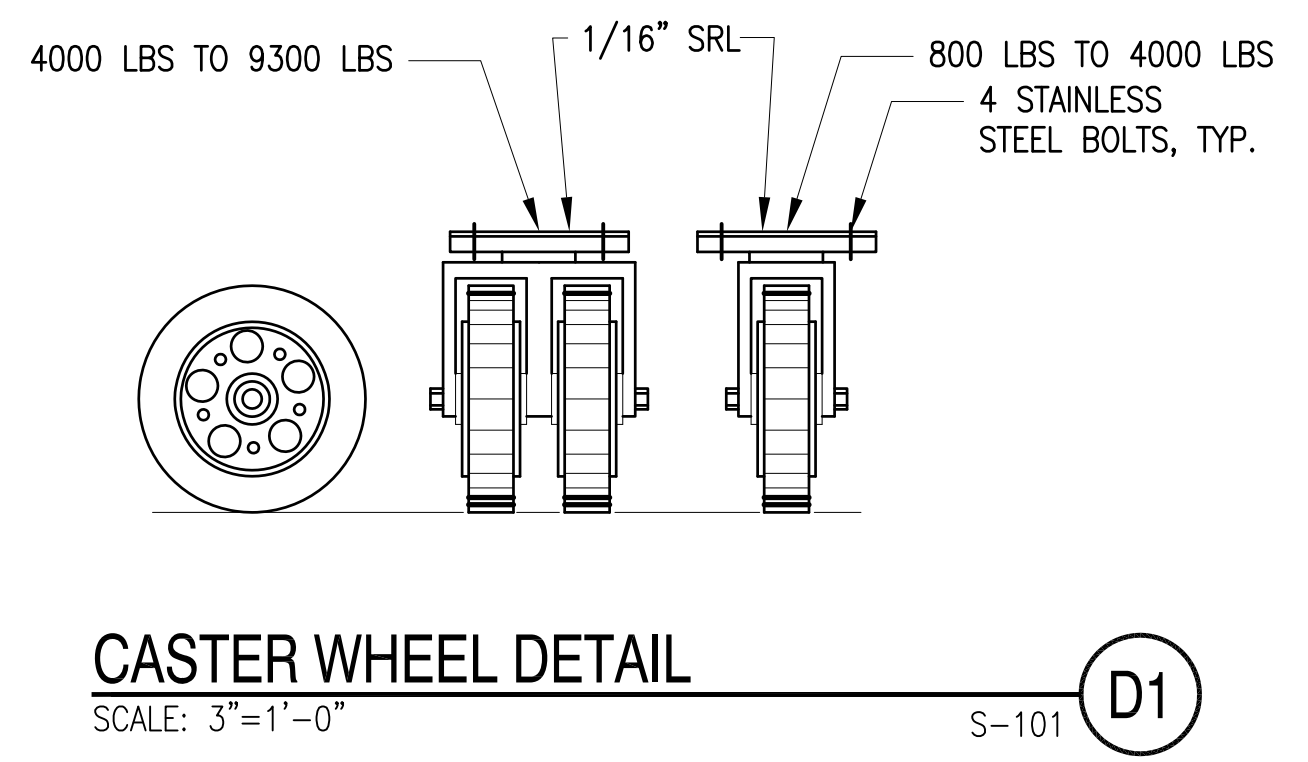
SATISFACTORY TO:  
DES: DBC, DRW: DBC, CHK: FBC  
PW/DM: F. B. COLE  
BRANCH MANAGER  
CHIEF ENG/ARCH: E. J. GALLAHER  
FIRE PROTECTION

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC IMPROVEMENTS

STANDARD DRAWINGS  
BROWS AND PLATFORMS  
BEAM AND TRUSS BROWS - DETAILS

SCALE: AS NOTED  
PROJECT NO.:  
CONSTR. CONTR. NO.:  
NAVFAC DRAWING NO.: SD1405003  
SHEET 4 OF 42  
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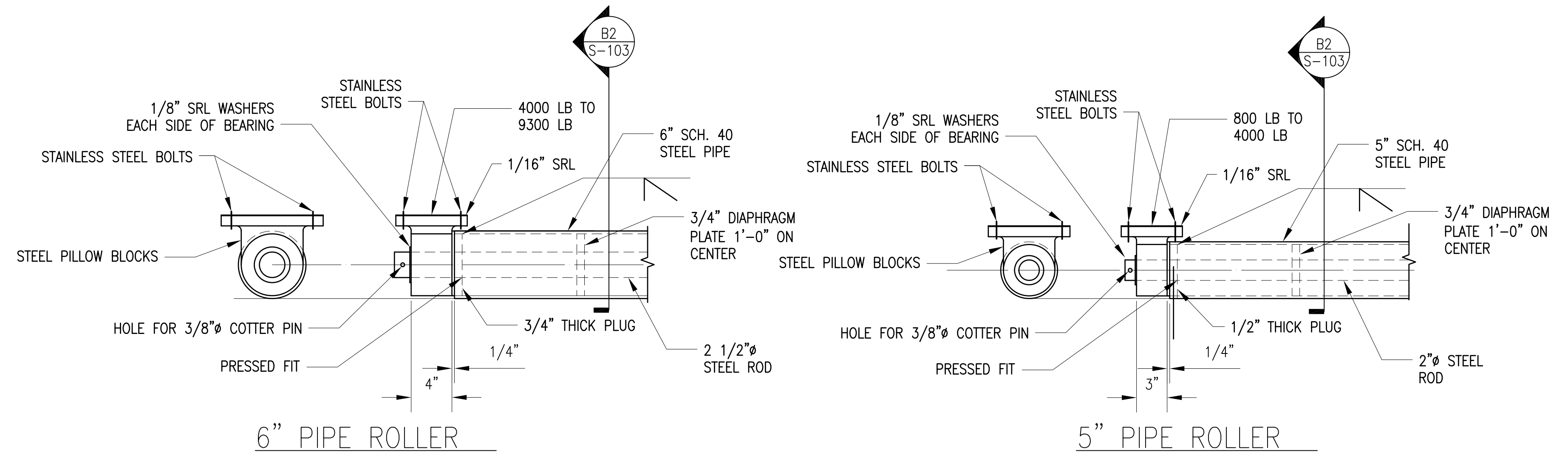
DRAWING REVISION: 10 MARCH 2009



**CASTER WHEEL DETAIL**

SCALE: 3"=1'-0"

S-101 **B1**



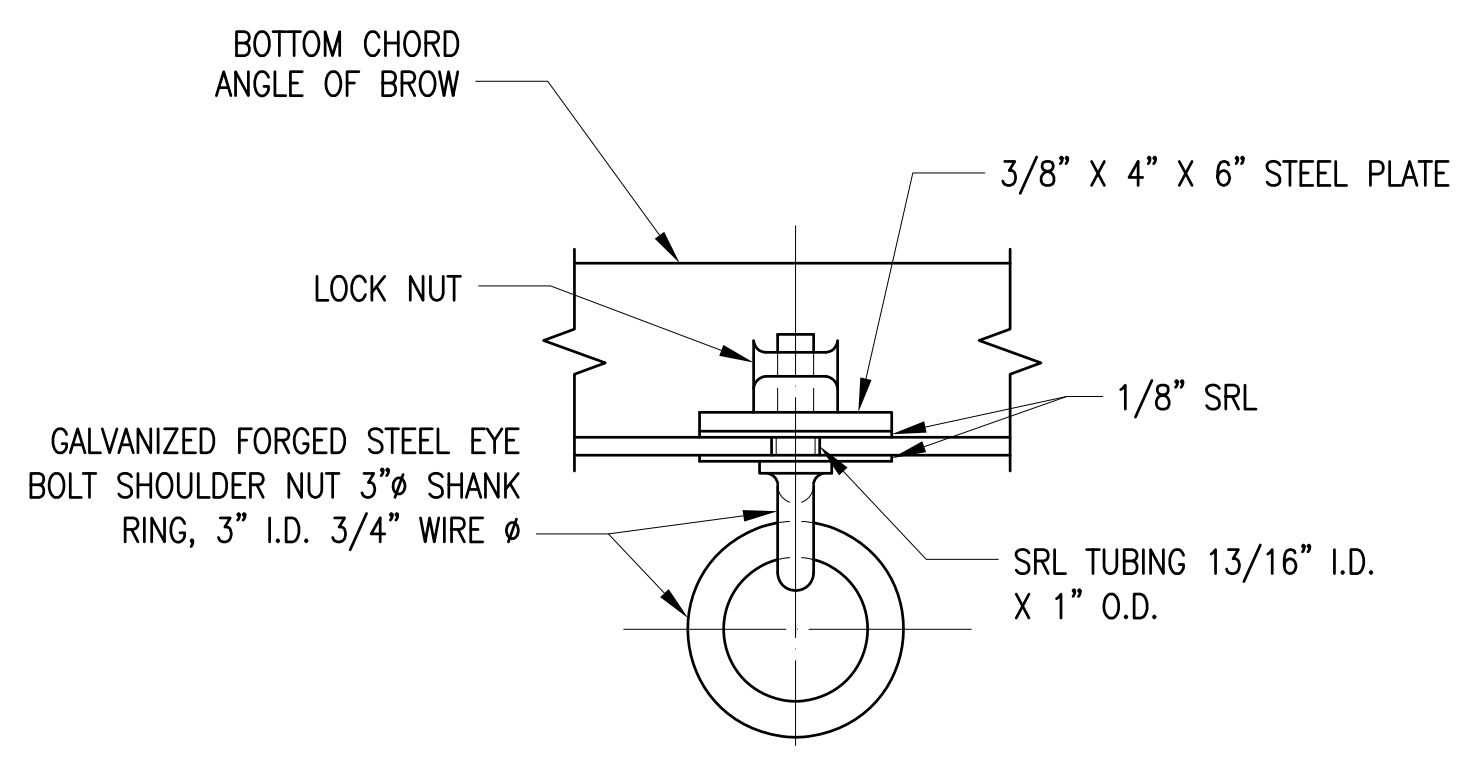
**PIPE ROLLER DETAILS**

SCALE: 1 1/2"=1'-0"

6" PIPE ROLLER

5" PIPE ROLLER

S-101 **B2**

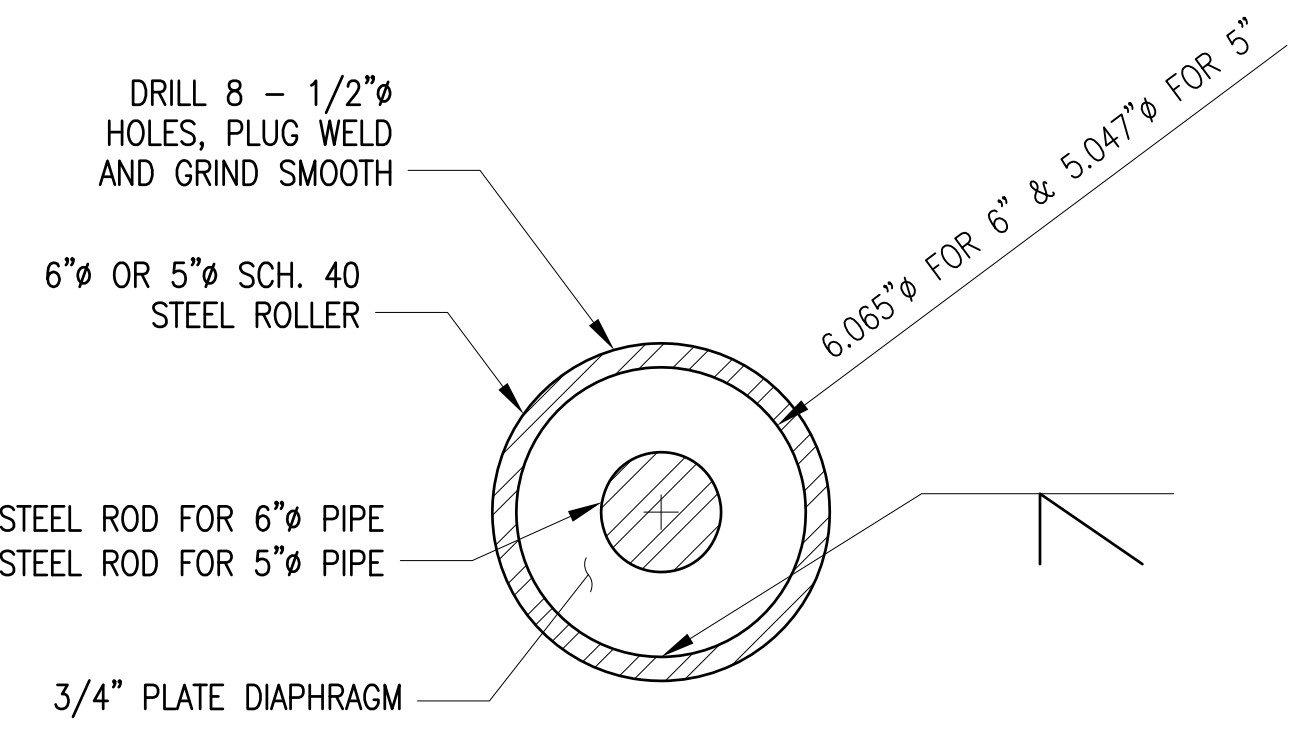


**RING BOLT DETAIL**

SCALE: 3"=1'-0"

S-108, S-112, S-114 THRU S-116, S-118 THRU S-122

**B1**



**PIPE ROLLER SECTION**

SCALE: 3"=1'-0"

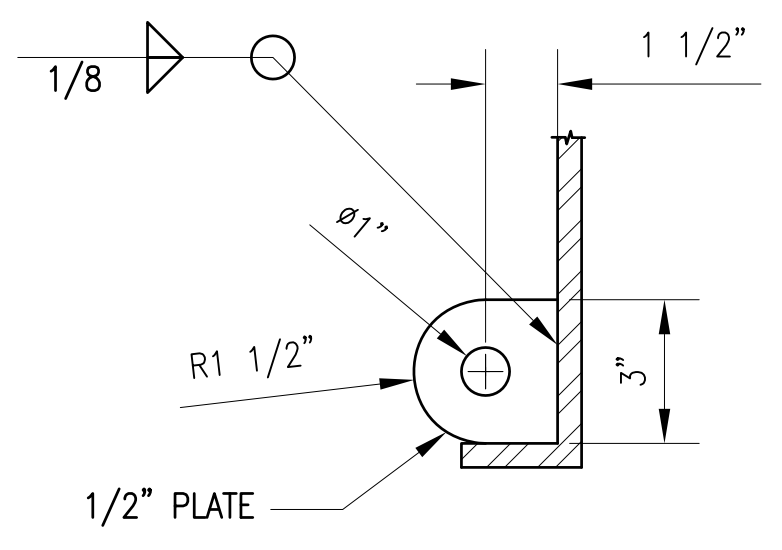
S-103, S-108, S-112

**B2**

**CASTER WHEEL NOTES:**

1. SWIVEL CASTERS: SWIVEL CONSTRUCTION, STEEL BALL BEARINGS IN HARDENED RACEWAYS, GREASE FITTED KING PIN.
2. RUBBER TIRE WHEELS: EACH WHEEL SHALL HAVE RUBBER TIRE, SOLID ROLLER CAGE BEARINGS, GREASE FITTINGS, AND GREASE RETAINING THRUST WASHERS.
3. SELECT WHEELS AND CASTERS TO SUIT BROW LOADINGS GIVEN. CASTERS AND WHEELS MUST ROLL FREELY UNDER FULL LOAD.
4. 4000 LB CASTER WHEELS TO BE USED ON BROWS 3-25 TO 3-50 INCLUSIVE, 4-25 TO 4-40 INCLUSIVE, 5-25, AND 5-35. 8000 LB CASTER WHEELS TO BE USED ON BROWS 3-60, 3-70, 4-50, 4-60, 4-70, AND 5-40 TO 5-80 INCLUSIVE.
5. TO FACILITATE NESTING, THE OUTSIDE EDGE OF THE ROLLERS SHALL NOT EXTEND PAST THE EXTREME OUTER EDGE OF THE BROW. THE CASTER WHEEL TOP PLATE SHALL BE PLACED FLUSH WITH THE END AND OUTSIDE EDGE OF THE BROW.
6. SRL = SYNTHETIC RESIN LAMINATE (SEE SPECIFICATIONS)
7. ALL STRUCTURAL STEEL SURFACES SHALL BE BLAST CLEANED TO NEAR WHITE METAL IN ACCORDANCE WITH SSPC-SP-10-63T.
8. APPLY A THREE COAT EPOXY-POLYAMIDE SYSTEM CONFORMING TO MIL-P-24441 WITH A TOTAL DRY THICKNESS OF 9 MILS. THE INDIVIDUAL COATS SHALL BE AS FOLLOWS:
 

FIRST COAT	FORMULA 150 (GREEN PRIMER)	3 MILS
SECOND COAT	FORMULA 152 (WHITE)	3 MILS
TOP COAT	FORMULA 151 (HAZE GREY)	3 MILS
9. DEFLECTION AT MID-SPAN IS LIMITED TO L/360 AT 100 PSF TEST LOAD.

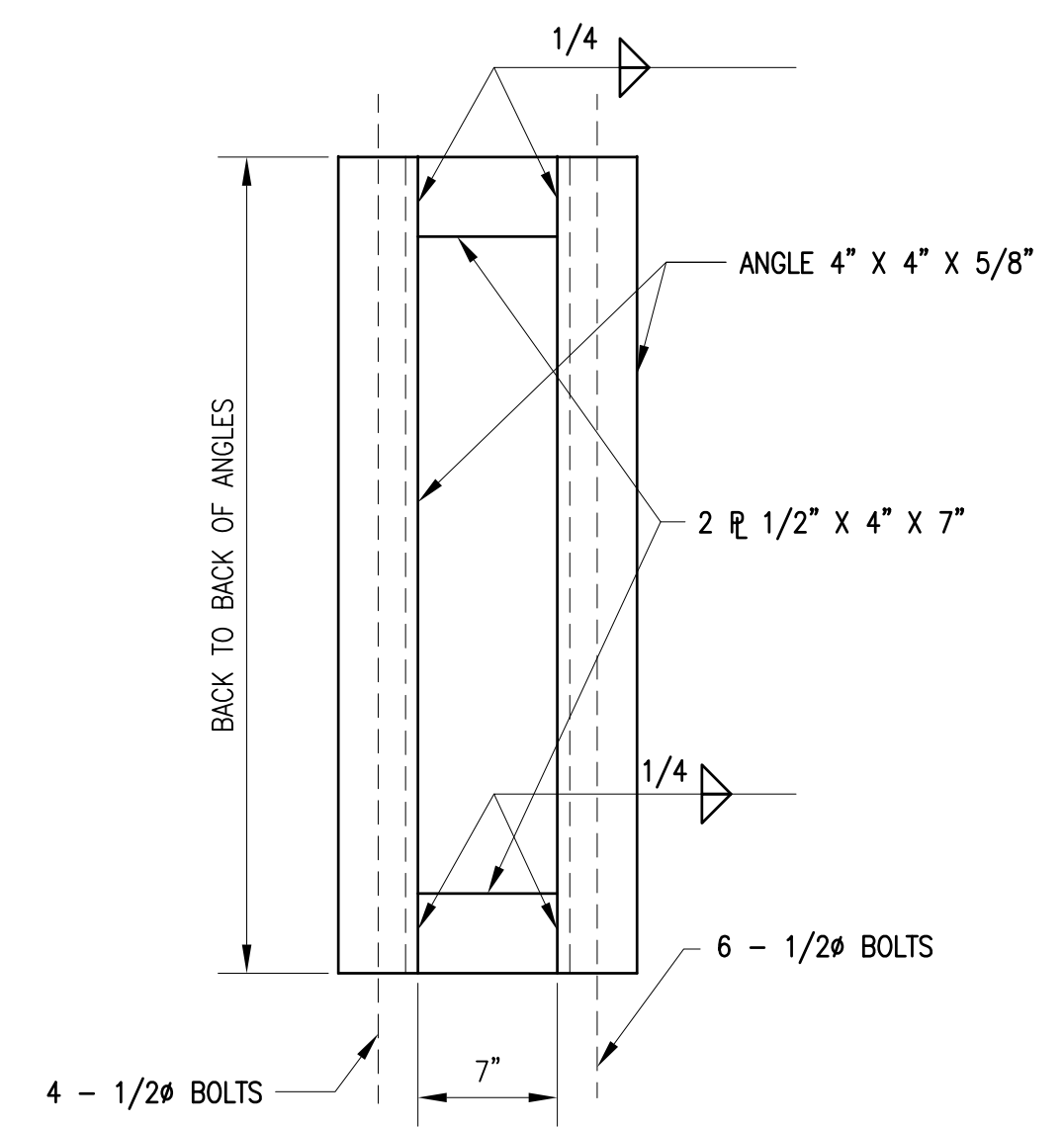


**BEAM BROW PAD EYE**

SCALE: 3"=1'-0"

S-108, S-112

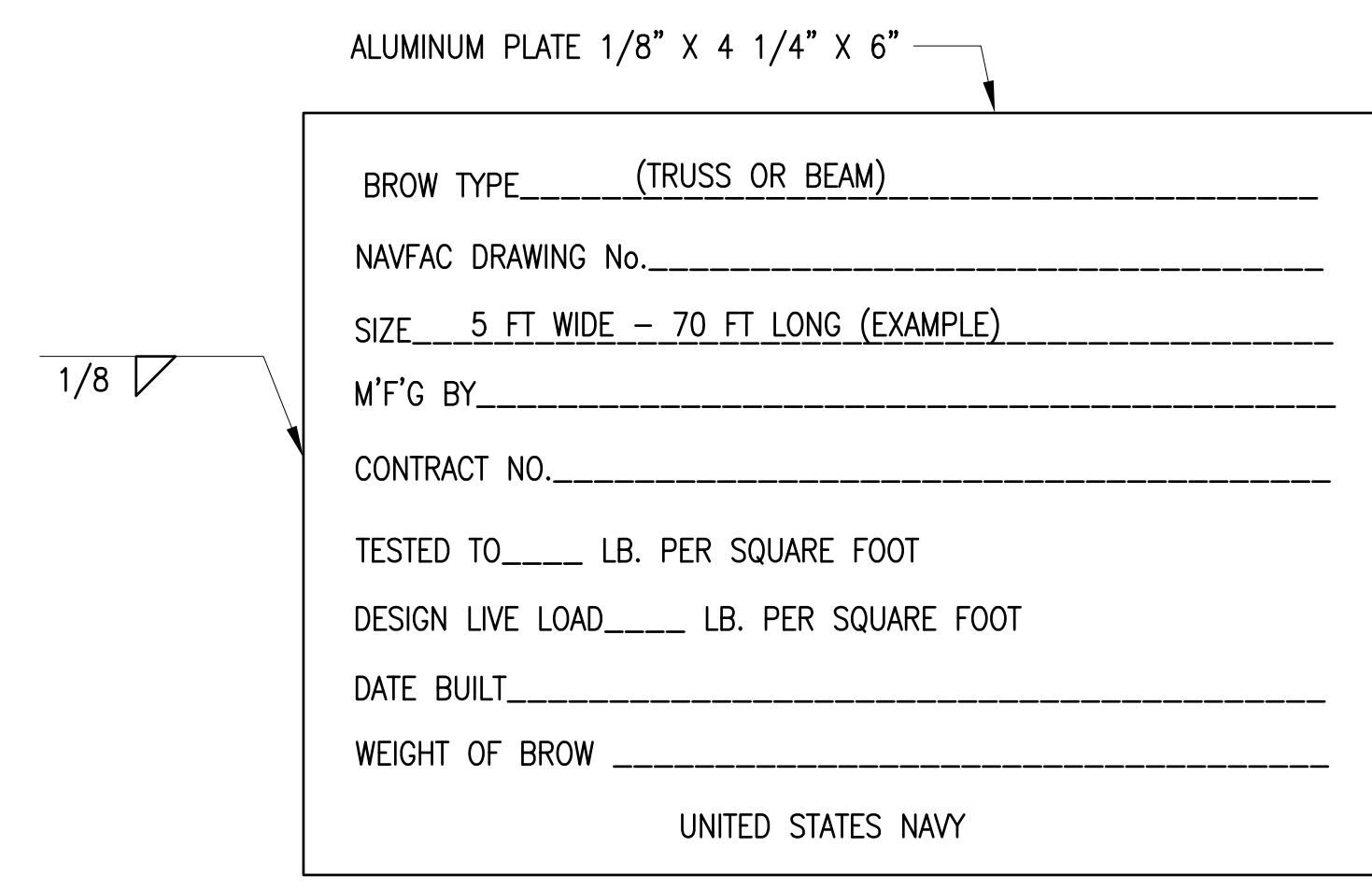
**A1**



**ANGLE CONNECTION DETAIL**

SCALE: 1 1/2"=1'-0"

S-101 **A2**



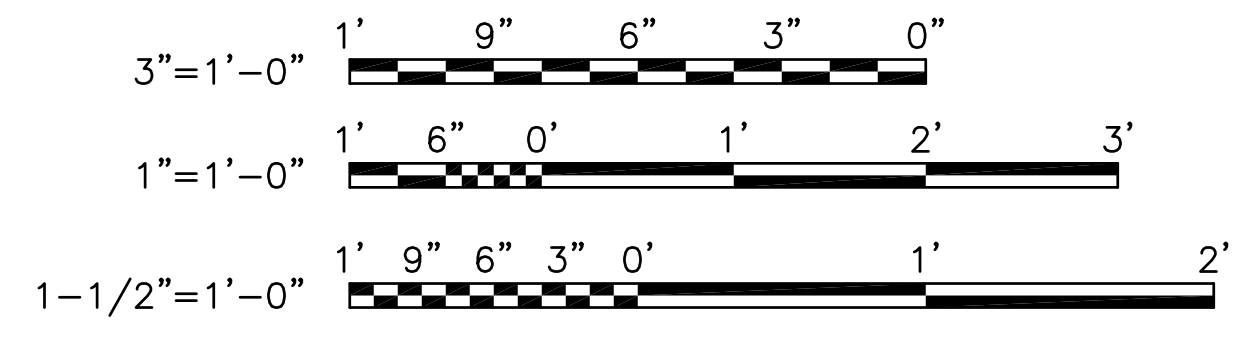
**STANDARD NAME PLATE**

SCALE: 1'-0"=1'-0"

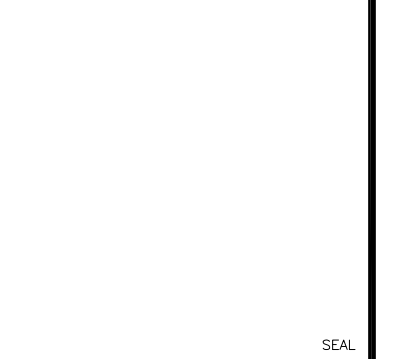
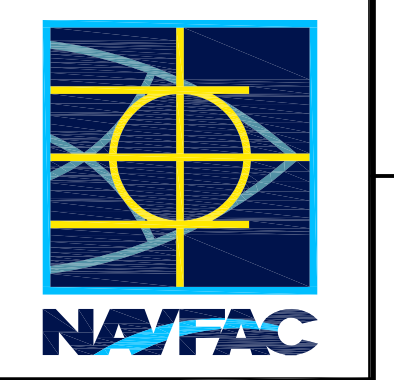
S-108, S-110, S-112

**A3**

**GRAPHIC SCALES:**



GENERAL REVISIONS	DATE	DESCRIPTION
1	7/12	



FOR COMMANDER NAVFAC
ACTIVITY
SATISFACTORY TO
DES DBC DRW DBC CHK FBC
PNV/DM F. B. COLE
BRANCH MANAGER
CHIEF ENG/ARCH E. J. GALLAHER
FIRE PROTECTION

DEPARTMENT OF THE NAVY
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC
LANT CAPITAL IMPROVEMENTS

STANDARD DRAWINGS	BROWS AND PLATFORMS	DETAILS, FITTINGS & NOTES
PROJECT NO.	CONSTR. CONTR. NO.	NAVFAC DRAWING NO. SD1405004
SHEET 5	OF 42	<b>S-103</b>

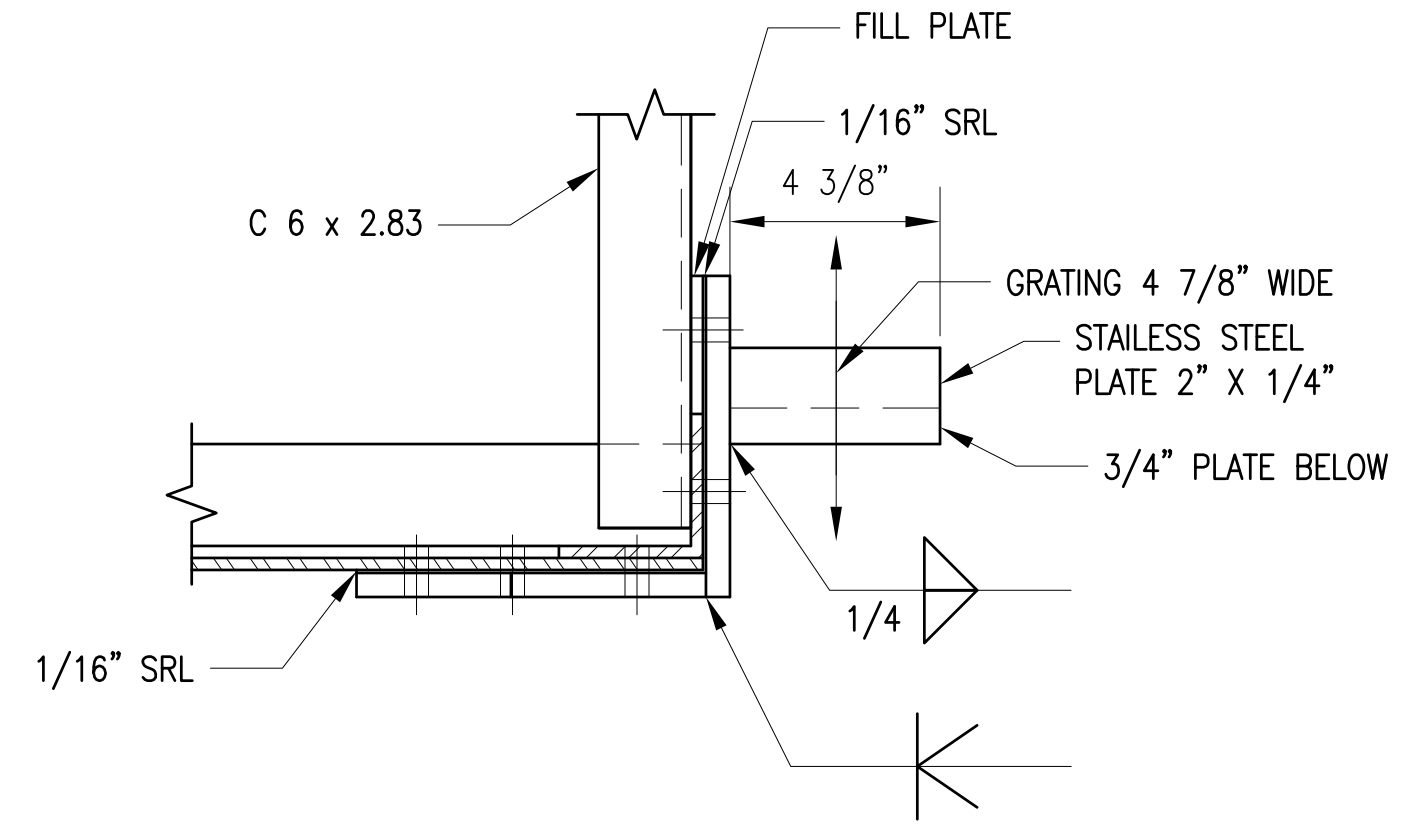
1

2

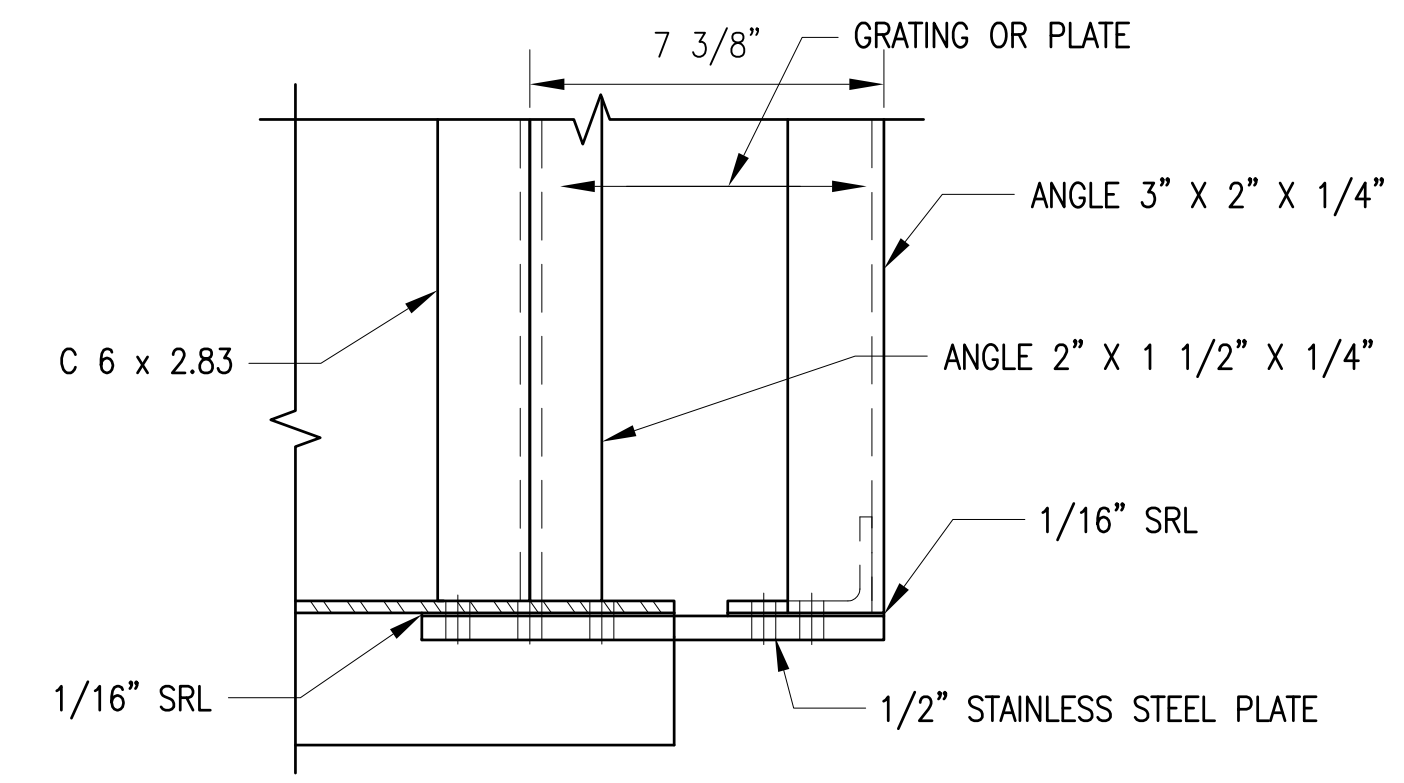
3

4

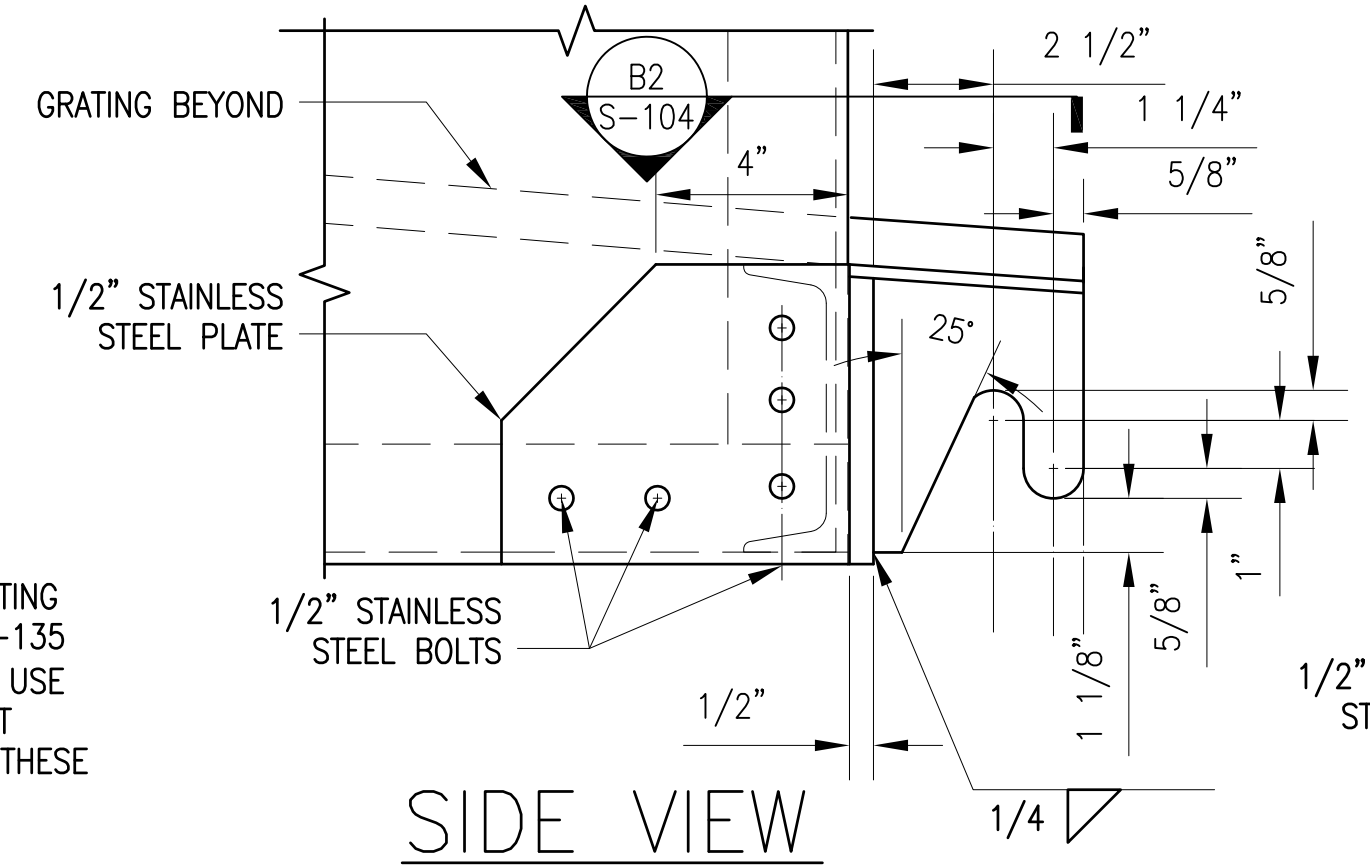
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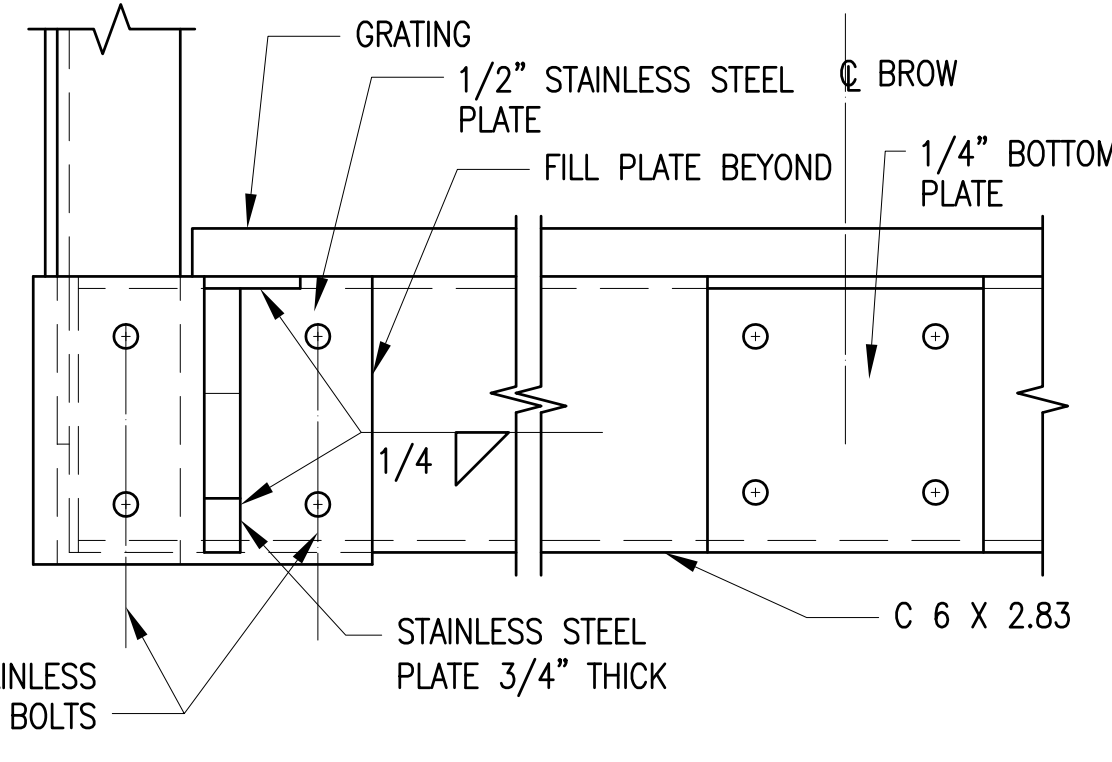
**TRUSS HOOK SECTION**  
SCALE: 3"=1'-0"  
S-104 (B2)



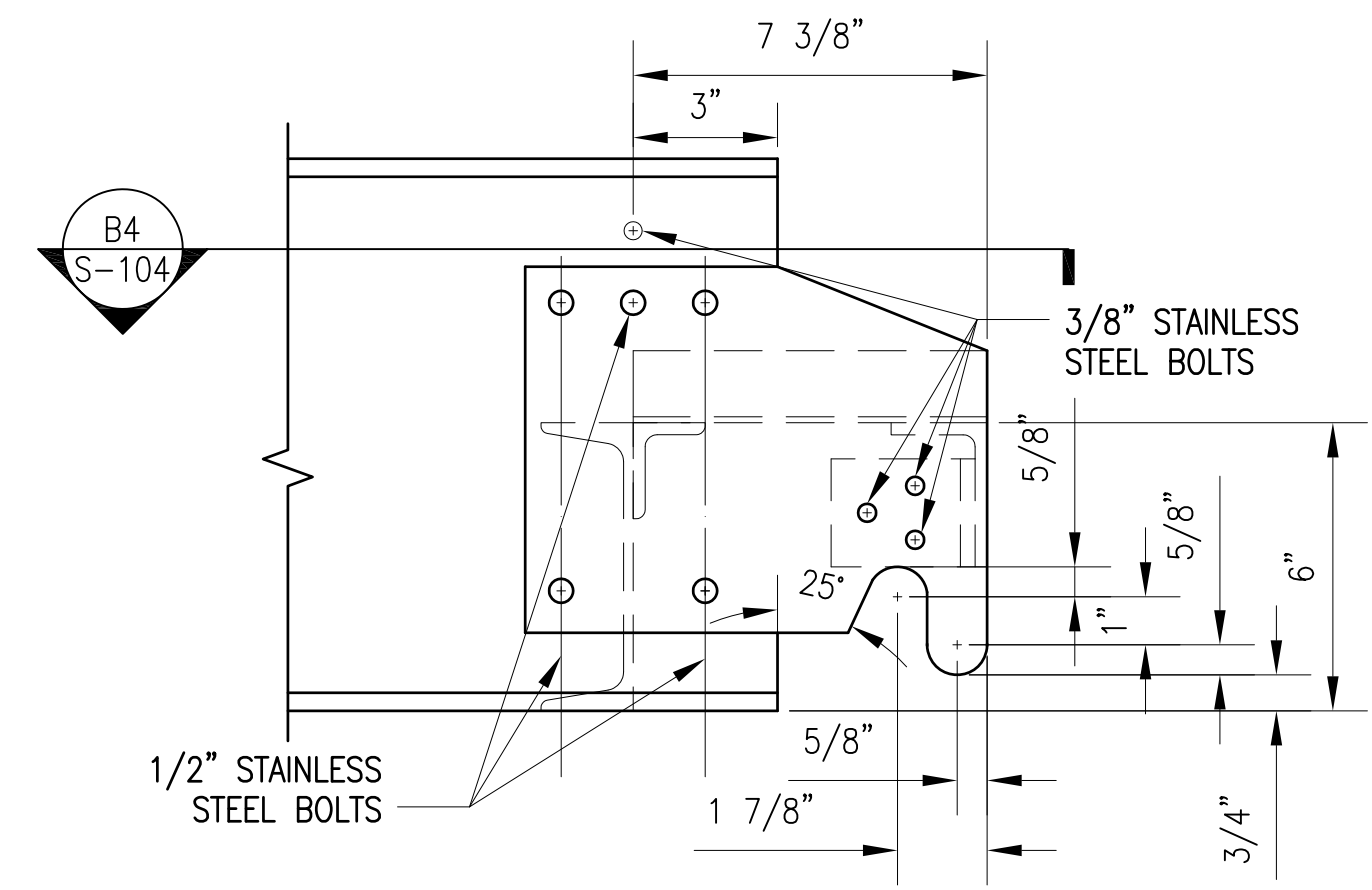
**BEAM BROW SECTION**  
SCALE: 3"=1'-0"  
S-104 (B4)



**SIDE VIEW**



**END VIEW**



**BEAM BROW HOOK DETAIL**  
SCALE: 3"=1'-0"  
S-101 (A4)

NOTE: FOR CONNECTIONS TO 180° ROTATING PLATFORMS USE DETAIL B4 ON SHEET S-135 FOR 3" AND 4" BROWS. FOR 5" BROWS USE CONNECTION DETAIL B4 SHOWN ON SHEET S-137. DO NOT USE HOOK DETAIL ON THESE ROTATING PLATFORMS.

**TRUSS BROW HOOK DETAIL**  
SCALE: 3"=1'-0"  
S-101 (A2)



1	GENERAL REVISIONS	DATE	APPR
7/12			

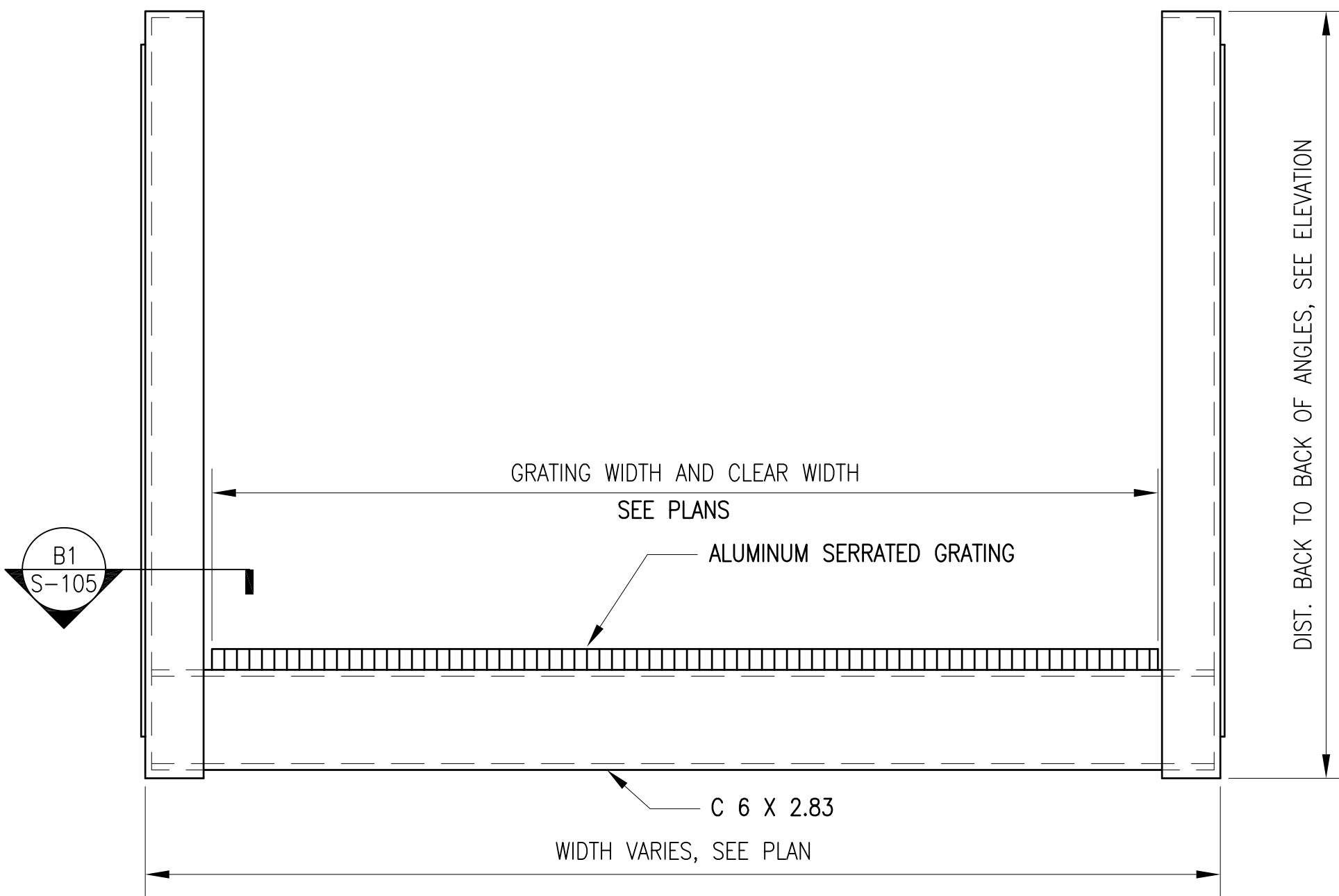


APPROVED: \_\_\_\_\_  
FOR COMMANDER NAVFAC  
ACTIVITY: \_\_\_\_\_  
SATISFACTORY TO: \_\_\_\_\_  
DES: DBC DRW: DBC CHK: FBC  
PW/DM: F. B. COLE  
BRANCH MANAGER  
CHIEF ENG/ARCH: E. J. GALLAHER  
FIRE PROTECTION

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC  
NAVFAC DRAWING NO. SD1405005  
SHEET 6 OF 42  
S-104  
DRAWING REVISION: 10 MARCH 2009

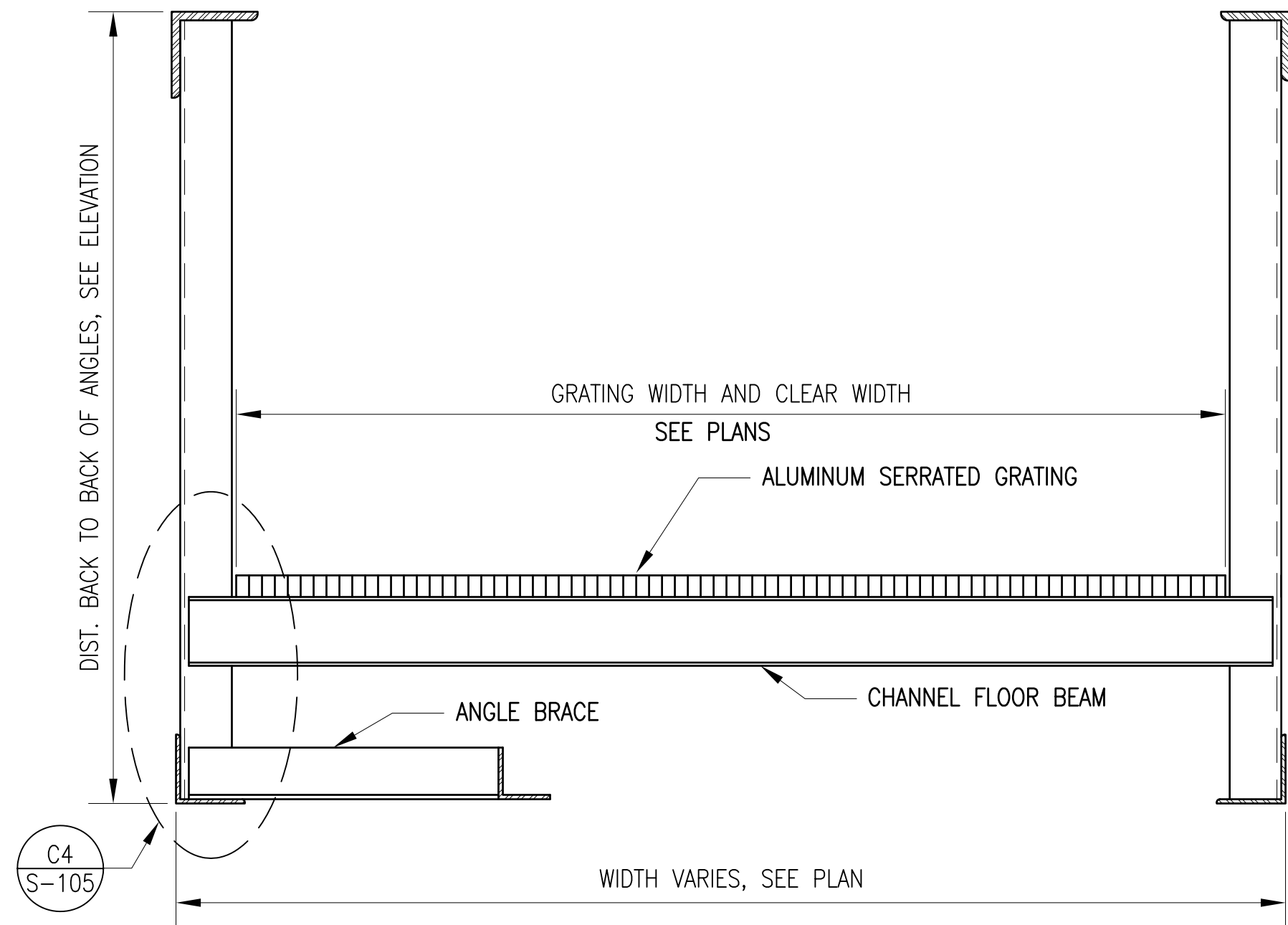
STANDARD DRAWINGS  
BROWS AND PLATFORMS  
TRUSS & BEAM BROW - HOOK DETAILS

SCALE: AS NOTED  
PROJECT NO.: \_\_\_\_\_  
CONSTR. CONTR. NO.: \_\_\_\_\_  
NAVFAC DRAWING NO. SD1405005  
SHEET 6 OF 42  
S-104  
DRAWING REVISION: 10 MARCH 2009



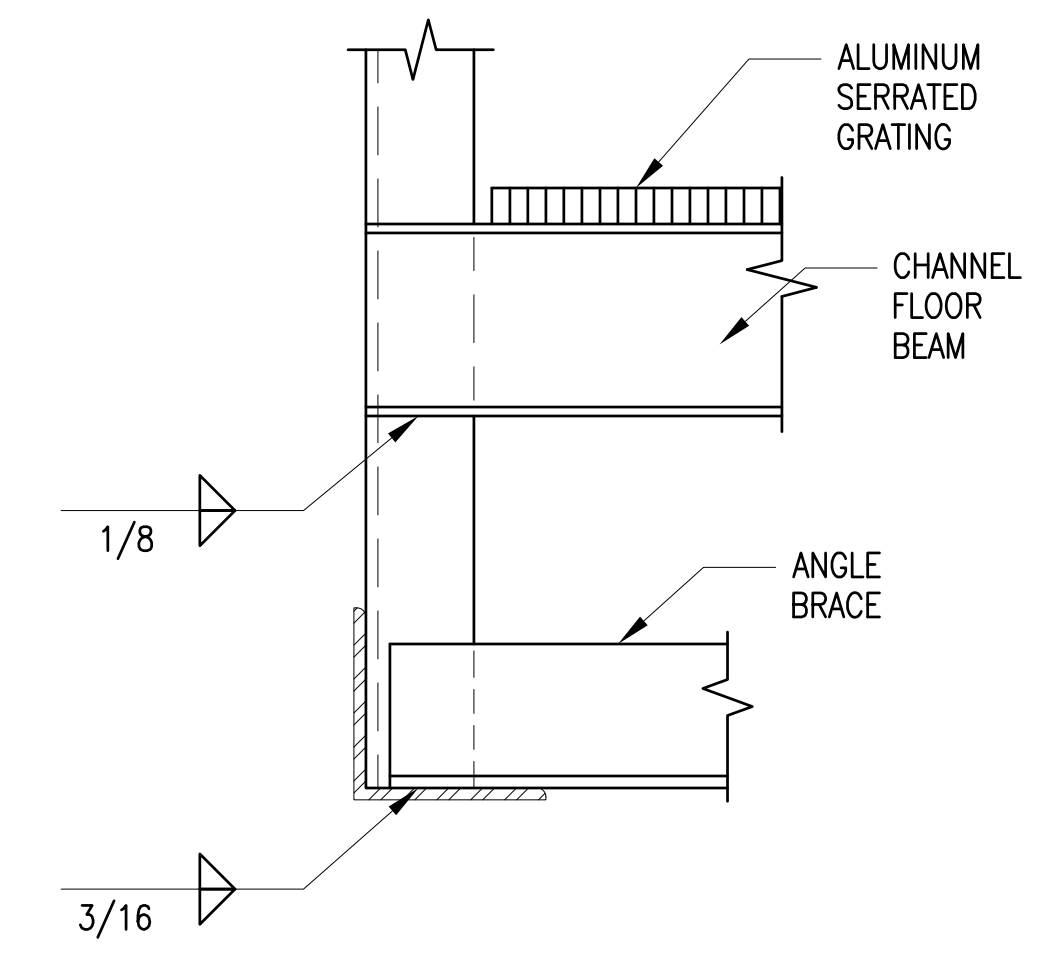
**END ELEVATION**

SCALE: 1 1/2"=1'-0" S-114, S-115, S-116, S-118, S-119, S-120, S-121, S-122 **C1**



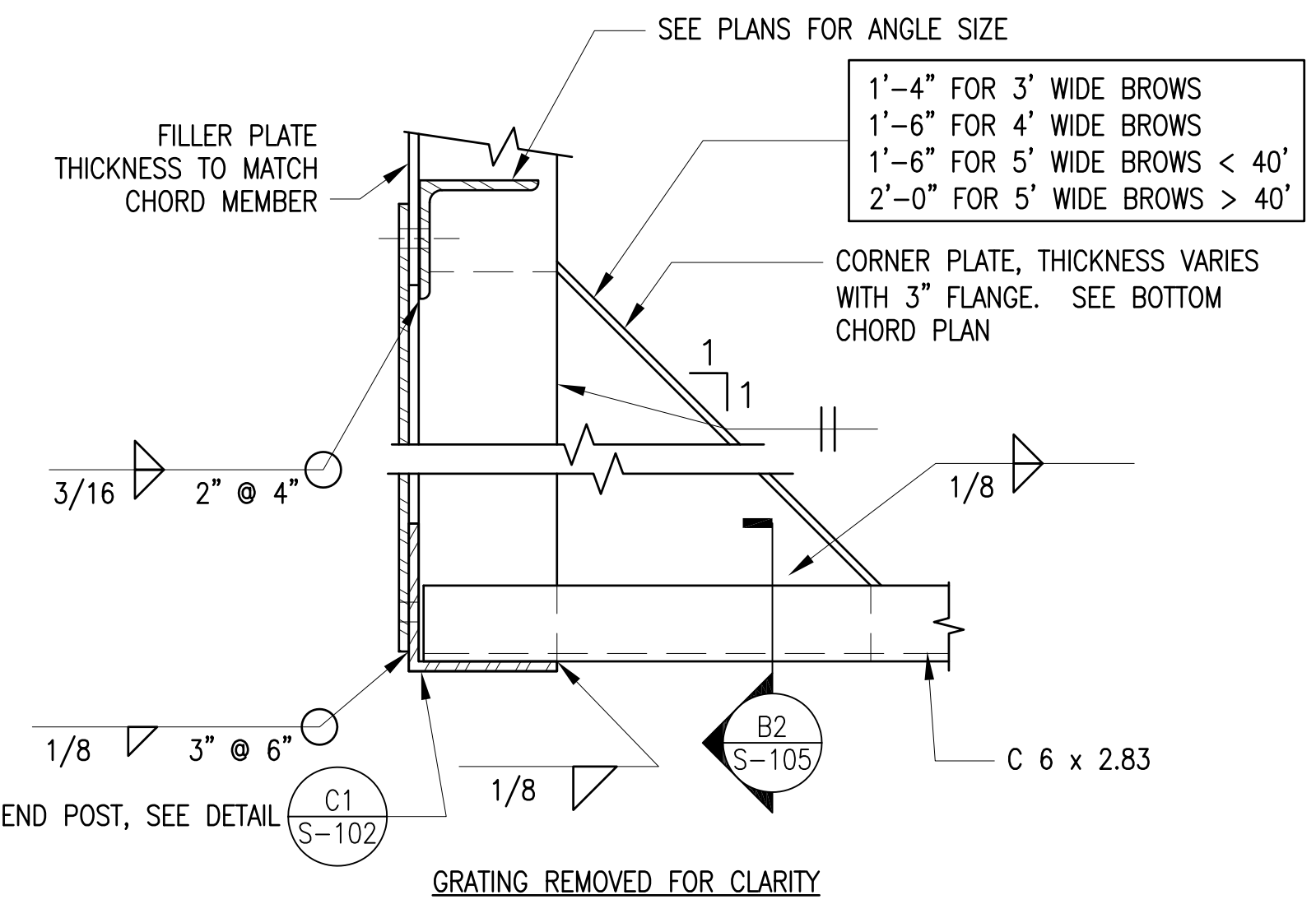
**BROW SECTION**

SCALE: 1 1/2"=1'-0" S-114, S-115, S-116, S-118, S-119 **C2**



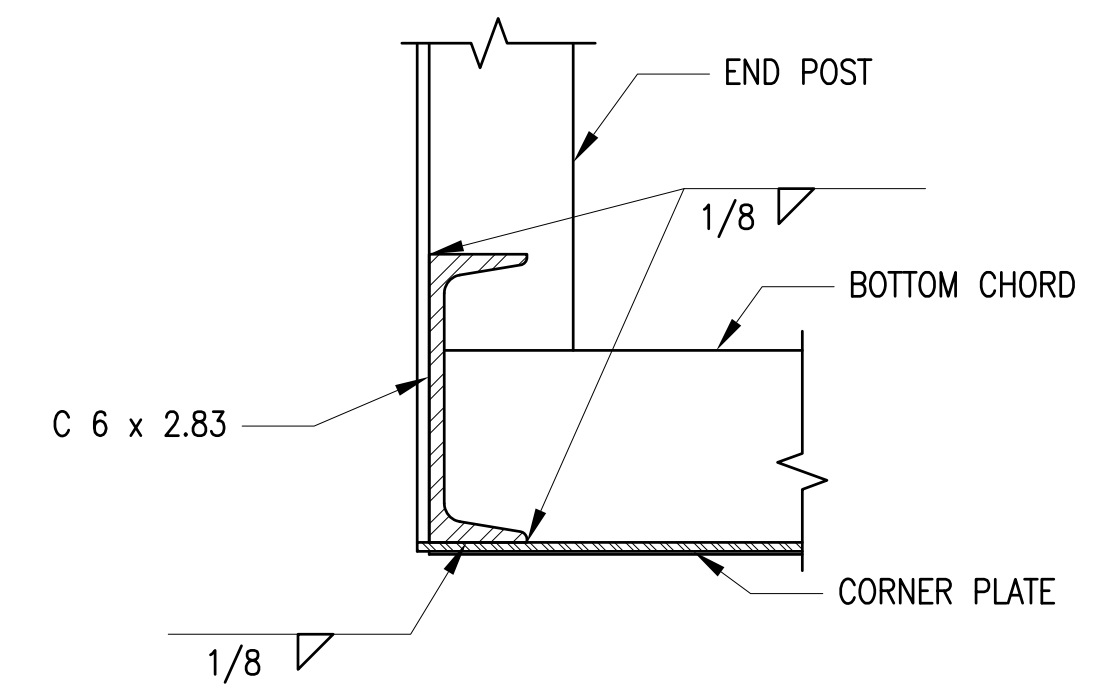
**BROW DETAIL**

SCALE: 3"=1'-0" S-105 **C4**



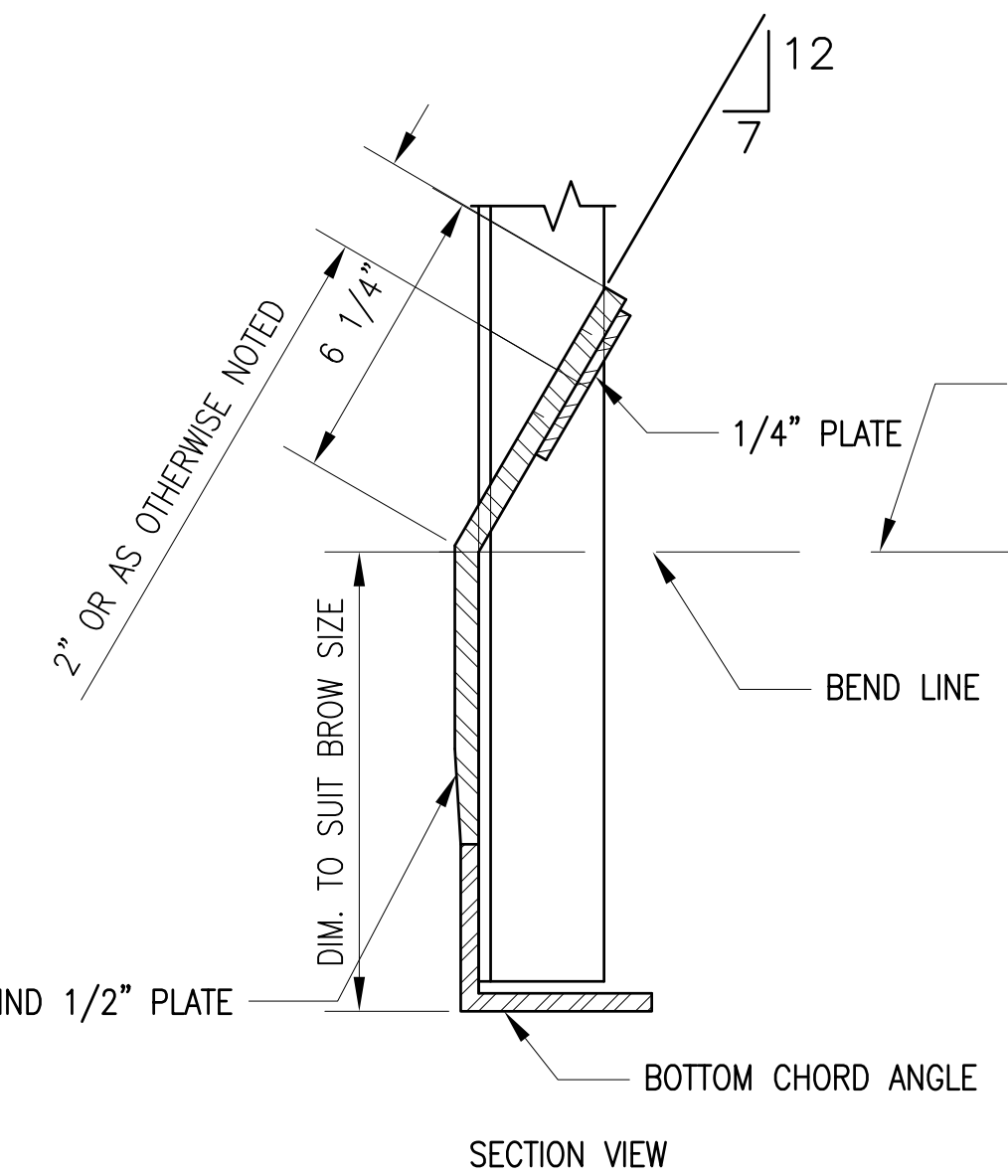
**CORNER PLATE DETAIL**

SCALE: 3"=1'-0" S-105, S-114, S-115, S-116, S-118, S-119, S-120, S-121, S-122 **B1**



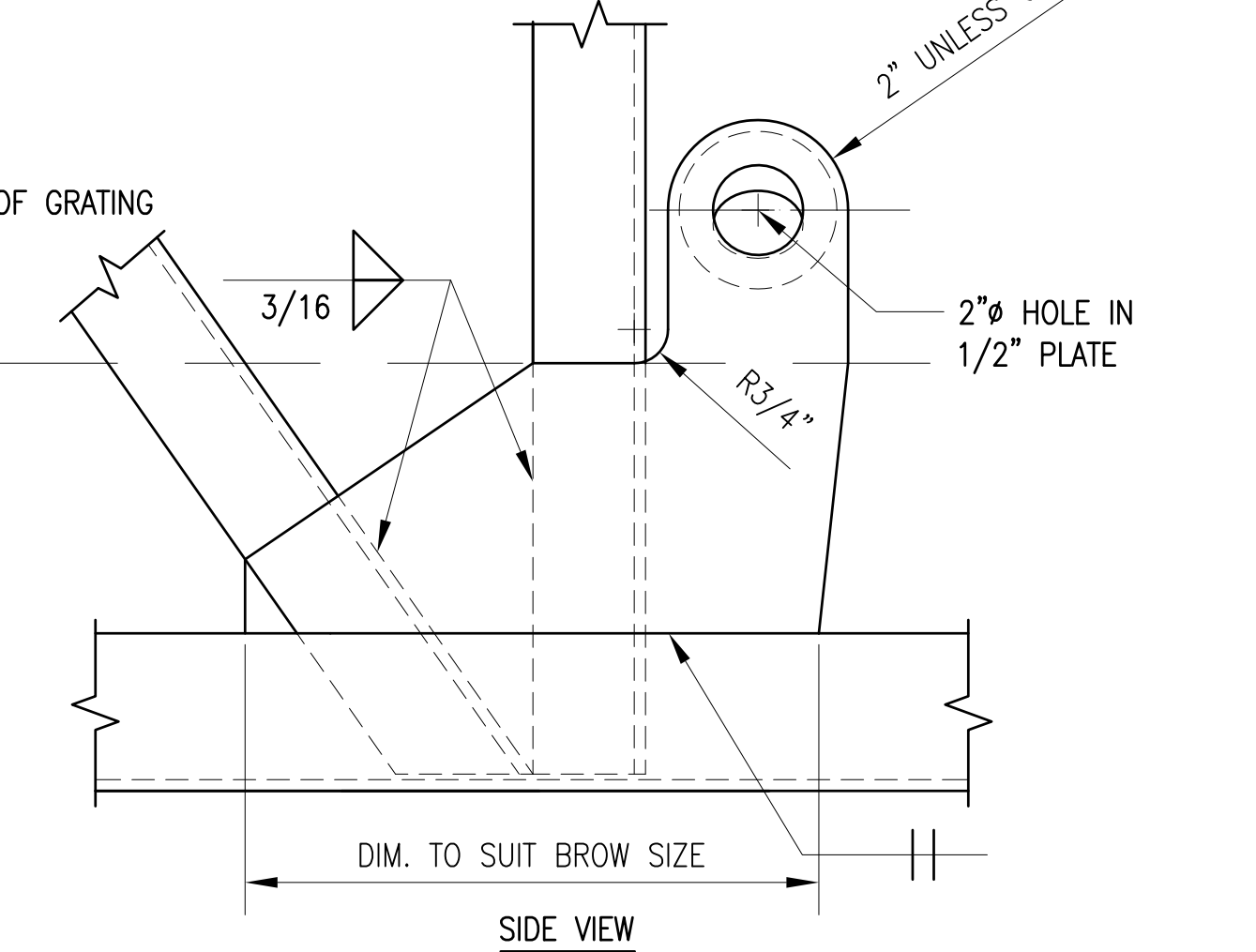
**DETAIL**

SCALE: 3"=1'-0" S-105 **B2**



**LIFTING EYE DETAIL**

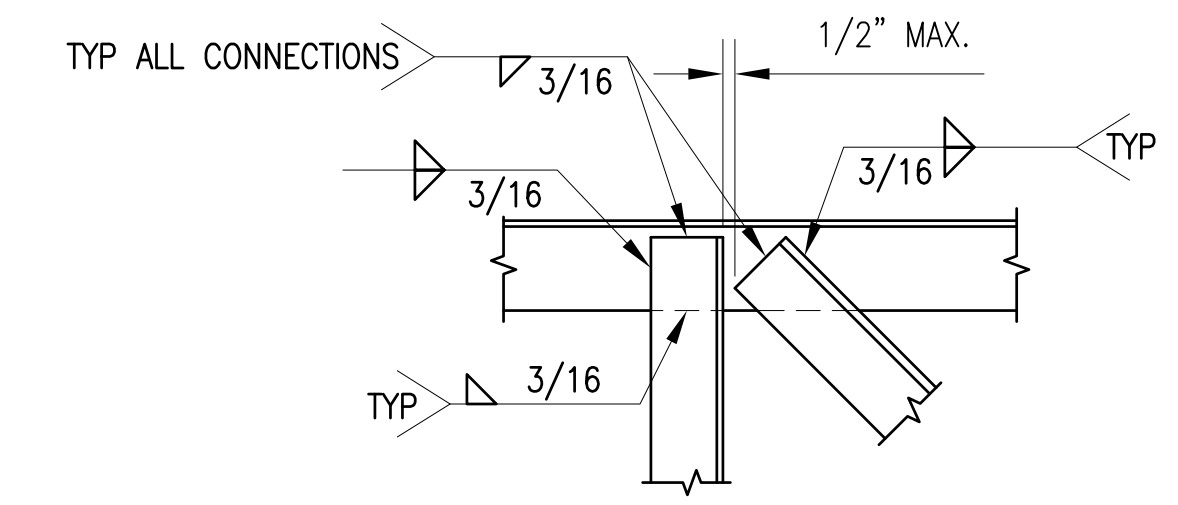
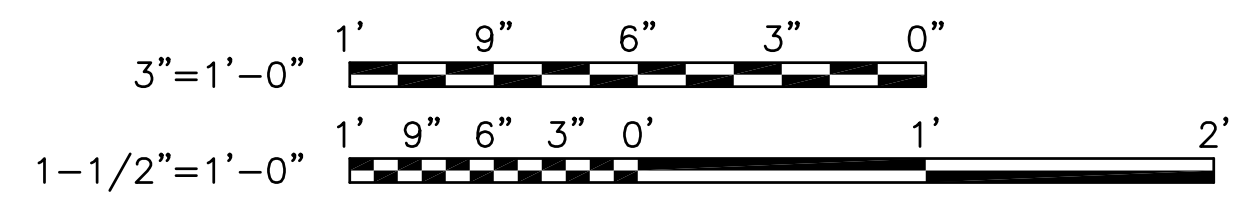
SCALE: 3"=1'-0"



**WELDING NOTES**

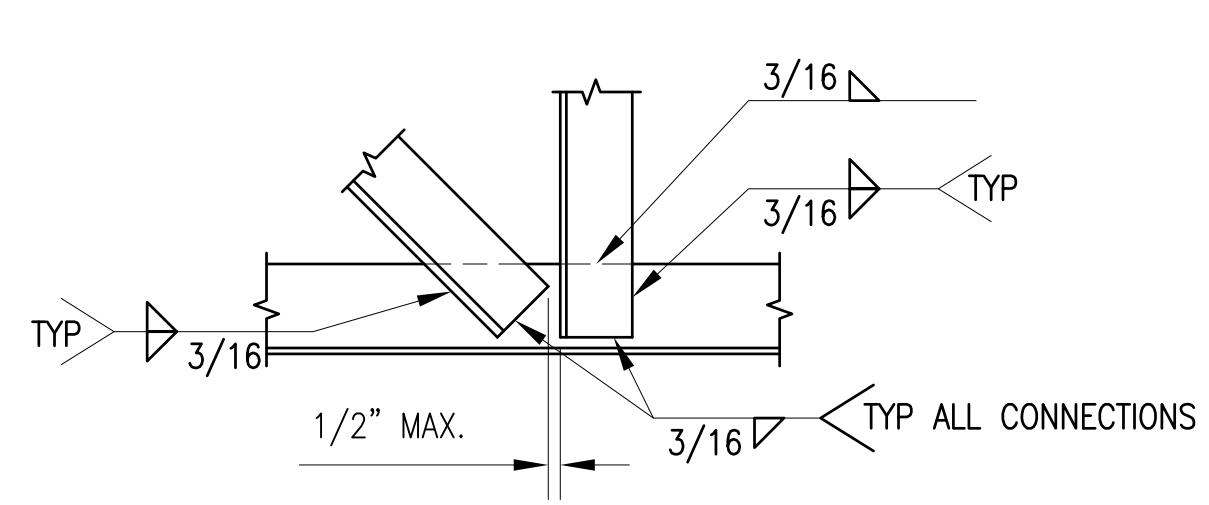
1. WELDING SHALL CONFORM TO THE ALUMINUM STRUCTURAL WELDING CODE, AWS D1.2.
2. PARTS SHALL BE WELDED WITH AN INERT GAS SHIELDED ARC OR RESISTANCE WELDING PROCESS. NO WELDING PROCESS THAT REQUIRES A WELDING FLUX SHOULD BE USED.
3. PARTS SHALL BE CUT BY SAWING, CHIPPING, MACHINING, SHEARING, OF ARC CUTTING. OXYGEN CUTTING SHALL NOT BE USED.
4. USE ER 4043 ALUMINUM FILLER ALLOY. USE ER 5356 FILLER ALLOY WHEN WELDING ANODIZED HANDRAILS.

**GRAPHIC SCALES:**



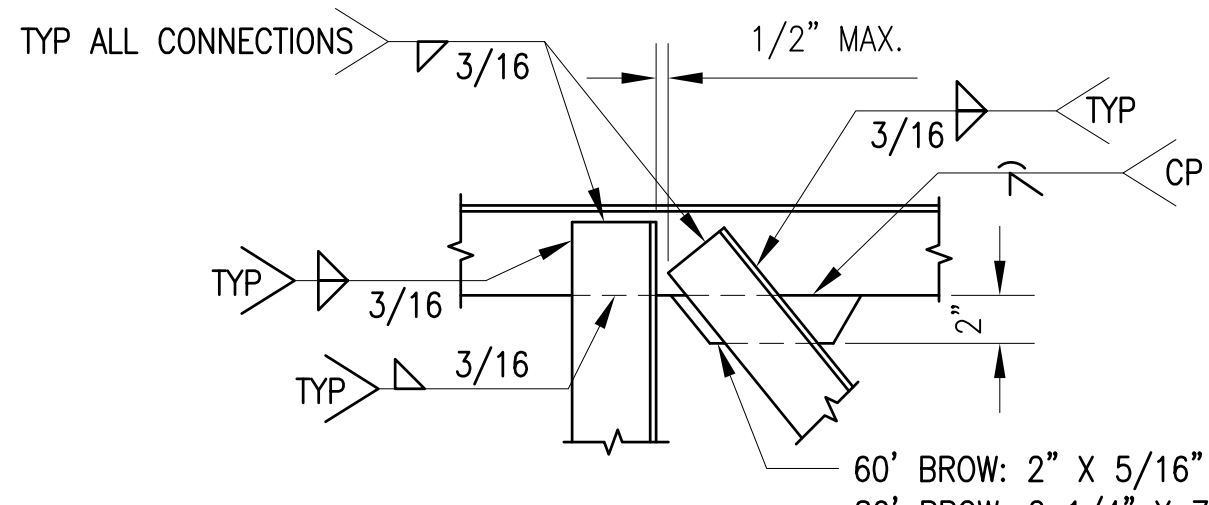
**DETAIL**

SCALE: 1 1/2"=1'-0" S-114, S-115, S-116, S-117, S-119, S-120, S-121, S-122 **A1**



**DETAIL**

SCALE: 1 1/2"=1'-0" S-114, S-115, S-116, S-117, S-119, S-120, S-121, S-122 **A2**



**DETAIL**

SCALE: 1 1/2"=1'-0" S-120, S-122 **A3**

FBC				DATE	APPR
7/12					
GENERAL REVISIONS				SYM	DESCRIPTION
1					

APPROVED: \_\_\_\_\_  
FOR COMMANDER NAVFAC  
ACTIVITY: \_\_\_\_\_  
SATISFACTORY TO: \_\_\_\_\_  
DES: DBC | DRW: DBC | CHK: FBC  
PW/DM: F. B. COLE  
BRANCH MANAGER: \_\_\_\_\_  
CHIEF ENG/ARCH: E. J. GALLAHER  
FIRE PROTECTION: \_\_\_\_\_

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC  
NAVFAC DRAWING NO. SD1405006  
SHEET 7 OF 42

STANDARD DRAWINGS  
TRUSS BROWS - WELDING NOTES AND DETAILS

SCALE: AS NOTED  
PROJECT NO.: \_\_\_\_\_  
CONSTR. CONTR. NO.: \_\_\_\_\_

SD1405006  
S-105

DRAWING REVISION: 10 MARCH 2009

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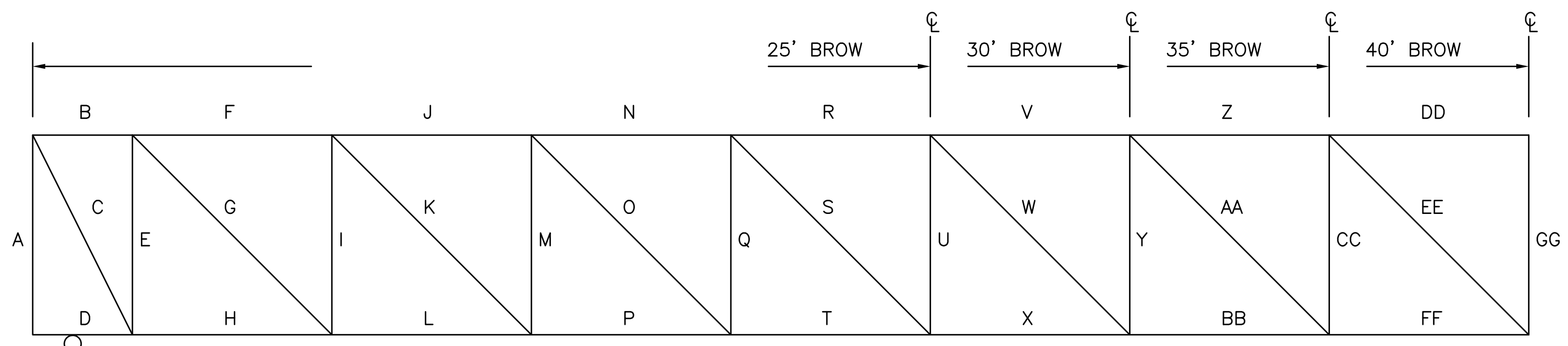
3

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MEMBER FORCES

MEMBERS	LENGTH	25'			30'			35'			40'		
	WIDTH	3'	4'	5'	3'	4'	5'	3'	4'	5'	3'	4'	5'
A	-1.58	-2.08	-2.59	-1.88	-2.49	-3.11	-2.22	-2.91	-3.64	-2.60	-3.41	-4.27	
B	-1.24	-1.63	-2.03	-1.27	-1.68	-2.10	-1.18	-1.57	-1.96	-1.56	-2.05	-2.56	
C	2.07	2.72	3.40	2.31	3.06	3.83	2.52	3.34	4.18	3.03	3.98	5.05	
D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
E	-1.19	-1.56	-1.95	-1.39	-1.85	-2.31	-1.84	-2.44	-3.06	-2.18	-2.85	-3.11	
F	-2.69	-3.54	-4.41	-2.98	-3.95	-4.94	-3.02	-4.01	-5.01	-3.38	-4.44	-5.56	
G	1.89	2.48	3.09	2.12	2.80	3.50	2.61	3.46	4.32	2.84	3.73	4.07	
H	1.24	1.63	2.03	1.27	1.68	2.10	1.18	1.57	1.96	1.56	2.05	2.56	
I	-0.89	-1.17	-1.46	-1.13	-1.49	-1.87	-1.54	-2.04	-2.55	-1.85	-2.43	-3.05	
J	-3.73	-4.90	-6.11	-4.31	-5.72	-7.15	-4.53	-6.00	-7.50	-4.92	-6.45	-8.07	
K	1.41	1.86	2.32	1.71	2.27	2.23	2.17	2.88	3.50	2.42	3.18	3.98	
L	2.69	3.54	4.41	2.98	3.95	4.94	3.02	4.01	5.01	3.38	4.44	5.56	
M	-0.64	-0.80	-1.05	-0.96	-1.26	-1.58	-1.25	-1.66	-2.08	-1.55	-2.04	-2.56	
N	-4.35	-5.72	-7.13	-5.27	-6.99	-8.72	-5.70	-7.55	-9.44	-6.16	-8.08	-10.11	
O	1.01	1.33	1.67	1.44	1.92	2.40	1.77	2.35	2.94	2.03	2.67	3.34	
P	3.73	4.90	6.11	4.32	5.72	7.15	4.53	6.00	7.50	4.92	6.45	8.07	
Q	-0.41	-0.55	-0.69	-0.70	-0.92	-1.16	-0.99	-1.32	-1.65	-1.28	-1.68	-2.11	
R	-4.56	-5.99	-7.46	-5.84	-7.74	-9.67	-6.54	-8.66	-10.82	-7.11	-9.32	-11.66	
S	0.65	0.87	1.09	1.06	1.40	1.75	1.40	1.86	2.33	1.67	2.20	2.75	
T	4.35	5.72	7.13	5.27	6.99	8.72	5.70	7.55	9.44	6.16	8.08	10.11	
U	0.00	0.00	0.00	-0.48	-0.64	-0.80	-0.76	-1.01	-1.26	-1.02	-1.35	-1.69	
V				-6.03	-8.00	-9.98	-7.04	-9.33	-11.65	-7.76	-10.18	-12.74	
W				0.73	0.97	1.22	1.07	1.42	1.79	1.34	1.76	2.20	
X				5.84	7.74	9.67	6.54	8.66	10.82	7.11	9.32	11.66	
Y				0.00	0.00	0.00	-0.55	-0.73	-0.92	-0.79	-1.04	-1.31	
Z							-7.21	-9.55	-11.93	-8.13	-10.66	-13.34	
AA							0.78	1.04	1.30	1.03	1.36	1.71	
BB							7.04	9.33	11.65	7.76	10.18	12.74	
CC							0.00	0.00	0.00	-0.61	-0.81	-1.02	
DD										-8.21	-10.77	-13.47	
EE										0.72	0.96	1.20	
FF										8.13	10.66	13.34	
GG										0.00	0.00	0.00	
HH													
II													
JJ													
KK													



TRUSS DIAGRAM ELEVATION

NOTES:

- FORCES SHOWN ARE IN KIPS.
- A NEGATIVE SIGN INDICATES MEMBER IN COMPRESSION.
- MEMBER FORCES ARE BASED ON UNIFORM DEAD LOAD PLUS A UNIFORM DESIGN LOAD OF 75 PSF POSITIONED TO PRODUCE THE MAXIMUM FORCE IN THE MEMBER UNDER CONSTRUCTION.

GENERAL REVISIONS	DATE	APPR
7/12		
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NORFOLK, VIRGINIA LANT CAPITAL IMPROVEMENTS <b>STANDARD DRAWINGS</b> <b>BROWS AND PLATFORMS</b> TRUSS BROWS - MEMBER FORCES		
APPROVED: _____ FOR COMMANDER NAVFAC: _____ ACTIVITY: _____ SATISFACTORY TO: _____ DES: DBC   DRW: DBC   CHK: FBC PW/DM: F. B. COLE BRANCH MANAGER: _____ CHIEF ENG/ARCH: E. J. GALLAHER FIRE PROTECTION: _____		
SCALE: AS NOTED PROJECT NO.: _____ CONSTR. CONTR. NO.: _____ NAVFAC DRAWING NO.: SD1405007 SHEET 8 OF 42 <b>S-106</b> <small>DRAWFORM REVISION: 10 MARCH 2009</small>		

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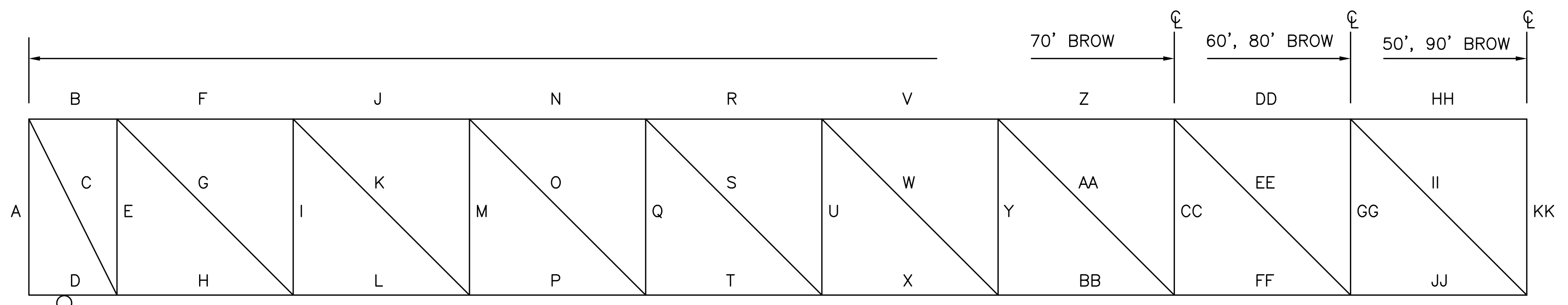
4

5



### MEMBER FORCES (CONTINUED)

MEMBERS	LENGTH	50'			60'			70'			80'	90'
	WIDTH	3'	4'	5'	3'	4'	5'	3'	4'	5'	5'	5'
A	-3.30	-4.28	-5.32	-4.04	-5.28	-6.51	-4.28	-6.40	-7.83	-9.25	-10.57	
B	-2.33	-3.02	-3.75	-2.30	-3.01	-3.71	-2.37	-3.15	-3.86	-4.10	-5.11	
C	4.13	5.35	6.65	4.71	6.16	7.60	5.42	7.19	8.81	10.12	11.81	
D	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
E	-2.60	-3.37	-4.18	-3.38	-4.92	-5.44	-4.04	-5.37	-6.58	-8.03	-9.51	
F	-4.15	-5.38	-6.68	-5.00	-6.54	-8.05	-6.06	-8.05	-9.86	-11.42	-9.85	
G	3.12	4.04	5.03	4.36	5.70	7.01	5.03	6.68	8.26	10.88	10.63	
H	2.33	3.02	3.75	2.30	3.01	3.71	2.37	3.15	3.86	4.10	5.11	
I	-2.41	-3.13	-9.90	-2.72	-3.55	-4.37	-3.37	-4.47	-5.48	-6.85	-8.48	
J	-5.73	-7.43	-9.24	-7.26	-9.50	-11.69	-9.08	-12.06	-14.77	-17.62	-18.31	
K	2.90	3.77	4.68	3.51	4.58	5.64	4.19	5.57	6.89	9.27	12.00	
L	4.15	5.36	6.68	5.00	6.54	8.05	6.06	8.05	9.86	11.42	9.85	
M	-2.11	-2.74	-3.40	-2.28	-2.98	-3.67	-2.74	-3.64	-4.47	-5.74	-7.21	
N	-7.08	-9.18	-11.41	-9.09	-11.89	-14.64	-11.43	-15.18	-18.58	-22.70	-25.35	
O	2.53	3.29	4.09	2.94	3.84	4.73	3.43	4.56	5.64	7.77	10.20	
P	5.73	7.43	9.24	7.26	9.50	11.69	9.08	12.06	14.77	17.62	18.31	
Q	-1.82	-2.37	-2.94	-1.86	-2.44	-3.01	-2.15	-2.86	-3.57	-4.76	-5.99	
R	-8.19	-10.63	-13.21	-10.49	-13.72	-16.90	-13.11	-17.40	-21.37	-26.63	-30.99	
S	2.19	2.85	3.54	2.40	3.15	3.88	2.71	3.60	4.46	6.45	8.47	
T	7.08	9.18	11.41	9.09	11.89	14.64	11.43	15.18	18.58	22.70	25.35	
U	-1.54	-2.01	-2.50	-1.57	-2.07	-2.56	-1.62	-2.15	-2.65	-3.81	-4.87	
V	-9.07	-11.77	-14.62	-11.46	-14.99	-18.46	-14.12	-18.74	-22.95	-29.16	-35.21	
W	1.86	2.42	3.01	2.03	2.66	3.29	2.07	2.75	3.41	5.16	6.89	
X	8.19	10.63	13.21	10.49	13.72	16.90	13.11	17.40	21.37	26.63	30.99	
Y	-1.29	-1.68	-2.09	-1.20	-1.59	-1.97	-1.13	-1.51	-1.88	-2.63	-3.83	
Z	-9.71	-12.67	-15.56	-12.00	-15.70	-19.32	-14.45	-19.19	-23.49	-31.15	-38.03	
AA	1.54	2.02	2.51	1.55	2.04	2.54	1.53	2.04	2.54	3.56	5.42	
BB	9.07	11.77	14.62	11.46	14.99	18.46	14.12	18.74	22.95	19.16	35.21	
CC	-1.00	-1.31	-1.63	-0.92	-1.22	-1.53	0.00	0.00	0.00	-2.01	-2.86	
DD	-10.13	-13.14	-16.33	-12.12	-15.85	-19.52				-31.72	-39.44	
EE	1.20	1.57	1.96	1.07	1.43	1.78				2.72	4.04	
FF	9.71	12.62	15.66	12.00	15.70	19.32				31.15	38.03	
GG	-0.79	-1.04	-1.30	0.00	0.00	0.00				0.00	-1.98	
HH	-10.31	-13.38	-16.62								-39.44	
II	1.02	1.35	1.69								2.78	
JJ	10.13	13.14	16.33								39.44	
KK	0.00	0.00	0.00								0.00	



TRUSS DIAGRAM ELEVATION

#### NOTES:

- FORCES SHOWN ARE IN KIPS.
- A NEGATIVE SIGN INDICATES MEMBER IN COMPRESSION.
- MEMBER FORCES ARE BASED ON UNIFORM DEAD LOAD PLUS A UNIFORM DESIGN LOAD OF 75 PSF POSITIONED TO PRODUCE THE MAXIMUM FORCE IN THE MEMBER UNDER CONSTRUCTION.

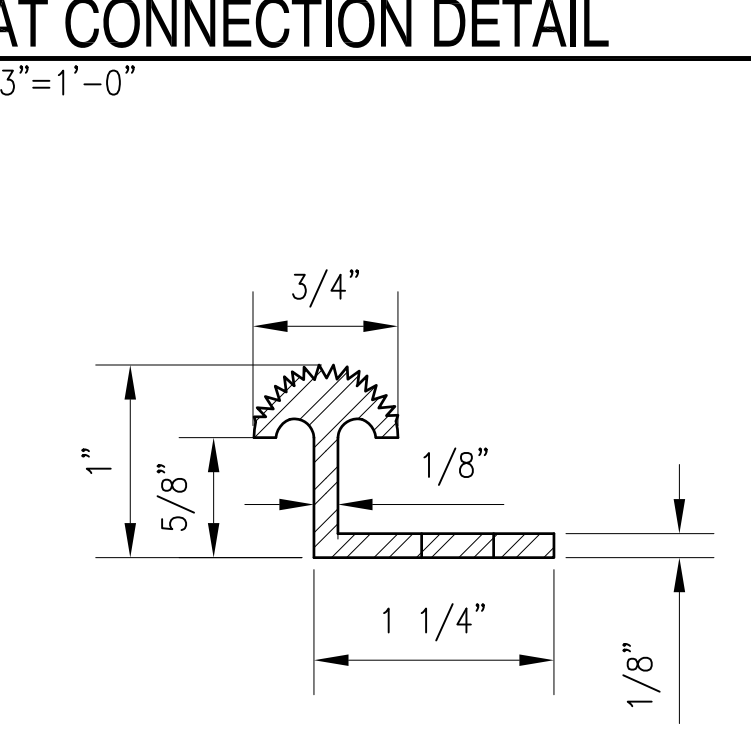
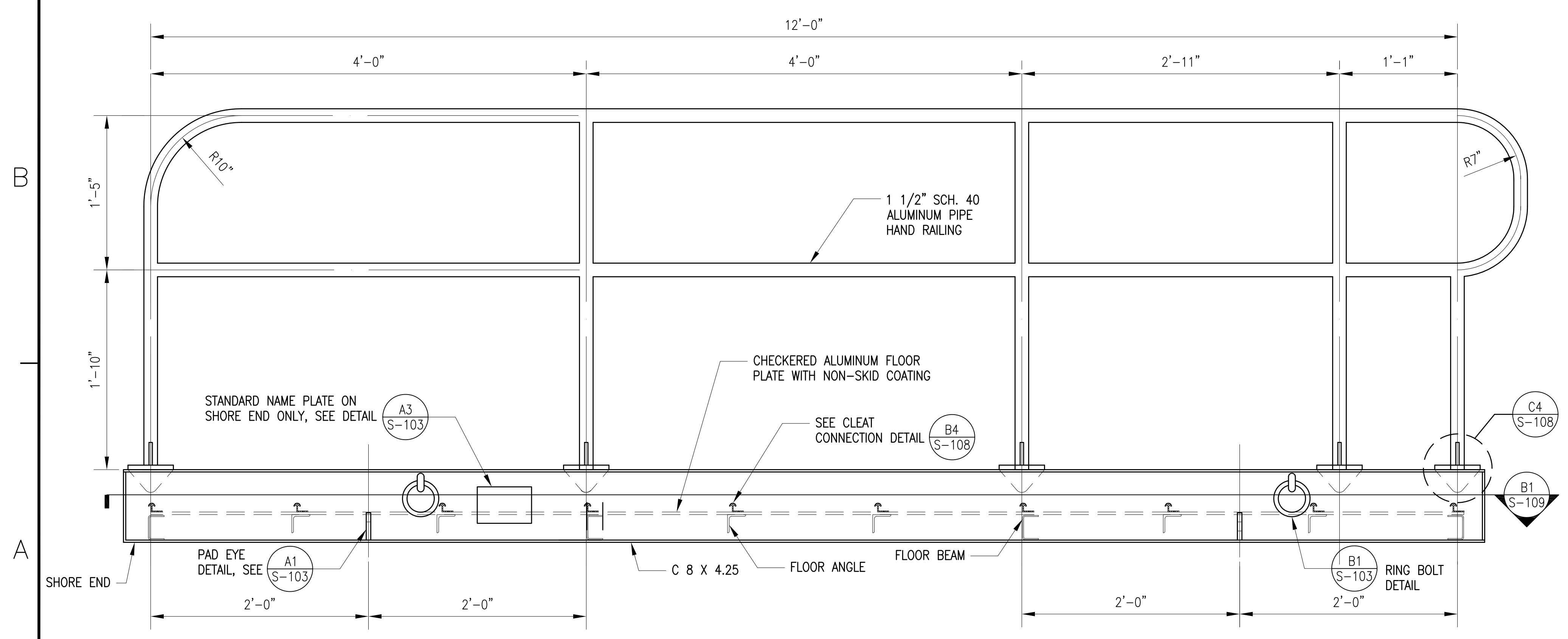
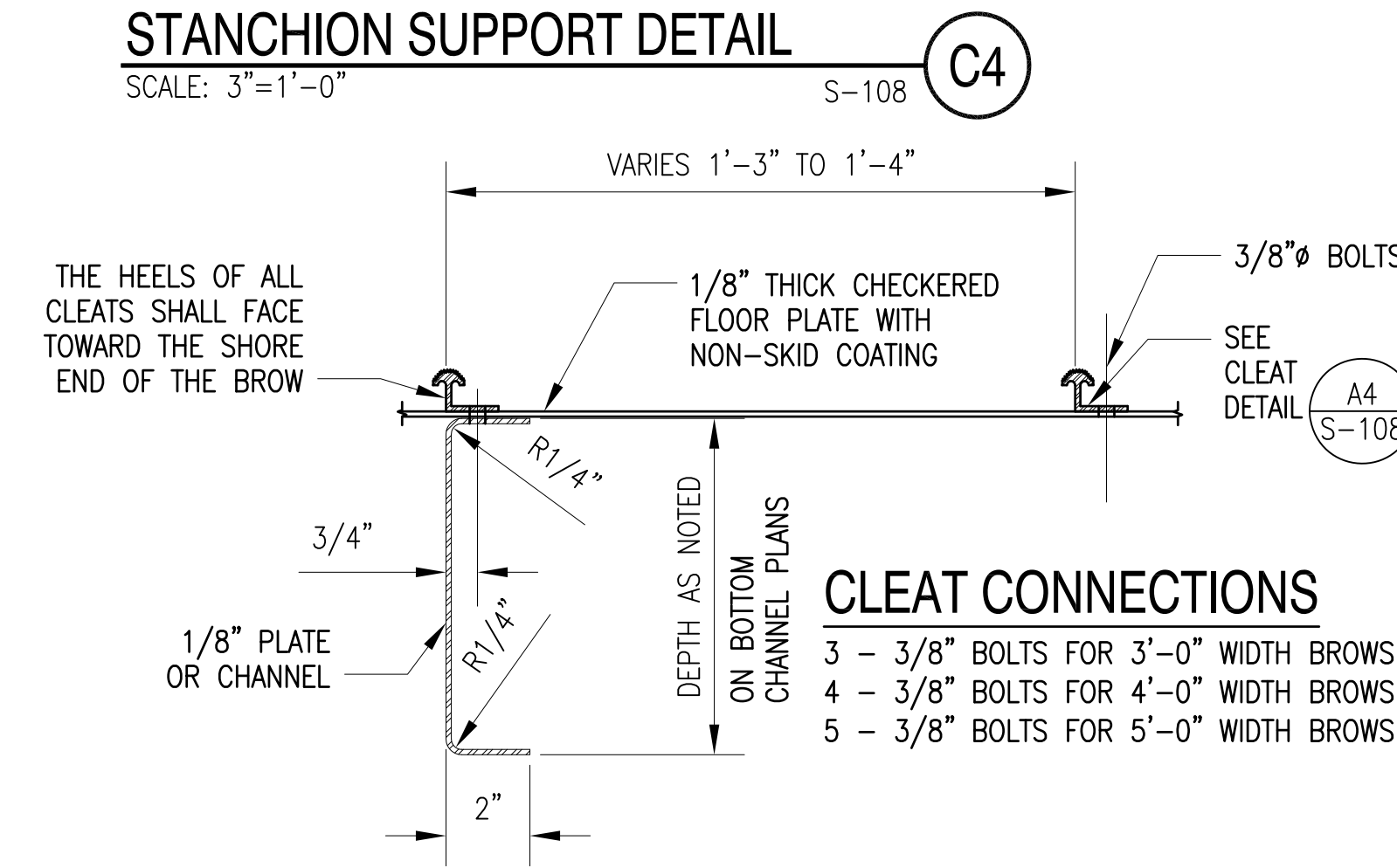
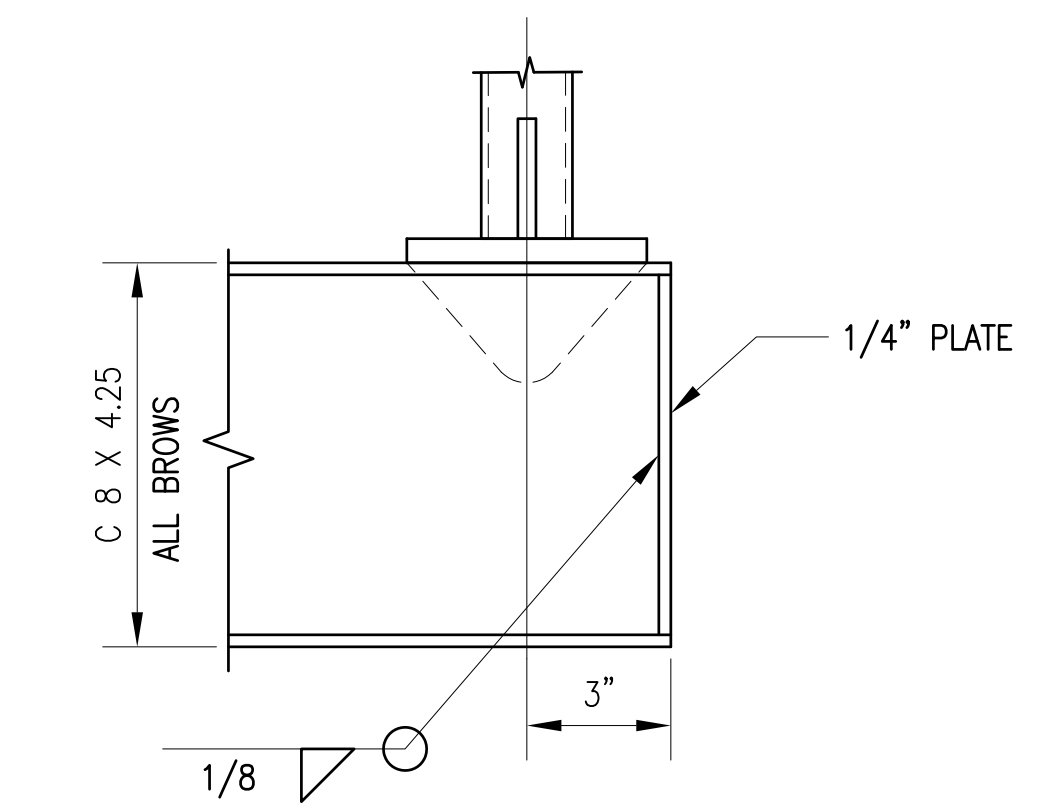
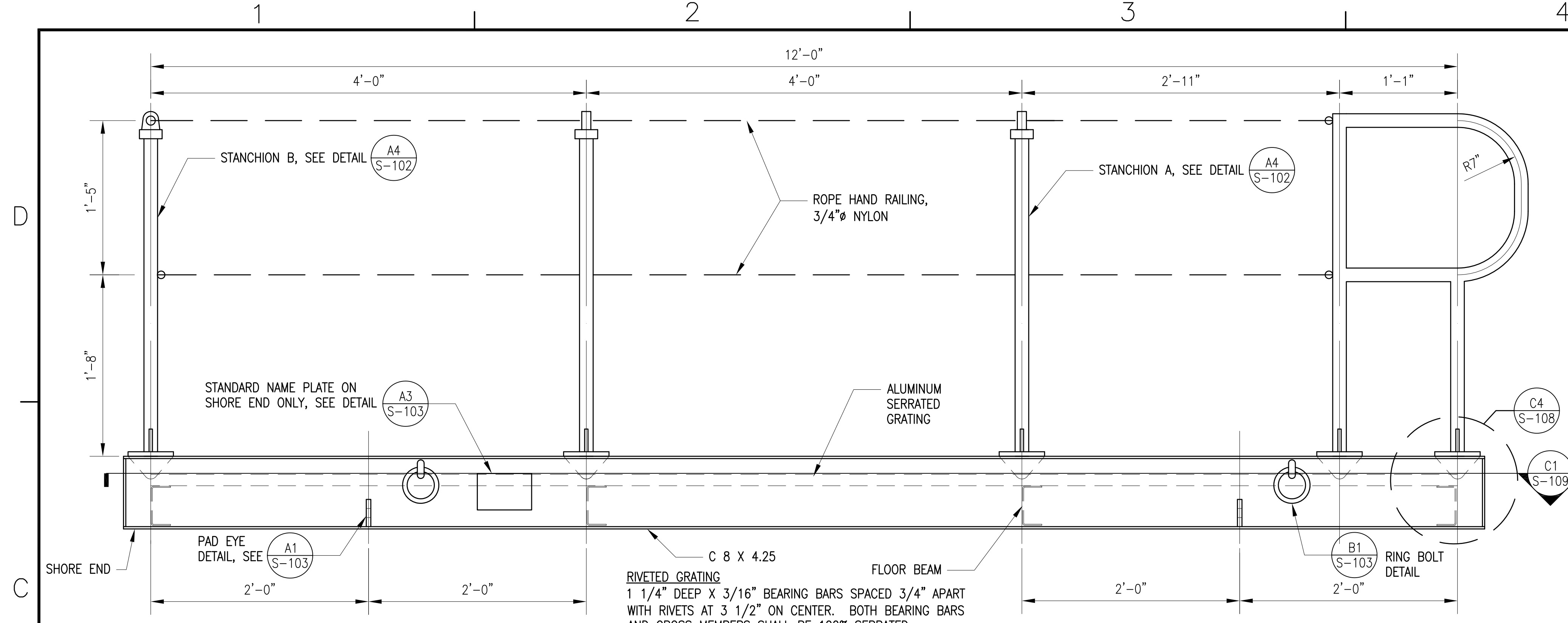
GENERAL REVISIONS	DATE	DESCRIPTION
7/12		



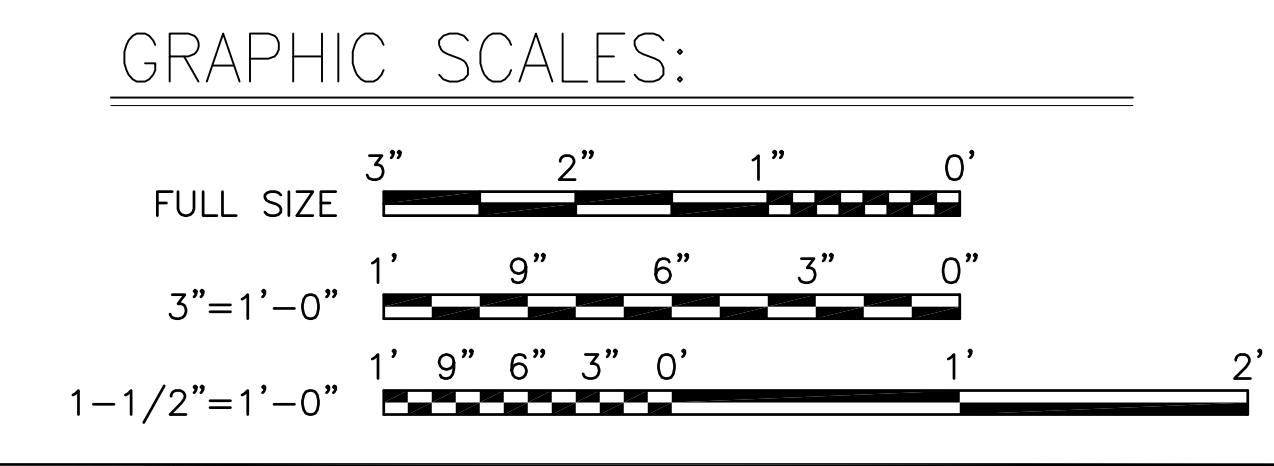
APPROVED		
FOR COMMANDER NAVFAC		
ACTIVITY		
SATISFACTORY TO		
DES DBC	DRW DBC	CHK FBC
PM/DM	F. B. COLE	
BRANCH MANAGER	E. J. GALLAHER	
CHEF ENG/ARCH	E. J. GALLAHER	
FIRE PROTECTION		

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
 NAVAL CAPITAL IMPROVEMENTS  
 STANDARD DRAWINGS  
 BROWS AND PLATFORMS  
 TRUSS BROWS - MEMBER FORCES

SCALE:	AS NOTED
PROJECT NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	SD1405008
SHEET	9 OF 42
<b>S-107</b>	



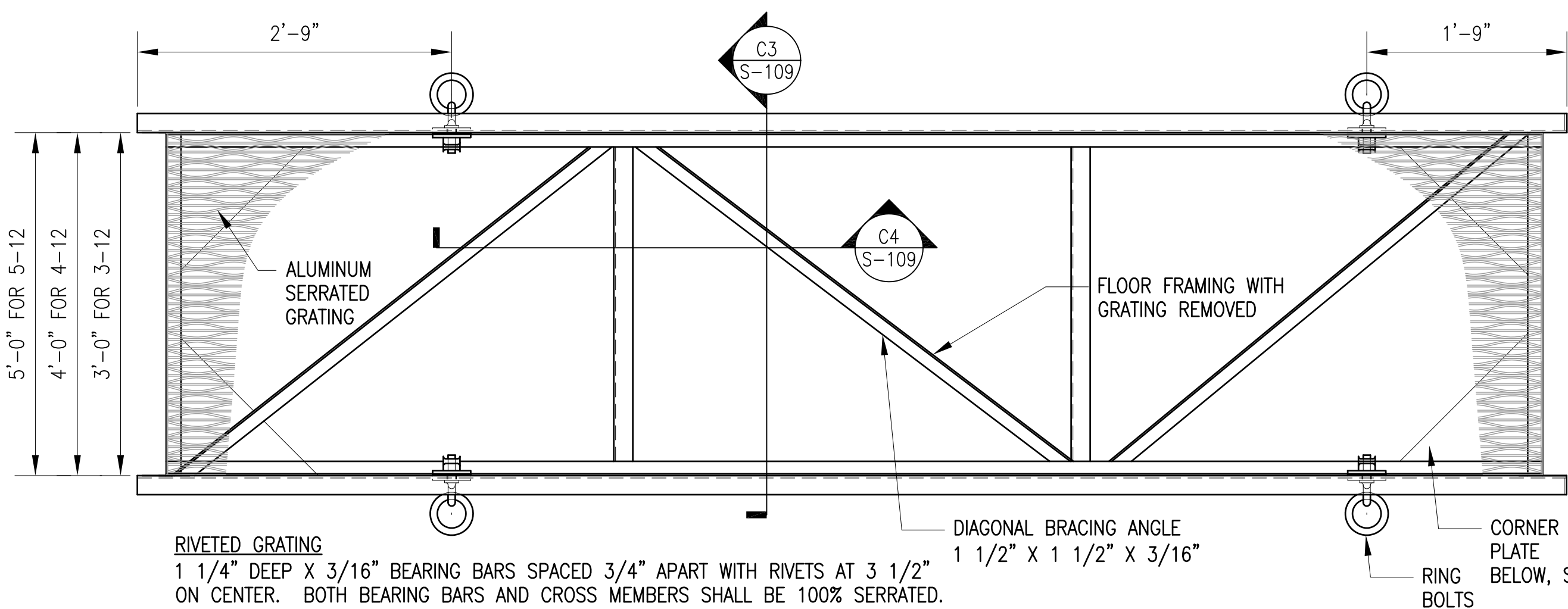
- NOTES:**
- ALL HANDRAILS ARE TO BE 1 1/2" SCH. 40 STD. PIPE WELDED THROUGHOUT, EXCEPT AS NOTED.
  - FOR DETAILS OF HOOKS, ROLLERS, FITTINGS, STANCHIONS, CLEATS, AND PAD EYE SEE SHEETS S-101 THROUGH S-105.
  - FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
  - BROW LIGHTING SHOWN ON SHEET E-100.
  - THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836925 THROUGH REVISION G. CALCULATIONS FOR Y&D DRAWING 836925 ARE CONTAINED IN BOOKS 5011 AND 5015.



FBC			7/12			DATE		
1 GENERAL REVISIONS			SYM			DESCRIPTION		
APPROVED			A/E INFO			SEAL		
FOR COMMANDER NAVFAC			ACTIVITY			SATISFACTORY TO		
DES: DBC			DRW: DBC			CHK: FBC		
PW/DM			F. B. COLE			BRANCH MANAGER		
CHIEF ENG/ARCH			E. J. GALLAHER			FIRE PROTECTION		
DEPARTMENT OF THE NAVY			NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC			NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC		
NAVFAC DRAWING NO. SD1405009			SHEET 10 OF 42			S-108		
DRAWING REVISION: 10 MARCH 2009								

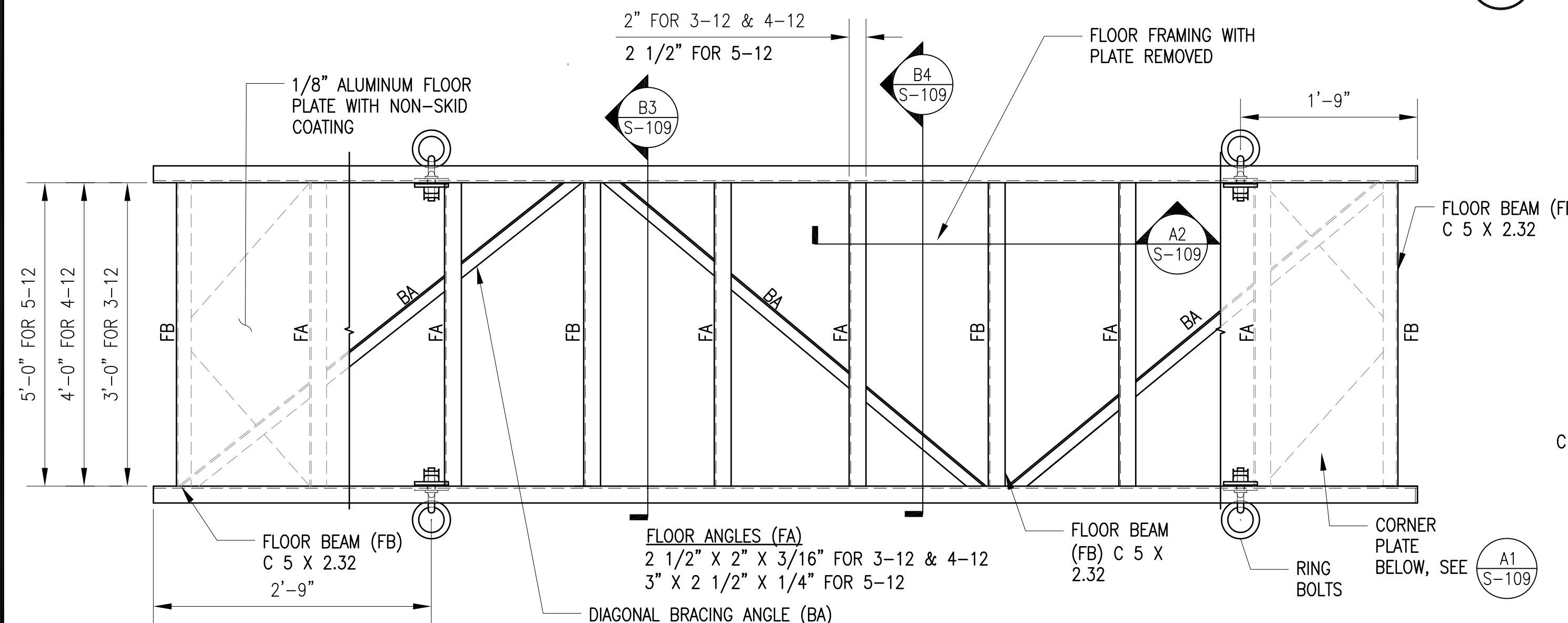
STANDARD DRAWINGS  
BROWS AND PLATFORMS  
ALUMINUM BEAM BROWS

ALUMINUM BEAM BROWS 3-12, 4-12 & 5-12 ELEVATION



**GRATING FLOOR SYSTEM SECTION**

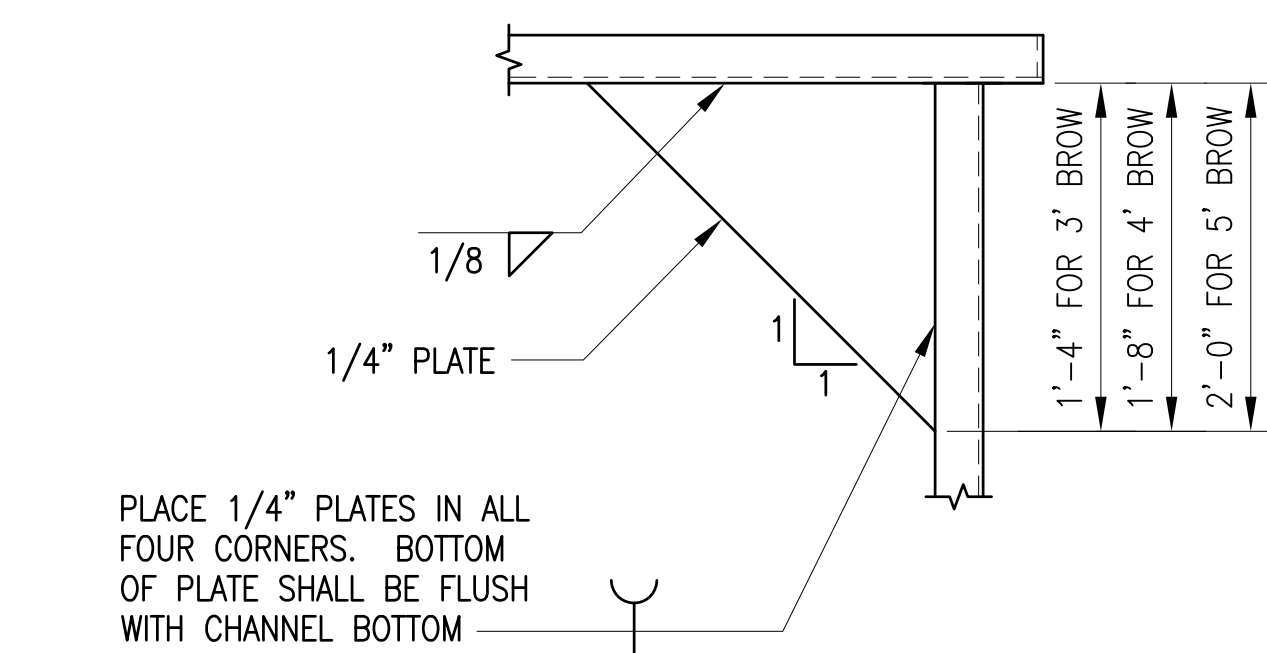
SCALE: 1"=1'-0"



**FLOOR PLATE SYSTEM SECTION**

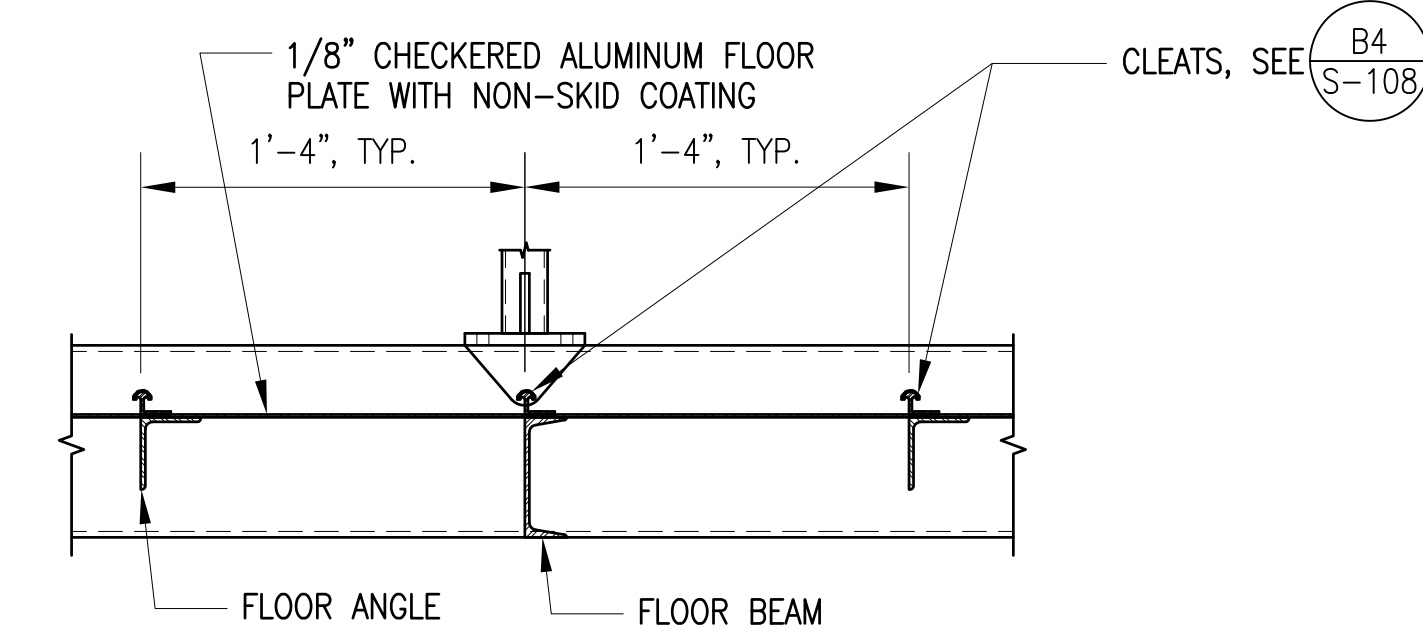
SCALE: 1"=1'-0"

NOTE: ONLY FLOOR PLATE BROWS HAVE ADDED CLEATS



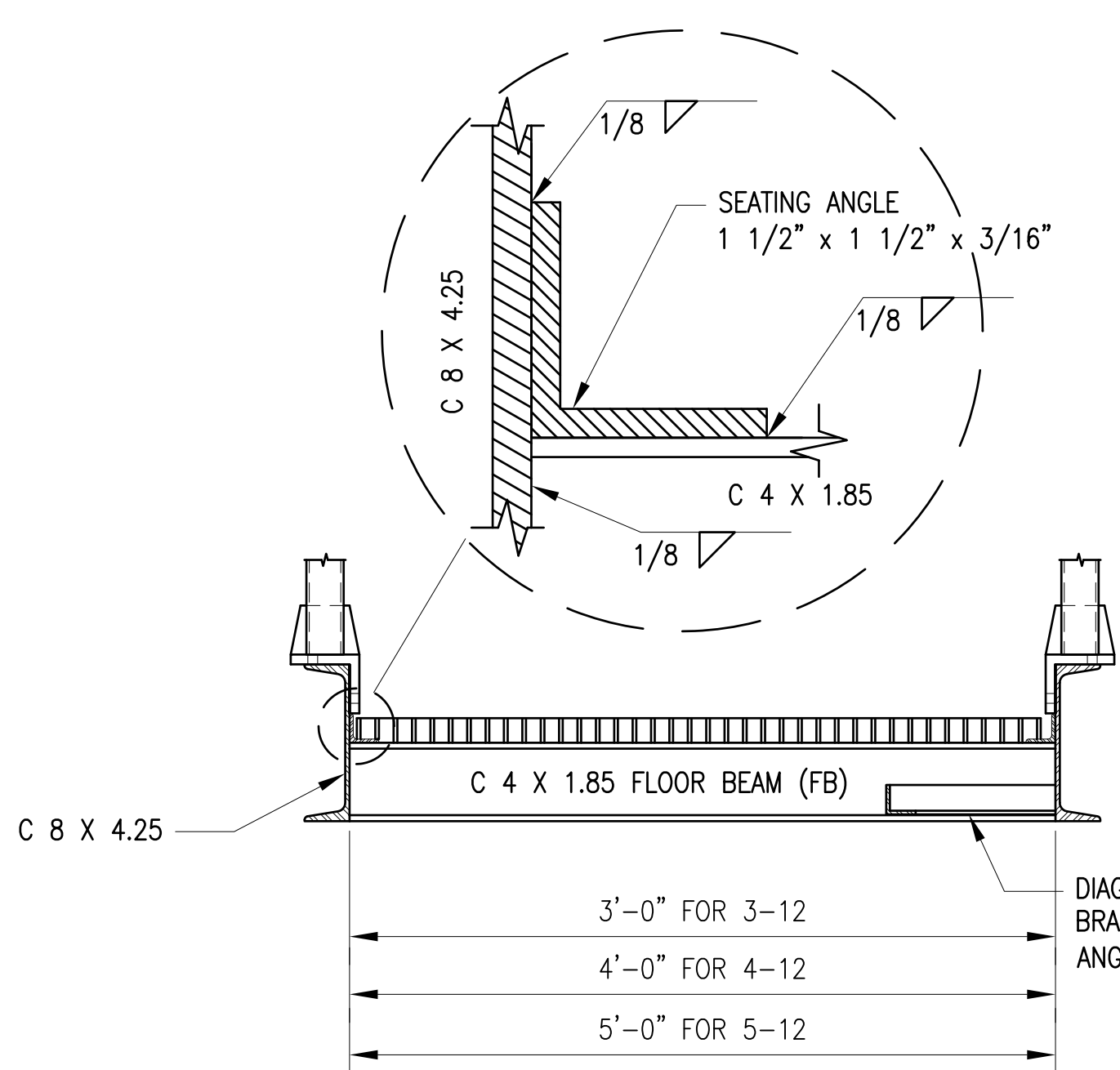
**CORNER PLATE DETAIL**

SCALE: 1 1/2"=1'-0"



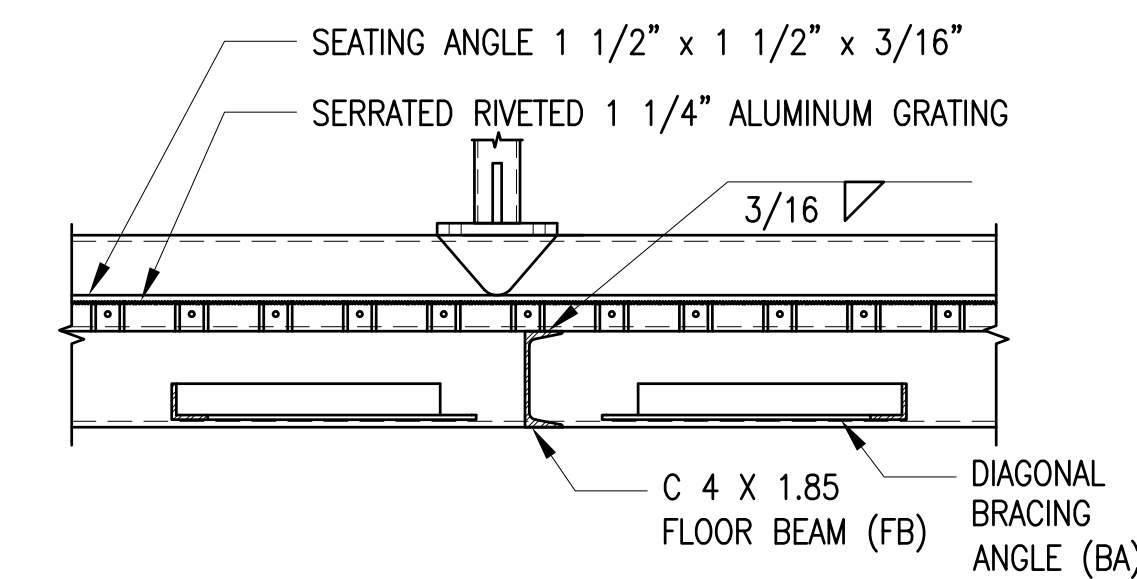
**PLATE FLOOR SYSTEM SECTION**

SCALE: 1 1/2"=1'-0"



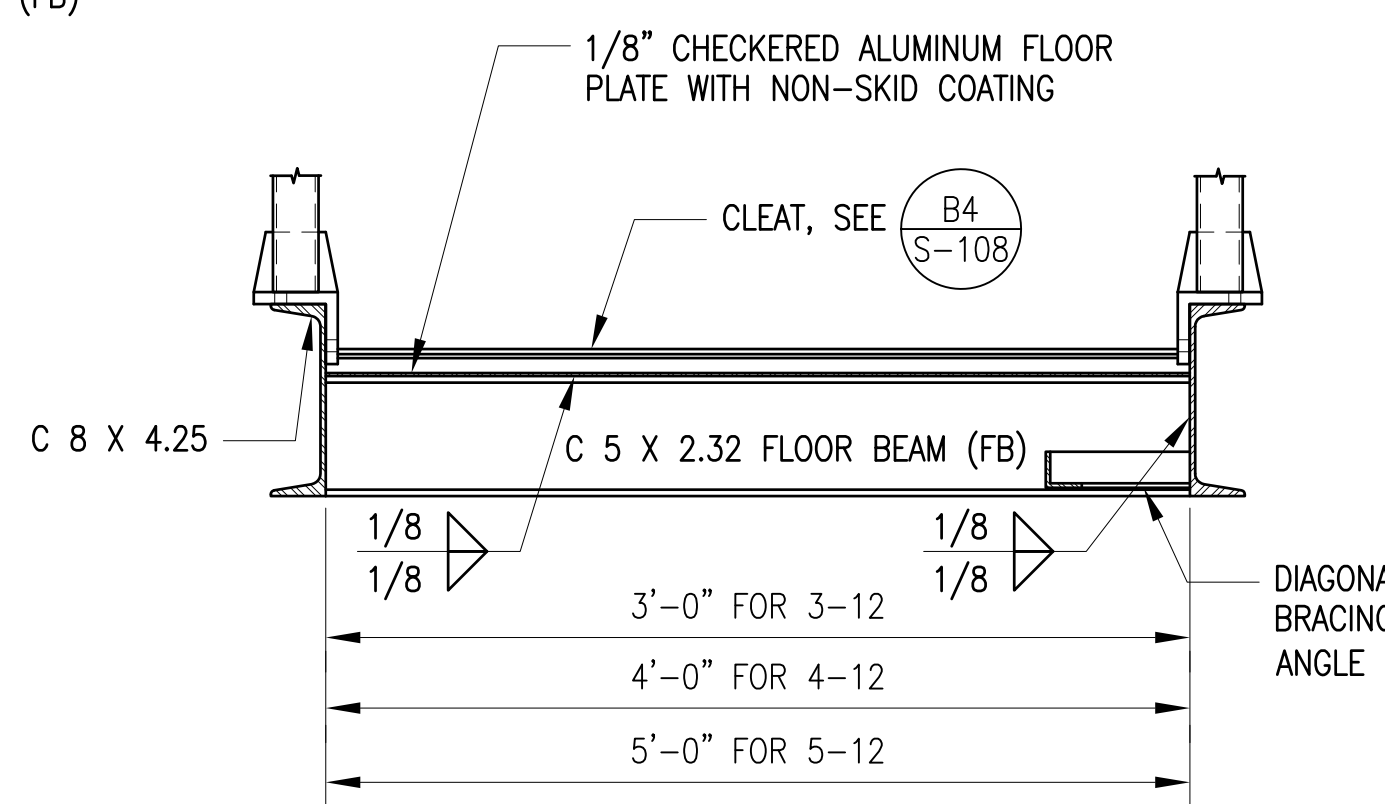
**GRATING FLOOR SYSTEM SECTION**

SCALE: 1 1/2"=1'-0"



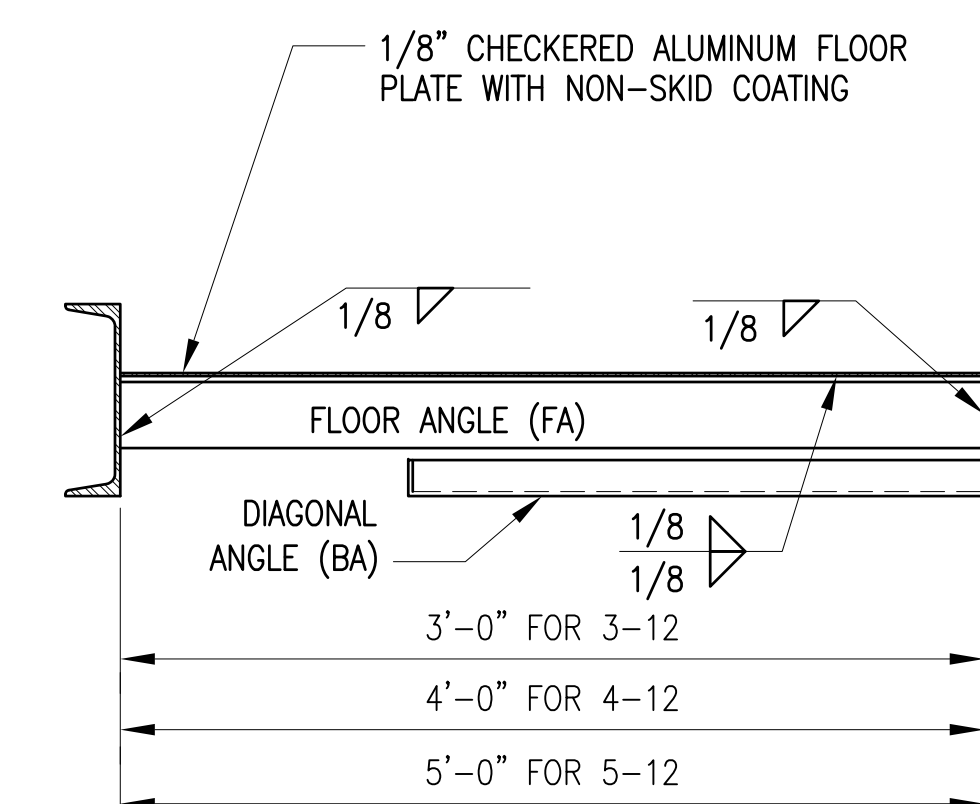
**GRATING FLOOR SYSTEM SECTION**

SCALE: 1 1/2"=1'-0"



**PLATE FLOOR SYSTEM SECTION**

SCALE: 1 1/2"=1'-0"



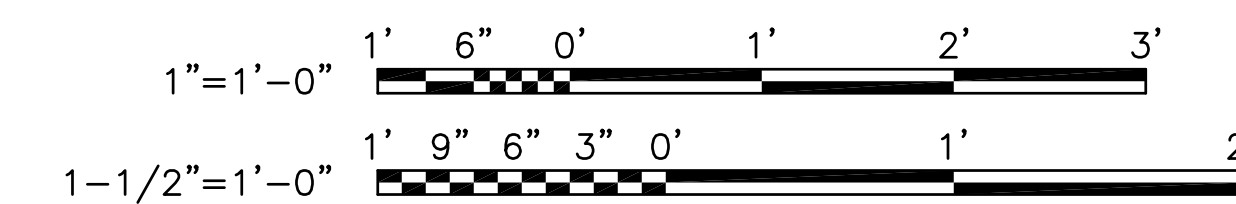
**PLATE FLOOR SYSTEM SECTION**

SCALE: 1 1/2"=1'-0"

**NOTES:**

- ALL HANDRAILS ARE TO BE 1 1/2" SCH. 40 STD. PIPE WELDED THROUGHOUT, EXCEPT AS NOTED.
- FOR DETAILS OF HOOKS, ROLLERS, FITTINGS, STANCHIONS, CLEATS, AND PAD EYE SEE SHEETS S-101 THROUGH S-105.
- FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
- BROW LIGHTING SHOWN ON SHEET E-100.
- THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836926 THROUGH REVISION G. CALCULATIONS FOR Y&D DRAWING 836926 ARE CONTAINED IN BOOKS 5011 AND 5015.

**GRAPHIC SCALES:**



GENERAL REVISIONS		DATE	APPR.
1	GENERAL REVISIONS	7/12	

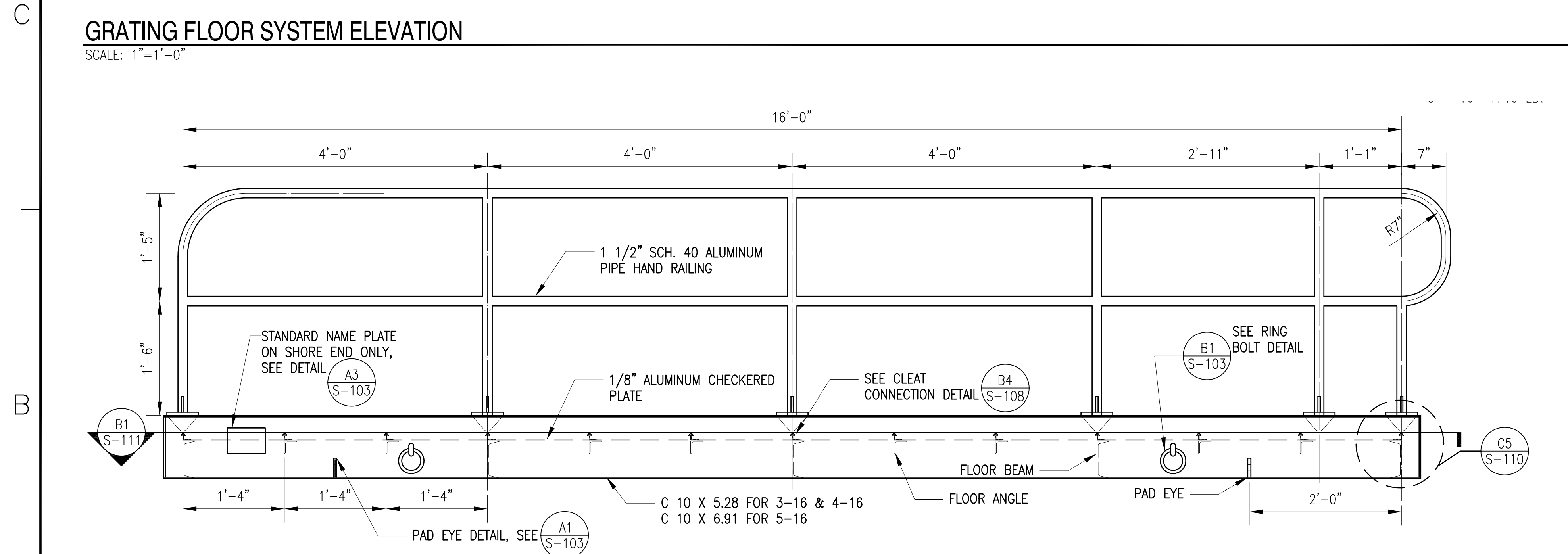
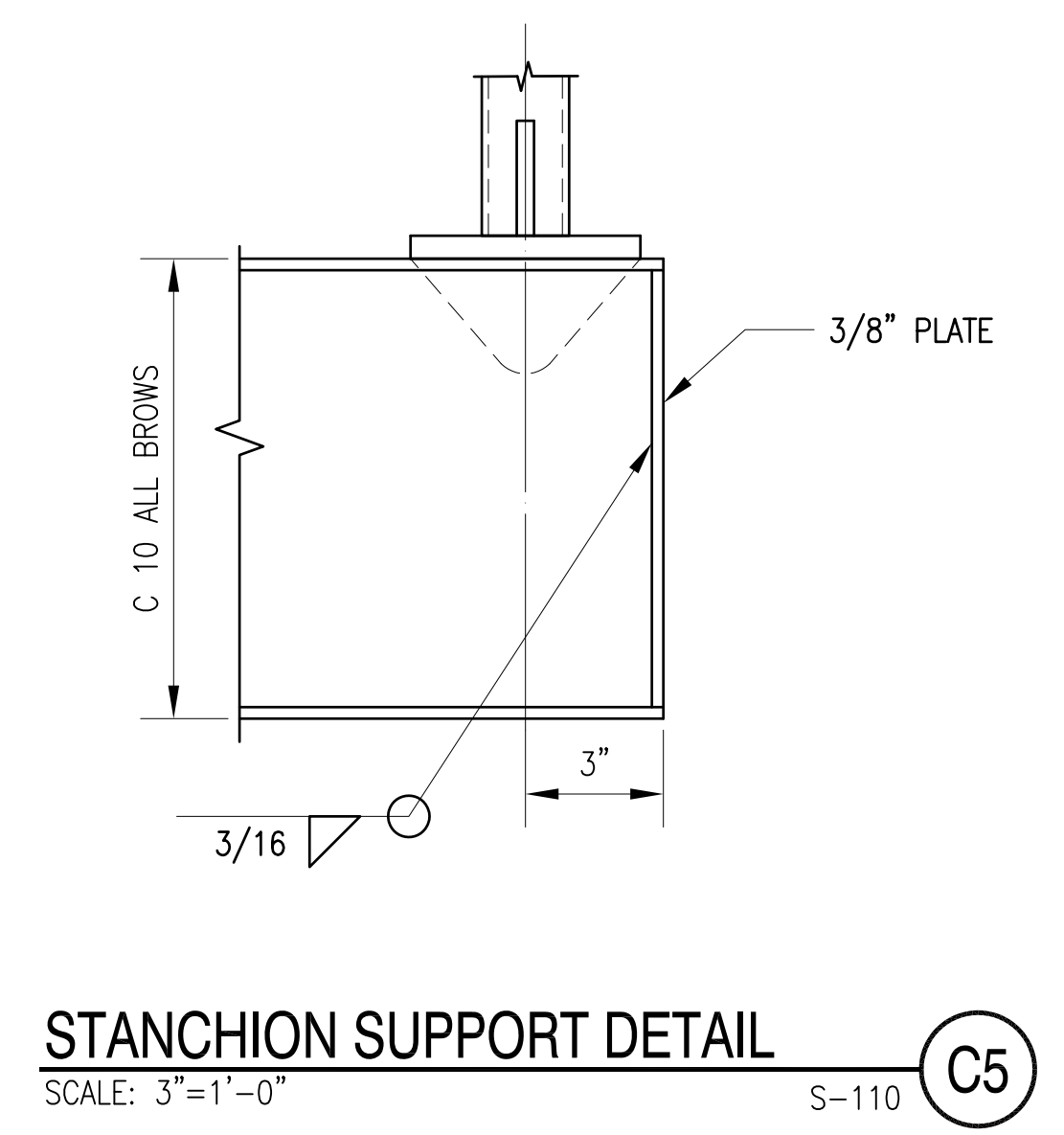
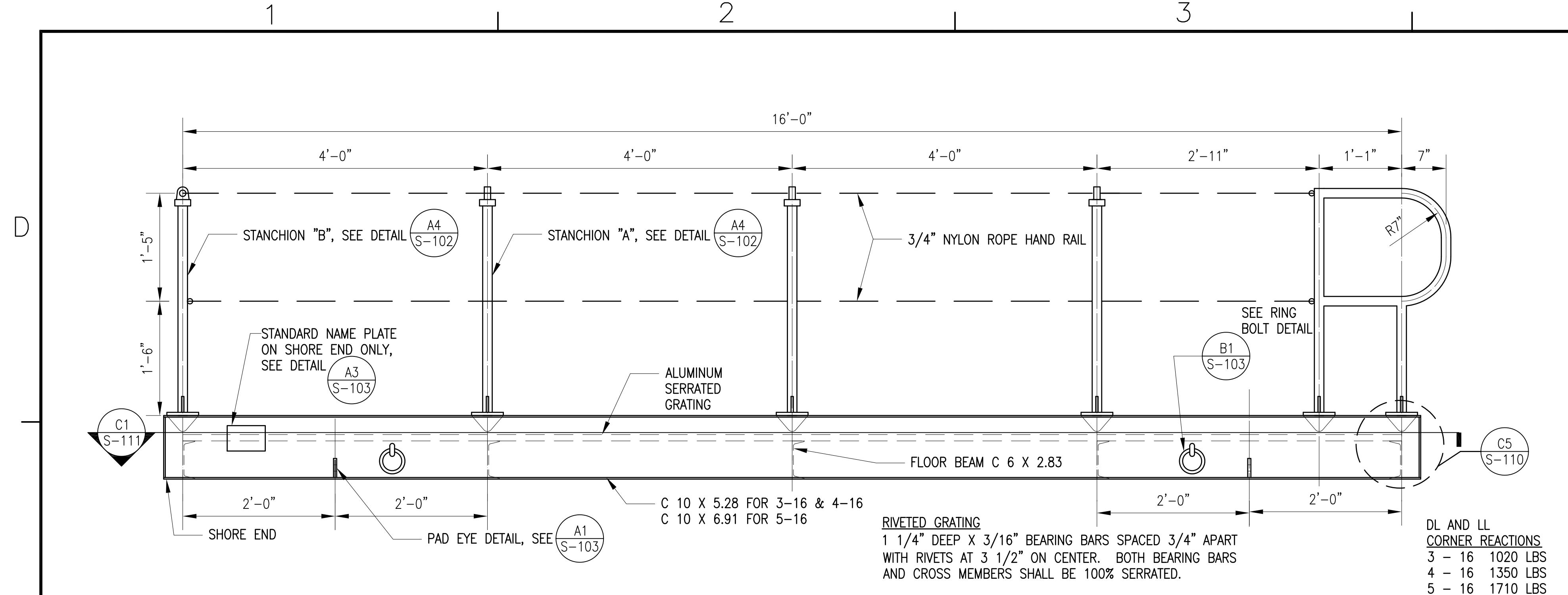
APPROVED:	
FOR COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	
DES	DBC
DRW	DBC
CHK	FBC
FW/DW	F. B. COLE
BRANCH MANAGER	
CHIEF ENG/ARCH	E. J. GALLAHER
FIRE PROTECTION	

DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC	NORFOLK, VIRGINIA
LANT CAPITAL IMPROVEMENTS	
SCALE:	AS NOTED
PROJECT NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	SD1405010
SHEET	11 OF 42
<b>S-109</b>	

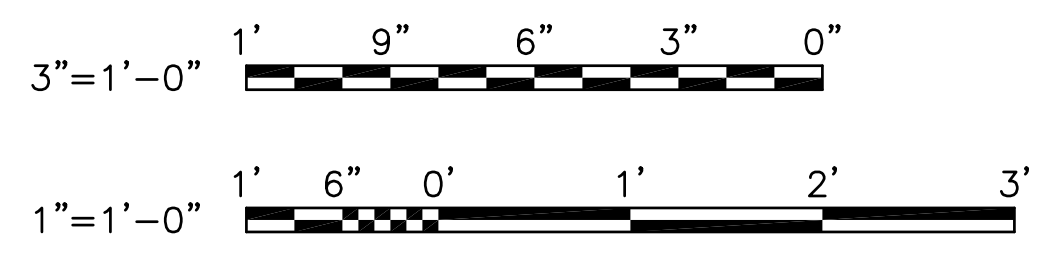
STANDARD DRAWINGS	ALUMINUM BEAM BROWS 3-12, 4-12 & 5-12 PLAN
BROWS AND PLATFORMS	
ALUMINUM BEAM BROWS	



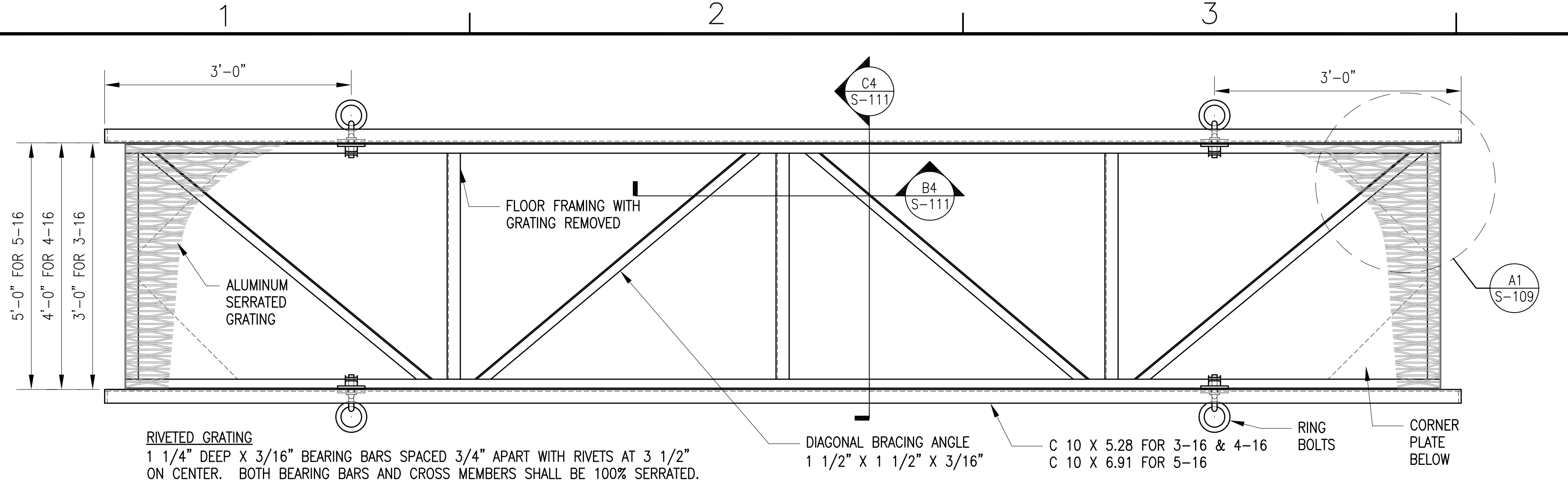
**NOTES:**

1. ALL HANDRAILS ARE TO BE 1 1/2" SCH. 40 STD. PIPE WELDED THROUGHOUT, EXCEPT AS NOTED.
2. FOR DETAILS OF HOOKS, ROLLERS, FITTINGS, STANCHIONS, CLEATS, AND PAD EYE SEE SHEETS S-101 THROUGH S-105.
3. FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
4. BROW LIGHTING SHOWN ON SHEET E-100.
5. THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836927 THROUGH REVISION E. CALCULATIONS FOR Y&D DRAWING 836927 ARE CONTAINED IN BOOKS 5011 AND 5015.

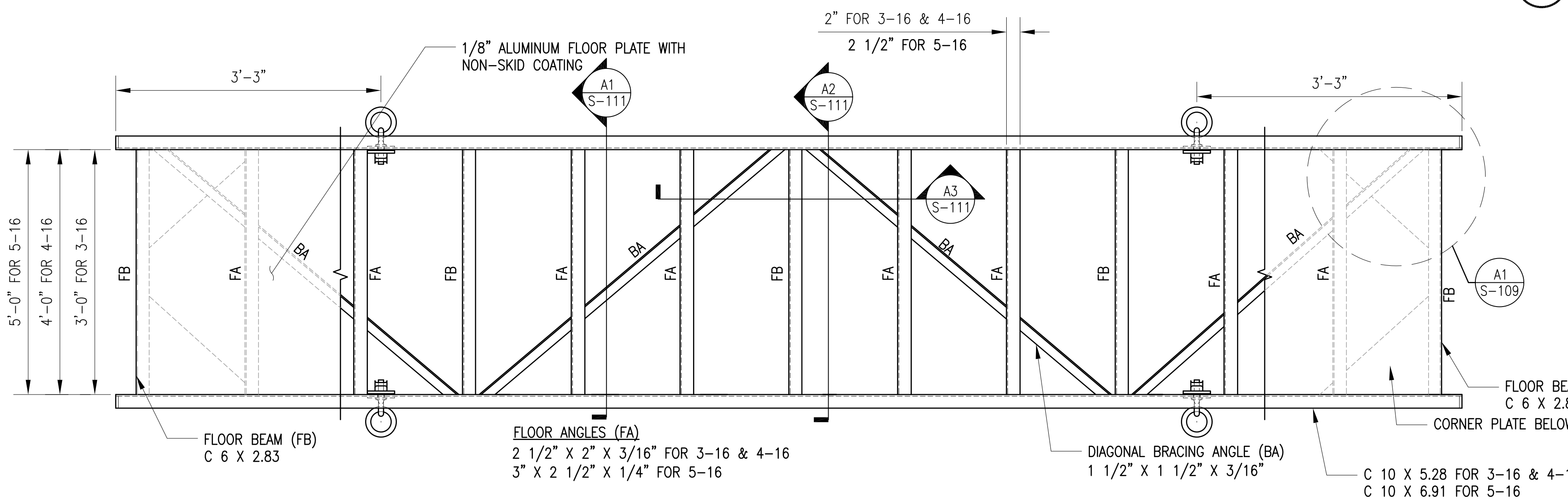
**GRAPHIC SCALES:**



DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL CAPITAL IMPROVEMENTS	NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NOBODIA, VIRGINIA	STANDARD DRAWINGS BROWS AND PLATFORMS ALUMINUM BEAM BROWS	ALUMINUM BEAM BROWS 3-16, 4-16 & 5-16 ELEVATION	SCALE: AS NOTED	PROJECT NO.	CONSTR. CONTR. NO.	NAVFAC DRAWING NO. SD1405011	SHEET 12 OF 42	S-110	DATE	APPR																																																																																																	
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PW/DM	F. B. COLE																																																																																																											
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FIRE PROTECTION																																																																																																												
<p>NAVFORM REVISION: 10 MARCH 2009</p>																																																																																																												

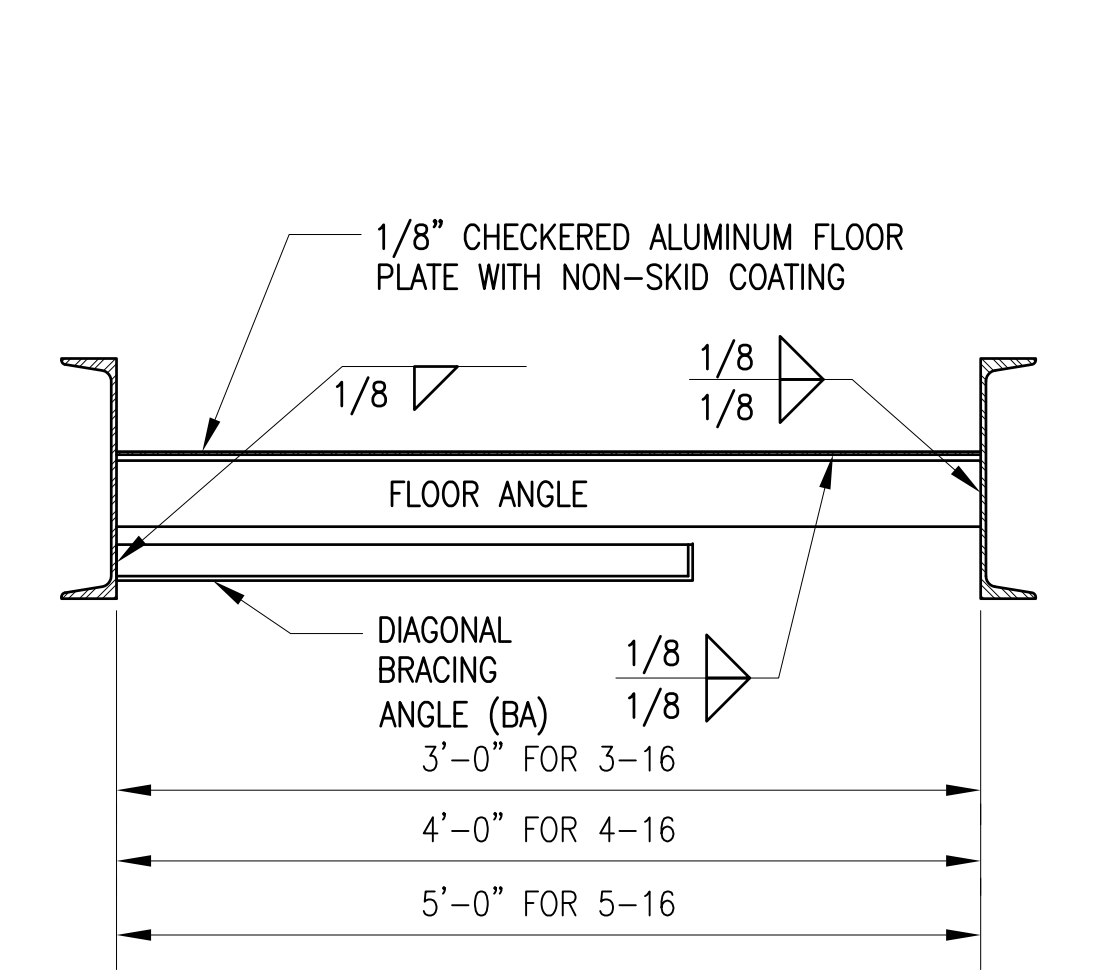


**GRATING FLOOR SYSTEM SECTION**  
SCALE: 1"=1'-0"

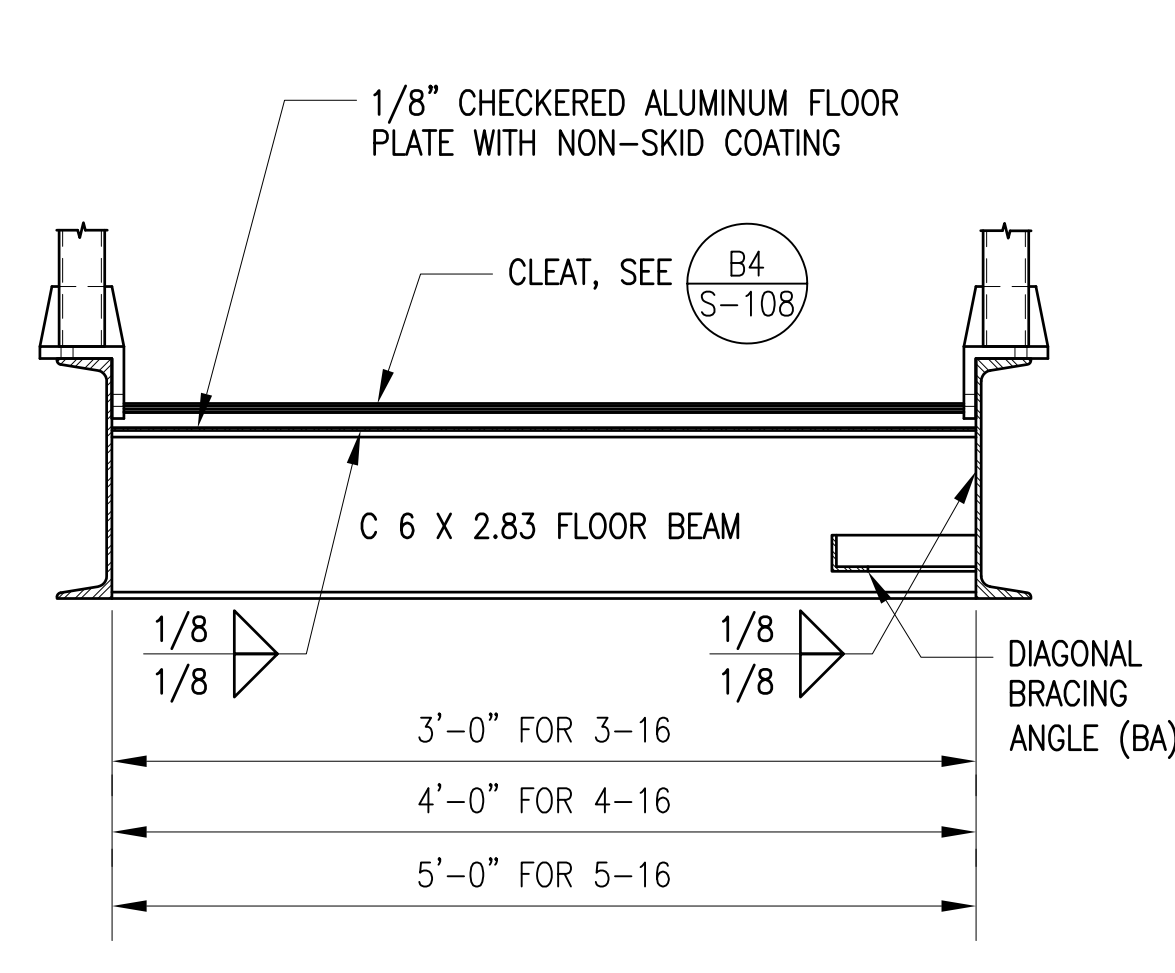


**FLOOR PLATE SYSTEM SECTION**  
SCALE: 1"=1'-0"

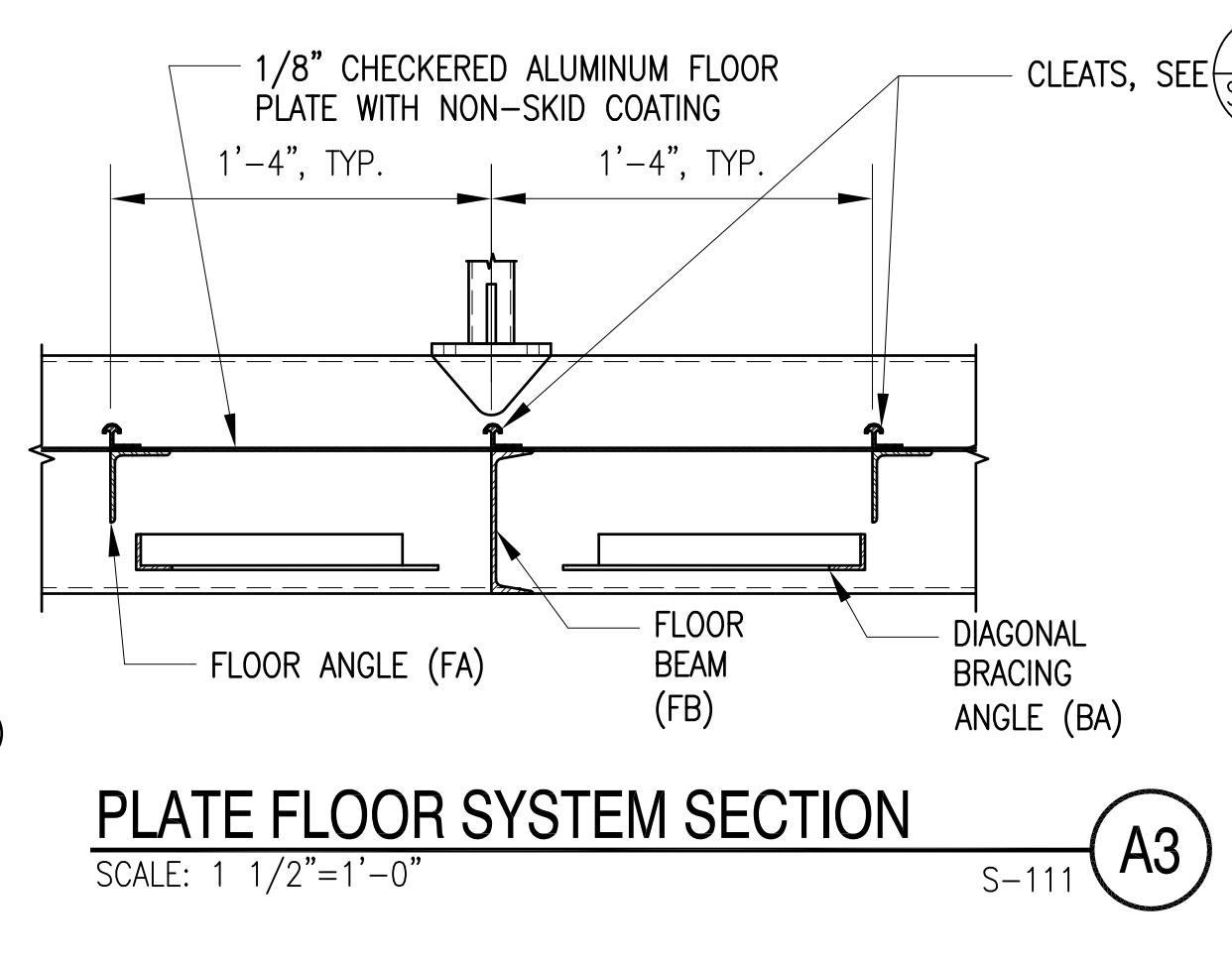
NOTE: ONLY FLOOR PLATE BROWS HAVE ADDED CLEATS



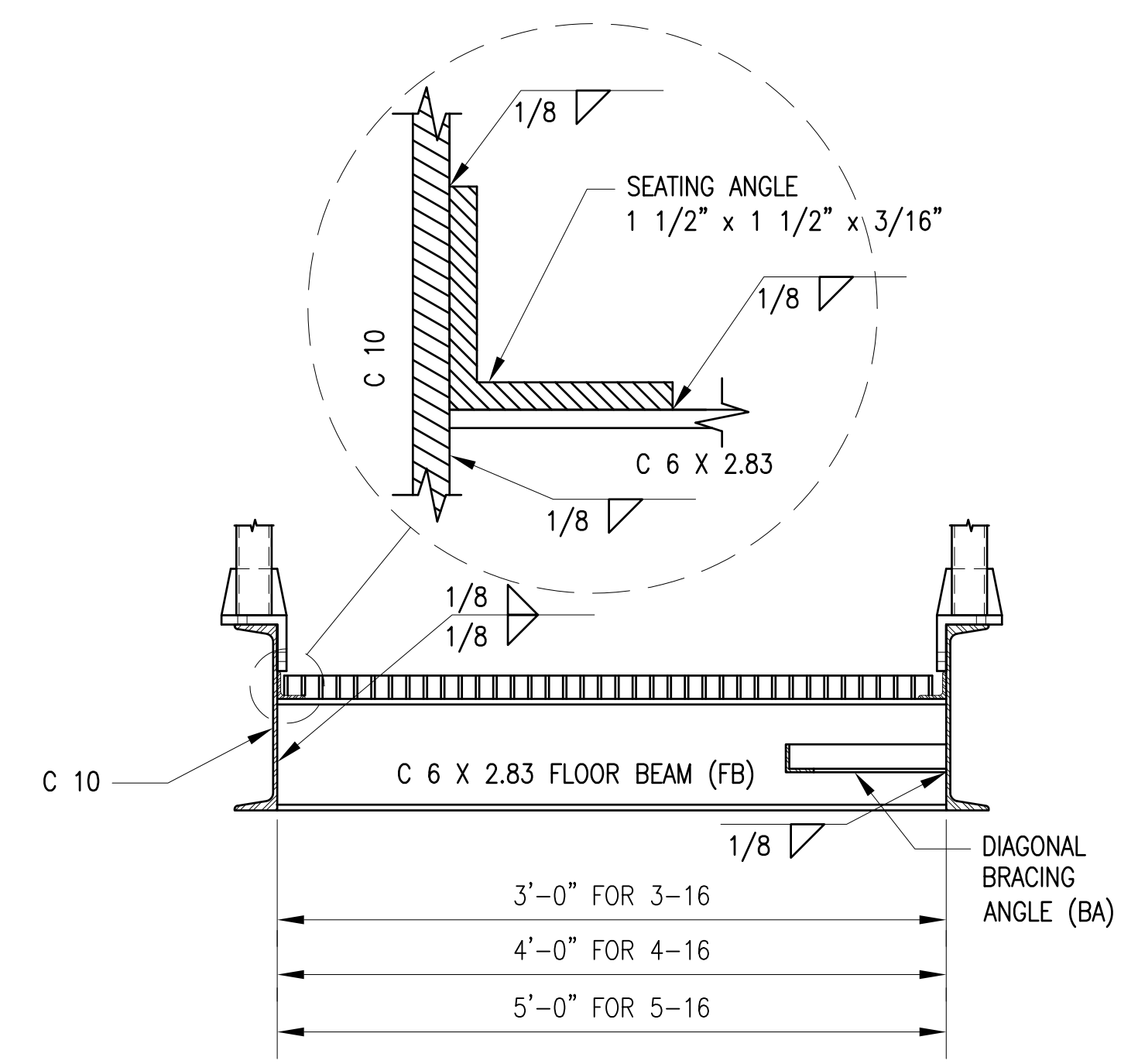
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SCALE: 1 1/2"=1'-0"



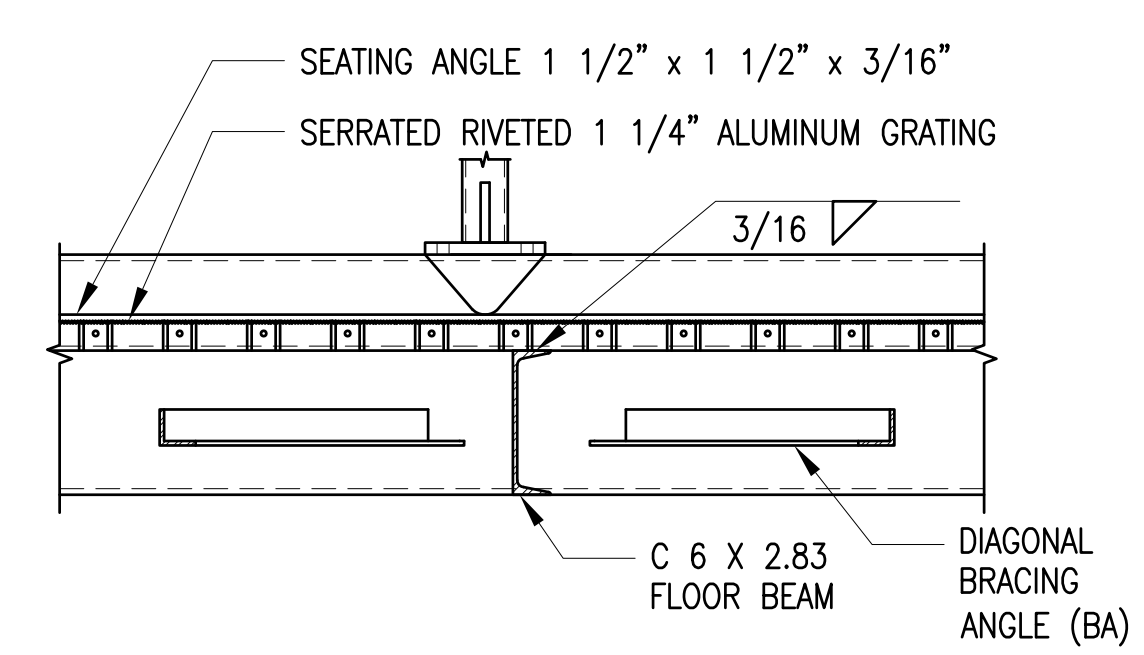
**PLATE FLOOR SYSTEM SECTION**  
SCALE: 1 1/2"=1'-0"



**PLATE FLOOR SYSTEM SECTION**  
SCALE: 1 1/2"=1'-0"



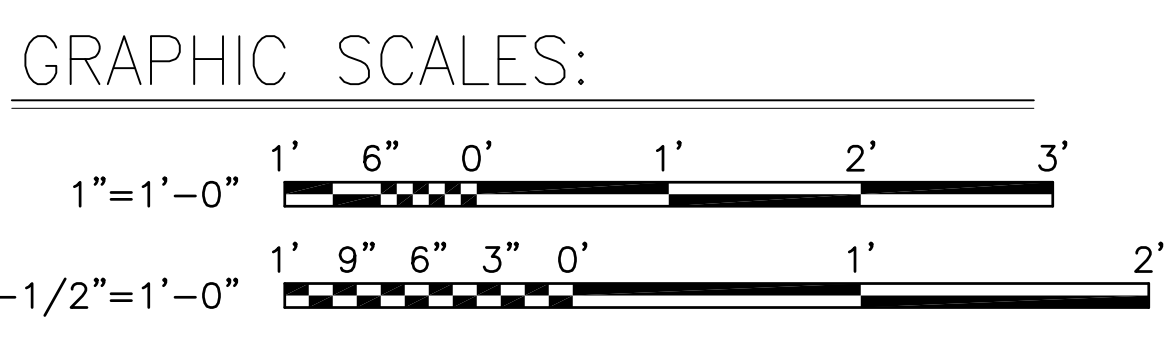
**GRATING FLOOR SYSTEM SECTION**  
SCALE: 1 1/2"=1'-0"



**GRATING FLOOR SYSTEM SECTION**  
SCALE: 1 1/2"=1'-0"

**NOTES:**

1. ALL HANDRAILS ARE TO BE 1 1/2" Ø SCH. 40 STD. PIPE WELDED THROUGHOUT, EXCEPT AS NOTED.
2. FOR DETAILS OF HOOKS, ROLLERS, FITTINGS, STANCHIONS, CLEATS, AND PAD EYE SEE SHEETS S-101 THROUGH S-105.
3. FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
4. BROW LIGHTING SHOWN ON SHEET E-100.
5. THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836927 THROUGH REVISION E. CALCULATIONS FOR Y&D DRAWING 836927 ARE CONTAINED IN BOOKS 5011 AND 5015.



GENERAL REVISIONS		DATE	APPR.
1		7/12	FBC

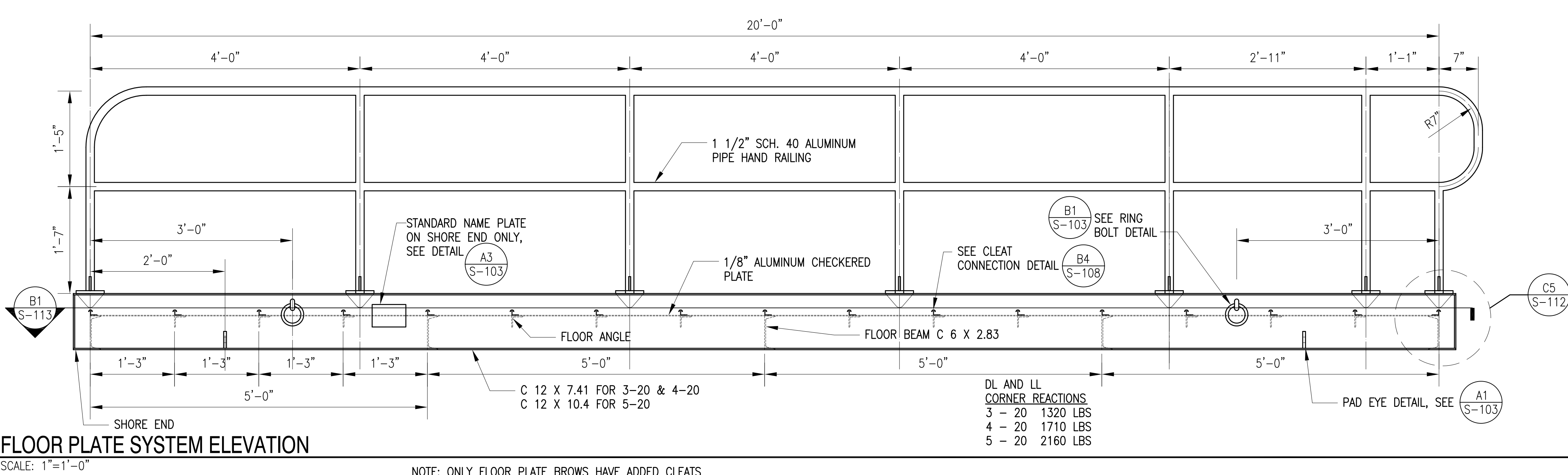
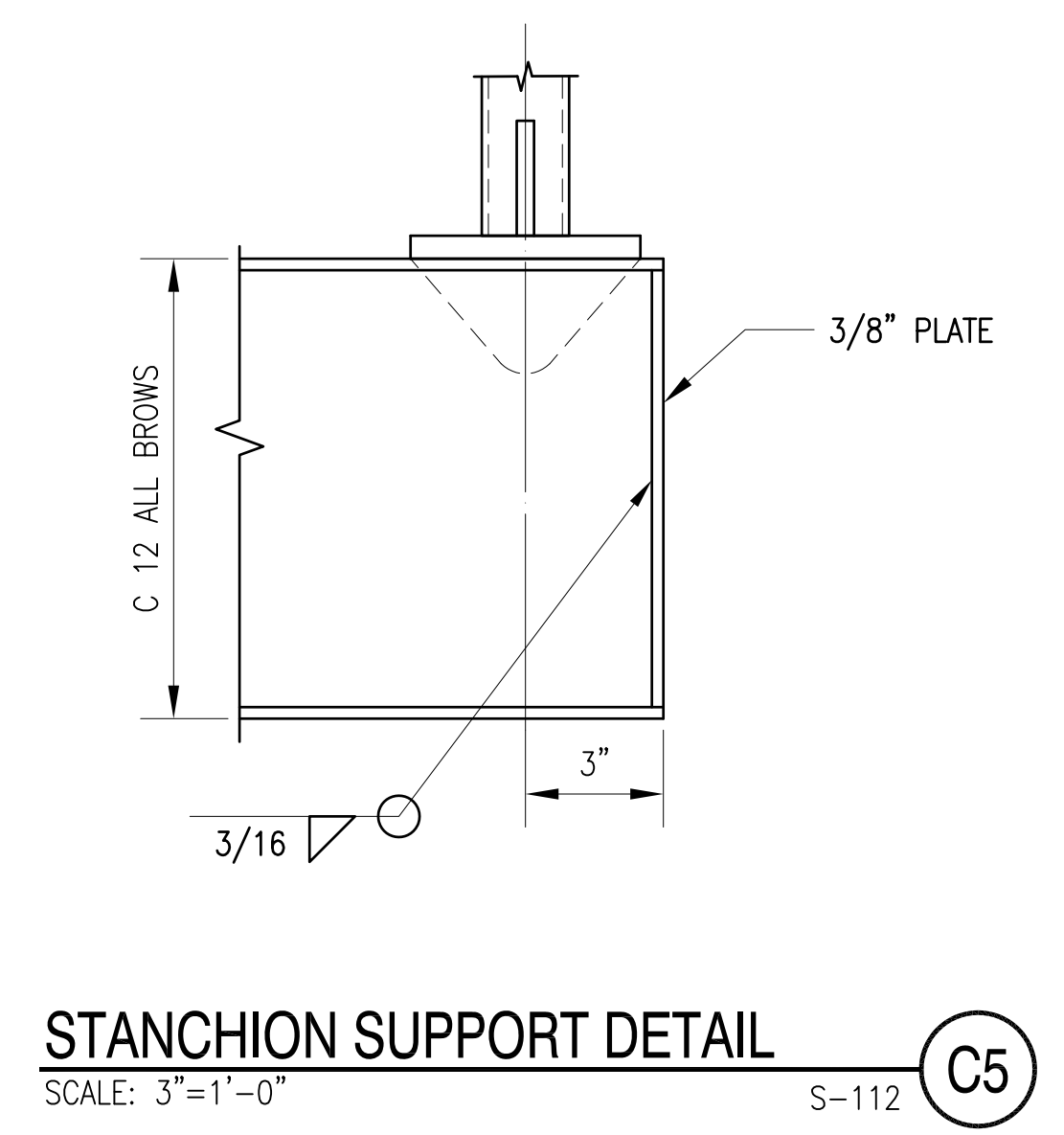
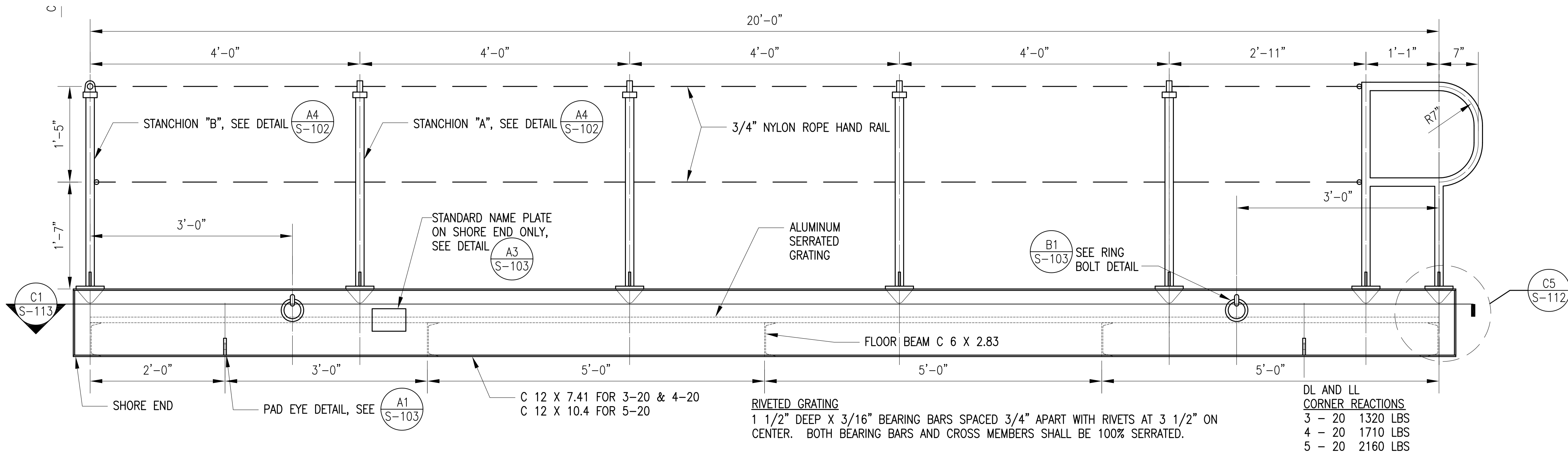
DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC DRAWING NO. SD1405012  
SHEET 13 OF 42  
S-111

STANDARD DRAWINGS  
BROWS AND PLATFORMS  
ALUMINUM BEAM BROWS

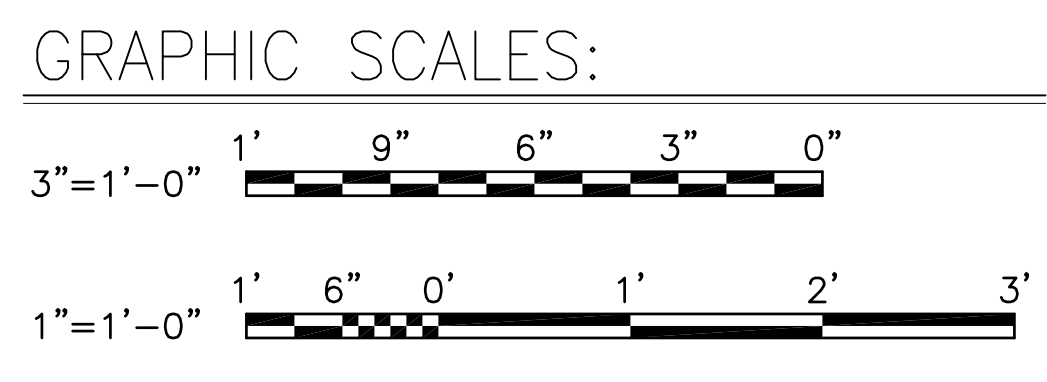
ALUMINUM BEAM BROWS 3-16, 4-16 & 5-16 PLAN

BRANCH MANAGER: F. B. COLE  
CHIEF ENG/ARCH: E. J. GALLAHER  
FIRE PROTECTION

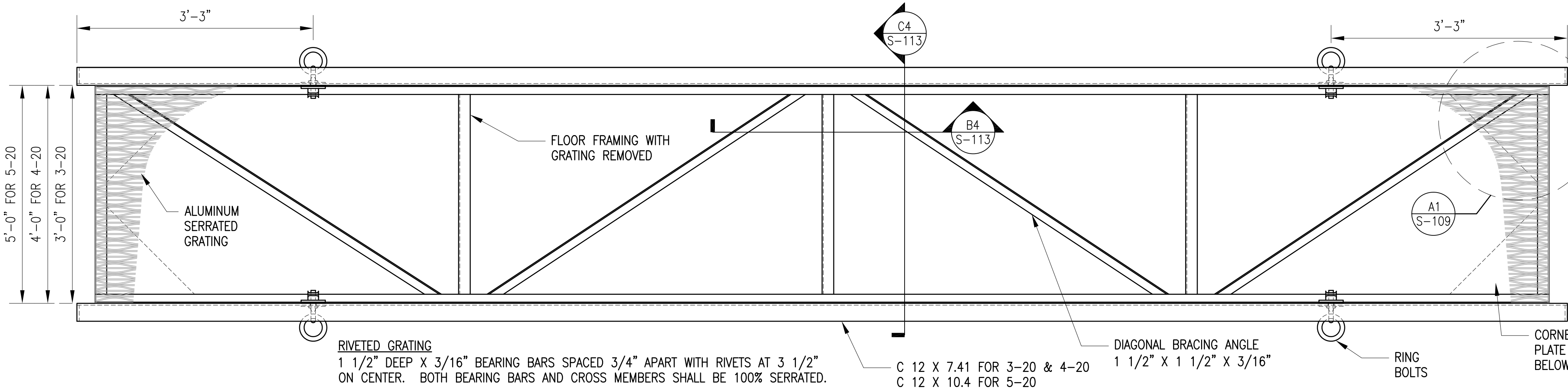
DATE: 10 MARCH 2009



- NOTES:**
1. ALL HANDRAILS ARE TO BE 1 1/2" SCH. 40 STD. PIPE WELDED THROUGHOUT, EXCEPT AS NOTED.
  2. FOR DETAILS OF HOOKS, ROLLERS, FITTINGS, STANCHIONS, CLEATS, AND PAD EYE SEE SHEETS S-101 THROUGH S-105.
  3. FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
  4. BROW LIGHTING SHOWN ON SHEET E-100.
  5. THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836928 THROUGH REVISION F. CALCULATIONS FOR Y&D DRAWING 836928 ARE CONTAINED IN BOOKS 5011 AND 5015.



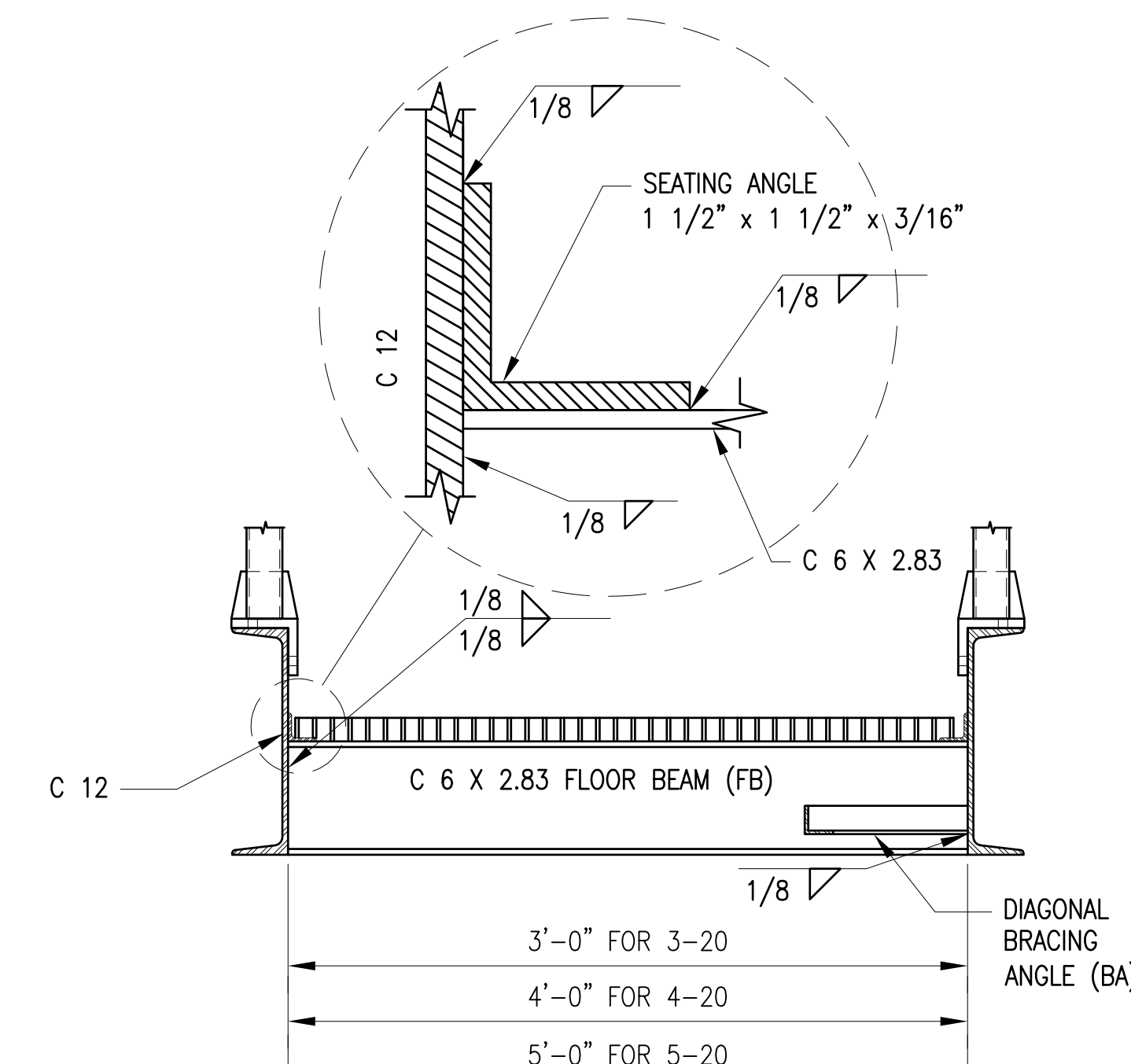
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	DATE	
	7/12	
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1	DESCRIPTION	
<b>STANDARD DRAWINGS BROWS AND PLATFORMS ALUMINUM BEAM BROWS</b>		
ALUMINUM BEAM BROWS 3-20, 4-20 & 5-20 ELEVATION		
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NORFOLK, VIRGINIA NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC		
SCALE:	AS NOTED	
PROJECT NO.:		
CONSTR. CONTR. NO.:		
NAVFAC DRAWING NO.:	SD1405013	
SHEET	14	OF 42
<b>S-112</b>		
DRAWING REVISION: 10 MARCH 2009		



**GRATING FLOOR SYSTEM SECTION**

SCALE: 1"=1'-0"

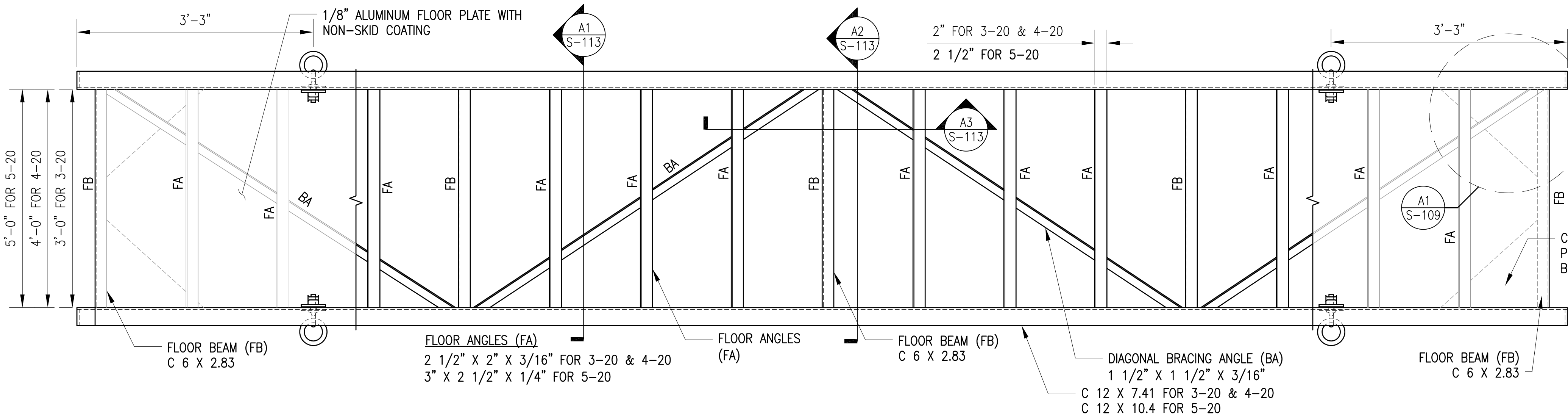
S-112 (C1)



**GRATING FLOOR SYSTEM SECTION**

SCALE: 1 1/2"=1'-0"

S-113 (C4)

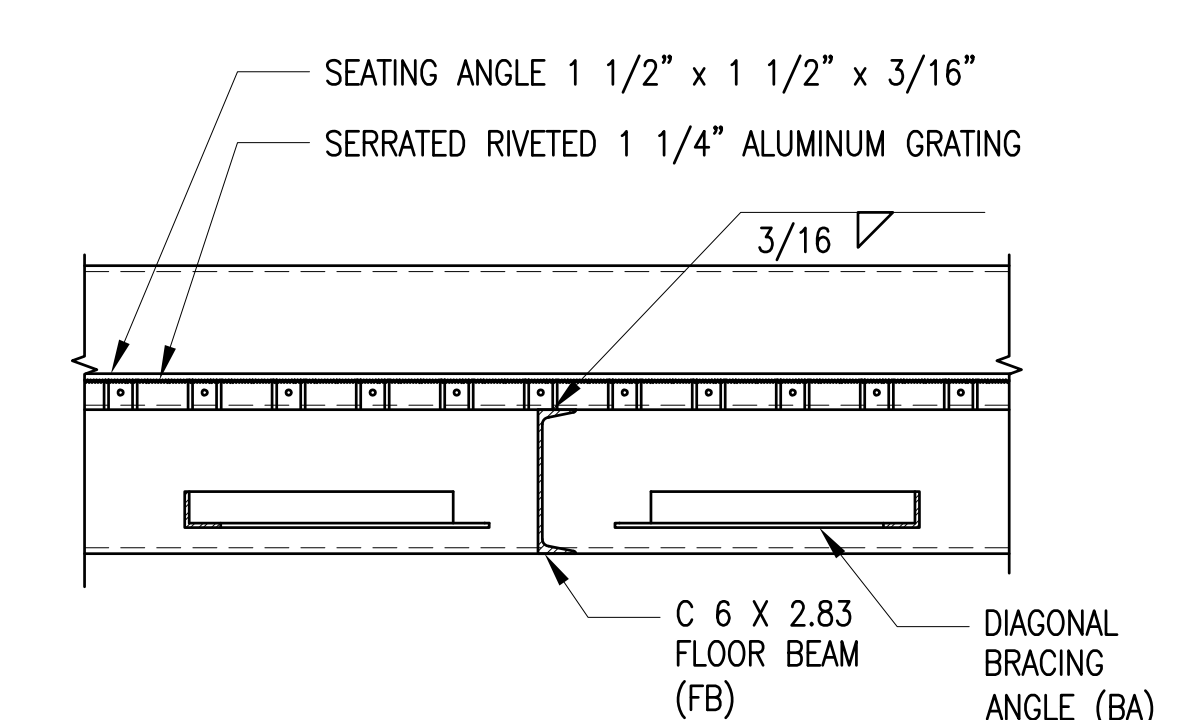


**FLOOR PLATE SYSTEM SECTION**

SCALE: 1"=1'-0"

S-112 (B1)

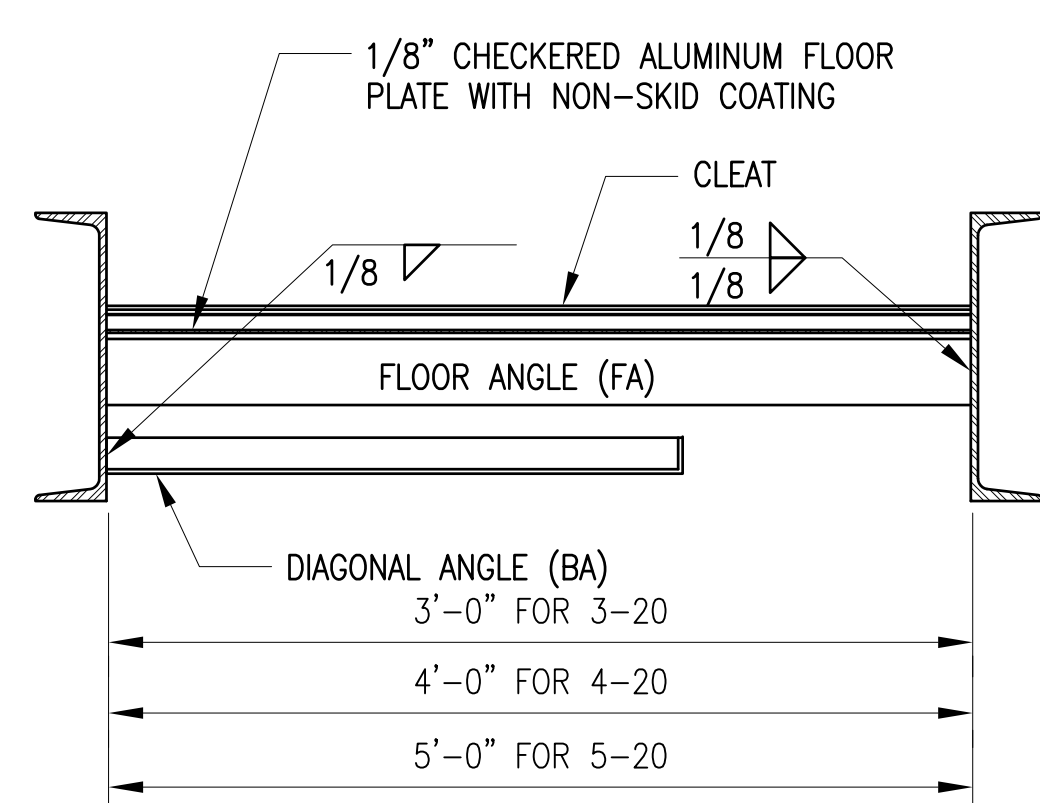
NOTE: ONLY FLOOR PLATE BROWS HAVE ADDED CLEATS



**GRATING FLOOR SYSTEM SECTION**

SCALE: 1 1/2"=1'-0"

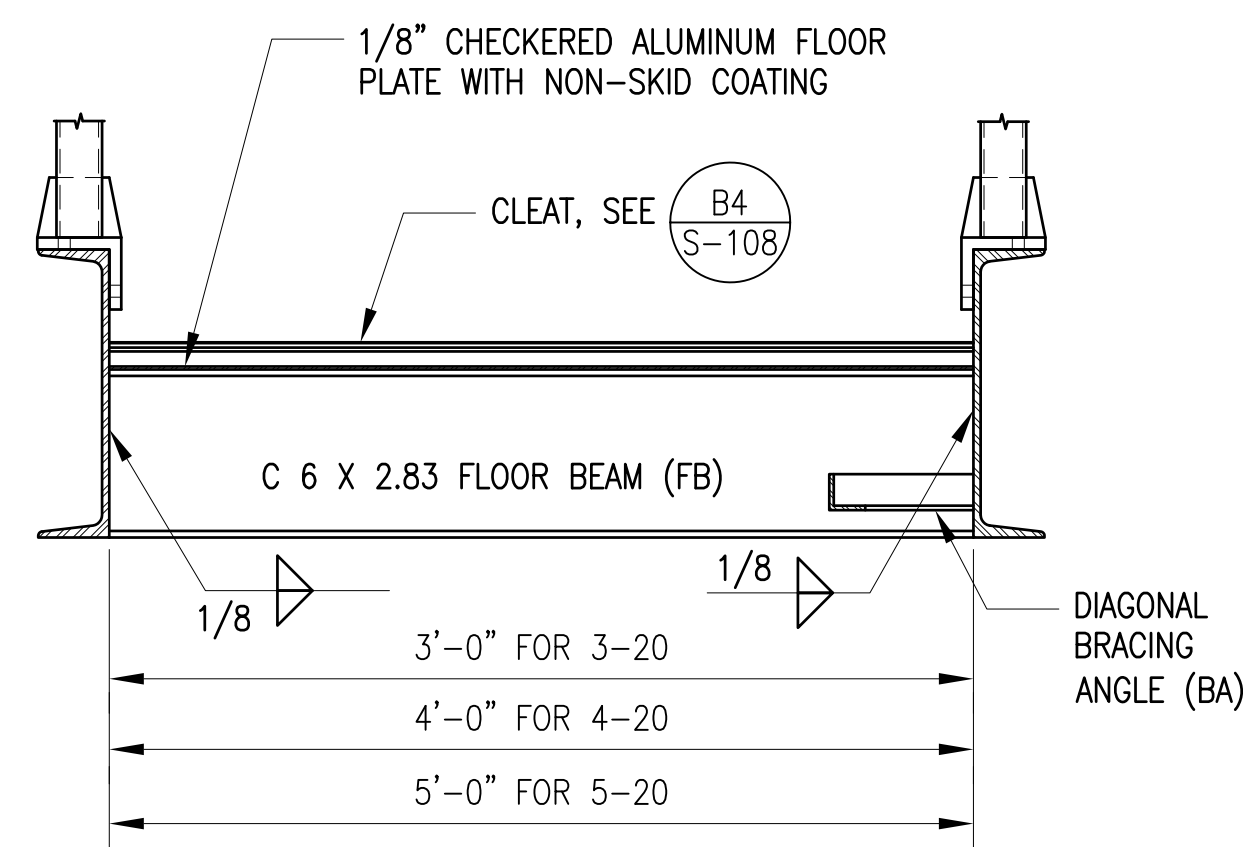
S-113 (B4)



**PLATE FLOOR SYSTEM SECTION**

SCALE: 1 1/2"=1'-0"

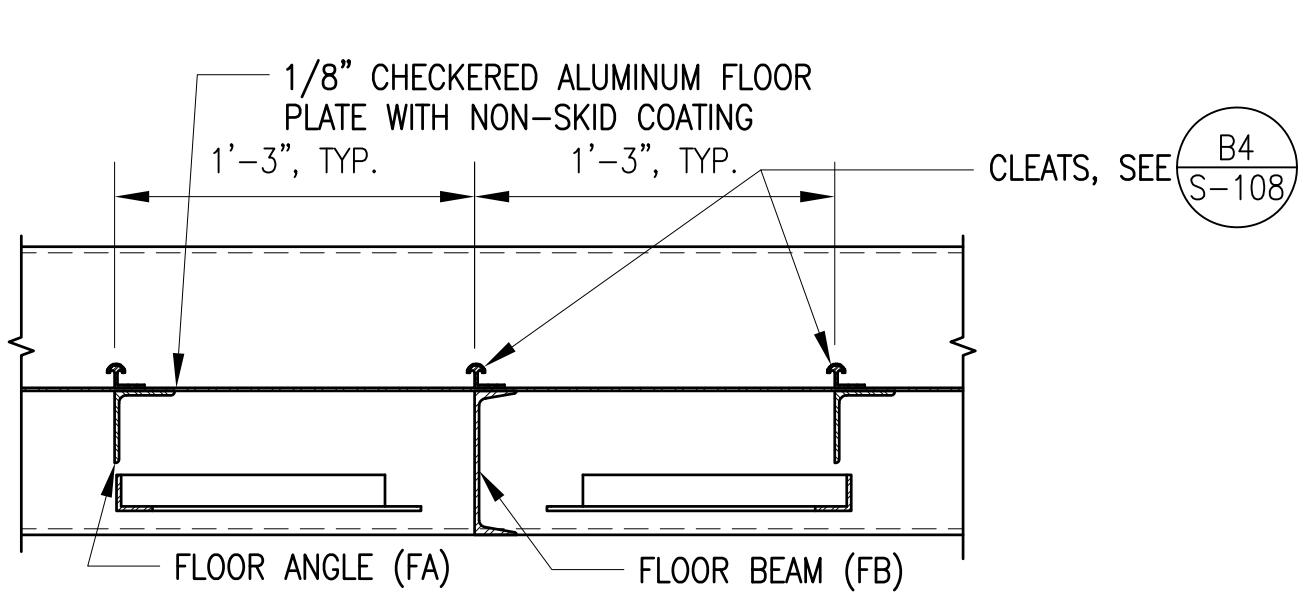
S-113 (A1)



**PLATE FLOOR SYSTEM SECTION**

SCALE: 1 1/2"=1'-0"

S-113 (A2)



**PLATE FLOOR SYSTEM SECTION**

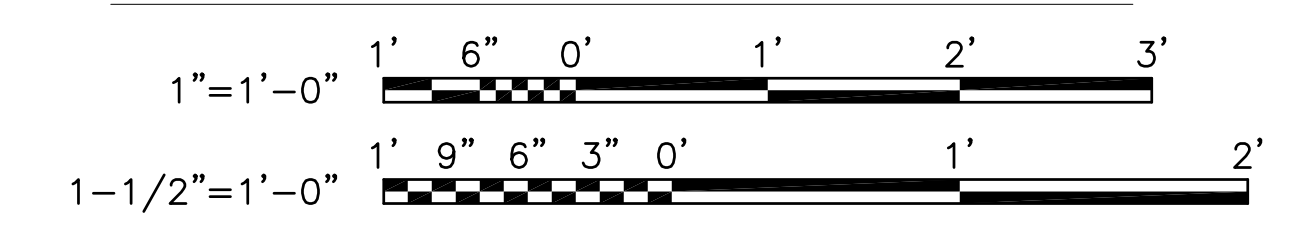
SCALE: 1 1/2"=1'-0"

S-113 (A3)

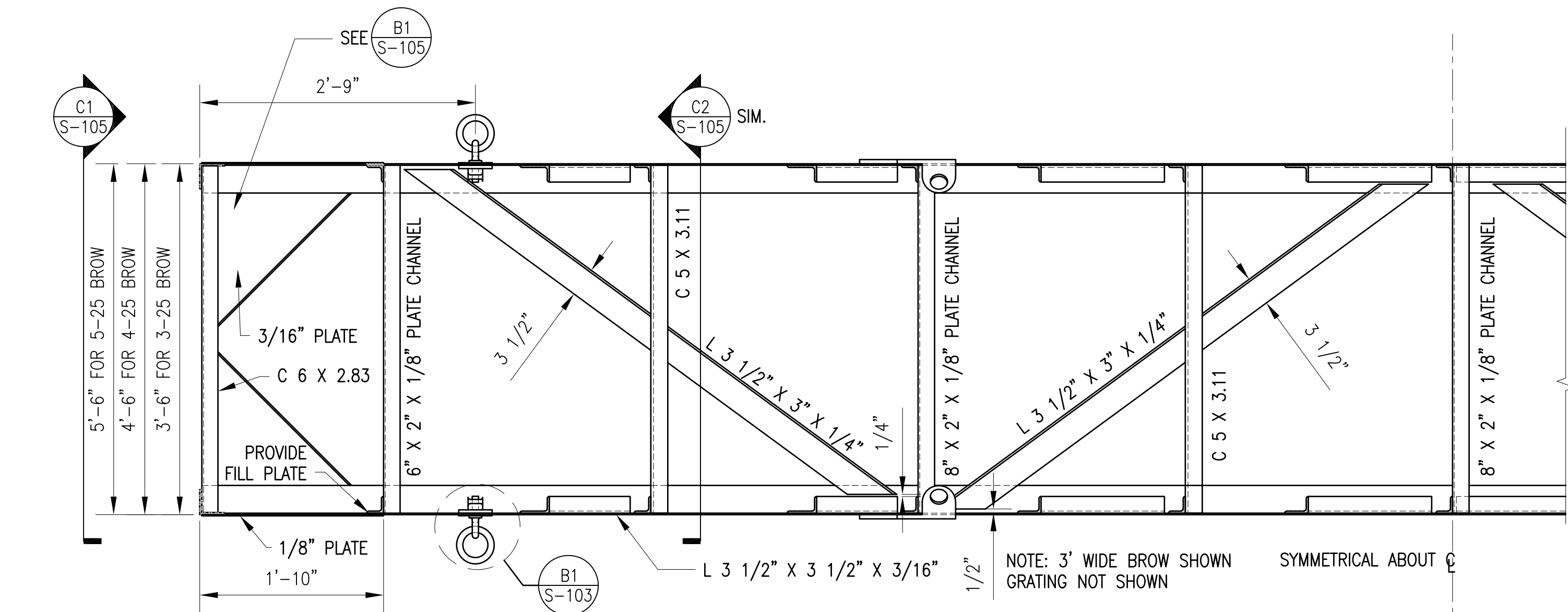
**NOTES:**

1. ALL HANDRAILS ARE TO BE 1 1/2"ø SCH. 40 STD. PIPE WELDED THROUGHOUT, EXCEPT AS NOTED.
2. FOR DETAILS OF HOOKS, ROLLERS, FITTINGS, STANCHIONS, CLEATS, AND PAD EYE SEE SHEETS S-101 THROUGH S-105.
3. FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
4. BROW LIGHTING SHOWN ON SHEET E-100.
5. THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836928 THROUGH REVISION E. CALCULATIONS FOR Y&D DRAWING 836928 ARE CONTAINED IN BOOKS 5011 AND 5015.

**GRAPHIC SCALES:**



	GENERAL REVISIONS	DATE	APPR
	1	7/12	
	<b>STANDARD DRAWINGS BROWS AND PLATFORMS ALUMINUM BEAM BROWS</b>		
	ALUMINUM BEAM BROWS 3-20, 4-20 & 5-20 PLAN		
	SCALE:	AS NOTED	
	PROJECT NO.		
	CONSTR. CONTR. NO.		
	NAVFAC DRAWING NO.	SD1405014	
	SHEET	15	OF 42
	<b>S-113</b>		
	<small>DRAWING REVISION: 10 MARCH 2009</small>		

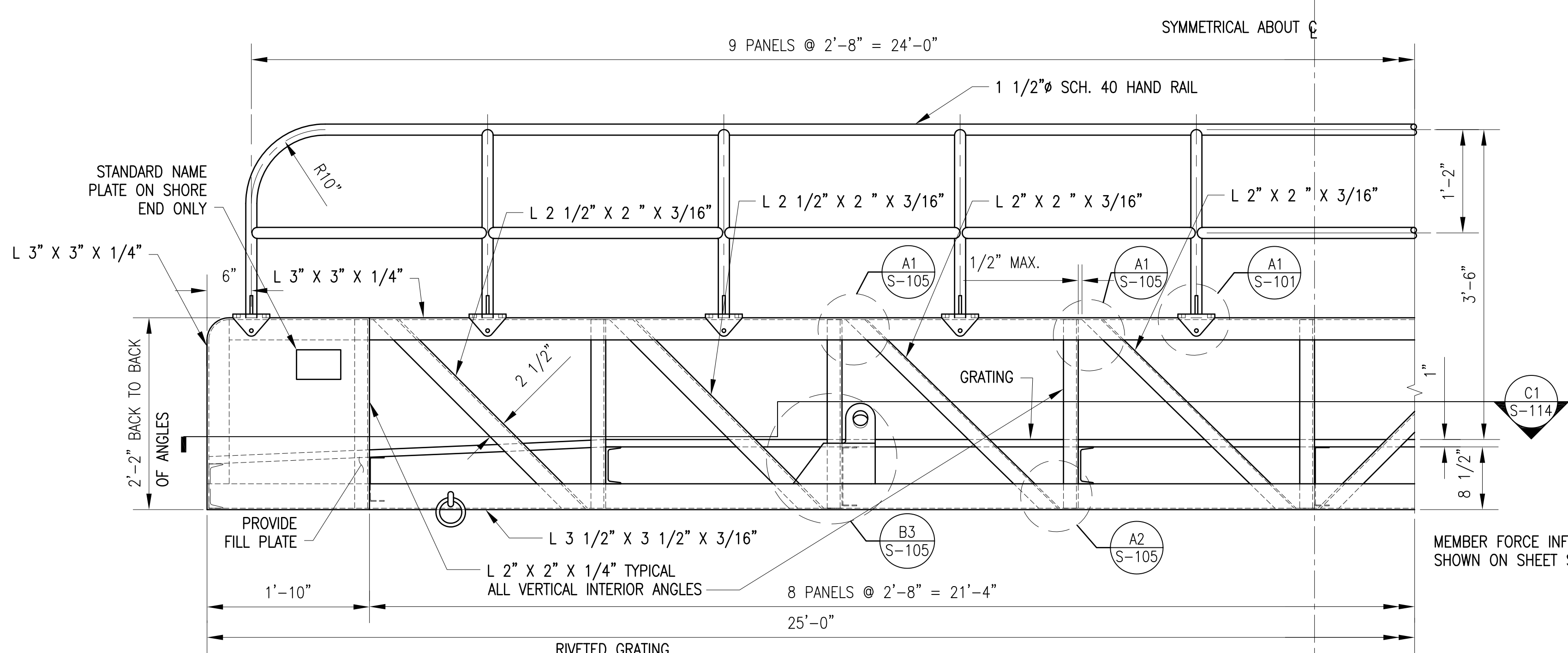


**BOTTOM CHORD PLAN**

SCALE: 1"=1'-0"

CLEAR WIDTH	WEIGHT
3'-0"	700 LBS
4'-0"	810 LBS
5'-0"	970 LBS

VERIFY WEIGHT AFTER CONSTRUCTION

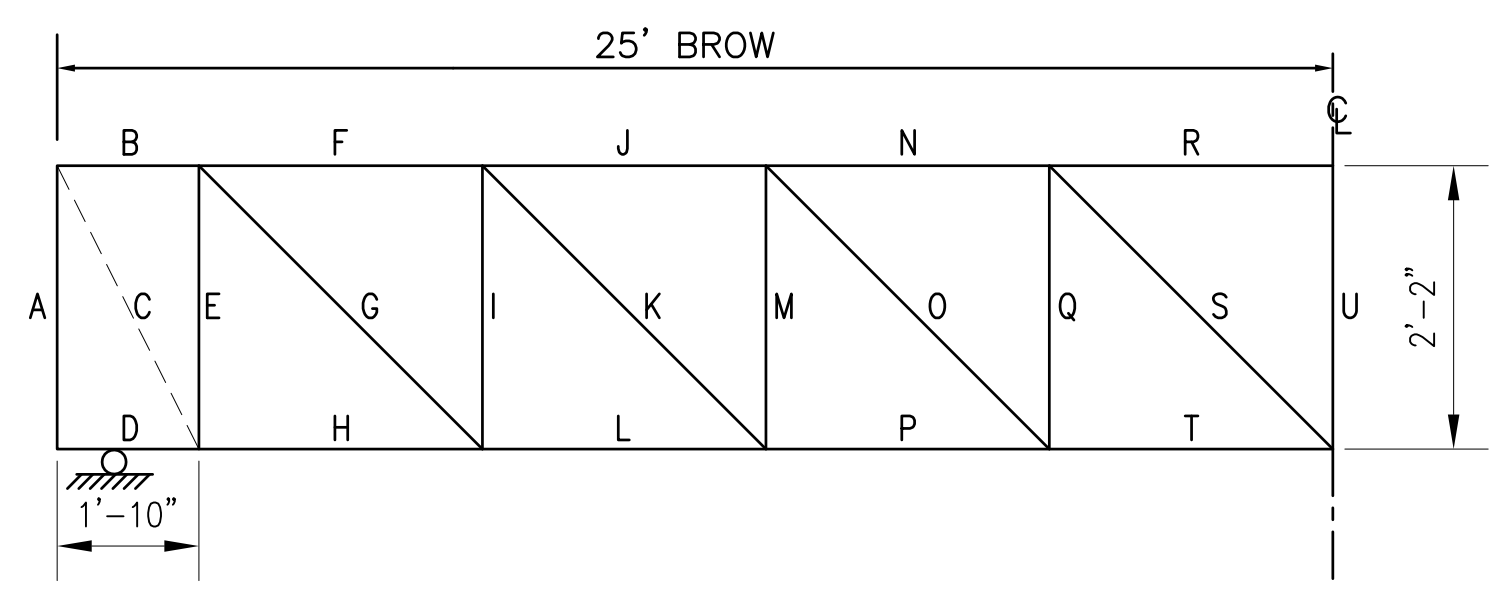


**25' TRUSS ELEVATION**

SCALE: 1"=1'-0"

NOTES:

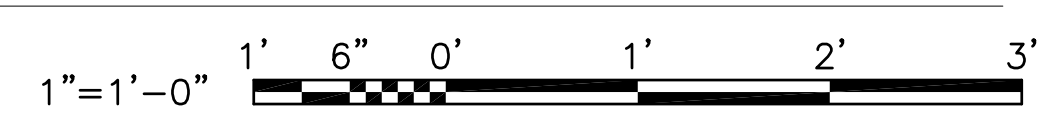
- FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
- HANDRAIL CONNECTIONS ARE SHOWN ON SHEET S-101 & S-102.
- DETAILS OF GRATING, ROLLERS, AND WHEELS ARE SHOWN ON SHEET S-103, S-104 & S-105
- DETAILS OF HOOKS ARE SHOWN ON SHEET S-104.
- BROW LIGHTING PLANS ARE SHOWN ON SHEET E-100.
- ALL HANDRAILS ARE TO BE SCH. 40 STD. ALUMINUM PIPE.
- WELDING DETAILS ARE SHOWN ON SHEET S-105.
- USE MEMBER SIZES SHOWN TO CONSTRUCT 3', 4' AND 5' WIDE BROWS.
- ALL MATERIAL TO BE 6061-T6 ALUMINUM UNLESS OTHERWISE NOTED.
- THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836930 THROUGH 836932, INCLUDING REVISION F. CALCULATIONS FOR Y&D DRAWING 836930 THROUGH 836932 ARE CONTAINED IN BOOKS 5011 AND 5015.



**MEMBER FORCES KEY DIAGRAM SHEET S-106**

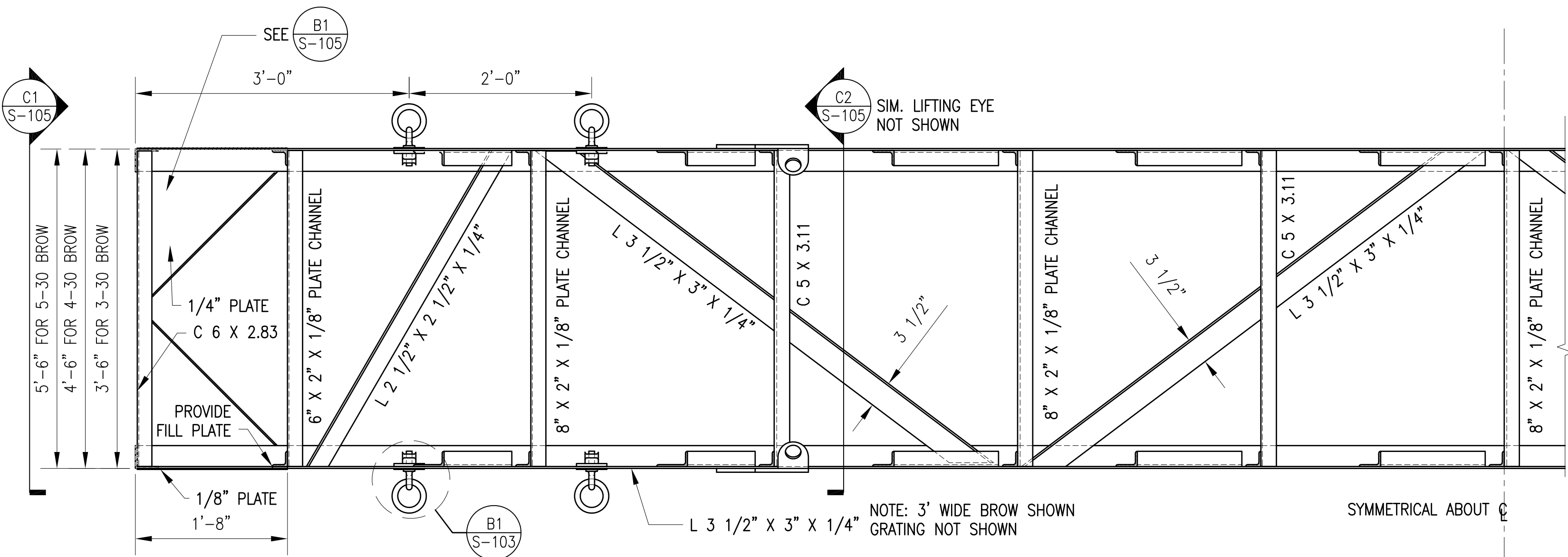
CLEAR WIDTH	SUPPORT REACTION
3'-0"	1580 LBS
4'-0"	2080 LBS
5'-0"	2590 LBS

GRAPHIC SCALES:



DATE	APPR
7/12	FBC
DESCRIPTION	
SYMBOL	
<p>DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVFAC NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NORFOLK, VIRGINIA NAVFAC DRAWING NO. SD1405015</p>	
<p>STANDARD DRAWINGS BROWS AND PLATFORMS ALUMINUM TRUSS BROWS TRUSS BROWS 3'-25, 4'-25 &amp; 5'-25</p>	
<p>SCALE: AS NOTED</p>	
<p>PROJECT NO.</p>	
<p>CONSTR. CONTR. NO.</p>	
<p>NAVFAC DRAWING NO. SD1405015</p>	
<p>SHEET 16 OF 42</p>	
<p><b>S-114</b></p>	
<p>DRAWING REVISION: 10 MARCH 2009</p>	





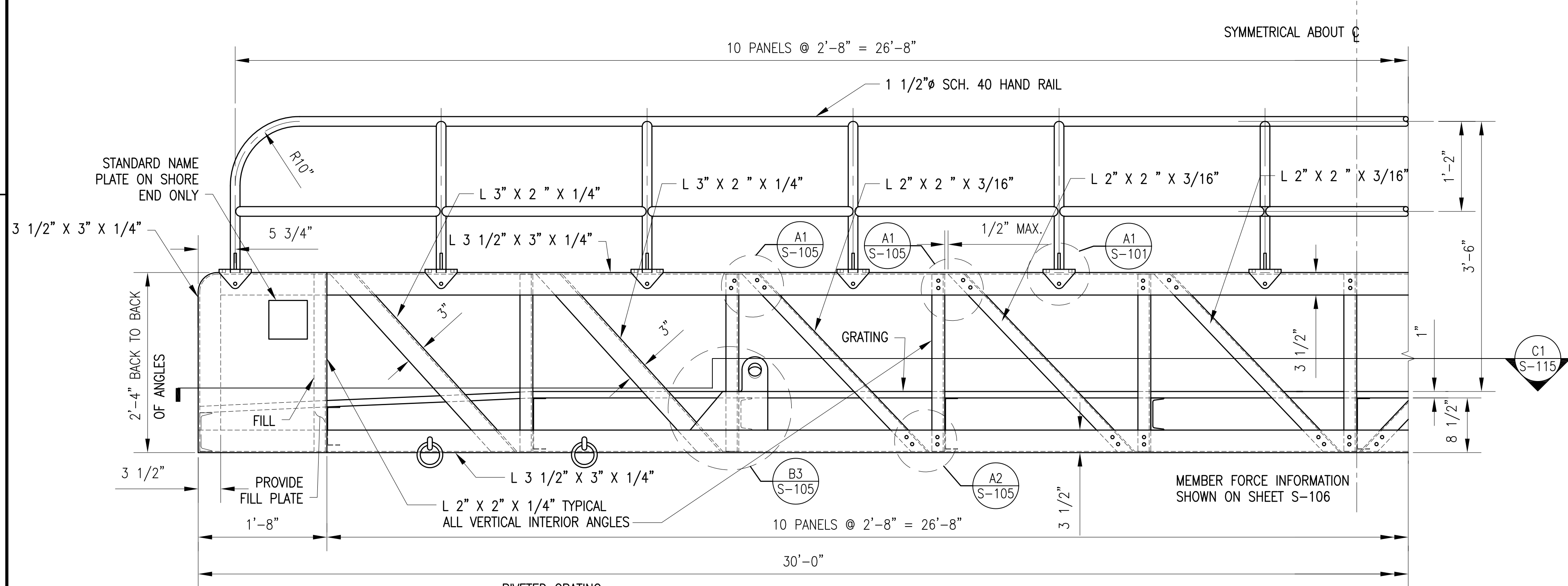
**BOTTOM CHORD PLAN**

SCALE: 1"=1'-0"

S-115 C1

CLEAR WIDTH	WEIGHT
3'-0"	840 LBS
4'-0"	972 LBS
5'-0"	1160 LBS

VERIFY WEIGHT AFTER CONSTRUCTION

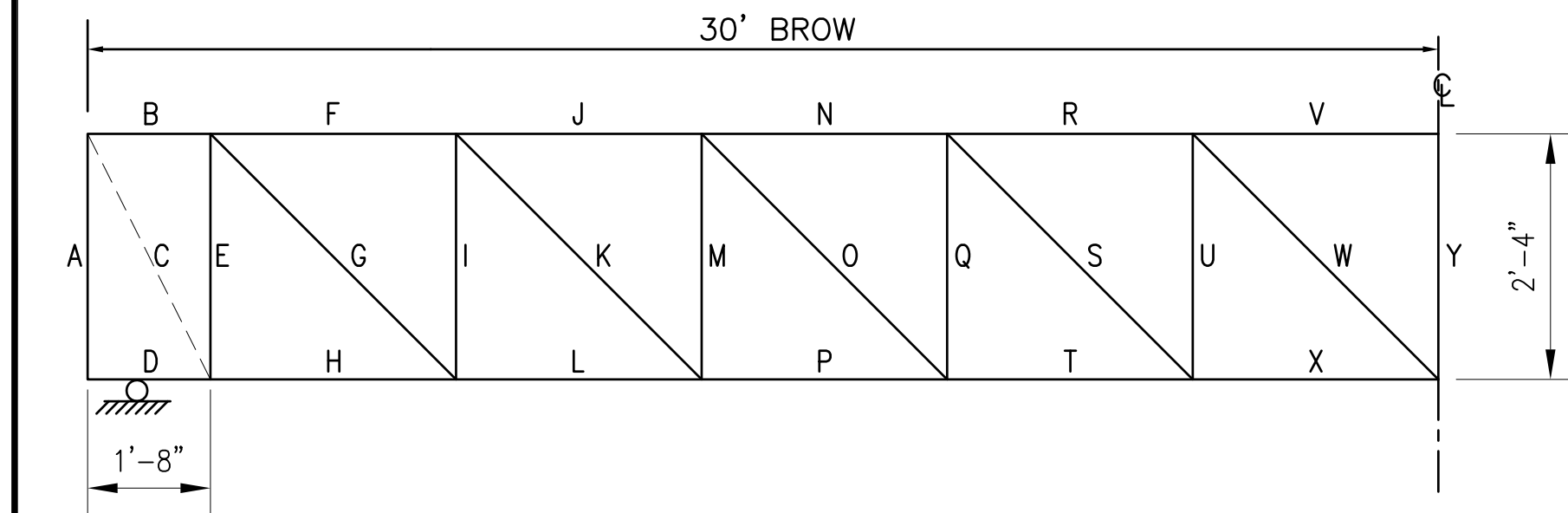


**30' TRUSS ELEVATION**

SCALE: 1"=1'-0"

**NOTES:**

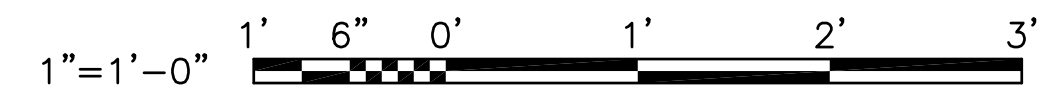
- FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
- HANDRAIL CONNECTIONS ARE SHOWN ON SHEET S-101 & S-102.
- DETAILS OF GRATING, ROLLERS, AND WHEELS ARE SHOWN ON SHEET S-103, S-104 & S-105
- DETAILS OF HOOKS ARE SHOWN ON SHEET S-104.
- BROW LIGHTING PLANS ARE SHOWN ON SHEET E-100.
- ALL HANDRAILS ARE TO BE SCH. 40 STD. ALUMINUM PIPE.
- WELDING DETAILS ARE SHOWN ON SHEET S-105.
- USE MEMBER SIZES SHOWN TO CONSTRUCT 3', 4' AND 5' WIDE BROWS.
- ALL MATERIAL TO BE 6061-T6 ALUMINUM UNLESS OTHERWISE NOTED.
- THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836930 THROUGH 836932, INCLUDING REVISION F. CALCULATIONS FOR Y&D DRAWING 836930 THROUGH 836932 ARE CONTAINED IN BOOKS 5011 AND 5015.



MEMBER FORCES KEY DIAGRAM SHEET S-106

CLEAR WIDTH	SUPPORT REACTION
3'-0"	1880 LBS
4'-0"	2490 LBS
5'-0"	3110 LBS

**GRAPHIC SCALES:**



DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC DRAWING NO. SD1405016  
SHEET 17 OF 42

TRUSS BROWS 3-30, 4-30 & 5-30

SCALE: AS NOTED

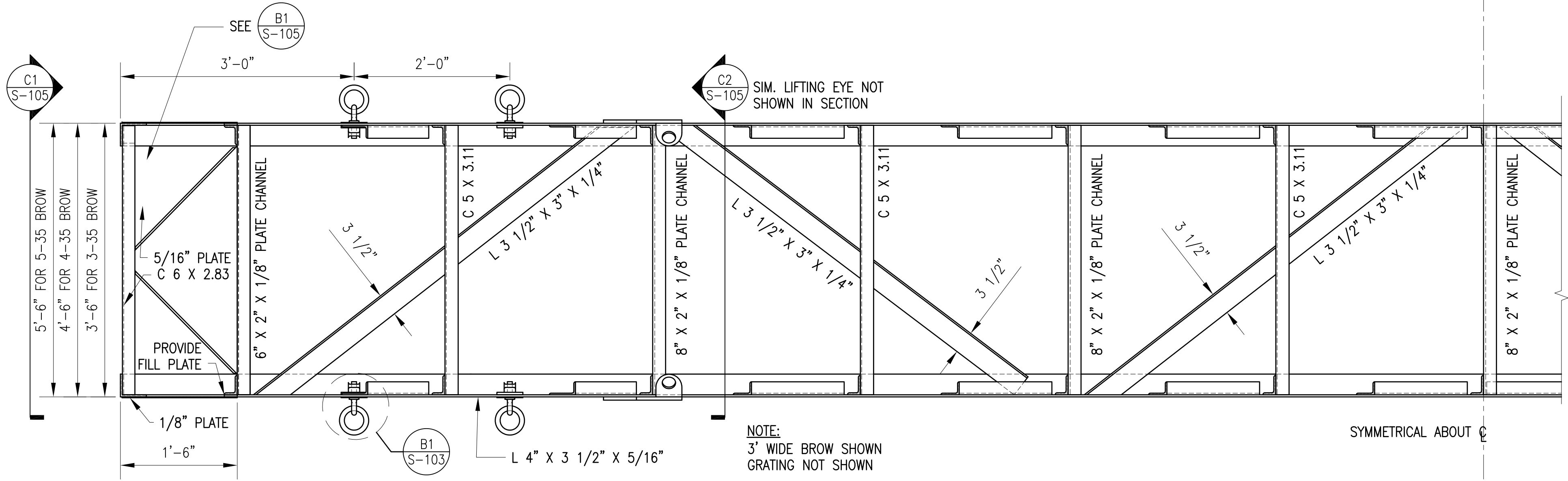
PROJECT NO.  
CONSTR. CONTR. NO.

NAVFAC DRAWING NO. SD1405016  
SHEET 17 OF 42

**S-115**

DRAWFORM REVISION: 10 MARCH 2009

GENERAL REVISIONS	DATE	DESCRIPTION
1	7/12	

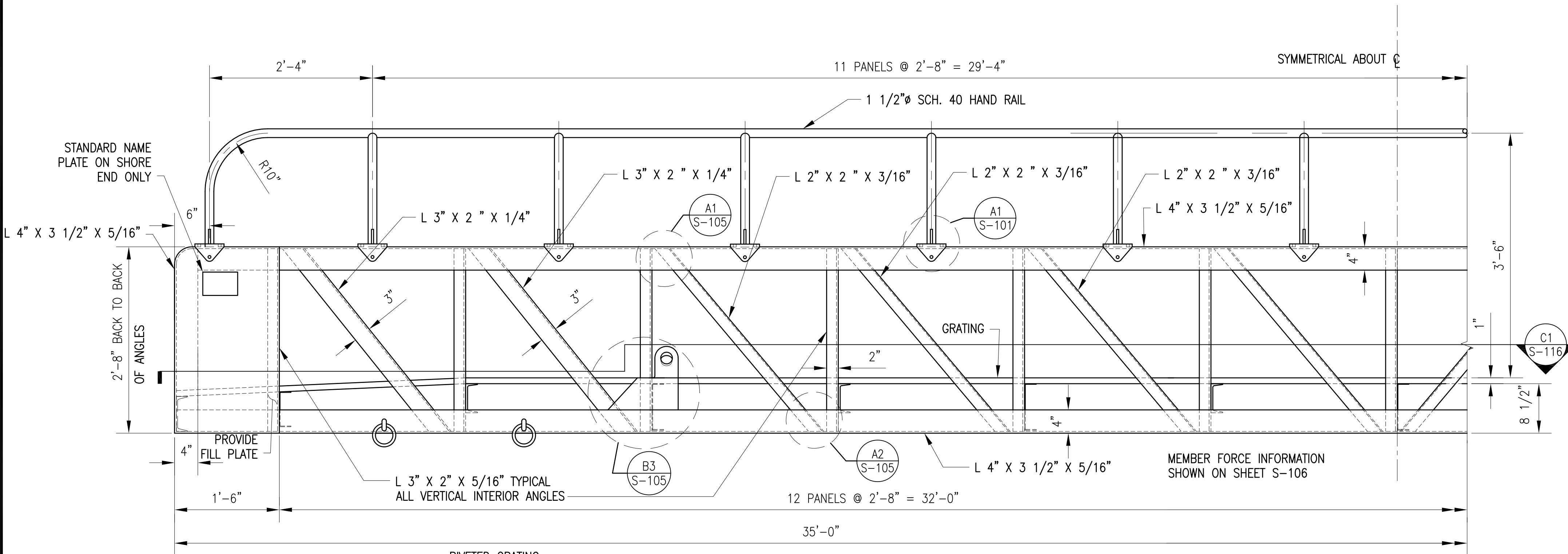


**BOTTOM CHORD PLAN**  
SCALE: 1"=1'-0"

- NOTES:**
- FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
  - HANDRAIL CONNECTIONS ARE SHOWN ON SHEET S-101 & S-102.
  - DETAILS OF GRATING, ROLLERS, AND WHEELS ARE SHOWN ON SHEET S-103, S-104 & S-105
  - DETAILS OF HOOKS ARE SHOWN ON SHEET S-104.
  - BROW LIGHTING PLANS ARE SHOWN ON SHEET E-100.
  - ALL HANDRAILS ARE TO BE SCH. 40 STD. ALUMINUM PIPE.
  - WELDING DETAILS ARE SHOWN ON SHEET S-105.
  - USE MEMBER SIZES SHOWN TO CONSTRUCT 3', 4' AND 5' WIDE BROWS.
  - ALL MATERIAL TO BE 6061-T6 ALUMINUM UNLESS OTHERWISE NOTED.
  - THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836930 THROUGH 836932, INCLUDING REVISION F. CALCULATIONS FOR Y&D DRAWING 836930 THROUGH 836932 ARE CONTAINED IN BOOKS 5011 AND 5015.

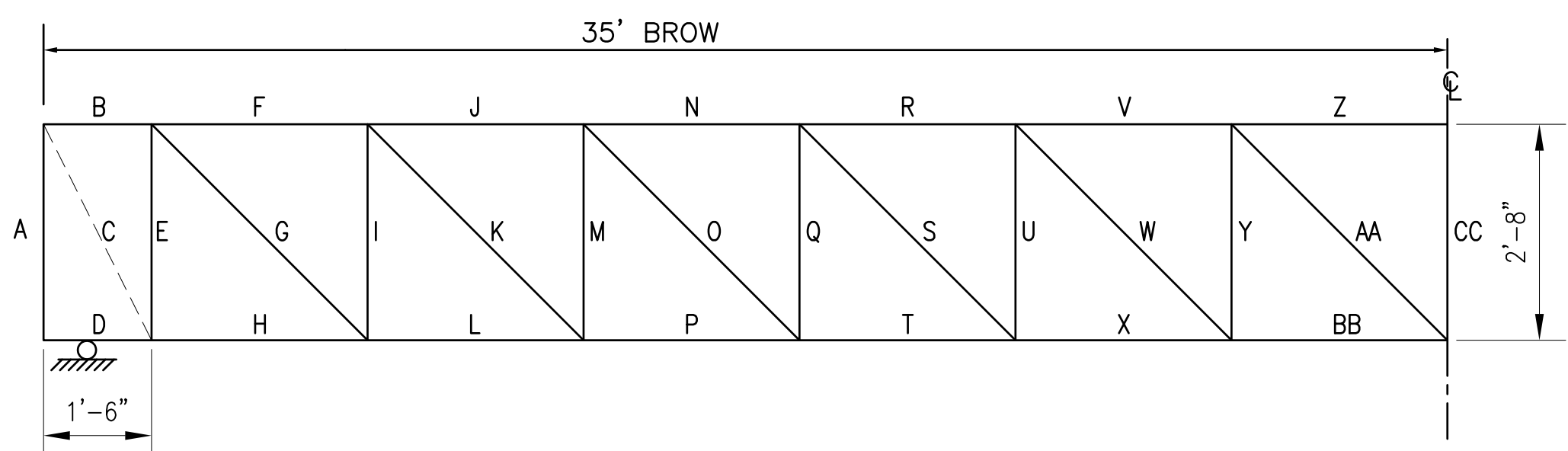
CLEAR WIDTH	WEIGHT
3'-0"	910 LBS
4'-0"	1140 LBS
5'-0"	1410 LBS

VERIFY WEIGHT AFTER CONSTRUCTION



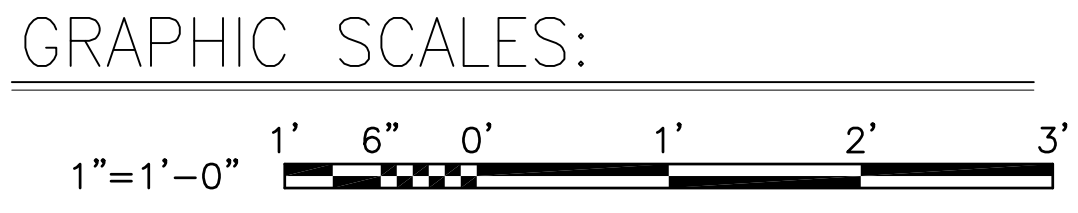
**35' TRUSS ELEVATION**  
SCALE: 1"=1'-0"

**RIVETED GRATING**  
1" DEEP X 3/16" BEARING BARS SPACED 3/4" APART WITH RIVETS AT 3 1/2" ON CENTER. BOTH BEARING BARS AND CROSS MEMBERS SHALL BE 100% SERRATED.



CLEAR WIDTH	SUPPORT REACTION
3'-0"	2220 LBS
4'-0"	2910 LBS
5'-0"	3640 LBS

**MEMBER FORCES KEY DIAGRAM SHEET S-106**



GENERAL REVISIONS	DATE	APPR	FBC	7/12	APPR
1					
<b>STANDARD DRAWINGS BROWS AND PLATFORMS ALUMINUM TRUSS BROWS</b>					
TRUSS BROWS 3-35, 4-35 & 5-35					
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC LANT CAPITAL IMPROVEMENTS NORFOLK, VIRGINIA					
SCALE: AS NOTED PROJECT NO.: CONSTR. CONTR. NO.: NAVFAC DRAWING NO.: SD1405017 SHEET 18 OF 42 <b>S-116</b> <small>DRAWFORM REVISION: 10 MARCH 2009</small>					

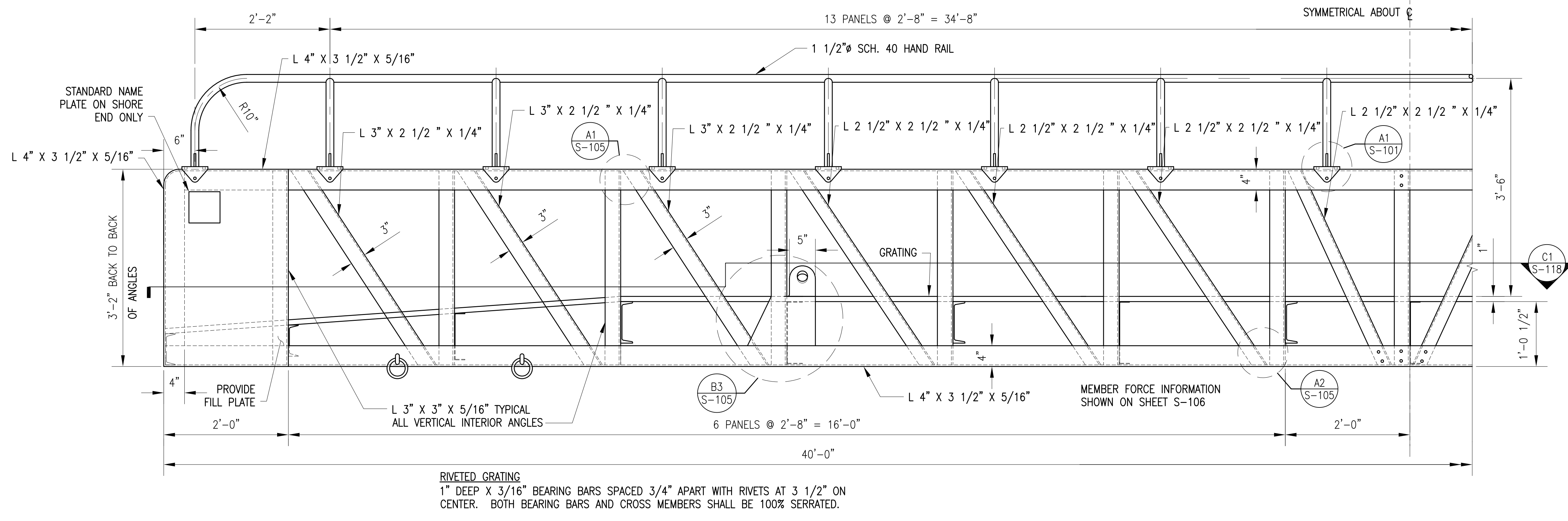
1

2

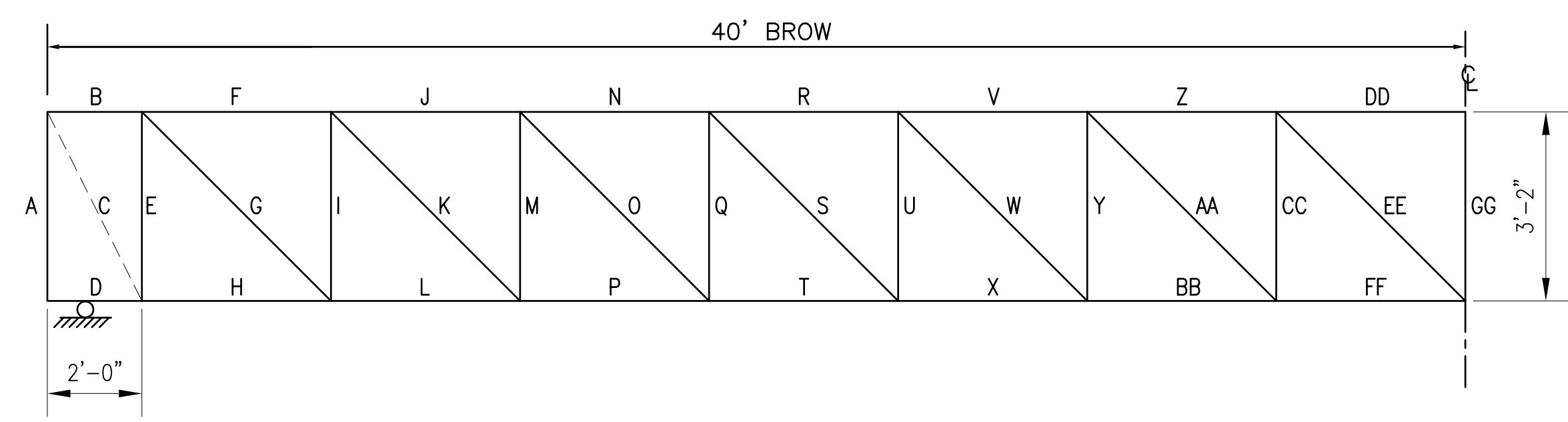
3

4

5

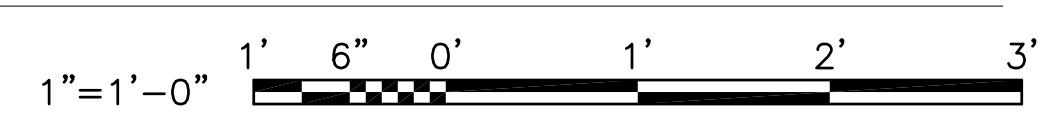


**40' TRUSS ELEVATION**  
SCALE: 1"=1'-0"

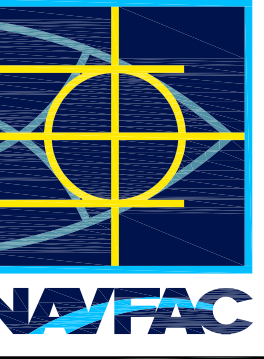


CLEAR WIDTH	SUPPORT REACTION
3'-0"	2600 LBS
4'-0"	3410 LBS
5'-0"	4270 LBS

GRAPHIC SCALES:



GENERAL REVISIONS			DATE	APPR
1			7/12	



SEAL

APPROVED:
FOR COMMANDER NAVFAC:
ACTIVITY:
SATISFACTORY TO:
DES: <b>DBC</b> DRW: <b>DBC</b> CHK: <b>FBC</b>
FW/DW: <b>F. B. COLE</b>
BRANCH MANAGER:
CHIEF ENG/ARCH: <b>E J GALLAH</b>
FIRE PROTECTION:

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NORFOLK, VIRGINIA  
LANT CAPITAL IMPROVEMENTS  
STANDARD DRAWINGS  
BROWS AND PLATFORMS  
ALUMINUM TRUSS BROWS  
TRUSS BROWS 3-40, 4-40 & 5-40 ELEVATION

SCALE: AS NOTED
PROJECT NO.
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. SD1405018
SHEET 19 OF 42
<b>S-117</b>

DRAWFORM REVISION: 10 MARCH 2009

D

C

B

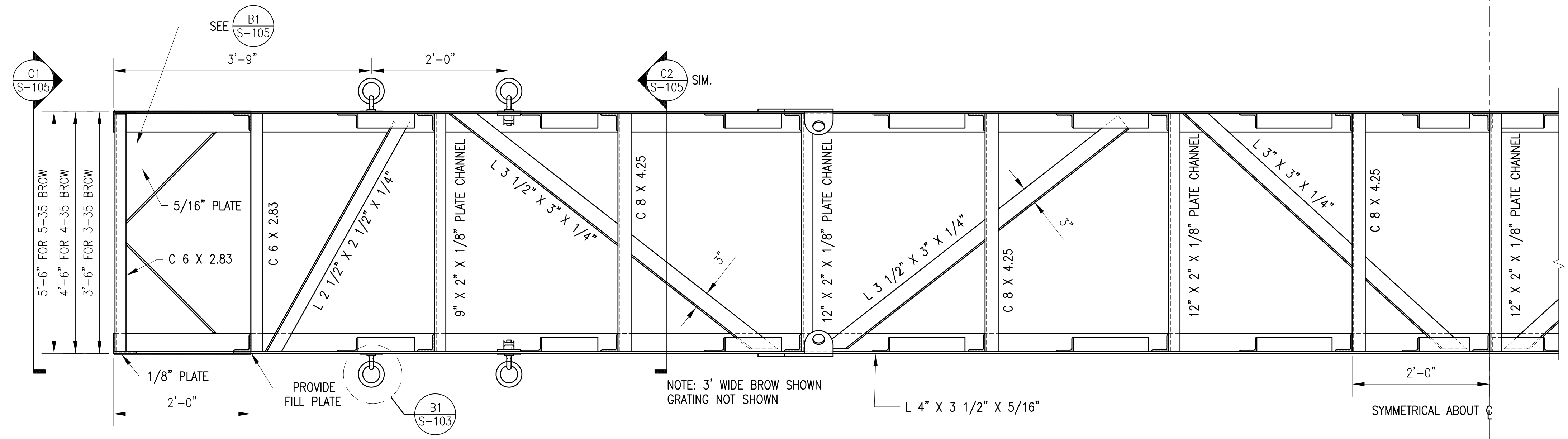
A

D

C

B

A



**BOTTOM CHORD PLAN**

SCALE: 1"=1'-0"

S-117 (C1)

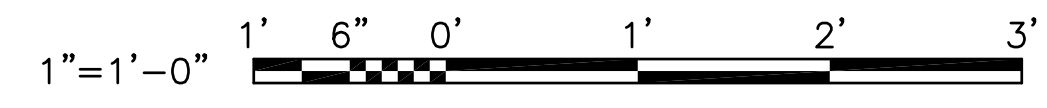
NOTES:

1. FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
2. HANDRAIL CONNECTIONS ARE SHOWN ON SHEET S-101 & S-102.
3. DETAILS OF GRATING, ROLLERS, AND WHEELS ARE SHOWN ON SHEET S-103, S-104 & S-105
4. DETAILS OF HOOKS ARE SHOWN ON SHEET S-104.
5. BROW LIGHTING PLANS ARE SHOWN ON SHEET E-100.
6. ALL HANDRAILS ARE TO BE SCH. 40 STD. ALUMINUM PIPE.
7. WELDING DETAILS ARE SHOWN ON SHEET S-105.
8. USE MEMBER SIZES SHOWN TO CONSTRUCT 3', 4' AND 5' WIDE BROWS.
9. ALL MATERIAL TO BE 6061-T6 ALUMINUM UNLESS OTHERWISE NOTED.
10. THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836936 THROUGH 836938, INCLUDING REVISION F. CALCULATIONS FOR Y&D DRAWING 836936 THROUGH 836938 ARE CONTAINED IN BOOKS 5011 AND 5015.

CLEAR WIDTH	WEIGHT
3'-0"	1400 LBS
4'-0"	1640 LBS
5'-0"	2060 LBS

VERIFY WEIGHT AFTER CONSTRUCTION

GRAPHIC SCALES:



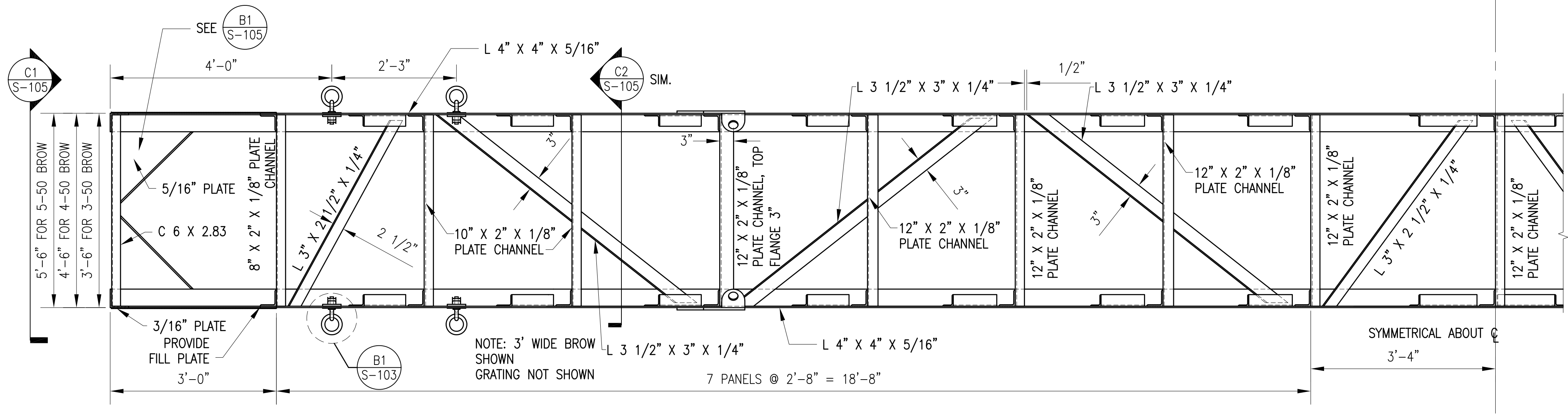
1	GENERAL REVISIONS	DATE	APPR
7/12			



APPROVED	A/E INFO		
FOR COMMANDER NAVFAC			
ACTIVITY			
SATISFACTORY TO			
DES	DRW	CHK	FBC
FW/DM	F. B. COLE		
BRANCH MANAGER			
CHIEF ENG/ARCH	E J GALLAHER		
FIRE PROTECTION			

DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
 NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
 NAUTICAL IMPROVEMENTS  
 STANDARD DRAWINGS  
 BROWS AND PLATFORMS  
 ALUMINUM TRUSS BROWS  
 TRUSS BROWS 3-40, 4-40 & 5-40 BOTTOM CHORD PLAN

SCALE:	AS NOTED
PROJECT NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	SD1405019
SHEET	20 OF 42
<b>S-118</b>	



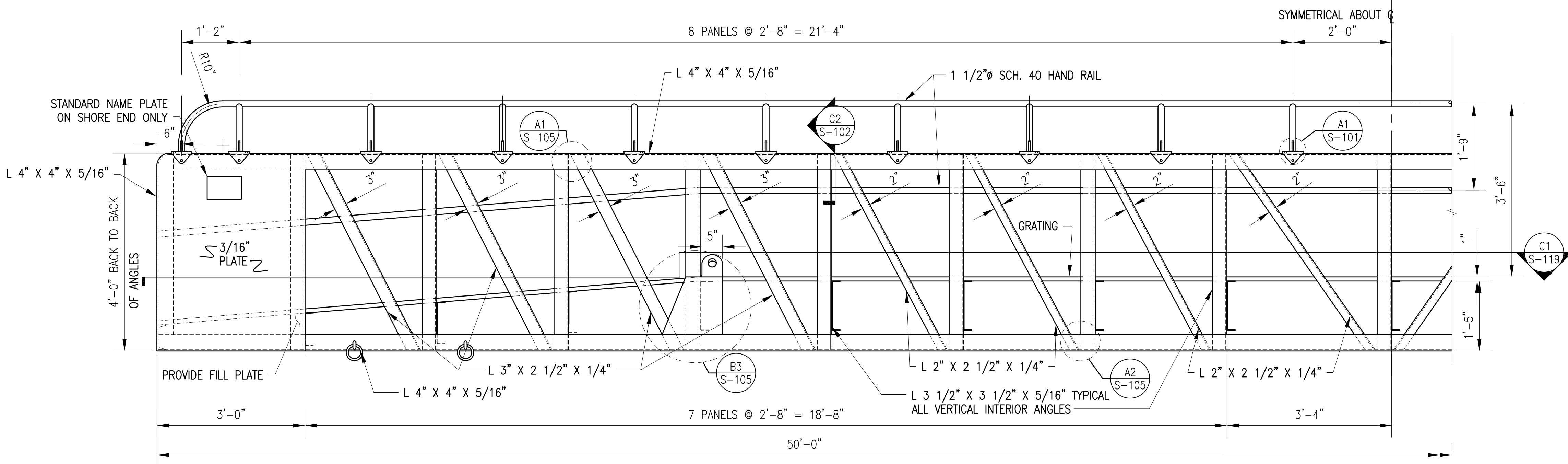
- NOTES:**
1. FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
  2. HANDRAIL CONNECTIONS ARE SHOWN ON SHEET S-101 & S-102.
  3. DETAILS OF GRATING, ROLLERS, AND WHEELS ARE SHOWN ON SHEET S-103, S-104 & S-105
  4. DETAILS OF HOOKS EYES ARE SHOWN ON SHEET S-104.
  5. BROW LIGHTING PLANS ARE SHOWN ON SHEET E-100.
  6. ALL HANDRAILS ARE TO BE SCH. 40 STD. ALUMINUM PIPE.
  7. WELDING DETAILS ARE SHOWN ON SHEET S-105.
  8. USE MEMBER SIZES SHOWN TO CONSTRUCT 3', 4' AND 5' WIDE BROWS.
  9. ALL MATERIAL TO BE 6061-T6 ALUMINUM UNLESS OTHERWISE NOTED.
  10. THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836939 THROUGH 836941, INCLUDING REVISION F OR G. CALCULATIONS FOR Y&D DRAWING 836939 THROUGH 836941 ARE CONTAINED IN BOOKS 5011 AND 5015.

FBC							
7/12							
GENERAL REVISIONS							
1							



**BOTTOM CHORD PLAN**  
SCALE: 3/4"=1'-0"

S-119 C1

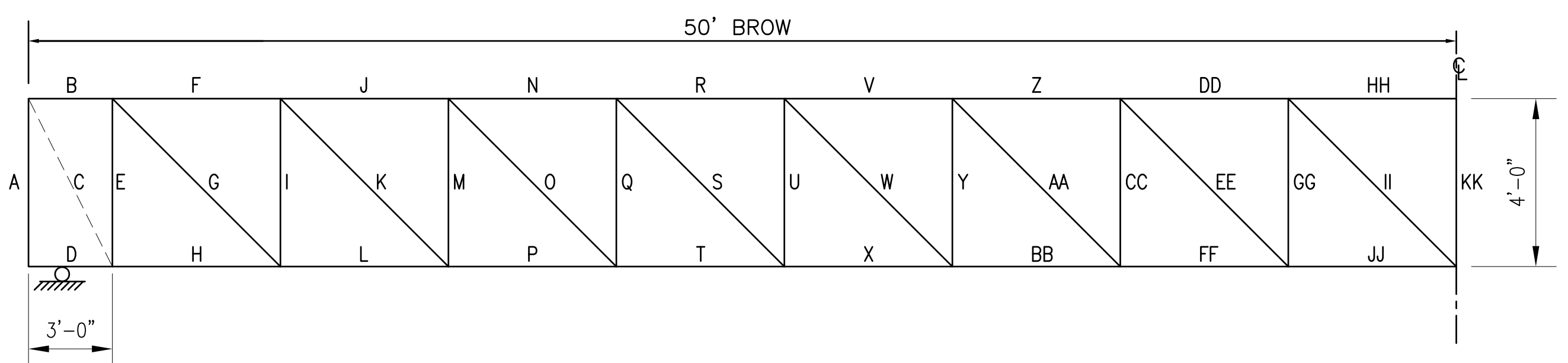


CLEAR WIDTH	WEIGHT
3'-0"	1950 LBS
4'-0"	2130 LBS
5'-0"	2520 LBS

VERIFY WEIGHT AFTER CONSTRUCTION

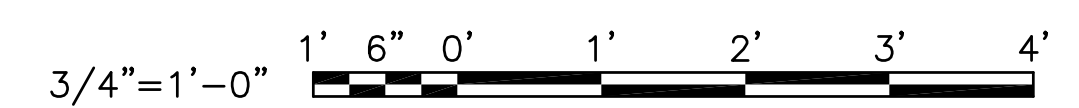
**50' TRUSS ELEVATION**  
SCALE: 3/4"=1'-0"

CLEAR WIDTH	SUPPORT REACTION
3'-0"	3300 LBS
4'-0"	4280 LBS
5'-0"	5320 LBS



MEMBER FORCES KEY DIAGRAM SHEET S-107

GRAPHIC SCALES:



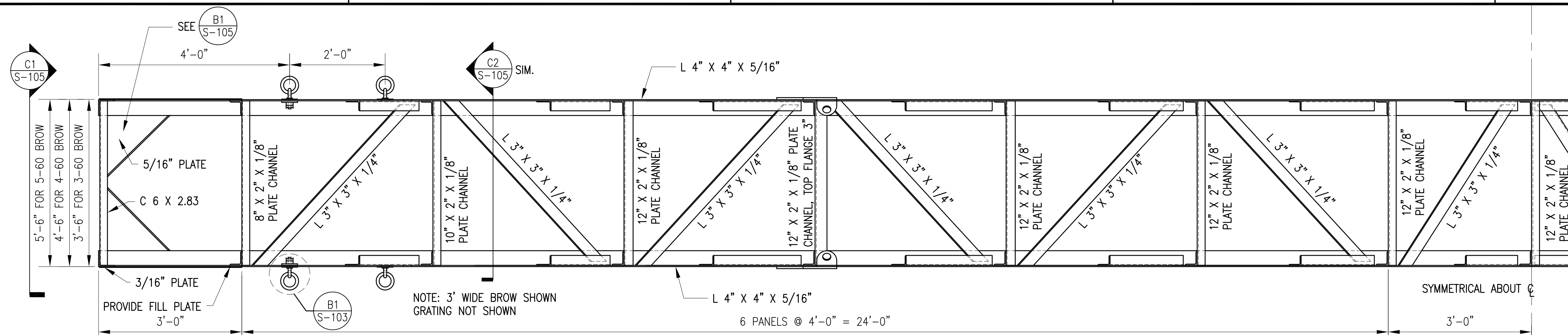
DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
LANE CAPITAL IMPROVEMENTS

NAVAL FACILITIES ENGINEERING COMMAND  
NORFOLK, VIRGINIA

**STANDARD DRAWINGS  
BROWS AND PLATFORMS  
ALUMINUM TRUSS BROWS**

TRUSS BROWS 3-50, 4-50 & 5-50

SCALE:	AS NOTED
PROJECT NO.:	
CONSTR. CONTR. NO.:	
NAVFAC DRAWING NO.:	SD1405020
SHEET:	21 OF 42
<b>S-119</b>	

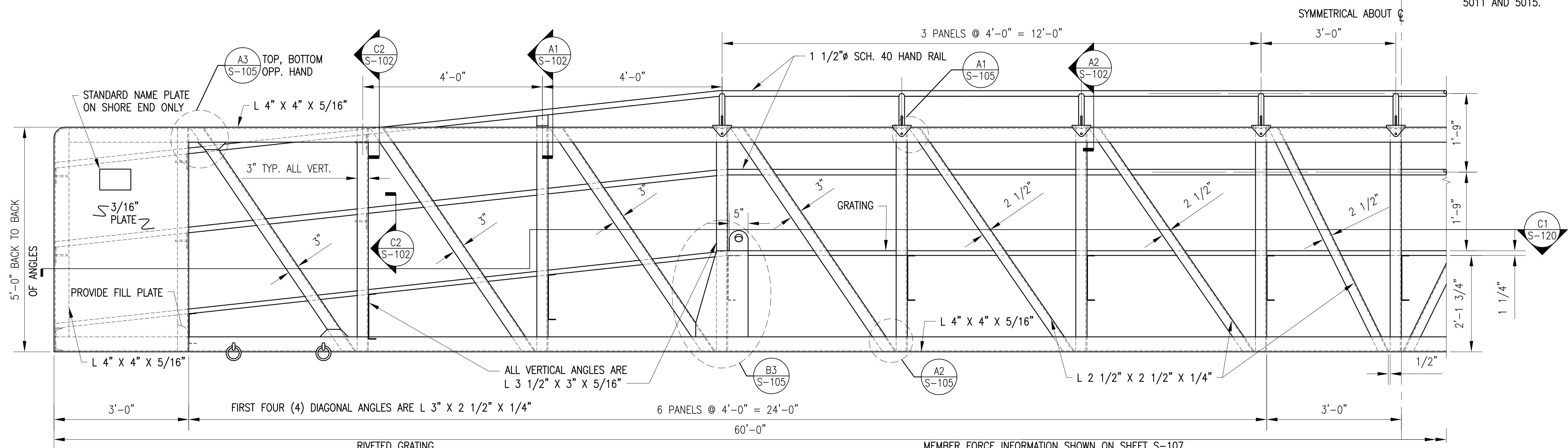


**BOTTOM CHORD PLAN**

SCALE: 3/4"=1'-0"

**NOTES:**

- FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
- HANDRAIL CONNECTIONS ARE SHOWN ON SHEET S-101 & S-102.
- DETAILS OF GRATING, ROLLERS, AND WHEELS ARE SHOWN ON SHEET S-103, S-104 & S-105.
- DETAILS OF HOOKS ARE SHOWN ON SHEET S-104.
- BROW LIGHTING PLANS ARE SHOWN ON SHEET F-100.
- ALL HANDRAILS ARE TO BE SCH. 40 STD. ALUMINUM PIPE.
- WELDING DETAILS ARE SHOWN ON SHEET S-105.
- USE MEMBER SIZES SHOWN TO CONSTRUCT 3', 4' AND 5' WIDE BROWS.
- ALL MATERIAL TO BE 6061-T6 ALUMINUM UNLESS OTHERWISE NOTED.
- THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836942 THROUGH 836944, INCLUDING REVISION F OR G. CALCULATIONS FOR Y&D DRAWING 836942 THROUGH 836944 ARE CONTAINED IN BOOKS 5011 AND 5015.

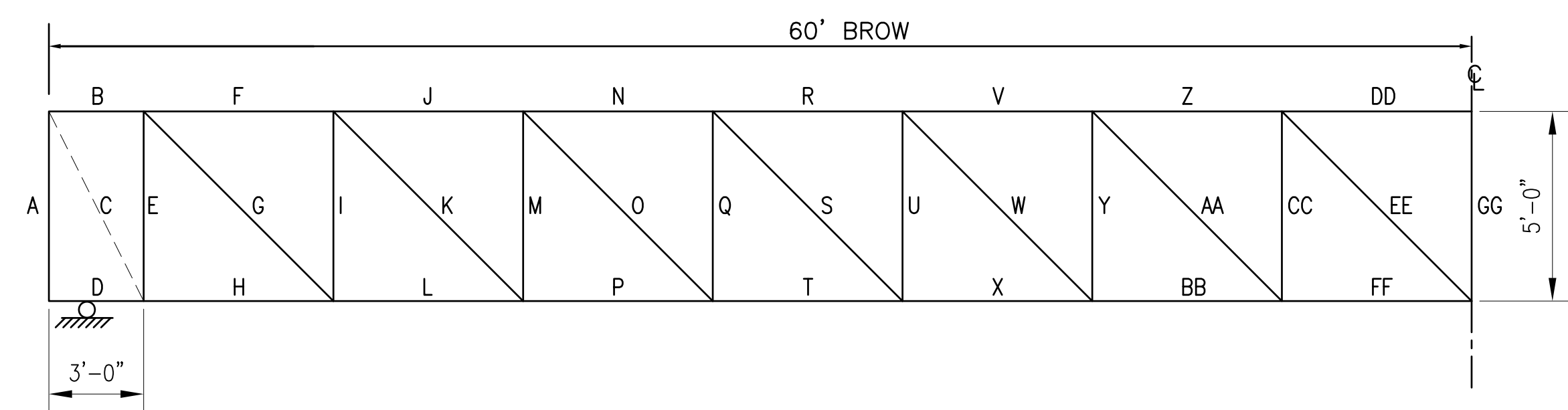


**60' TRUSS ELEVATION**

SCALE: 3/4"=1'-0"

**RIVETED GRATING**  
 1 1/4" DEEP X 3/16" BEARING BARS SPACED 3/4" APART WITH RIVETS AT 3 1/2" ON CENTER.  
 BOTH BEARING BARS AND CROSS MEMBERS SHALL BE 100% SERRATED.

MEMBER FORCE INFORMATION SHOWN ON SHEET S-107



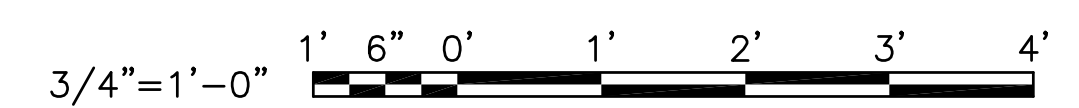
**MEMBER FORCES KEY DIAGRAM SHEET S-107**

CLEAR WIDTH	SUPPORT REACTION
3'-0"	4040 LBS
4'-0"	5280 LBS
5'-0"	6510 LBS

CLEAR WIDTH	WEIGHT
3'-0"	2660 LBS
4'-0"	3140 LBS
5'-0"	3520 LBS

VERIFY WEIGHT AFTER CONSTRUCTION

**GRAPHIC SCALES:**



7/12

1 GENERAL REVISIONS

DATE

DESCRIPTION

SYMBOL

APPROVED

FOR COMMANDER NAVFAC

ACTIVITY

SATISFACTORY TO

DES DBC DRW DBC CHK FBC

FW/DM F. B. COLE

BRANCH MANAGER

CHIEF ENG/ARCH E. J. GALLAHER

FIRE PROTECTION

NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC

STANDARD DRAWINGS BROWS AND PLATFORMS ALUMINUM TRUSS BROWS

TRUSS BROWS 3-60, 4-60 & 5-60

SCALE: AS NOTED

PROJECT NO.

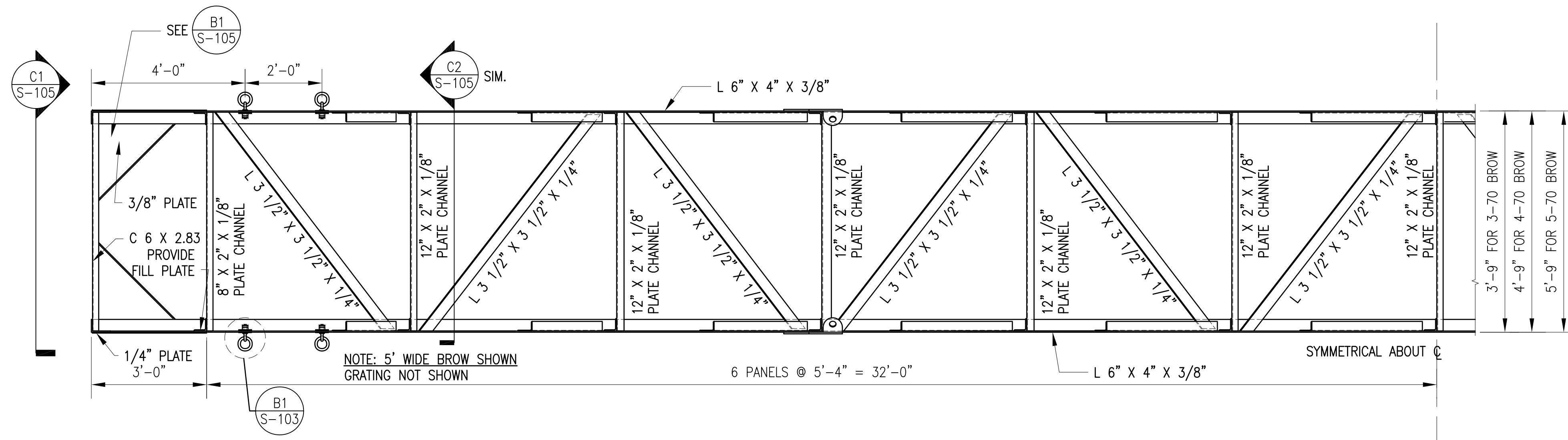
CONSTR. CONTR. NO.

NAVFAC DRAWING NO. SD1405021

SHEET 22 OF 42

**S-120**

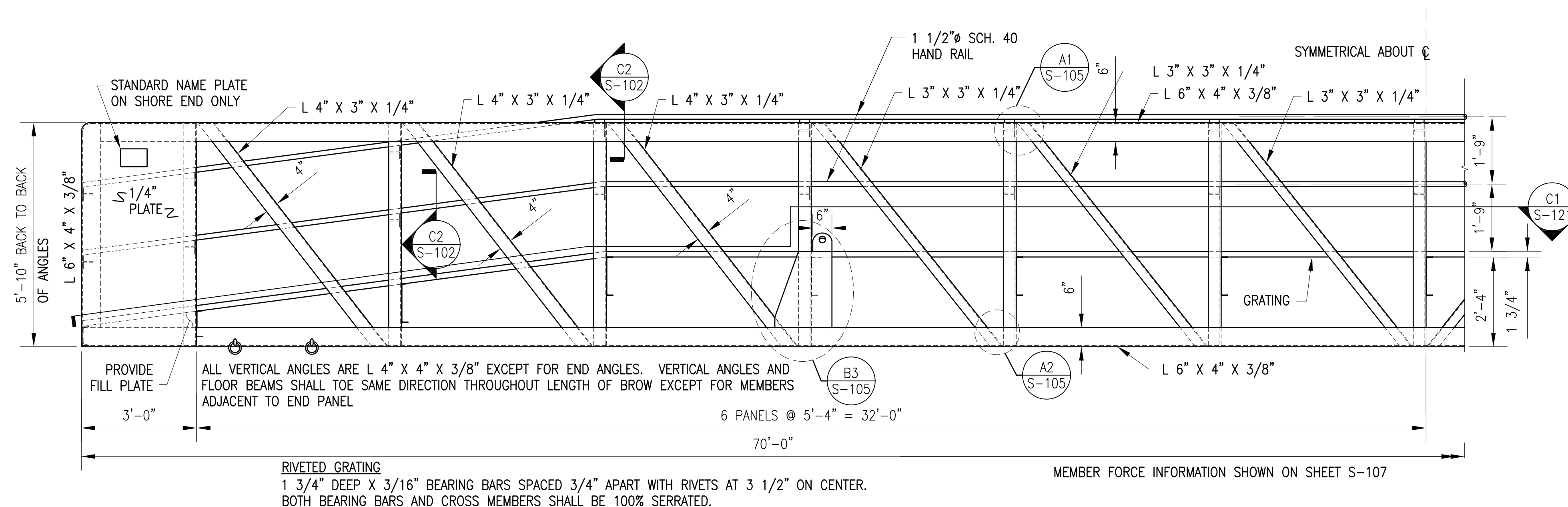
DRAWING REVISION: 10 MARCH 2009



**BOTTOM CHORD PLAN**

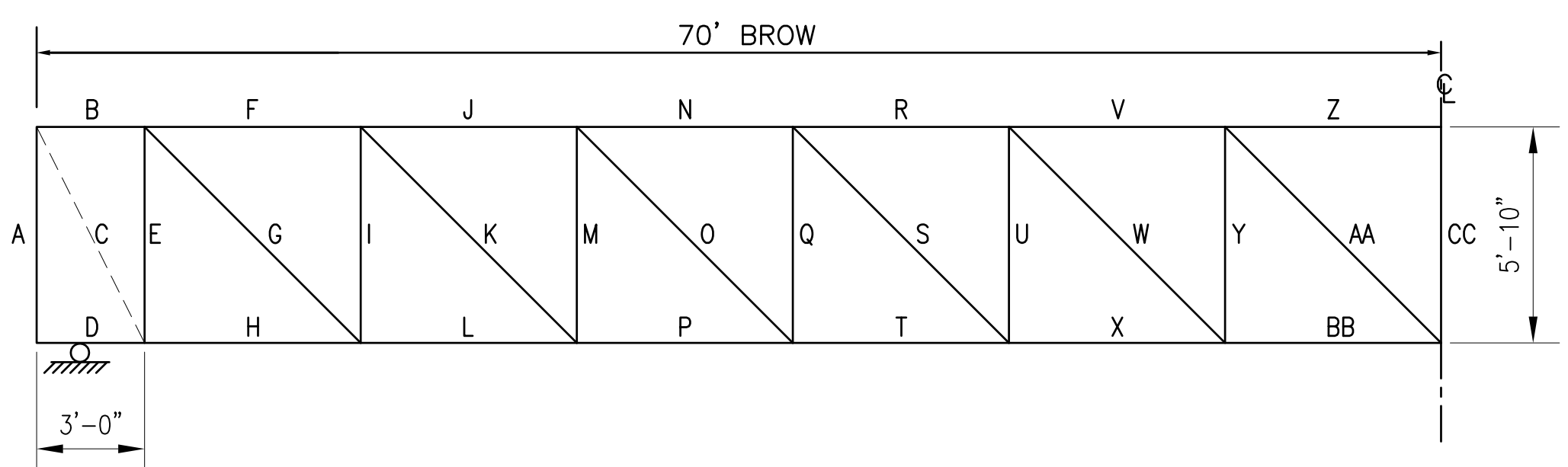
SCALE: 1/2"=1'-0"

S-121 C1



**70' TRUSS ELEVATION**

SCALE: 1/2"=1'-0"



MEMBER FORCES KEY DIAGRAM SHEET S-107

CLEAR WIDTH	SUPPORT REACTION
3'-0"	4280 LBS
4'-0"	6400 LBS
5'-0"	7830 LBS

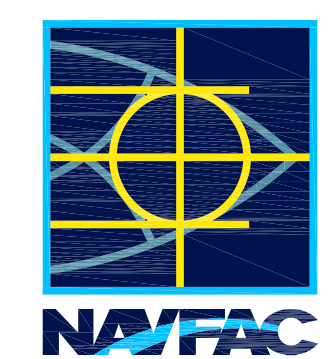
CLEAR WIDTH	WEIGHT
3'-0"	3520 LBS
4'-0"	4580 LBS
5'-0"	5070 LBS

VERIFY WEIGHT AFTER CONSTRUCTION

**NOTES:**

- FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
- HANDRAIL CONNECTIONS ARE SHOWN ON SHEET S-101 & S-102.
- DETAILS OF GRATING, ROLLERS, AND WHEELS ARE SHOWN ON SHEET S-103, S-104 & S-105
- DETAILS OF HOOKS ARE SHOWN ON SHEET S-104.
- BROW LIGHTING PLANS ARE SHOWN ON SHEET E-100.
- ALL HANDRAILS ARE TO BE SCH. 40 STD. ALUMINUM PIPE.
- WELDING DETAILS ARE SHOWN ON SHEET S-105.
- USE MEMBER SIZES SHOWN TO CONSTRUCT 3', 4' AND 5' WIDE BROWS.
- ALL MATERIAL TO BE 6061-T6 ALUMINUM UNLESS OTHERWISE NOTED.
- THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836945 THROUGH 836947, INCLUDING REVISION F OR G. CALCULATIONS FOR Y&D DRAWING 836945 THROUGH 836947 ARE CONTAINED IN BOOKS 5011 AND 5015.

GENERAL REVISIONS	DATE	DESCRIPTION
1	7/12	



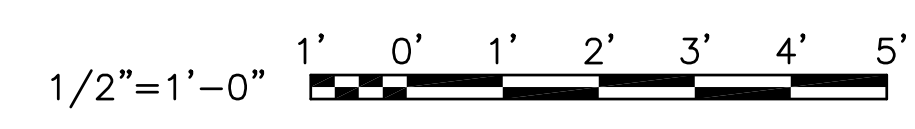
APPROVED	A/E INFO
FOR COMMANDER NAVFAC	
ACTIVITY	
SATISFACTORY TO	
DES DBC	DRW DBC
CHK FBC	
PM/DM	F. B. COLE
BRANCH MANAGER	
CHIEF ENG/ARCH	E. J. GALLAHER
FIRE PROTECTION	

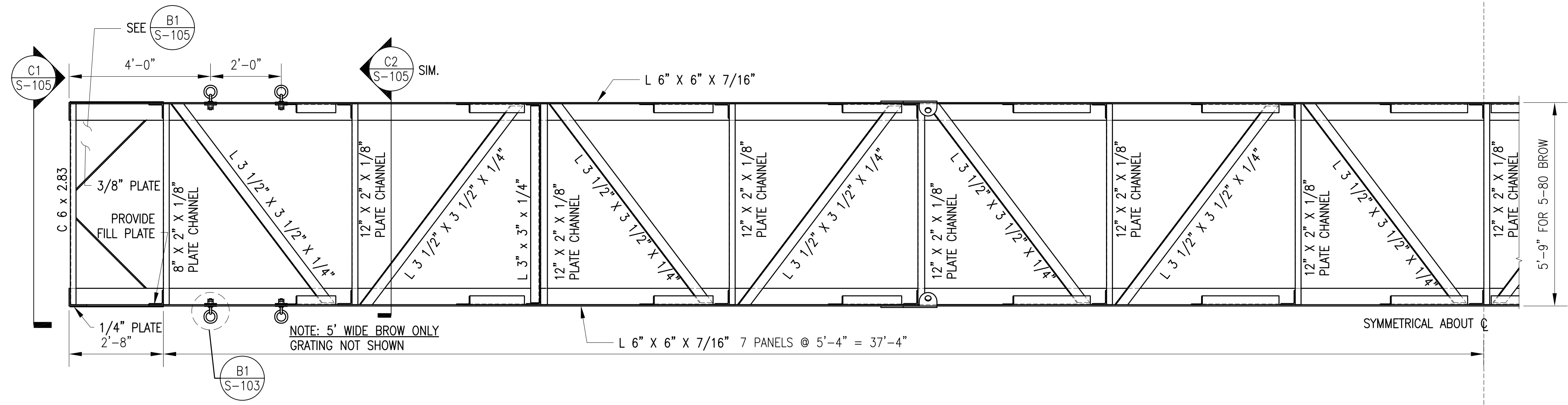
DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC	NORFOLK, VIRGINIA
NAVAL CAPITAL IMPROVEMENTS	

**STANDARD DRAWINGS**  
**BROWS AND PLATFORMS**  
 ALUMINUM TRUSS BROWS  
 TRUSS BROWS 3-70, 4-70 & 5-70

SCALE	AS NOTED
PROJECT NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	SD1405022
SHEET	23 OF 42
<b>S-121</b>	

**GRAPHIC SCALES:**

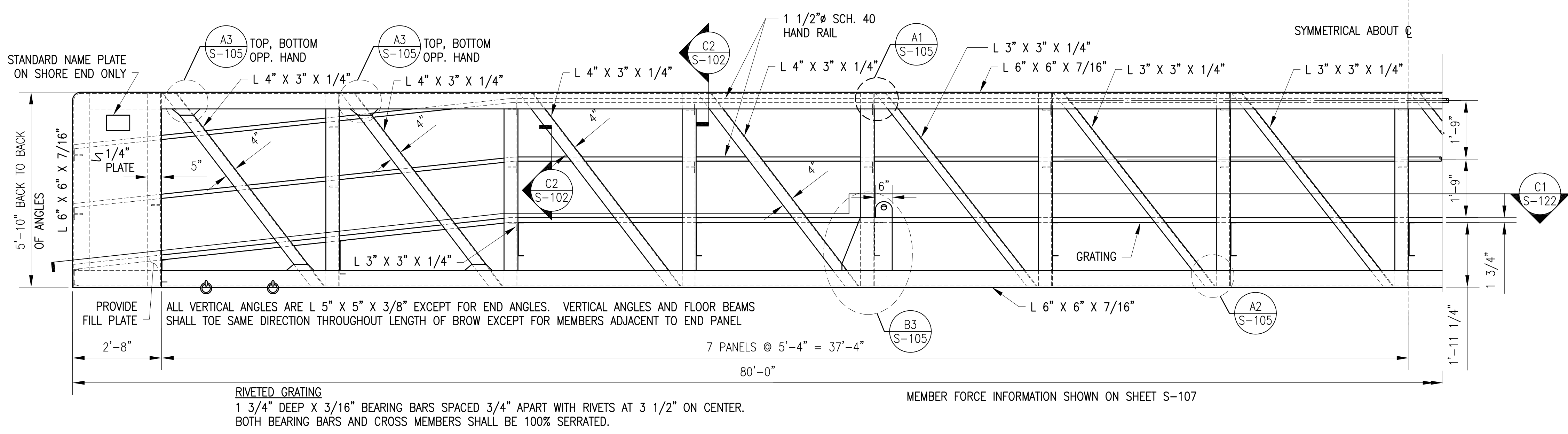




**BOTTOM CHORD PLAN**

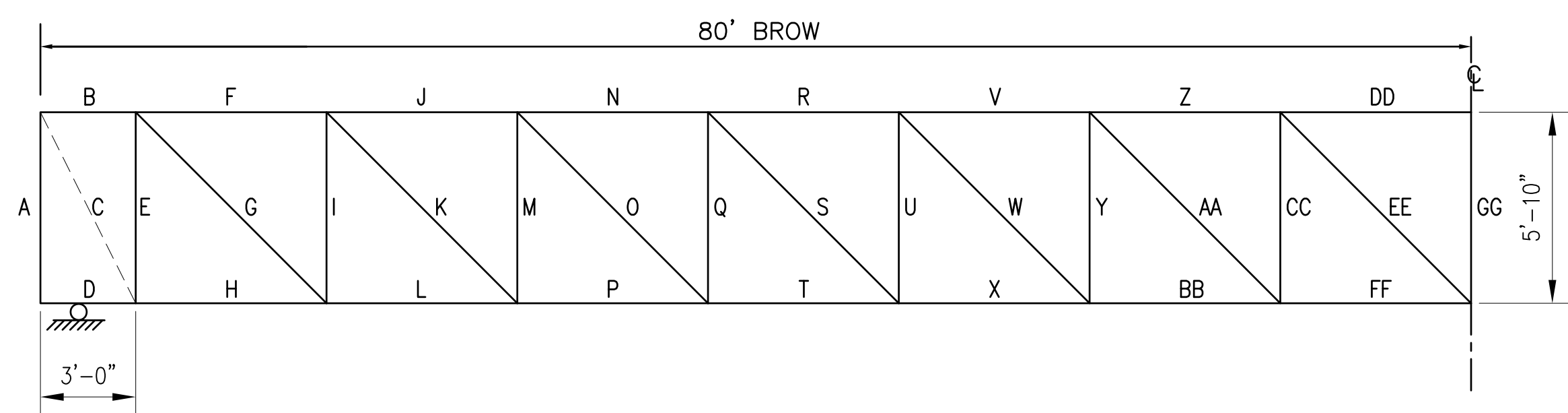
SCALE: 1/2"=1'-0"

S-122 C1



**80' TRUSS ELEVATION**

SCALE: 1/2"=1'-0"



CLEAR WIDTH	SUPPORT REACTION
5'-0"	9250 LBS

CLEAR WIDTH	WEIGHT
5'-0"	7500 LBS

VERIFY WEIGHT AFTER CONSTRUCTION

**NOTES:**

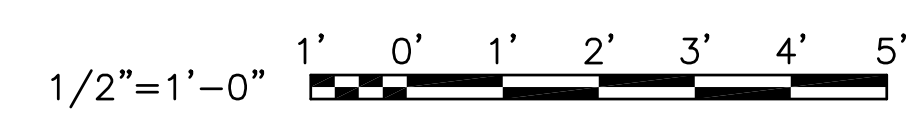
- FOR GENERAL NOTES AND LOADS SEE SHEET S-101.
- HANDRAIL CONNECTIONS ARE SHOWN ON SHEET S-101 & S-102.
- DETAILS OF GRATING, ROLLERS, AND WHEELS ARE SHOWN ON SHEET S-103, S-104 & S-105
- DETAILS OF HOOKS ARE SHOWN ON SHEET S-104.
- BROW LIGHTING PLANS ARE SHOWN ON SHEET E-100.
- ALL HANDRAILS ARE TO BE SCH. 40 STD. ALUMINUM PIPE.
- WELDING DETAILS ARE SHOWN ON SHEET S-105.
- 3' or 4' WIDE BROWS SHOULD NOT BE CONSTRUCTED FROM THIS DRAWING. 5' WIDE BROW SHOWN.
- ALL MATERIAL TO BE 6061-T6 ALUMINUM UNLESS OTHERWISE NOTED.
- THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836942, INCLUDING REVISION B.

FBC	DATE	APPR
7/12		
GENERAL REVISIONS	DESCRIPTION	SYM
1		

NAVFAC  
STANDARD DRAWINGS  
BROWS AND PLATFORMS  
ALUMINUM TRUSS BROWS  
TRUSS BROW 5-80

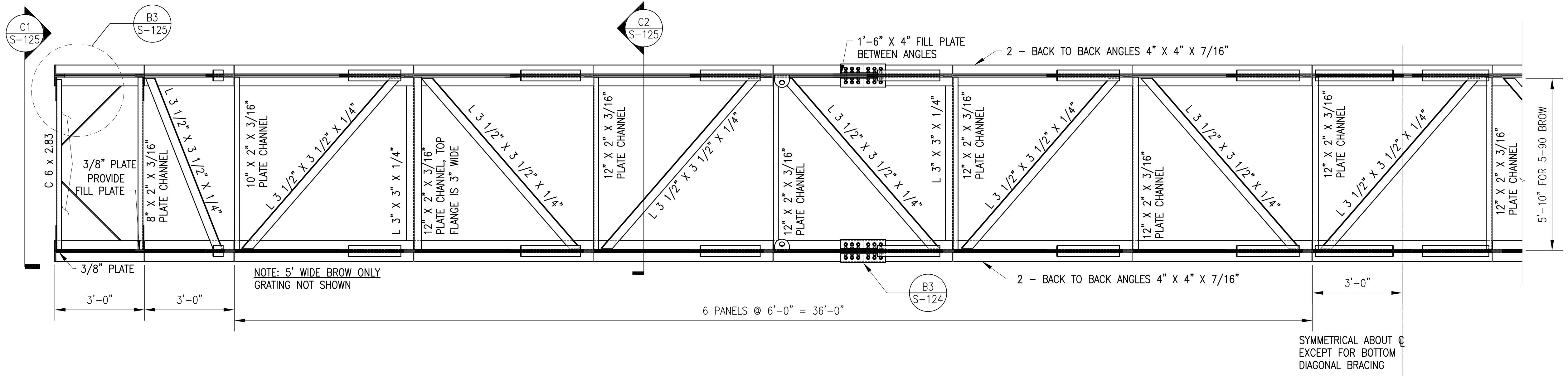
DEPARTMENT OF THE NAVY  
NAVFACILITIES ENGINEERING COMMAND  
NAVFACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC  
NAVFAC DRAWING NO. SD1405023  
SHEET 24 OF 42  
SCALE: AS NOTED  
PROJECT NO.  
CONSTR. CONTR. NO.  
DRAWING REVISION: 10 MARCH 2009

**GRAPHIC SCALES:**



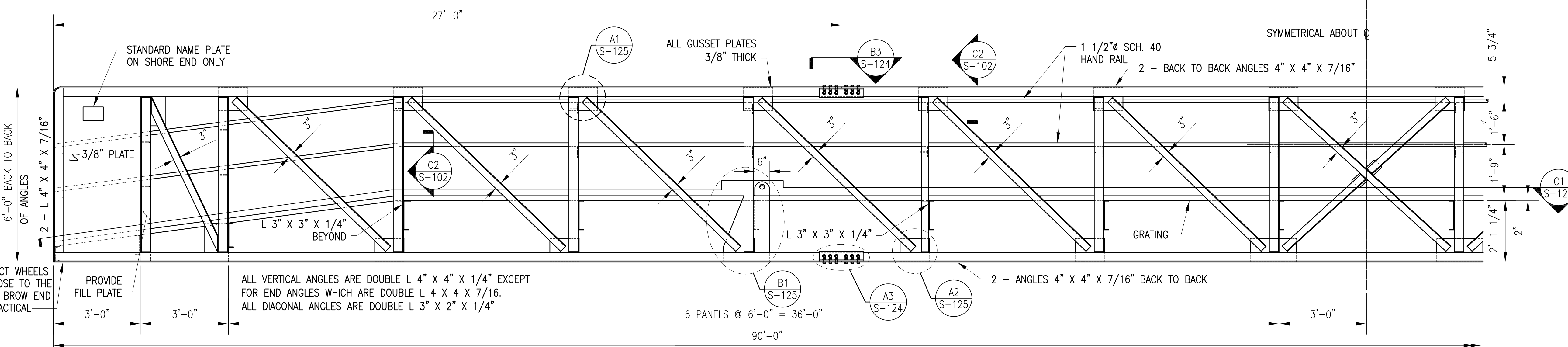
MEMBER FORCES KEY DIAGRAM SHEET S-107





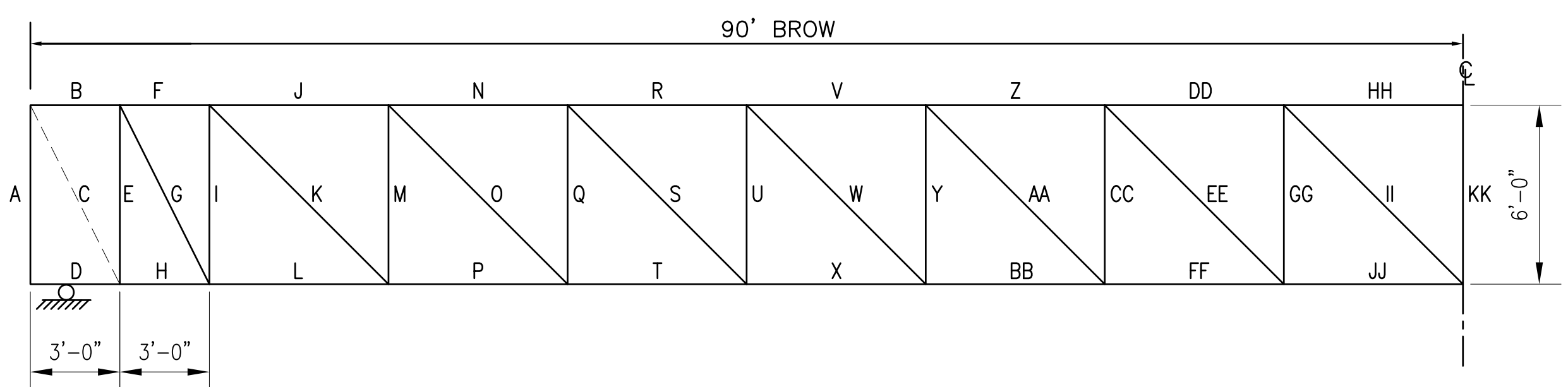
**BOTTOM CHORD PLAN**

SCALE: 1/2"=1'-0"



**90' TRUSS ELEVATION**

SCALE: 1/2"=1'-0"



MEMBER FORCES KEY DIAGRAM SHEET S-107

CLEAR WIDTH	WEIGHT
5'-0"	8500 LBS

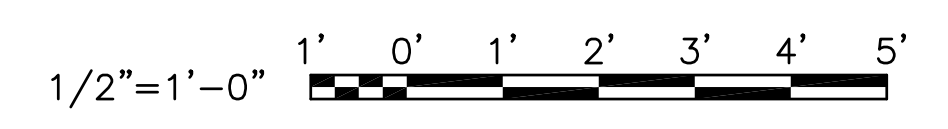
VERIFY WEIGHT AFTER CONSTRUCTION

CLEAR WIDTH	SUPPORT REACTION
5'-0"	10570 LBS

**NOTES:**

- FOR NOTES AND DETAILS SEE SHEETS S-124 & S-125
- THIS DRAWING SUPERSEDES Y&D DRAWING 1046641.

**GRAPHIC SCALES:**



1 GENERAL REVISIONS

NO.	DESCRIPTION	DATE	APPR.
1		7/12	FBC

APPROVED: \_\_\_\_\_

FOR COMMANDER NAVFAC: \_\_\_\_\_

ACTIVITY: \_\_\_\_\_

SATISFACTORY TO:

DES	DBC	DRW	DBC	CHK	FBC
-----	-----	-----	-----	-----	-----

BRANCH MANAGER: E J GALLAHER

CHIEF ENG/ARCH: \_\_\_\_\_

FIRE PROTECTION: \_\_\_\_\_

DEPARTMENT OF THE NAVY  
NAVFACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFACILITIES ENGINEERING COMMAND ATLANTIC

**STANDARD DRAWINGS  
BROWS AND PLATFORMS  
ALUMINUM TRUSS BROWS**

TRUSS BROW 5-90

SCALE: AS NOTED

PROJECT NO.: \_\_\_\_\_

CONSTR. CONTR. NO.: \_\_\_\_\_

NAVFAC DRAWING NO.: SD1405024

SHEET 25 OF 42

**S-123**

DRAWING REVISION: 10 MARCH 2009

1

2

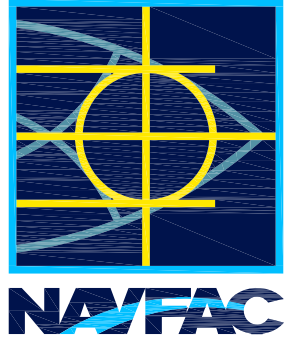
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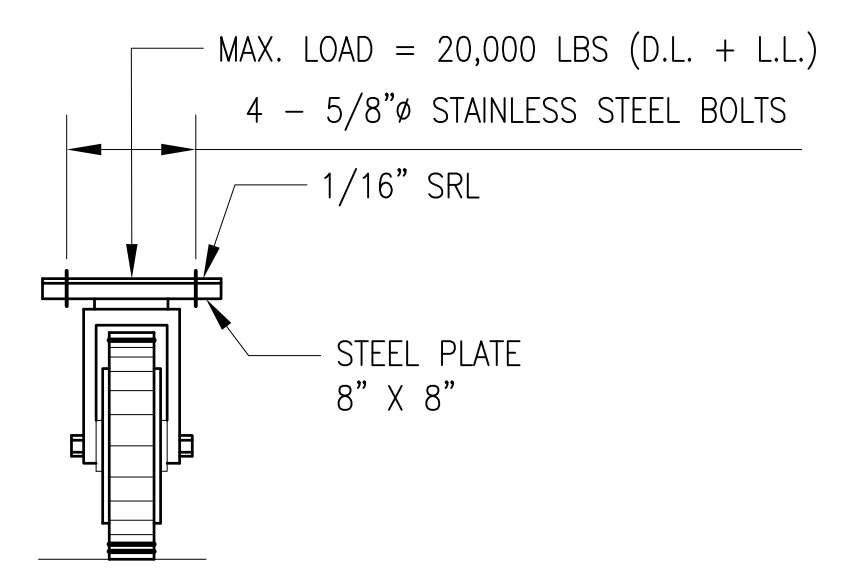
4

5

### GENERAL NOTES:

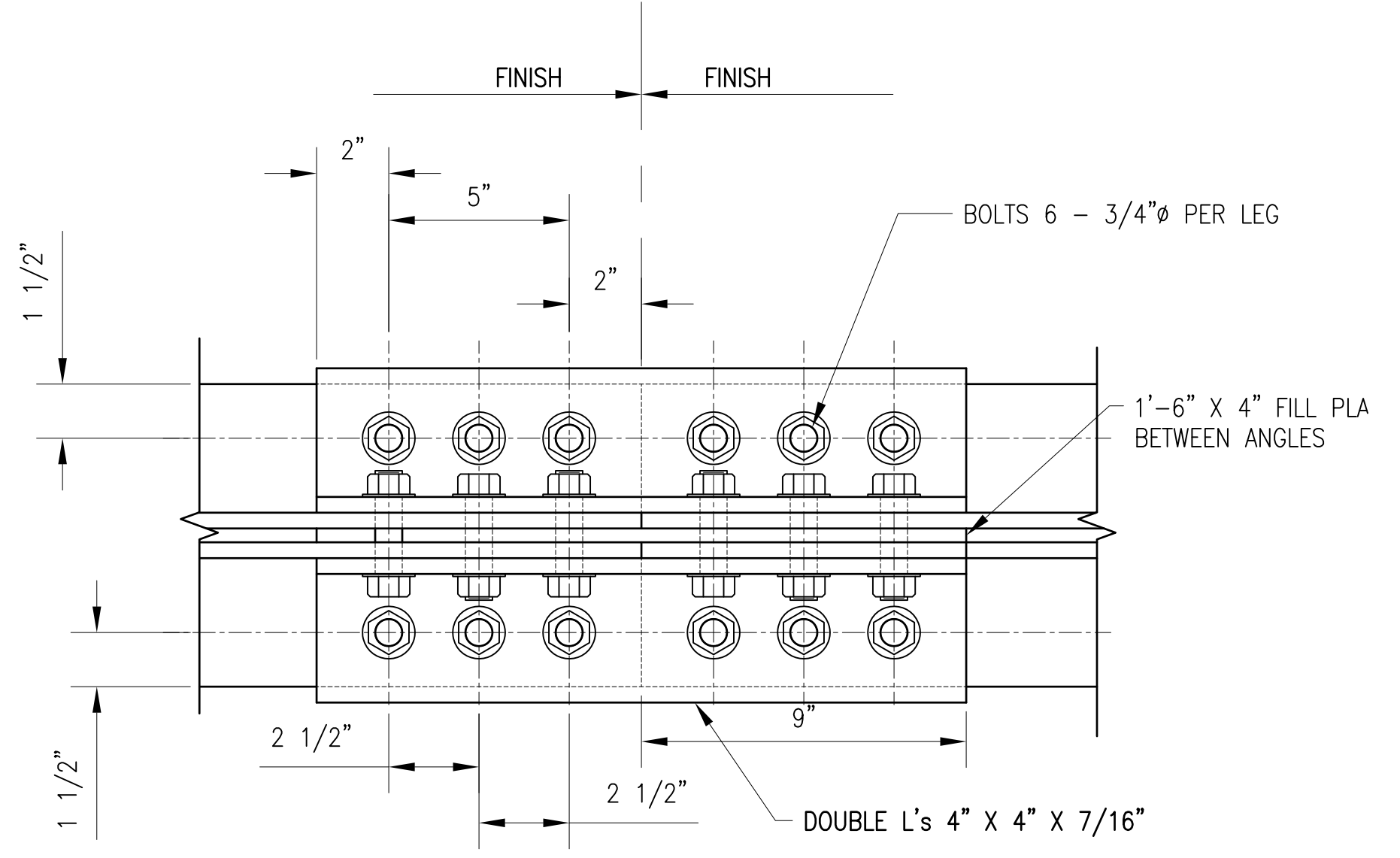
- ALL GUSSET PLATES TO BE 3/8" THICK.
- TRUSS BROW TO BE FABRICATED IN THREE SECTIONS AND SPLICED TOGETHER IN THE FIELD.
- ALL BOLTS AND NUTS SHALL BE 6061-T6 ALUMINUM EXCEPT AS NOTED OTHERWISE.
- ENDS OF ANGLES SHALL BE FACED FOR BEARING AT SPLICES AND SHALL BE SPLICED TO HOLD ABUTTING PARTS TRUE TO PLACE.
- SPLICES SHALL BE MADE AS CLOSE AS POSSIBLE TO PANEL POINTS.
- SRL = SYNTHETIC RESIN LAMINATE, REFER TO SPECS.
- ALL HANDRAILS TO BE 1 1/2" STANDARD ALUMINUM PIPE WELDED THROUGHOUT, EXCEPT AS NOTED.
- PROVIDE GRATING WITH MIN. SAFE LOAD OF 400 P.S.F. FOR UNSUPPORTED LENGTH OF 6'-0". APPROXIMATE WT. = 8.1 P.S.F.
- FOR GENERAL SCHEME OF LIGHTING FOR BROW, REFER TO SHEET E-100
- PROVIDE 3/8" STAY PLATE AT MIDPOINT OF DIAGONALS, TOP AND BOTTOM CHORD MEMBERS.
- PROVIDE A SECOND SET OF WHEELS AT THE PANEL POINT 24'-0" FROM THE HOOK END OF THE BROW, REFER TO TYPICAL DETAIL.
- SELECTION OF WHEELS AND CASTERS TO SUIT BROW LOADINGS GIVEN, AND ROLL FREELY UNDER FULL LOAD.
- APPROX. WEIGHT OF BROW = 8500 LBS.
- STANDARD ROTATING PLATFORM DEPICTED ON SHEET S-136 SHALL BE USED ALONG WITH THIS BROW.
- WELDING DETAILS ARE SHOWN ON SHEET S-125.
- 3 OR 4 FEET WIDE, SHOULD NOT BE CONSTRUCTED FROM THIS DRAWING.

FBC										APPR
7/12										DATE
GENERAL REVISIONS										DESCRIPTION
1										SYM
										
APPROVED: _____ FOR COMMANDER NAVFAC ACTIVITY SATISFACTORY TO DES DBC DRW DBC CHK FBC PW/DM <b>F. B. COLE</b> BRANCH MANAGER CHIEF ENG/ARCH <b>E. J. GALLAHER</b> FIRE PROTECTION										
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC <b>STANDARD DRAWINGS          BROWS AND PLATFORMS          ALUMINUM TRUSS BROWS</b> TRUSS BROW 5-90 SECTIONS, DETAILS & NOTES										
SCALE: AS NOTED PROJECT NO. CONSTR. CONTR. NO. NAVFAC DRAWING NO. <b>SD1405025</b> SHEET <b>26</b> OF <b>42</b> <b>S-124</b> <small>DRAWING REVISION: 10 MARCH 2009</small>										



### TYPICAL WHEEL

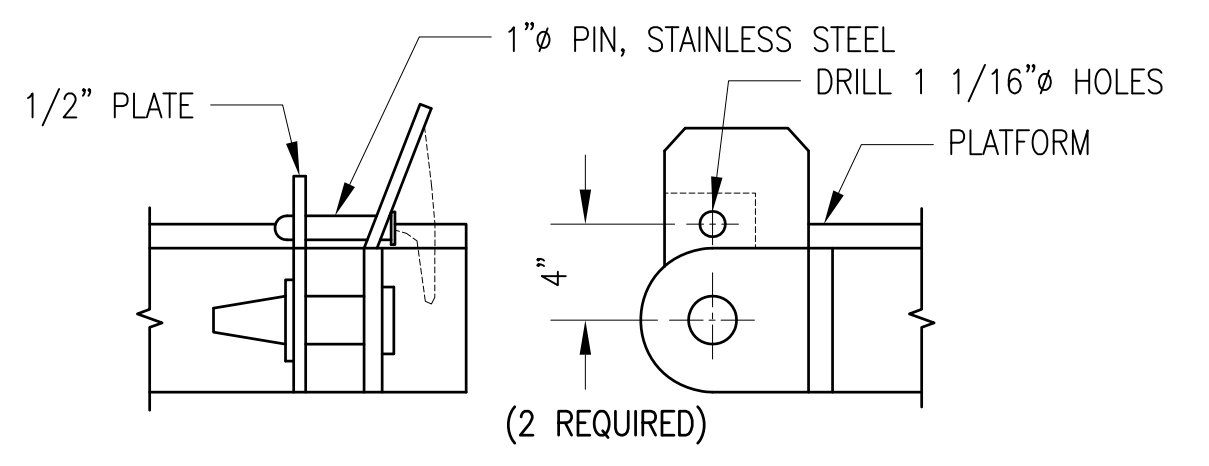
N.T.S.



### SPLICE DETAIL PLAN

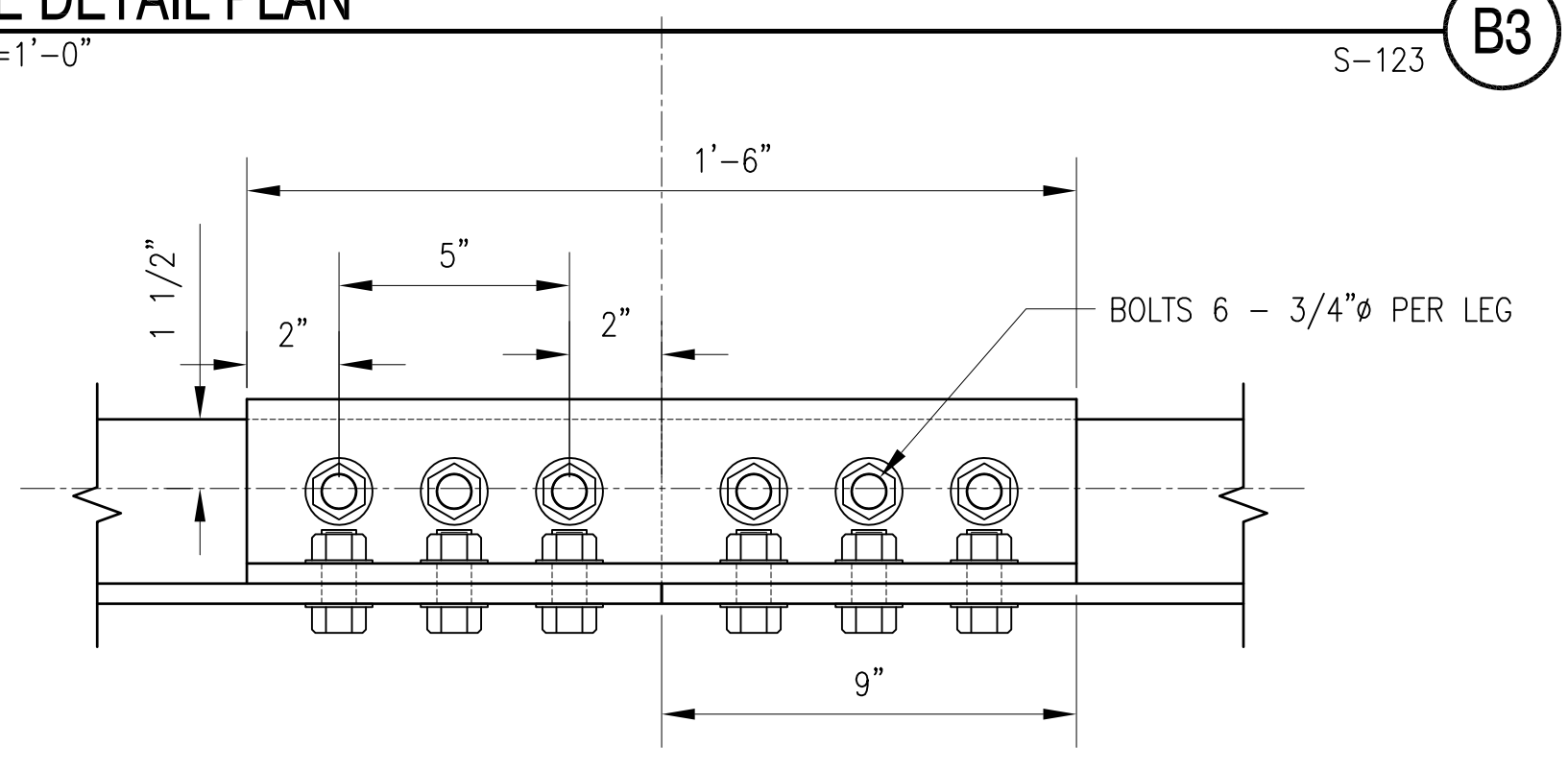
SCALE: 3"=1'-0"

5-123 **B3**



### LOCKING DEVICE FOR BROW CONNECTION TO PLATFORM

N.T.S.

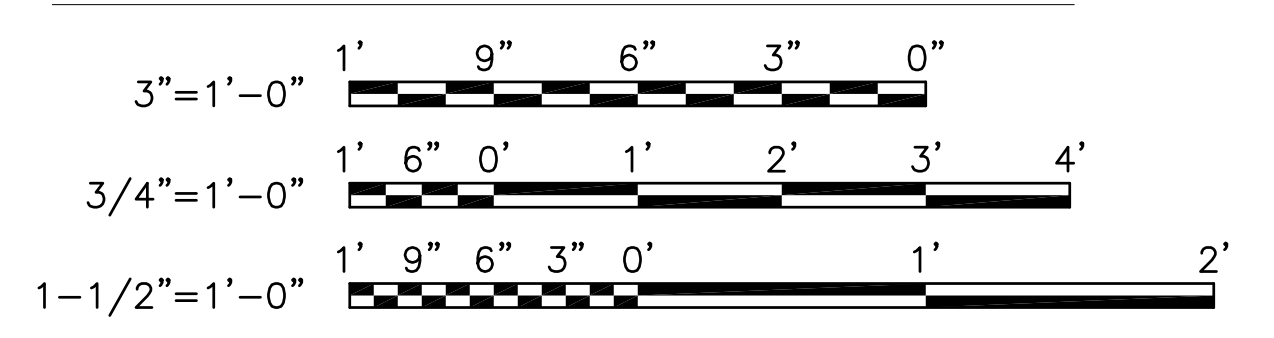


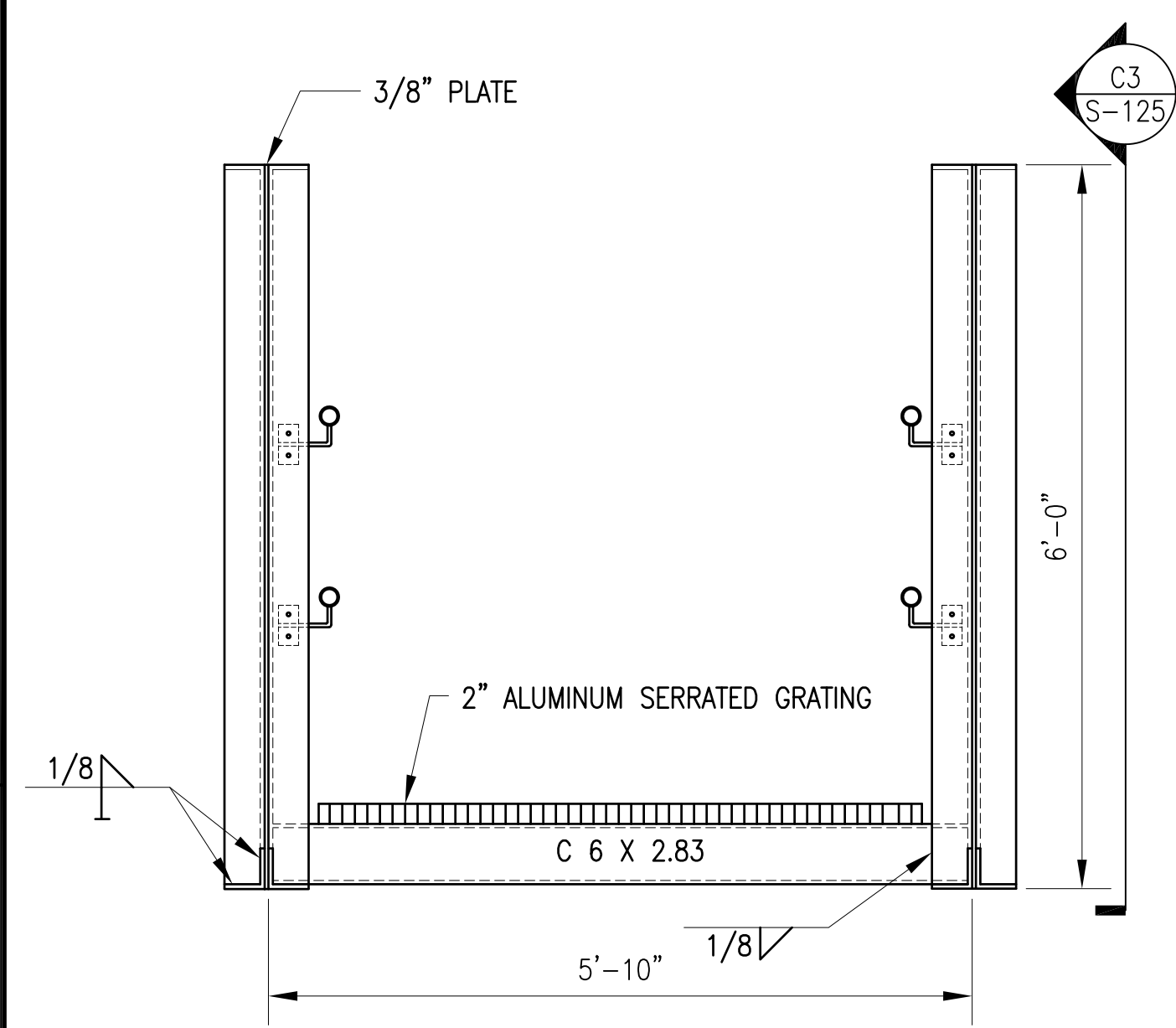
### SPLICE DETAIL ELEVATION

SCALE: 3"=1'-0"

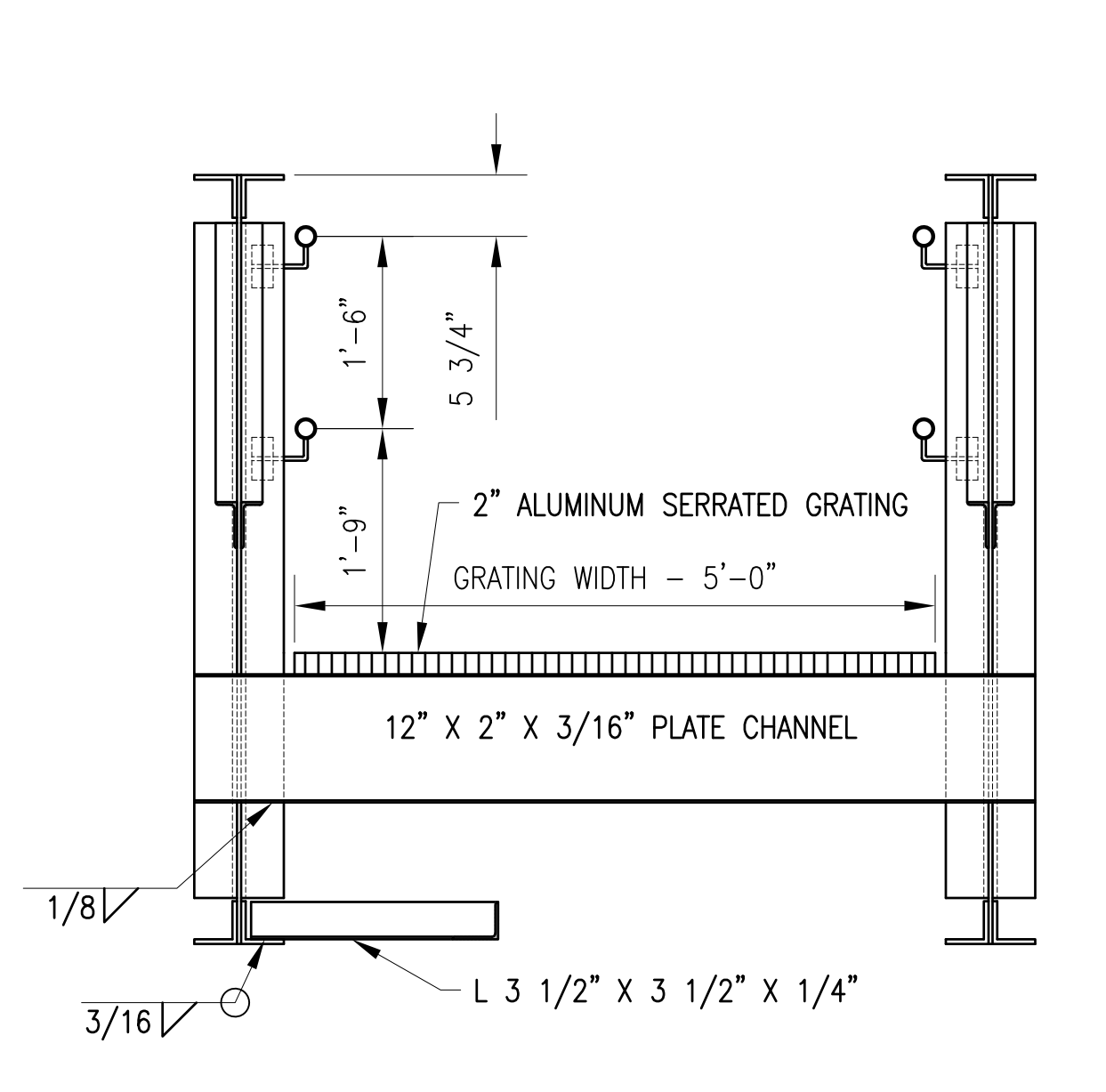
5-123 **A3**

### GRAPHIC SCALES:

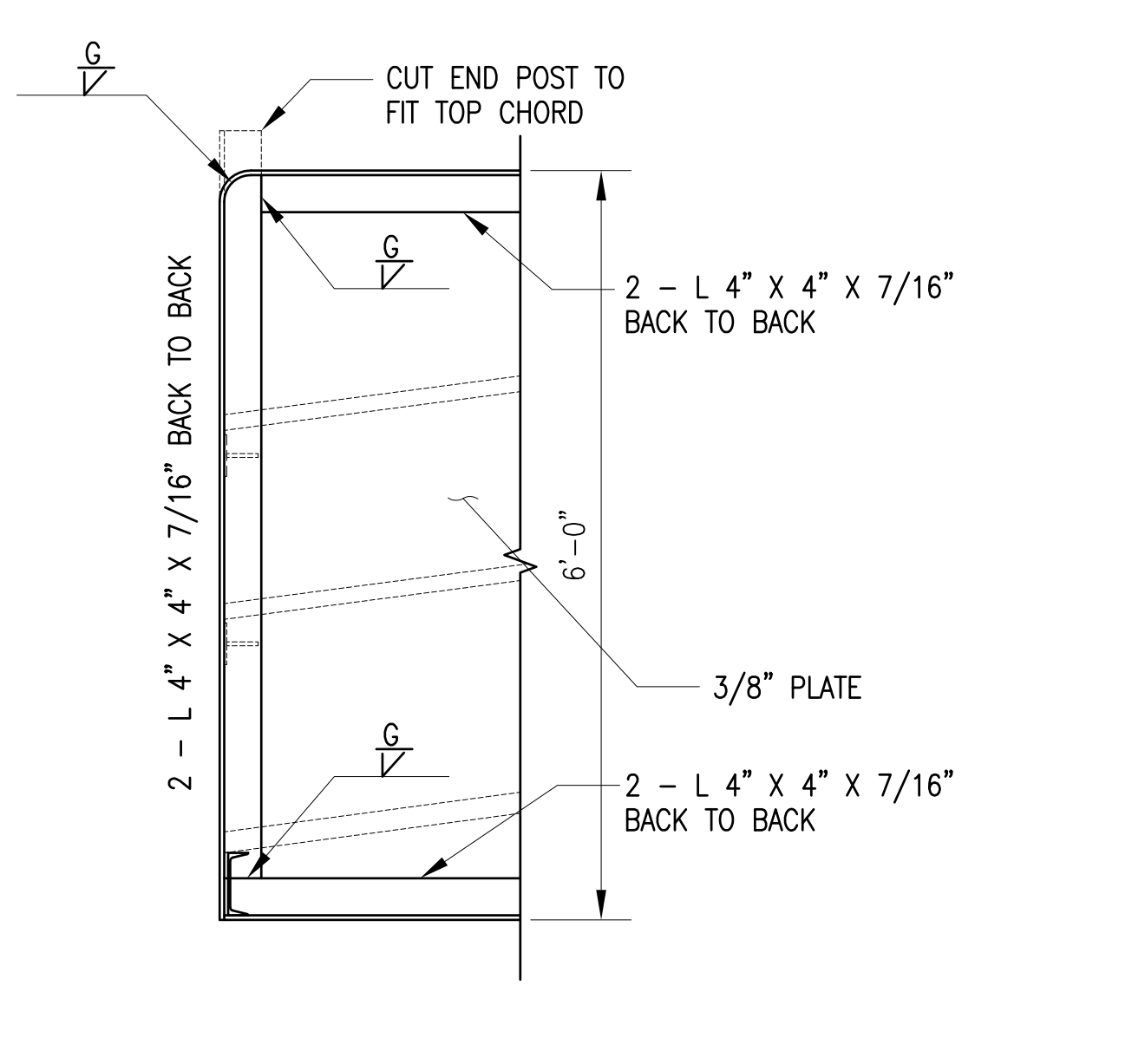




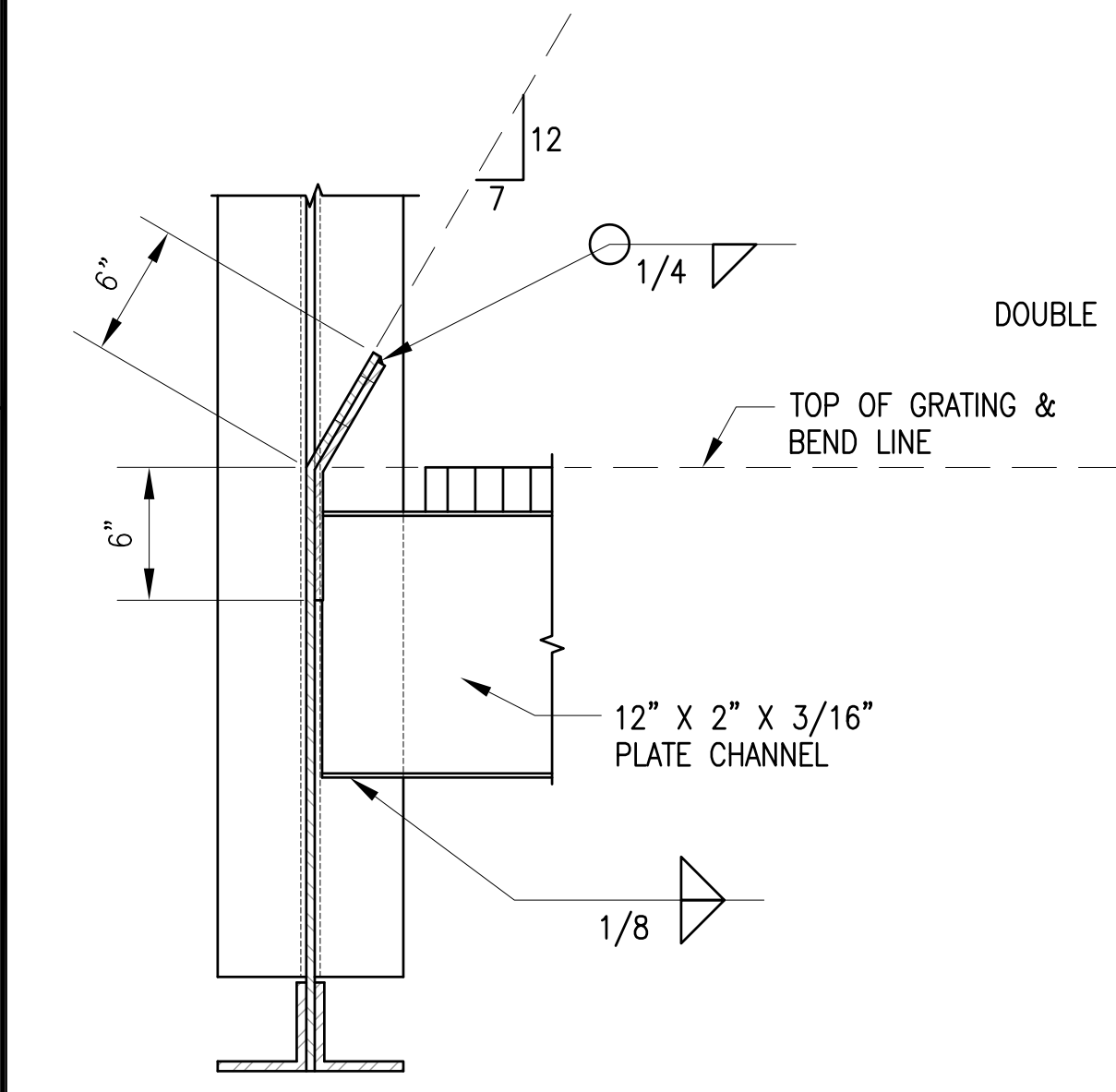
**END ELEVATION**  
SCALE: 3/4"=1'-0"  
S-123 C1



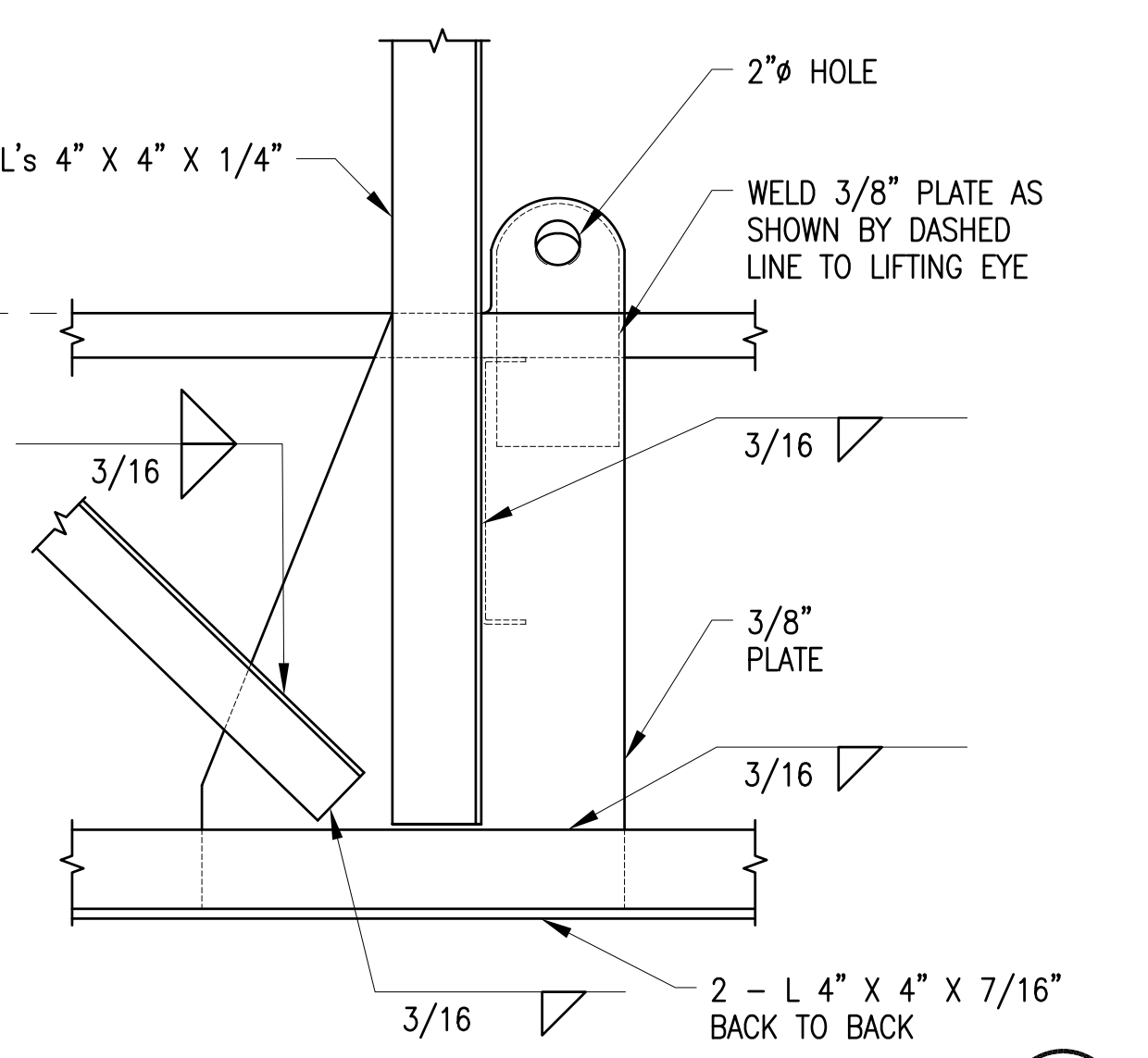
**BROW SECTION**  
SCALE: 3/4"=1'-0"  
S-123 C2



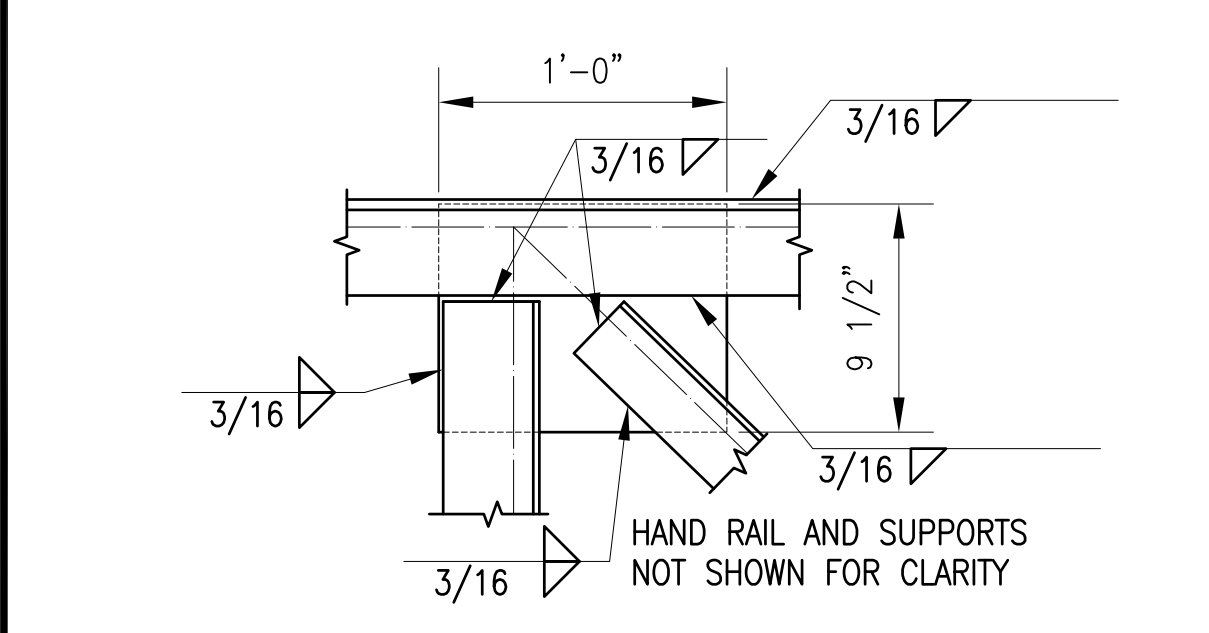
**TYPICAL END POST ELEVATION**  
SCALE: 3/4"=1'-0"  
S-125 C3



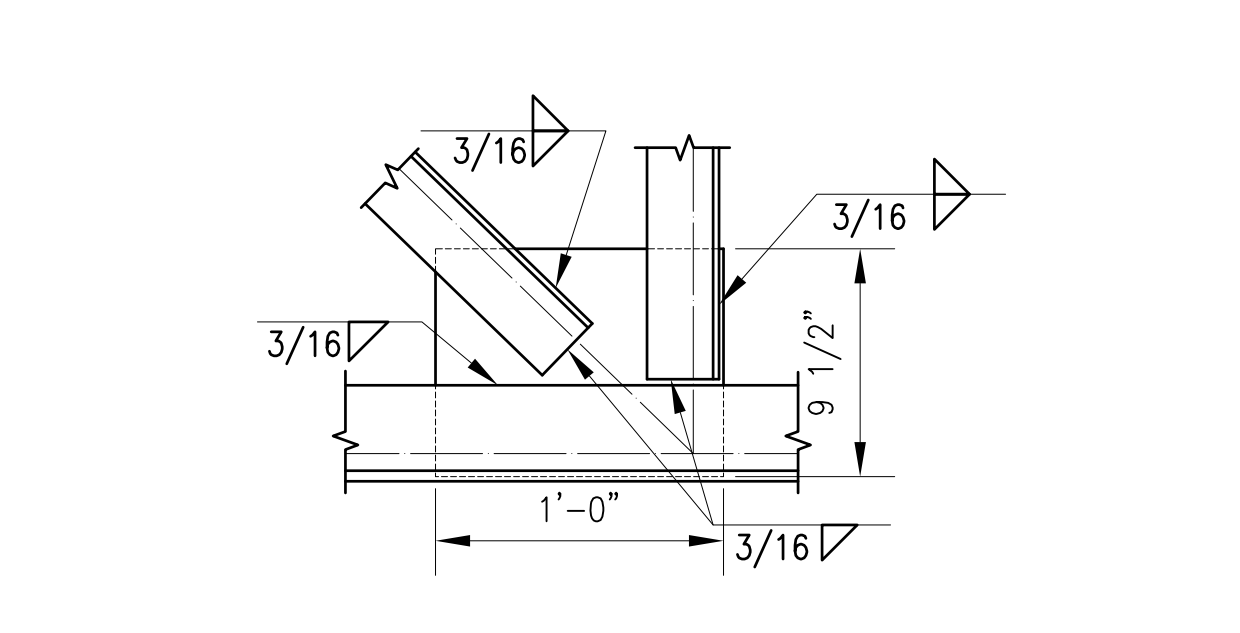
**TRUSS BROW LIFTING EYE**  
SCALE: 1 1/2"=1'-0"  
S-123 B1



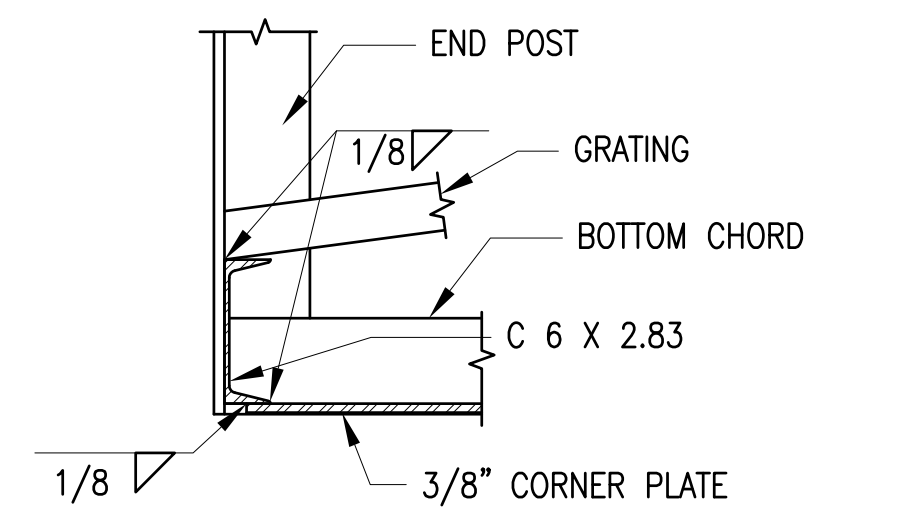
**TRIANGULAR CORNER PLATE DETAIL**  
SCALE: 1 1/2"=1'-0"  
S-123 B3



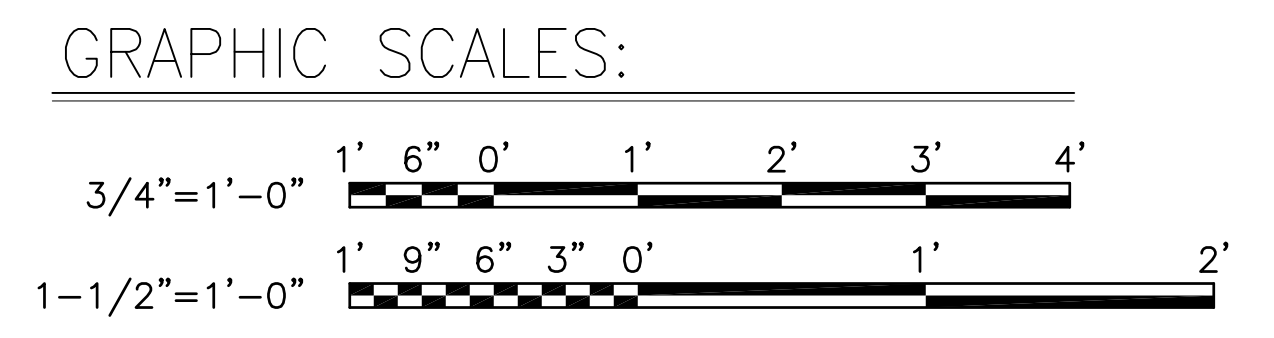
**GUSSET PLATE DETAIL**  
SCALE: 1 1/2"=1'-0"  
S-123 A1



**GUSSET PLATE DETAIL**  
SCALE: 1 1/2"=1'-0"  
S-123 A2

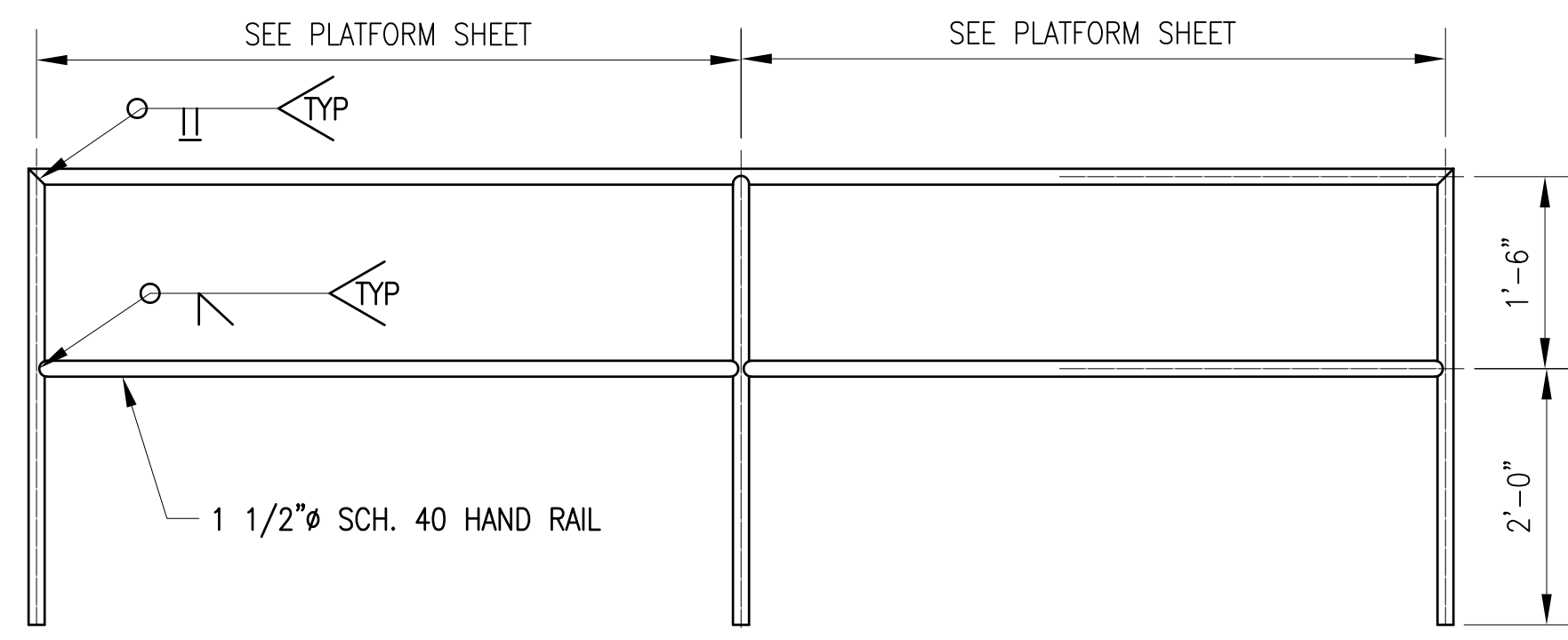


**SECTION**  
SCALE: 1 1/2"=1'-0"  
S-125 A3



GENERAL REVISIONS		DATE	APPR
1		7/12	FBC

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC  
NAVFAC DRAWING NO. SD1405026  
SHEET 27 OF 42  
S-125  
DRAWING REVISION: 10 MARCH 2009

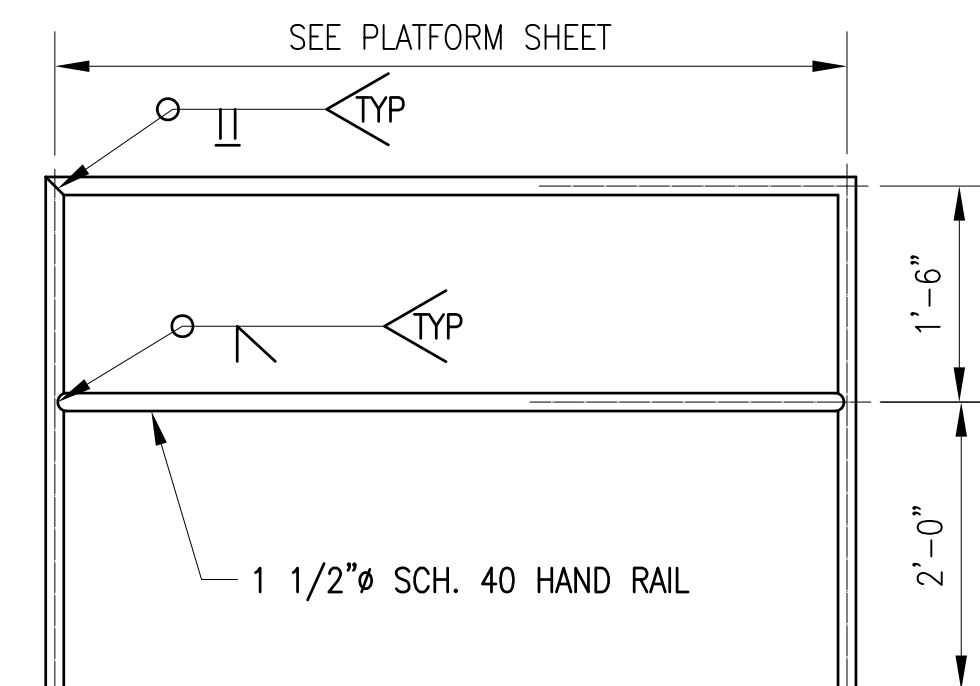


**TYPICAL HAND RAIL SECTION TYPE "A"**

SCALE: 3/4"=1'-0" UNLESS OTHERWISE NOTED (UON)

S-128

**D1**



**TYPICAL HAND RAIL SECTION TYPE "B"**

SCALE: 3/4"=1'-0"

S-127 THRU S-130

**D2**

**WHEEL NOTES**

SWIVEL CASTERS - SWIVEL CONSTRUCTION, STEEL BALL BEARINGS IN HARDENED RACEWAYS - GREASE FITTED KING PIN.

RUBBER TIRED WHEELS - EACH WHEEL SHALL HAVE RUBBER TIRE, SOLID ROLLER CAGE BEARINGS, GREASE FITTINGS AND GREASE RETAINING THRU WASHERS.

SELECTION OF WHEELS AND CASTERS TO SUIT BROW LOADS GIVEN.

**LOADS AND STRESSES USED IN DESIGN**

WIND SPEED	75 MPH
BROW LIVE LOAD	75 PSF
PLATFORM LIVE LOAD	75 PSF

ALUMINUM ALLOY 6061-T6 ULTIMATE STRENGTH	
TENSION	38000 PSI
SHEAR	24000 PSI
BEARING	80000 PSI
ALUMINUM ALLOY 6061-T6 YIELD STRENGTH	
TENSION	35000 PSI
COMPRESSION	35000 PSI
SHEAR	20000 PSI
BEARING	56000 PSI
WELD BASE STRESS	8000 PSI

PLATFORMS DESIGNED WITH THE FOLLOWING CRITERIA:

1. DEAD LOAD PLUS BROW LIVE LOAD
- OR:
2. DEAD LOAD PLUS WIND LOAD

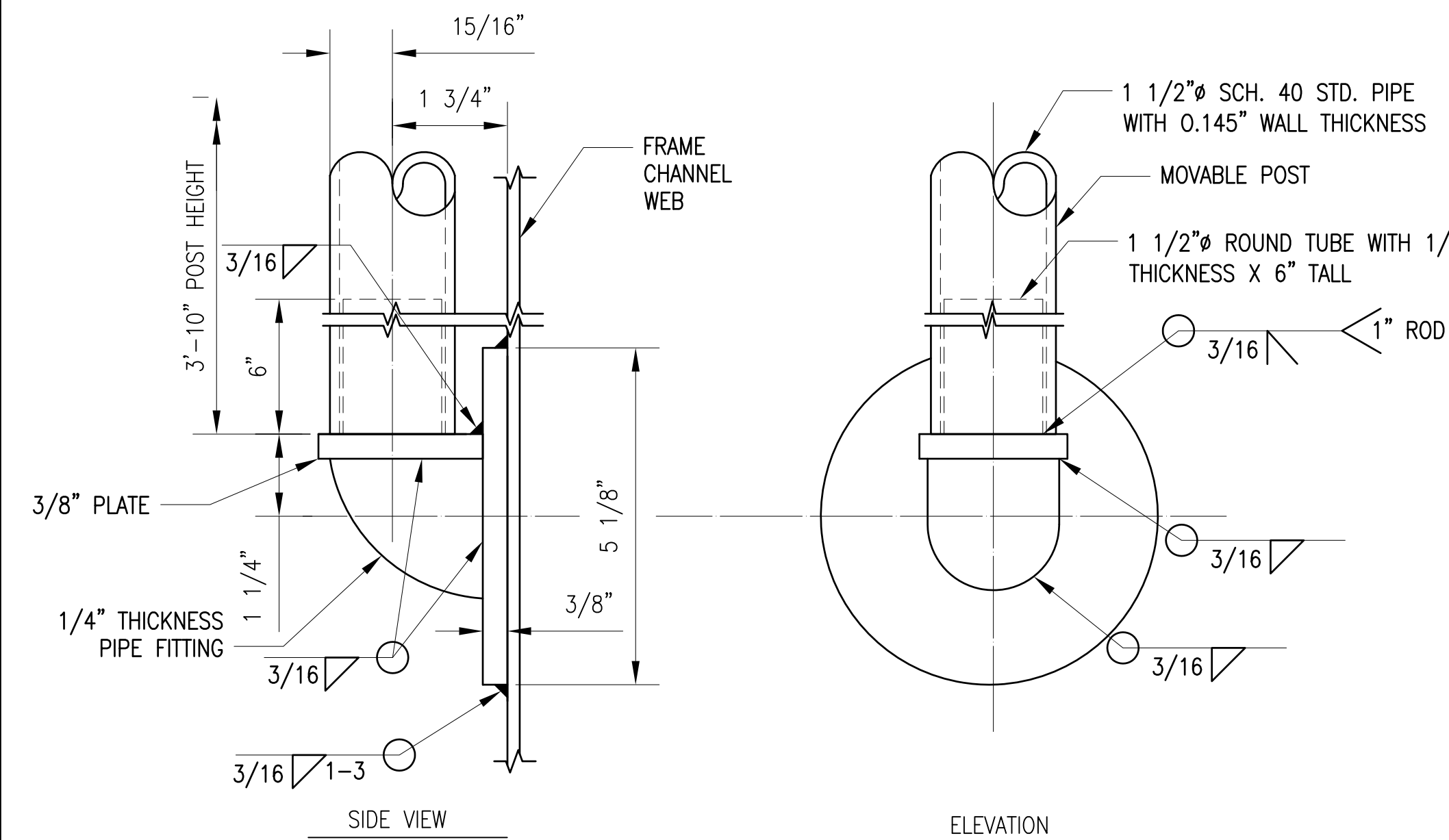
FACTOR OF SAFETY OF 3.0 ON ULTIMATE STRENGTHS.

**GENERAL NOTES**

1. MATERIAL SHALL BE 6061-T6 ALUMINUM ALLOY EXTRUSIONS UNLESS OTHERWISE SPECIFIED.
2. WHEELS SHALL BE SWIVEL CASTERS EQUIPPED WITH A MANUAL LOCK AND BRAKE CAPABLE OF RESISTING A HORIZONTAL FORCE OF 1500 POUNDS AND A VERTICAL LOAD AS GIVEN IN "CASTER WHEEL DETAIL".
3. CONNECTIONS SHALL BE WELDED UNLESS OTHERWISE NOTED.
4. GRATING SHALL HAVE NON-SLIP PROPERTIES SATISFACTORY TO THE PROCURING AGENCY AND MECHANICAL PROPERTIES AS SHOWN ON THE DRAWINGS.
5. 70 FOOT BROWS SHALL BE PLACED SYMMETRICALLY ON PLATFORMS
6. 5" X 3" X 1/2" CURB ANGLES SHALL BE REMOVABLE AS SHOWN ON THE DRAWINGS TO ACCOMMODATE THE POSSIBLE USE OF THE MOBILE STAIR SHOWN ON SHEET S-138.
7. FOR DETAILS OF STANDARD ALUMINUM BROWS, SEE SHEET S-101 THRU S-125.
8. PLATFORMS SHALL BE LASHED DOWN WHEN THE ACTUAL WIND VELOCITY EQUALS OR EXCEEDS THE CRITICAL VELOCITY SHOWN ON THE DRAWINGS.
9. FOR BROW CORNER REACTIONS AND WIND AREAS, SEE SHEET S-133.
10. SRL - SYNTHETIC RESIN LAMINATE, SEE SPECIFICATIONS.
11. SST - SERIES 300 STAINLESS STEEL.

NOTE: FOR TYPE OF CASTER WHEELS TO BE USED, SEE NOTES SHEET S-103

USE THE LATEST REVISION OF MIL-P-23210 FOR CONSTRUCTION THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 883208 INCLUDING REVISION D. CALCULATIONS FOR Y&D 883208 ARE CONTAINED IN BOOKS 5014, 5015, AND 5023.

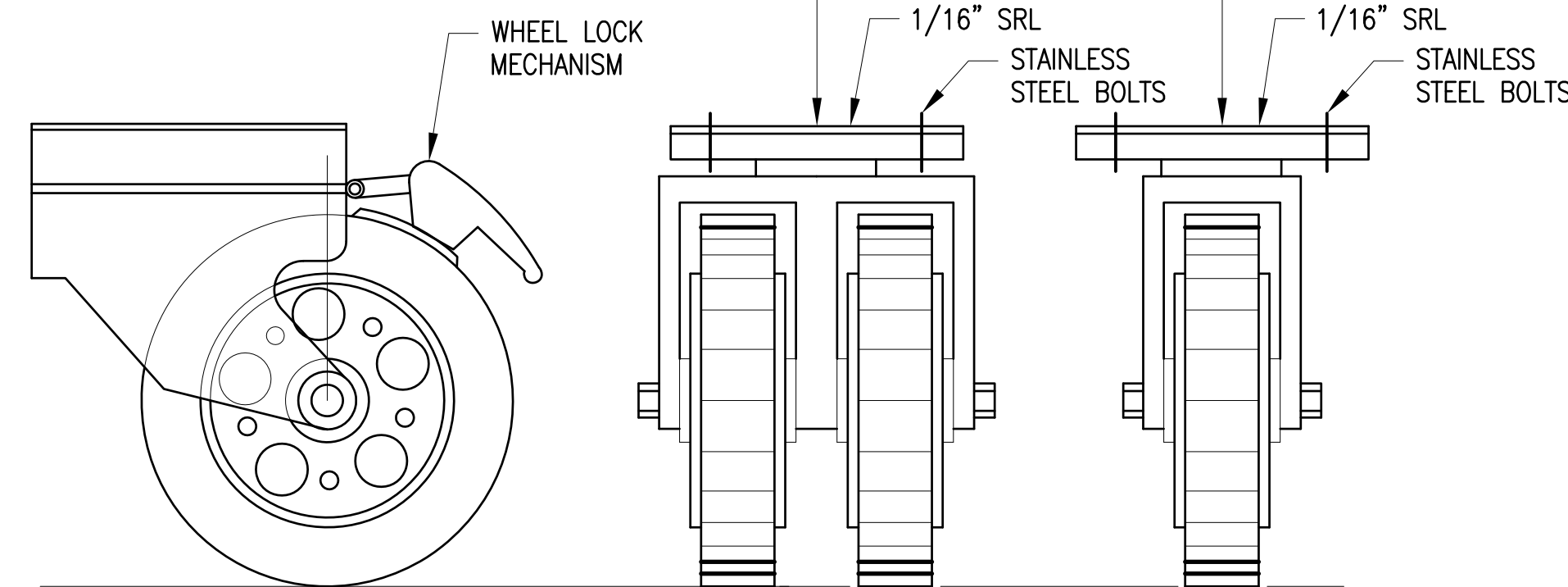


**HAND RAIL SUPPORT DETAIL**

SCALE: 6"=1'-0"

S-127 THRU S-130

**B1**

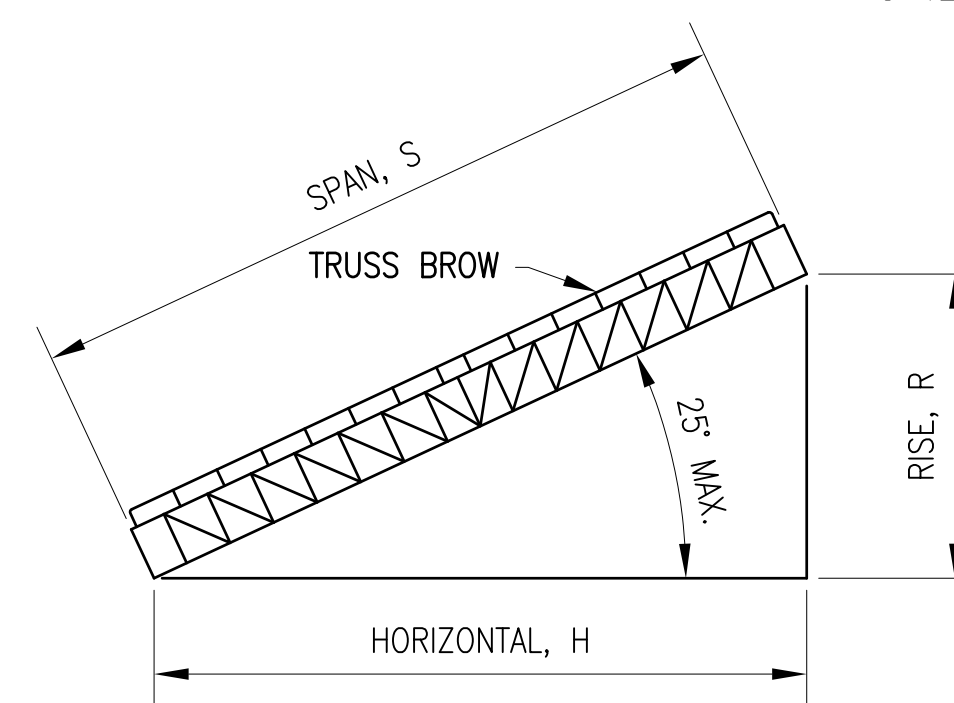


**HAND RAIL SUPPORT DETAIL**

SCALE: 6"=1'-0"

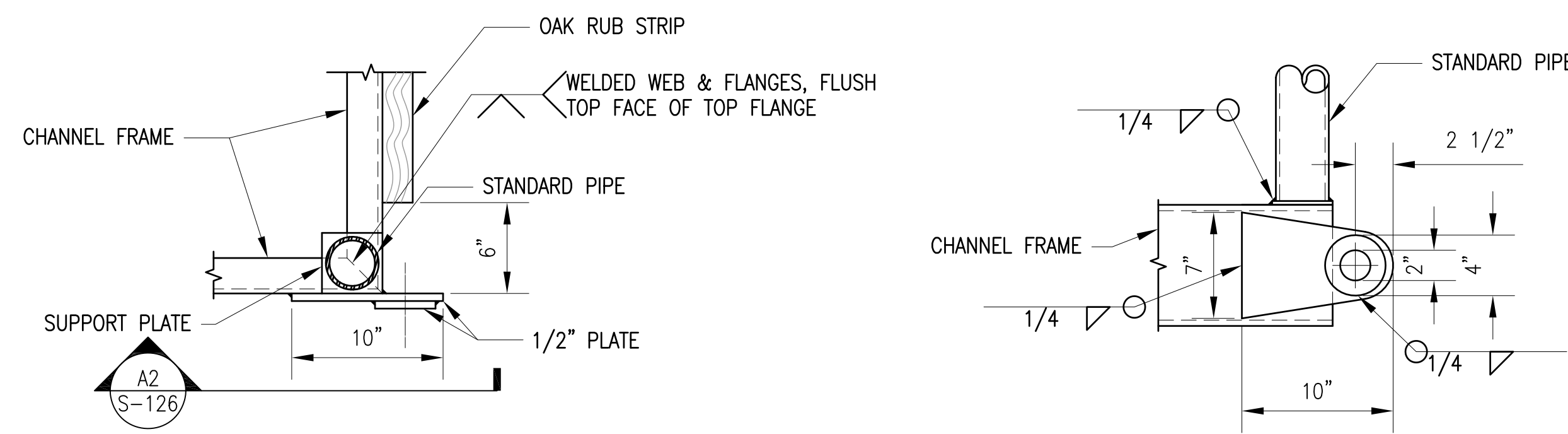
S-127 THRU S-132

**B2**



SPAN, S, FT.	HORIZ. H, FT.	RISE R, FT.
	S COS 25°	S SIN 25°
12'-0"	10.9	5.1
16'-0"	14.5	6.8
20'-0"	18.1	8.5
25'-0"	22.7	10.6
30'-0"	27.2	12.7
35'-0"	31.7	14.8
40'-0"	36.3	16.9
50'-0"	45.3	21.1
60'-0"	54.4	25.4
70'-0"	63.4	29.6
80'-0"	72.5	33.8

BROW HORIZONTALS & RISES



**TOW BAR PLAN**

SCALE: 1 1/2"=1'-0"

S-127, S-128, S-132, S-138

**A1**

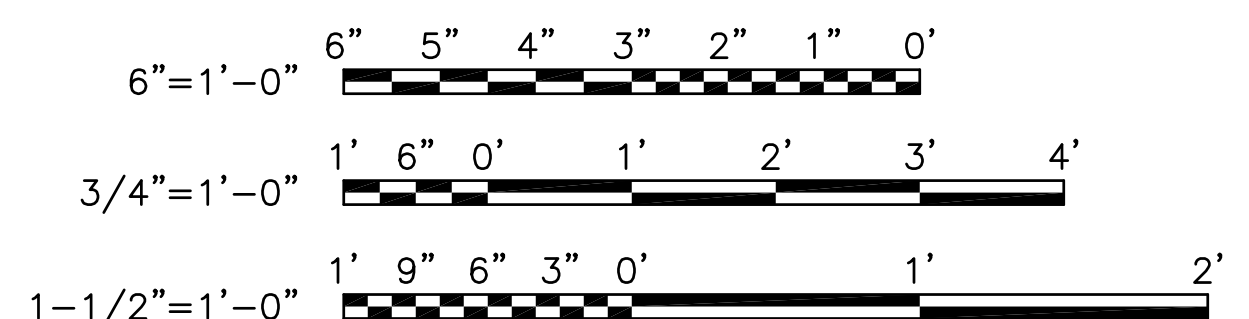
**TOW BAR ELEVATION**

SCALE: 1 1/2"=1'-0"

S-126

**A2**

**GRAPHIC SCALES:**



REVISIONS

NO.	DATE	DESCRIPTION
1	7/12	GENERAL REVISIONS

APPROVED: [Signature]

FOR COMMANDER NAVFAC

SATISFACTORY TO:

DES	DBC	DRW	DBC	CHK	FBC

BRANCH MANAGER: F. B. COLE

CHEF ENG/ARCH: E. J. GALLAHER

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NORFOLK, VIRGINIA  
NAVFAC DRAWING NO. SD1405027  
SHEET 28 OF 42

**STANDARD DRAWING BROWS AND PLATFORMS ALUMINUM BROW PLATFORMS**

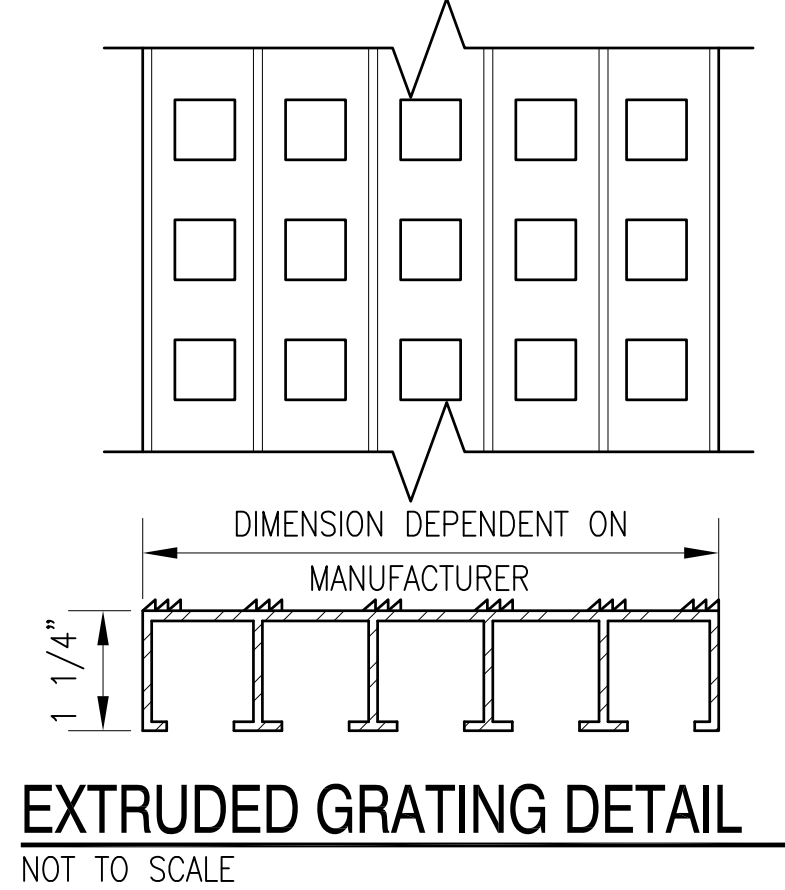
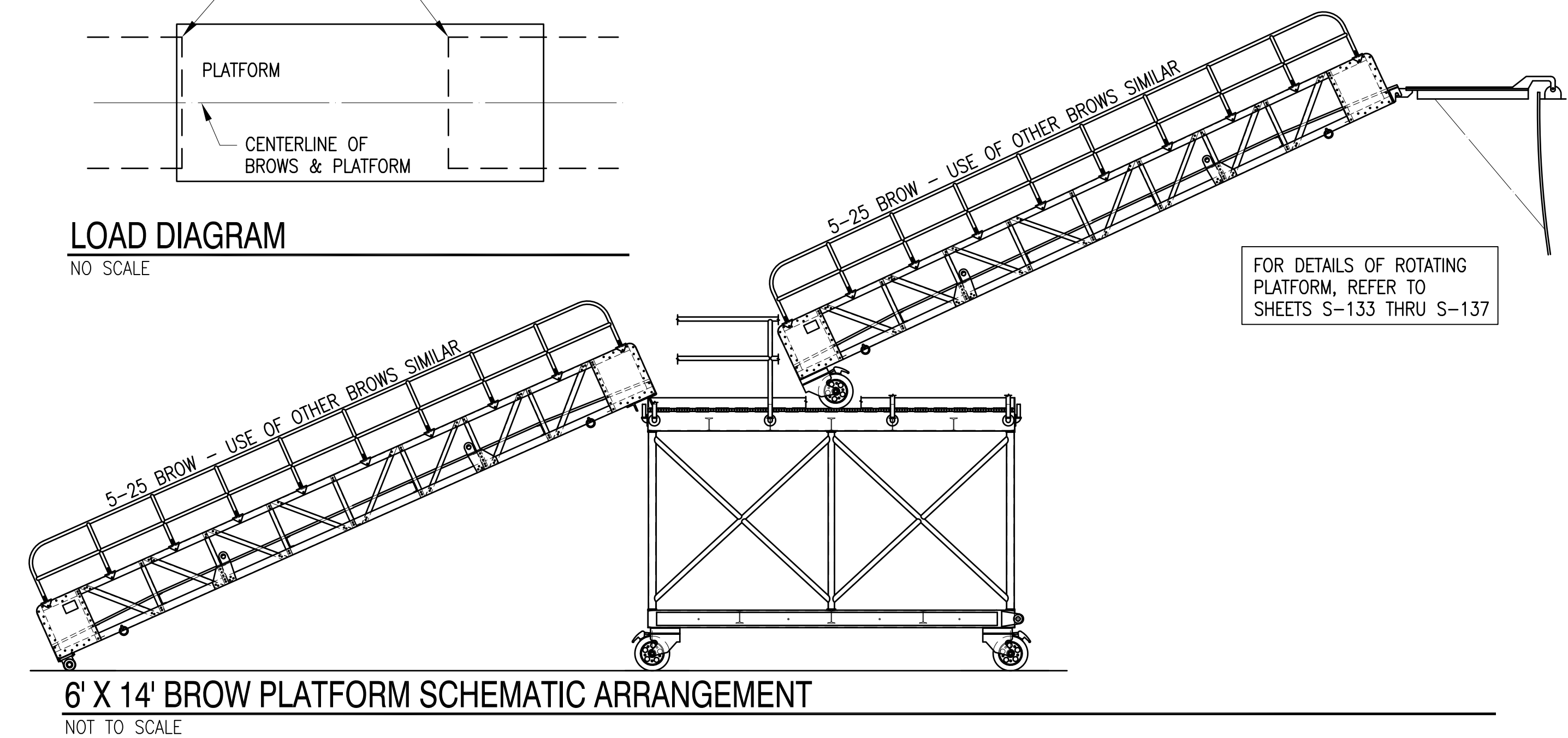
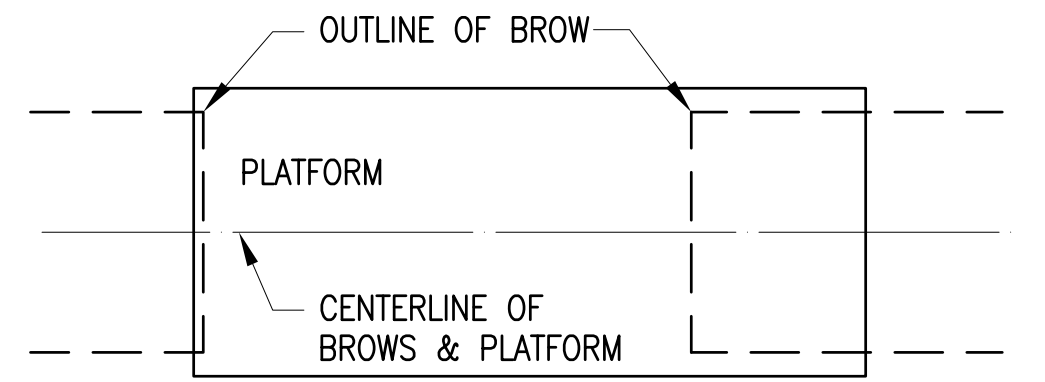
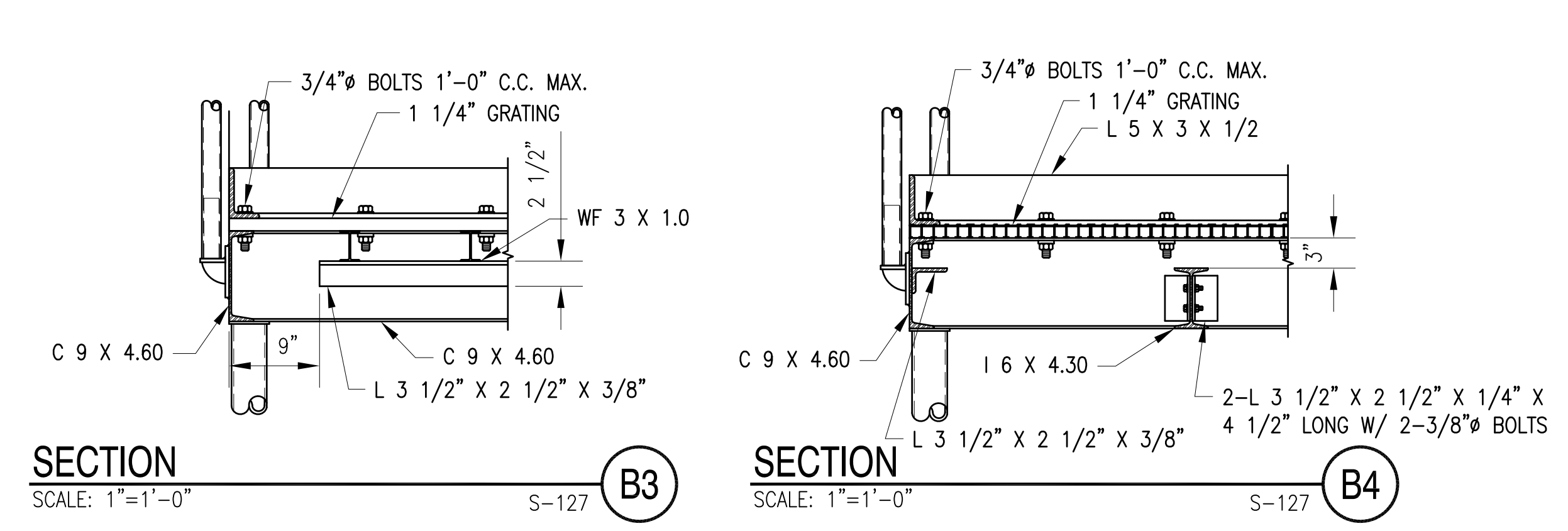
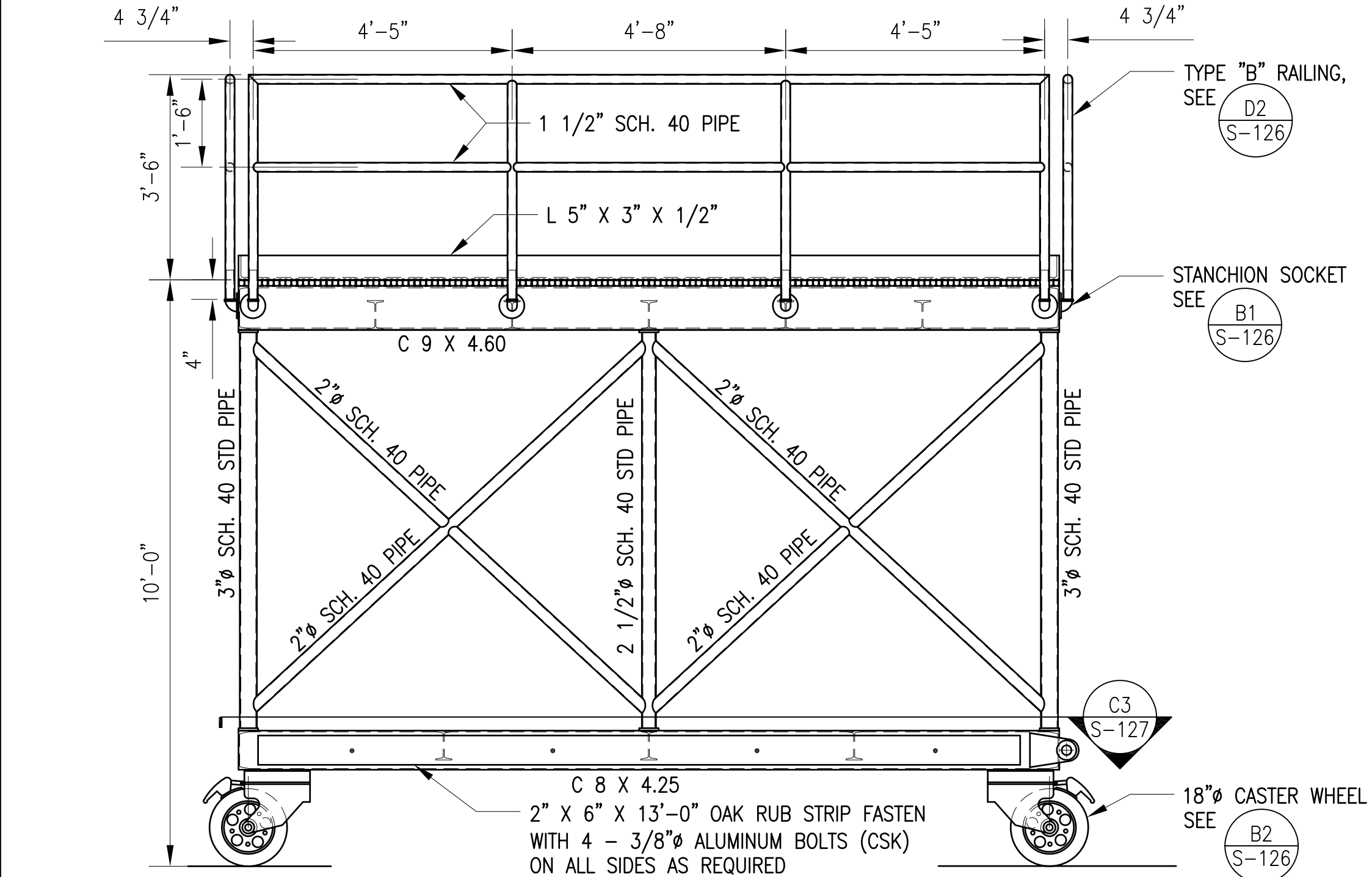
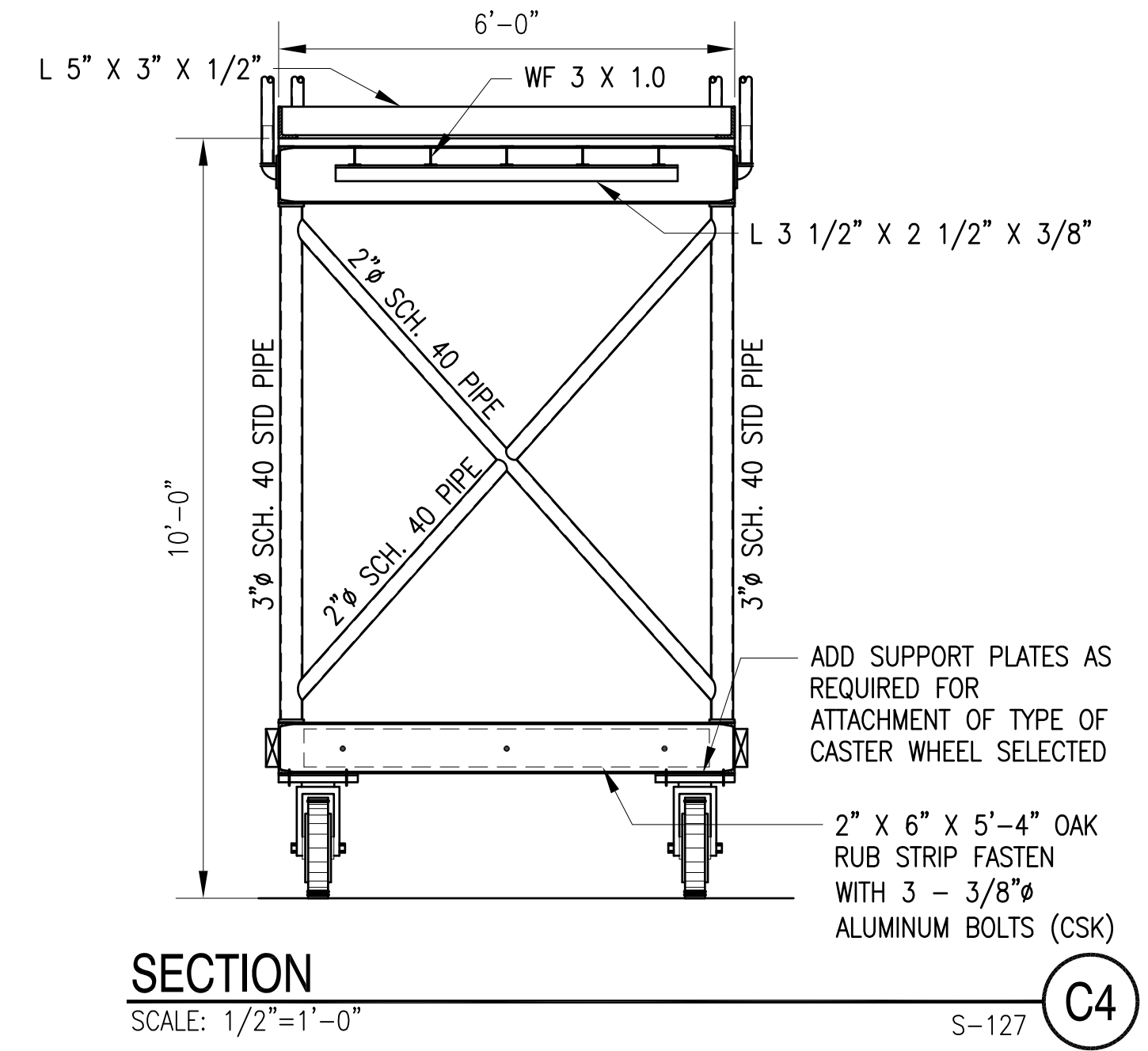
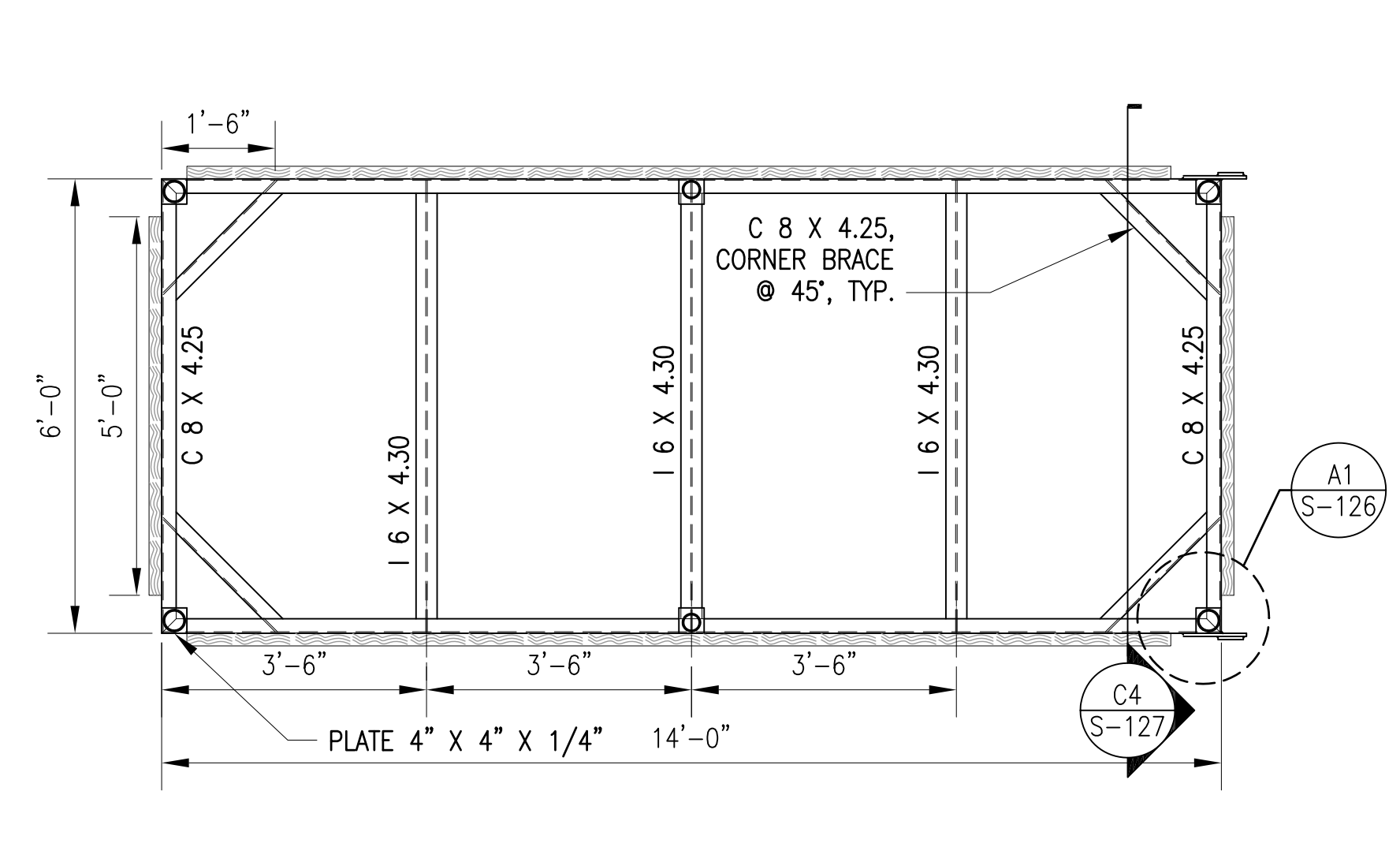
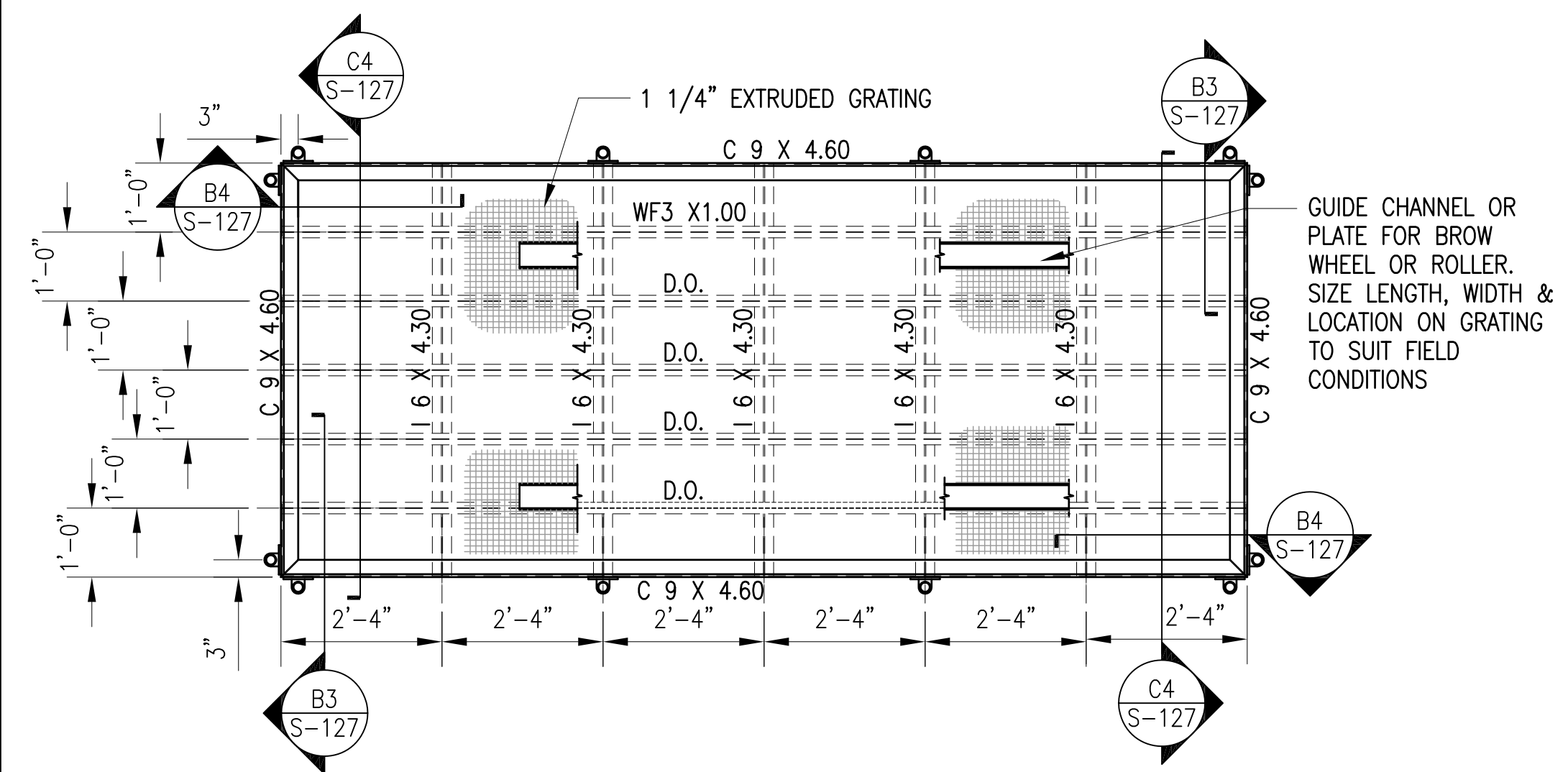
ALUMINUM BROW PLATFORMS NOTES & DETAILS

SCALE: AS NOTED

PROJECT NO.

CONSTR. CONTR. NO.

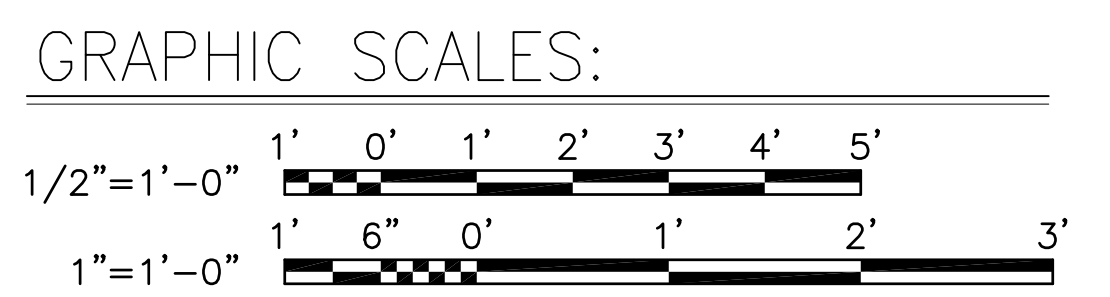
NAVFORM REVISION: 10 MARCH 2009



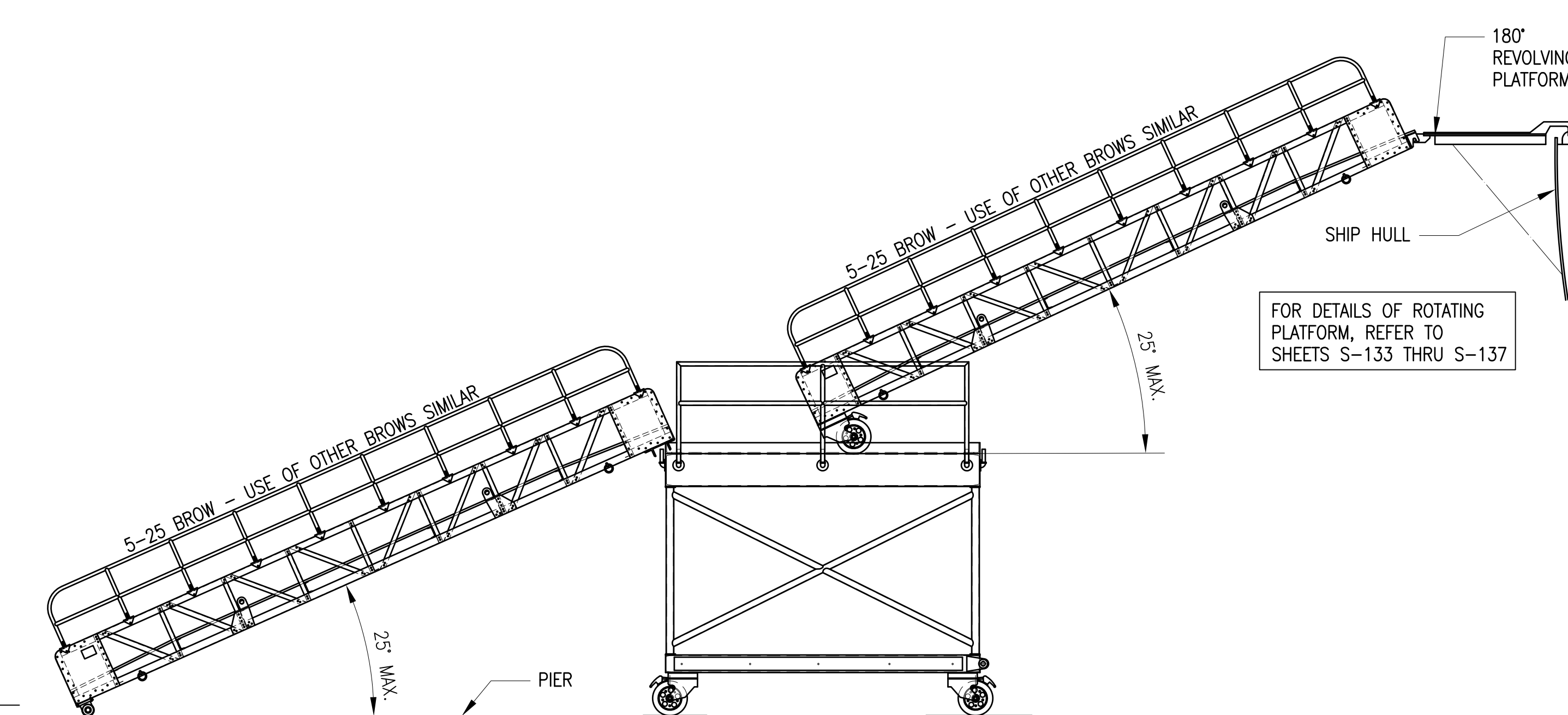
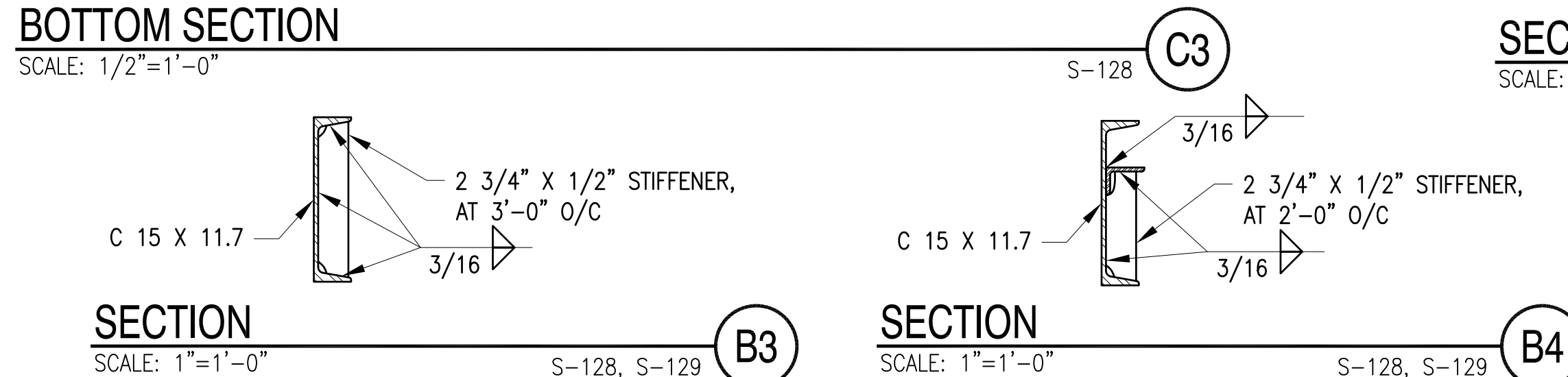
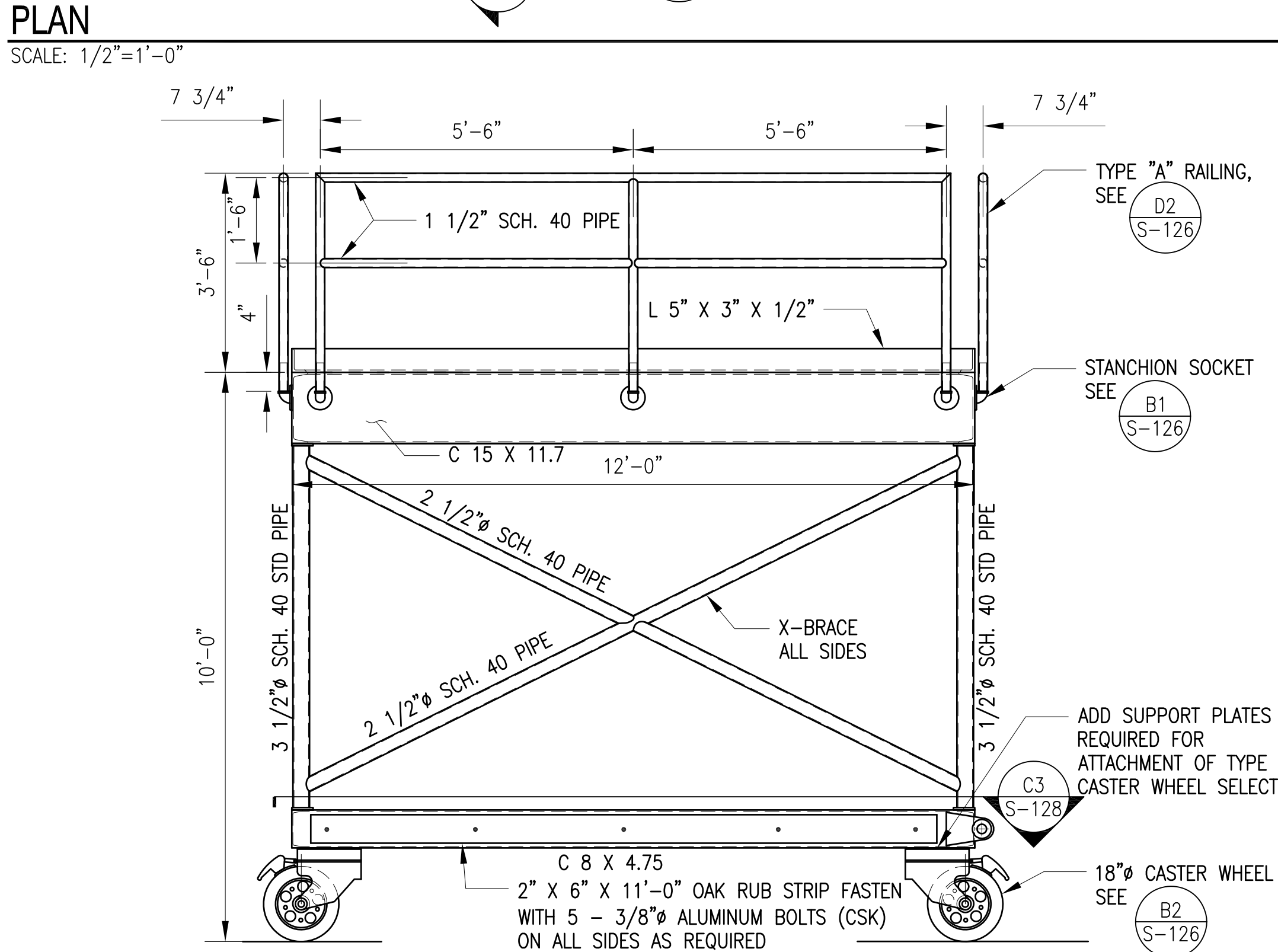
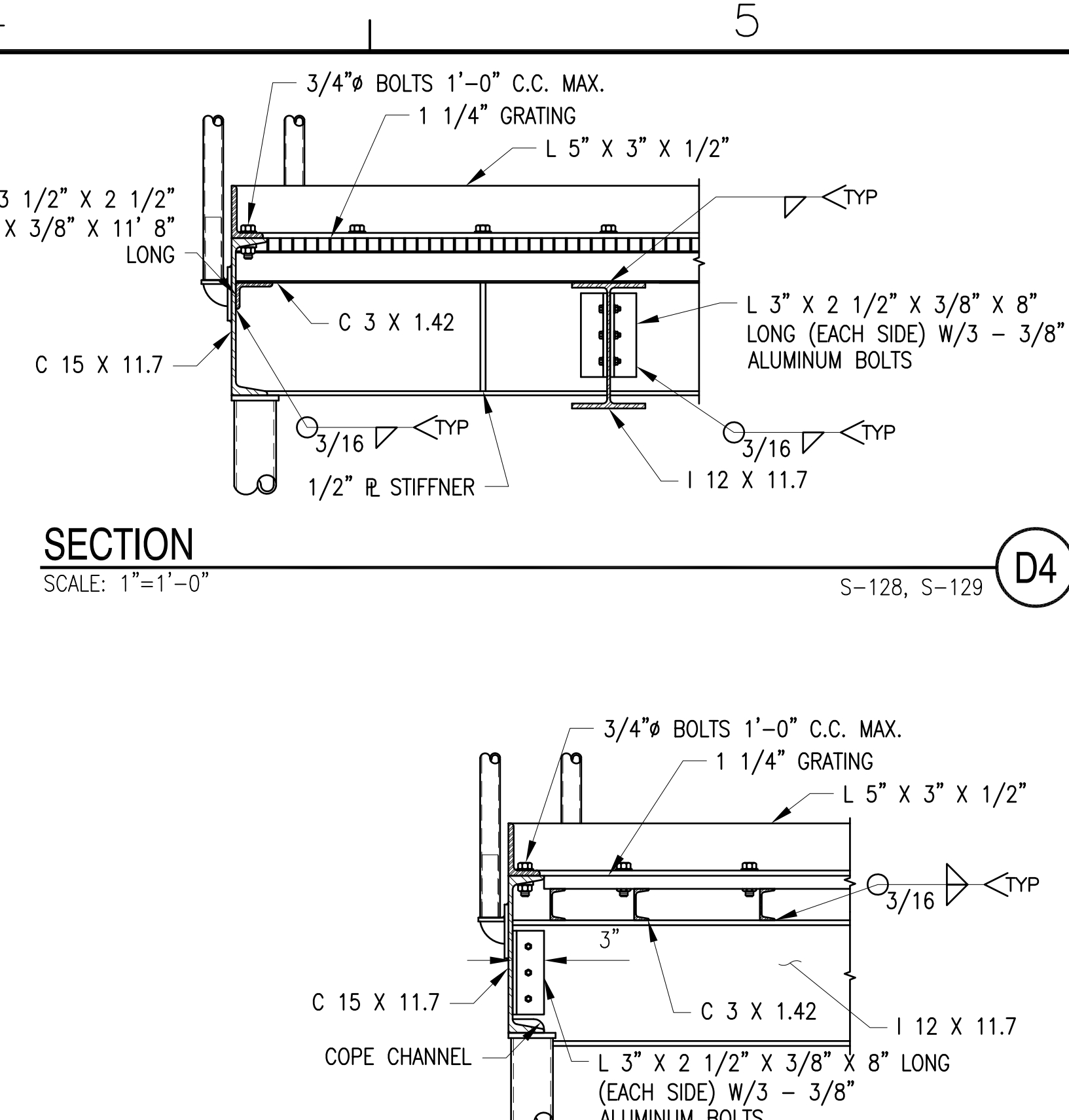
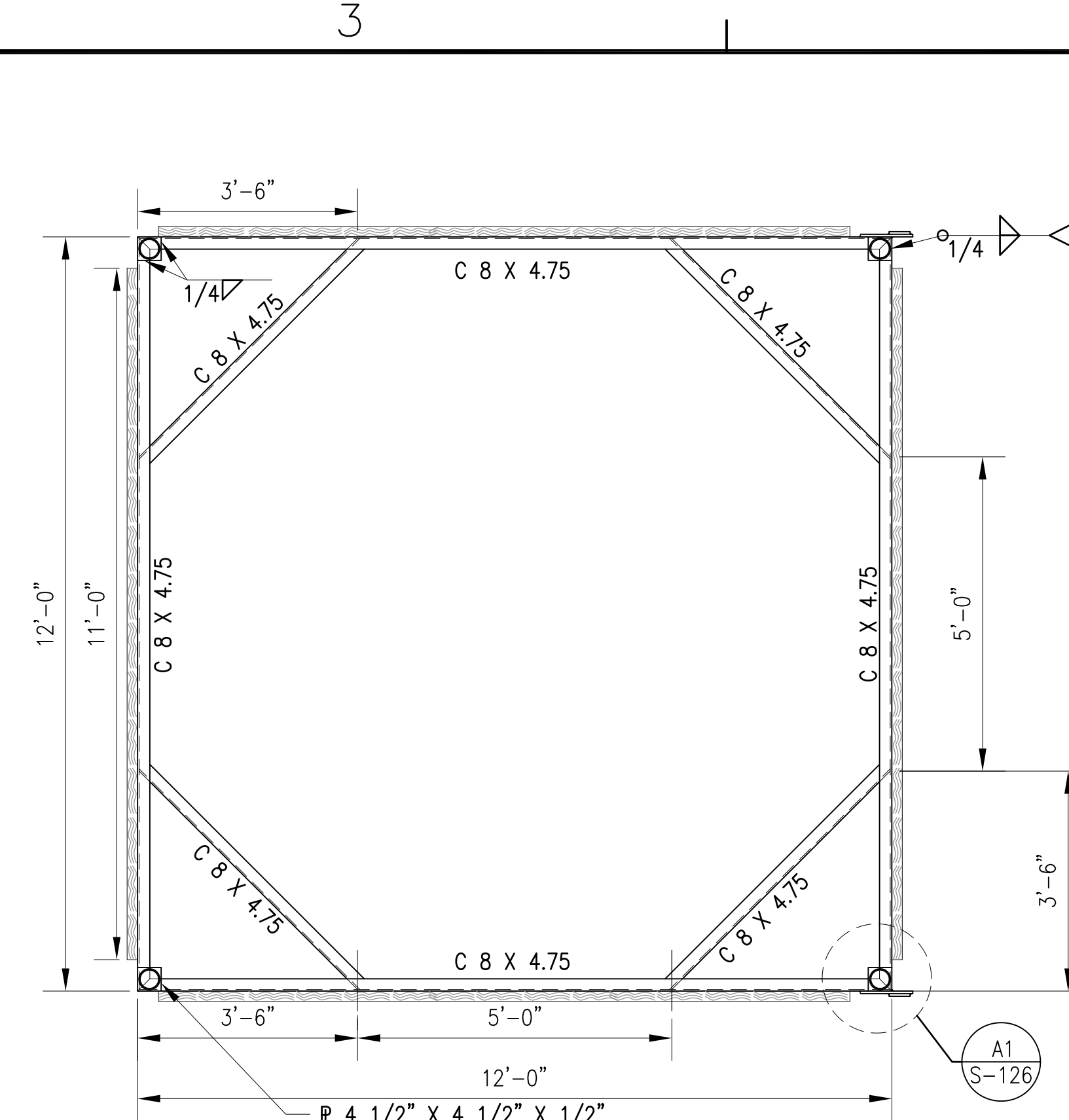
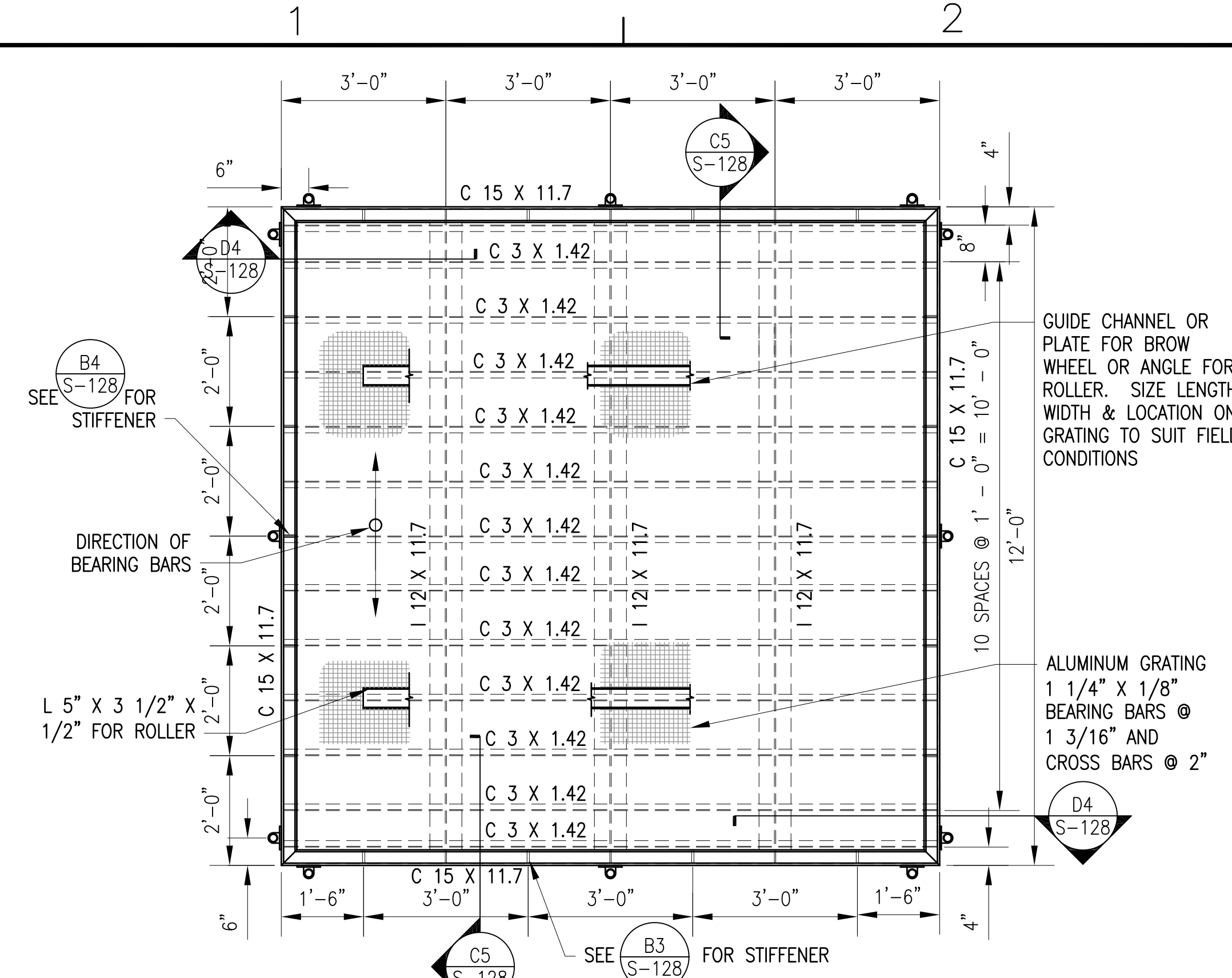
**TABLE OF CRITICAL WIND VELOCITIES**

SIZE OF BROW USED	CRITICAL VELOCITY
80 FT	50 MPH
70 FT	50 MPH
60 FT	50 MPH
50 FT	50 MPH
40 FT	55 MPH
30 FT	60 MPH
25 FT	60 MPH
NO LOAD	65 MPH

- GENERAL NOTES**
- ALL MATERIAL SHALL BE 6061 T6 ALUM ALLOY UNLESS OTHERWISE SPECIFIED.
  - PLATFORM WEIGHT APPROXIMATELY 1500 LB.
  - FOR BROW CORNER REACTIONS AND WIND AREAS, REFER TO SHEET S-133.
  - ALL BROWS SHALL BE CENTERED ON PLATFORM, REFER TO LOAD DIAGRAM.
  - THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 883209 INCLUDING REVISION D. CALCULATIONS FOR 883209 ARE CONTAINED IN BOOKS 5014, 5015, AND 5023.



APPROVED	DATE	APPR
FOR COMMANDER NAVFAC	7/12	
ACTIVITY	GENERAL REVISIONS	SYM
SATISFACTORY TO		DESCRIPTION
DES DBC		
DRW DBC		
CHK FBC		
FW/DW		
BRANCH MANAGER		
CHIEF ENG/ARCH		
FIRE PROTECTION		
NAVAL FACILITIES ENGINEERING COMMAND		
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC		
NORFOLK, VIRGINIA		
DEPARTMENT OF THE NAVY		
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC		
LANE CAPITAL IMPROVEMENTS		
STANDARD DRAWING		
BROWS AND PLATFORMS		
ALUMINUM BROW PLATFORMS		
ALUMINUM BROW PLATFORMS 6'-0" X 14'-0" X 10'-0"		
SCALE: AS NOTED		
PROJECT NO.		
CONSTR. CONTR. NO.		
NAVFAC DRAWING NO.		
SD1405028		
SHEET 29 OF 42		
<b>S-127</b>		
DRAWING REVISION: 10 MARCH 2009		



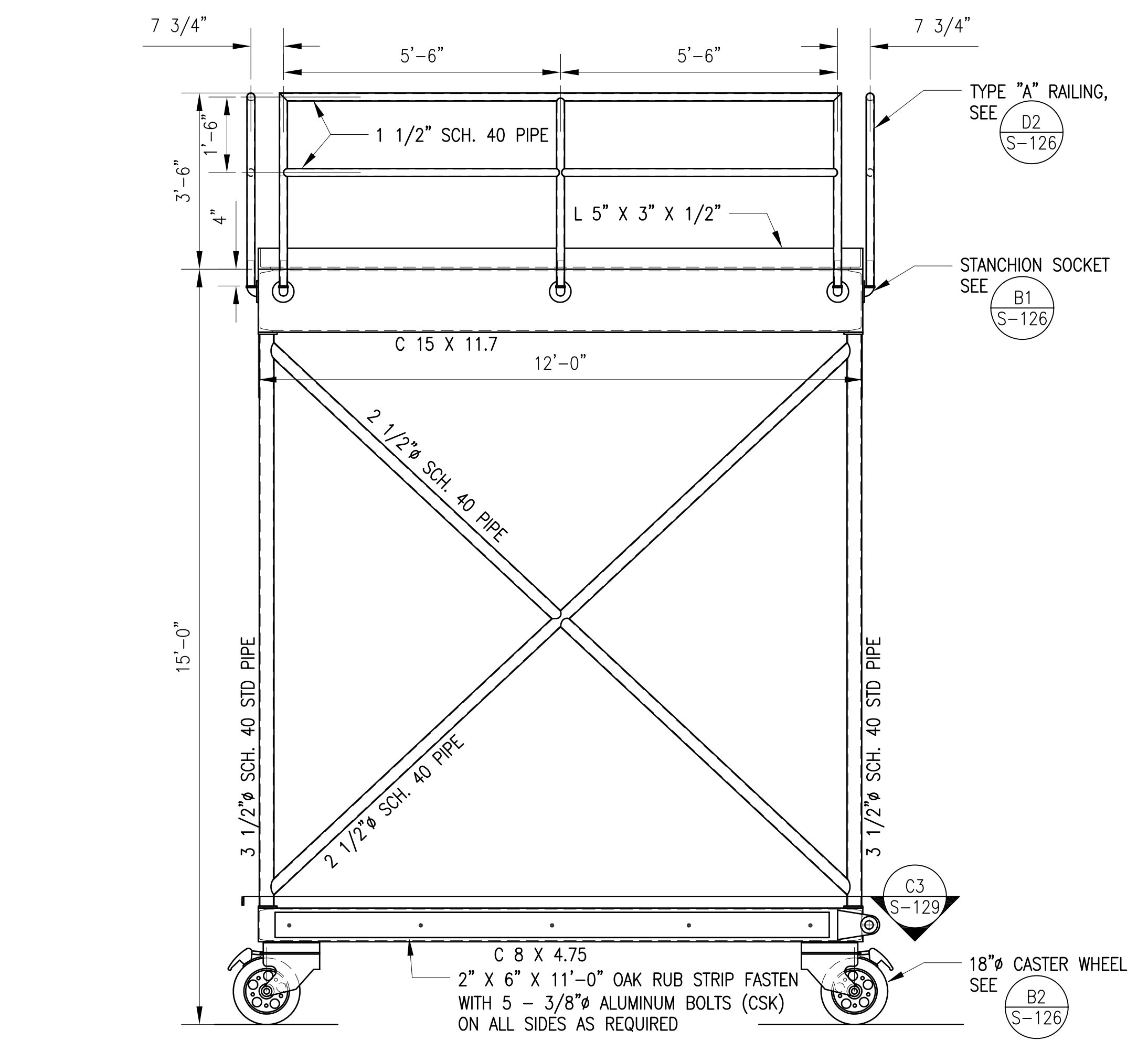
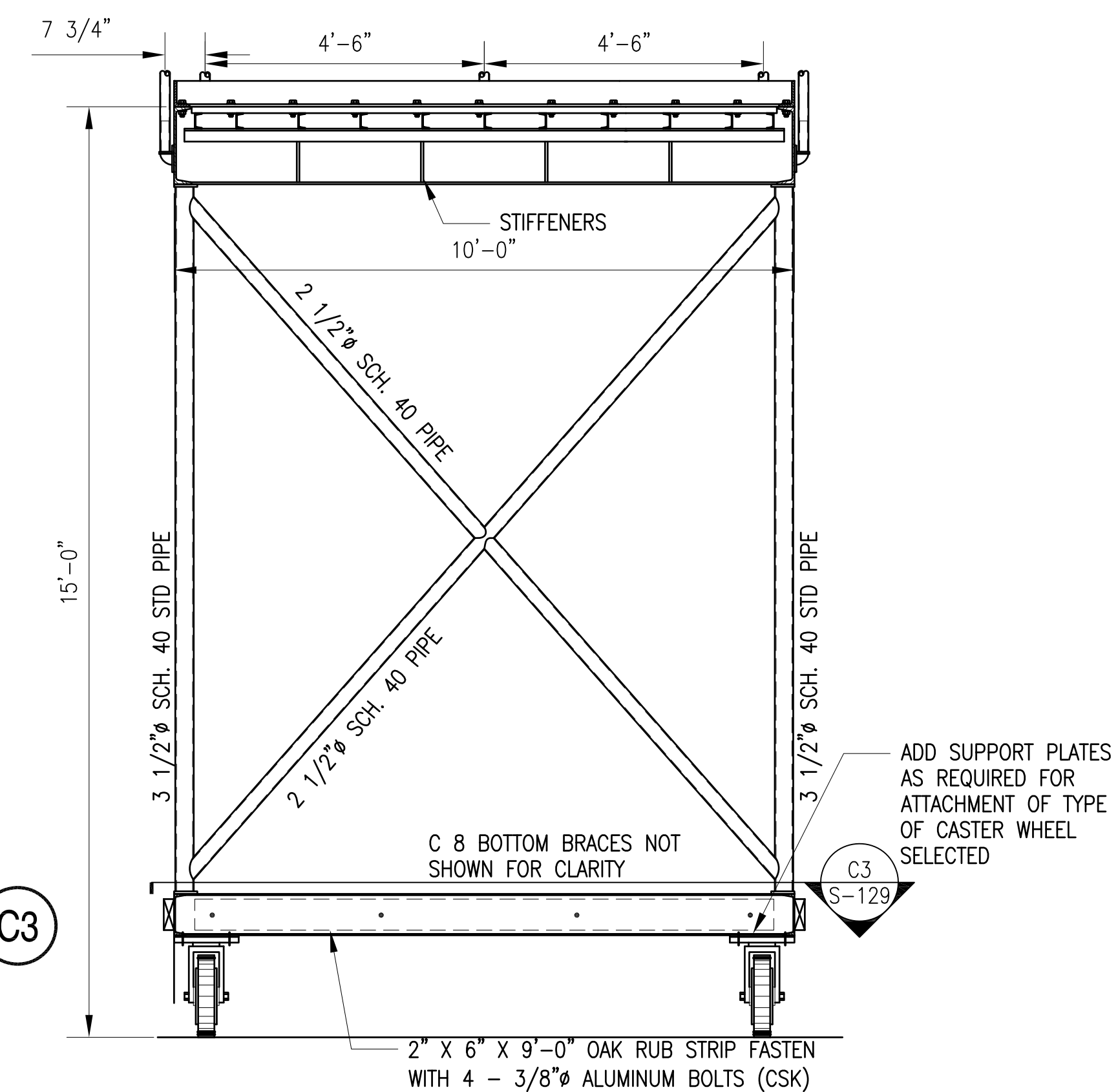
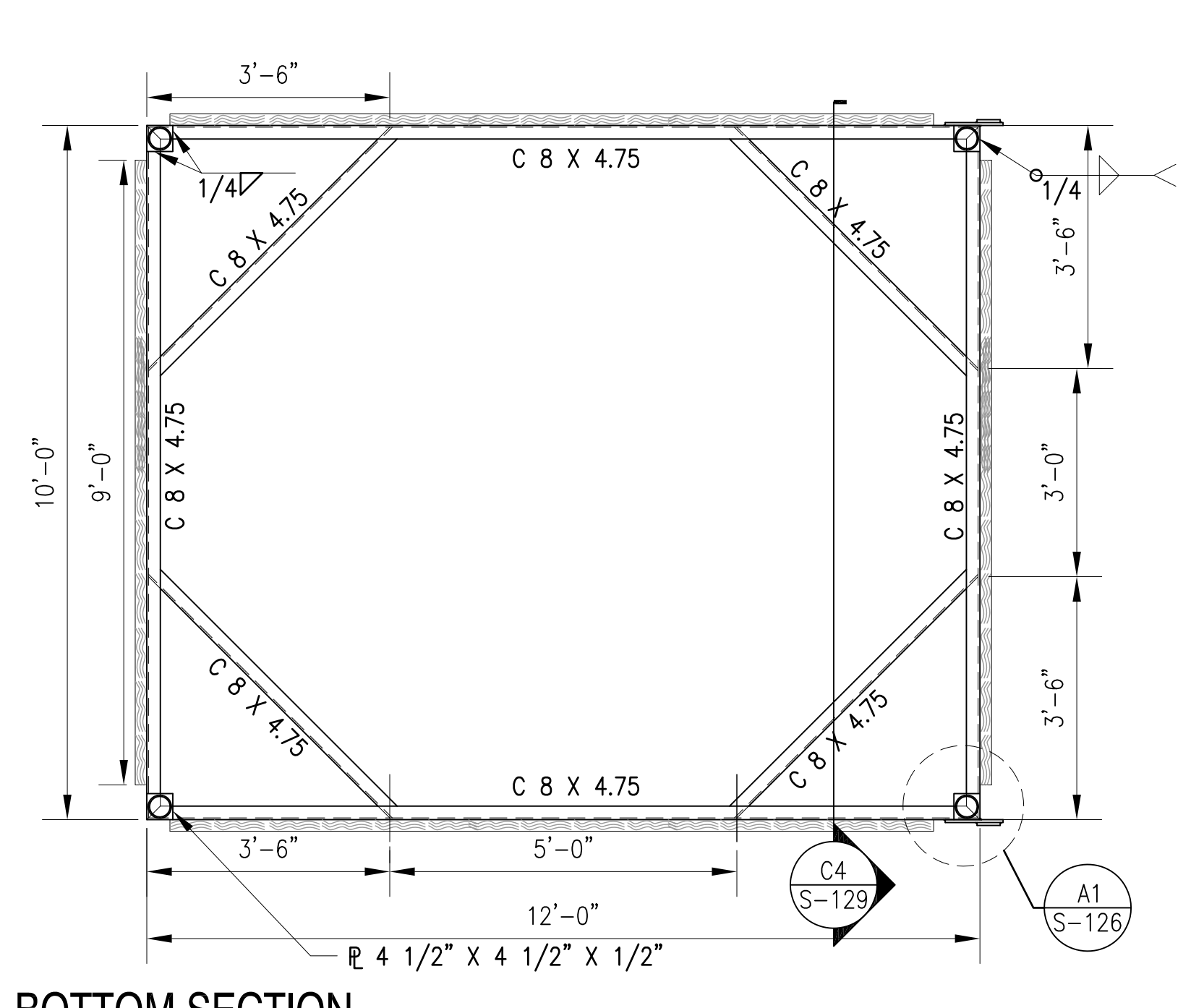
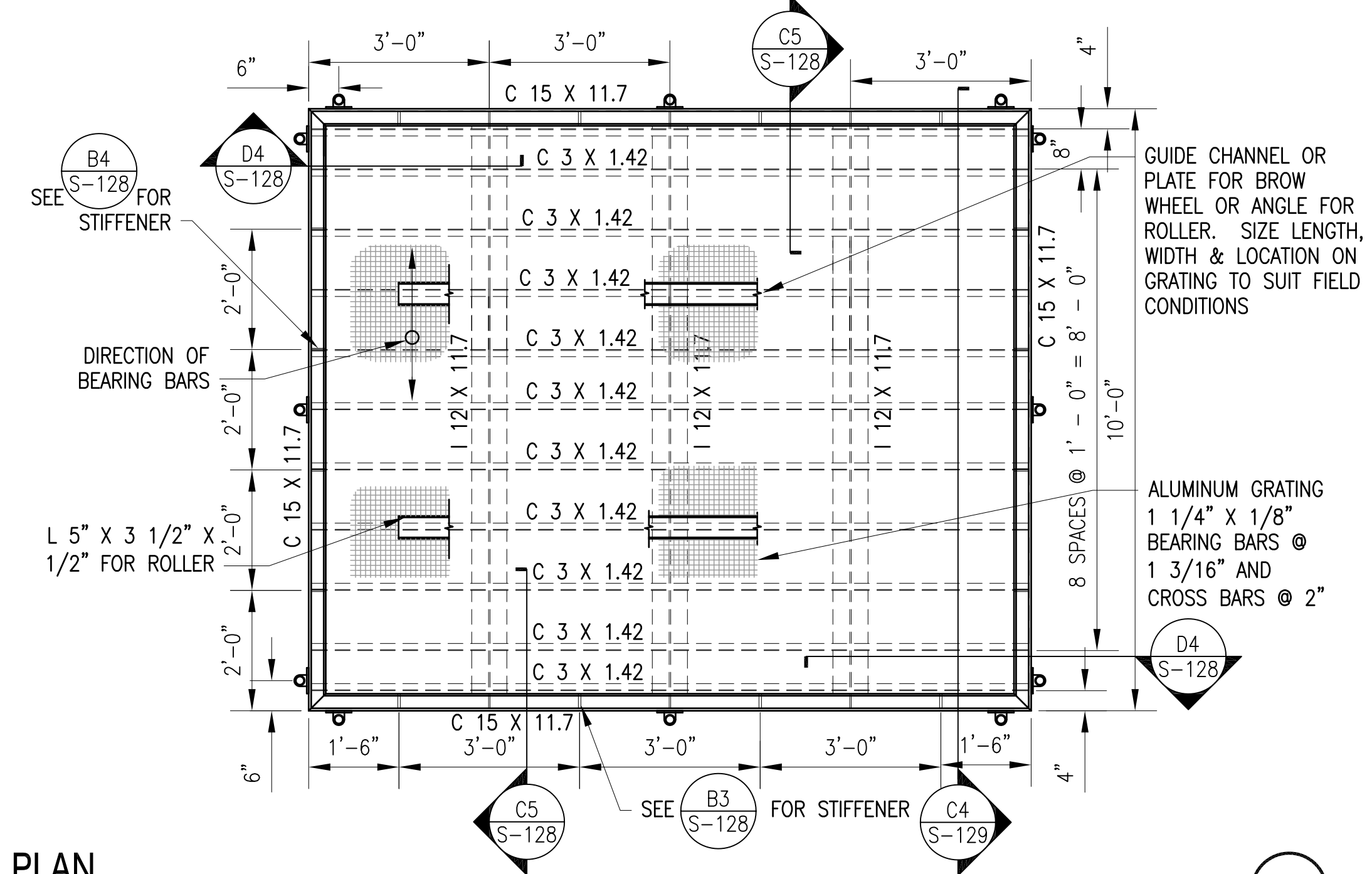
**GENERAL NOTES**

- ALL MATERIAL SHALL BE 6061 T6 ALUM ALLOY UNLESS OTHERWISE SPECIFIED.
- GRATING AND GUIDE CHANNEL SHALL BE LOCKED TO CHANNEL WITH CLIP FASTENERS.
- FOR BROW CORNER REACTIONS AND WIND AREAS, REFER TO SHEET S-133. SEE TABLE OF CRITICAL WIND VELOCITIES ON S-127
- ALL BROWS SHALL BE CENTERED ON PLATFORM,
- THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 883210 INCLUDING REVISION D. CALCULATIONS FOR 883210 ARE CONTAINED IN BOOKS 5014, 5015, AND 5023.

**GRAPHIC SCALES:**

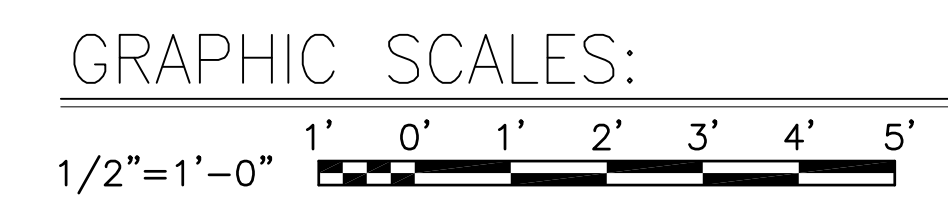
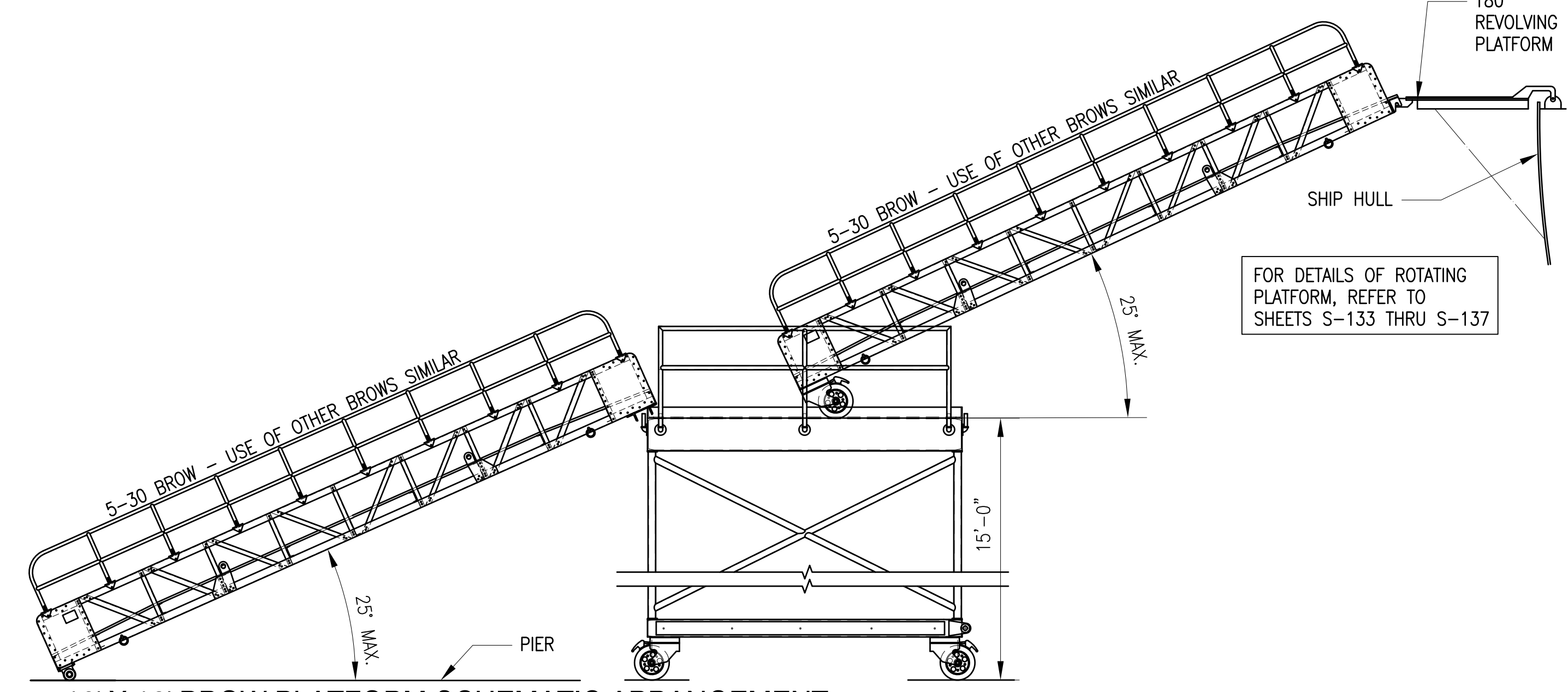


APPROVED	DATE	APPR
FOR COMMANDER NAVFAC	7/12	
ACTIVITY	GENERAL REVISIONS	
SATISFACTORY TO	1	
DES: DBC	DRW: DBC	CHK: FBC
FW/DM		F. B. COLE
BRANCH MANAGER		
CHIEF ENG/ARCH		E. J. GALLAHER
FIRE PROTECTION		
DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND	
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC	NORFOLK, VIRGINIA	
NAVAL CAPITAL IMPROVEMENTS	STANDARD DRAWING	
	BROWS AND PLATFORMS	
	ALUMINUM BROW PLATFORMS	
	ALUMINUM BROW PLATFORMS 12'-0" X 12'-0" X 10'-0"	
SCALE: AS NOTED	PROJECT NO.	
CONSTR. CONTR. NO.	NAVFAC DRAWING NO.	
	SD1405029	
SHEET 30 OF 42	S-128	
DRAWING REVISION: 10 MARCH 2009		

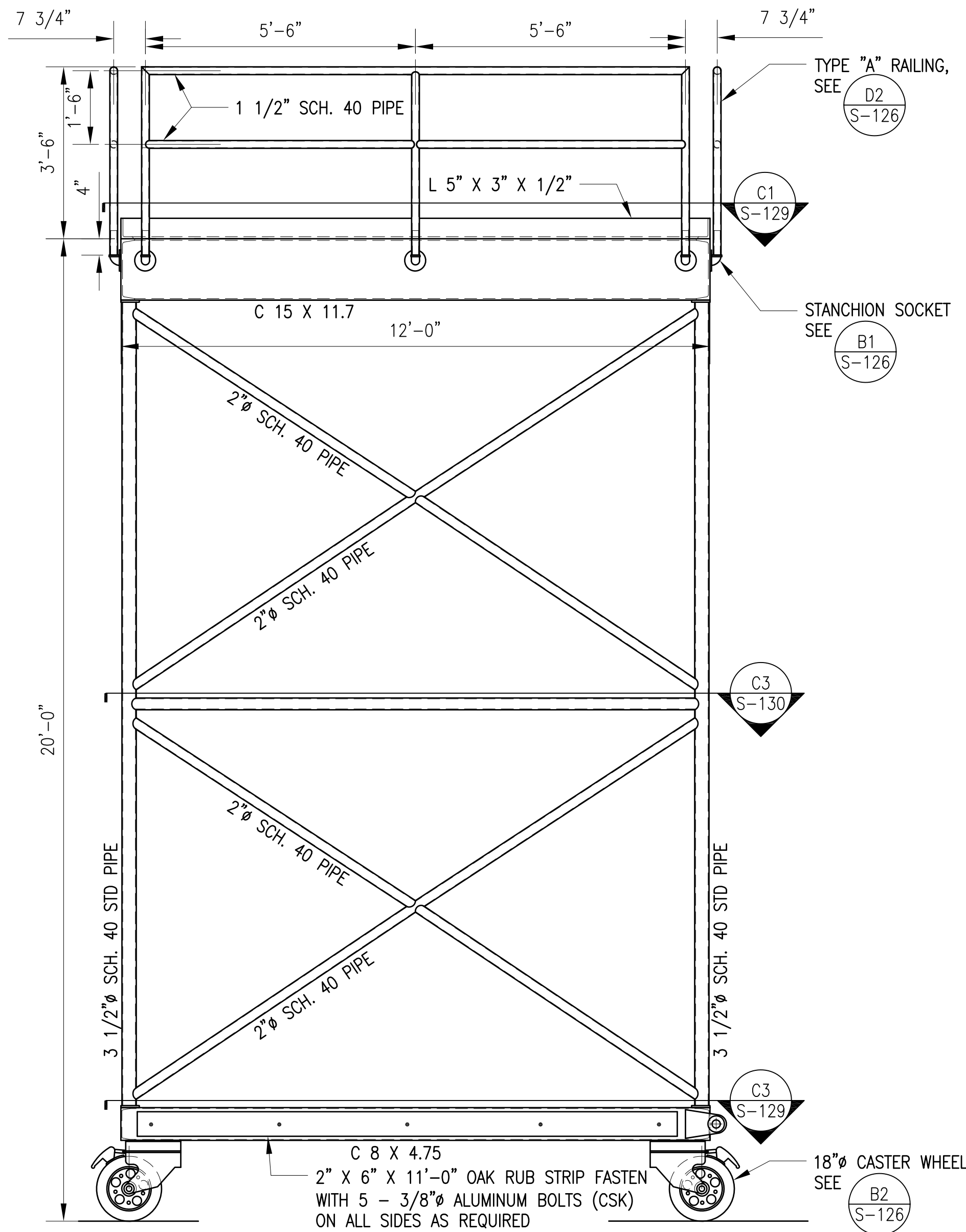


**GENERAL NOTES**

1. ALL MATERIAL SHALL BE 6061 T6 ALUM ALLOY UNLESS OTHERWISE SPECIFIED.
2. GRATING AND GUIDE CHANNEL SHALL BE LOCKED TO CHANNEL WITH CLIP FASTENERS.
3. FOR BROW CORNER REACTIONS AND WIND AREAS, REFER TO SHEET S-133. SEE TABLE OF CRITICAL WIND VELOCITIES ON S-127
4. ALL BROWS SHALL BE CENTERED ON PLATFORM,
5. THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 883210 INCLUDING REVISION D. CALCULATIONS FOR 883210 ARE CONTAINED IN BOOKS 5014, 5015, AND 5023.

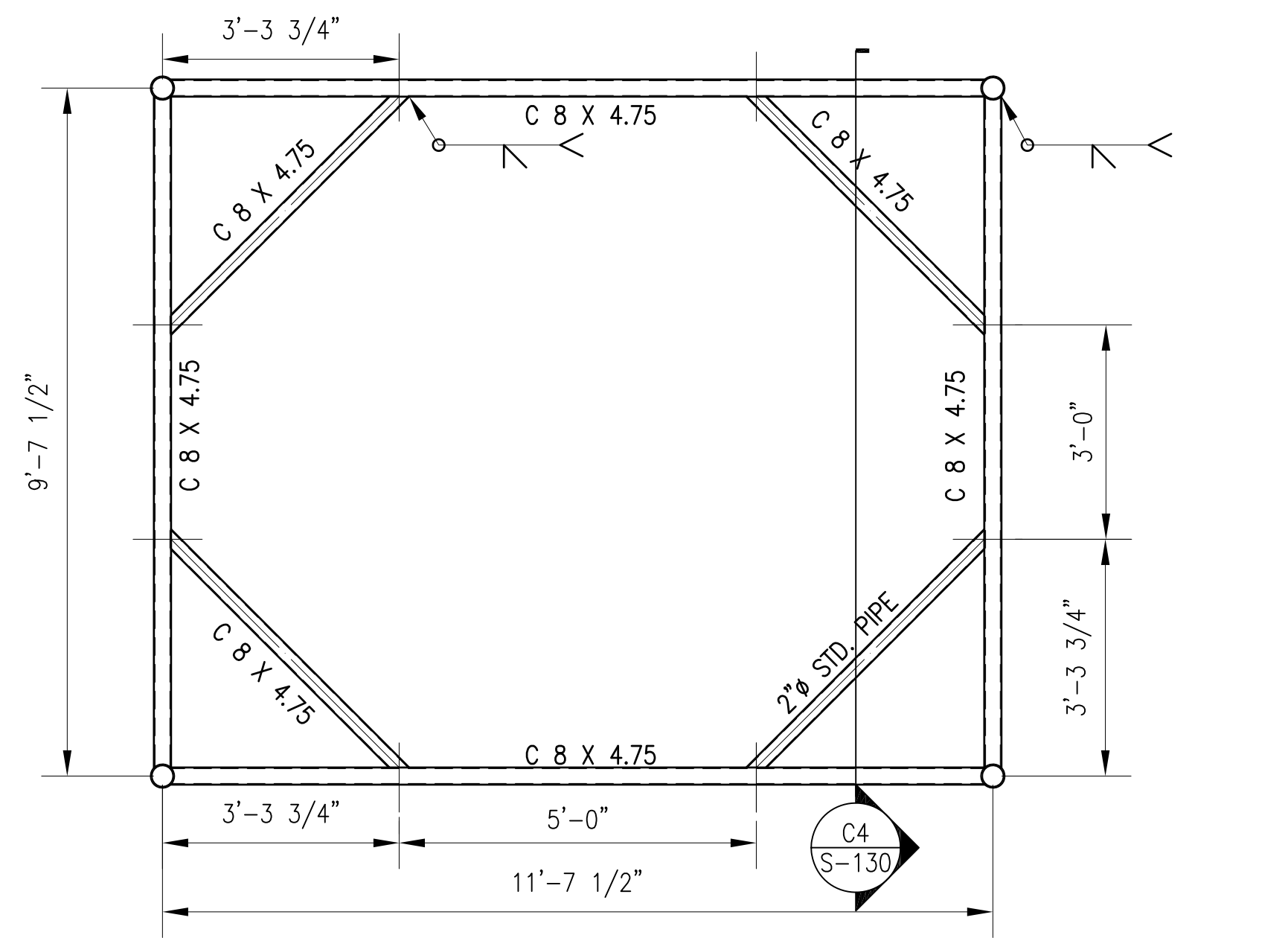


FBC	7/12	DATE	APPR
1	GENERAL REVISIONS	SYMBOL	DESCRIPTION
<b>STANDARD DRAWING</b> <b>BROWS AND PLATFORMS</b> ALUMINUM BROW PLATFORMS ALUMINUM BROW PLATFORMS 10'-0" X 12'-0" X 15'-0"			
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NORFOLK, VIRGINIA NAVAL FACILITIES ENGINEERING COMMAND NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NORFOLK, VIRGINIA LANT CAPITAL IMPROVEMENTS			
SATISFACTORY TO: DES: DBC    DRW: DBC    CHK: FBC PW/DM: F. B. COLE BRANCH MANAGER CHIEF ENG/ARCH: E. J. GALLAHER FIRE PROTECTION			
SCALE: AS NOTED EPROJECT NO. CONSTR. CONTR. NO. NAVFAC DRAWING NO. SD1405030 SHEET 31 OF 42			
<b>S-129</b>			
DRAWFORM REVISION: 10 MARCH 2009			



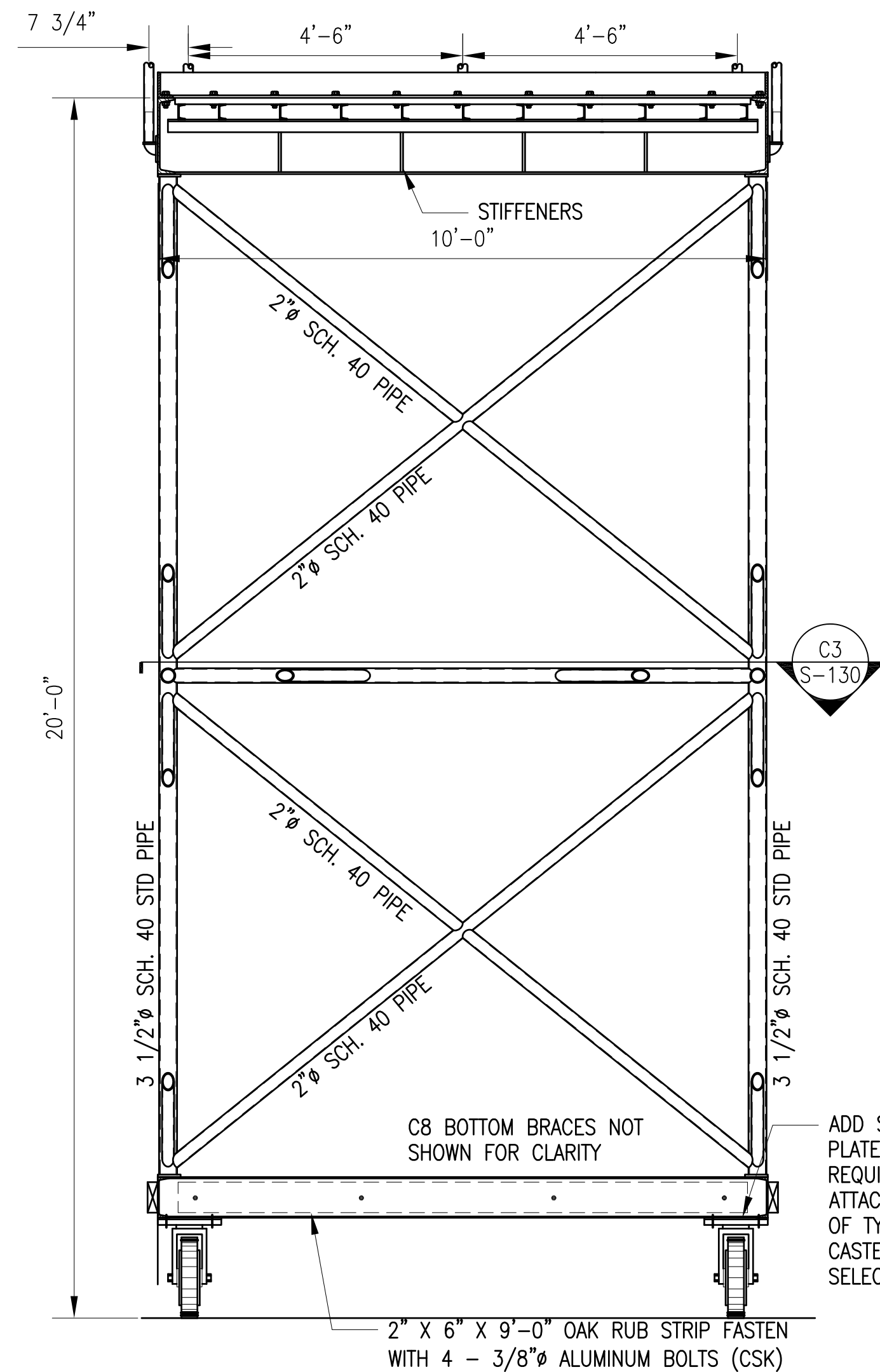
**ELEVATION**

SCALE: 1/2"=1'-0"



**CENTER BRACE SECTION**

SCALE: 1/2"=1'-0"

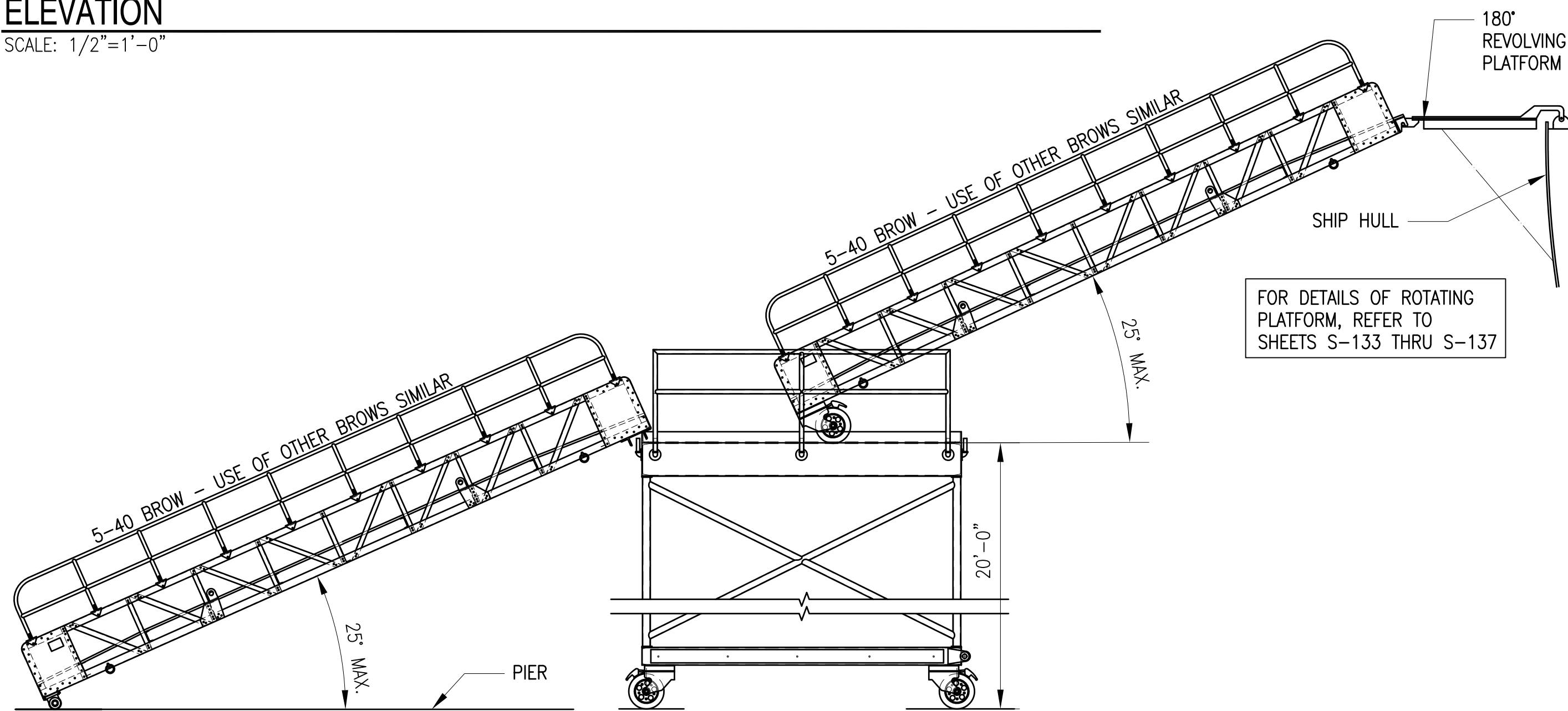


**BOTTOM SECTION**

SCALE: 1/2"=1'-0"

**GENERAL NOTES**

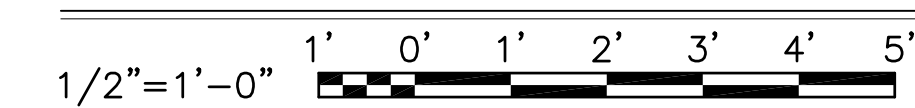
1. ALL MATERIAL SHALL BE 6061 T6 ALUM ALLOY UNLESS OTHERWISE SPECIFIED.
2. GRATING AND GUIDE CHANNEL SHALL BE LOCKED TO CHANNEL WITH CLIP FASTENERS.
3. FOR BROW CORNER REACTIONS AND WIND AREAS, REFER TO SHEET S-133. SEE TABLE OF CRITICAL WIND VELOCITIES ON S-127
4. ALL BROWS SHALL BE CENTERED ON PLATFORM,
5. THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 883212 INCLUDING REVISION D. CALCULATIONS FOR 883212 ARE CONTAINED IN BOOKS 5014, 5015, AND 5023.



**10' X 12' BROW PLATFORM SCHEMATIC ARRANGEMENT**

NO SCALE

**GRAPHIC SCALES:**



SYMBOL	DESCRIPTION	DATE	APPROVED
1	GENERAL REVISIONS	7/12	FBC

FOR COMMANDER NAVFAC
SATISFACTORY TO:
DES: <b>DBC</b> DRW: <b>DBC</b> CHK: <b>FBC</b>
FW/DM: <b>F. B. COLE</b>
BRANCH MANAGER
CHIEF ENG/ARCH: <b>E. J. GALLAHER</b>
FIRE PROTECTION

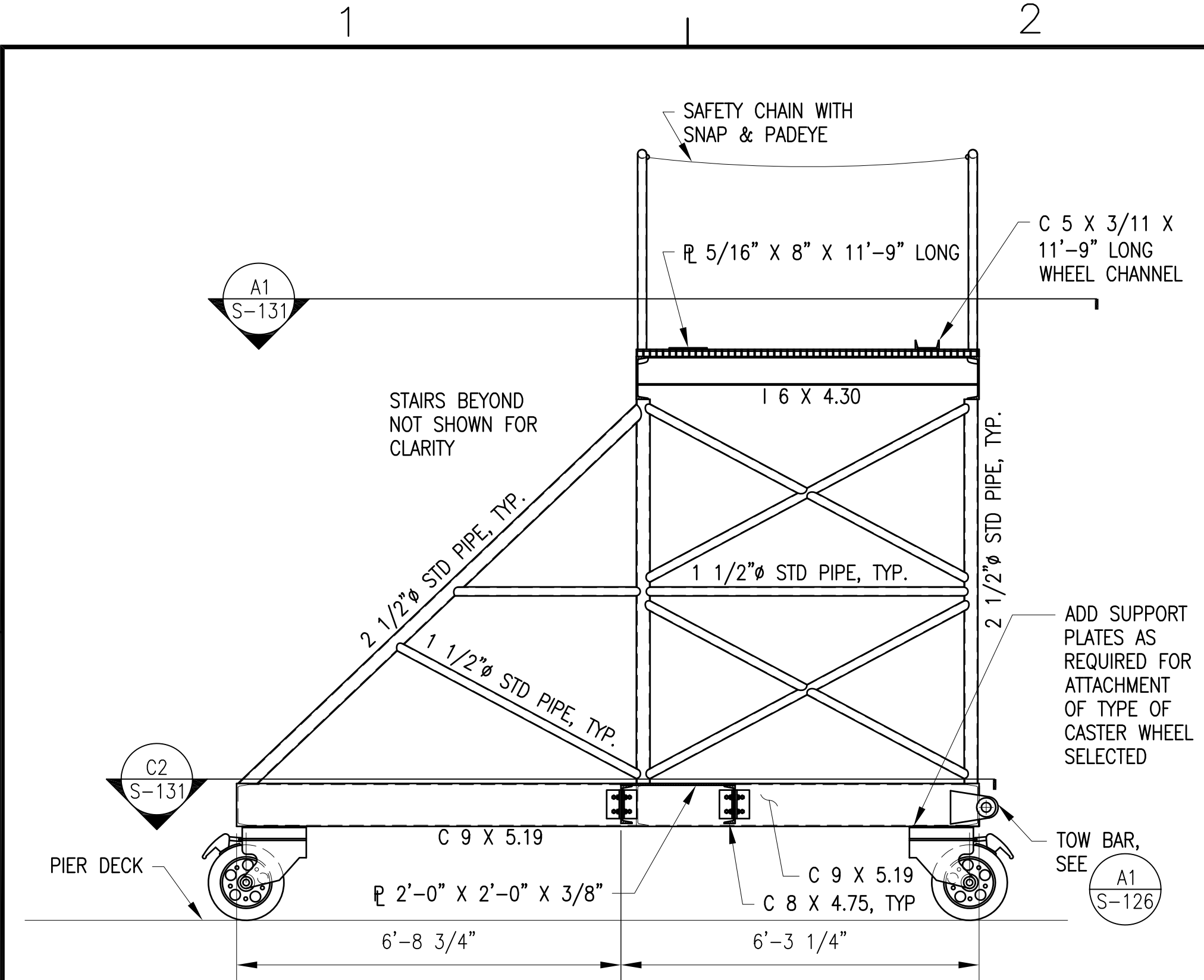
DEPARTMENT OF THE NAVY  
 NAVAL FACILITIES ENGINEERING COMMAND  
 NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
 NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
 NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
 NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
 NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC

**STANDARD DRAWING**  
**BROWS AND PLATFORMS**  
**ALUMINUM BROW PLATFORMS**

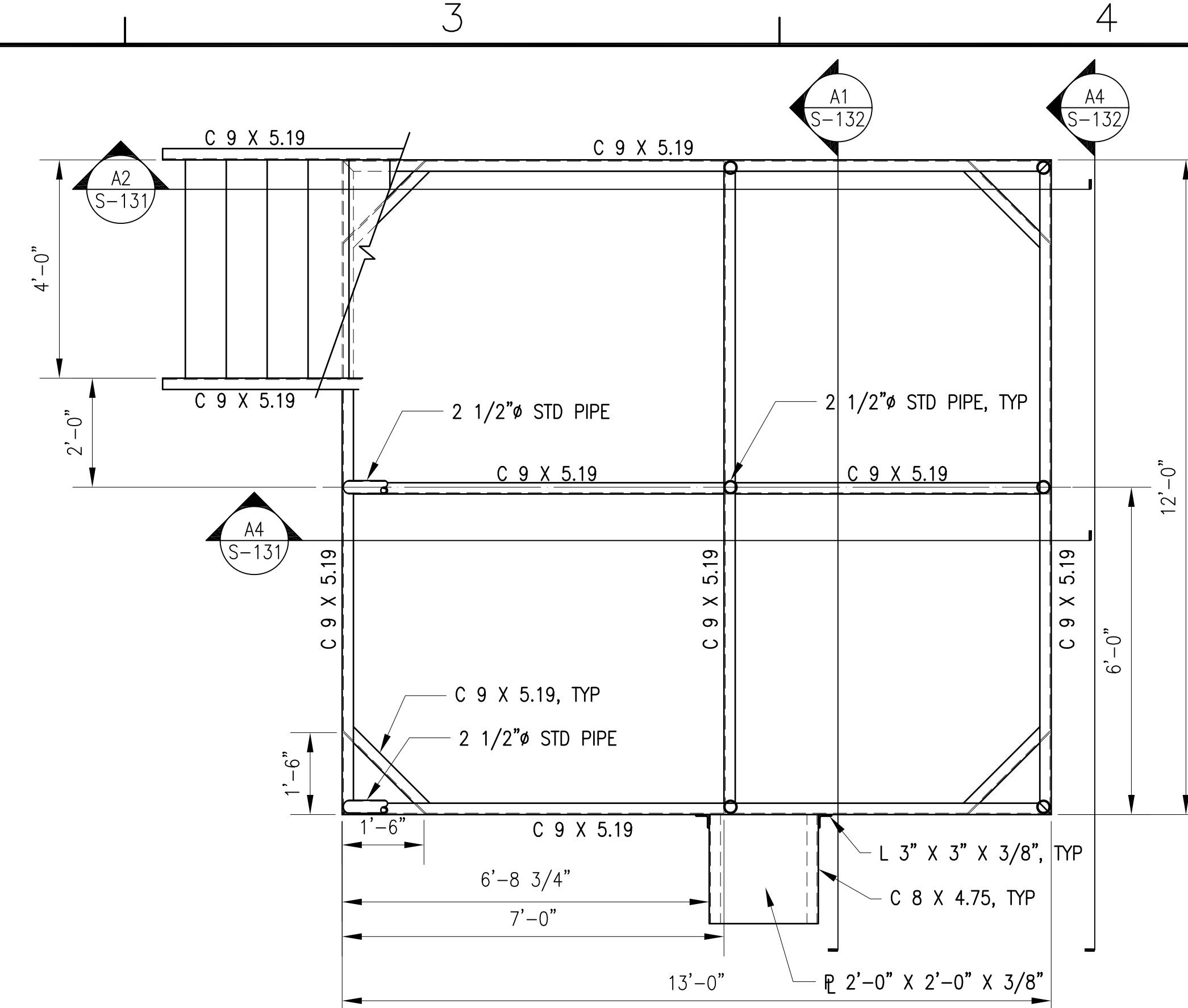
ALUMINUM BROW PLATFORMS 10'-0" X 12'-0" X 20'-0"

SCALE: AS NOTED
PROJECT NO.
CONSTR. CONTR. NO.
NAVFAC DRAWING NO. SD1405031
SHEET 32 OF 42
<b>S-130</b>



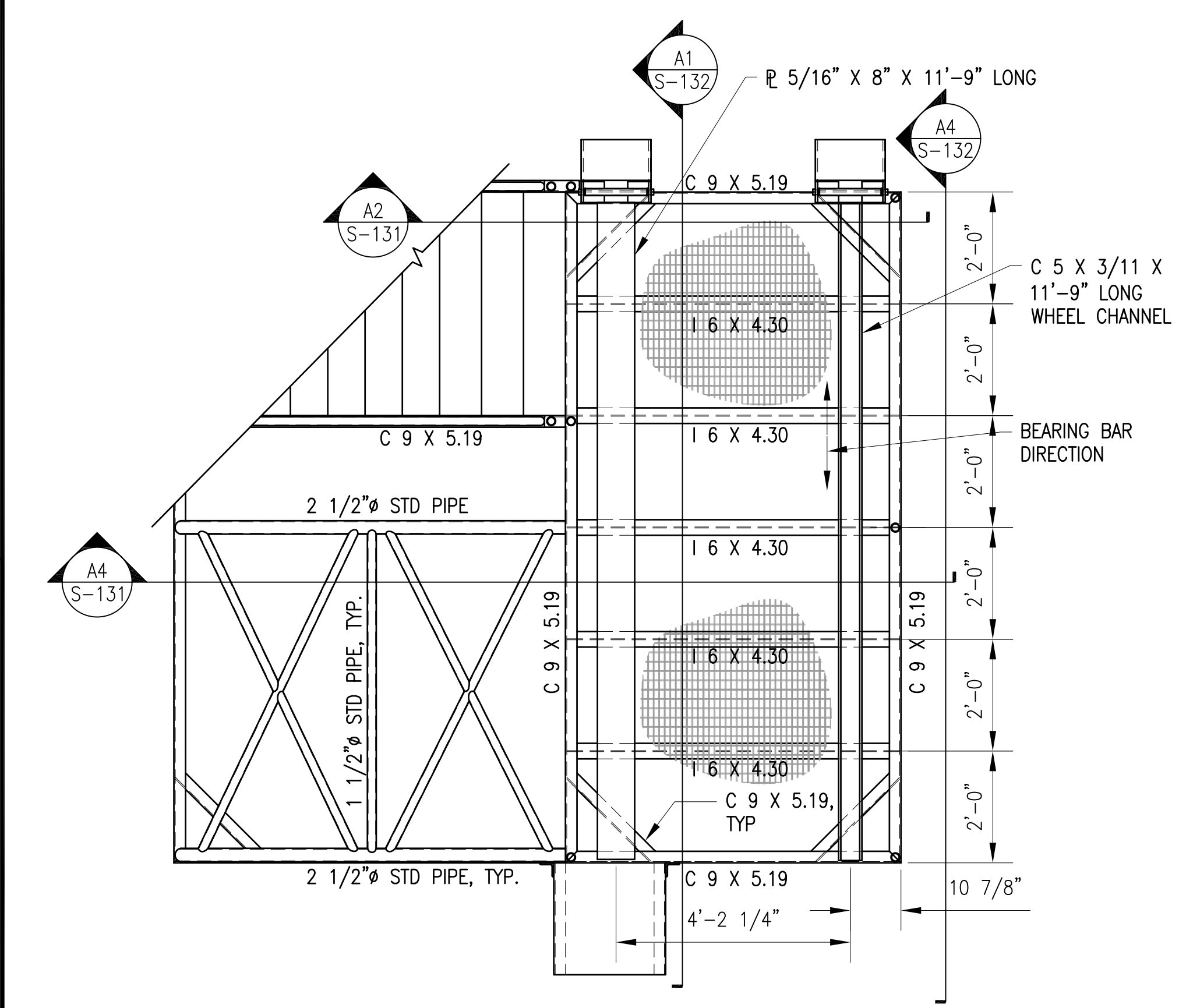


**ELEVATION**  
SCALE: 1/2"=1'-0"

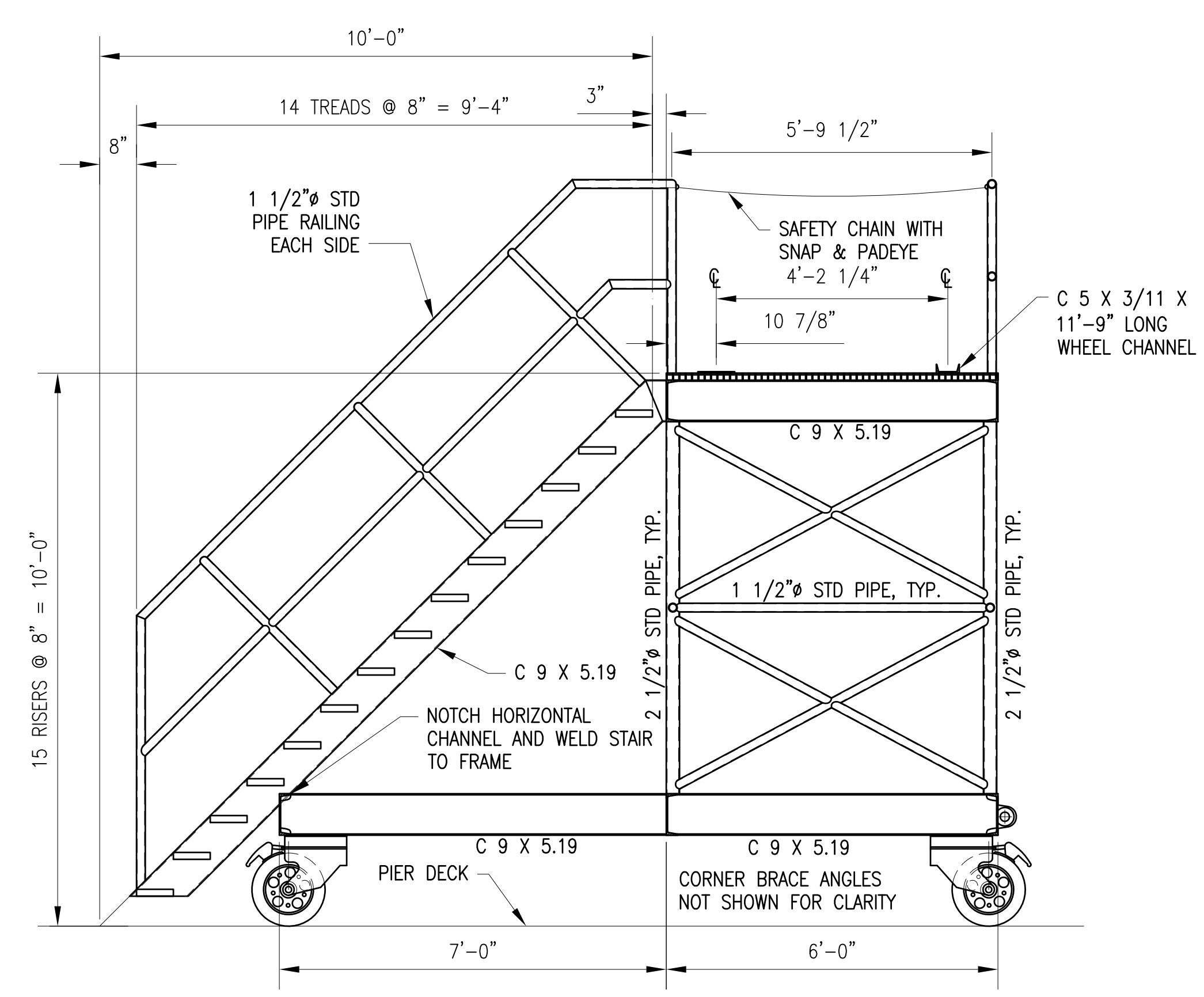


**BOTTOM FRAMING PLAN**  
SCALE: 1/2"=1'-0"

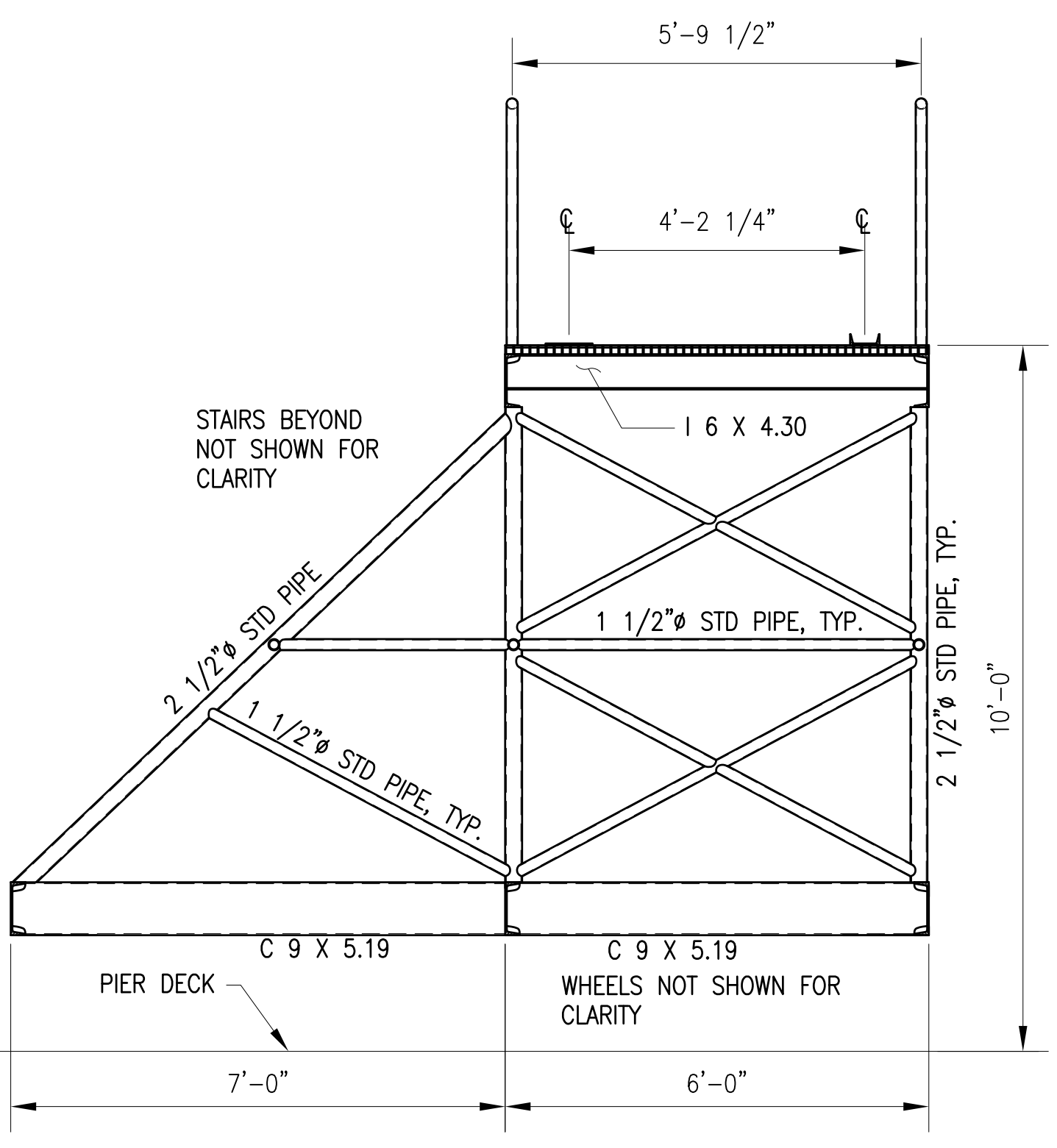
- GENERAL NOTES**
1. PLATFORM GENERAL NOTES, SEE SHEET S-126
  2. ALUMINUM GRATING SHALL BE 1 1/2" X 3/16" BEARING BARS @ 1 3/16" SPACING AND CROSS BARS @ 2" SPACING WITH NON-SLIP SURFACE.
  3. ALL CROSS BRACING SHALL BE STANDARD (STD) PIPE 1 1/2" SCHEDULE 40 PIPE.
  4. THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 883213 INCLUDING REVISION C. CALCULATIONS FOR 883213 ARE CONTAINED IN BOOKS 5014, 5015, AND 5023. DRAWING S-132 IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 883214 INCLUDING REVISION B. CALCULATIONS FOR 883213 ARE CONTAINED IN BOOKS 5014, 5015, AND 5023.
  5. ALL MATERIAL 6061-T6 UON, ESTIMATED WEIGHT OF ALUMINUM = 1750 POUNDS



**PLATFORM DECK PLAN**  
SCALE: 1/2"=1'-0"



**STAIR SECTION**  
SCALE: 1/2"=1'-0"



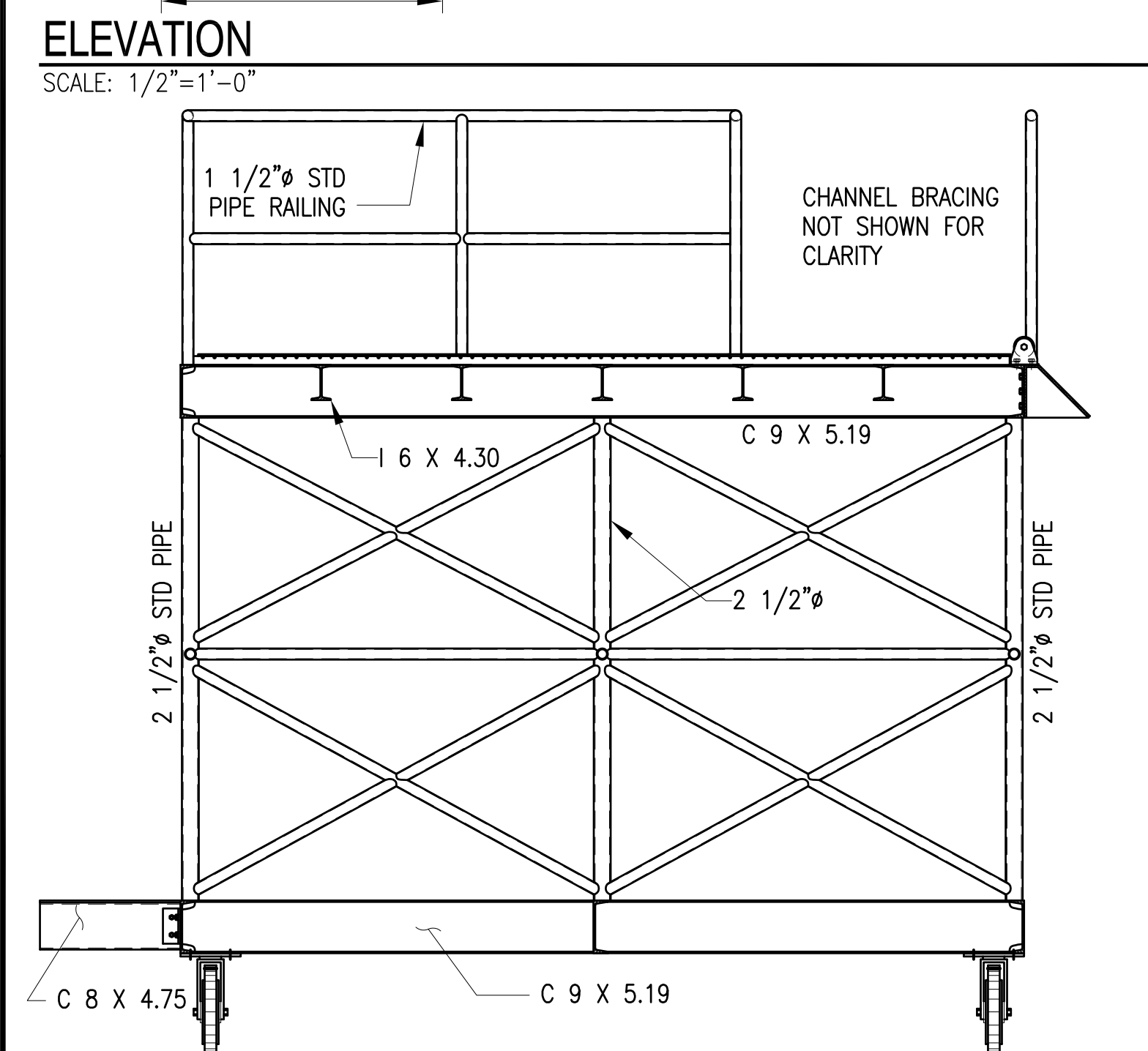
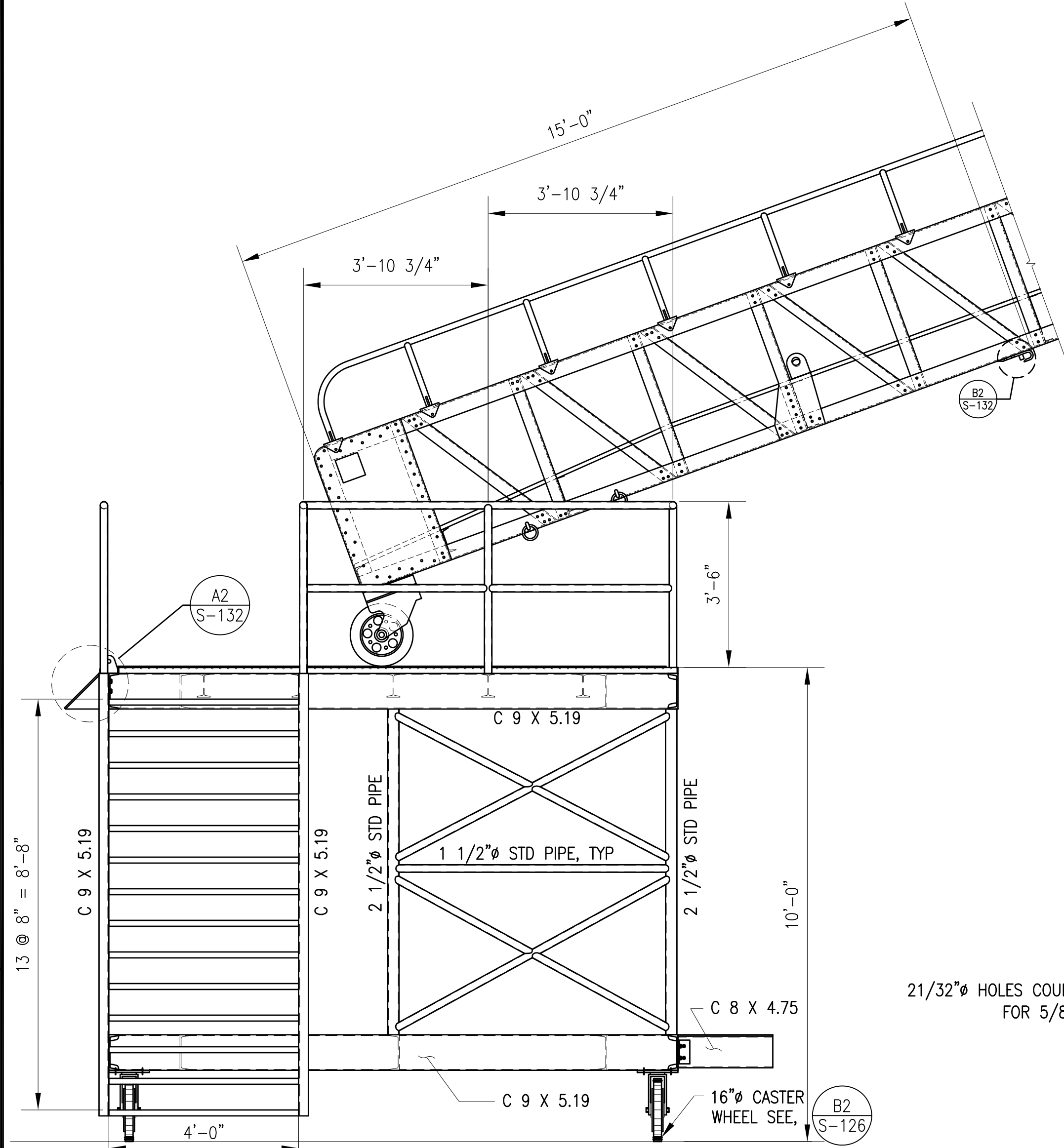
**MIDDLE FRAME SECTION**  
SCALE: 1/2"=1'-0"



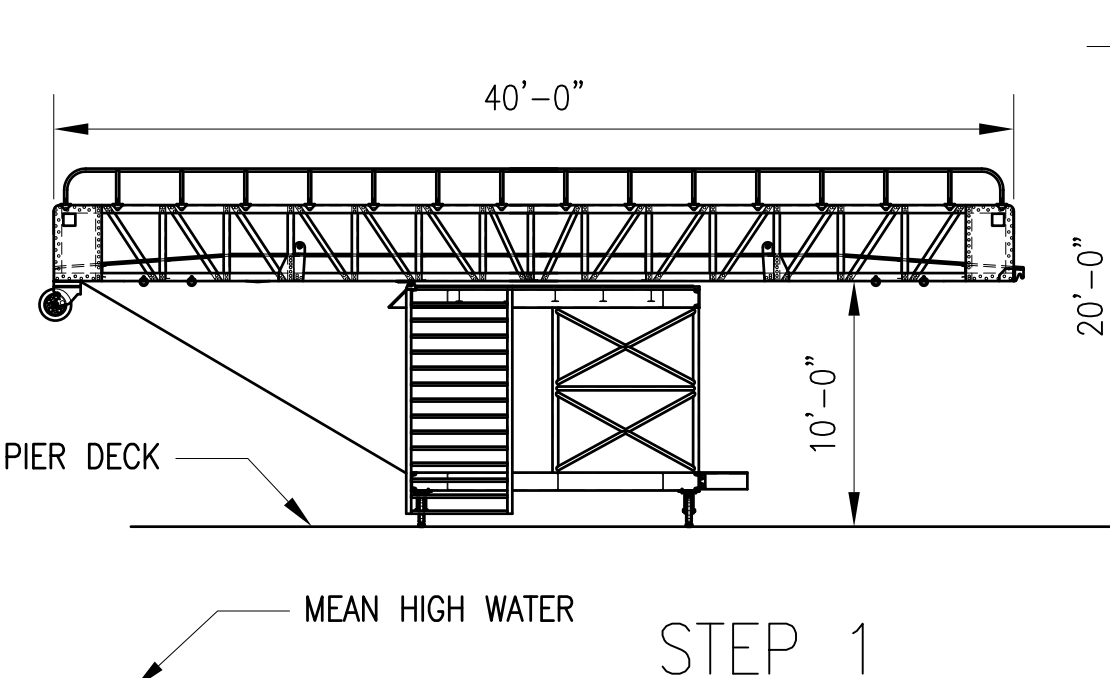
FBC					APPR
7/12					DATE
1	GENERAL REVISIONS				SYM DESCRIPTION
APPROVED FOR COMMANDER NAVFAC ACTIVITY SATISFACTORY TO DES DBC DRW DBC CHK FBC PW/DM F. B. COLE BRANCH MANAGER CHIEF ENG/ARCH E. J. GALLAHER FIRE PROTECTION DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC NAVAL CAPITAL IMPROVEMENTS LANIER HALL NORFOLK, VIRGINIA STANDARD DRAWING BROWS AND PLATFORMS ALUMINUM STAR PLATFORM ALUMINUM STAR PLATFORM FOR 4-40 BROW					
SCALE: AS NOTED					
PROJECT NO. SD1405032					
CONSTR. CONTR. NO.					
NAVFAC DRAWING NO. SD1405032					
SHEET 33 OF 42					
<b>S-131</b>					
DRAWING REVISION: 10 MARCH 2009					

1    2    3    4    5

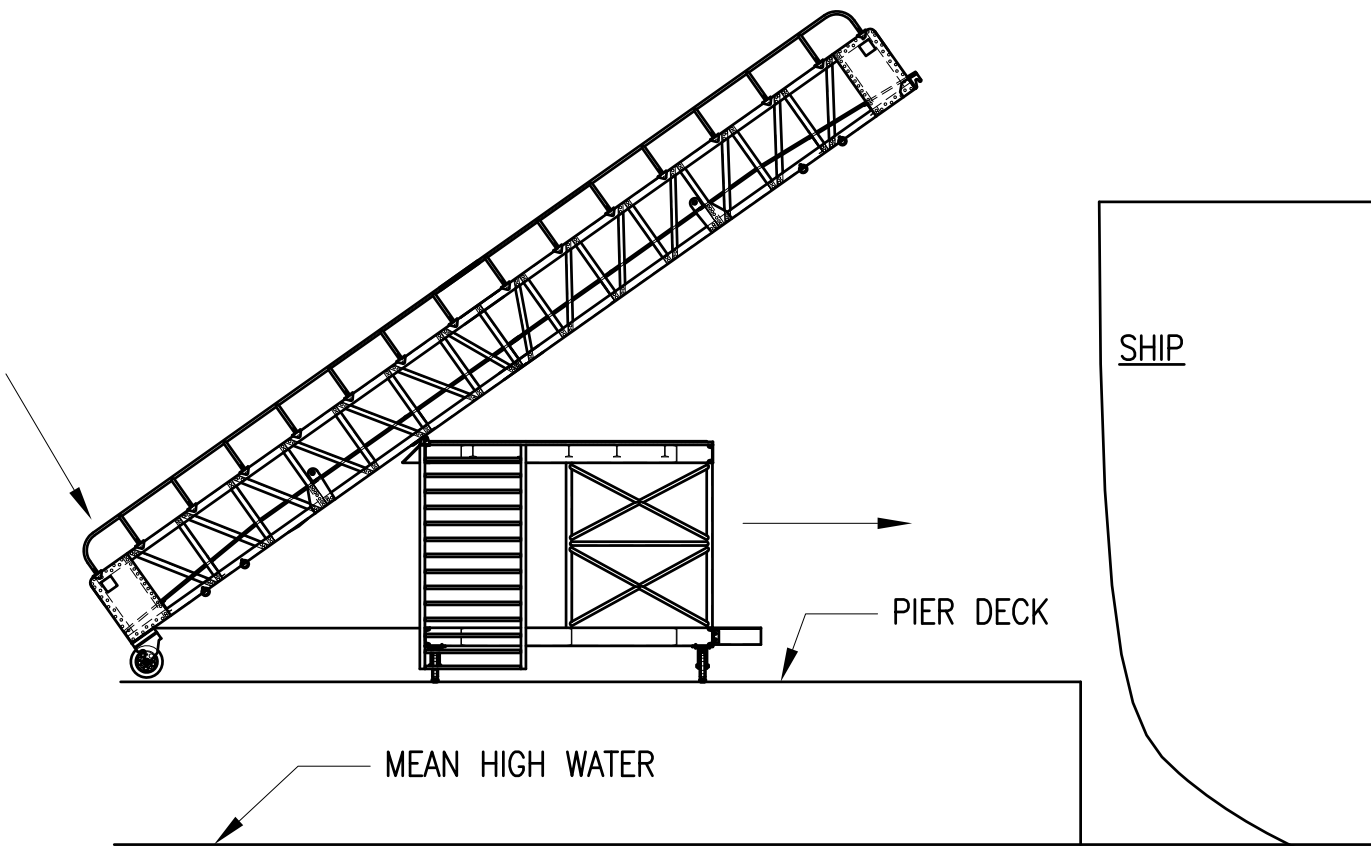
D  
C  
B  
A



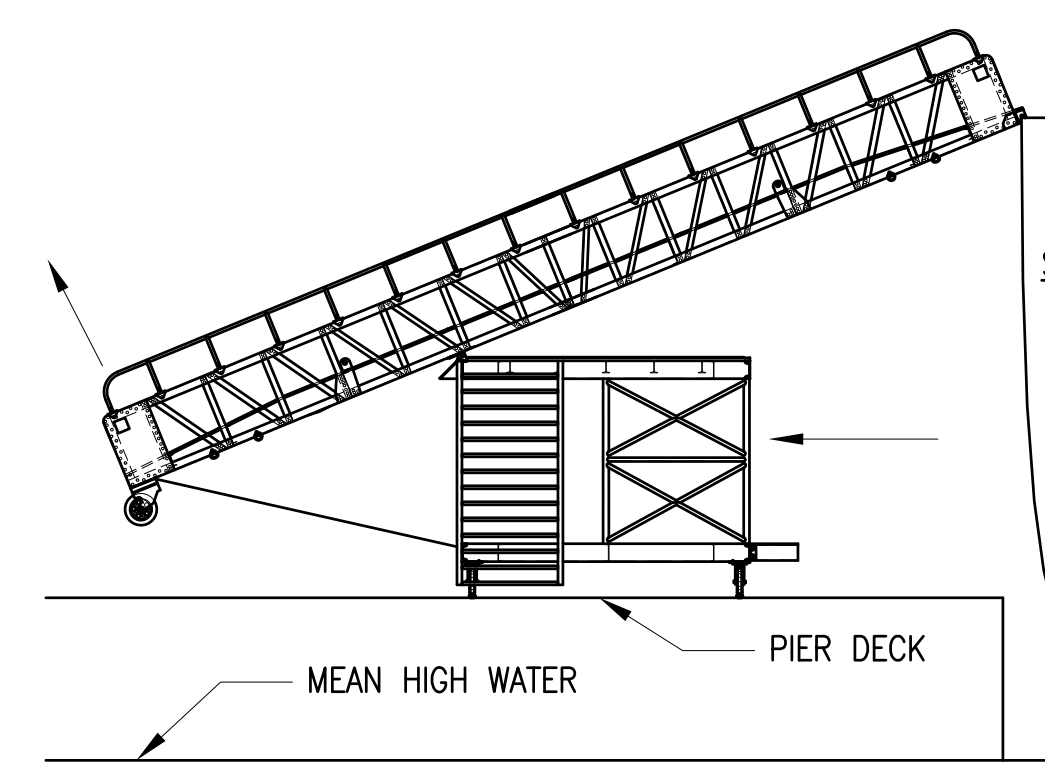
**ELEVATION**  
SCALE: 1/2"=1'-0"  
**SECTION**  
SCALE: 1/2"=1'-0"



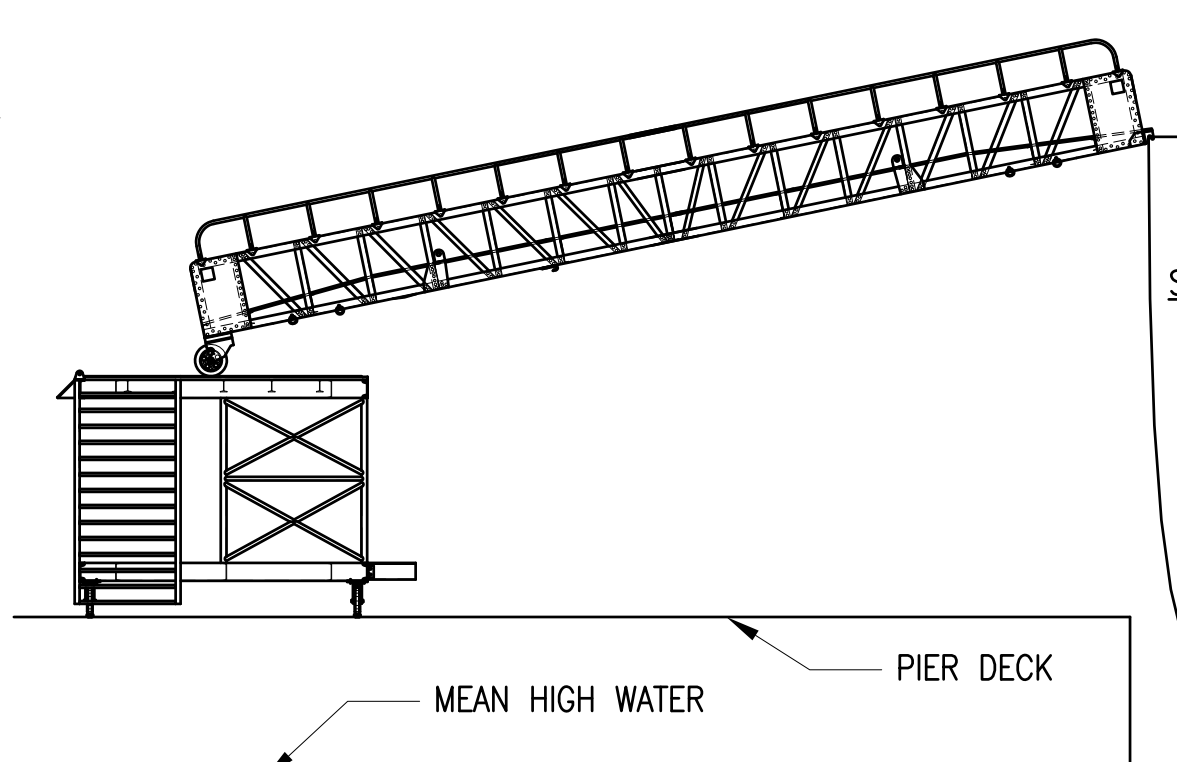
STEP 1  
THE 40'-0" X 4' BROW IS BALANCED AND LOCKED TO THE PLATFORM IN THIS POSITION. THE UNIT MAY BE MOVED TO ANY LOCATION IN THE YARD OR ON THE PIER.



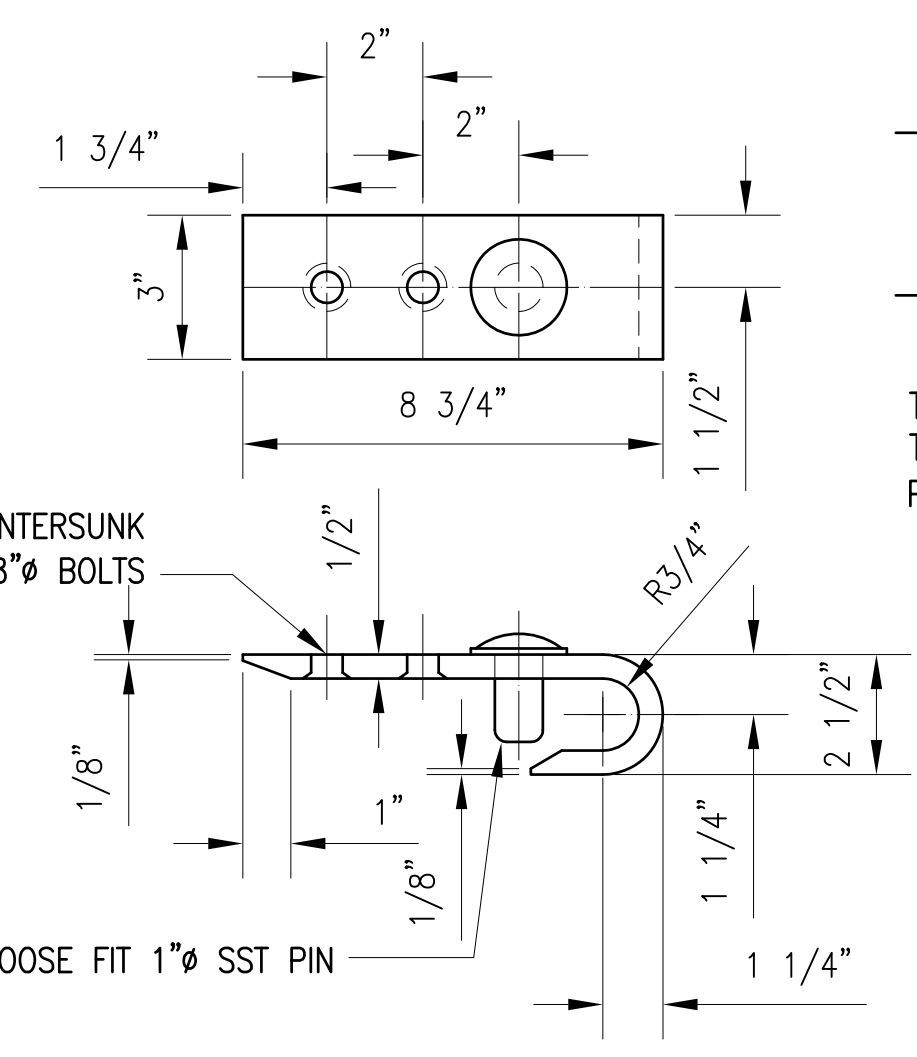
STEP 2  
THE OPERATOR USES THE WINCH SO AS TO CAUSE ONE END OF THE BROW TO RAISE TO THE HEIGHT OF SHIP'S GUNWALE.



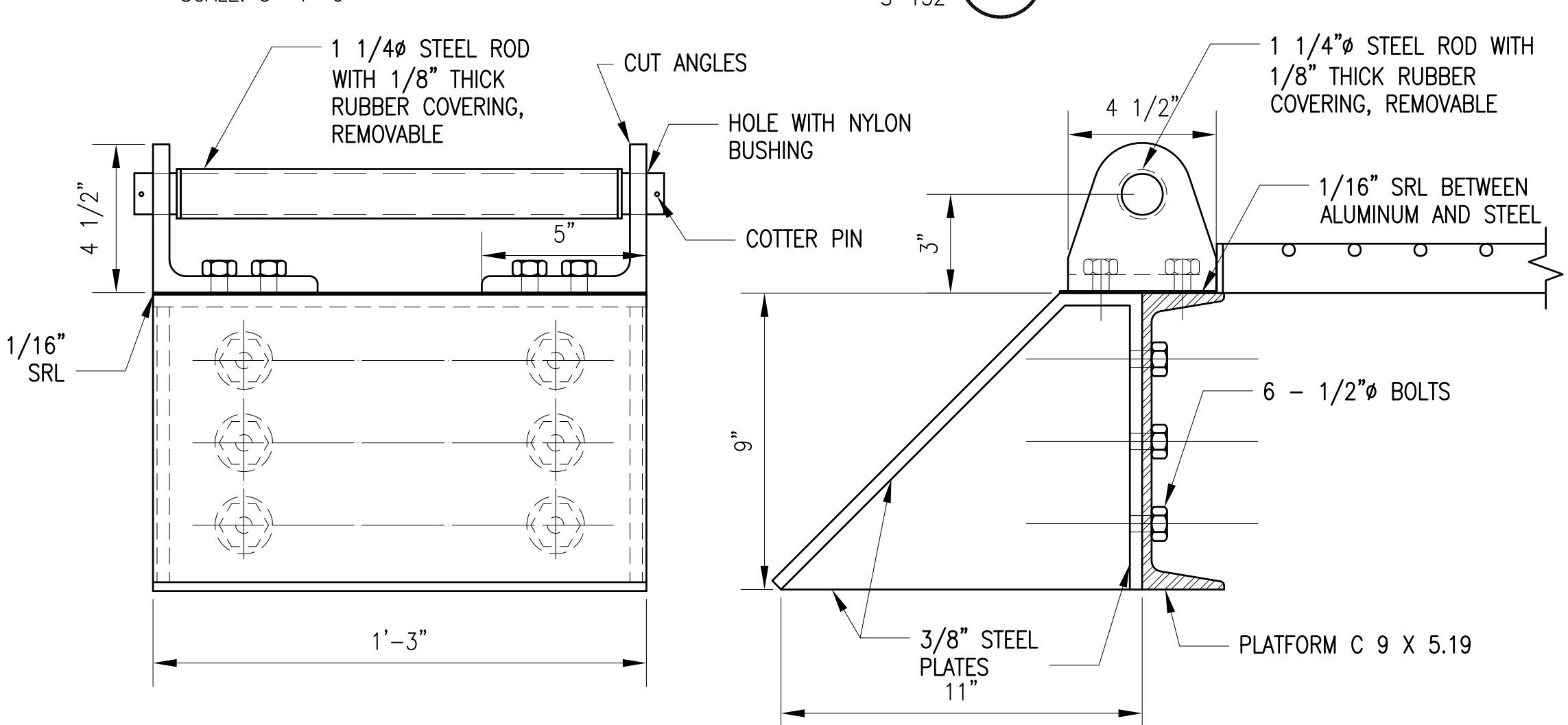
STEP 3  
THE RAISED END OF THE BROW IS SECURED IN PLACE TO THE SHIP'S GUNWALE. THE SECOND WINCH IS NOW USED TO MOVE THE FREE END OF THE BROW TO A POSITION ON THE PLATFORM AS SHOWN IN THE "SECURED" POSITION.



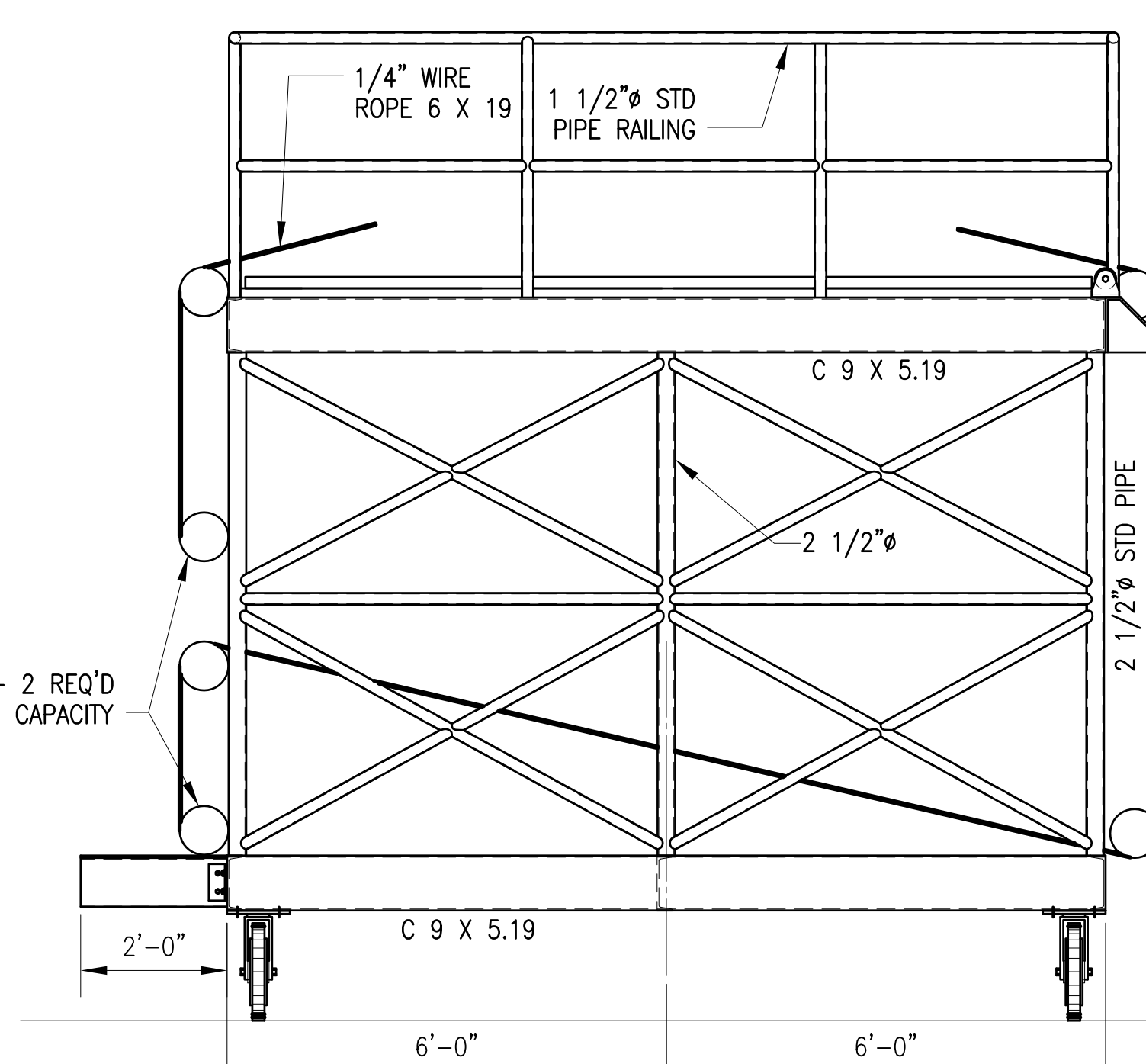
SECURED POSITION  
THE UNIT IS NOW READY FOR USE.



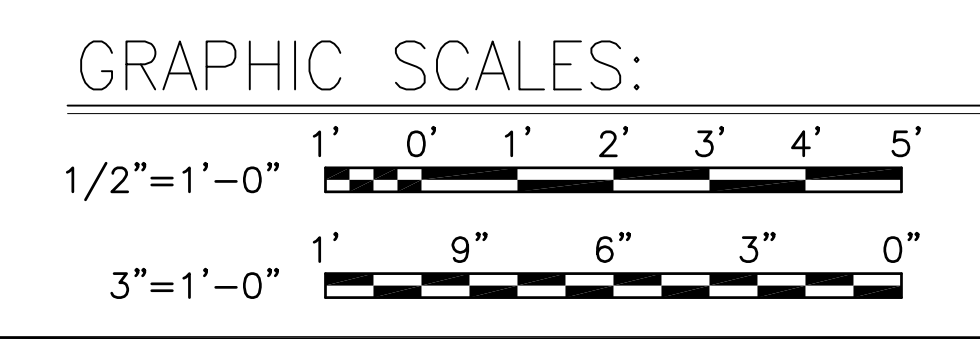
**PIVOT BAR DETAIL**  
SCALE: 3"=1'-0"



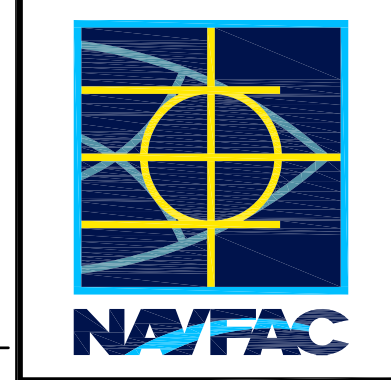
**ROLLER-PIVOT DETAILS**  
SCALE: 3"=1'-0"



**ELEVATION**  
SCALE: 1/2"=1'-0"



GENERAL REVISIONS	DATE	APPR
1	7/12	



FOR COMMANDER NAVFAC

SATISFACTORY TO:  
DCS: **DBC** DRW: **DBC** CHK: **FBC**  
PNW/DM: **F. B. COLE**  
BRANCH MANAGER:  
CHIEF ENG/ARCH: **E. J. GALLAHER**  
FIRE PROTECTION

DEPARTMENT OF THE NAVY  
NAVFACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC PENSACOLA, FLORIDA, VIRGINIA  
NAVFAC PENSACOLA  
LANT CAPITAL IMPROVEMENTS

**STANDARD DRAWING**  
**BROWS AND PLATFORMS**  
ALUMINUM STAR PLATFORM

ALUMINUM STAR PLATFORM FOR 4-40 BROW DETAILS

SCALE: AS NOTED  
PROJECT NO.:  
CONSTR. CONTR. NO.:  
NAVFAC DRAWING NO.: **SD1405033**  
SHEET **34** OF **42**  
**S-132**  
DRAWING REVISION: 10 MARCH 2009

1    2    3    4    5

# BROW REACTIONS AND WIND AREAS

## TRUSS BROWS

BROW WIDTH & LENGTH	CORNER REACTION DEAD LOAD, LBS	CORNER REACTION LIVE LOAD, LBS	CORNER REACTION D.L. + L.L., LBS	TOTAL AREA EXPOSED TO WIND, SQ. FT.
5'-90'	2,130	8,440	10,570	350
5'-80'	1,750	7,500	9,250	305
5'-70'	1,265	6,565	7,830	238
4'-70'	1,150	5,250	6,400	238
3'-70'	880	3,940	4,820	238
5'-60'	880	5,630	6,510	187
4'-60'	780	4,500	5,280	187
3'-60'	665	3,375	4,040	187
5'-50'	630	4,690	5,320	149
4'-50'	530	3,750	4,280	149
3'-50'	490	2,810	3,300	149
5'-40'	515	3,750	4,265	102
4'-40'	410	3,000	3,410	102
3'-40'	350	2,250	2,600	102
5'-35'	400	2,810	3,210	74
4'-35'	385	2,525	2,910	74
3'-35'	230	1,970	2,200	74
5'-30'	295	2,815	3,110	44
4'-30'	240	2,250	2,490	36
3'-30'	190	1,690	1,880	35
5'-25'	245	2,345	2,590	29
4'-25'	205	1,875	2,080	29
3'-25'	175	1,405	1,580	29

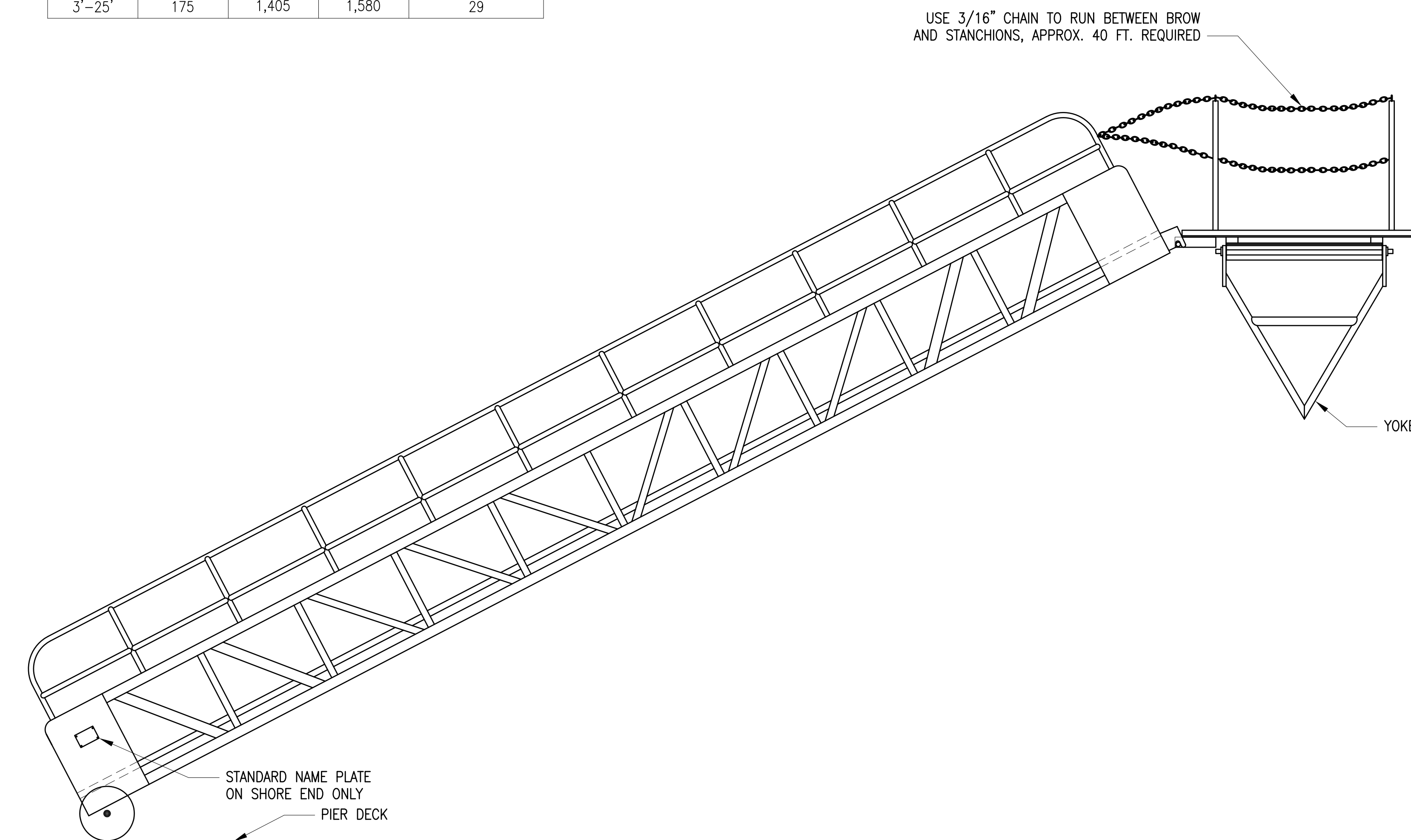
## BEAM BROWS

BROW WIDTH & LENGTH	CORNER REACTION DEAD LOAD, LBS	CORNER REACTION LIVE LOAD, LBS	CORNER REACTION D.L. + L.L., LBS	TOTAL AREA EXPOSED TO WIND, SQ. FT.
5'-20'	270	1,875	2,145	28
4'-20'	195	1,500	1,695	28
3'-20'	155	1,125	1,280	24
5'-16'	195	1,500	1,695	19
4'-16'	150	1,200	1,350	19
3'-16'	115	900	1,015	18
5'-12'	130	1,125	1,255	13
4'-12'	105	900	1,005	13
3'-12'	75	675	750	13

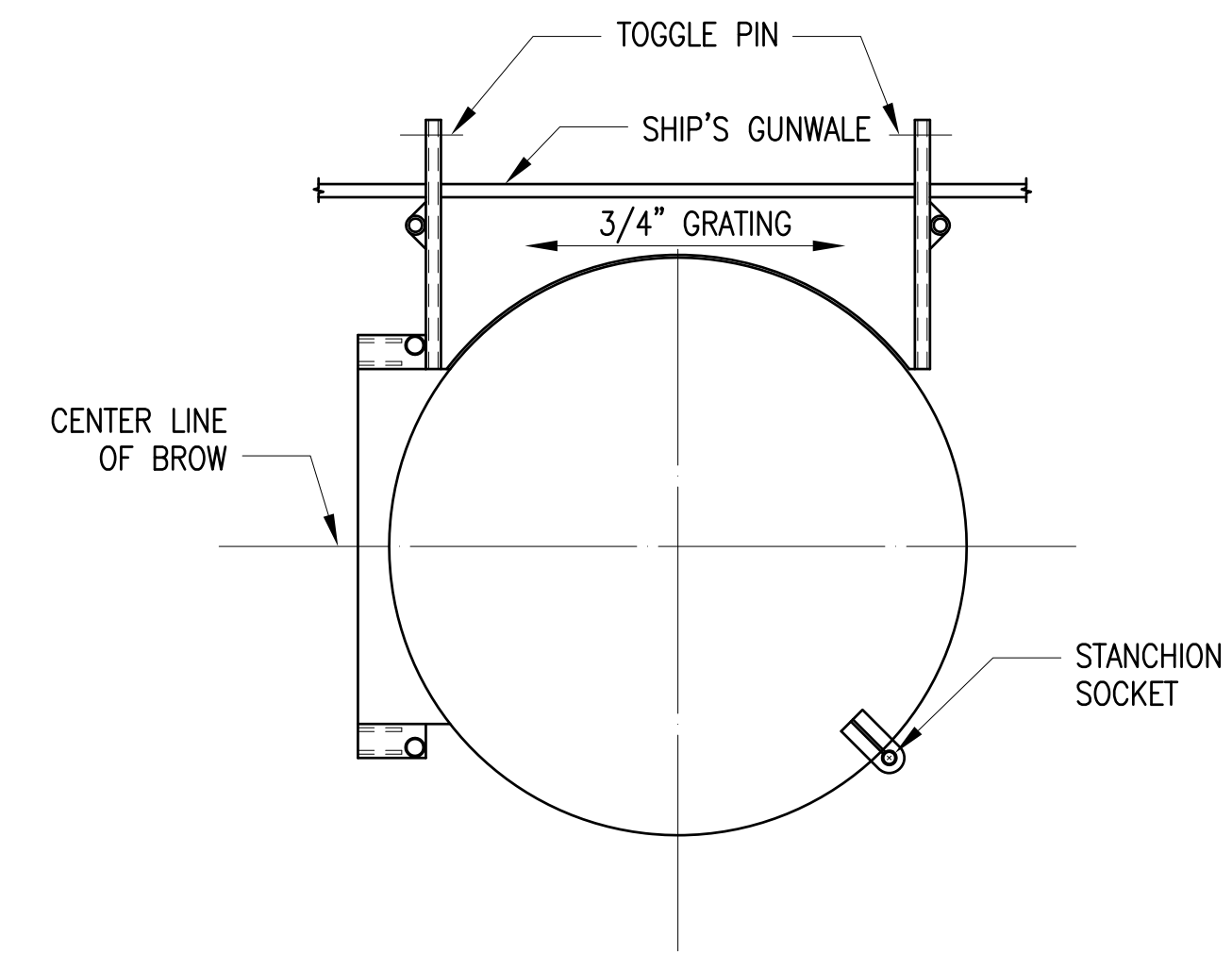
NOTE:  
ALL AREAS INCLUDE FACTOR OF 1.5 FOR PARALLEL MEMBERS

## GENERAL NOTES

- FOR PLANS, ELEVATIONS AND DETAILS OF ROTATING PLATFORMS, SEE SHEETS S-134 THRU S-137.
- FOR DETAILS OF BROWS, SEE SHEETS S-101 THRU S-125.
- THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 883216 INCLUDING REVISION D. CALCULATIONS FOR Y&D 883216 ARE CONTAINED IN BOOKS IN BOOKS 5014, 5015 AND 5023.

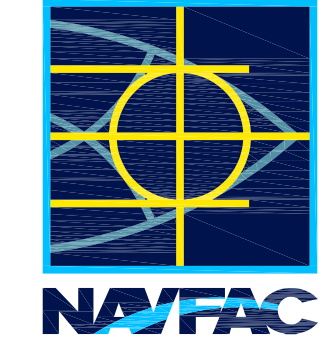
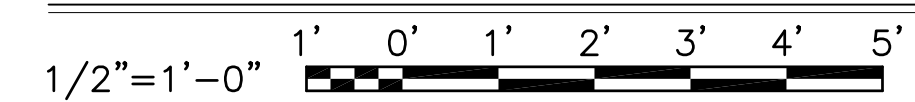


ELEVATION  
SCALE: 1/2"=1'-0"



PLATFORM PLAN  
SCALE: 1/2"=1'-0"

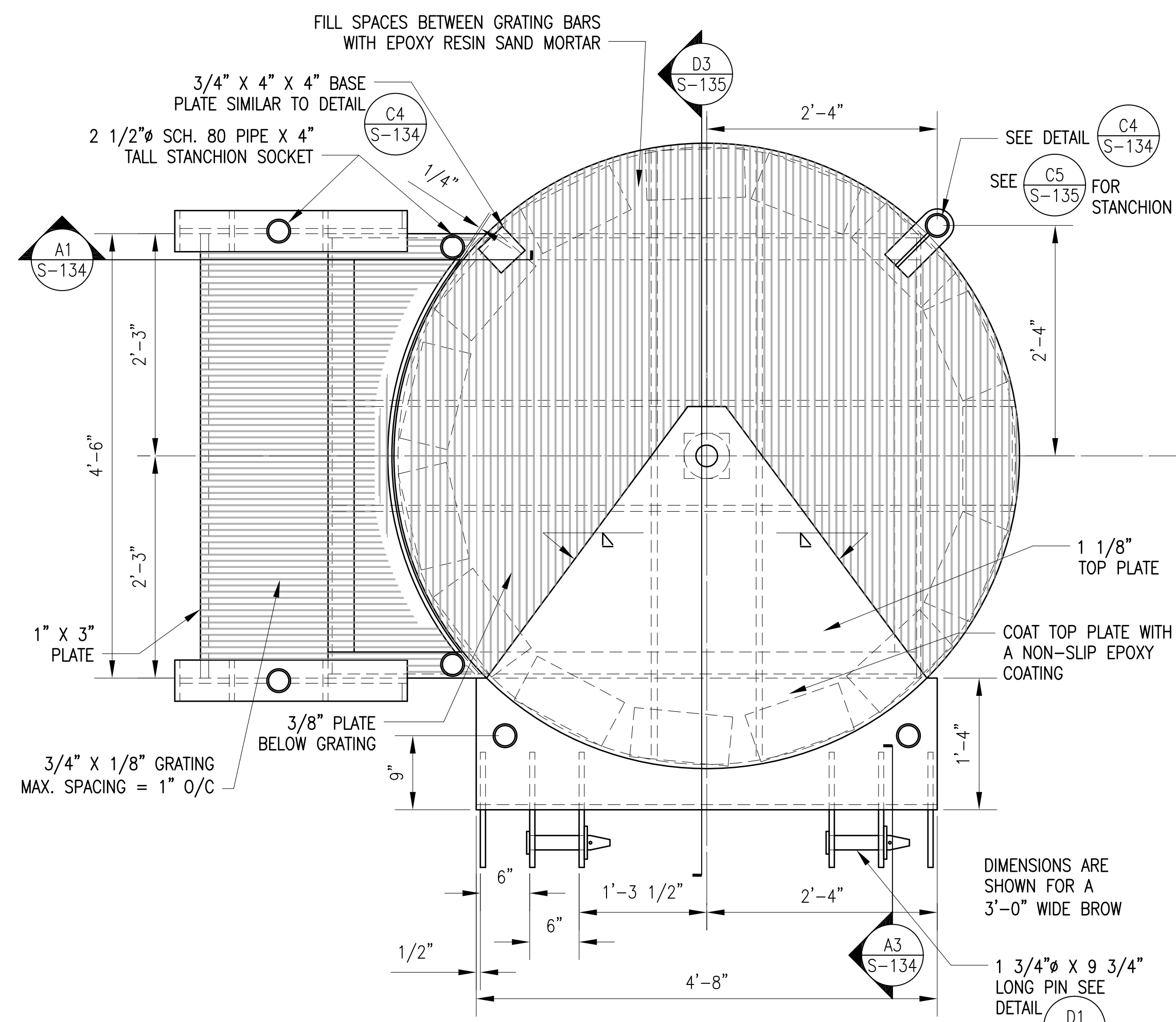
## GRAPHIC SCALES:



GENERAL REVISIONS	DATE	APPR
1	7/12	

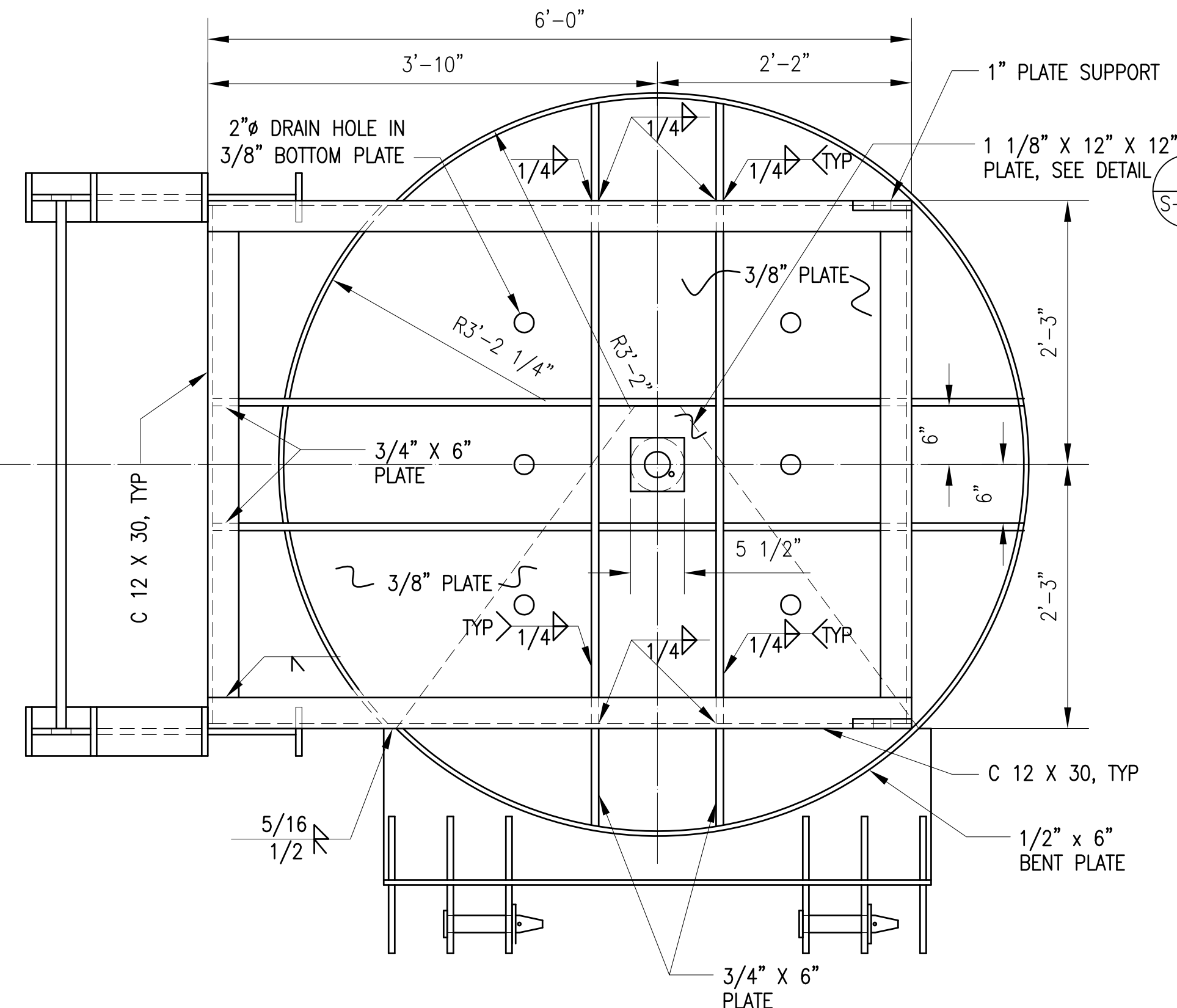
DES	DBC	DRW	DBC	CHK	FBC
F. B. COLE					
E. J. GALLAHER					

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC DRAWING NO. SD1405034  
SHEET 35 OF 42  
S-133



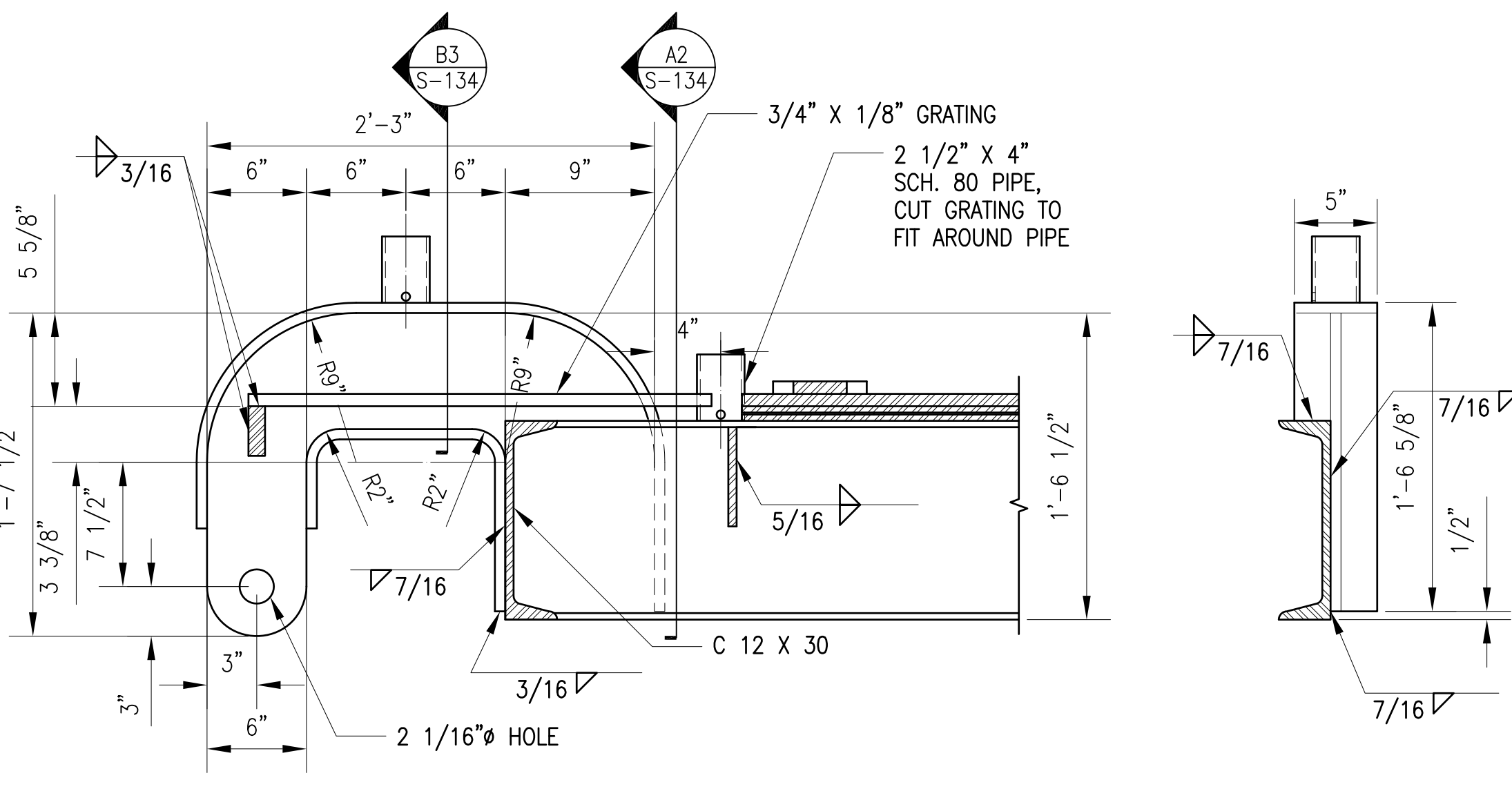
**PLATFORM PLAN**

SCALE: 1"=1'-0"



**BOTTOM VIEW - LOOKING UP**

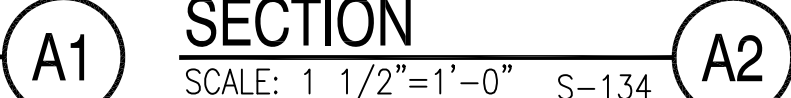
SCALE: 1"=1'-0"



**SHIP SUPPORT SECTION**

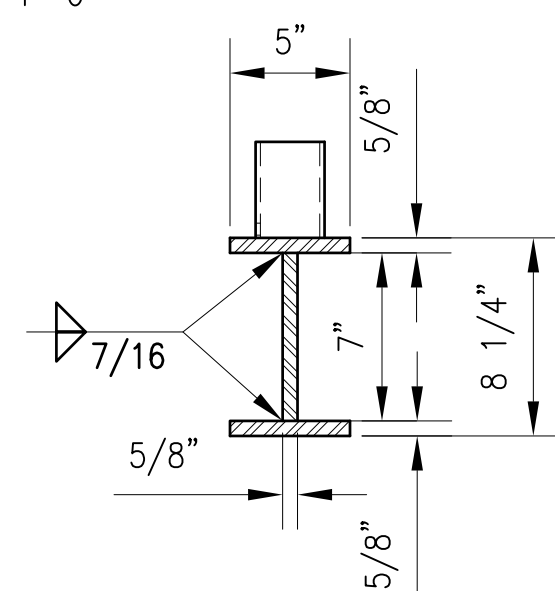
SCALE: 1 1/2"=1'-0"

S-134



**SECTION**

SCALE: 1 1/2"=1'-0"



**SECTION**

SCALE: 1 1/2"=1'-0"

S-134

**COATING NOTES**

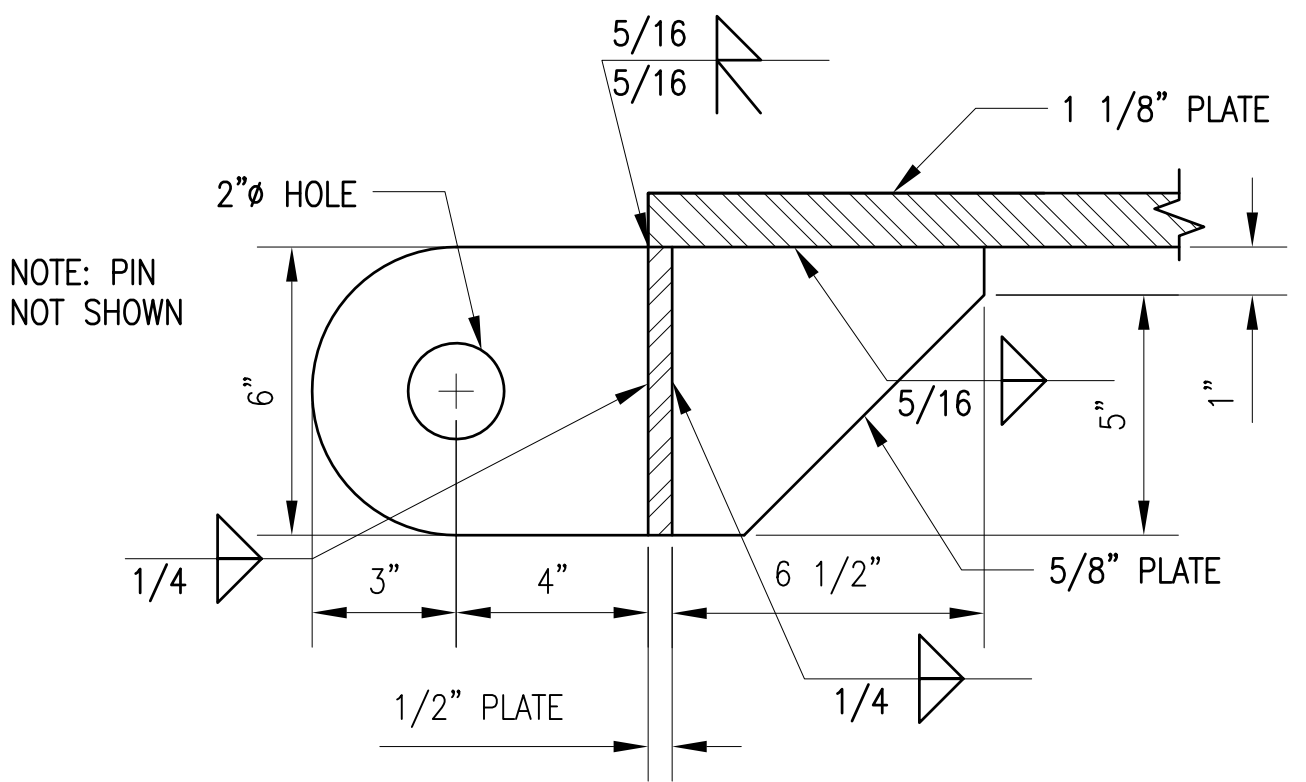
1. ALL STRUCTURAL STEEL SURFACES SHALL BE BLAST CLEANED TO NEAR WHITE METAL IN ACCORDANCE WITH SSPC-SP-10-63T.
2. APPLY A THREE COAT EPOXY-POLYAMIDE SYSTEM CONFORMING TO MIL-P-24441 WITH A TOTAL DRY THICKNESS OF 9 MILS. THE INDIVIDUAL COATS SHALL BE AS FOLLOWS:

COAT	FORMULA	THICKNESS
FIRST COAT	FORMULA 150 (GREEN PRIMER)	3MILS
SECOND COAT	FORMULA 150 (GREEN WHITE)	3MILS
TOP COAT	FORMULA 150 (HAZE GREY)	3MILS

THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y & D DRAWING 1046647.

**REFERENCE NOTES**

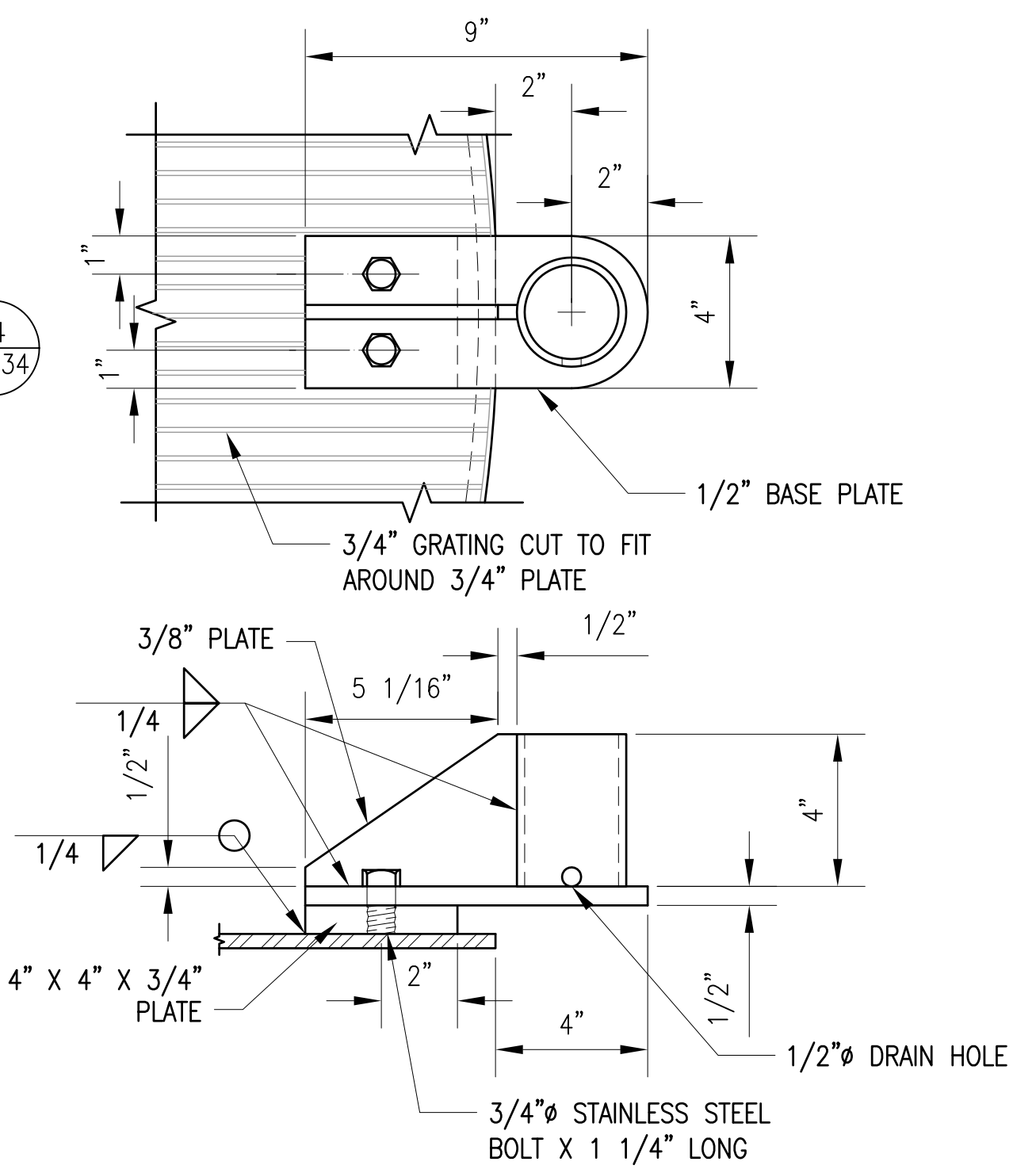
1. FOR DETAILS OF BROWS SEE SHEETS S-101 THRU S-125.
2. FOR BROW LOADS SEE SHEET S-133.
3. ATTACH BROW CONNECTION TO BROW AS SHOWN IN



**DETAIL**

SCALE: 3"=1'-0"

S-134

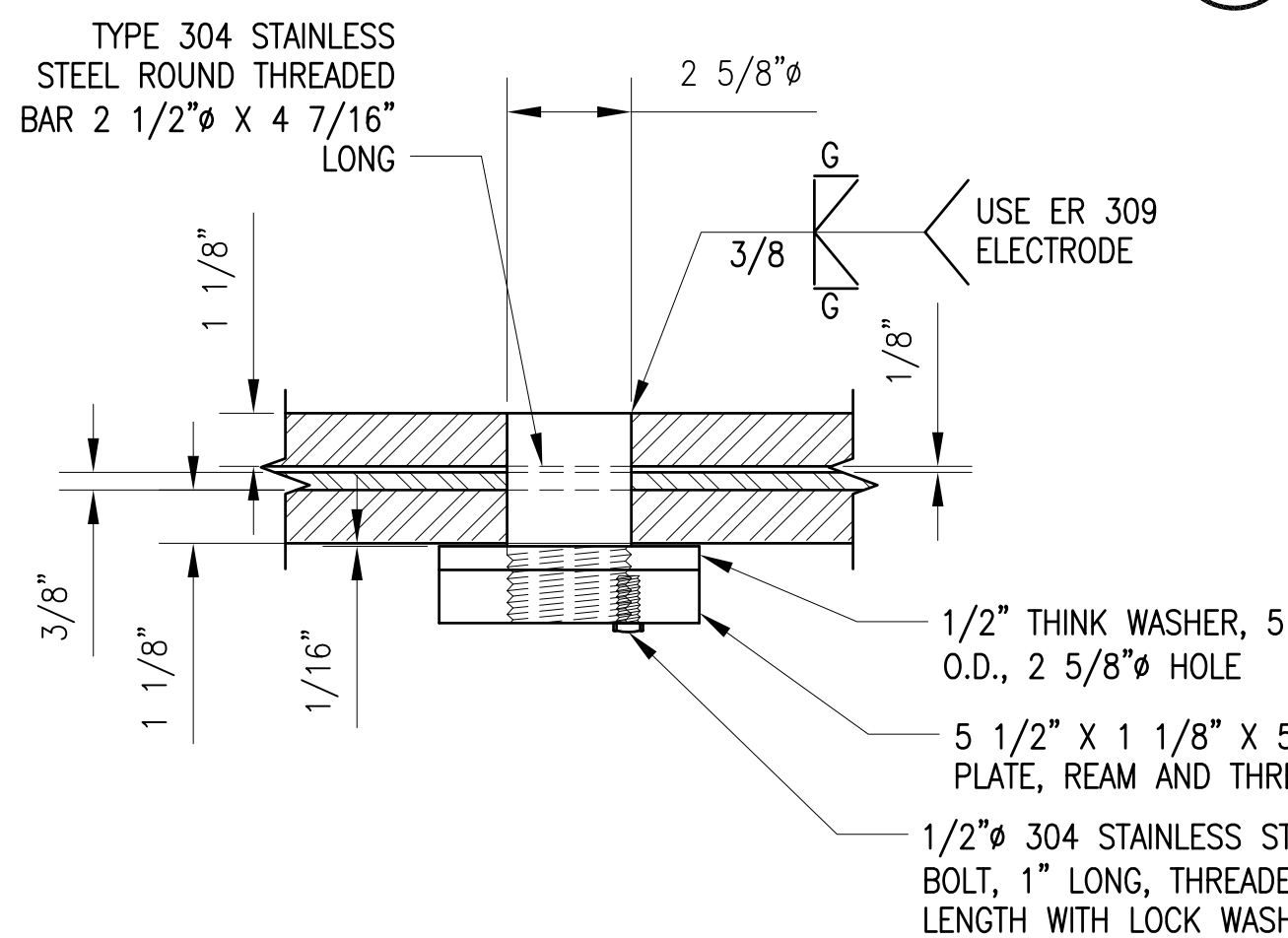


**DETAIL**

SCALE: 3"=1'-0"

S-134, S-136, S-137

C4



**DETAIL**

SCALE: 3"=1'-0"

S-134, S-135

B4

**GENERAL NOTES**

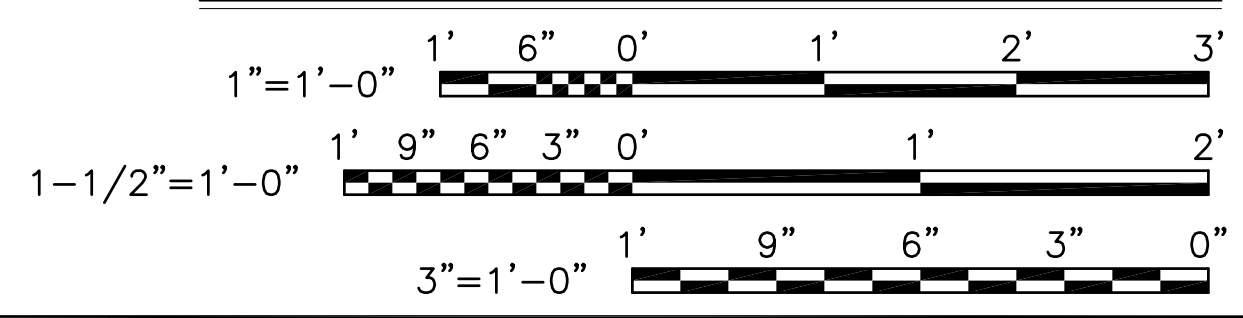
DESIGN LIVE LOAD = 75 PSF  
 DESIGN TEST LOAD = 150 PSF  
 ALL STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO ASTM SPECIFICATION A36 (Fy=36,000 PSI).

WELDING SHALL CONFORM TO THE SPECIFICATIONS OF THE AMERICAN WELDING SOCIETY.

PLATFORM SHALL BE TESTED WITH A 150 PSF TEST LOAD ON PLATFORM AND ON A 4 FT X 70 FT STANDARD ALUMINUM BROW JOINED TO IT. A TOTAL EQUIV. LOAD FROM BROW EQUAL TO 23,290 POUNDS CAN BE HUNG ON BROW CONNECTIONS TO SIMULATE THE 4 FT X 70 FT BROW LOADING.

THE PLATFORM CAN BE ROTATED TO ANY OF ITS POSSIBLE POSITIONS WHILE THUS LOADED. THE STRENGTH OF THE VARIOUS MEMBERS MAKING UP THE PLATFORM IS CONTROLLED BY THE ABOVE TEST LOADING WITH STRESSES NOT EXCEEDING 1.33 TIMES THE ALLOWABLE UNIT STRESSES SPECIFIED BY THE AISC SPECIFICATIONS. APPROX. WEIGHT OF THE PLATFORM = 3500 LB. ALL REMOVABLE PINS SHALL BE SECURED TO PLATFORM WITH CHAIN.

**GRAPHIC SCALES:**



REV	DATE	DESCRIPTION
1	7/12	GENERAL REVISIONS



APPROVED	DATE

FOR COMMANDER NAVFAC

SATISFACTORY TO

DES	CHK	DRW	DB	CHK	FBC

PROJECT MANAGER: F. B. COLE

BRANCH MANAGER

CHIEF ENG/ARCH: E. J. GALAHAR

FIRES PROTECTION

NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC

NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC

DEPARTMENT OF THE NAVY

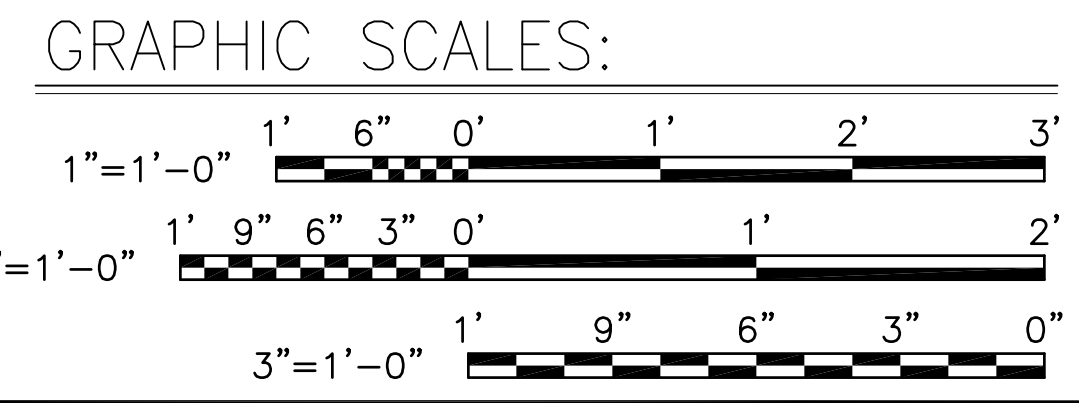
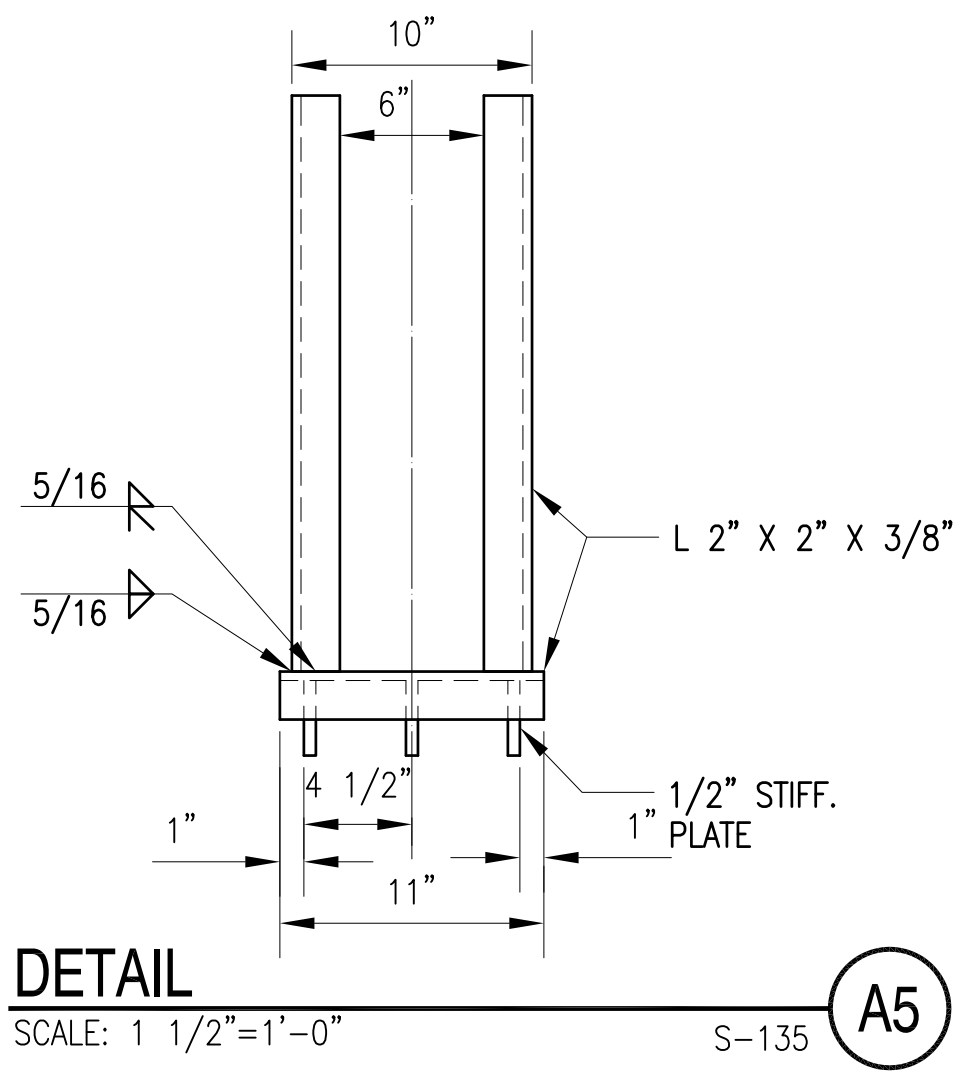
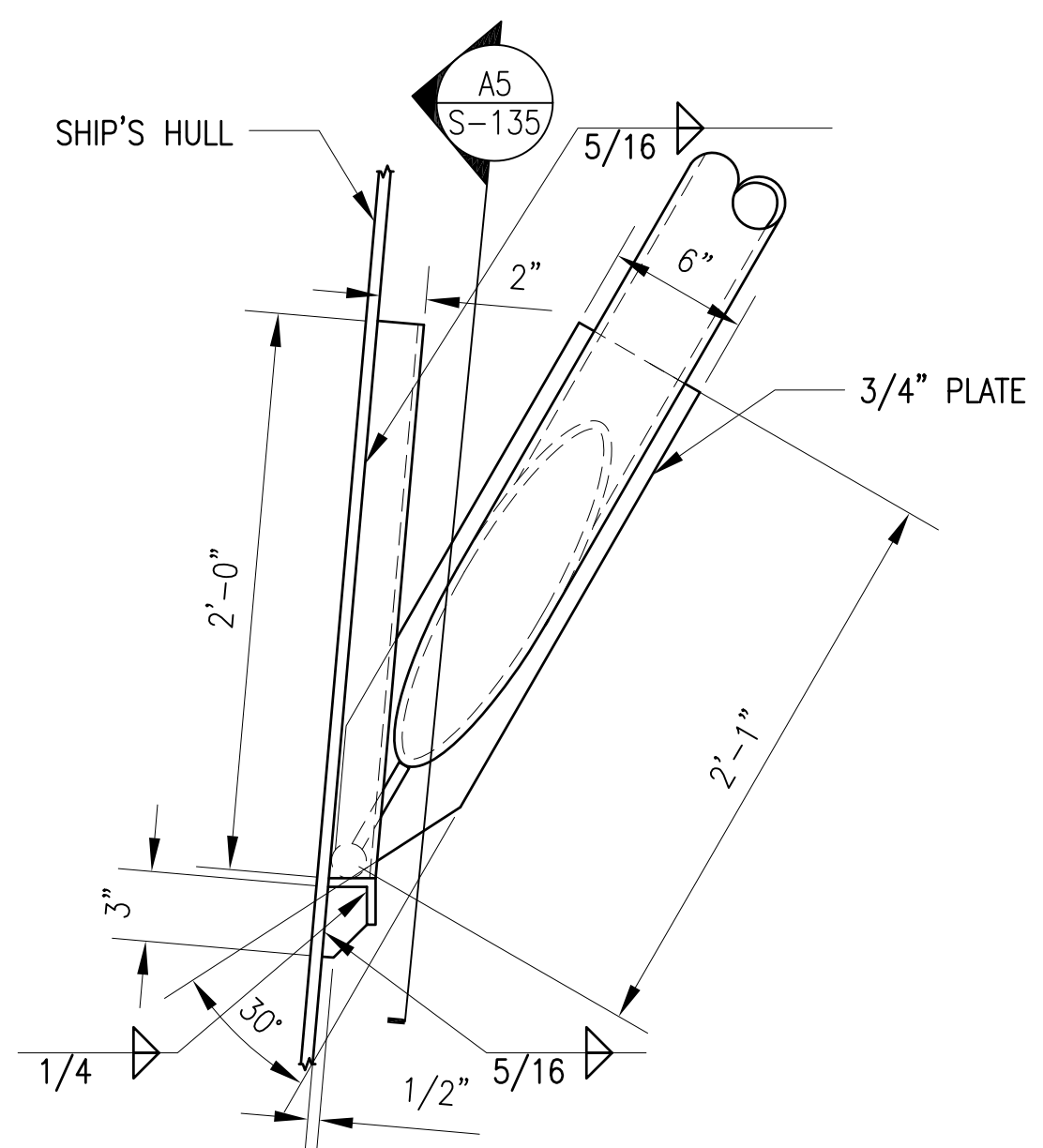
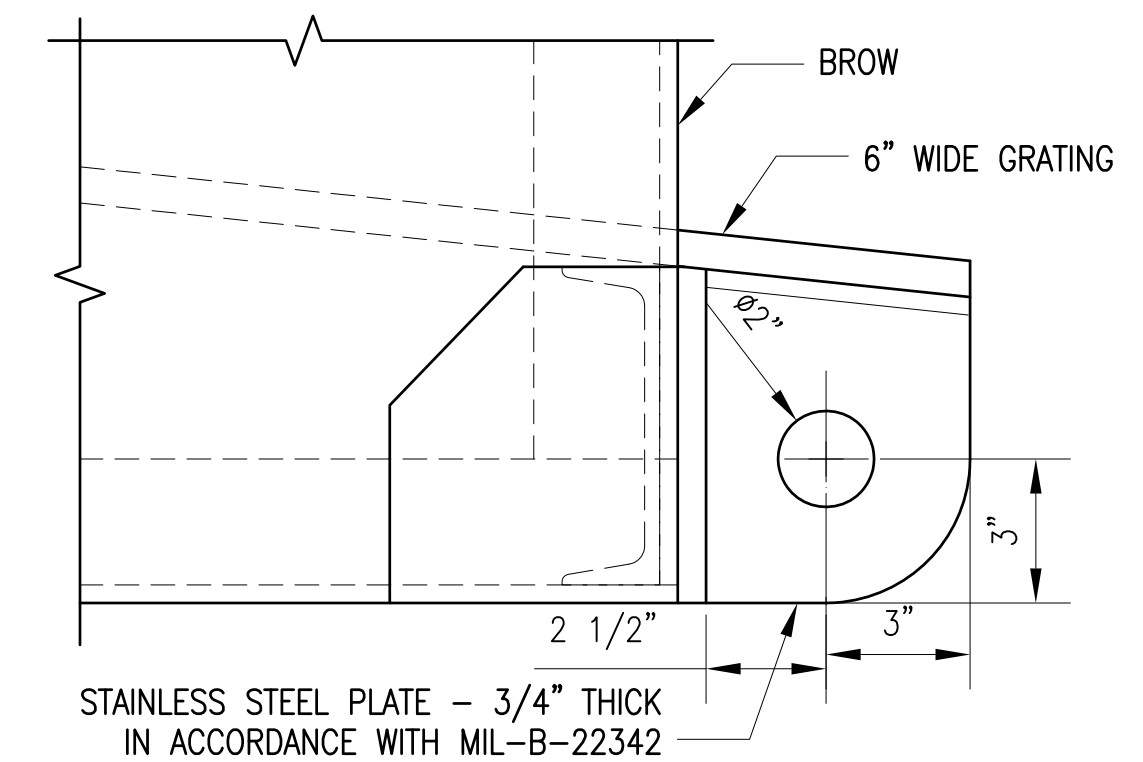
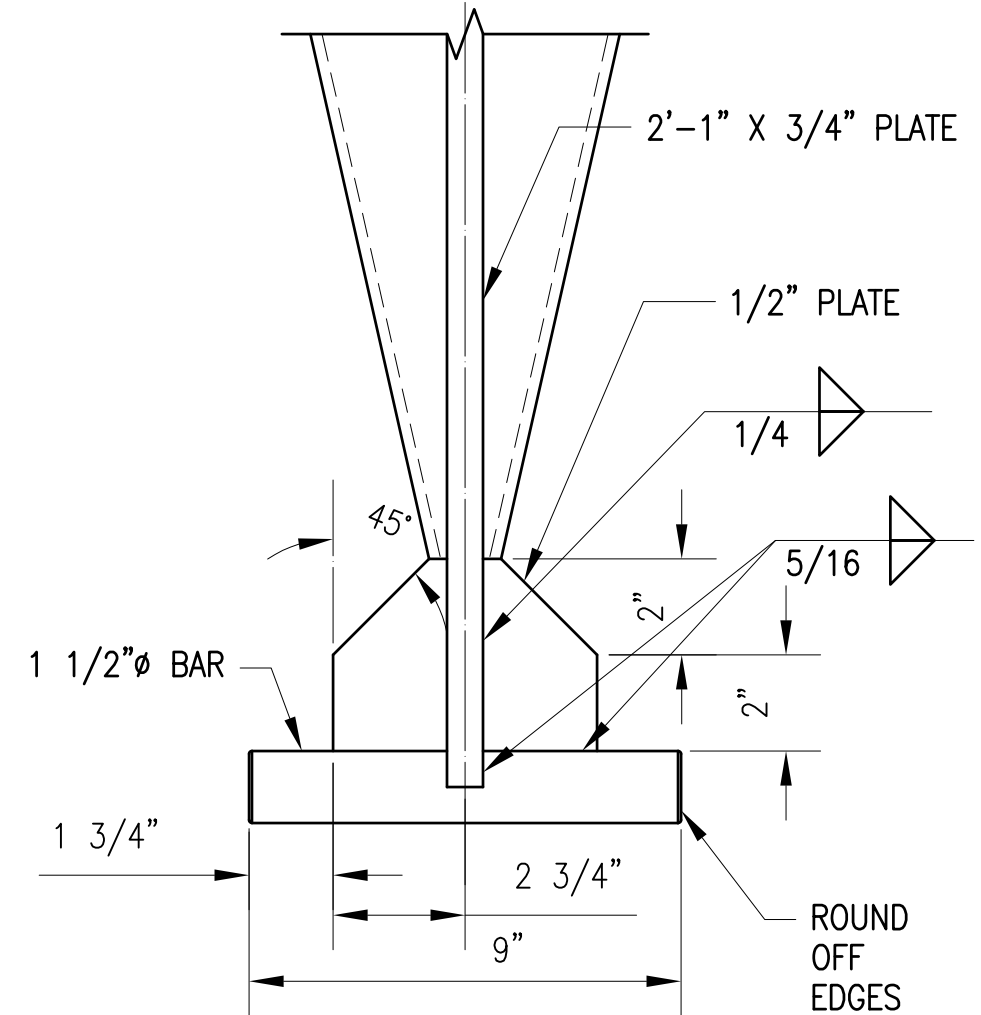
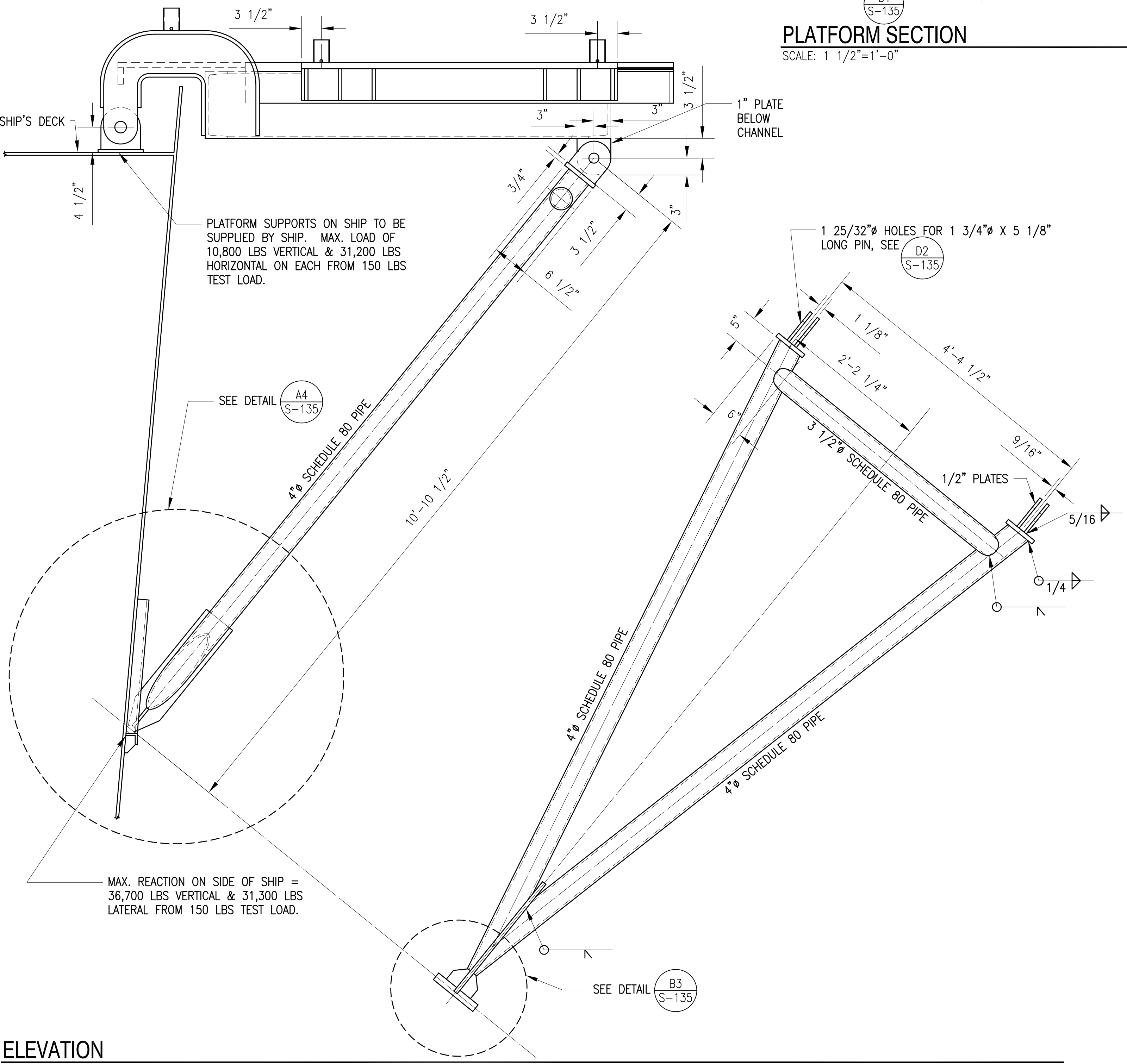
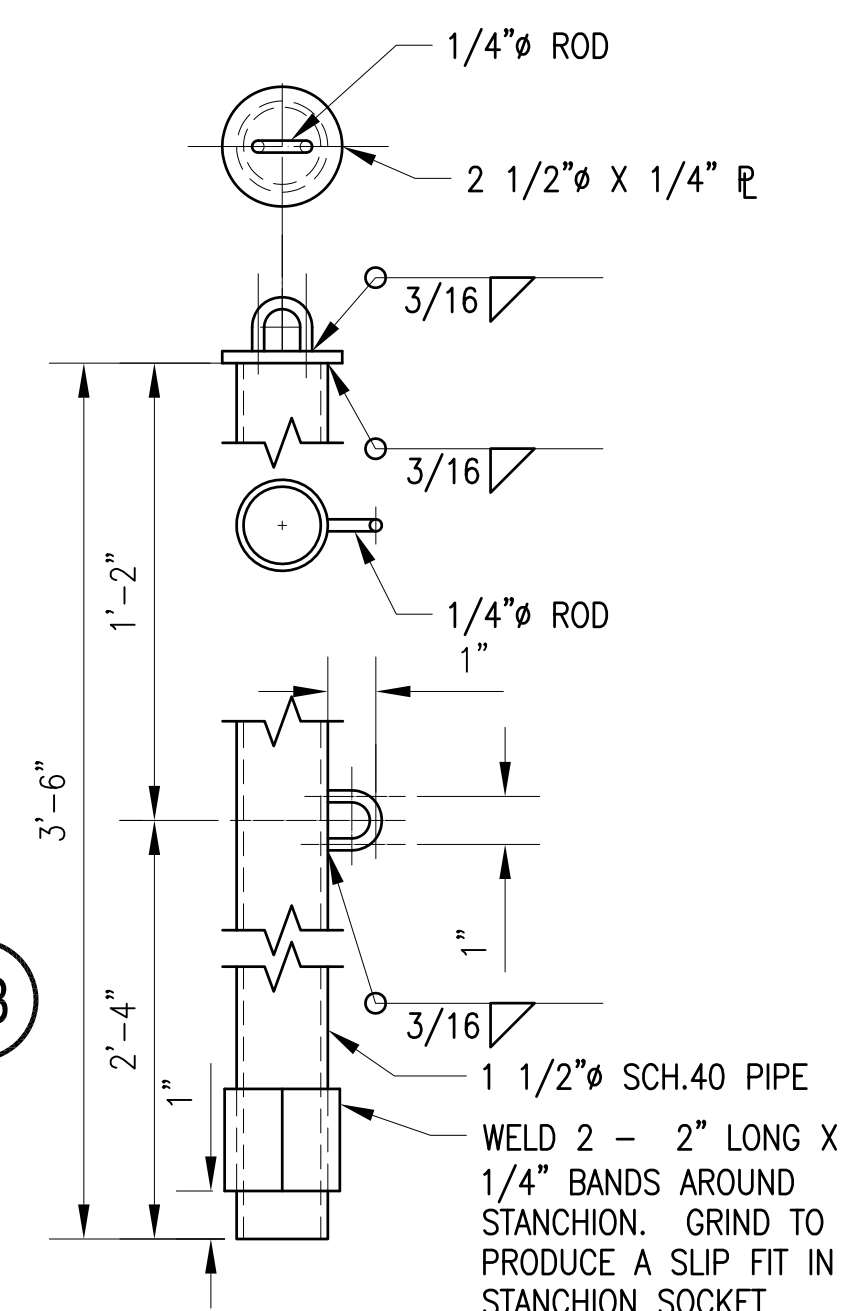
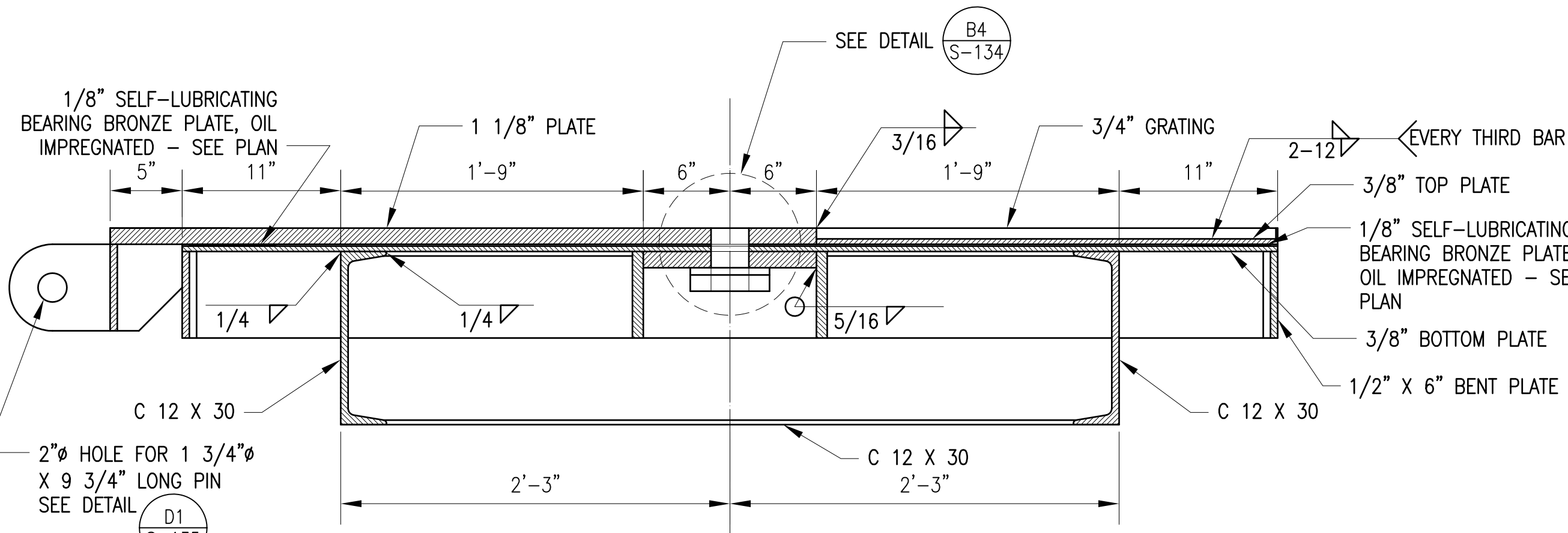
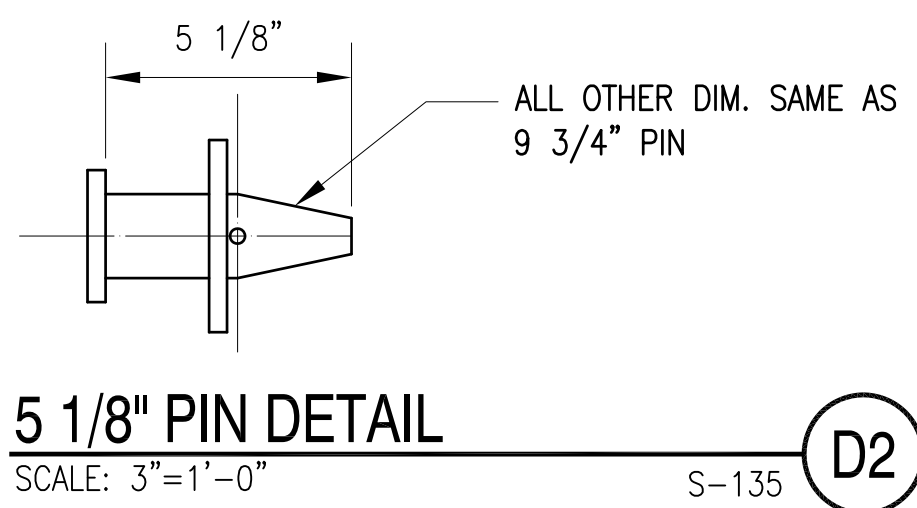
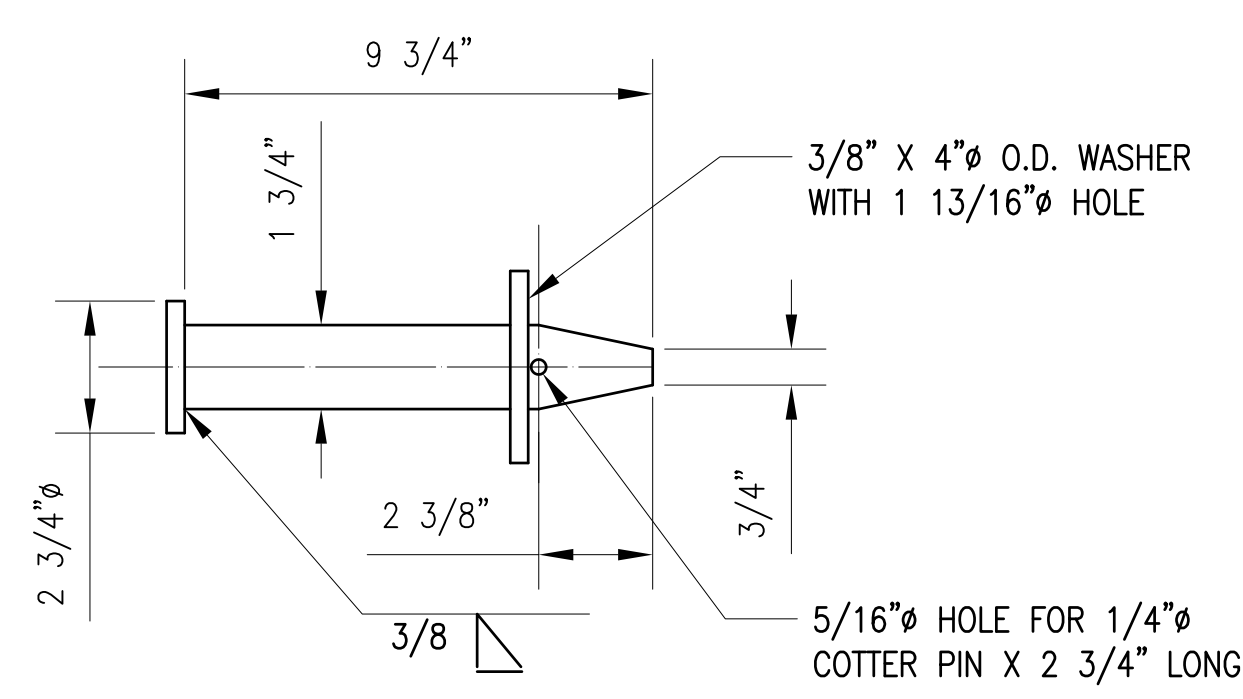
NAVAL CAPITAL IMPROVEMENTS

STANDARD DRAWING BROWS AND PLATFORMS

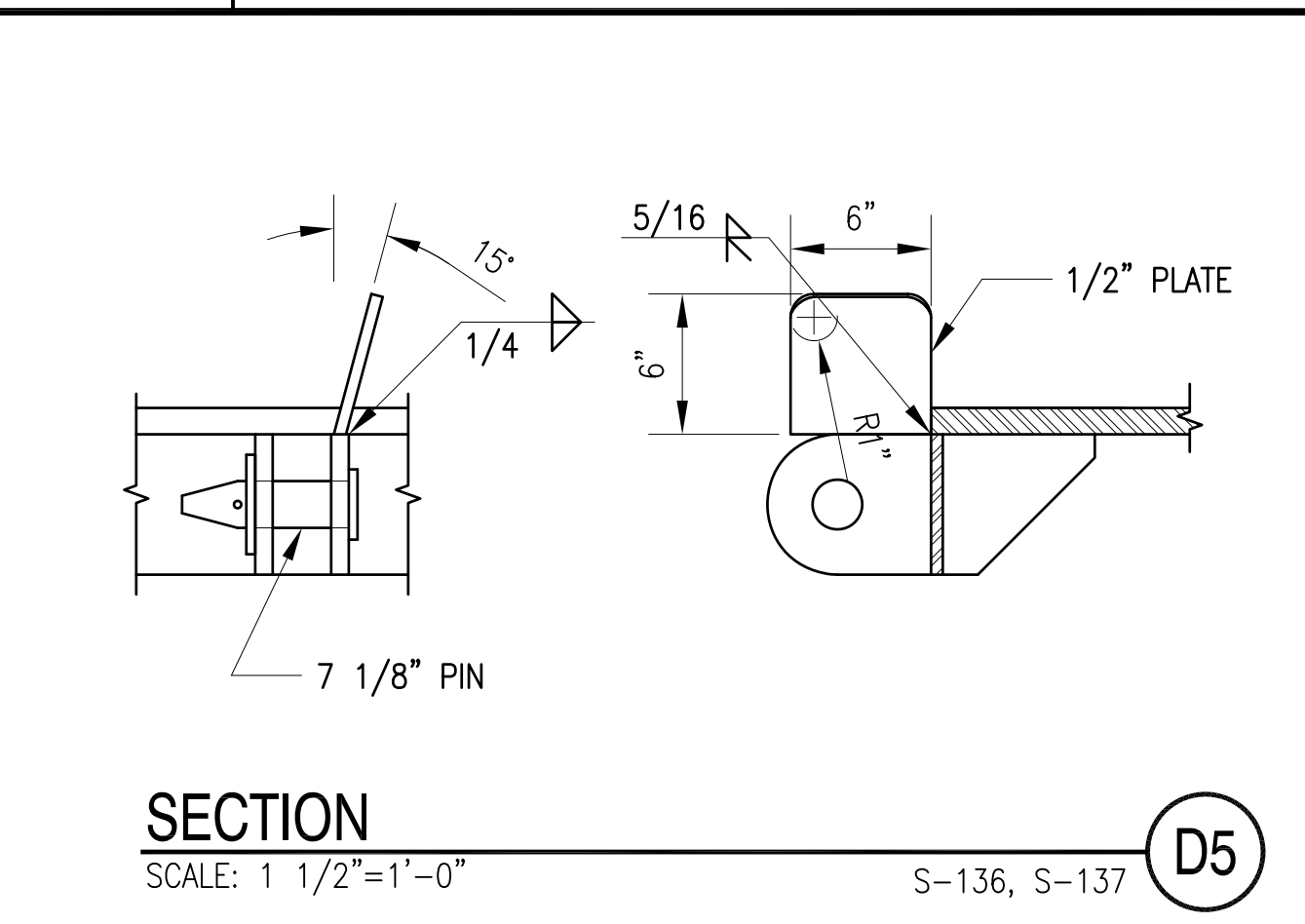
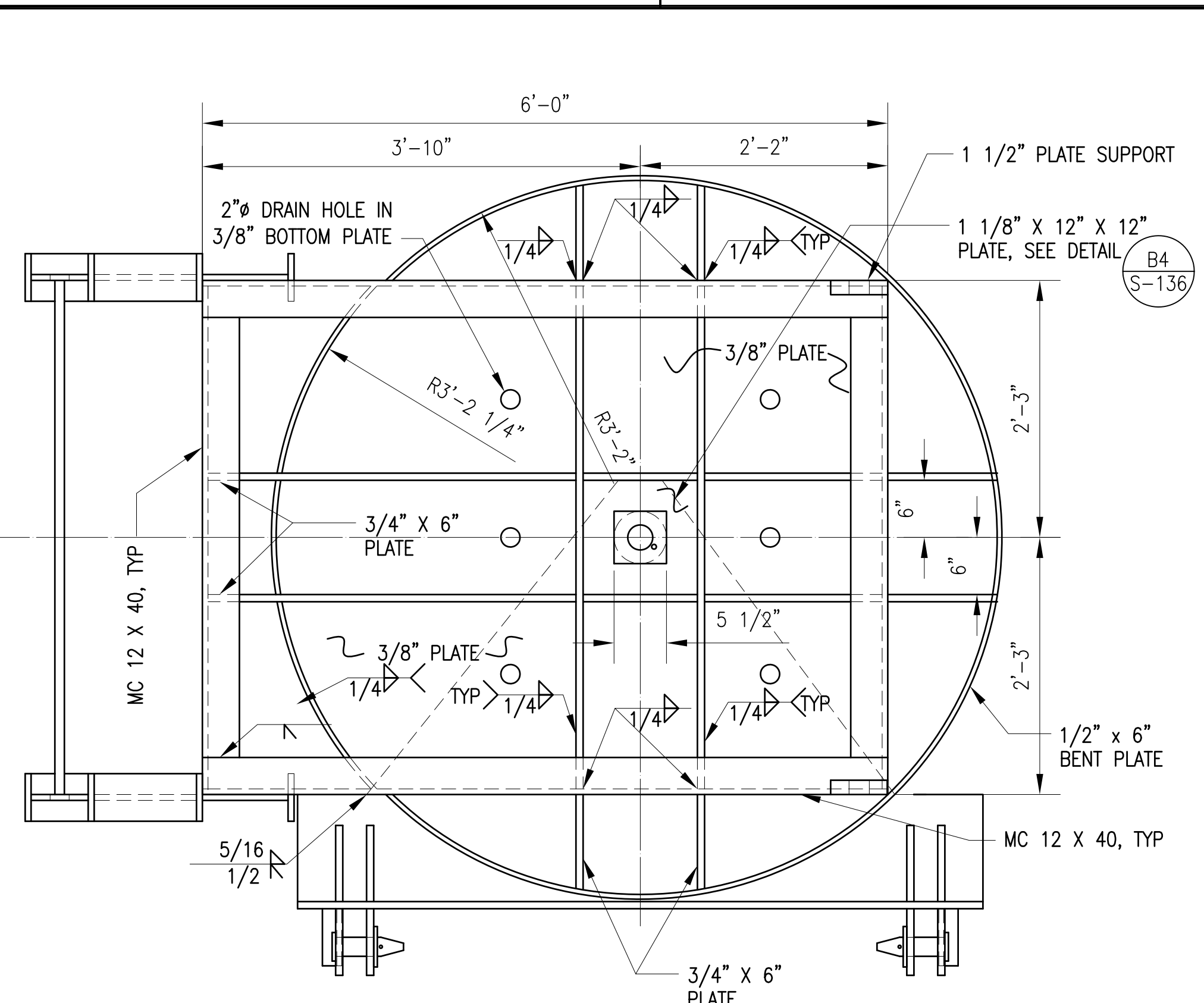
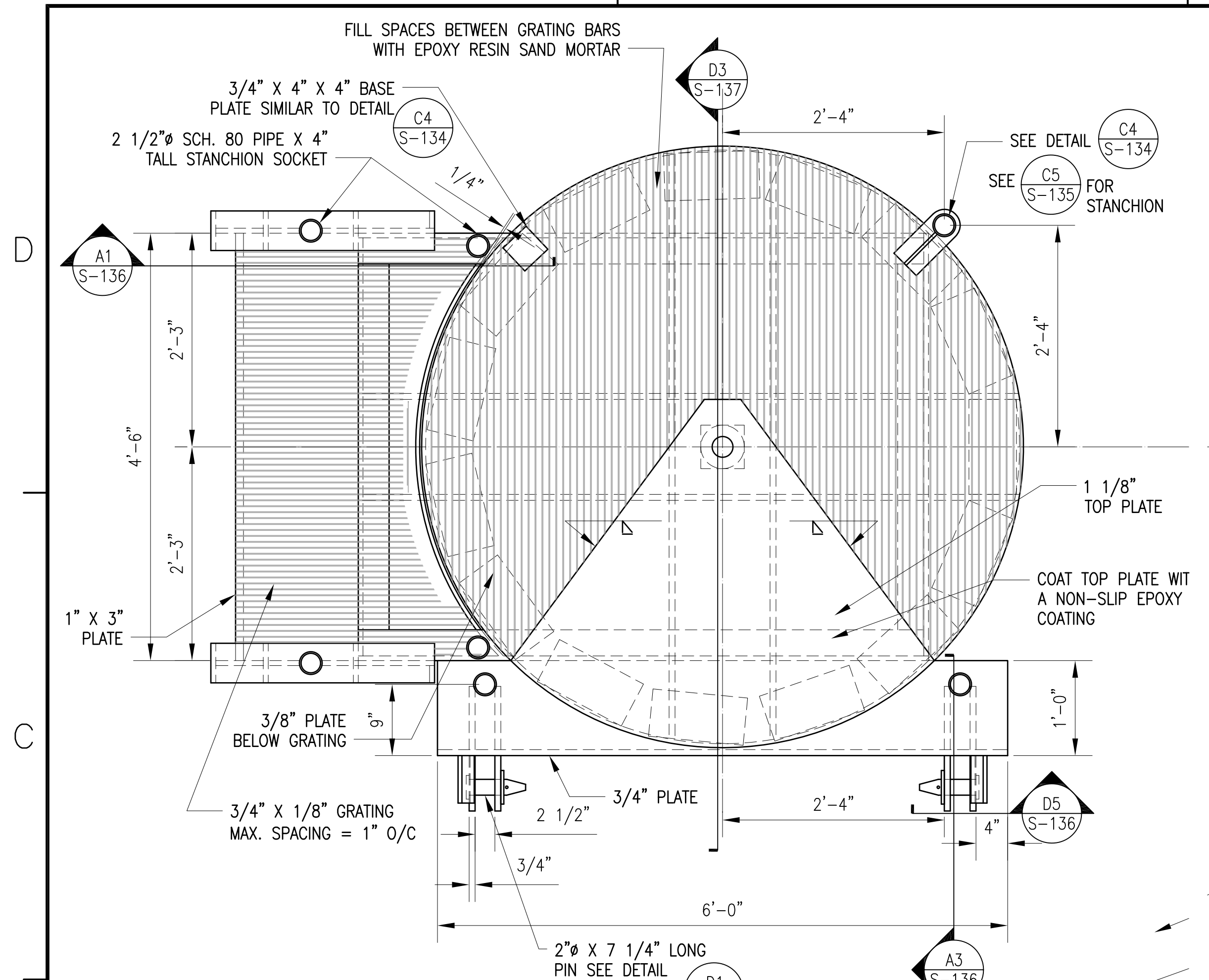
STEEL ROTATING PLATFORM

STEEL ROTATING PLATFORM 3' & 4' WIDE BROW DETAILS

SCALE	AS NOTED
PROJECT NO.	
CONSTR. CONTR. NO.	
NAVFAC DRAWING NO.	SD1405035
SHEET	36 OF 42
<b>S-134</b>	



APPROVED	DATE	APPR
FOR COMMANDER NAVFAC		
ACTIVITY		
SATISFACTORY TO		
DES DBC	DRW DBC	CHK FBC
FW/DM		F. B. COLE
BRANCH MANAGER		
CHIEF ENG/ARCH		E. J. GALLAHER
FIRE PROTECTION		
DEPARTMENT OF THE NAVY	NAVAL FACILITIES ENGINEERING COMMAND	
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC	NORFOLK, VIRGINIA	
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC	STANDARD DRAWING	
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC	BROWS AND PLATFORMS	
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC	STEEL ROTATING PLATFORM	
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC	STEEL ROTATING PLATFORM 3' & 4' WIDE BROW DETAILS	
SCALE: AS NOTED	PROJECT NO.	
CONSTR. CONTR. NO.	NAVFAC DRAWING NO.	
	SD1405036	
SHEET 37 OF 42	S-135	
DRAWING REVISION: 10 MARCH 2009		



**PLATFORM PLAN**

SCALE: 1"=1'-0"

**BOTTOM VIEW - LOOKING UP**

SCALE: 1"=1'-0"

**COATING NOTES**

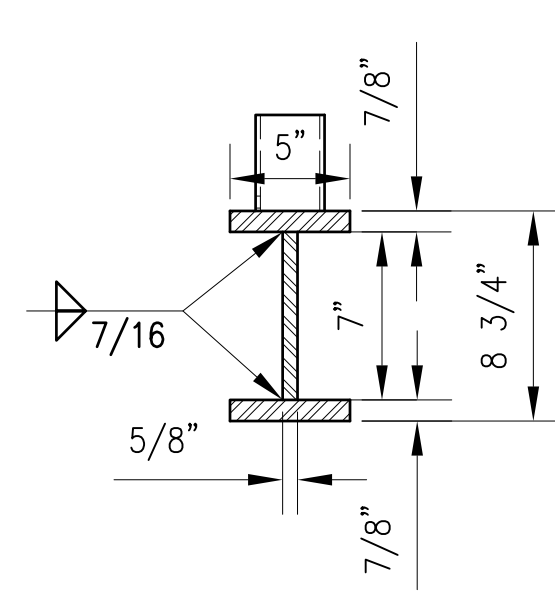
1. ALL STRUCTURAL STEEL SURFACES SHALL BE BLAST CLEANED TO NEAR WHITE METAL IN ACCORDANCE WITH SSPC-SP-10-63T.
2. APPLY A THREE COAT EPOXY-POLYAMIDE SYSTEM CONFORMING TO MIL-P-24441 WITH A TOTAL DRY THICKNESS OF 9 MILS. THE INDIVIDUAL COATS SHALL BE AS FOLLOWS:

FIRST COAT	FORMULA 150 (GREEN PRIMER)	3MILS
SECOND COAT	FORMULA 150 (GREEN WHITE)	3MILS
TOP COAT	FORMULA 150 (HAZE GREY)	3MILS

THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y & D DRAWING 1046647.

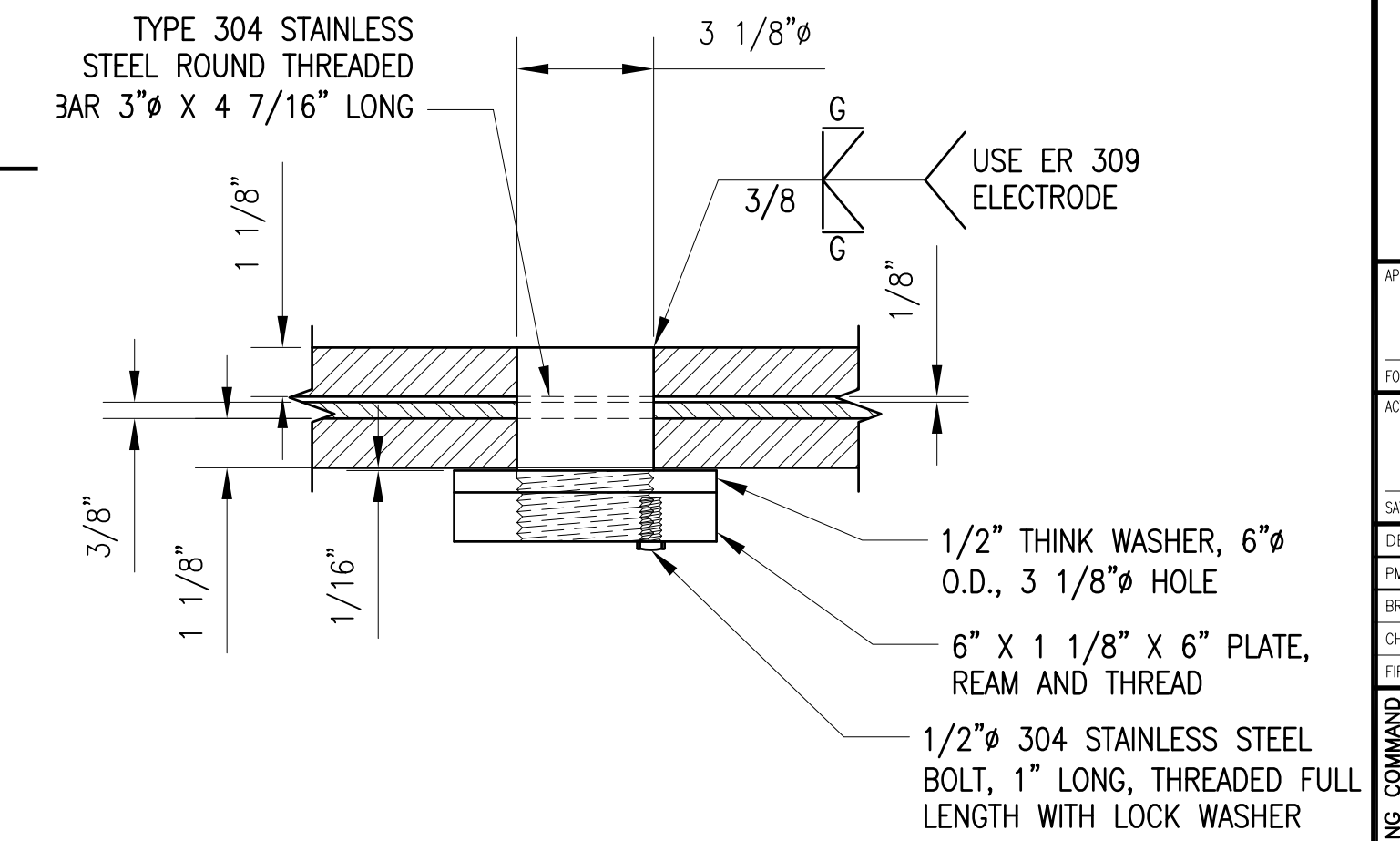
**SECTION**

SCALE: 1 1/2"=1'-0"



**REFERENCE NOTES**

1. FOR DETAILS OF BROWS SEE SHEETS S-101 THRU S-125.
2. FOR BROW LOADS SEE SHEET S-133.
3. ATTACH BROW CONNECTION TO BROW AS SHOWN IN B4 S-137



**DETAIL**

SCALE: 3"=1'-0"

S-136, S-137

**GENERAL NOTES**

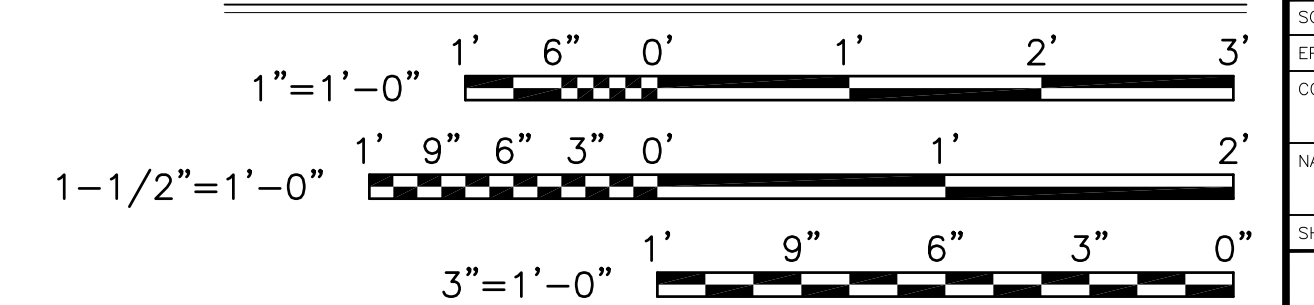
DESIGN LIVE LOAD = 75 PSF  
DESIGN TEST LOAD = 150 PSF  
ALL STRUCTURAL STEEL PLATES AND SHAPES SHALL CONFORM TO ASTM SPECIFICATION A36 (Fy=36,000 PSI).

WELDING SHALL CONFORM TO THE SPECIFICATIONS OF THE AMERICAN WELDING SOCIETY.

PLATFORM SHALL BE TESTED WITH A 150 PSF TEST LOAD ON PLATFORM AND ON A 5 FT x 80 FT STANDARD ALUMINUM BROW JOINED TO IT.

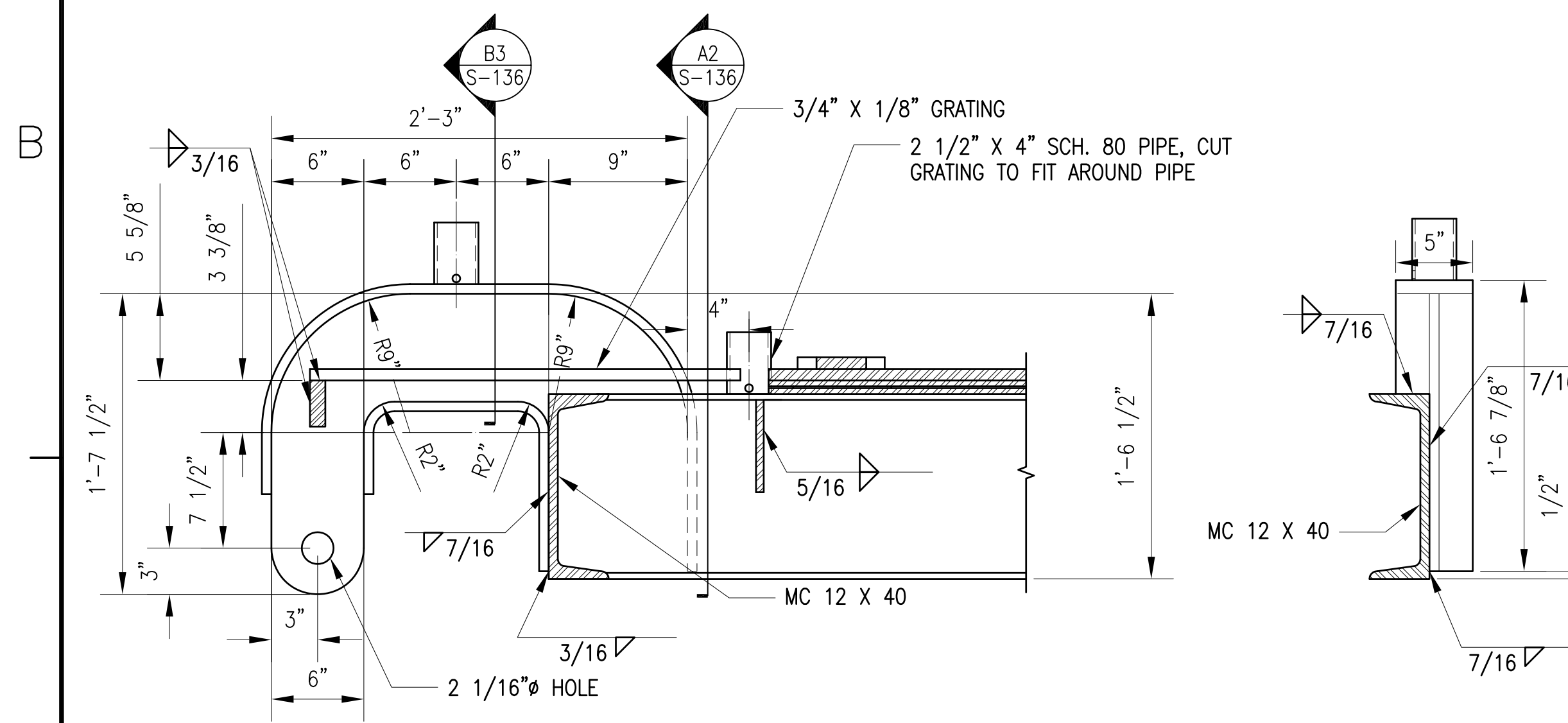
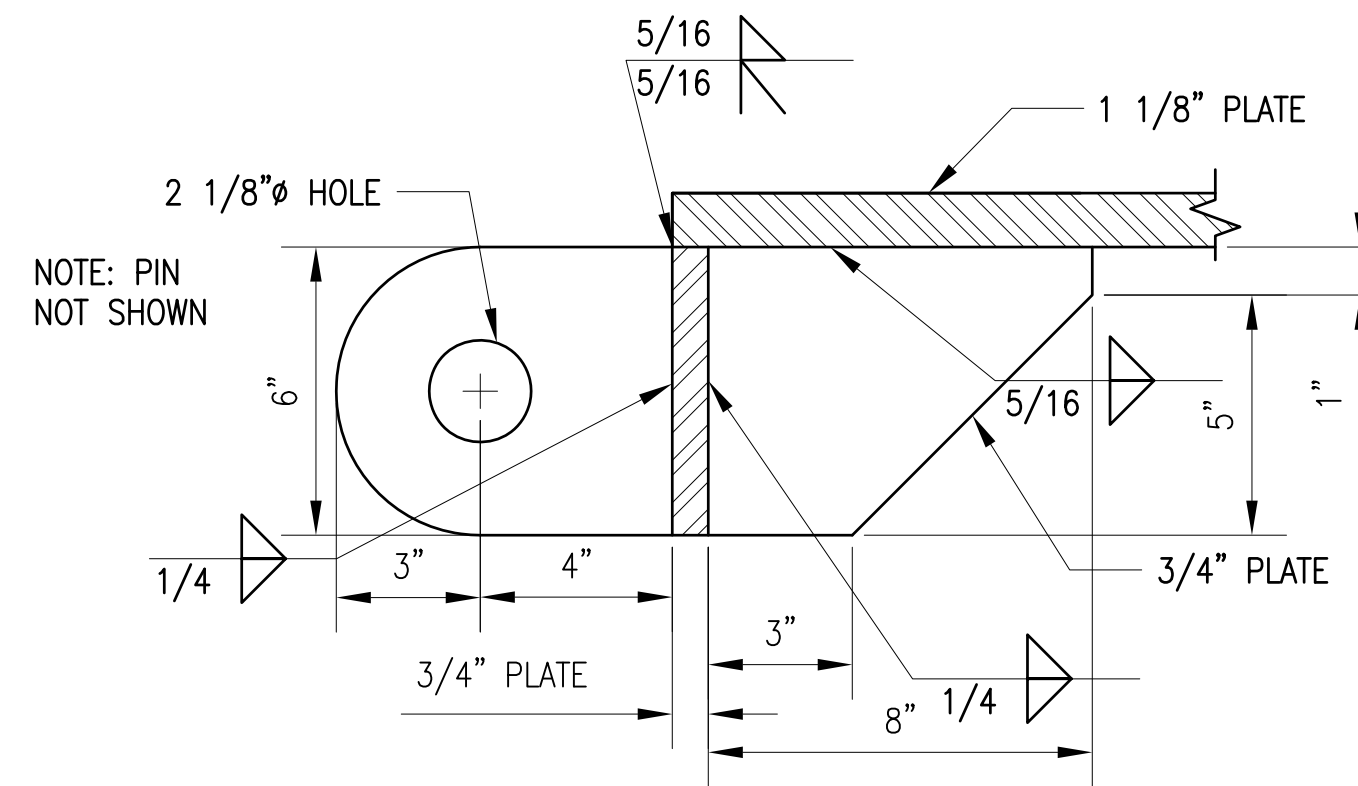
A TOTAL EQUIV. LOAD FROM BROW EQUAL TO 33,500 POUNDS CAN BE HUNG ON BROW CONNECTIONS TO SIMULATE THE 5 FT x 80 FT BROW LOADING. THE PLATFORM CAN BE ROTATED TO ANY OF ITS POSSIBLE POSITIONS WHILE THUS LOADED. THE STRENGTH OF THE VARIOUS MEMBERS MAKING UP THE PLATFORM IS CONTROLLED BY THE ABOVE TEST LOADING WITH STRESSES NOT EXCEEDING 1.33 TIMES THE ALLOWABLE UNIT STRESSES SPECIFIED BY THE AISC SPECIFICATIONS. APPROX. WEIGHT OF THE PLATFORM =4000 LB. ALL REMOVABLE PINS SHALL BE SECURED TO PLATFORM WITH CHAIN.

**GRAPHIC SCALES:**



**DETAIL**

SCALE: 3"=1'-0"



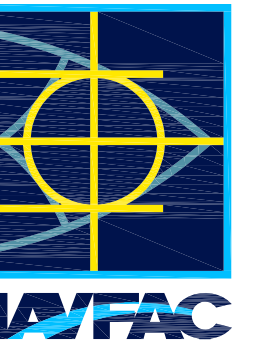
**SHIP SUPPORT SECTION**

SCALE: 1 1/2"=1'-0"

**SECTION**

SCALE: 1 1/2"=1'-0"

GENERAL REVISIONS	DATE	DESCRIPTION
1	7/12	



A/E INFO

FOR COMMANDER NAVFAC

SATISFACTORY TO

DES DBC DRW DBC CHK FBC

PNW/DM F. B. COLE

BRANCH MANAGER

CHIEF ENG/ARCH E. J. GALLAHER

FIRE PROTECTION

NAVAL FACILITIES ENGINEERING COMMAND

NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC

NOFFOLK, VIRGINIA

LAKE CAPITAL IMPROVEMENTS

STANDARD DRAWING

BROWS AND PLATFORMS

STEEL ROTATING PLATFORM

STEEL ROTATING PLATFORM 5' WIDE BROW DETAILS

SCALE: AS NOTED

PROJECT NO.

CONSTR. CONTR. NO.

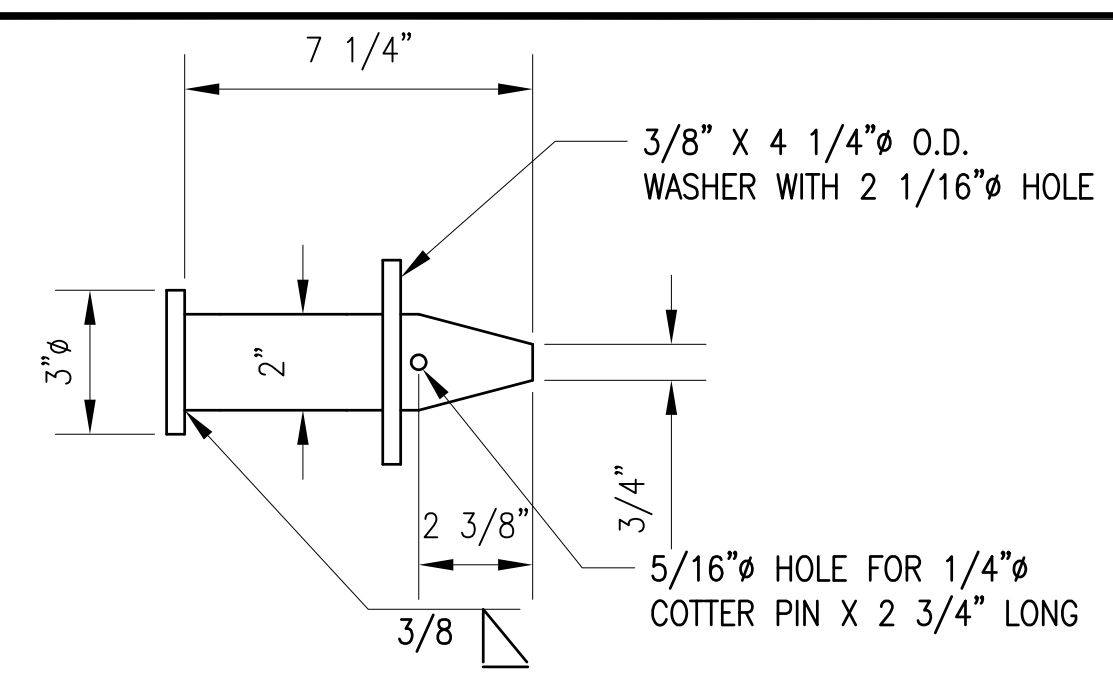
NAVFAC DRAWING NO.

SD1405037

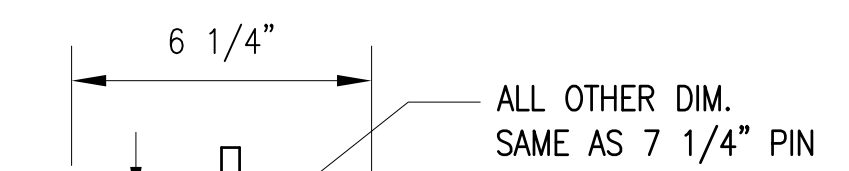
SHEET 38 OF 42

S-136

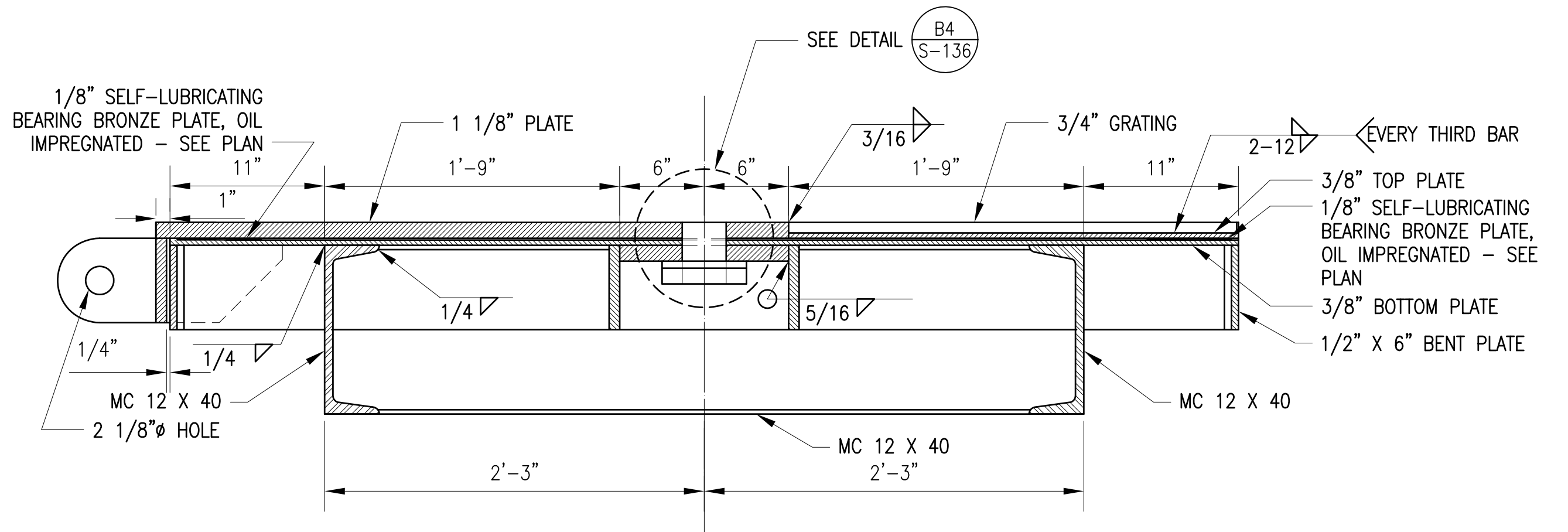
DRAWING REVISION: 10 MARCH 2009



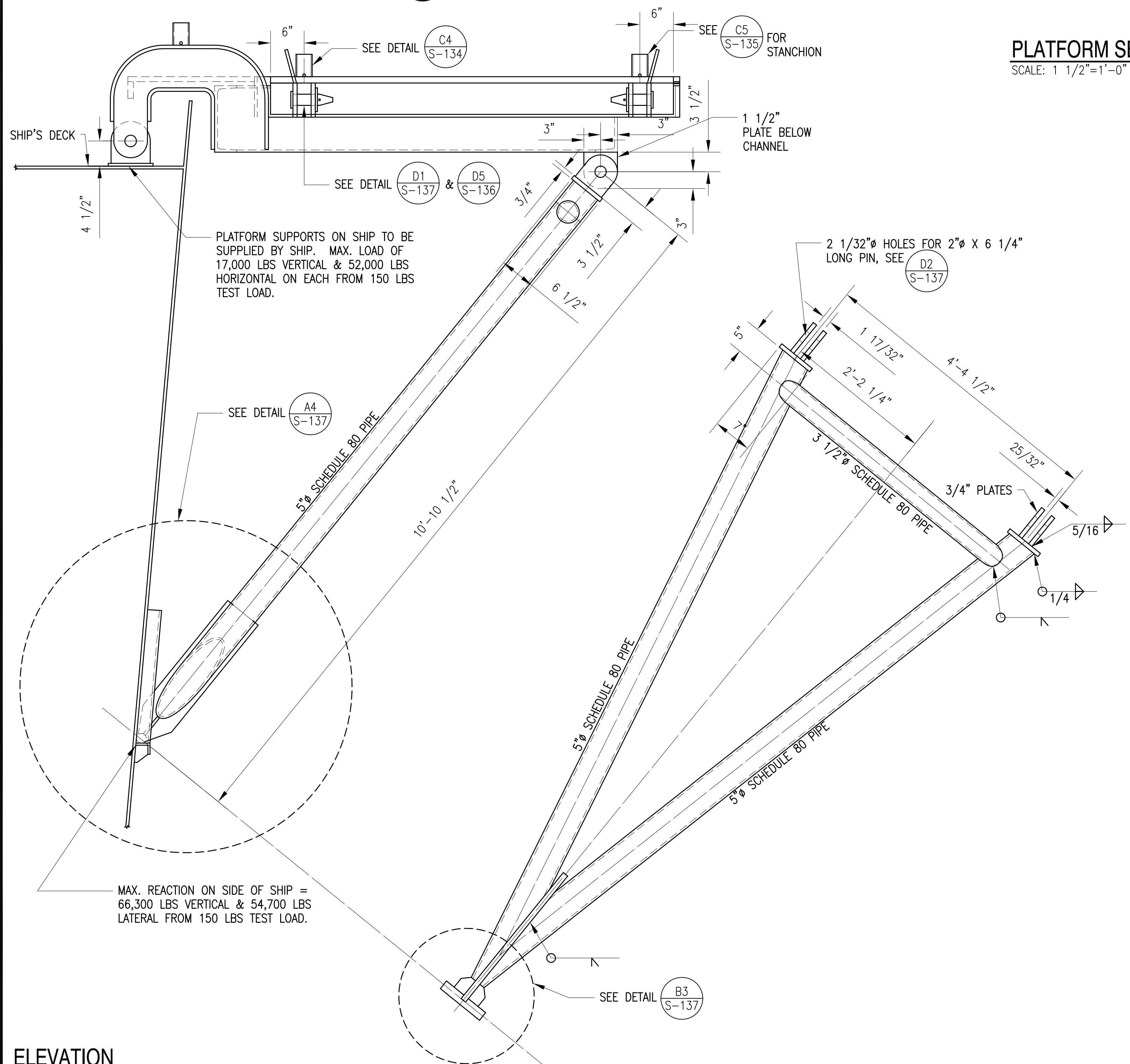
**7 1/4" PIN DETAIL**  
SCALE: 3"=1'-0"



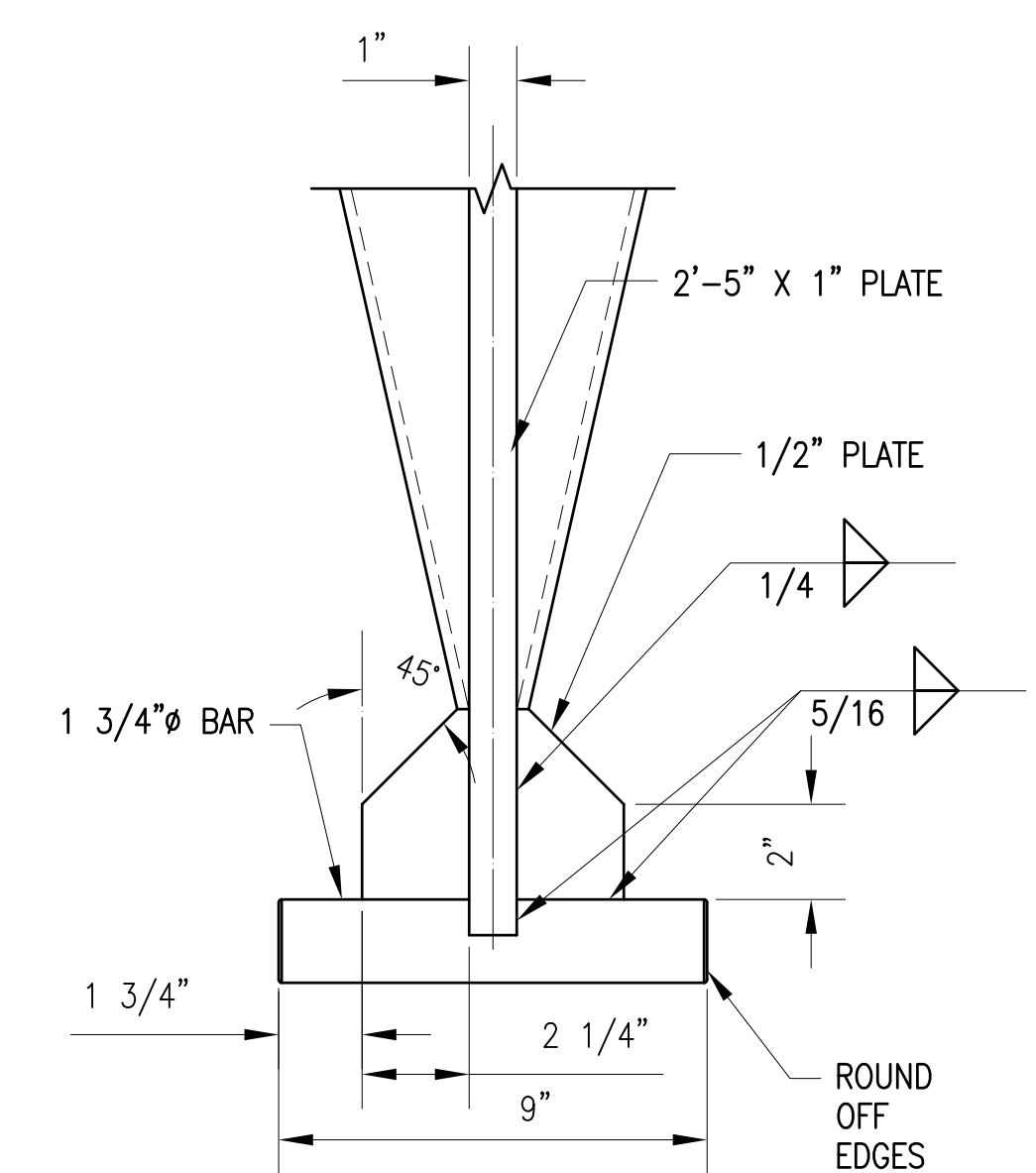
**6 1/4" PIN DETAIL**  
SCALE: 3"=1'-0"



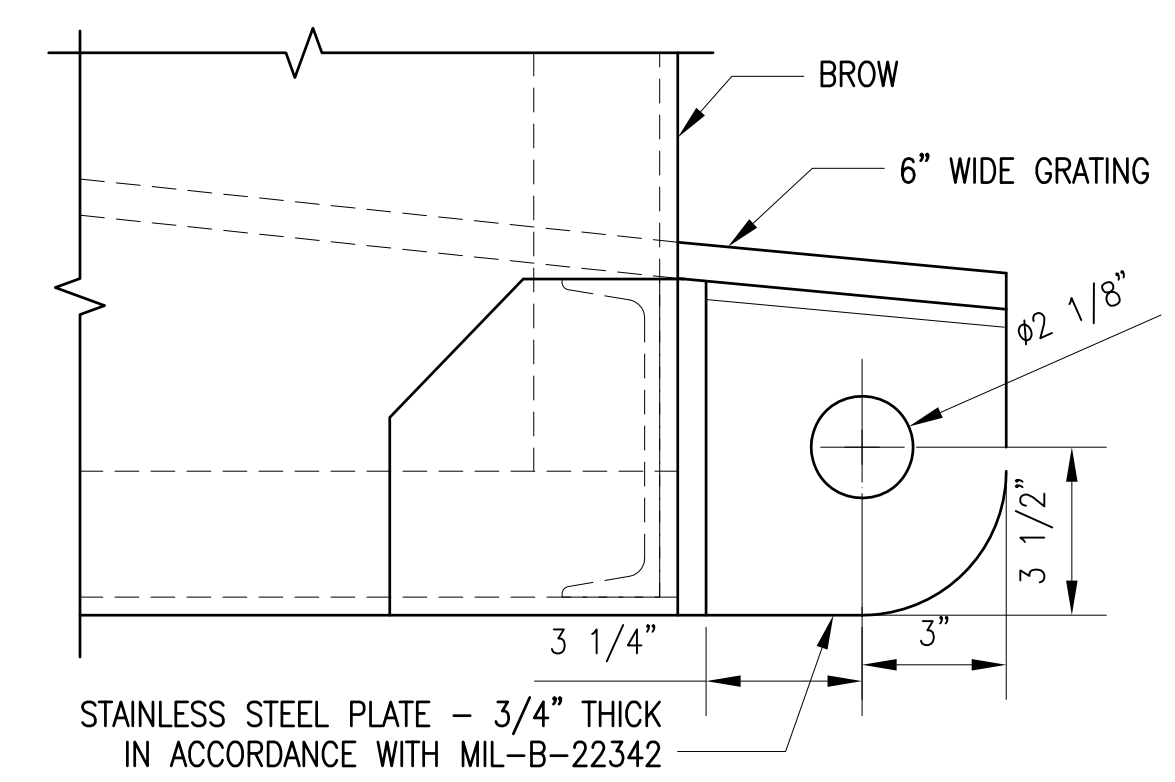
**PLATFORM SECTION**  
SCALE: 1 1/2"=1'-0"



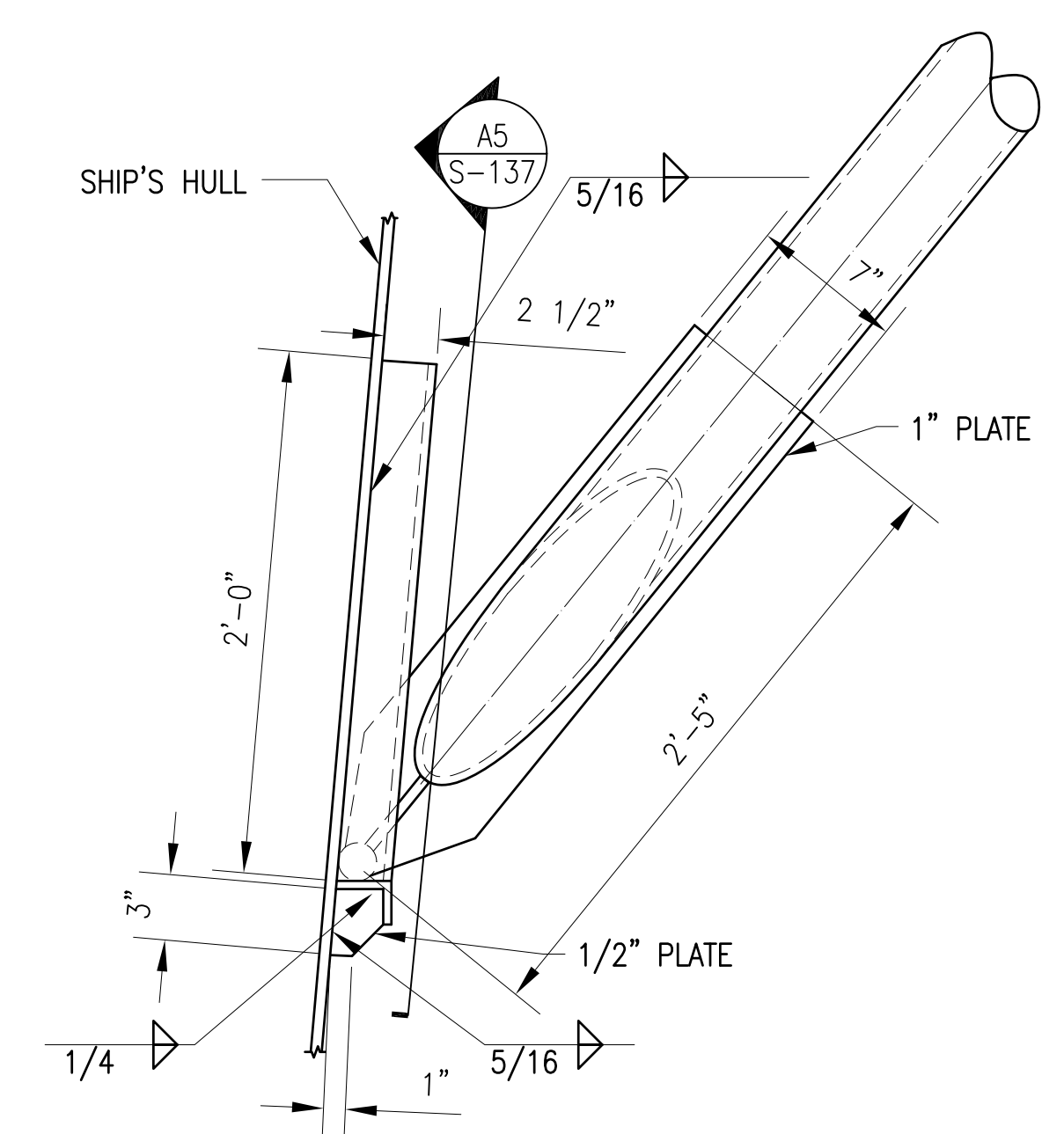
**ELEVATION**  
SCALE: 1"=1'-0"



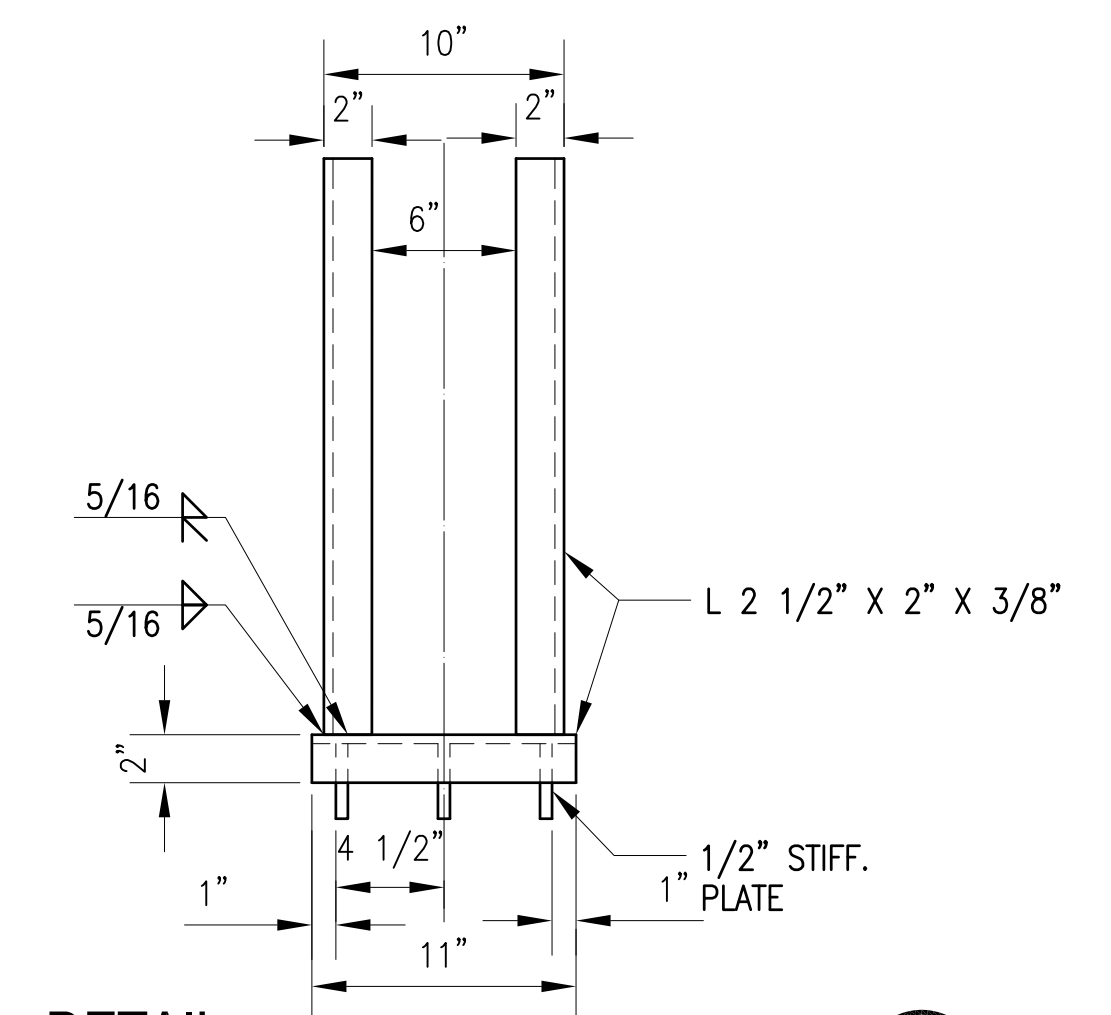
**DETAIL**  
SCALE: 3"=1'-0"



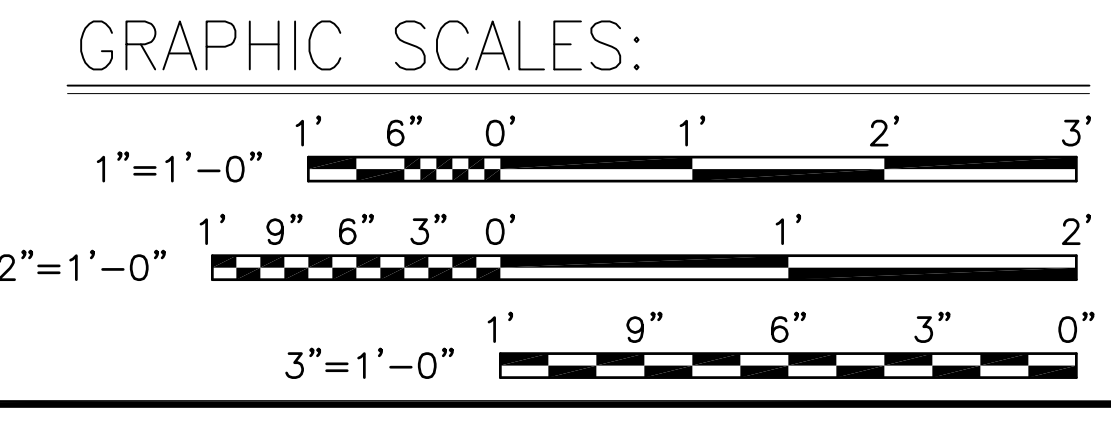
**BROW CONNECTION DETAIL**  
SCALE: 3"=1'-0"



**DETAIL**  
SCALE: 1 1/2"=1'-0"



**DETAIL**  
SCALE: 1 1/2"=1'-0"



GENERAL REVISIONS	DATE	APPR
1	7/12	

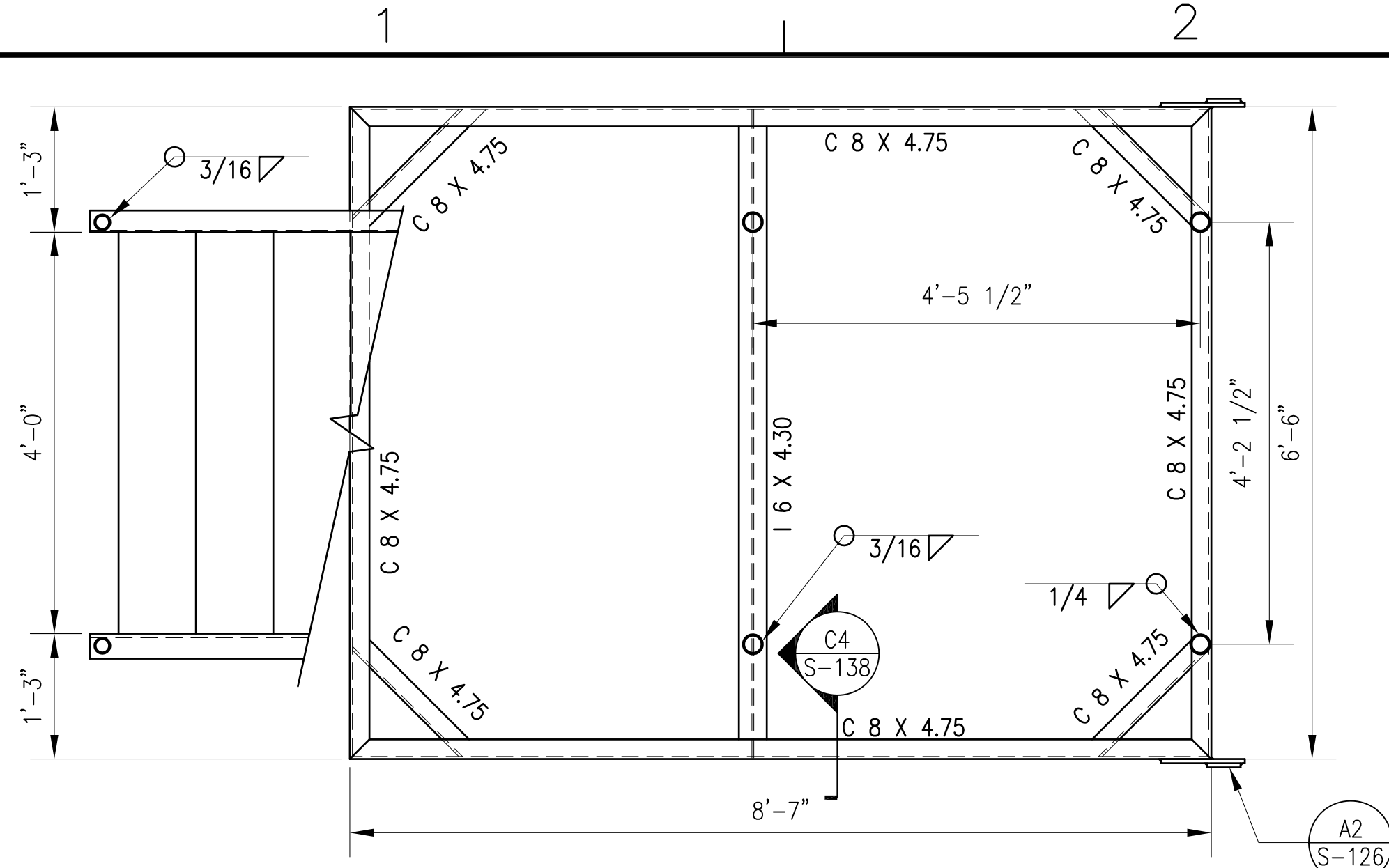


FOR COMMANDER NAVFAC		
ACTIVITY		
SATISFACTORY TO		
DES DBC	DRW DBC	CHK FBC
FW/DM	F. B. COLE	
BRANCH MANAGER		
CHIEF ENG/ARCH	E. J. GALLAHER	
FIRE PROTECTION		

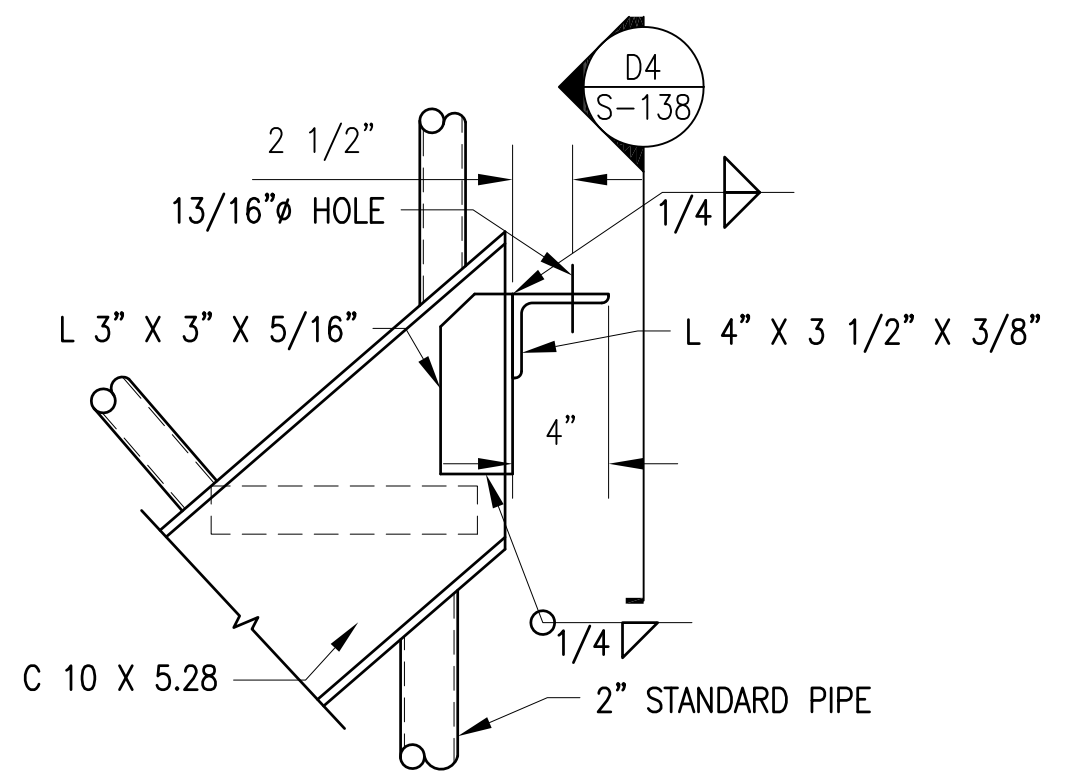
NAVAL FACILITIES ENGINEERING COMMAND
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC
NORFOLK, VIRGINIA
NAVFAC DRAWING NO. SD1405038
SHEET 39 OF 42

STANDARD DRAWING  
BROWS AND PLATFORMS  
STEEL ROTATING PLATFORM  
STEEL ROTATING PLATFORM 5" WIDE BROW DETAILS

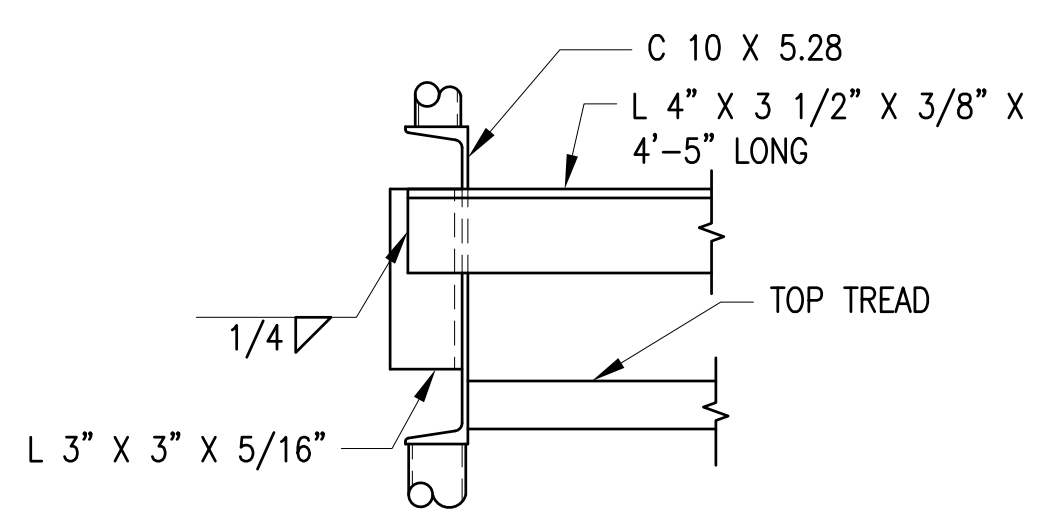
SCALE: AS NOTED
PROJECT NO.
CONSTR. CONTR. NO.
NAVFORM REVISION: 10 MARCH 2009



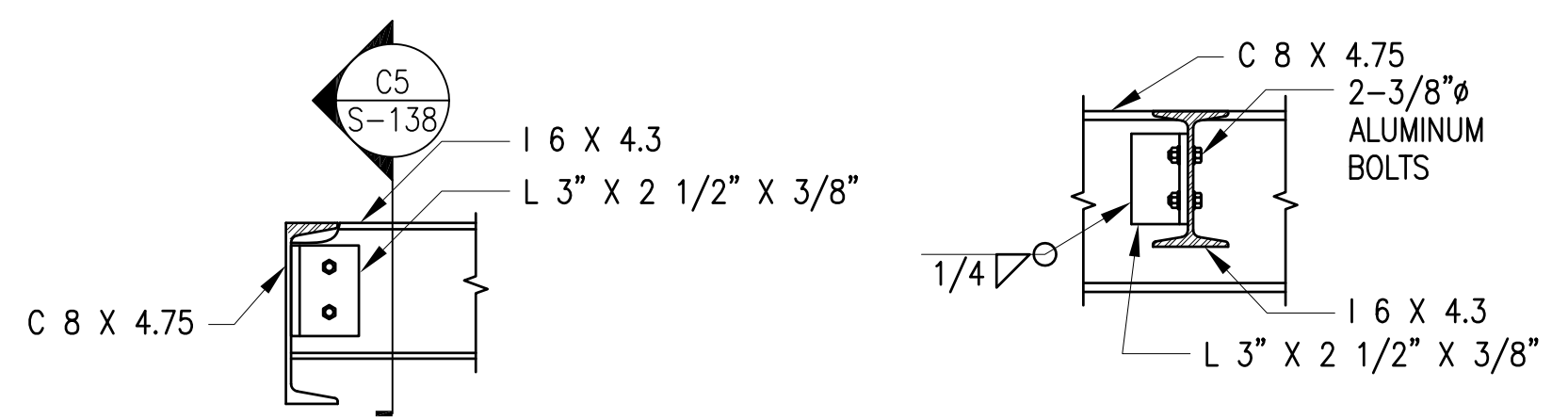
**BOTTOM FRAME PLAN**  
SCALE: 3/4"=1'-0"



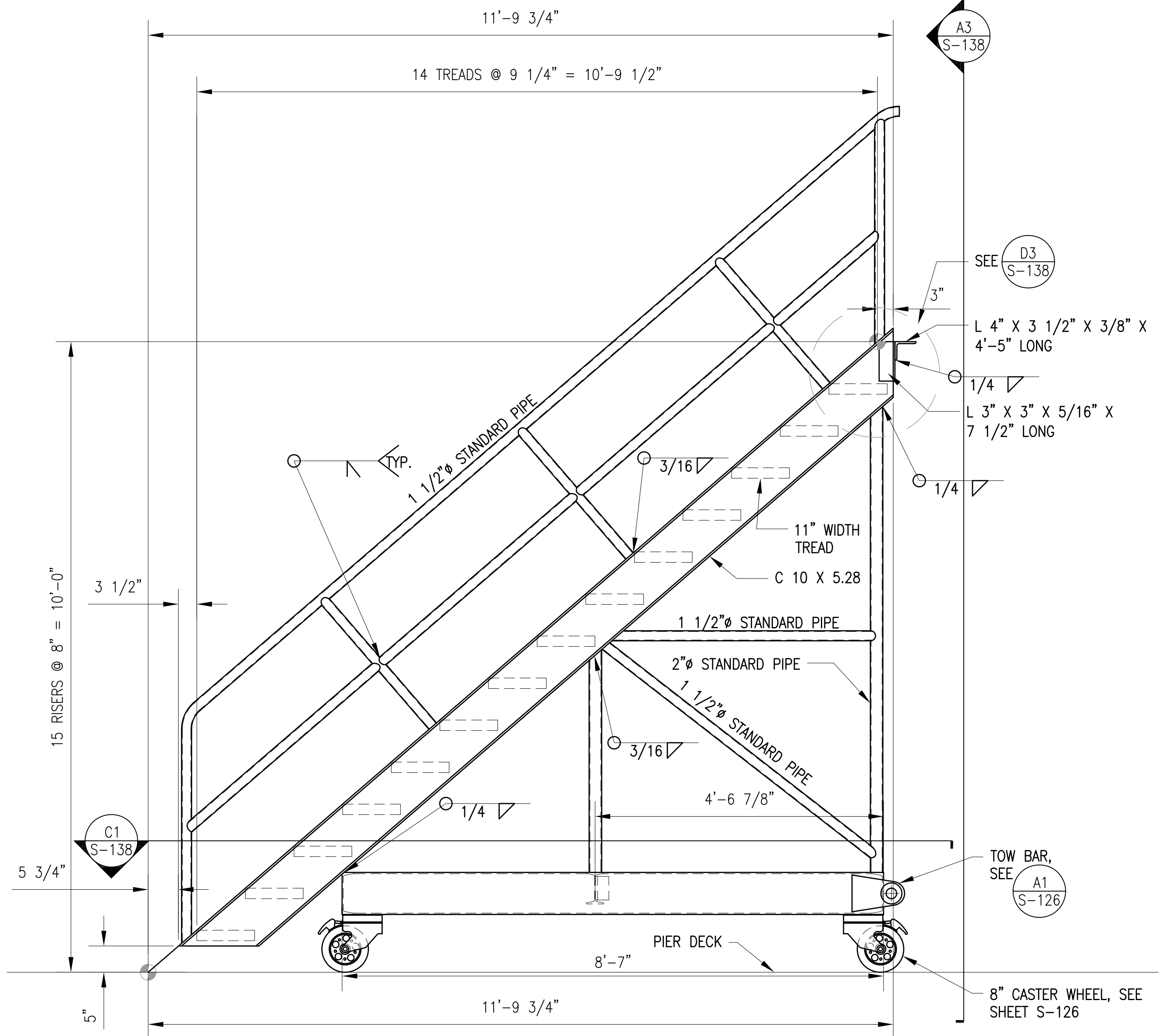
**TOP CHANNEL SECTION**  
SCALE: 1 1/2"=1'-0"



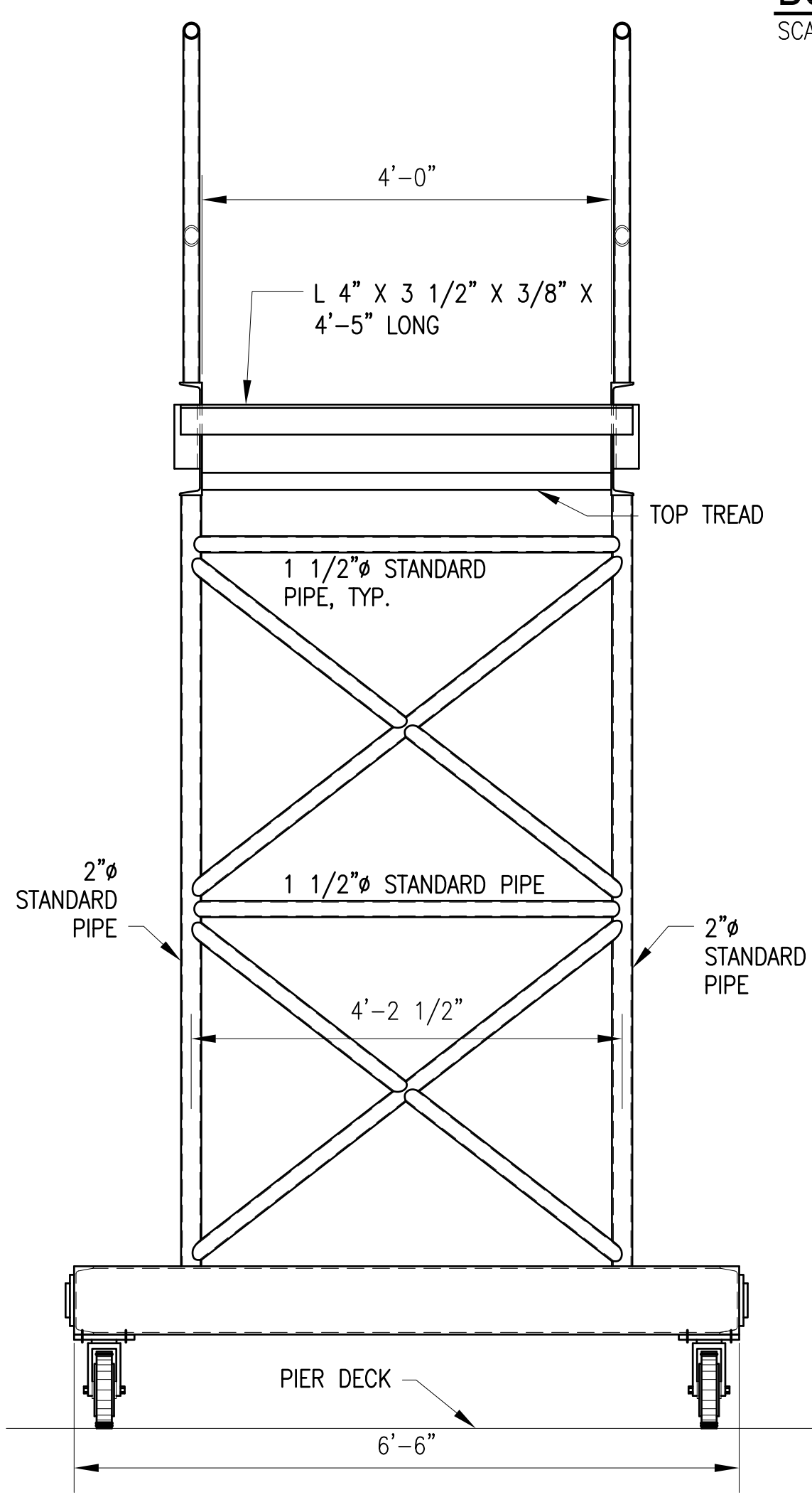
**TOP ELEVATION**  
SCALE: 1 1/2"=1'-0"



**BOTTOM CHANNEL SECTION**  
SCALE: 1 1/2"=1'-0"



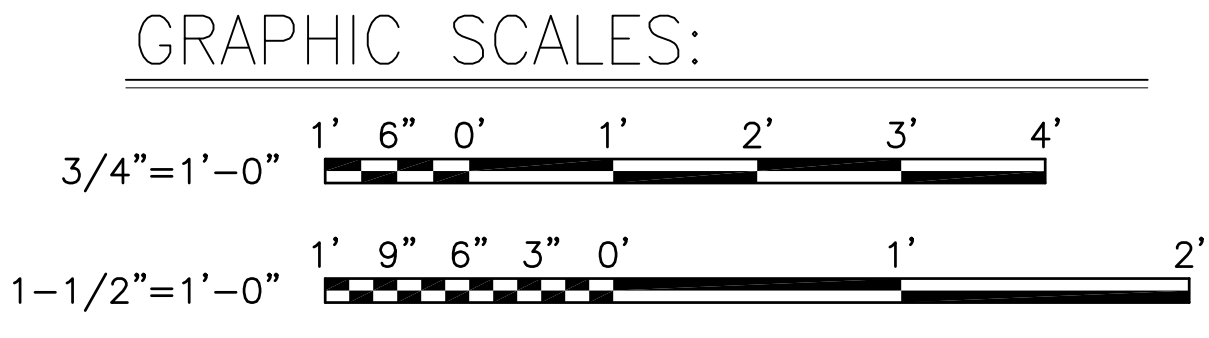
**ELEVATION**  
SCALE: 3/4"=1'-0"



**END ELEVATION VIEW**  
SCALE: 3/4"=1'-0"

**GENERAL NOTES**

1. ALL MATERIAL SHALL BE 6061-T6 ALUMINUM ALLOY UNLESS OTHERWISE NOTED.
2. PLATFORMS SHOWN ON SHEETS S-126 THRU S-130.
3. DESIGN LOAD 75 PSF.
4. CASTER WHEELS SHALL BE PROVIDED WITH BRAKES CAPABLE OF WITHSTANDING A 500 LB HORIZONTAL FORCE.
5. THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 883218 INCLUDING REVISION B. CALCULATIONS FOR Y&D 883218 ARE CONTAINED IN BOOKS 5014, 5015 AND 5023.



GENERAL REVISIONS	DATE	DESCRIPTION
1	7/12	



DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC DRAWING NO. SD1405039  
SHEET 40 OF 42

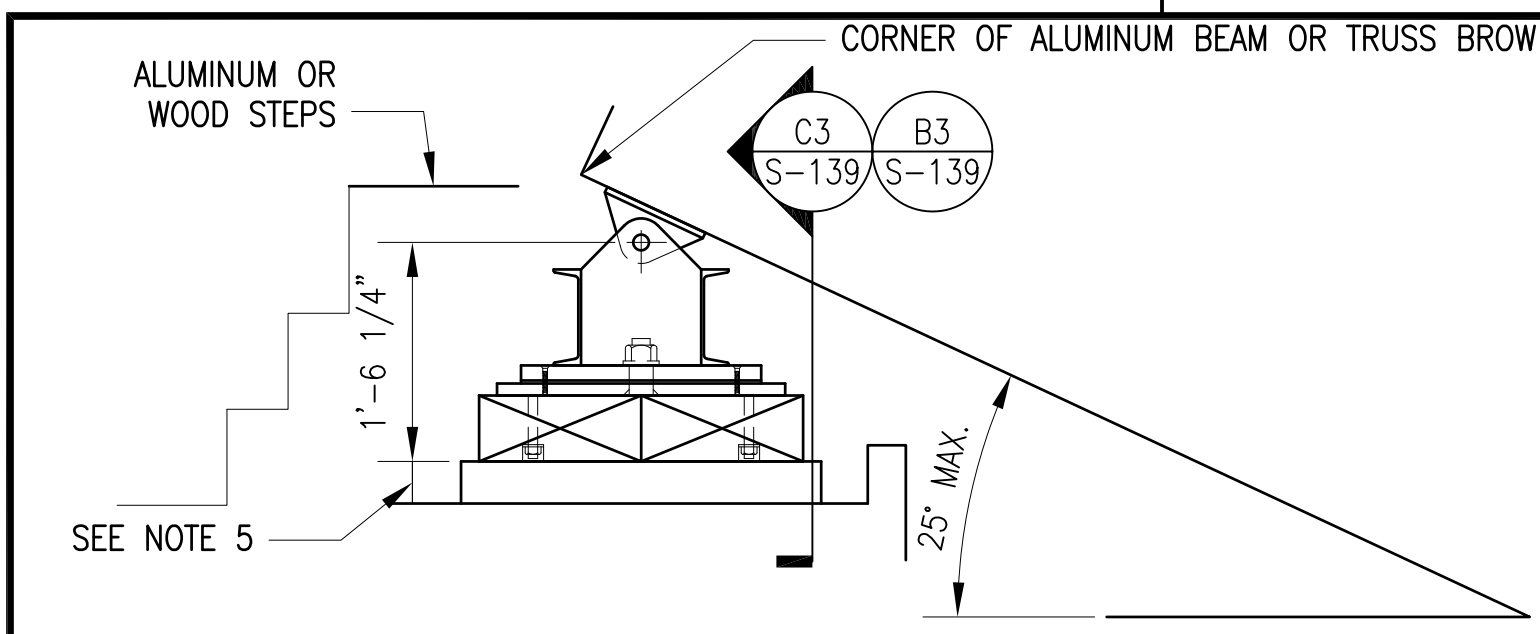
**STANDARD DRAWING  
BROWS AND PLATFORMS  
ALUMINUM STAIRS**

ALUMINUM STAIRS FOR 10' HIGH PLATFORM

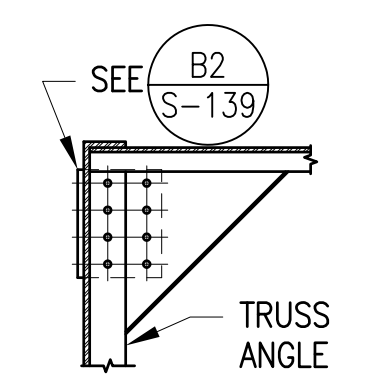
SCALE: AS NOTED  
PROJECT NO.  
CONSTR. CONTR. NO.

NAVFORM REVISION: 10 MARCH 2009

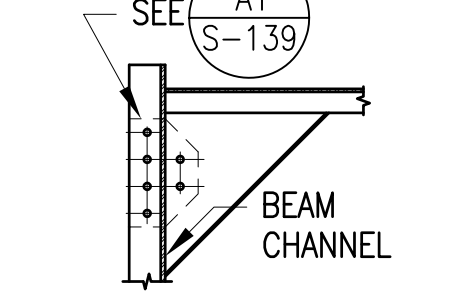




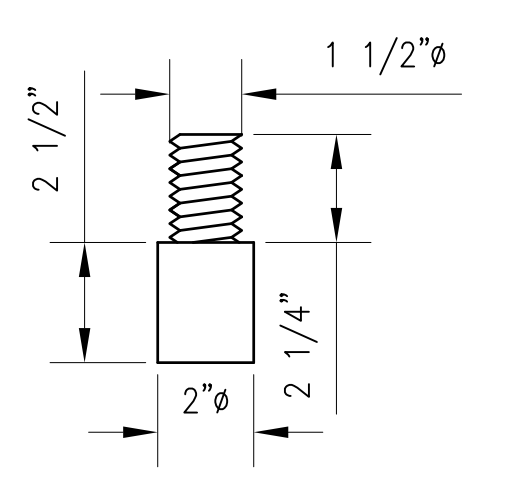
**END ELEVATION**  
SCALE: 3/4"=1'-0"



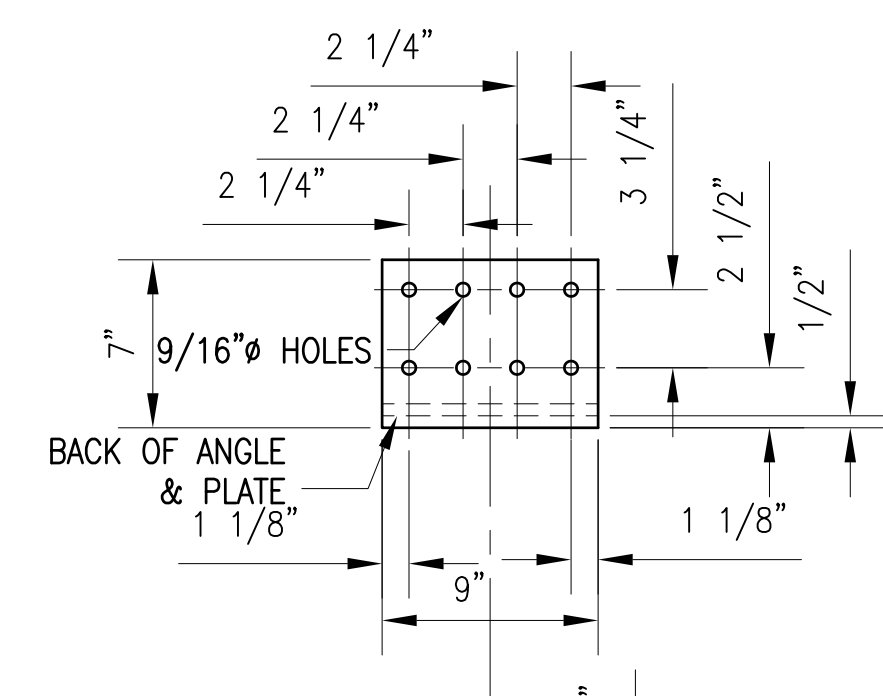
**TRUSS BROW**  
SCALE: 3/4"=1'-0" S-139 (C1)



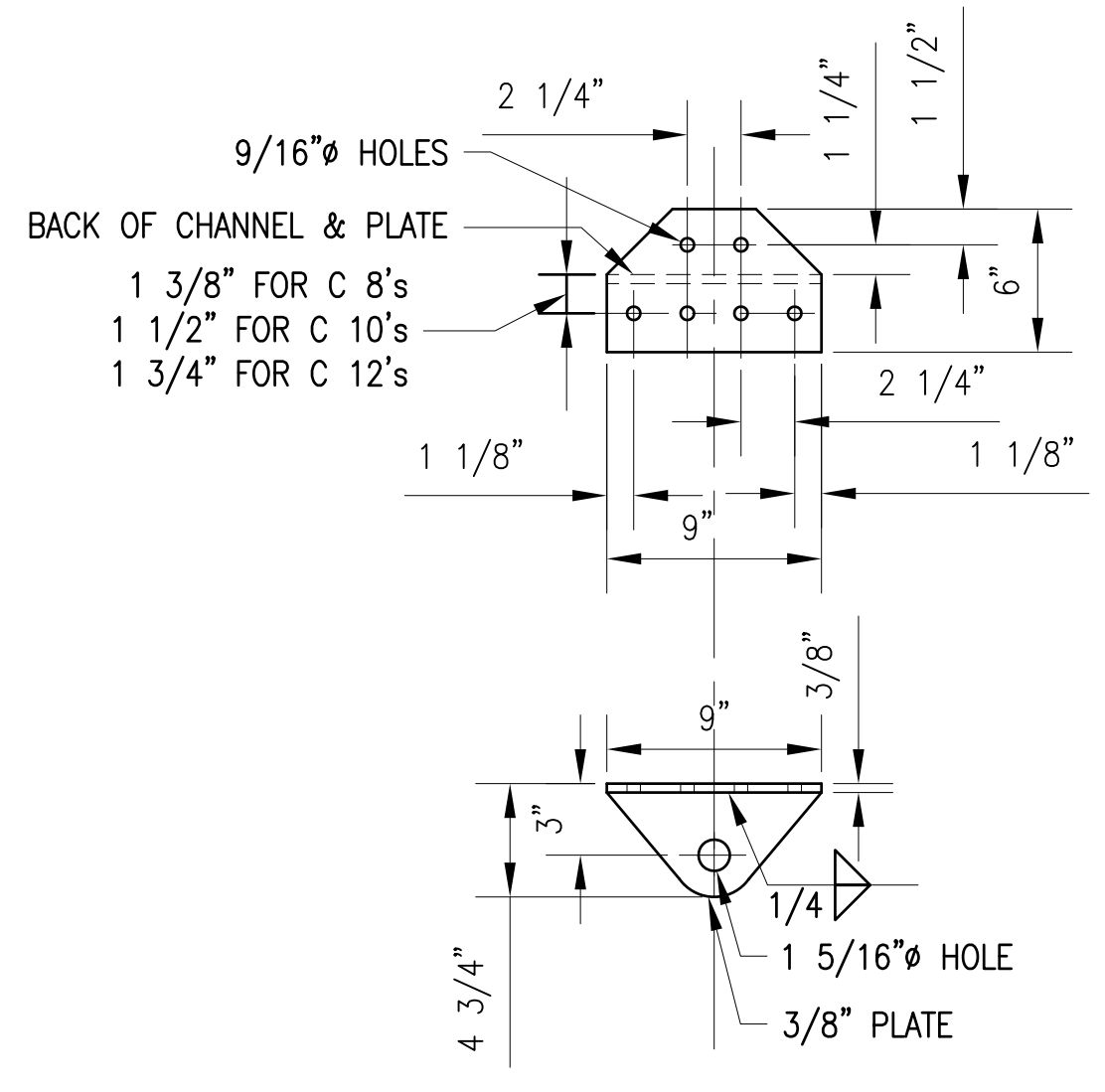
**BEAM BROW**  
SCALE: 3/4"=1'-0" S-139 (C2)



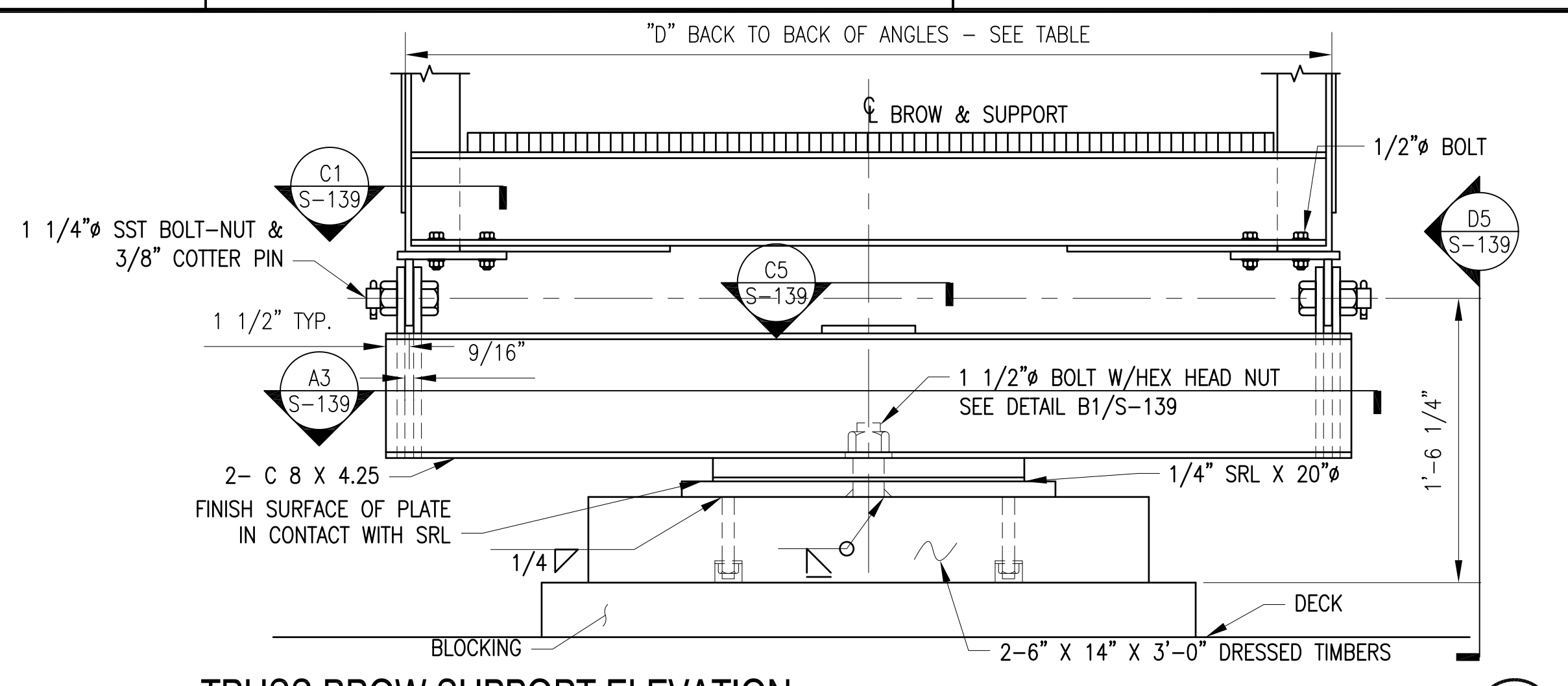
**BOLT DETAIL**  
SCALE: 1 1/2"=1'-0" S-139 (B1)



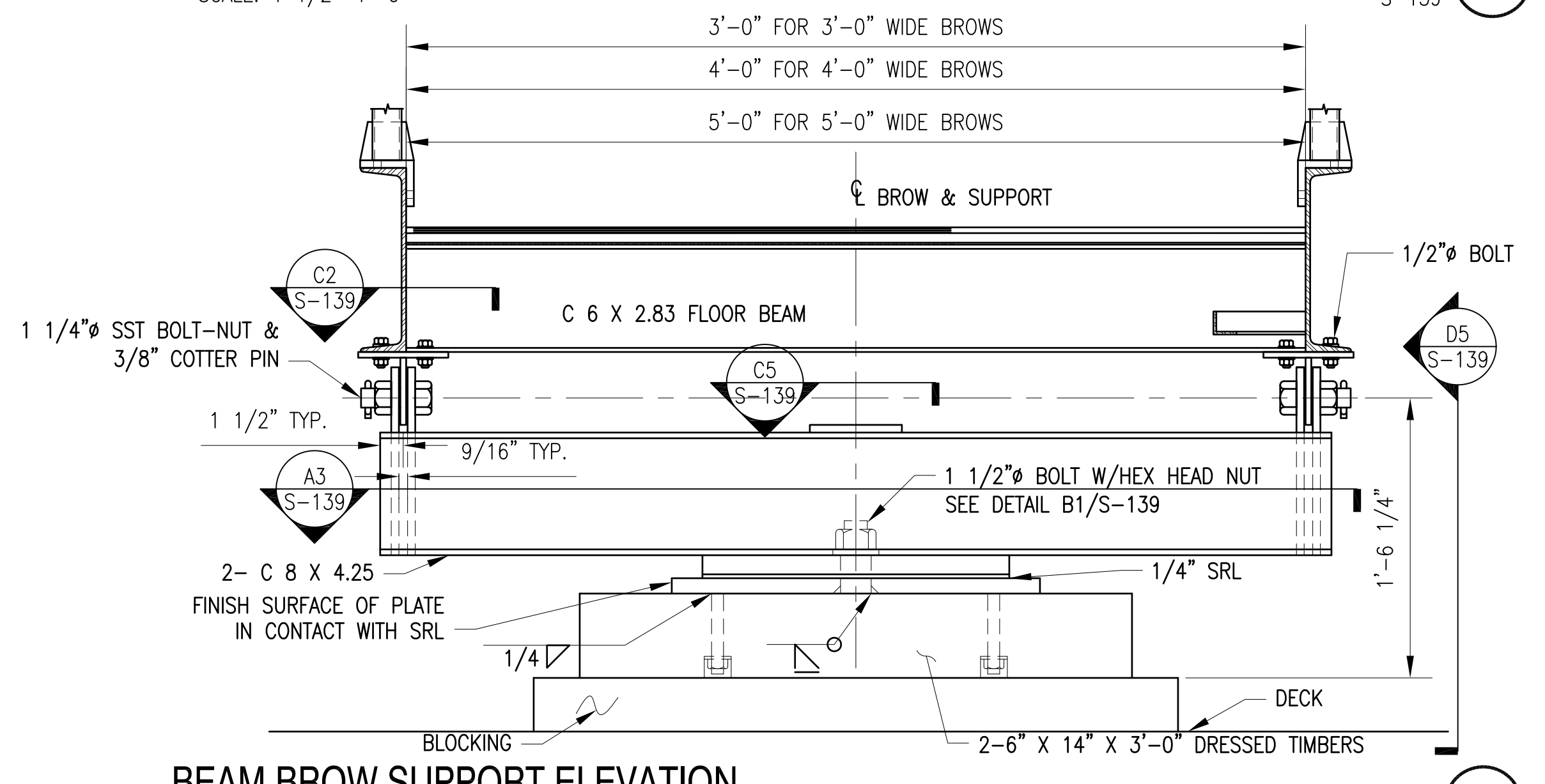
**TRUSS BROW SUPPORT DETAIL**  
SCALE: 1 1/2"=1'-0" S-139 (B2)



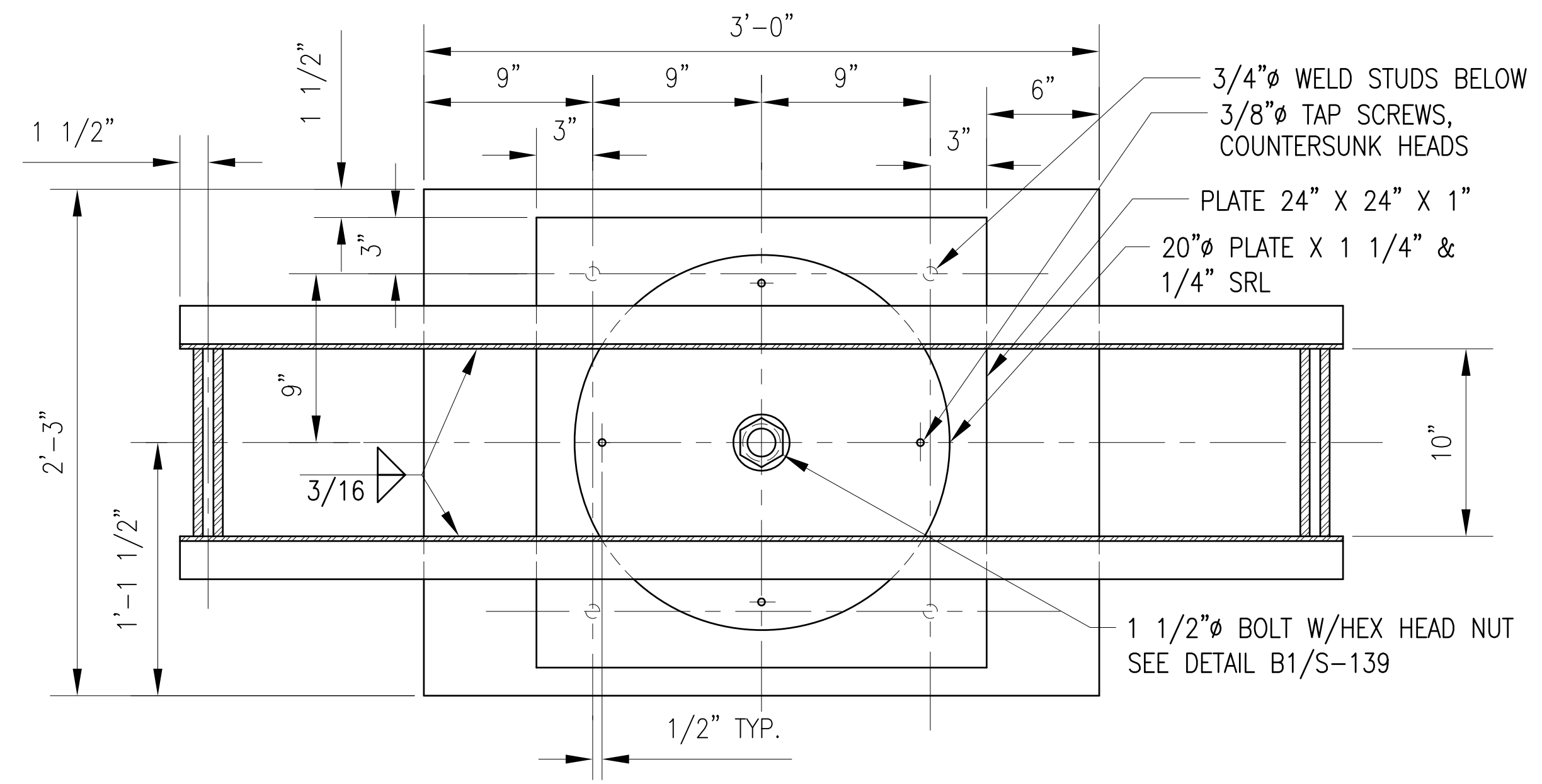
**BEAM BROW SUPPORT DETAIL**  
SCALE: 1 1/2"=1'-0" S-139 (A1)



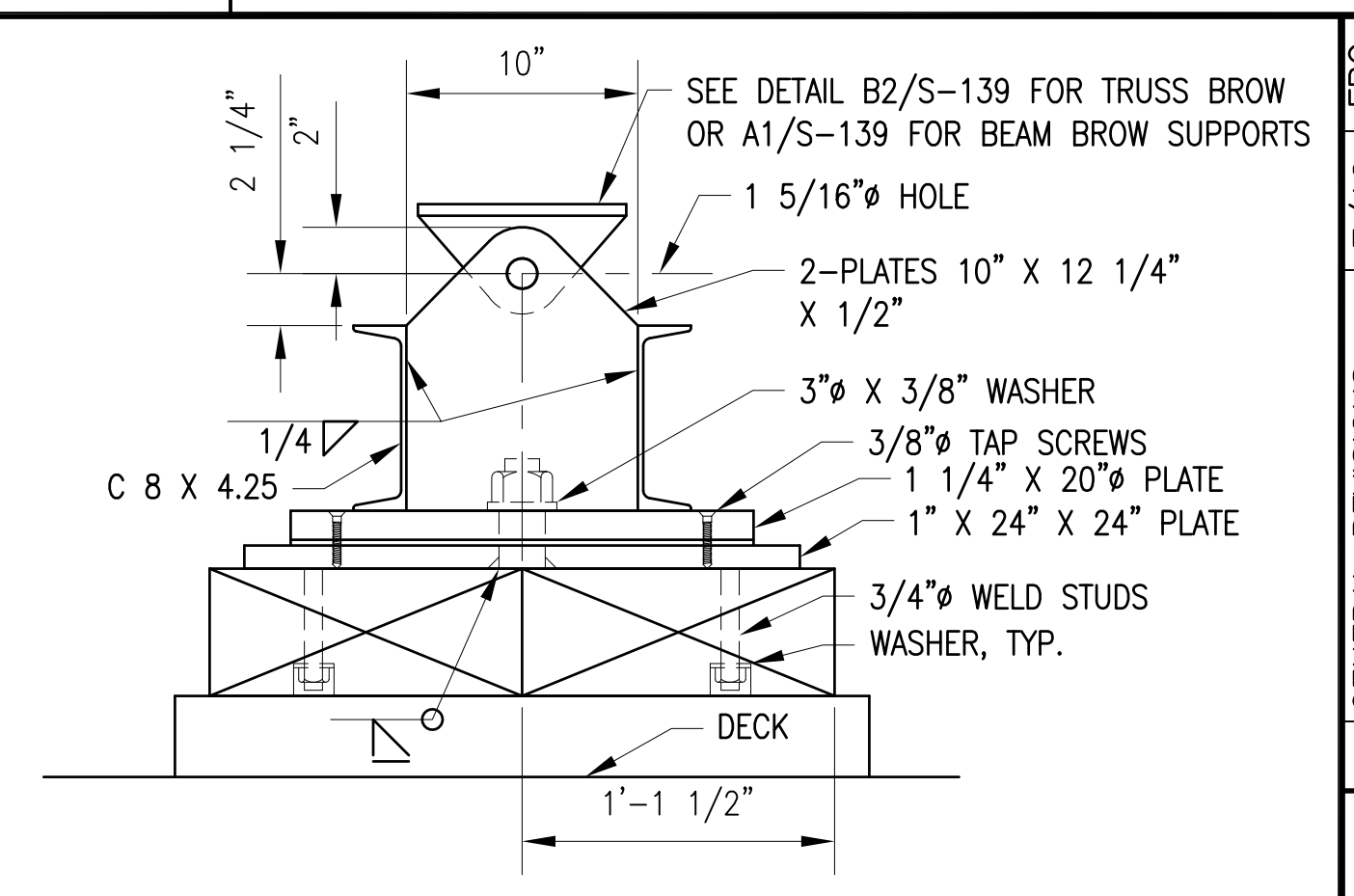
**TRUSS BROW SUPPORT ELEVATION**  
SCALE: 1 1/2"=1'-0" S-139 (C3)



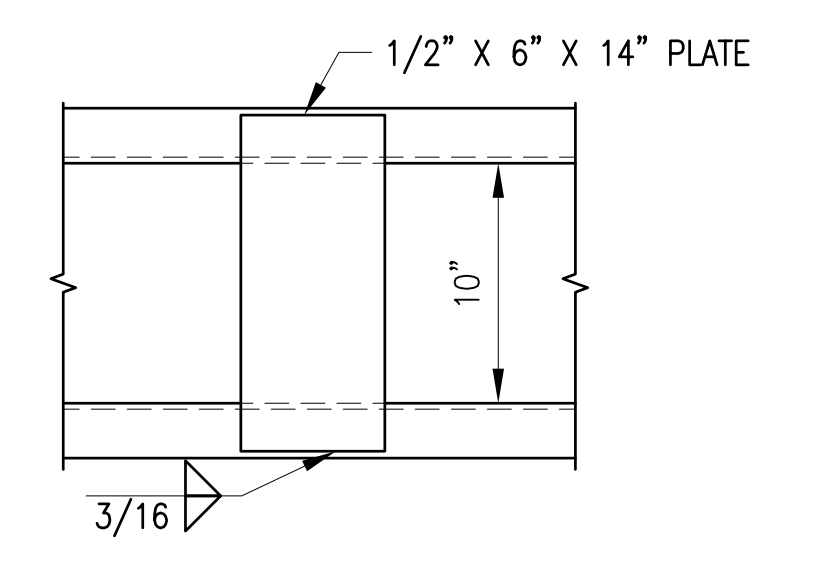
**BEAM BROW SUPPORT ELEVATION**  
SCALE: 1 1/2"=1'-0" S-139 (B3)



**SECTION**  
SCALE: 1 1/2"=1'-0" S-139 (A3)



**END VIEW**  
SCALE: 1 1/2"=1'-0" S-139 (D5)

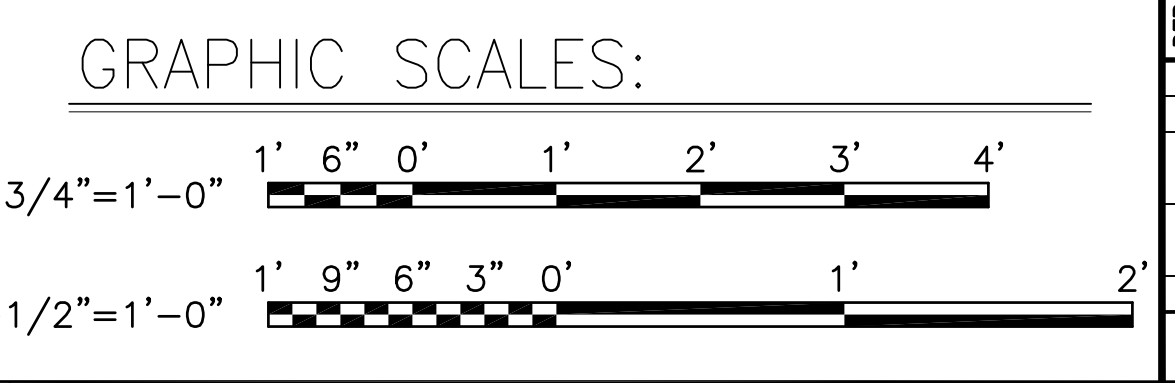


**PLAN**  
SCALE: 1 1/2"=1'-0" S-139 (C5)

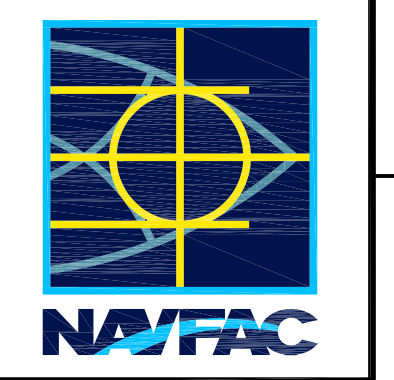
BROW LENGTH	BROW WIDTH			
	3'	4'	5'	
25'	3'-6"	4'-6"	5'-6"	
30'	3'-6"	4'-6"	5'-6"	
35'	3'-6"	4'-6"	5'-6"	
40'	3'-6"	4'-6"	5'-6"	
50'	3'-7"	4'-8"	5'-8"	
60'	3'-8"	4'-8"	5'-8"	
70'	3'-9"	4'-9"	5'-9"	

**GENERAL NOTES**

- SRL=SYNTHETIC RESIN LAMINATE, SEE SPECIFICATION MIL-P-23210, LATEST REV.
- MATERIAL-ALUMINUM ALLOY 6061-T6
- TIMBER & LUMBER GRADE SHALL NOT BE LESS THEN SOUTHERN YELLOW PINE DENSE SELECT STRUCTURAL 86.
- WELDING, BASE STRESS 8,000 PSI.
- PROVIDE TIMBER BLOCKING SO BROW WILL CLEAR THE GUNWALE AND CONCRETE CURB.
- THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 883219 INCLUDING REVISION B. CALCULATIONS FOR Y&D DRAWING 883219 ARE CONTAINED IN BOOKS 5014, 5015, AND 5023.



GENERAL REVISIONS	DATE	DESCRIPTION	SYMBOL	APPROVED
1	7/12			



APPROVED	DATE	DESCRIPTION

FOR COMMANDER NAVFAC
ACTIVITY

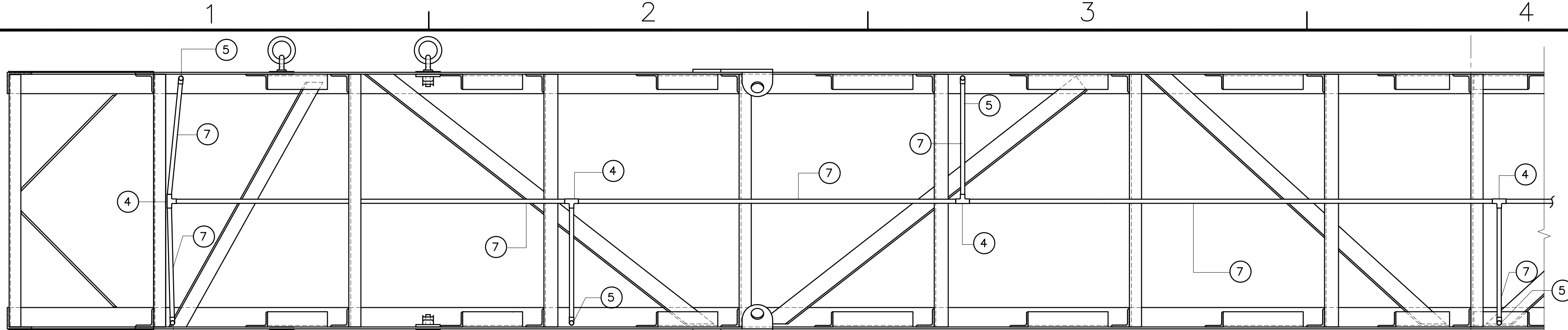
SATISFACTORY TO
DES: DBC DRW: DBC CHK: FBC
FW/DM: F. B. COLE
BRANCH MANAGER: E. J. GALLAHER
CHIEF ENG/ARCH: E. J. GALLAHER
FIRE PROTECTION

DEPARTMENT OF THE NAVY  
NAVAL FACILITIES ENGINEERING COMMAND ATLANTIC  
NAVFAC DRAWING NO. SD1405040  
SHEET 41 OF 42  
S-139

STANDARD DRAWING  
BROWS AND PLATFORMS  
PLATFORM  
SHIPS ROTATING BROW SUPPORT

SCALE: AS NOTED  
PROJECT NO.  
CONSTR. CONTR. NO.

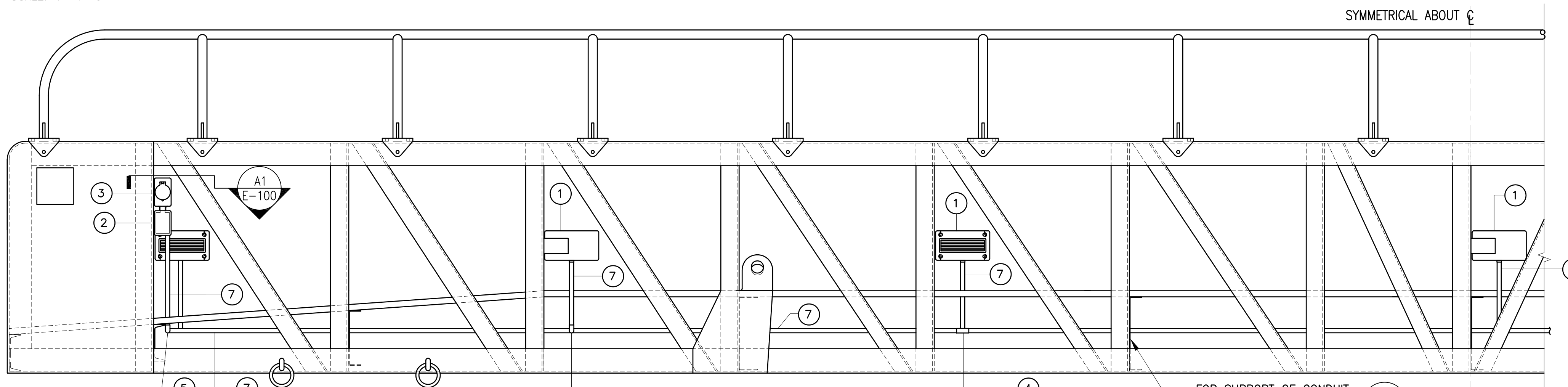
NAVFORM REVISION: 10 MARCH 2009



**TRUSS BOTTOM CHORD PLAN**  
SCALE: 1"=1'-0"

NOTE: LIGHTING FIXTURES SHALL BE SPACED ALONG THE LENGTH AND ON ALTERNATE SIDES OF BROW.

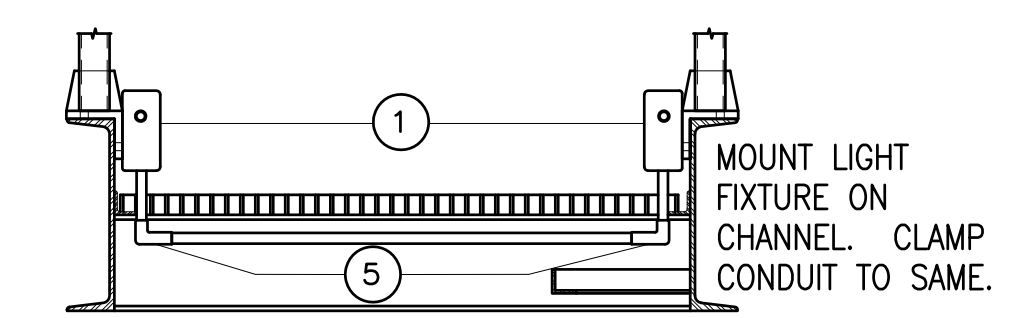
SYMMETRICAL ABOUT C



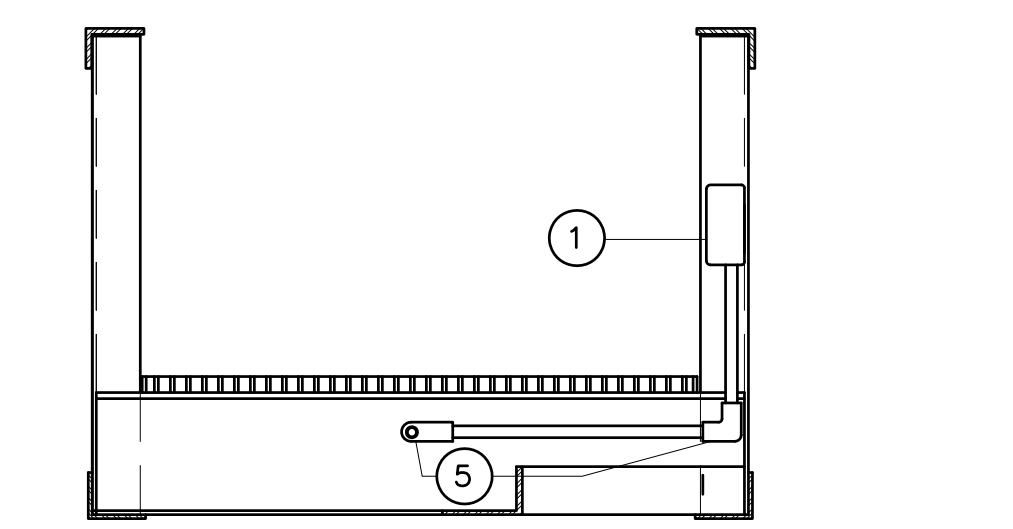
**TRUSS ELEVATION**  
SCALE: 1"=1'-0"

FOR SUPPORT OF CONDUIT ON FLOOR BEAM SEE DETAIL A2 E-100

SYMMETRICAL ABOUT C



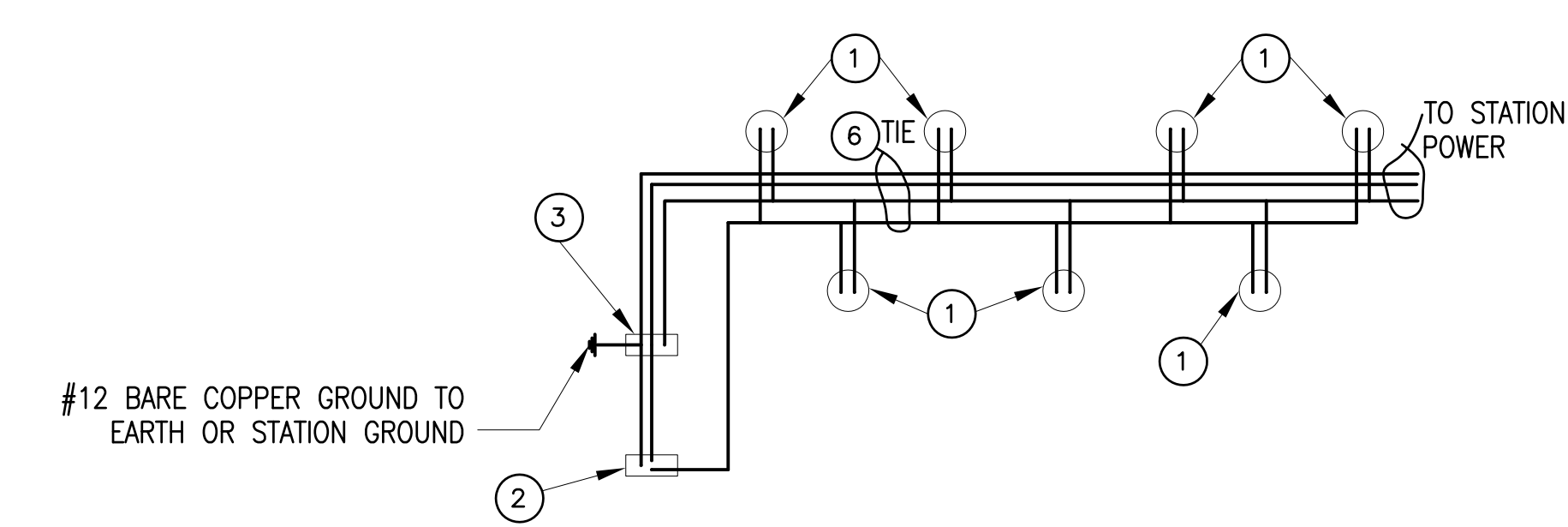
**BEAM BROW LIGHT MOUNT**  
SCALE: 1"=1'-0"



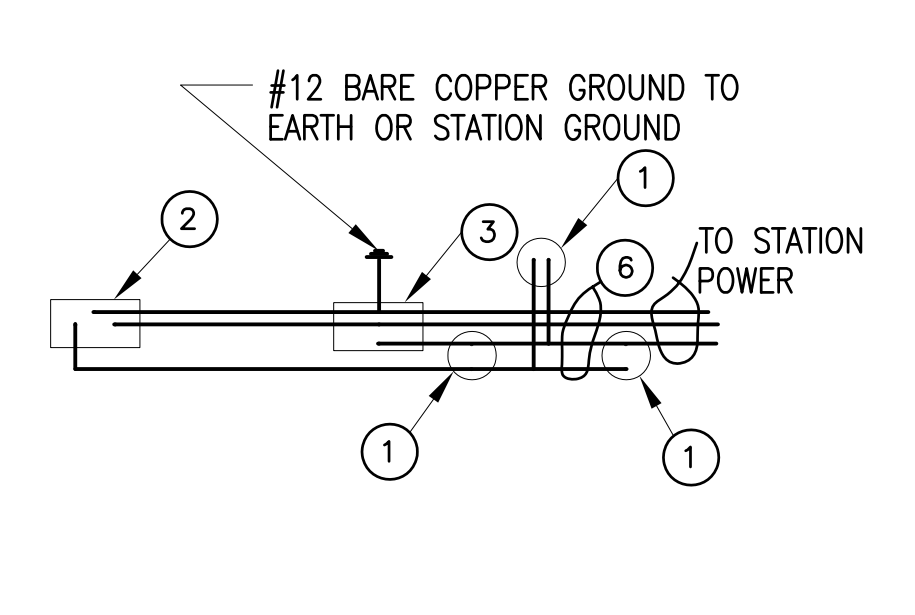
**TRUSS BROW LIGHT MOUNT**  
SCALE: 1"=1'-0"

**LIST OF MATERIALS**

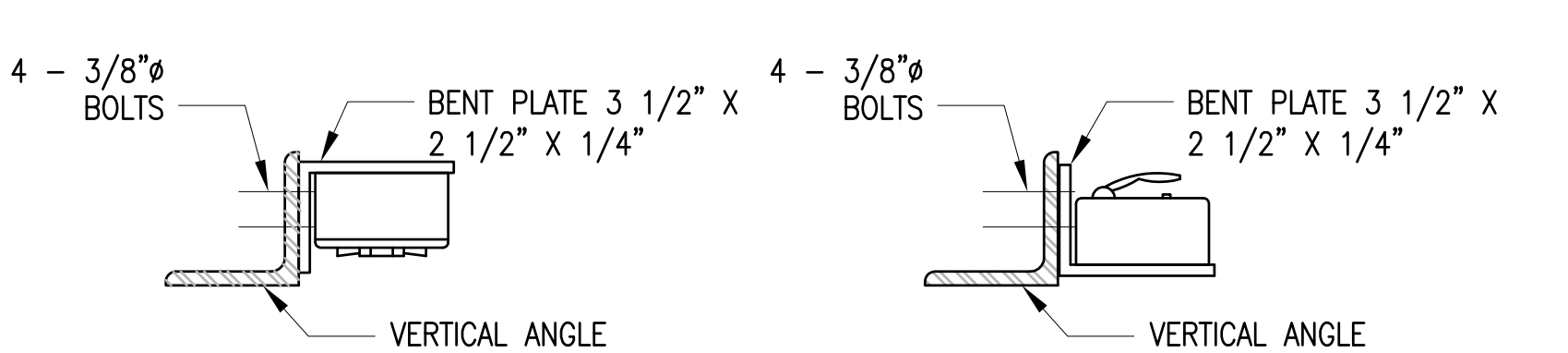
ITEM NO	NAME	MATERIAL	QTY	REMARKS
①	LIGHTING FIXTURE	ALUMINUM	17 EA.	90 FT. BROW
①	LIGHTING FIXTURE	ALUMINUM	15 EA.	80 FT. BROW
①	LIGHTING FIXTURE	ALUMINUM	13 EA.	70 FT. BROW
①	LIGHTING FIXTURE	ALUMINUM	11 EA.	60 FT. BROW
①	LIGHTING FIXTURE	ALUMINUM	9 EA.	50 FT. BROW
①	LIGHTING FIXTURE	ALUMINUM	7 EA.	40 FT. BROW
①	LIGHTING FIXTURE	ALUMINUM	5 EA.	30 & 35 FT. BROW
①	LIGHTING FIXTURE	ALUMINUM	3 EA.	25 FT. BROW
①	LIGHTING FIXTURE	ALUMINUM	3 EA.	20 FT. BROW
①	LIGHTING FIXTURE	ALUMINUM	3 EA.	16 FT. BROW
①	LIGHTING FIXTURE	ALUMINUM	2 EA.	12 FT. BROW
②	20 AMP, IP, PUSH BUTTON 3W, ROCKER ARM OPERATING HANDLE, 3/4" CONDUIT	ALUMINUM	17 EA.	90 FT. BROW
③	REVERSE SERVICE WP 20 AMP, 125 V, 3W, GROUNDED "ALE" RECP, LOCKING TYPE IN A TYPE FD BOX WITH SPRING HINGED COVER, INCLUDE MATCHING WP FEMAL PLUG	ALUMINUM W/COVER	1 EA.	SEE NOTE 3
④	3/4" TEE FITTING	ALUMINUM W/COVER		SEE NOTE 3
⑤	3/4" ELBOW FITTING	ALUMINUM W/COVER		SEE NOTE 3
⑥	NO. 12 AWG 1/C RHW WIRE, 600V	COPPER		SEE NOTE 3
⑦	3/4" CONDUIT	ALUMINUM		SEE NOTE 3



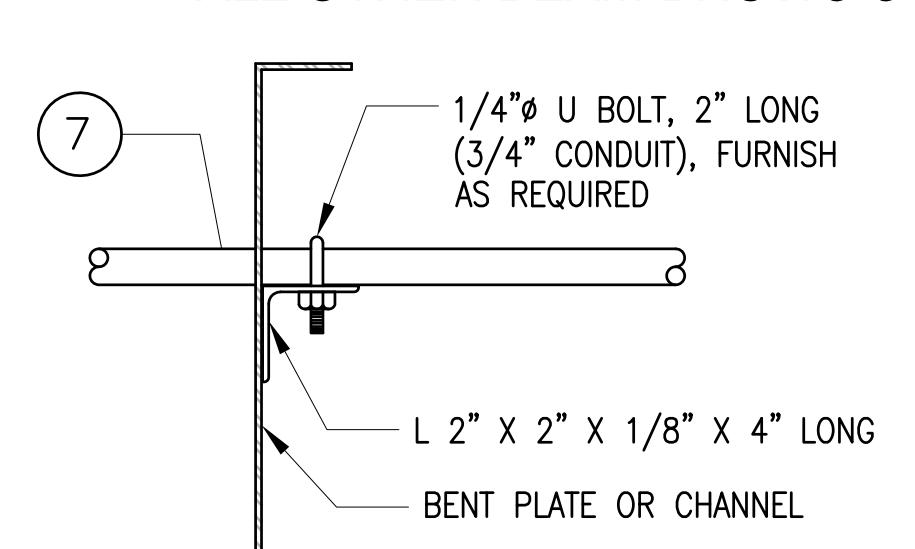
**WIRING DIAGRAM FOR 40 FT. BROW ALL OTHER TRUSS BROWS SIMILAR**  
NTS



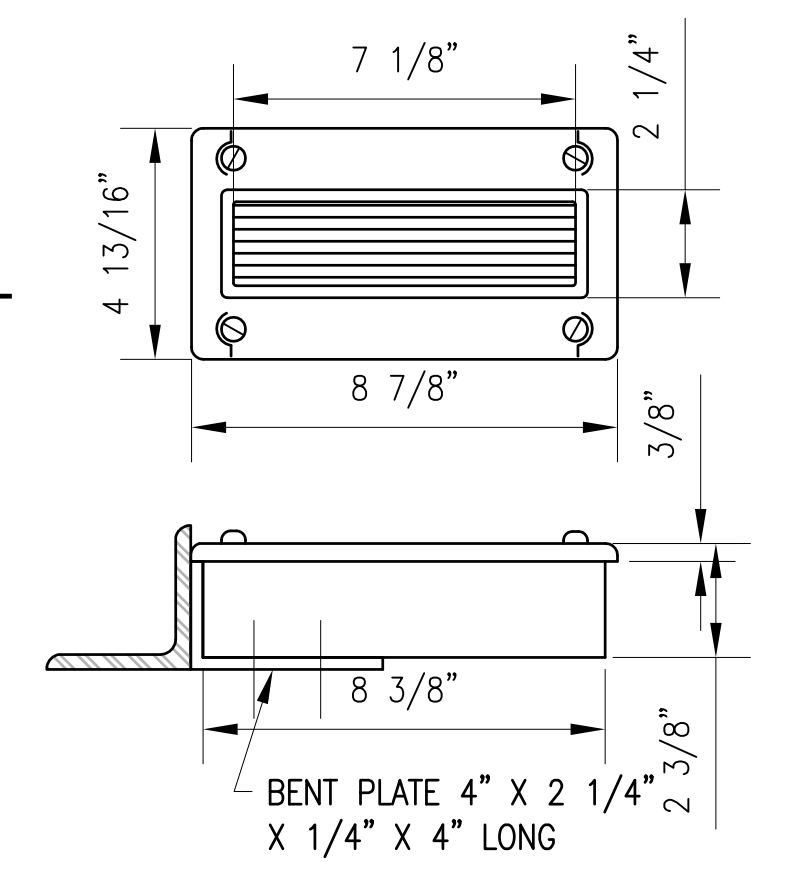
**WIRING DIAGRAM FOR 20 FT. BROW ALL OTHER BEAM BROWS SIMILAR**



**RECEPTACLE CONNECTION** SCALE: 3"=1'-0"  
**SWITCH CONNECTION** SCALE: 3"=1'-0"



**CONDUIT SUPPORT DETAIL** SCALE: 3"=1'-0"



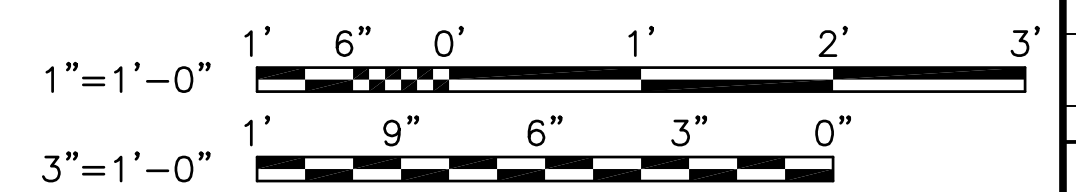
**DETAIL OF LIGHTING FIXTURE** SCALE: 3"=1'-0"

HOUSING - CAST ALUMINUM  
HUBS FOR 3/4" CONDUIT THREADED (THRU FEED WHERE REQUIRED)  
COVER ALUMINUM WITH BASKET FOR WATERTIGHT JOINT  
LAMP RECEPTACLE-INTERMEDIATE SCREW BASE FOR 25W TGI/2 CLEAR BULB  
LENS - CLEAR ONE WAY REFRACTING RIBBED GLASS  
VOLTAGE=120 VOLTS

**GENERAL NOTES**

1. THE USE OF PERMANENT LIGHTING FOR BROWS AS SHOWN ON THIS DRAWING IS OPTIONAL.
2. BROW DETAILS SHOWN ON SHEETS S-101 THROUGH S-126
3. FIBERGLASS OR POLY-VINYLCHLORIDE (PVC) ENCLOSURES, FITTINGS & CONDUIT MAY BE PROVIDED INSTEAD OF ALUMINUM.
4. THIS DRAWING IS SIMILAR TO AND SUPERSEDES Y&D DRAWING 836049 INCLUDING REVISION B.

**GRAPHIC SCALES:**



GENERAL REVISIONS	DATE	APPR
1	7/12	



APPROVED	DATE

FOR COMMANDER NAVFAC

SATISFACTORY TO

DES	DBC	DRW	DBC	CHK	FBC
					F. B. COLE

BRANCH MANAGER  
CHIEF ENG/ARCH  
FIRE PROTECTION  
E. J. GALLAHER

DEPARTMENT OF THE NAVY  
NAVFACILITIES ENGINEERING COMMAND ATLANTIC  
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STANDARD DRAWING  
BEAM AND TRUSS BROWS

BEAM AND TRUSS BROW - LIGHTING SYSTEM

SCALE: AS NOTED

PROJECT NO.

CONSTR. CONTR. NO.

NAVFAC DRAWING NO.  
SD1405041

SHEET 42 OF 42

**E-100**

DRAWING REVISION: 10 MARCH 2009