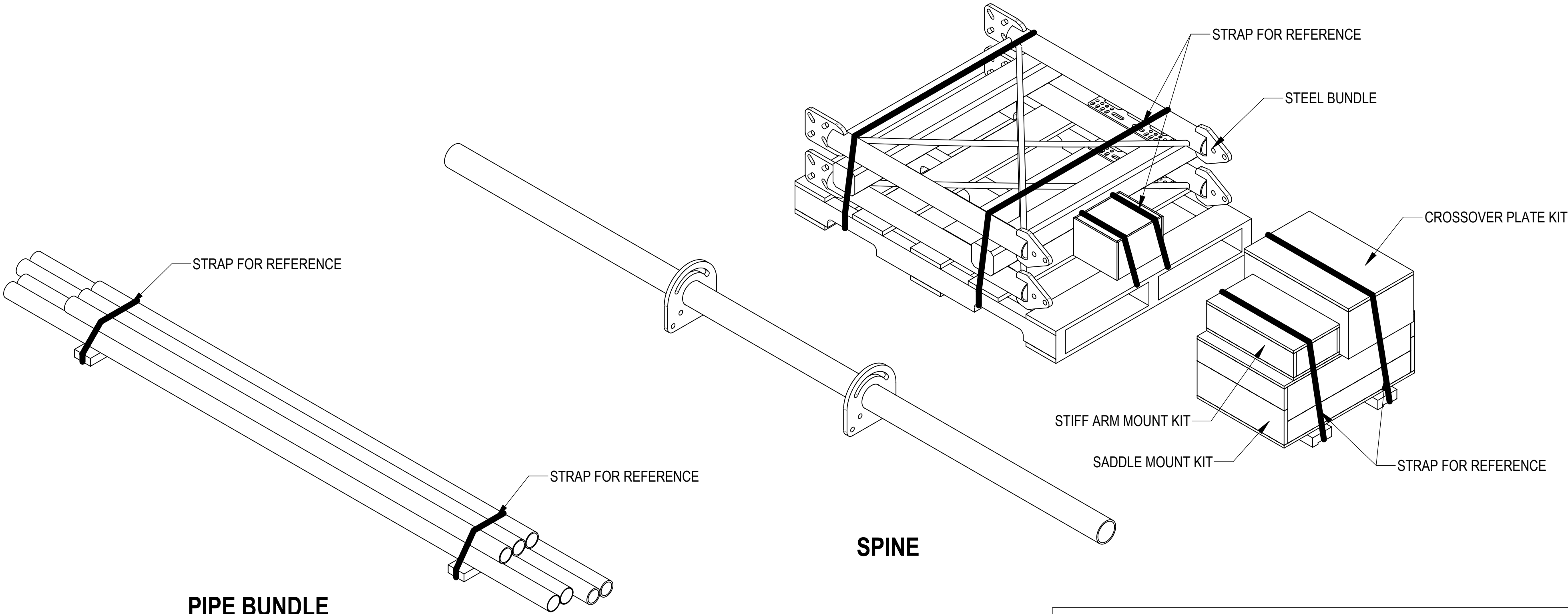


- 1.0 GENERAL NOTES
- 1.1 ALL METRIC DIMENSIONS ARE IN BRACKETS [X. X]
- 1.2 FOR PATENT INFO: <https://www.adwpat.com>
- 2.0 DESIGN NOTES
- 2.1 ANY HAZARDS OR OBSTRUCTIONS TO THE CLIMBING FACILITY AND SAFETY CLIMB MUST BE IDENTIFIED PRIOR TO INSTALLING THE APPURTENANCE. ADDITIONAL PRODUCTS MAY BE REQUIRED TO MAINTAIN THE INTEGRITY OF THE SAFETY CLIMB. DURING INSTALLATION, TEMPORARY AND/OR PERMANENT PRECAUTIONARY MEASURES SHOULD BE TAKEN TO PRESERVE THE CLIMBING FACILITY AND/OR SAFETY CLIMB.
- 2.2 UP TO 5.0° TAPER AVAILABLE ON MODELS THAT SUPPORT ADJUSTMENT
- 3.0 MANUFACTURING/SPECIAL REQUIREMENTS
- 3.1 TIGHTEN ALL BOLTS SECURING FLAT PLATES BY THE TURN-OF-NUT METHOD. TIGHTEN ALL U-BOLTS USING TURN-OF-NUT METHOD WITH ATTENTION TO LEAVE EQUAL DISTANCE AND EQUAL FORCE ON EACH LEG OF THE U-BOLT.
- 4.0 TEST
- 5.0 PACKAGING
- 5.1 PACKAGING SHALL MEET ANDREW REQUIREMENTS PER DOCUMENT IS-PL-3005
- 5.2 PRINTED DOCUMENT TO BE PLACED INSIDE POLYBAG AND THEN IN SHIPPING CONTAINER
- 5.3 EXTRA HARDWARE MAY BE SUPPLIED, BAGGED AND SHIPPED

REVISIONS			
REV.	DESCRIPTION	DATE	APPROVED
D	ADDED SHEET 2; ADDED SFG23RHDX-11-B & SFG23RHDX-11-3-126; CHG QTY SFG2386 TO 1 EA, AND GUB-4355 TO 3 EA; ADDED SFG2397-00; ADDED SFG2398 TO THE TOP OF V-ARM	RY1002 09OCT23	YW1045 40179941CMO
E	SHEET2: ADDED SFG2398 TO TABLE 1; SHEET5: ADDED LABEL INSTALLATION NOTICE	JL1183 17NOV23	YW1045 40183325CMO
F	UPDATED SFG23175 TO ADD UNIVERSAL INTERFACE PLATES; ADDED SFG23RHDX-11-3-120, SFG23RHDX-13-B, SFG23RHDX-13-4-120, SFG23RHDX-15-B, SFG23RHDX-15-4-120 & SFG23RHDX-15-5-120 TO SERIES; CHG PALLET FROM 62X38PALLET TO PALLET48X36 TO MATCH WITH SAP BOM	RY1002 03SEP24	XK1001 40202713CMO
G	UPDATED EPA TABLE	YMENG 12DEC24	CB1094 40210882CMO
H	SHEET 5&9: ADDED AZIMUTH ADJUSTMENT RANGE VIEW & NOTE	JL1183 10JAN25	BA1025 40212102CMO



ANDREW[®] an Amphenol company																	
TOLERANCES							SAP MATERIAL MASTER										
0 PLACE		X[X] ± 0.2[5]		2 PLACE		.XX[X] ± 0.06[1.5]		SEE TABLE 1									
1 PLACE		X[X] ± 0.12[3.0]		ANGLES		± 2°											
FINISH						MATERIAL											
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES INTERPRET PER ANSI Y 14.5M-1994		NAME		DATE		SFG23RHDX SECTOR FRAME SERIES											
	CE	ES1081		12/15/20													
	RW	LL1090		06/12/2025													
						SCALE 1:18 DOCUMENT NO. SFG23RHDX											
	AD	YMENG		06/12/2025													
	RE	YMENG		06/12/2025													
	ECN 40212102CMO																
SIZE		Auth Group		INSL		MODEL			DRAWING			SHEET 1 OF 13					
C						VERSION		STATUS		REVISION				VERSION		STATUS	
						02		RE		C		11		RE		H	

Confidential

4

3

2

1

PART NUMBERS, WEIGHTS, & EPA

TABLE 1: CONFIGURATIONS																														
PART NUMBER	DESCRIPTION	WEIGHT (LBS)	MOUNT EPA W/NO ICE (FT²)			MOUNT EPA W/ 1/2" ICE (FT²)			ANTENNA PIPES	INCLUDED PARTS																				
			FRONT (EPA)N	SIDE (EPA)T	3-SECTORS (EPA)A	FRONT (EPA)N	SIDE (EPA)T	3-SECTORS (EPA)A		SM-U2080HDG23	SFG22HDX-HK01	SFG23RHDX-SB01	SFG2204	XP-2525-6	XP-2525-8	XP-2525-4	XP-2525-OFF-4	PB02TEB0211P	PB02TEB0310K0211P	PB02TEB03TEK0211P	PB02TEB0213P	PB02TEB04TEK0213P	PB02TEB0215P	PB02TEB04TEK0215P	PB02TEB05TEK0215P	SFG2398				
SFG23RHDX-11-B	SF,11',BASE-KIT	626.55	9.63	9.42	22.86	13.53	13.62	32.59	-	1	1	1	1	-	-	-	-	1	-	-	-	-	-	-	-	1				
SFG23RHDX-11-3-126	SF,11',(3)2.88"X126"-PIPES-PIM-SPACED	859.91							3	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1
SFG23RHDX-11-3-120	PG,SF,11'FP,(3)120"AP	849.13							3	1	1	1	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
SFG23RHDX-13-B	SF,13'FP,NOAP	657.30	10.69	9.42	24.13	14.94	13.62	34.28	-	1	1	1	1	-	-	-	-	-	-	1	-	-	-	-	-	1				
SFG23RHDX-13-4-120	PG,SF,13'FP,(4)120"AP	954.08							4	1	1	1	1	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1
SFG23RHDX-15-B	SF,15'FP,NOAP	688.06	11.76	9.42	25.41	16.36	13.62	35.97	-	1	1	1	1	-	-	-	-	-	-	-	-	1	-	-	-	1				
SFG23RHDX-15-4-120	PG,SF,15'FP,(4)120"AP	1022.97							4	1	1	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	1	-	-	1
SFG23RHDX-15-5-120	PG,SF,15'FP,(5)120"AP	1059.02							5	1	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1

- NOTES:
1. NO MOUNT PIPES CONSIDERED. IF DESIRED, ADD ANTENNA PIPE PER TABLE 2
2. MOUNT CONNECTION MEMBERS TO TOWER CONSIDERED.
3. 3-SECTOR EPA INCLUDES KA FACTORS.

TABLE 2: EPA OF EACH ANTENNA PIPE						
ANTENNA PIPE	MOUNT EPA W/NO ICE (FT²)			MOUNT EPA W/ 1/2" ICE (FT²)		
	FRONT (EPA)N	SIDE (EPA)T	3-SECTORS (EPA)A	FRONT (EPA)N	SIDE (EPA)T	3-SECTORS (EPA)A
2-7/8" X 96"	2.07	2.07	1.84	2.79	2.79	2.48
2-7/8" X120"	2.59	2.59	2.30	3.49	3.49	3.10
2-7/8" X126"	2.72	2.72	2.42	3.67	3.67	3.26

- NOTE:
1. ANTENNA PIPES ARE CONSIDERED SEPARATELY.
2. KA FACTOR OF 3-SECTOR EPA INCLUDED.
3. COMBINE THE ASSOCIATED EPA VALUES IN THE TABLES ABOVE TO DETERMINE THE EPA OF A MOUNT MODEL WITH A LISTED MOUNT PIPE CONFIGURATION.
FOR EXAMPLE: SFG23RHDX-10-4-120 HAS A FRONT EPA OF 9.36 FT² WITH NO ICE PLUS 4 ANTENNA PIPES WITH A FRONT EPA OF 4X2.59=10.36 FT² WITH NO ICE.
SO, THE TOTAL FRONT EPA SHOULD BE 19.72 FT²; (SIDE EPA SAME METHOD AS FRONT EPA).
WHEN 3 SECTOR FRAMES ARE MOUNTED AT THE SAME RELATIVE ELEVATION IN AN ARRANGEMENT, IT HAS A 3-SECTOR EPA OF 22.53 FT² WITH NO ICE PLUS 4 ANTENNA PIPES WITH A 3-SECTOR EPA OF (4X2.30)X3=27.60 FT² WITH NO ICE. SO, THE TOTAL 3-SECTOR EPA SHOULD BE 50.13 FT².



TITLE

SFG23RHDX SECTOR FRAME SERIES

SIZE

C

SCALE

1:12

DOCUMENT NO.

SFG23RHDX



VERSION

11

STATUS

RE

REVISION

H

SHEET

3 OF 13

Confidential

D

C

B

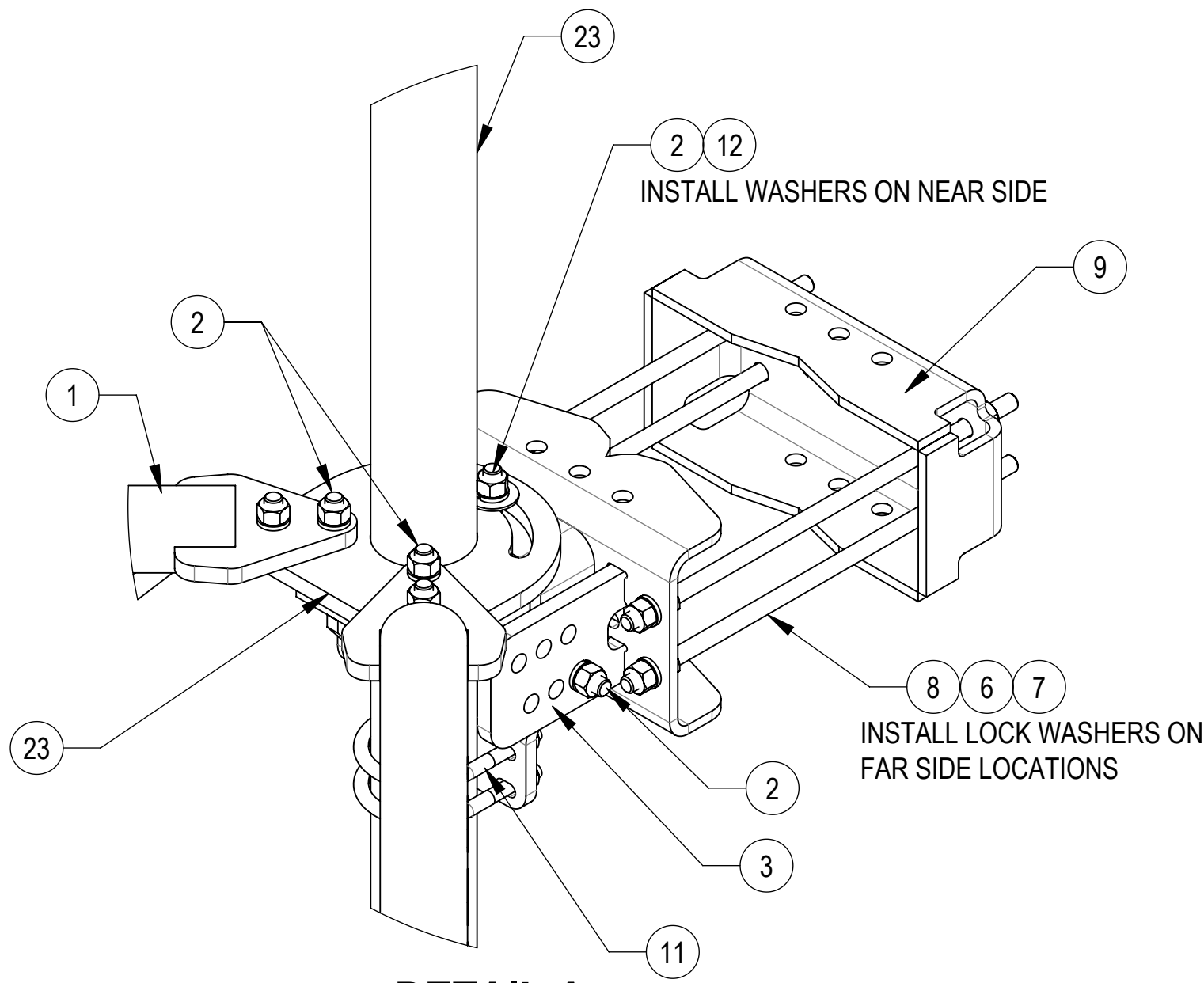
A

D

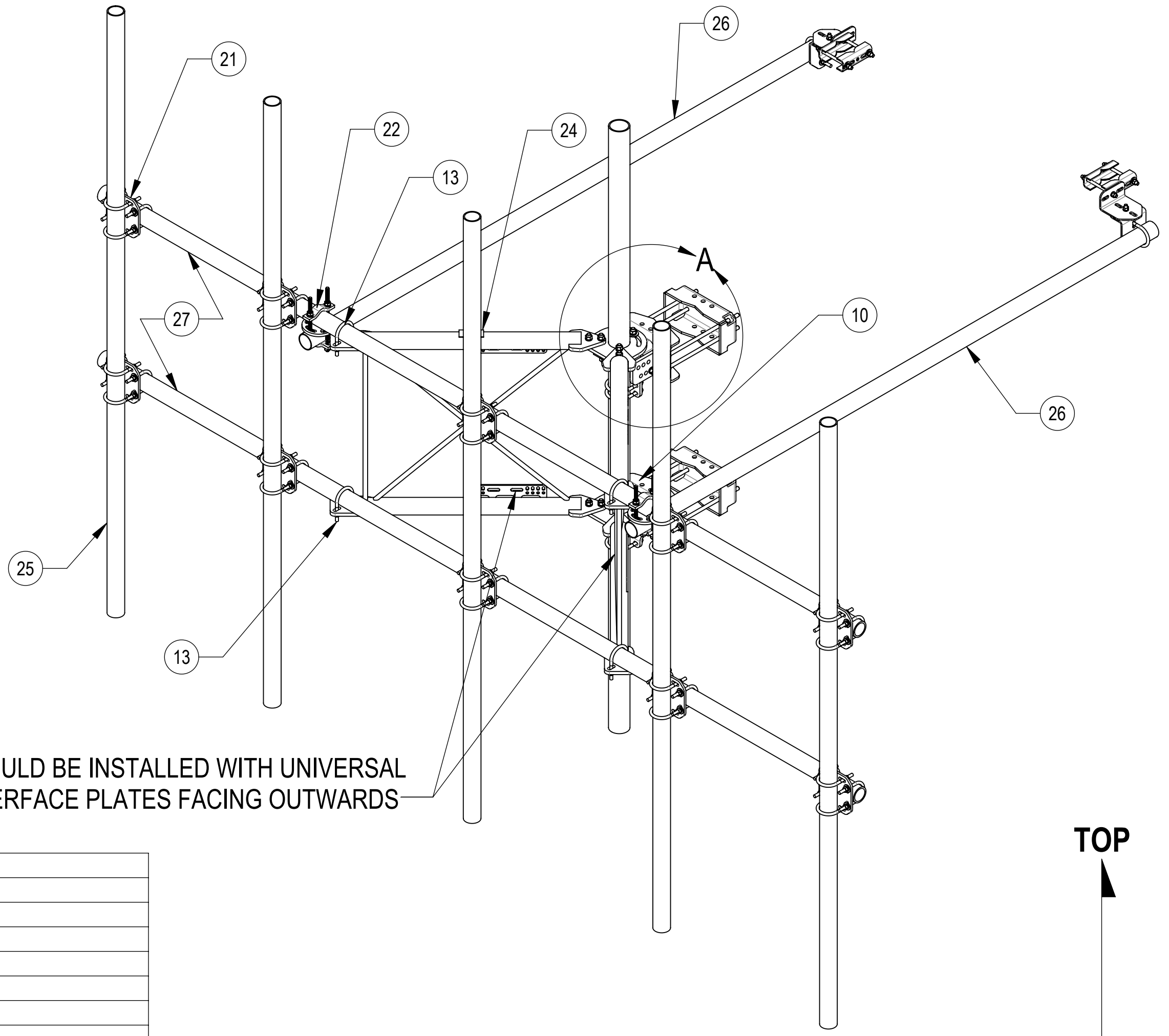
C

B

A



DETAIL A
SCALE 1 : 5

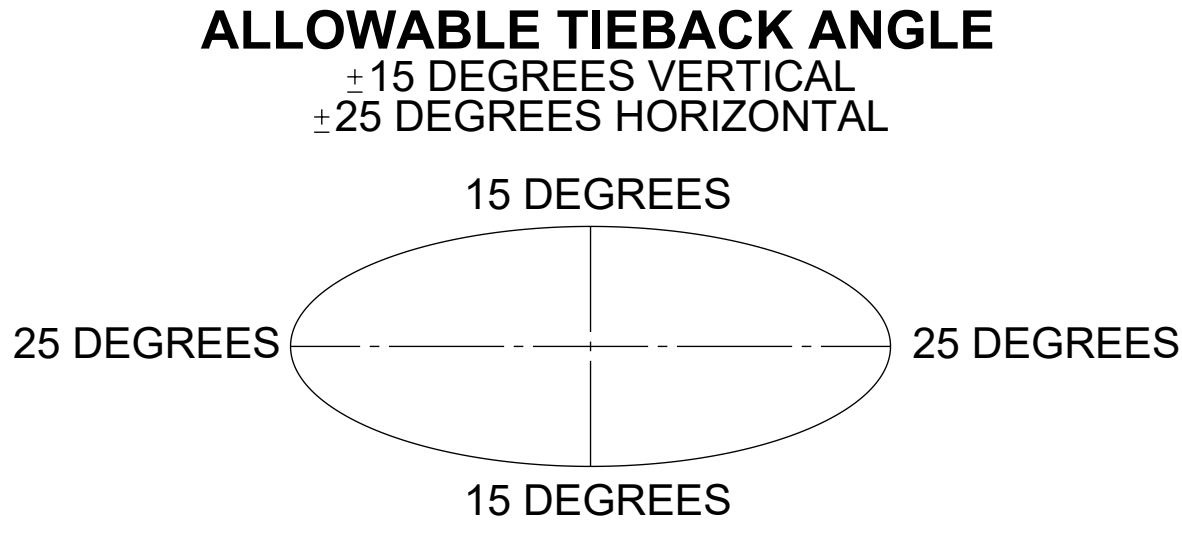


SHOULD BE INSTALLED WITH UNIVERSAL
INTERFACE PLATES FACING OUTWARDS

SFG23RHDX-14-5-120 SHOWN FOR REFERENCE
(NOT ALL CONFIGURATIONS INCLUDE ALL ITEMS, SEE NOTES IN TABLE)

COMPONENT PART NUMBERS PROVIDED FOR ASSEMBLY PURPOSES;
INDIVIDUAL COMPONENTS MAY BE SHIPPED AS PARTS WITHIN AN INCLUDED KIT.

ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT	NOTE
1	SFG23175	ARM STANDOFF SFG23	2	66.61 LBS	
2	GB-05225	5/8" X 2-1/4" GALV BOLT KIT	14	0.28 LBS	
3	SFG2380	WELDMENT, HD, TOP TAPER BRACKET	1	22.78 LBS	
4	SFG2386	WELDMENT, SFG2 AZIMUTH BRACKET	1	10.07 LBS	
5	SFG2397-00	WELDMENT, G23 AZIMUTH BRACKET	1	7.94 LBS	
6	GN-05	5/8" GALV HEX NUT	24	0.08 LBS	
7	GWL-05	5/8" GALV LOCK WASHER	16	0.03 LBS	
8	MT-382-18	5/8" X 18" THREADED ROD	8	1.43 LBS	
9	SFG2289	G2 RRU BACK CLAMP, HD	2	18.65 LBS	
10	SFG2381	WELDMENT, HD, LOWER TOWER LEG BRACKET	1	17.42 LBS	
11	GUB-4355	1/2" X 3-5/8" X 5" GALV U-BOLT	3	0.71 LBS	
12	GWL-05	5/8" GALV FLAT WASHER, 1.70D	2	0.06 LBS	
13	GUB-4352	1/2" X 3" X 5-1/4" GALV U-BOLT	6	0.71 LBS	
14	SAB01	FORMED CLAMP	4	1.35 LBS	
15	MT-379-8	1/2" X 8" GALV THREADED ROD	4	0.45 LBS	
16	XAU01	ANGLE, CROSSOVER, 1.9-3.5" X 1.9-3.5" OD	4	2.98 LBS	
17	GB-04145	1/2" X 1-1/2" GALV BOLT KIT	2	0.13 LBS	
18	GWL-04	1/2" GALV FLAT WASHER	8	0.04 LBS	
19	GWL-04	1/2" GALV LOCK WASHER	10	0.01 LBS	
20	GN-04	1/2" GALV HEX NUT	10	0.04 LBS	
21	XP-2525	CROSSOVER PLATE KIT, 2-7/8 OD X 2-7/8 OD	10	8.37 LBS	QTY SEE INDIVIDUAL DRAWING
22	XP-R	CROSSOVER PLATE, ROUND, UP TO 3.5" OD	2	6.20 LBS	
23	SFG2204	WELDMENT, BACK VERTICAL ARM MOUNT	1	97.29 LBS	
24	SFG2398	LABEL, SFG23RHDX	1	0.03 LBS	
25	MT546120	PIPE, 2.875"OD X 120"	5	57.45 LBS	PART NO. AND QTY SEE INDIVIDUAL DRAWING
26	MT546120120	PIPE, 2.875"OD X 120"	2	35.44 LBS	
27	MT546174276	PIPE, 2.875"OD X 174"	2	111.49 LBS	PART NO. SEE INDIVIDUAL DRAWING



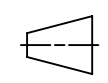
**ANDREW**[®] an Amphenol company

TITLE
SFG23RHDX SECTOR FRAME SERIES

SIZE
C

SCALE
1:16

DOCUMENT NO.
SFG23RHDX

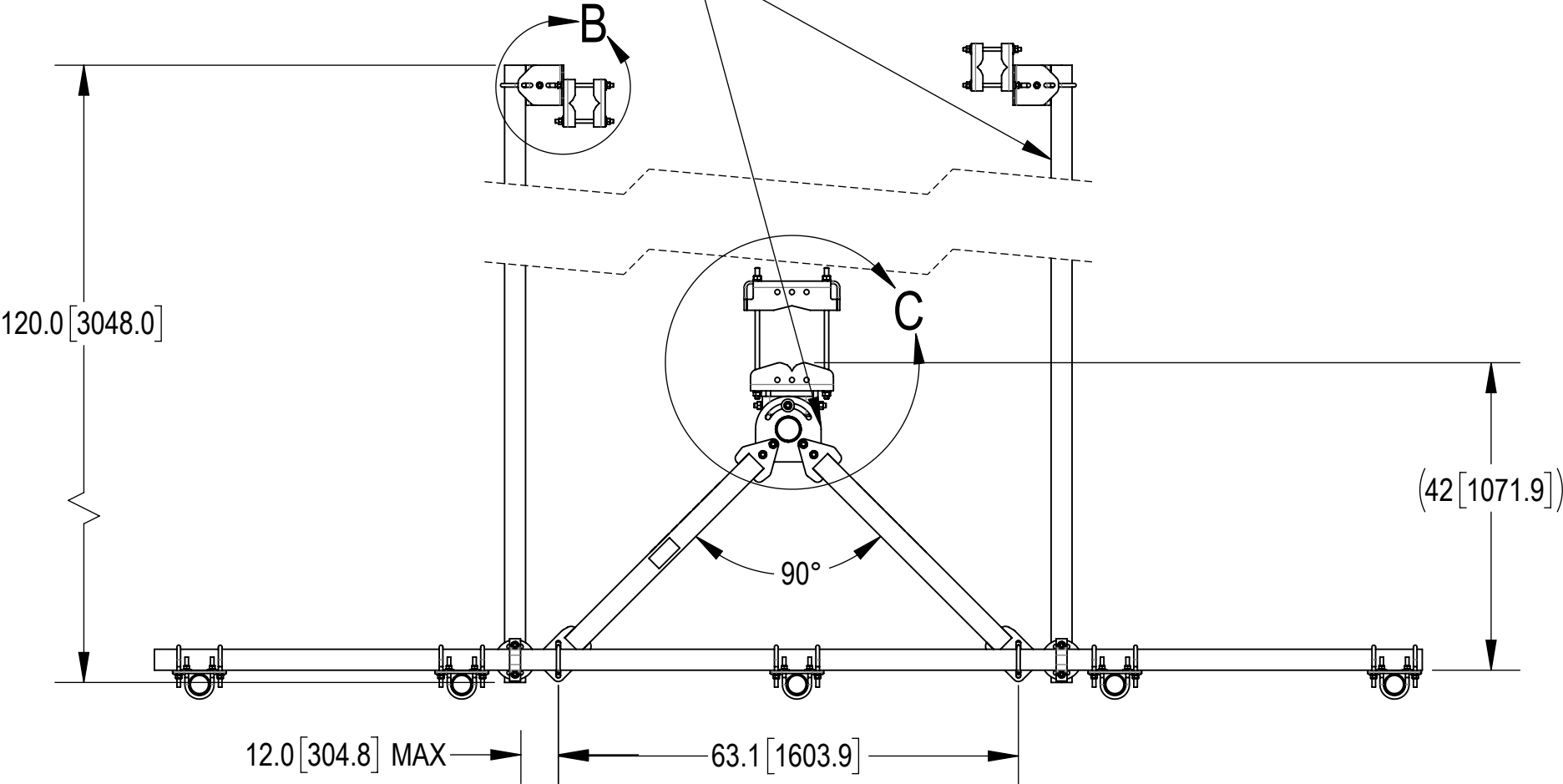


DRAWING		
VERSION	STATUS	REVISION
11	RE	H

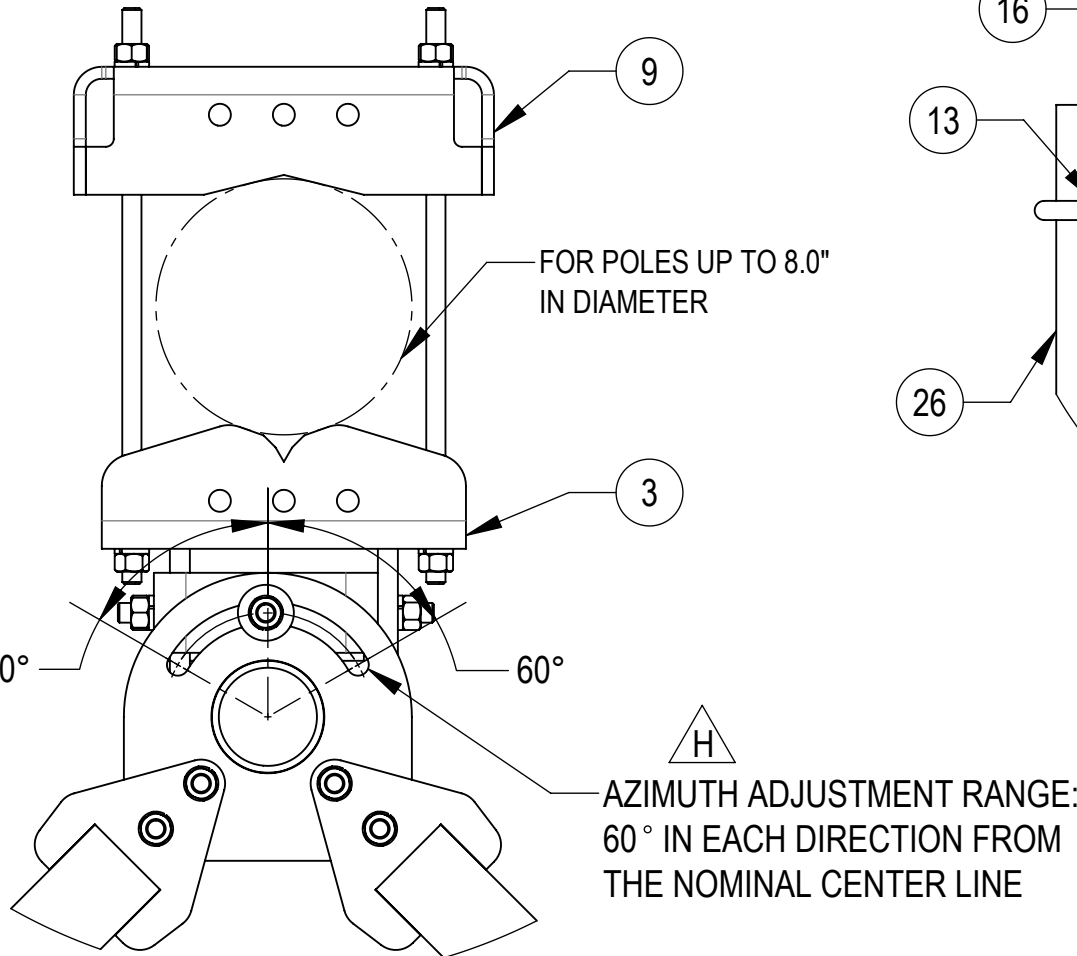
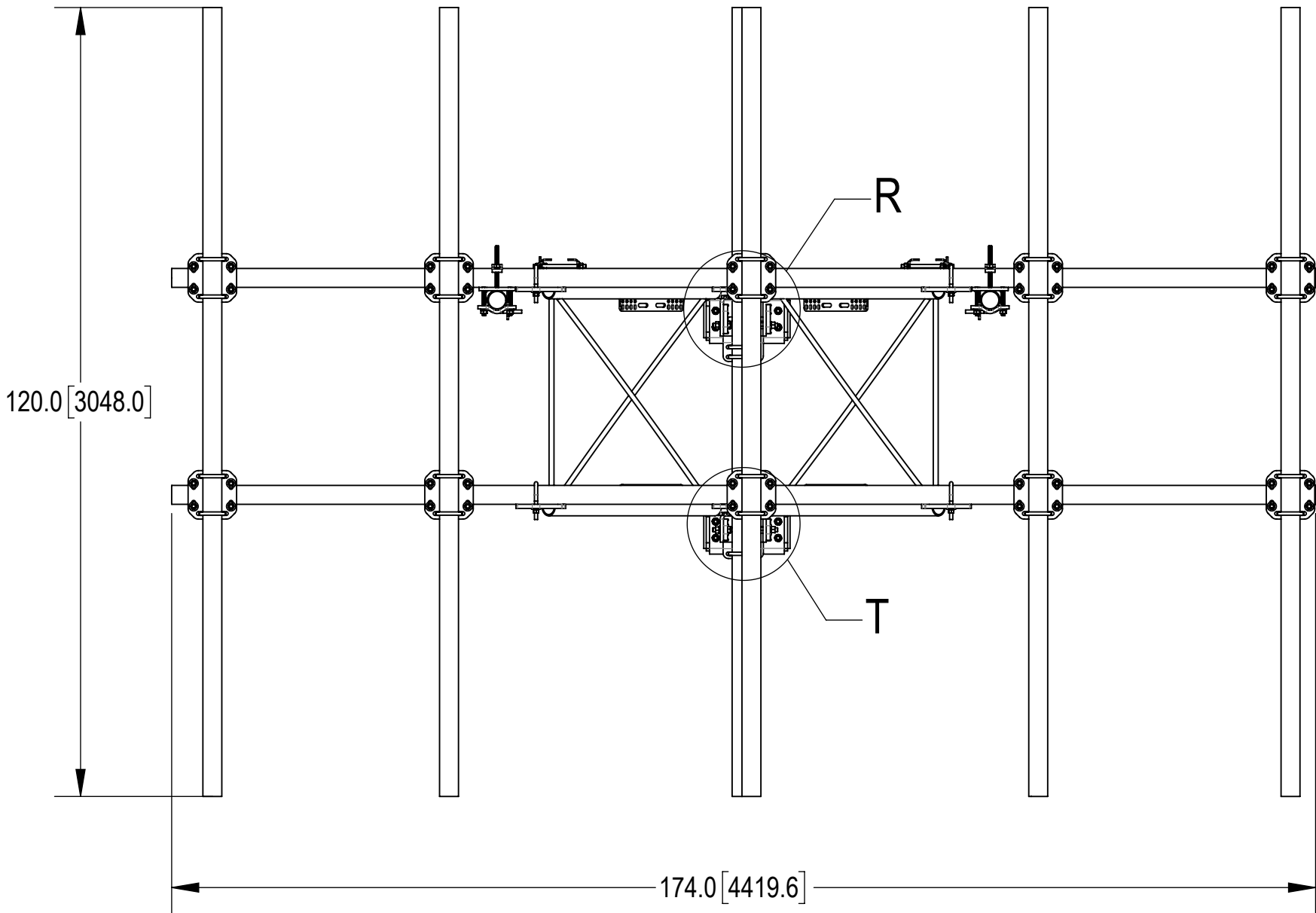
SHEET
4 OF 13

Confidential

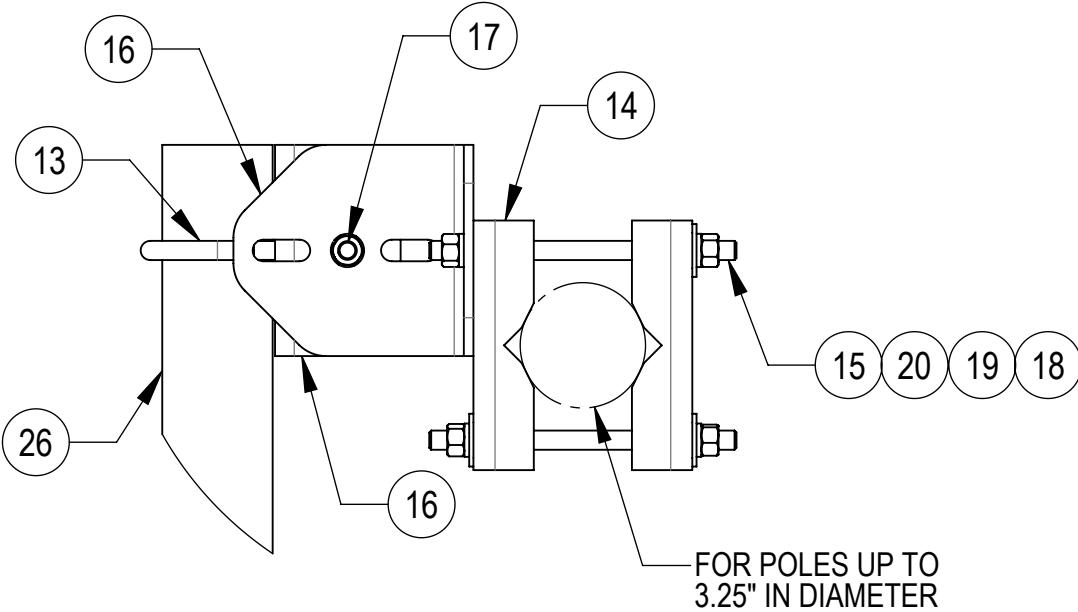
TIEBACK MUST BE CONNECTED TO A RIGID MEMBER THAT PROVIDES ADEQUATE SUPPORT WITHIN THE LIMITS NOTED IN THE TIEBACK ANGLE RANGE DETAIL. UNLESS APPROVED BY ENGINEER OF RECORD. SPINE STEM OF NEIGHBORING MOUNT IS ACCEPTABLE.



SFG23RHDX-14-5-120 SHOWN FOR REFERENCE
(NOT ALL CONFIGURATIONS INCLUDE ALL ITEMS, SEE NOTES IN TABLE ON PAGE 4)

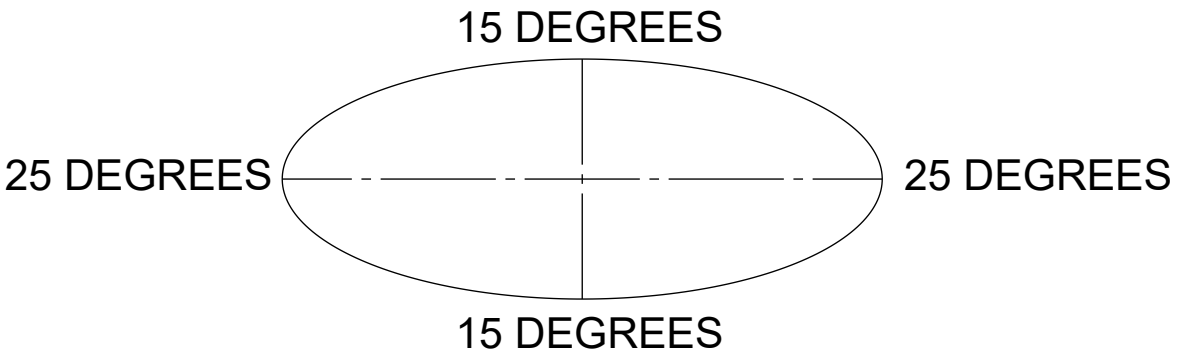


DETAIL C
SCALE 1 : 6

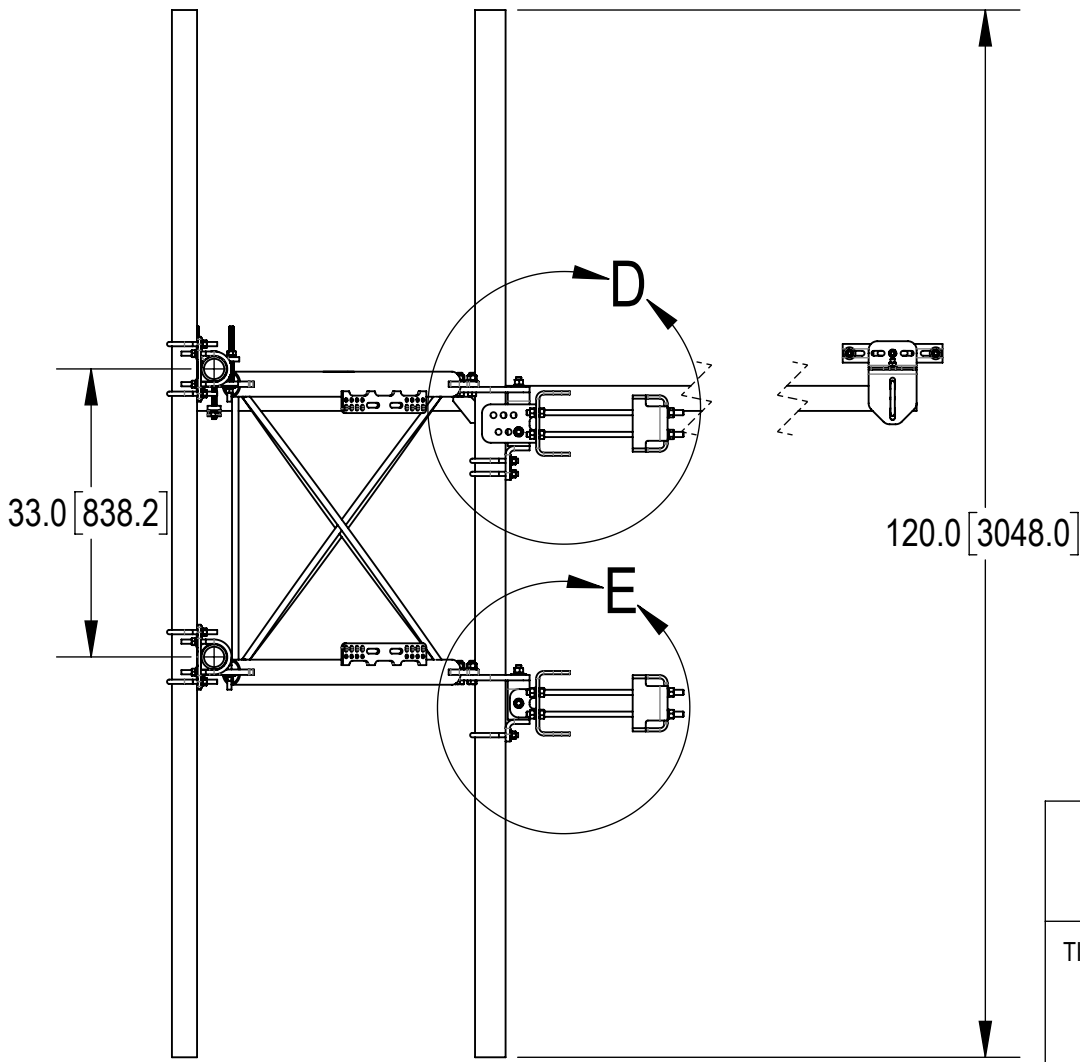


DETAIL B
SCALE 1 : 5

ALLOWABLE TIEBACK ANGLE
±15 DEGREES VERTICAL
±25 DEGREES HORIZONTAL

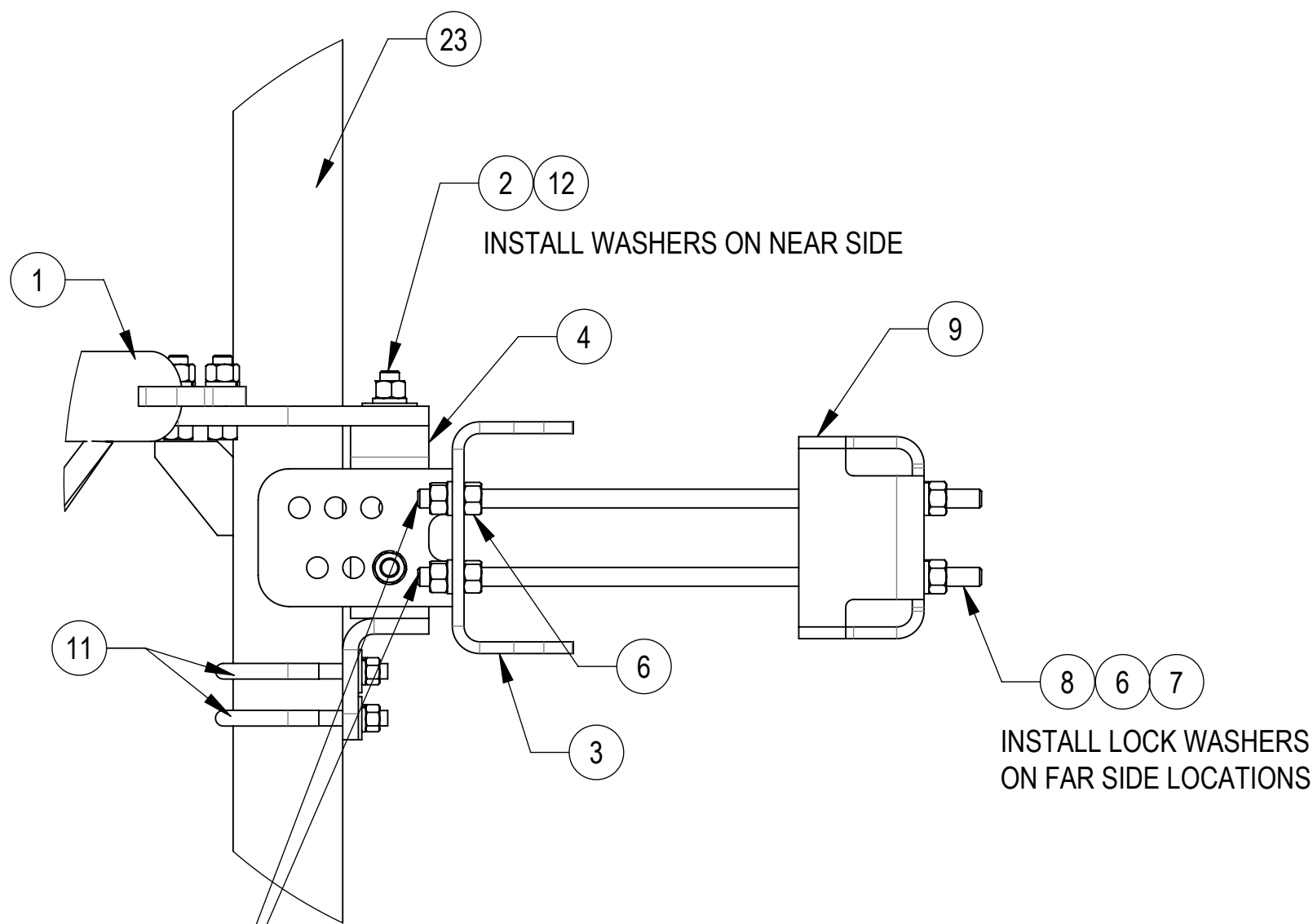


TOP
BOTTOM

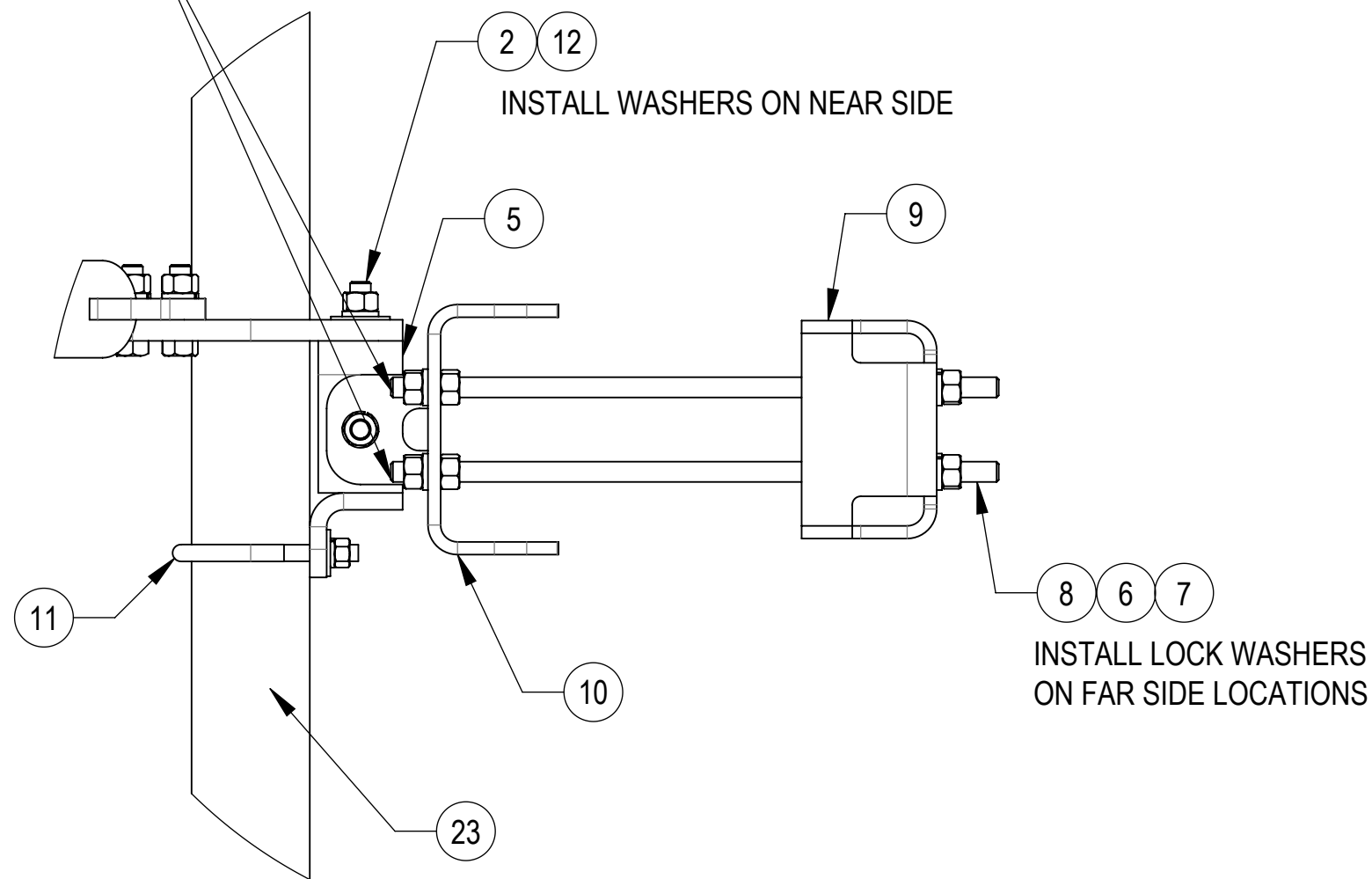


Confidential

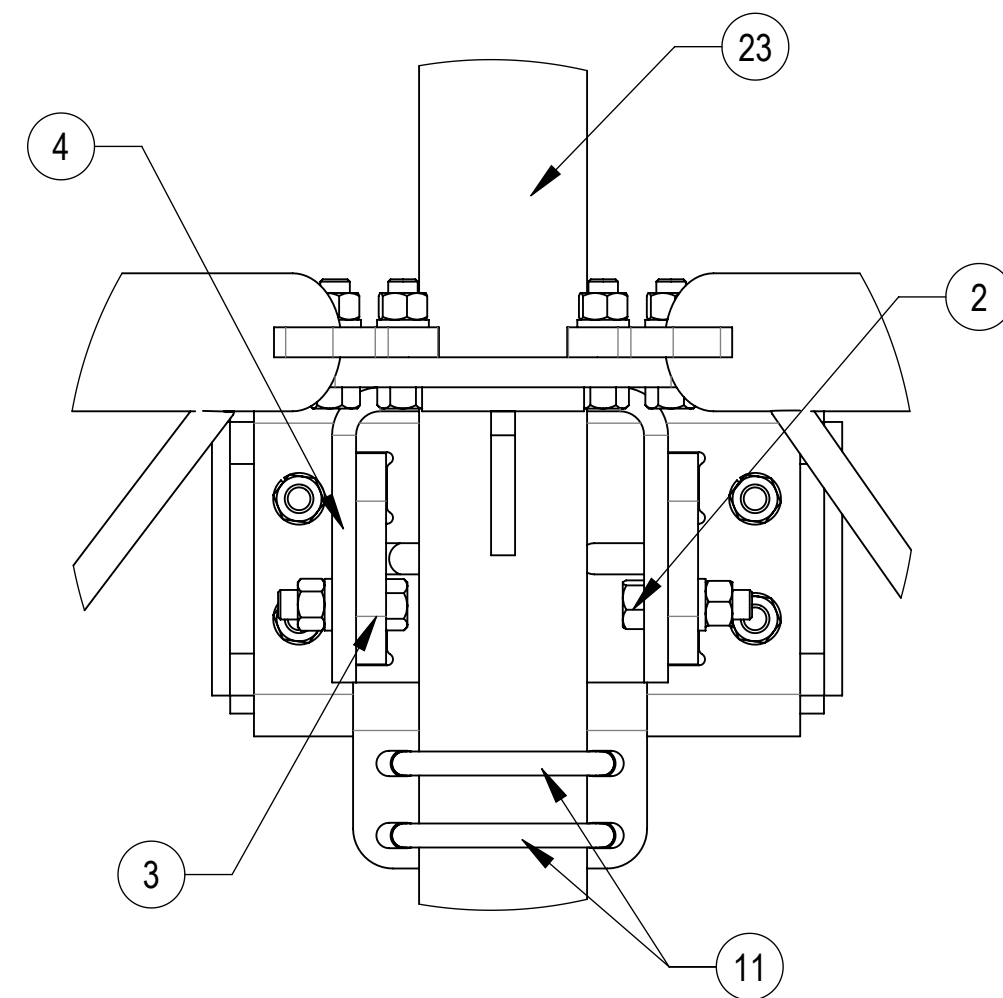
				
TITLE				
SFG23RHDX SECTOR FRAME SERIES				
SIZE	SCALE	DOCUMENT NO.		
		SFG23RHDX		
		DRAWING		
		VERSION	STATUS	REVISION
		11	RE	H
		SHEET		
		5 OF 13		



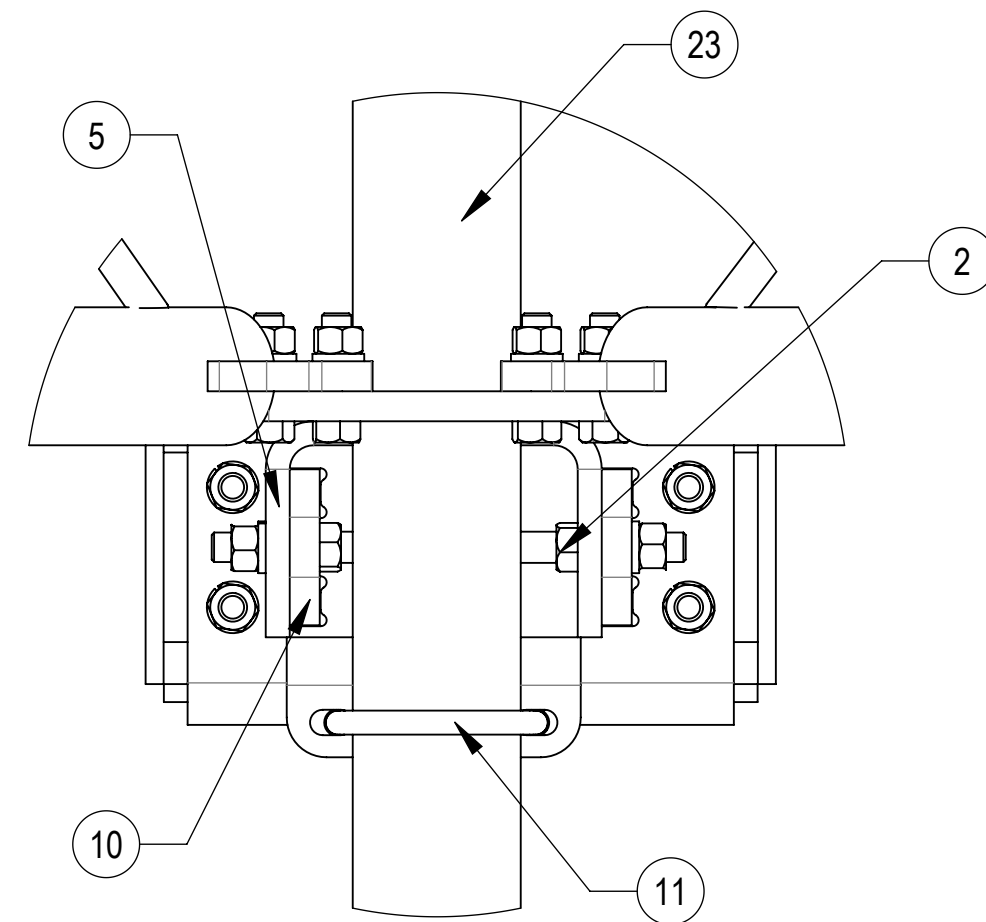
DETAIL D
SCALE 1 : 5



DETAIL E
SCALE 1 : 5



DETAIL R
SCALE 1 : 4



DETAIL T
SCALE 1 : 4



ANDREW® an Amphenol company

TITLE			
SFG23RHDx SECTOR FRAME SERIES			
SIZE	SCALE	DOCUMENT NO.	
C	1:24	SFG23RHDx	
DRAWING			SHEET
VERSION	STATUS	REVISION	6 OF 13
11	RE	H	

Confidential

4

3

2

1

D

D

C

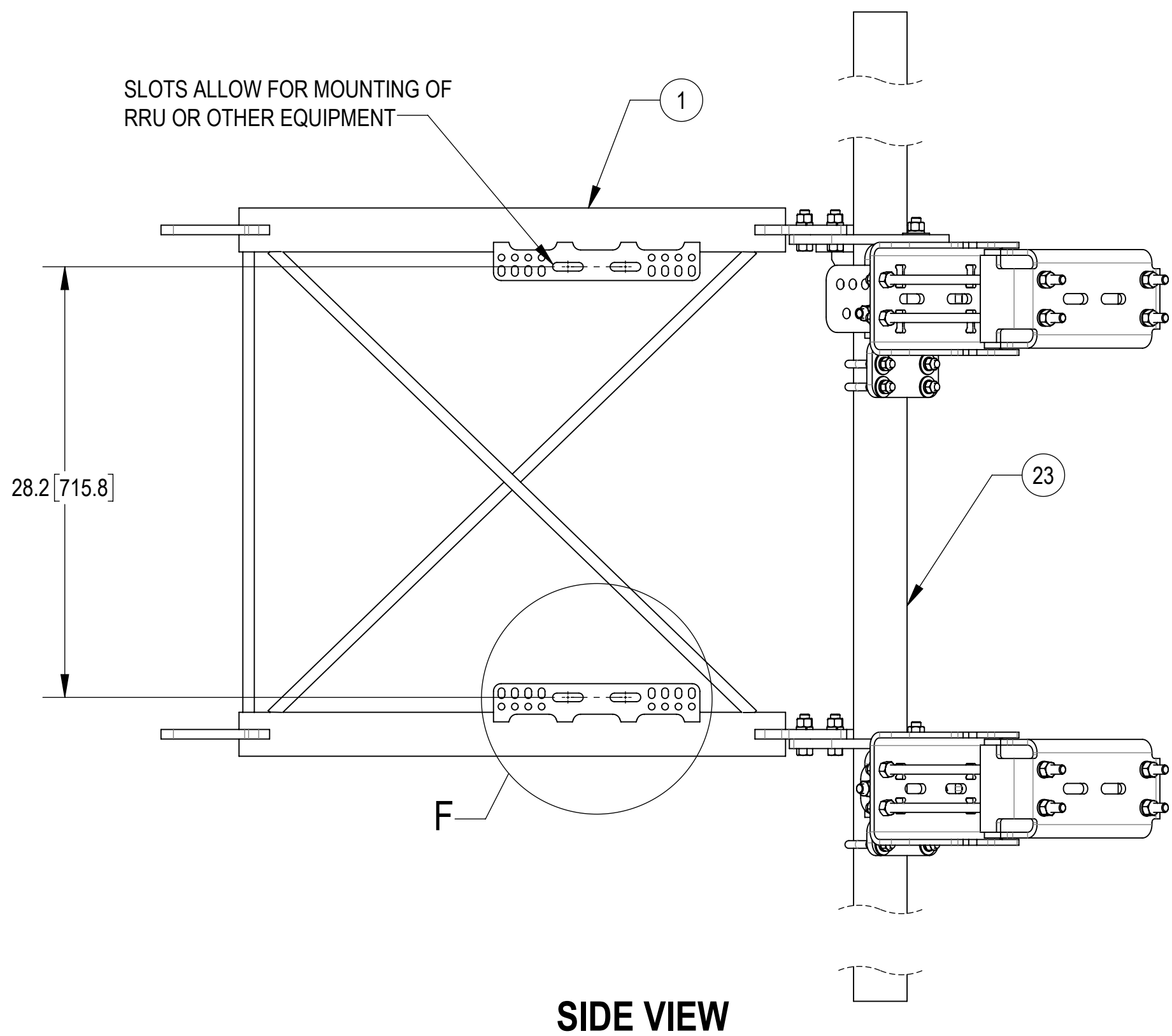
C

B

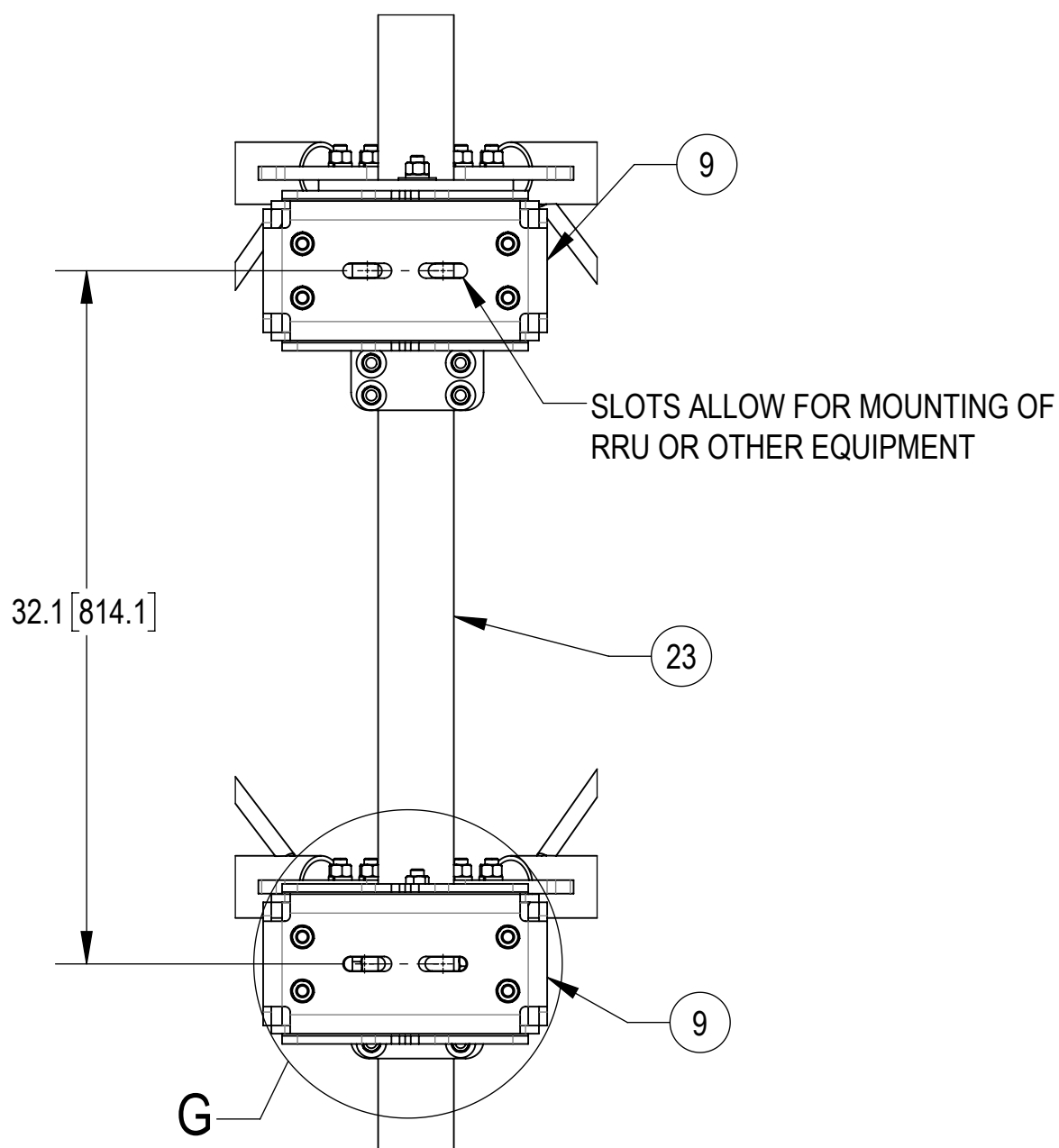
B

A

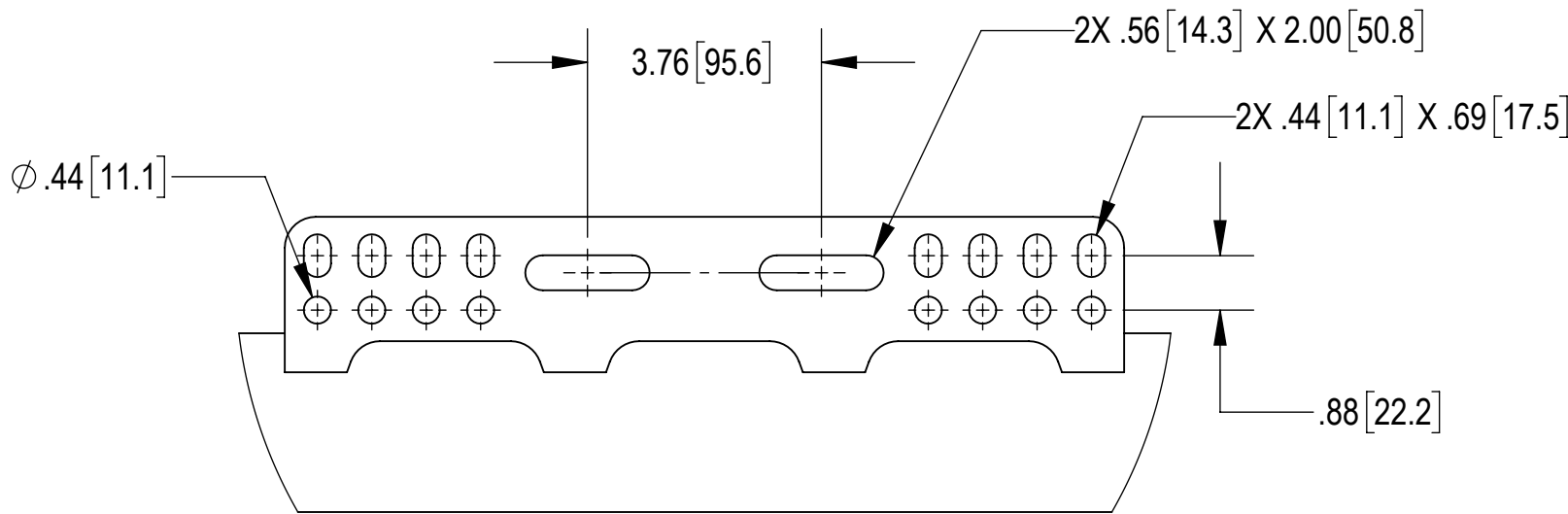
A



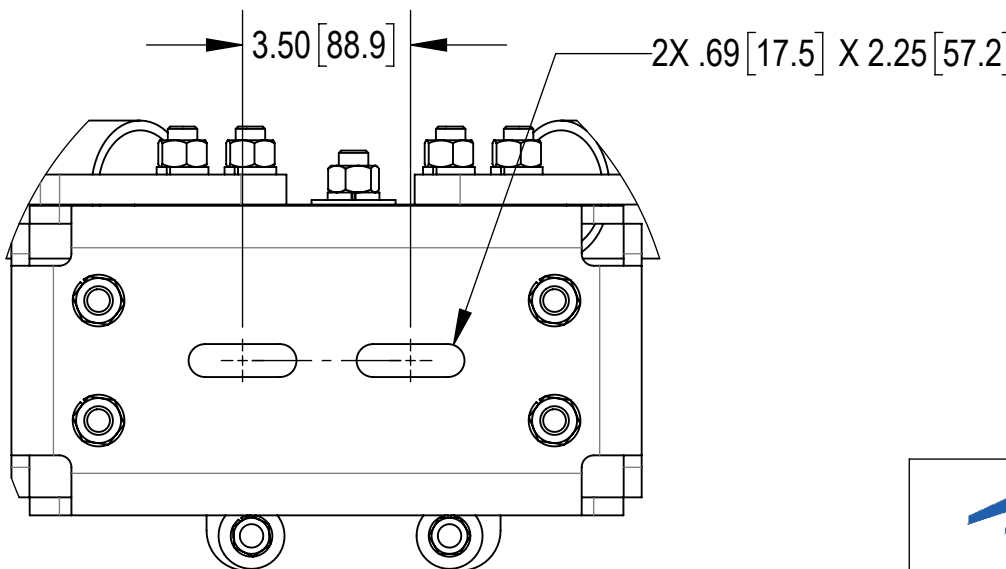
SIDE VIEW



BACK CROP VIEW



DETAIL F
SCALE 1 : 3



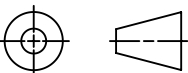
DETAIL G
SCALE 1 : 4

Confidential



TITLE
SFG23RHDx SECTOR FRAME SERIES

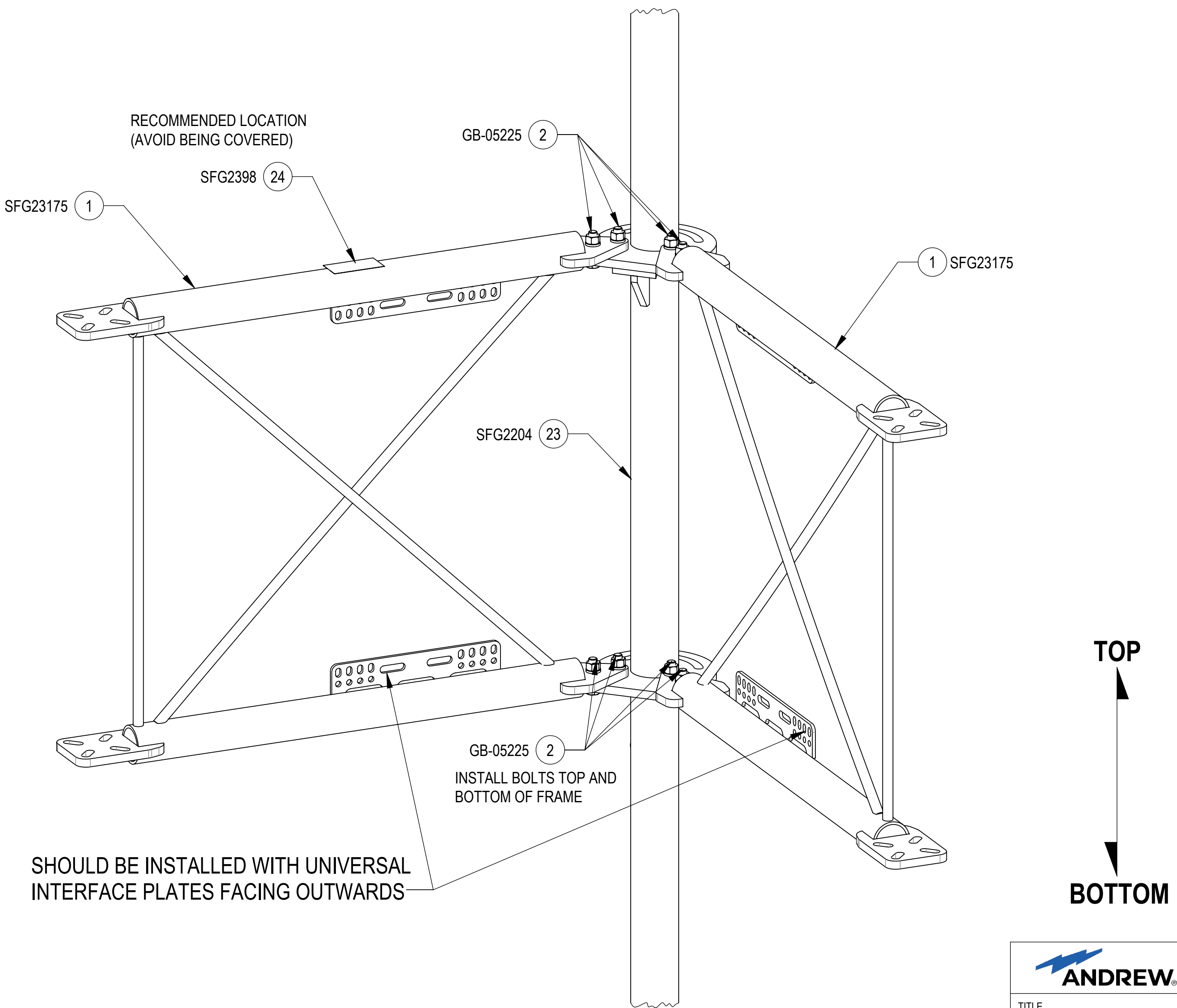
SIZE **C** SCALE **1:10** DOCUMENT NO. **SFG23RHDx**



DRAWING			SHEET 7 OF 13
VERSION	STATUS	REVISION	
11	RE	H	

4 3 2 1

INSTALLATION SEQUENCE - REFERENCE ONLY
STEP 1: ATTACH STANDOFF ARMS (SFG23175) TO BACK VERTICAL ARM MOUNT (SFG2204) USING BOLT KITS (GB-05225).
PLACE LABEL (SFG2398) ON TOP OF STANDOFF ARMS (SFG23175). (WIPE GALVANIZED SURFACE WITH ALCOHOL CLEANER BEFORE APPLYING LABEL)



ISO VIEW

**ANDREW**[®] an Amphenol company

TITLE

SFG23RHDx SECTOR FRAME SERIES

SIZE

C

SCALE

1:6

DOCUMENT NO.

SFG23RHDx

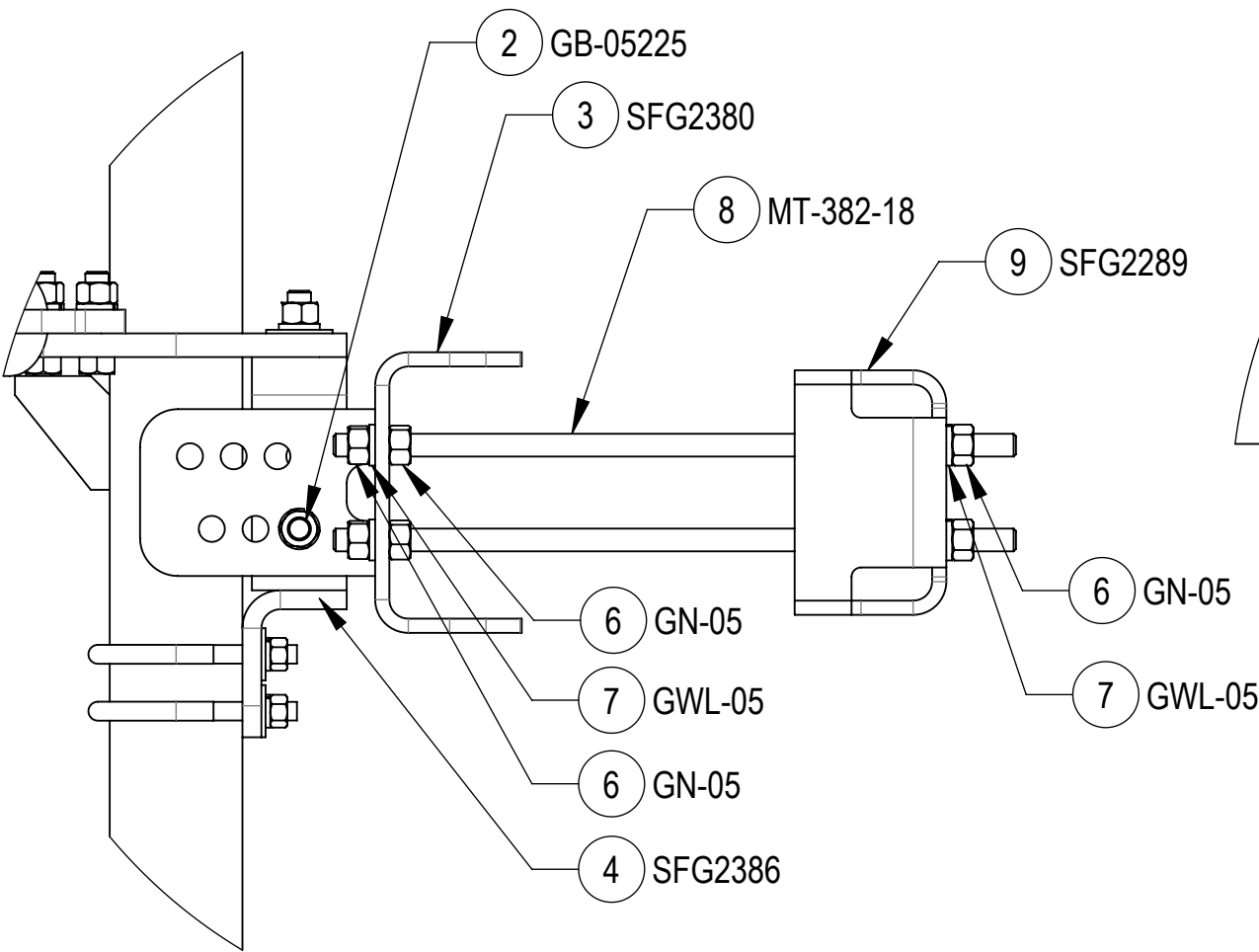




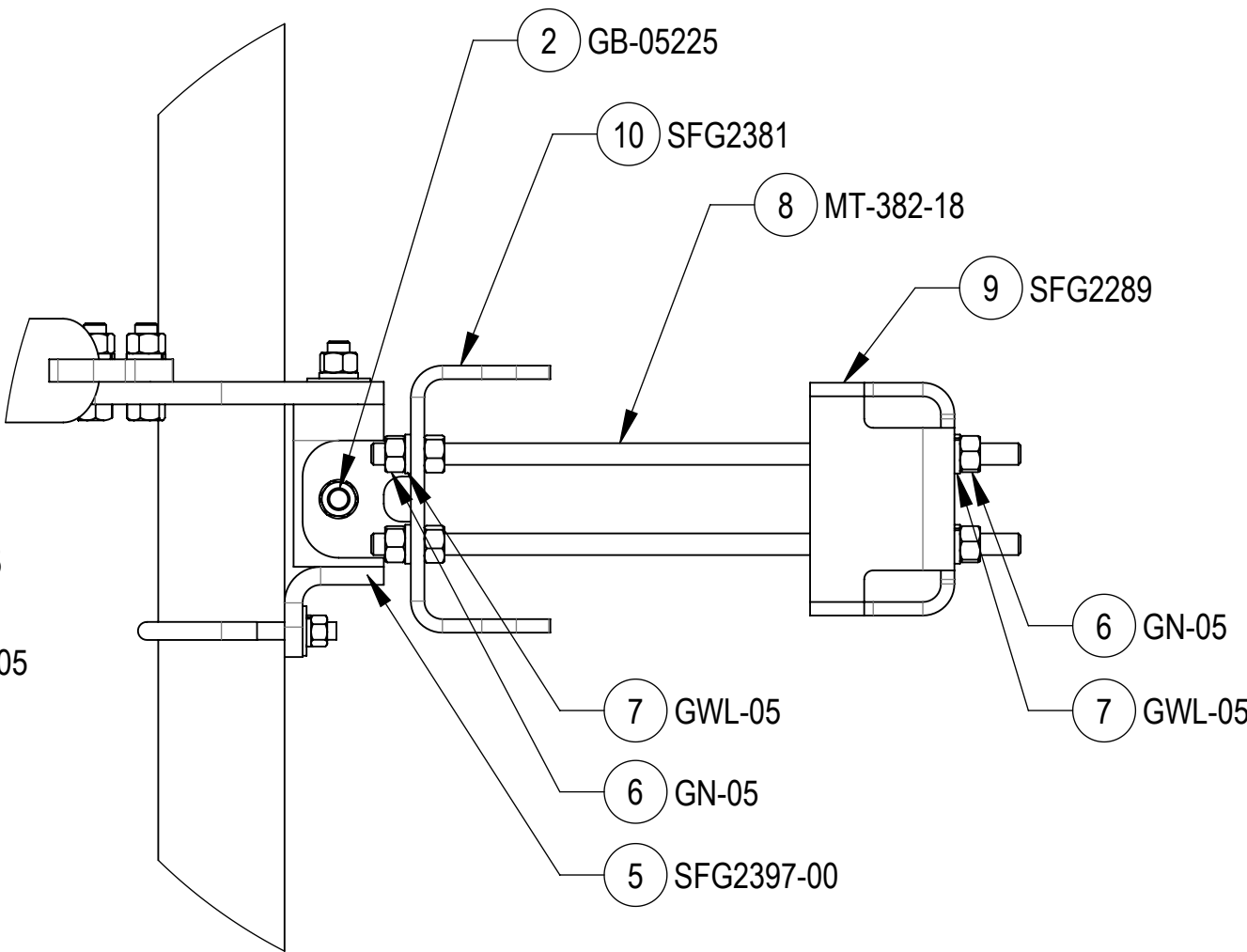
DRAWING			SHEET 8 OF 13
VERSION	STATUS	REVISION	
11	RE	H	

Confidential

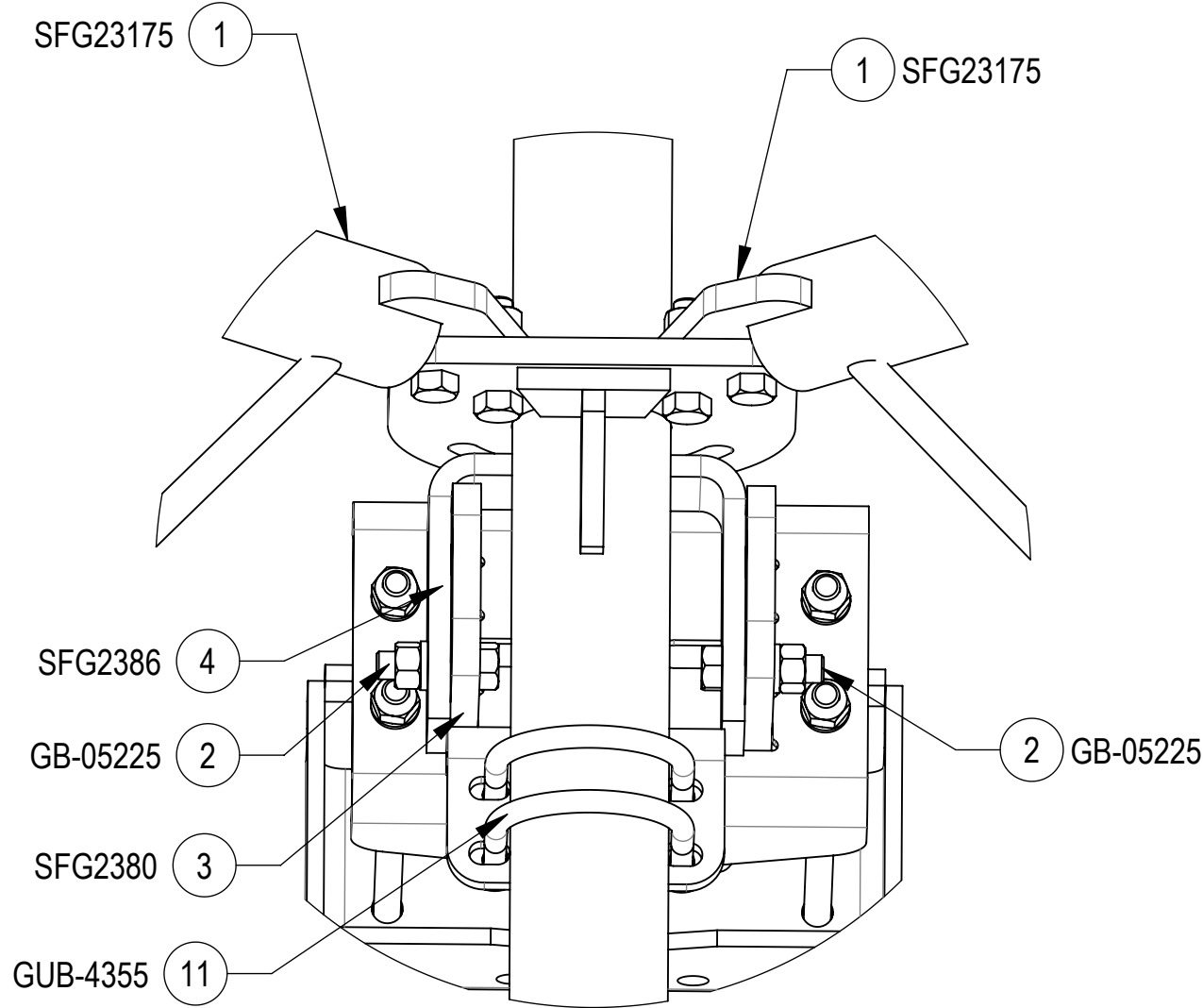
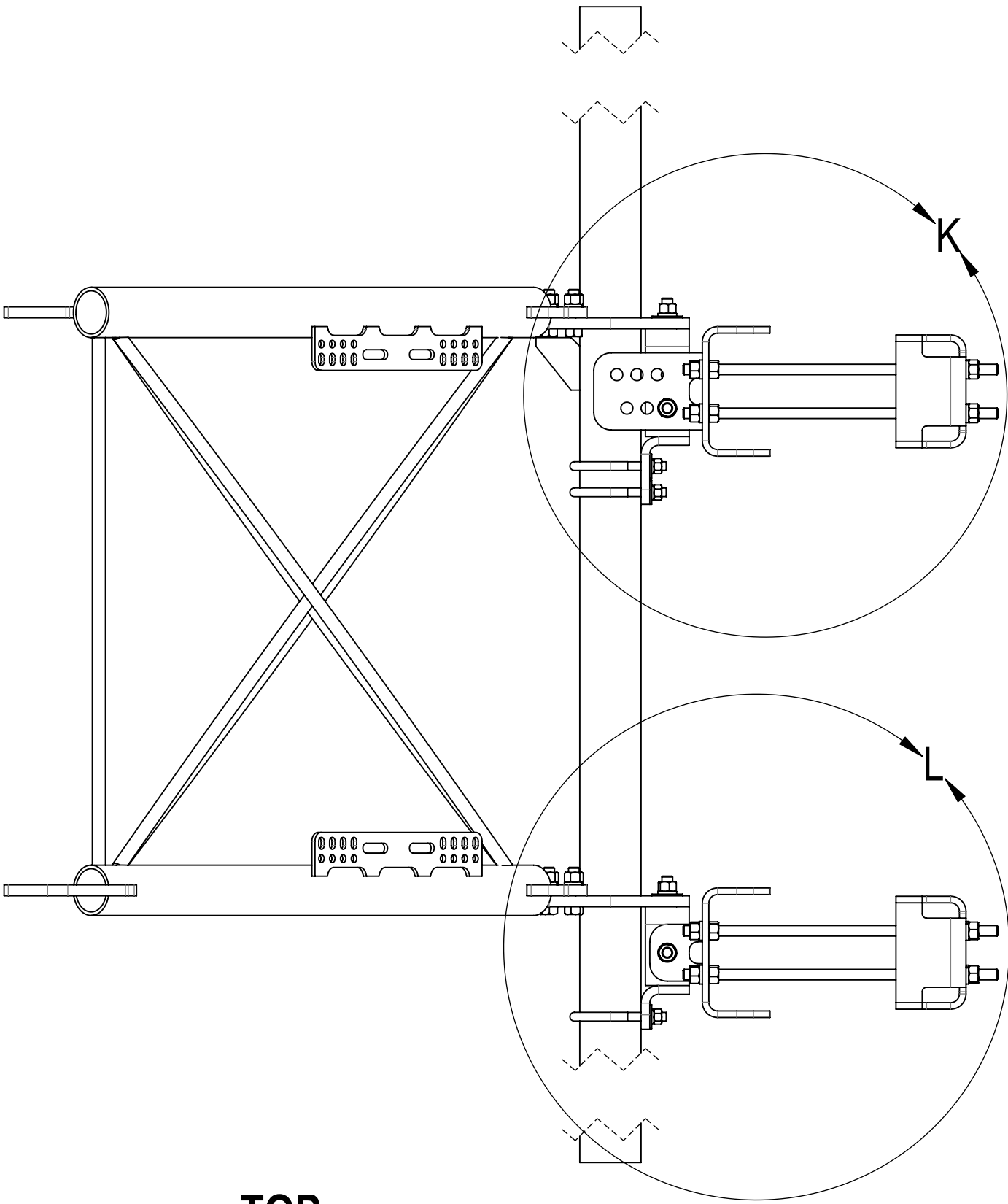
STEP 3: AT TOP, ATTACH TOP TAPER BRACKET (SFG2380) AZIMUTH/TAPER BRACKET (SFG2386) USING BOLTS KITS (GB-05225)
AT BOTTOM, ATTACH LOWER TOWER LEG BRACKET (SFG2381) TO AZIMUTH/TAPER BRACKET (SFG2397-00) USING BOLTS KITS (GB-05225)



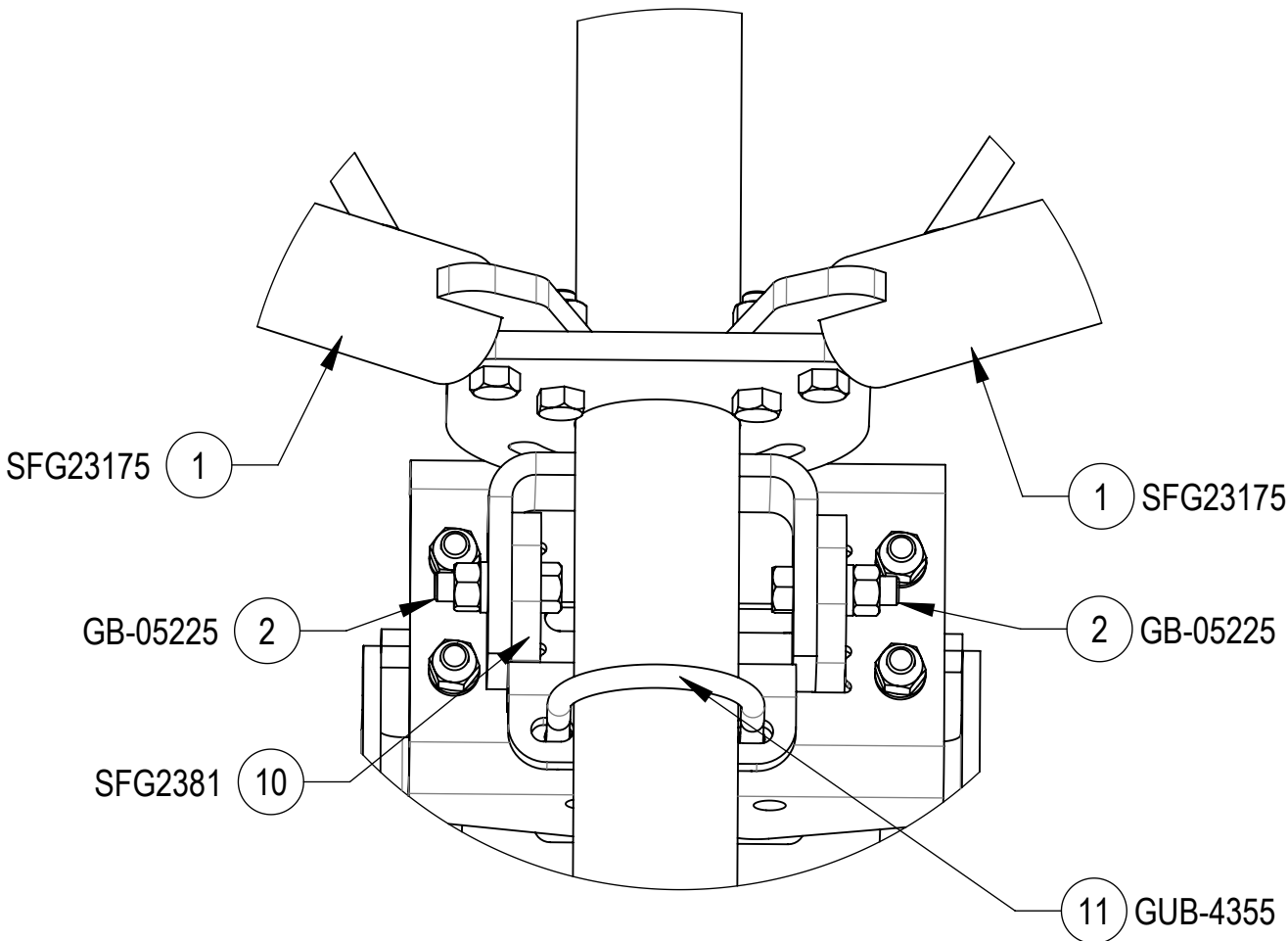
DETAIL K
SCALE 1 : 5



DETAIL L
SCALE 1 : 5



DETAIL ISO TOP ROTATED VIEW
SCALE 1 : 4



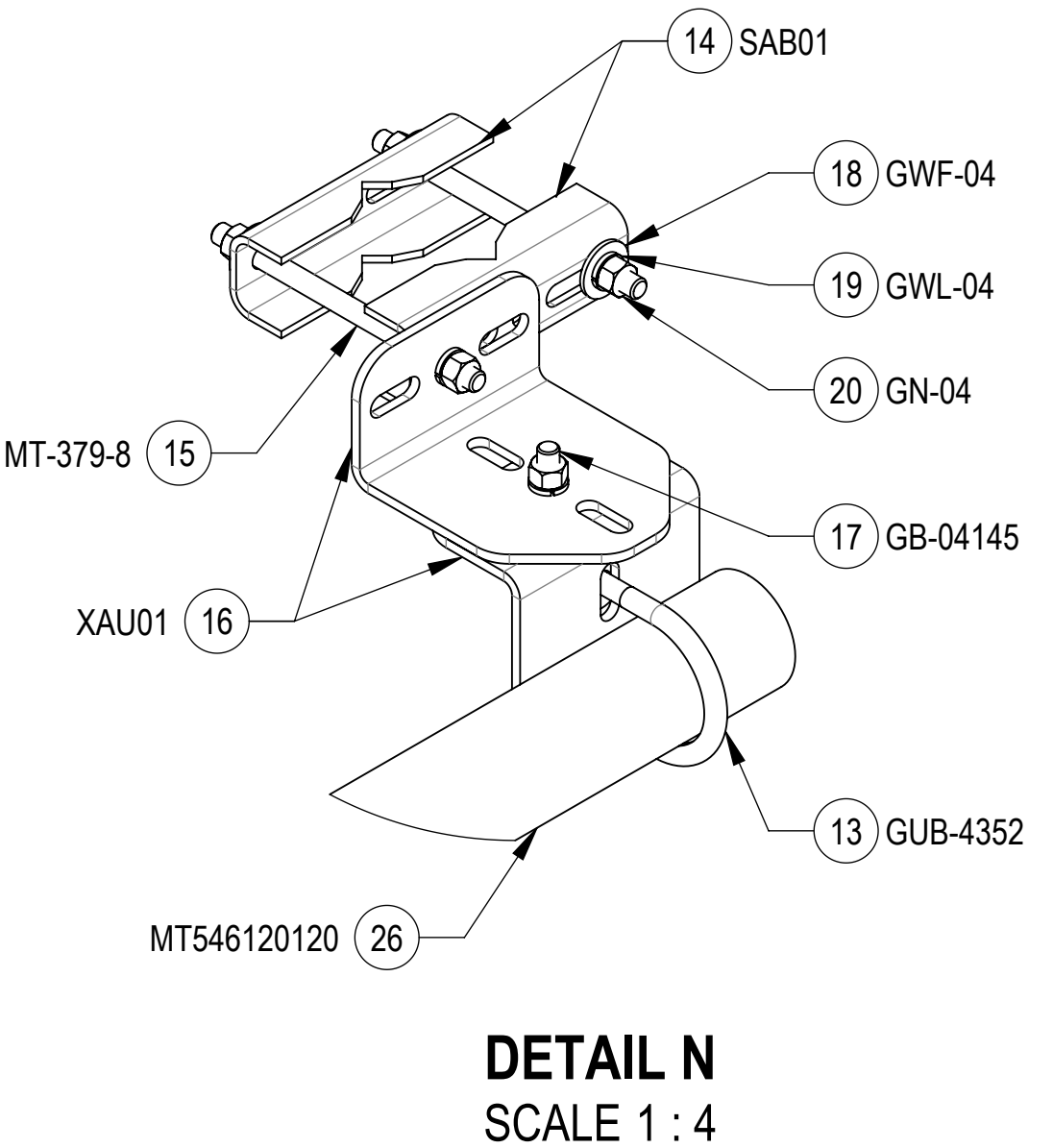
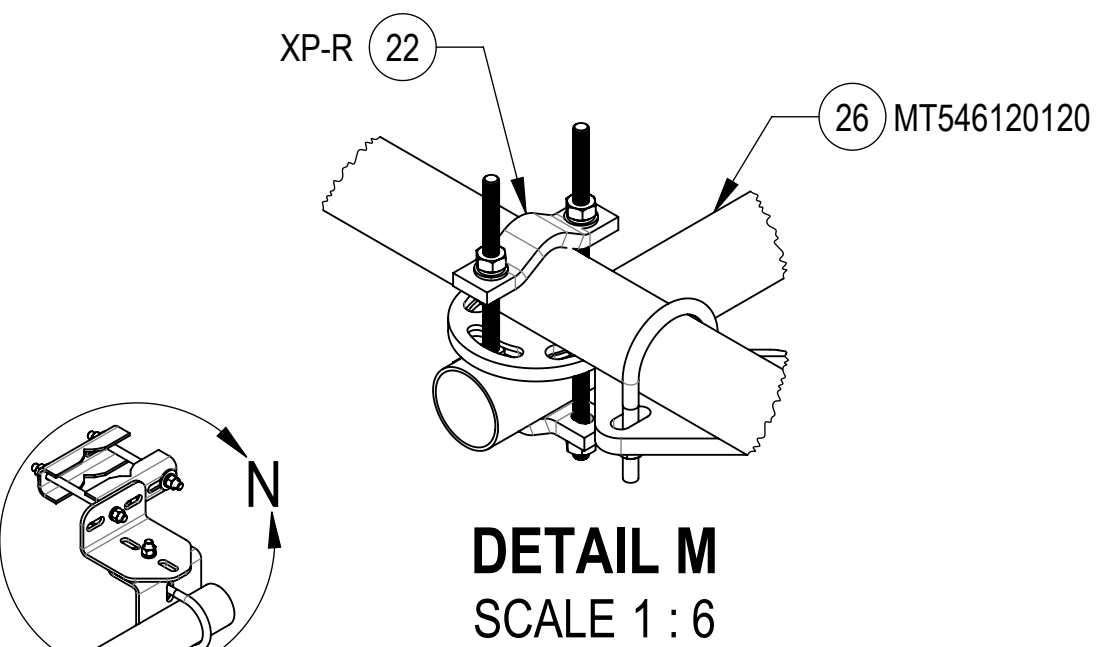
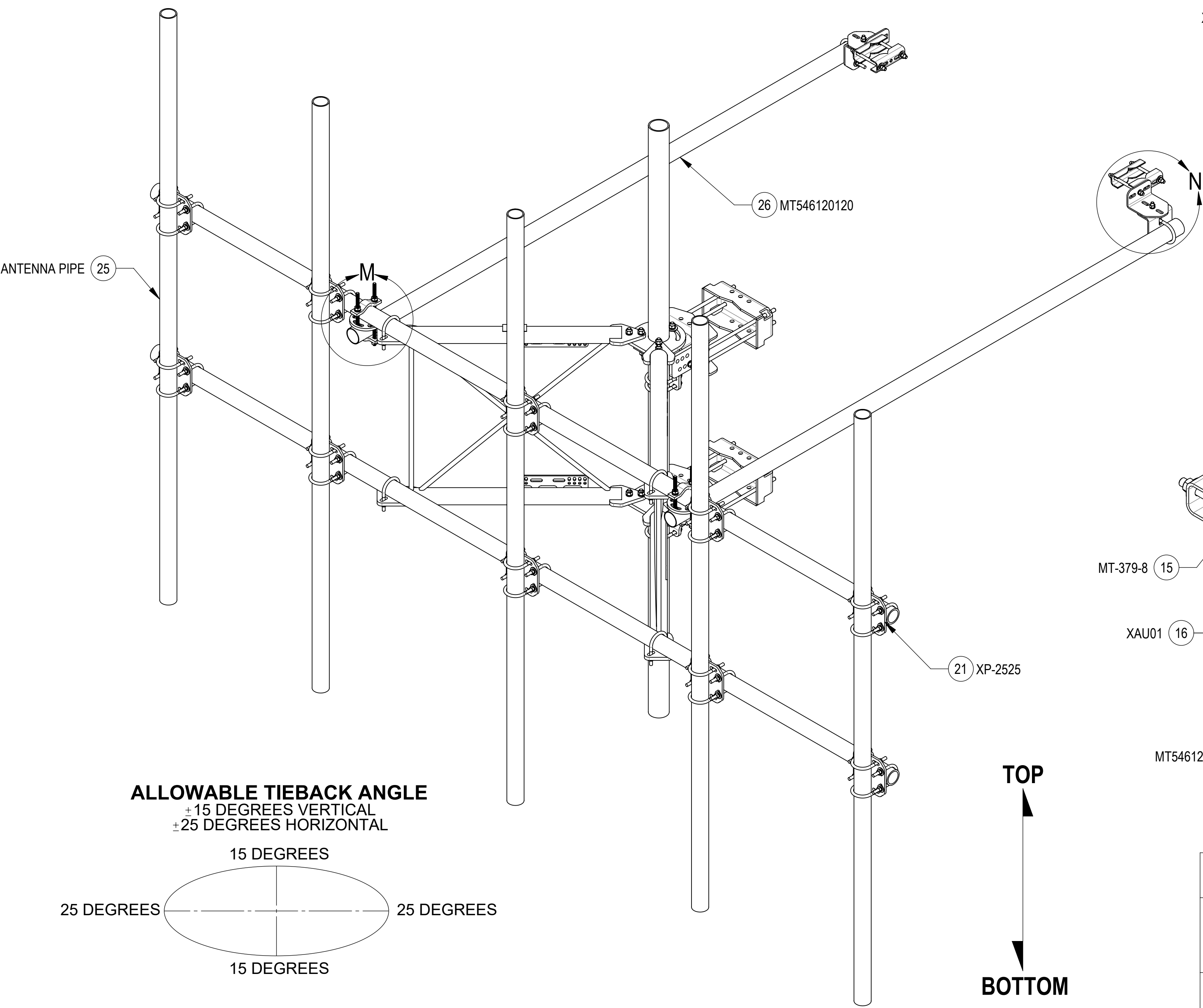
DETAIL ISO BOTTOM ROTATED VIEW
SCALE 1 : 4

TOP
↓
BOTTOM

Confidential

				
TITLE SFG23RHDX SECTOR FRAME SERIES				
SIZE C	SCALE 1:6	DOCUMENT NO. SFG23RHDX		
 		DRAWING		
		VERSION 11	STATUS RE	REVISION H
				SHEET 10 OF 13

STEP 5: ATTACH ANTENNA PIPES TO FACE PIPES USING CROSSOVER PLATES KITS (XP-2525) .
ATTACH TIE BACK PIPES (MT546120120) TO FACE PIPES USING ROUND CROSSOVER PLATES KITS (XP-R).



				
TITLE SFG23RHDX SECTOR FRAME SERIES				
SIZE C	SCALE 1:12	DOCUMENT NO. SFG23RHDX		
 	DRAWING			SHEET 12 OF 13
	VERSION 11	STATUS RE	REVISION H	

Confidential

4

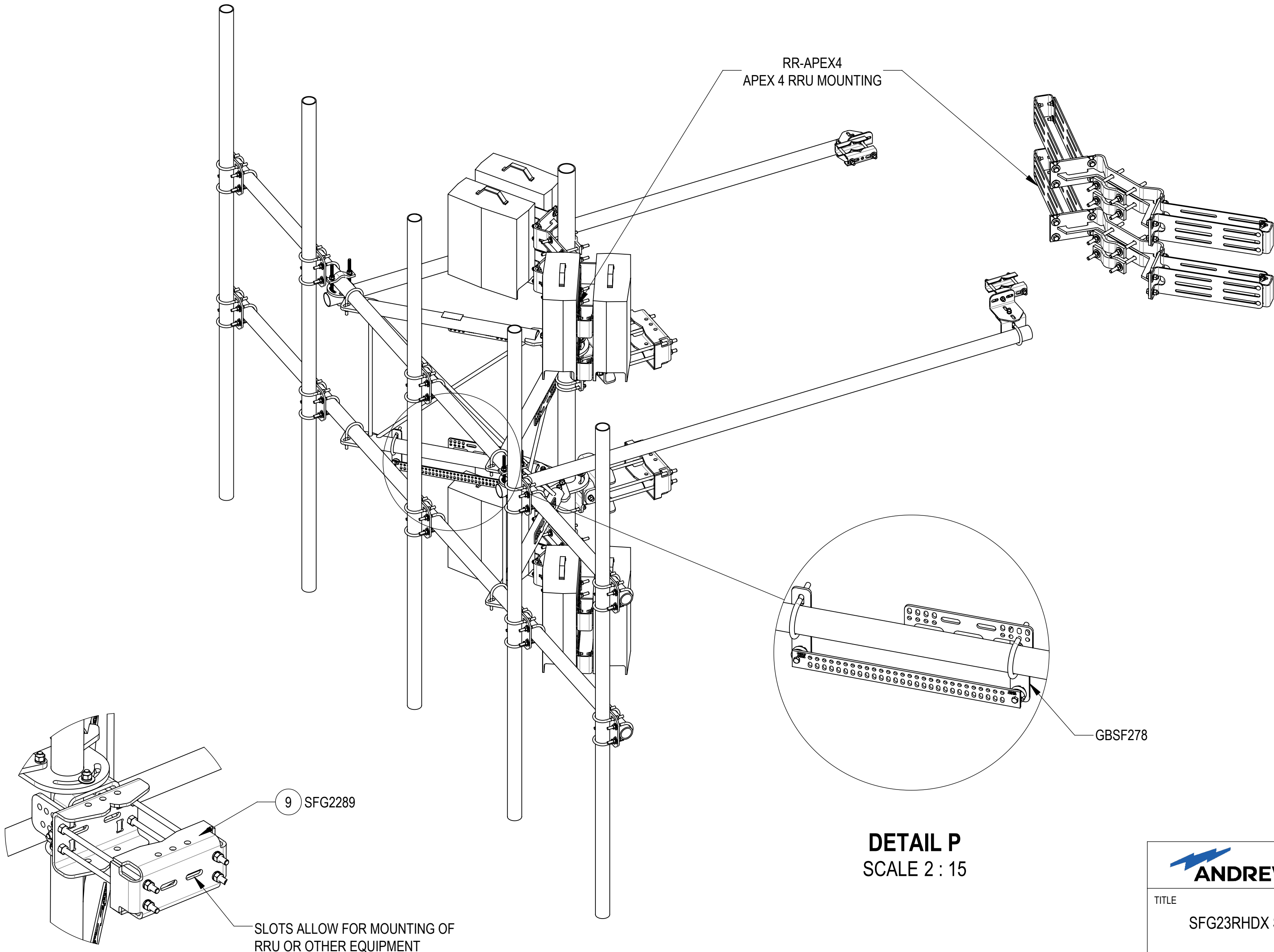
3

2

1

NOT ALL MATERIALS ARE INCLUDED WITH ITEMS SHOWN ON THIS PAGE
SEE RESPECTIVE PART NUMBER DRAWING BOM FOR DETAILS

ACCESSORIES ORDERED SEPARATELY:



TITLE
SFG23RHDX SECTOR FRAME SERIES

SIZE C	SCALE 1:12	DOCUMENT NO. SFG23RHDX
------------------	----------------------	---------------------------

DRAWING			SHEET 13 OF 13
VERSION	STATUS	REVISION	
11	RE	H	

Confidential