

DRAWING INDEX
Job #50209, Model 8.1M KPK-DBS
VATG – Germany – Libya

ANTENNA SYSTEM

Catalogue # Drawing # Description

R000371.....000386 Foundation Instl, 8/9KP
012450-01.....012450 Foundation Conduit Instl, 9KP
R000001-G.....000388 Ant Instl 8KP, 120DEG AZ
R000101-C.....000459 Ref Instl 8.1M, 125MPH

FEED SYSTEM

N/A 009172 Feed 8/9M DBS-BND, FR, LP, BSC
R000302 000789.....Feed Instl 8/9KP Ku-Band
R003033 001807.....Feed Ring Instl 9KPK LP
N/A 008646 Feed Interface 9M, DBS-Bnd,FR,LP
N/A 009267 Optical Geometry, 9M KPK

MOTOR/ CONTROL SYSTEM

R001261....000133 Az Motorized Drive Instl (25T/35T-RF60/63)
R000540....000133 El Motorized Drive Instl (20T-RF60/63)
R007773....004450 Motorized Drive Instl POL 18 8/9 KP
R007439....004446 Limit Switch Instl AZ 8/9KP Std. Trvl.
R007466....004448 Limit Switch Instl EL 8/9KP Std. Trvl
R000658....000283 Limit Switch Stop Instl Pol
013754-01P013754 Pos Xducer Instl 8/9 KP AZ 11 CPLG
013872-01P.....013872 Pos Xducer Instl 8/9KP EL 11 CPLG
023528-01..023528 Cndt Instl ACS 8/9KP Std
014587-01..014587 Cndt Instl MOT 8/9KP Std
012503-02..012503 Cable Instl ACS, 8/9KP-LP 1P Std
N/A 001402 Wiring Schematic, ACS7134EMT
N/A 023862 Wiring Schematic, DTR

DEICE SYSTEM

Catalogue # Drawing # Description

Not Required

RF INTEGRATION SYSTEM

011852-01... 011852.....Hub Intg Instl 8/9KXX-DBS Dual TX
007208-02... 007208.....Axis Xover Instl 8/9KXX-DBS Dual
026058-02... 026058.....Hub Intg Instl 8/9KXX CP/LP 1:2 RX

ANTENNA OPTIONS

R000630.... 001003.....Access Instl 8/9KP
R007967... 004753.....Elec Kit LPS 8/9KX Std.
030947-01C 030947.....Hub Cover Instl 9KP 2 Pc
R008381.... 005081.....Rainshield Instl Ku-Band 8/9M
024865-03 024865.....Elec Kit AUS 8/9M L/S/A 230V
024868-02.. 024868.....Elec Kit AUS 8/9M ACWL 230V
023641-03 023641.....Cndt Instl AUS 8/9KX, 2-pos
023634-01 023634.....Cable Tower Instl Std w/ Jbox
N/A 024055.....Wiring Schematic, Utilities

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:30:54

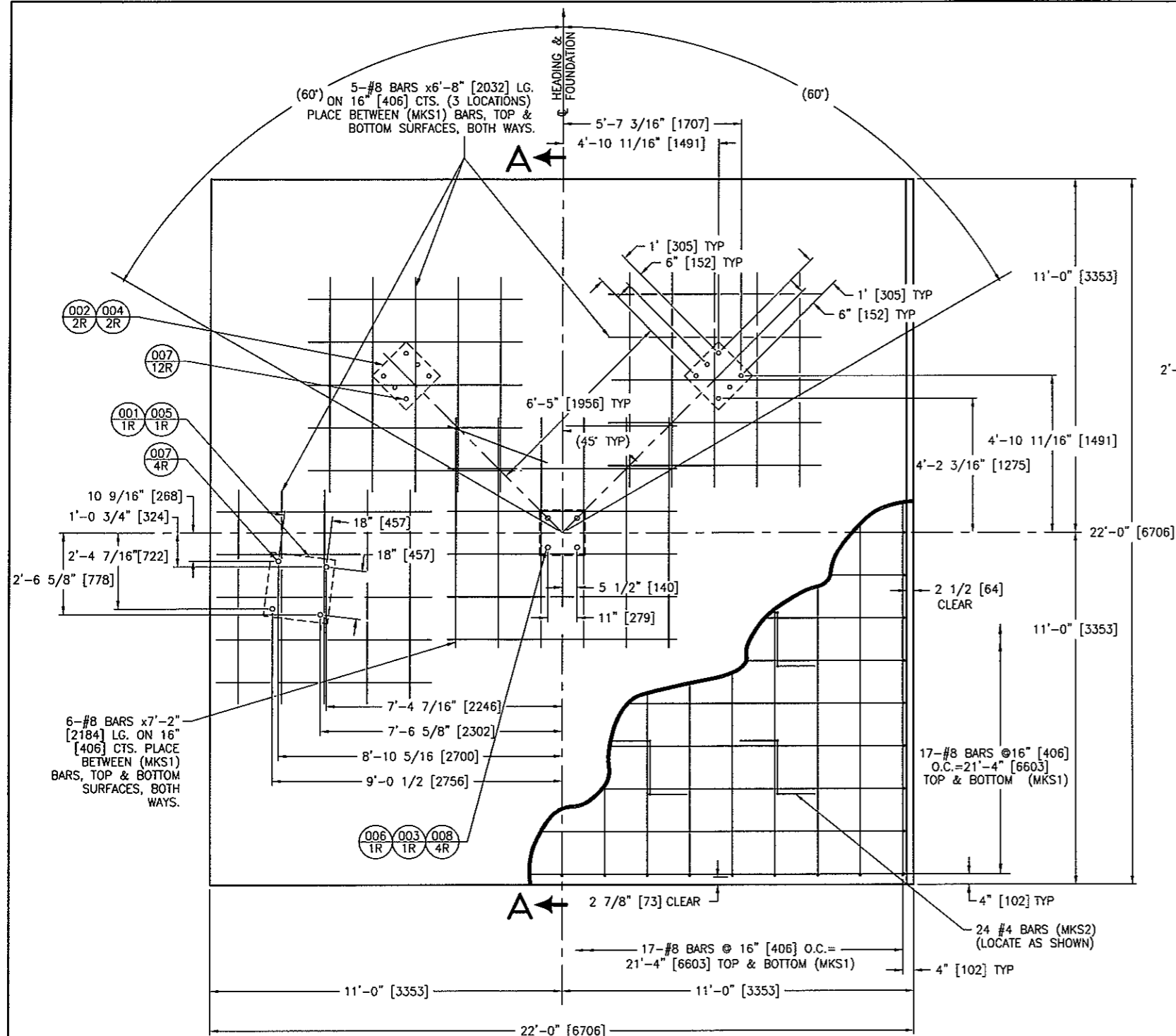
 CATALOGUE#: R000371 PSM: M STATUS: RELEASED DRAWING: D-000386 REV: D
 DESCRIPTION: FDN INSTL 8/9KP 125MPH STD TRV KINGPOST
 CATEGORY: ANTENNA ENTERED: 11/24/1992
 CLASS: BASFTN REVISED: 6/28/2004 REV: D
 SUBCLASS: INSTL APPROVED: 6/28/2004
 JOB#: 11295 PENDING: REV
 REVISION: E 040574 6/28/04 SDA/GPR OLD CAT#: 572769-01 SIZE: D DWG CAT: I ID: CAB

BILL OF MATERIAL

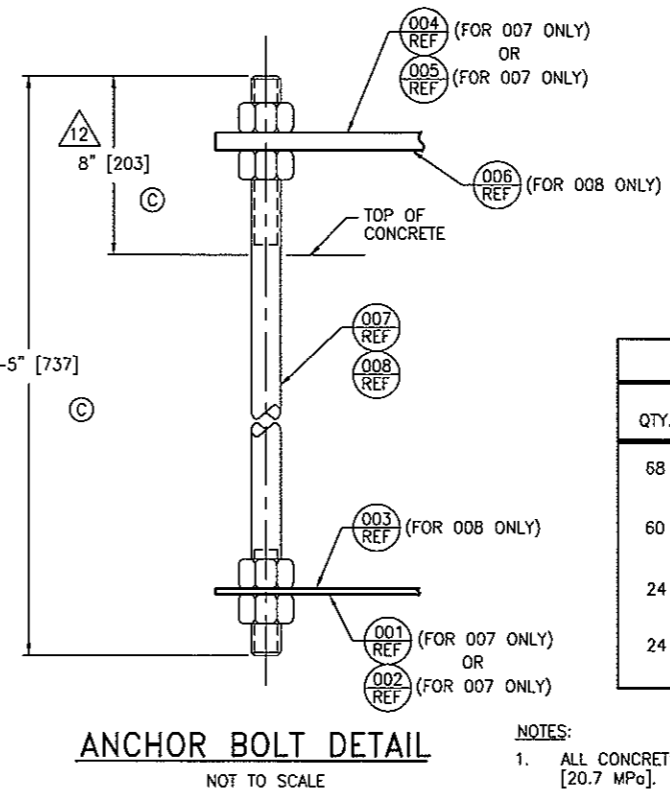
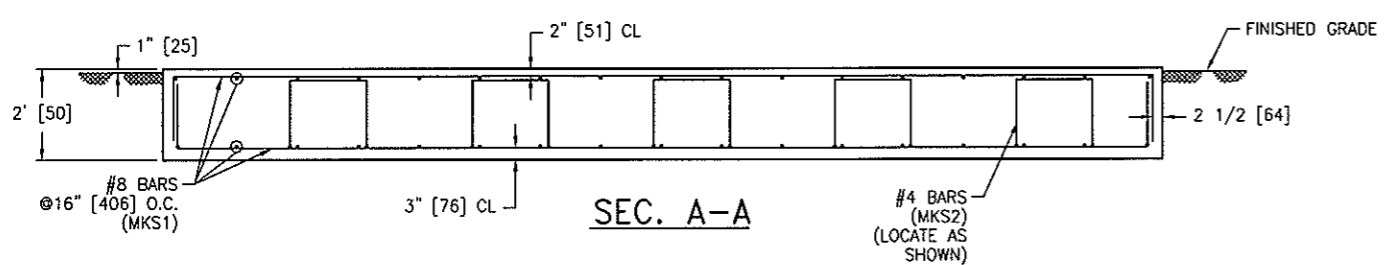
ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
001	R000372	1.00			R	C	S	PL WASHER 0.5 X 24 X 24LG A36	BASFTN	DETAIL	B-000025	F
002	R000373	2.00			R	C	S	PL WASHER 0.5 X 18 X 18LG A36	BASFTN	DETAIL	B-000026	H
003	R000374	1.00			R	C	S	PL WASHER 0.5 X 17 X 17LG A36	BASFTN	DETAIL	B-000025	F
004	R000375	2.00			R	C	S	TEMPLATE FDN ANCHOR BOLT	BASFTN	DETAIL	B-000026	H
005	R000376	1.00			R	C	S	TEMPLATE FDN ANCHOR BOLT	BASFTN	DETAIL	B-000025	F
006	R000377	1.00			R	C	S	TEMPLATE FDN ANCHOR BOLT	BASFTN	DETAIL	B-000025	F
007	V10980-9	16.00			EA	R	P	S BOLT ASSY ANCHOR 1 1/2-6UNC X 29 A193 B7	BASFTN	HDG		
008	V11080-9	4.00			EA	R	P	S BOLT ASSY ANCHOR 1 3/4-5UNC X 29 A193-B7	BASFTN	HDG		
901R	DWG-000386	2.00			EA	R	P	P DOC DWG D-000386 FDN	BASFTN	INSTL	D-000386	D

END OF BOM:R000371

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASELINE, REPLACES 572769(D);	12/31/92	CLK/
B	ECR96-1438; DELETED ITEMS 009 AND 010.	1/16/97	SJH/KLL
C	EC 03-0951; ANCH BOLT: 8" [203] WAS 7 1/2" [191] & 1'-11 1/2" [597] WAS 1'-11" [584].	11/11/03	KBN/KLL
D	ECR04-0574; CHG DEPTH, REBAR, BOLT GRADE	08/23/04	SDA/GPR



PLAN VIEW
R000371



REINFORCEMENT BARS				
QTY.	SIZE	CUTTING LENGTH	MARK	BENDING DIAGRAM ALL DIMENSIONS OUT TO OUT
68	#8	24'-6" [7468]	S1	
60	#8	6'-8" [2032]		
24	#8	7'-2" [2184]		
24	#4	6'-9 1/2" [2070]	S2	

- NOTES:
- ALL CONCRETE SHALL HAVE A 28-DAY MIN. COMPRESSION STRENGTH OF 3,000 PSI [20.7 MPa].
 - CONCRETE SHALL BE THOROUGHLY CONSOLIDATED BY EITHER RODDING OR VIBRATING.
 - REINFORCEMENT STEEL SHALL BE DEFORMED INTERMEDIATE GRADE NEW BILLET STEEL BARS WITH 60,000 PSI [414 MPa] MIN. YIELD STRENGTH IN ACCORDANCE WITH SPECIFICATION FOR DEFORMED STEEL BARS FOR CONCRETE REINFORCEMENT (A.S.T.M. A-615).
 - ALL REINFORCEMENT BARS SHALL BE SECURELY WIRED TO PREVENT SHIFTING WHEN CONCRETE IS PLACED.
 - THE BASE UNDER THE FOUNDATION SHALL CONSIST OF UNDISTURBED (OR COMPACTED) MATERIAL WITH A MINIMUM BEARING CAPACITY OF 2,000 PSF [957.6 mbor].
 - SURFACE TO HAVE A BROOM FINISH AND BE LEVEL TO THE HORIZON WITHIN ±1/8"[3]
 - WHEN THE FROST-LINE IS BELOW 17" [432], THE SUB-SOIL BASE REQUIRES SPECIAL DESIGN CONSIDERATION TO PREVENT HEAVING.
 - COMPLIANCE WITH ALL BUILDING CODES AND THE REQUIRED PERMITS ARE THE RESPONSIBILITY OF OTHERS.
 - ANCHOR BOLT PATTERNS SHALL BE LOCATED WITHIN ±1/8" [3] OF SPECIFIED LOCATIONS.
 - COMPLIANCE WITH ALL ELECTRICAL CODES AND THE REQUIRED PERMITS ARE THE RESPONSIBILITY OF OTHERS.
 - ESTIMATED QUANTITIES: CONCRETE: 36 CU. YDS [27.5 M³]. STEEL: 6,100 LBS [2767 Kg].
 - PROTECT EXPOSED THREADS FROM CONCRETE SPLATTER DURING PLACEMENT OF CONCRETE. REMOVE WOODEN TEMPLATES AND HEX NUTS 24 HOURS AFTER PLACEMENT OF CONCRETE AND CLEAN ALL EXPOSED THREADS.
 - DIMENSIONS [] ARE METRIC (MILLIMETERS).
 - REINFORCED CONCRETE SHALL MEET THE REQUIREMENTS OF CURRENT ACI 318-02 CODE

DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED, INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DETAILS ± 1/16 .XX ± .05 ASSY'S ± 1/8 .XXX ± .005 ANGLES ± 1° UNLESS OTHERWISE SPECIFIED, PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY. TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.	REFERENCE SEPARATE BOM FOR SPECIFIC INFO				VertexRSI CONFIDENTIAL AND PROPRIETARY	
	ADDITIONAL APPROVALS	DATE	APPROVALS	DATE	VertexRSI	
DESIGN			DRAWN C.KEMP	12/31/92	ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
MECHANICAL			CHECKED G.ROBERTS	01/05/93	TITLE: FOUNDATION INSTALLATION ±P60° AZ TRAVEL, 125 MPH WIND MODEL 8.1/9.0 KPC/KPK	
STRUCTURAL			DESIGNER V.TWU	10/10/89	CODE ID. NO. 98230	SIZE D
ELECTRICAL			MANUFACTURING		DWG NO. 000386	REV D
			PROJECT C.BUSSE		SCALE: 1/25	CONTRACT NO.
			PRODUCT MGR J.PORIER			SHEET 1 OF 1

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:30:57

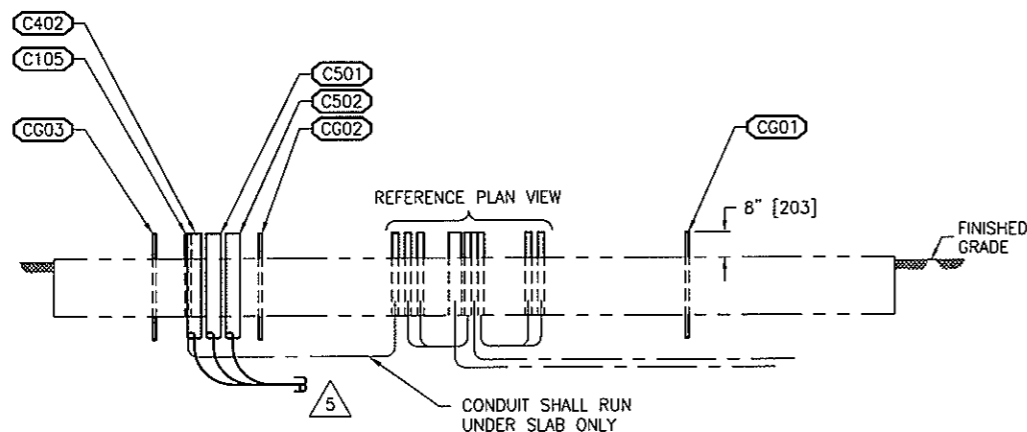
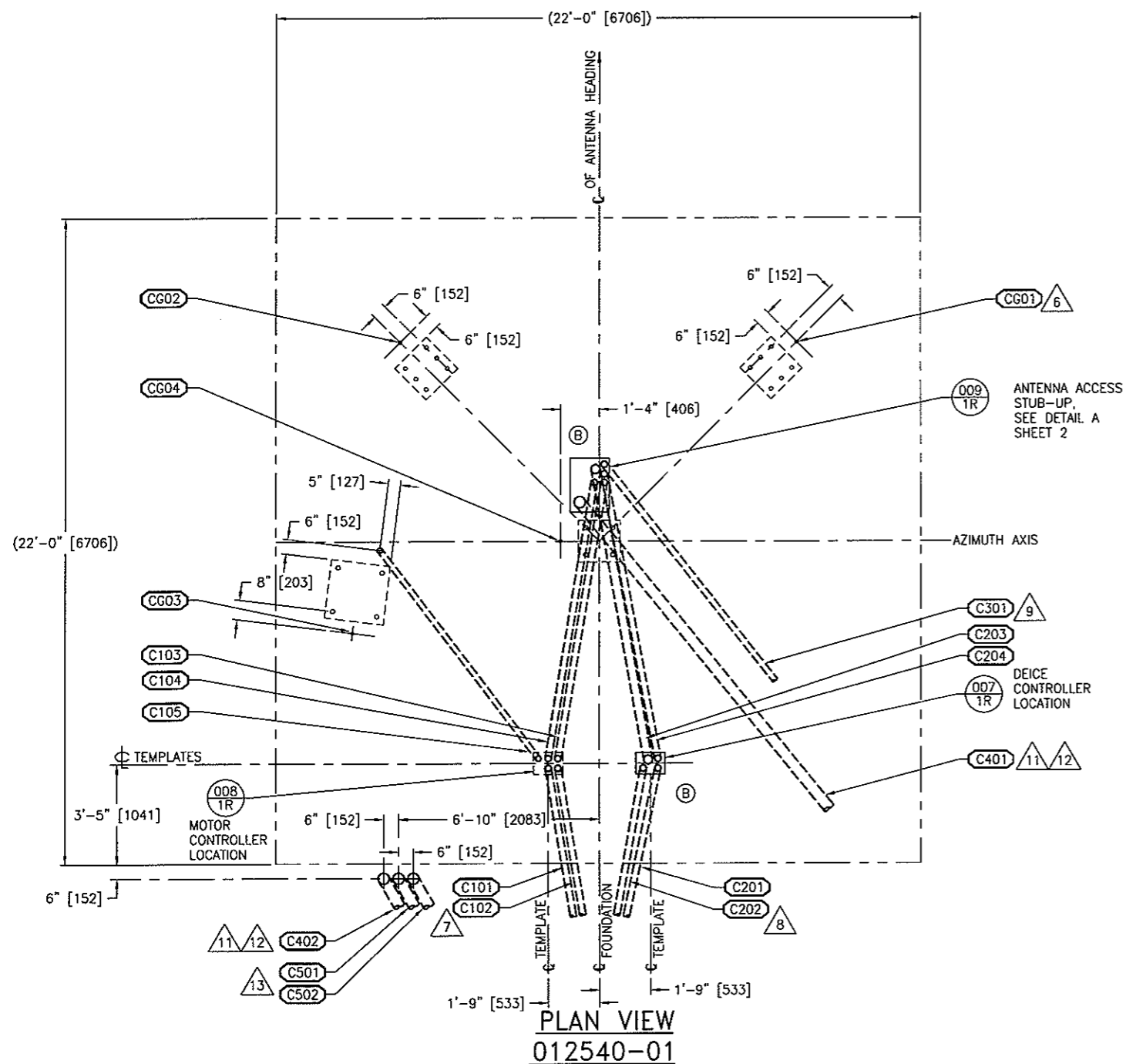
CATALOGUE#: 012450-01	PSM: M	STATUS: RELEASED	DRAWING: D-012450	REV: C
DESCRIPTION: FDN CNDT LAYOUT 8/9/9.3KP		CATEGORY: INTEGRAT	ENTERED: 7/20/1996	
		CLASS: BASFTN	REVISED: 5/16/2000	REV: C
		SUBCLASS: INSTL	APPROVED: 5/18/2000	
		JOB#: 9708	PENDING:	REV
REVISION: B 01/12/99 99-0330 JD/KS		OLD CAT#: NEW A 07/20/96 HLK/GPR	SIZE: D DWG CAT: I	ID: HLK

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
007	015859-02	1.00			R	C	S	DET TEMPLATE CNDT FDN	BASFTN	DETAIL	D-015859	A
008	R000358	1.00			R	C	S	TEMPLATE FDN CNDT	BASFTN	DETAIL	B-000022	A
009	015859-01	1.00			R	C	S	DET TEMPLATE FDN CNDT	BASFTN	DETAIL	D-015859	A
900	DWG-012450	2.00		EA	R	P	P	DWG PRINT D-012450	BASFTN	INSTL		

END OF BOM:012450-01

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	07/20/96	HLK/GPR
B	REVISED PER ECR #99-0330	01/12/99	JED/KBS
C	EC 00-0612	05/16/00	JED/KBS



NOTES:

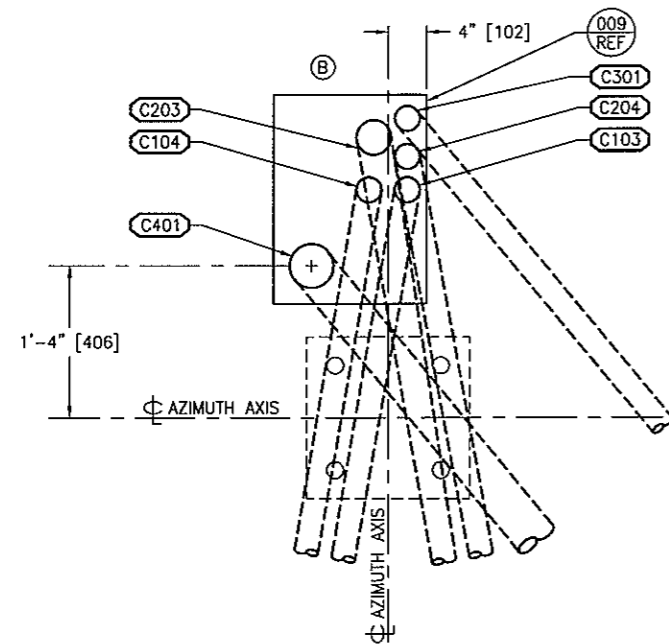
- COMPLIANCE WITH ALL ELECTRICAL CODES AND THE REQUIRED PERMITS ARE THE RESPONSIBILITIES OF OTHERS.
- (C000) INDICATES CONDUIT ID NUMBER. REFERENCE CONDUIT SCHEDULE FOR SIZE AND DESCRIPTION. ALL PVC CONDUIT (OR TYPE REQUIRED BY LOCAL CODES) IS TO BE SUPPLIED BY OTHERS.
- CONDUITS SHOWN EXITING THE FOUNDATION MAY DO SO IN THE DIRECTION THAT IS THE MOST CONVENIENT FOR EACH SITE.
- POWER DISTRIBUTION PANEL(S) AND/OR MAIN POWER DISCONNECTS ARE TO BE SUPPLIED BY OTHERS. VOLTAGE AND FREQUENCY ARE CONTRACT SPECIFIC AS SITE DICTATES.
- ALL CONDUIT ELBOWS ARE TO BE SWEEPS, 90° LONG ELBOWS THAT ARE PROPERLY SEALED FOR UNDERGROUND USE.
- CONDUIT STUB-UPS FOR GROUNDING CABLES. TYPICAL 4 PLACES. SITE GROUNDING SYSTEM IS TO BE SUPPLIED BY OTHERS.
- CONDUITS WITH 100 SERIES I.D. NUMBERS REQUIRED FOR ANTENNA CONTROL. REFER TO CONTRACT POWER REQUIREMENTS FOR DEFINITION OF POWER FEEDERS REQUIRED.
- CONDUITS WITH 200 SERIES I.D. NUMBERS REQUIRED FOR ELECTRIC ANTENNA DEICING. (REFLECTOR, FEED AND SUBREFLECTOR HEATING WITH PAD MOUNTED DEICE CONTROLLER). REFER TO CONTRACT POWER REQUIREMENTS FOR DEFINITION OF POWER FEEDERS REQUIRED.
- CONDUITS WITH 300 SERIES I.D. NUMBERS REQUIRED FOR ANCILLARY EQUIPMENT POWER FEEDERS. ANCILLARY EQUIPMENT MAY CONSIST OF ANY OF THE FOLLOWING OPTIONS: RAINBLOWER, OBSTRUCTION LIGHTING, HUB UTILITIES, ETC... REFER TO THE CONTRACT POWER REQUIREMENTS FOR EXACT DEFINITION OF FEEDERS REQUIRED.
- DIMENSIONS IN [] ARE METRIC (MILLIMETERS). CONDUITS ARE U.S. STANDARD NOMINAL SIZES.
- CONDUITS WITH 400 SERIES I.D. NUMBERS REQUIRED FOR RX IFL CABLING. RX IFL CABLING MAY CONSIST OF THE FOLLOWING: RX COAX, LNA CONTROL CABLING, DEHYDRATOR PRESSURE TUBING, ETC. REFER TO CONTRACT REQUIREMENTS FOR EXACT DEFINITIONS.
- C401 REQUIRED FOR RX ONLY SYSTEMS WITH IFL CABLING INSTALLED IN UNDERGROUND CONDUIT. C401 NOT REQUIRED ON TX/RX SYSTEMS. REFER TO STAND PIPE INSTALLATION FOR INTERFACE REQUIREMENTS. C402 REQUIRED FOR TX/RX SYSTEMS WITH IFL CABLING INSTALLED IN UNDERGROUND CONDUIT. C402 NOT REQUIRED FOR RX ONLY SYSTEMS. C402 WILL INTERFACE WITH CABLE TRAY INSTALLATION ACROSS PAD TO AZIMUTH AXIS. REFER TO CABLE TRAY INSTALLATION FOR INTERFACE REQUIREMENTS.
- CONDUITS WITH 500 SERIES I.D. NUMBERS ARE REQUIRED FOR TX ELLIPTICAL WAVEGUIDE -- ONE WAVEGUIDE RUN PER CONDUIT. REFER TO CONTRACT REQUIREMENTS FOR INSTALLATION OF UNDERGROUND TX WAVEGUIDE. TX WAVEGUIDE WILL INTERFACE WITH CABLE TRAY INSTALLATION ACROSS PAD TO AZIMUTH AXIS. REFER TO CABLE TRAY INSTALLATION FOR INTERFACE REQUIREMENTS.

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DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO		VertexRSI CONFIDENTIAL AND PROPRIETARY			
UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DETAILS ± 1/16 ASSY'S ± 1/8 DECIMALS: .XX ± .03 .XXX ± .005 ANGLES ± 1°		ADDITIONAL APPROVALS	DATE	APPROVALS	DATE	 ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
DESIGN				HL KREWSON	07/20/96	FOUNDATION CONDUIT LAYOUT STANDARD CONFIGURATION MODEL 8/9/9.3 KP	
MECHANICAL				CHECKED GP ROBERTS	07/02/97	TITLE:	
STRUCTURAL				DESIGNER HL KREWSON	07/16/97	CODE ID. NO.	
ELECTRICAL				MANUFACTURING MW CARTER	07/21/97	SIZE	
				PROJECT JR KING	07/16/97	DWG NO.	
				PRODUCT MGR DL BEAKLEY	07/16/97	REV	
UNLESS OTHERWISE SPECIFIED ! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.				1GD22		D	
TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.				SCALE: 1/30		CONTRACT NO. 9708	
				SHEET 1 OF 2		REV C	

EA
- EST. WEIGHT -



DETAIL A - ANTENNA ACCESS TEMPLATE
(SHT 1)

CONDUIT SCHEDULE - FOUNDATION CONDUITS					
ID#	SIZE	TERMINATION POINT	ORIGINATION POINT	FILL	NOTES
C101	2" PVC	TEMPLATE AT MOTOR CONTROLLER	CUSTOMER POWER SOURCE	MOTOR CONTROLLER POWER FEEDER	8
C102	2" PVC	TEMPLATE AT MOTOR CONTROLLER	ANTENNA REMOTE CONTROL UNIT	RESOLVER/CONTROL CABLING	8
C103	2" PVC	TEMPLATE AT ANTENNA ACCESS STUB-UP	TEMPLATE AT MOTOR CONTROLLER	ANTENNA CABLING - MOTORS	8
C104	2" PVC	TEMPLATE AT ANTENNA ACCESS STUB-UP	TEMPLATE AT MOTOR CONTROLLER	ANTENNA CABLING -- RESOLVERS/LIMITS	8
C105	1 1/2" PVC	AZIMUTH MOTOR LOCATION	TEMPLATE AT MOTOR CONTROLLER	ANTENNA CABLING - AZIMUTH MOTOR	8
C201	2" PVC	TEMPLATE AT DEICE CONTROLLER	CUSTOMER POWER SOURCE	DEICING POWER FEEDER	7
C202	2" PVC	TEMPLATE AT DEICE CONTROLLER	DEICE REMOTE CONTROL UNIT	DEICING CONTROL CABLES	7
C203	3" PVC	TEMPLATE AT ANTENNA ACCESS STUB-UP	TEMPLATE AT DEICE CONTROLLER	ANTENNA DEICING CABLES	7
C204	2" PVC	TEMPLATE AT ANTENNA ACCESS STUB-UP	TEMPLATE AT DEICE CONTROLLER	ANTENNA DEICING CABLES	7
C301	2" PVC	TEMPLATE AT ANTENNA ACCESS STUB-UP	CUSTOMER POWER SOURCE	ANCILLARY POWER FEEDERS	9
C401	4" PVC	TEMPLATE AT ANTENNA ACCESS STUB-UP	CUSTOMER RACK INTERFACE POINT	RX COAX CABLING	11,12
C402	4" PVC	EDGE OF ANTENNA FOUNDATION	CUSTOMER RACK INTERFACE POINT	RX COAX CABLING	11,12
C501	4" PVC	EDGE OF ANTENNA FOUNDATION	CUSTOMER TX WG INTERFACE	TX1 ELLIPTICAL WAVEGUIDE	13
C502	4" PVC	EDGE OF ANTENNA FOUNDATION	CUSTOMER TX WG INTERFACE	TX2 ELLIPTICAL WAVEGUIDE	13
CG01	1" PVC	GROUNDING SYSTEM	ANTENNA MECHANICAL INTERFACE	GROUNDING CABLE	6
CG02	1" PVC	GROUNDING SYSTEM	ANTENNA MECHANICAL INTERFACE	GROUNDING CABLE	6
CG03	1" PVC	GROUNDING SYSTEM	ANTENNA MECHANICAL INTERFACE	GROUNDING CABLE	6
CG04	1" PVC	GROUNDING SYSTEM	ANTENNA MECHANICAL INTERFACE	GROUNDING CABLE	6

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08 TIME 9:31:00

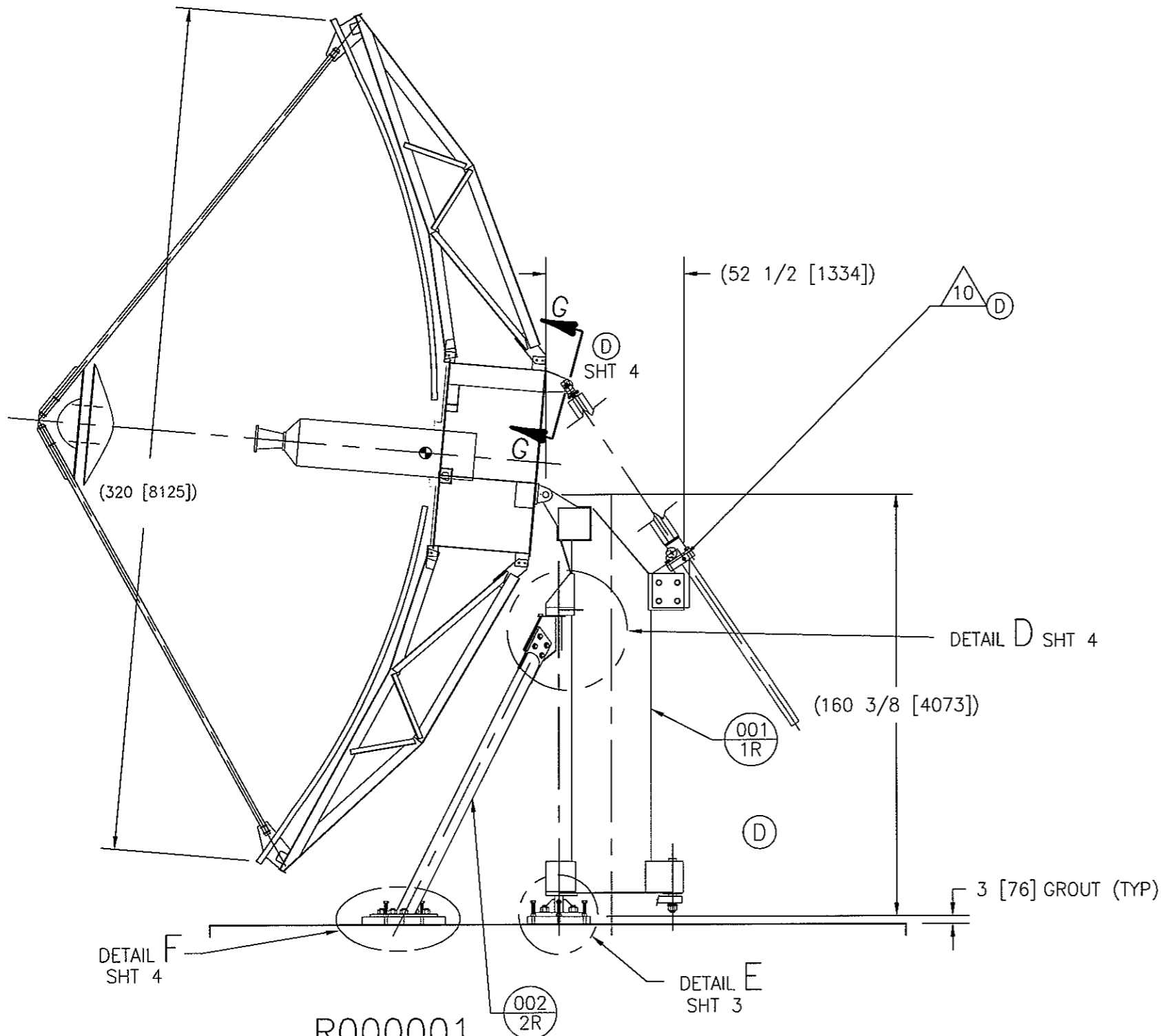
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 DESCRIPTION: ANT INSTL 8KP 125MPH 120AZ 1 CATEGORY: ANTENNA ENTERED: 11/25/1992
 5-90 EL IEA CLASS: BAS REVISED: 12/04/2007 REV: F
 SUBCLASS: INSTL APPROVED: 1/14/2008
 JOB#: PENDING: REV
 REVISION: E 970328 12/13/96GOH/JDH OLD CAT#: SIZE: B DWG CAT: I ID: CAB

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
001	R000002-G	1.00			R	C	M	PED ASSY 8KP 125MPH 120AZ 5-90	BASPED	ASSY	D-000391	T
002	R017126-G	2.00			R	C	M	LEG ASSY PED 8/9KP STD TRAVEL KP 125 MPH	BASLEG	ASSY	D-000608	D
003	R000004-G	1.00			R	C	M	TRUN ASSY GALV 8KP 125MPH 120	BASTRN	ASSY	D-000419	C
006	V00100V-1	16.00			R	C	S	PL WASHER 1.625 ID X 0.25 X 4 X 4LG A36	BAS	DETAIL	B-000429	D
007	V00200V-1	4.00			R	C	S	PL WASHER 1 7/8ID X 3/8 X 4 X 4 A36	BAS	DETAIL	B-000429	D
008	R000009	10.00			R	C	S	PL WASHER 1/4 X 3 X 3LG A36	BASFTRN	DETAIL	B-000049	M
011	P95415-19	7.00			EA	R	P	FTG GREASE 1/4-18NPT	FTTG			
015	H04975-29	8.00			EA	R	P	BOLT HH 1 1/2-6UNC X 3 3/4 A325 HDG	HHBOLT	HDG		
022	H21025-29	8.00			EA	R	P	NUT HH 1 1/2-6UNC A563-DH HDG	HHNUT	HDG		
028	H40117-29	32.00			EA	R	P	FW (AN) 1 1/2 X 3 F436 HDG	FW	HDG		
028S	H40117-29	4.00			EA	R	P	FW (AN) 1 1/2 X 3 F436 HDG	FW	HDG		
029	H40127-29	4.00			EA	R	P	FW (A) 1 3/4 X 4 F436 HDG	FW	HDG		
029S	H40127-29	1.00			EA	R	P	FW (A) 1 3/4 X 4 F436 HDG	FW	HDG		
032	P95418-19	2.00			EA	R	P	FTG GREASE 90DEG 1/4-18NPT	FTTG			
032S	P95418-19	1.00			EA	R	P	FTG GREASE 90DEG 1/4-18NPT	FTTG			
901R	H20025-19				EA	R	P	NUT HEX 1 1/2-6UNC A194 ZINC	HEXNUT	ZINC		

END OF BOM:R000001-G

REV	DESCRIPTION	DATE	APPROVED
A	JBS BASE, REPL 370378(E);	12/14/92	CLK/GPR
B	CHANGED PER ECO #2458: ITEM 011 QTY WAS 8; ADDED ITEM 032.	10/27/93	JCH/kl
C	ECR 94-0534/DDP A94-1683; ADDED R572446 & R012844 & NOTE 10; REDEFINED ITEM BUBS.	01/20/95	TLR/kl
D	EC 95-1345; DEL ITEM 800 BUB & ITEMS 4,14, 21,22,27,10,16,17,20,24,25 & 28 & 3 OF ITEM 18 & CHANGED NOTE 10.	10/24/95	MSS/KLL
E	ECR 96-0467; ADDED SECOND WASHER TO SEC G-G SHT 4.	02/14/96	MSS/KLL



NOTES:

- FIELD INSTALL FOR FINAL LUBRICATION, PER SPEC. 600-0045.
 - ALLOW GROUT TO CURE A MINIMUM OF 3 DAYS, REMOVE BOLTS THEN TIGHTEN ANCHOR BOLT NUTS AS FOLLOWS:
 1 3/4-5UNC-2B 1150 ft-lbs ±10% DRY TORQUE
 OR
 873 ft-lbs ±10% LUBRICATED
 1 1/2-6UNC-2B 740 ft-lbs ±10% DRY TORQUE
 OR
 560 ft-lbs ±10% LUBRICATED
 FILL VOIDS LEFT BY REMOVAL OF BOLTS WITH GROUT FLUSH WITH BOTTOM OF NUT. FILL NUT WITH RTV.
 - INSTALL GROUT PER VERTEX SPEC. 300-2436.
 - INSTALL SET SCREWS BEFORE WASHER AND RETAINING.
 - FEED SYSTEM DETERMINED PER CONTRACT.
 - REMOVE PAINT PRIOR TO INSTALLATION OF AXIS JUMPERS. APPLY TOUCH-UP PAINT UPON COMPLETION IF NEEDED.
 - APPLY GREASE TO THREADS OF BOLTS THAT WILL BE IN GROUT, BEFORE GROUTING.
 - DIMENSIONS IN [] ARE METRIC (MILLIMETERS).
 - TIGHTEN BOLTS PER TURN-OF-NUT METHOD DEFINED IN AISC MANUAL OF STEEL CONSTRUCTION, NINTH EDITION, PART 5: SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS, SECTION 8, PARAGRAPHS (D1) AND (E).
- ⑩ (19 3/4 [502] RETRACTED, 59 [1499] STROKE, 78 3/4 [2000] EXTENDED.)

R000001

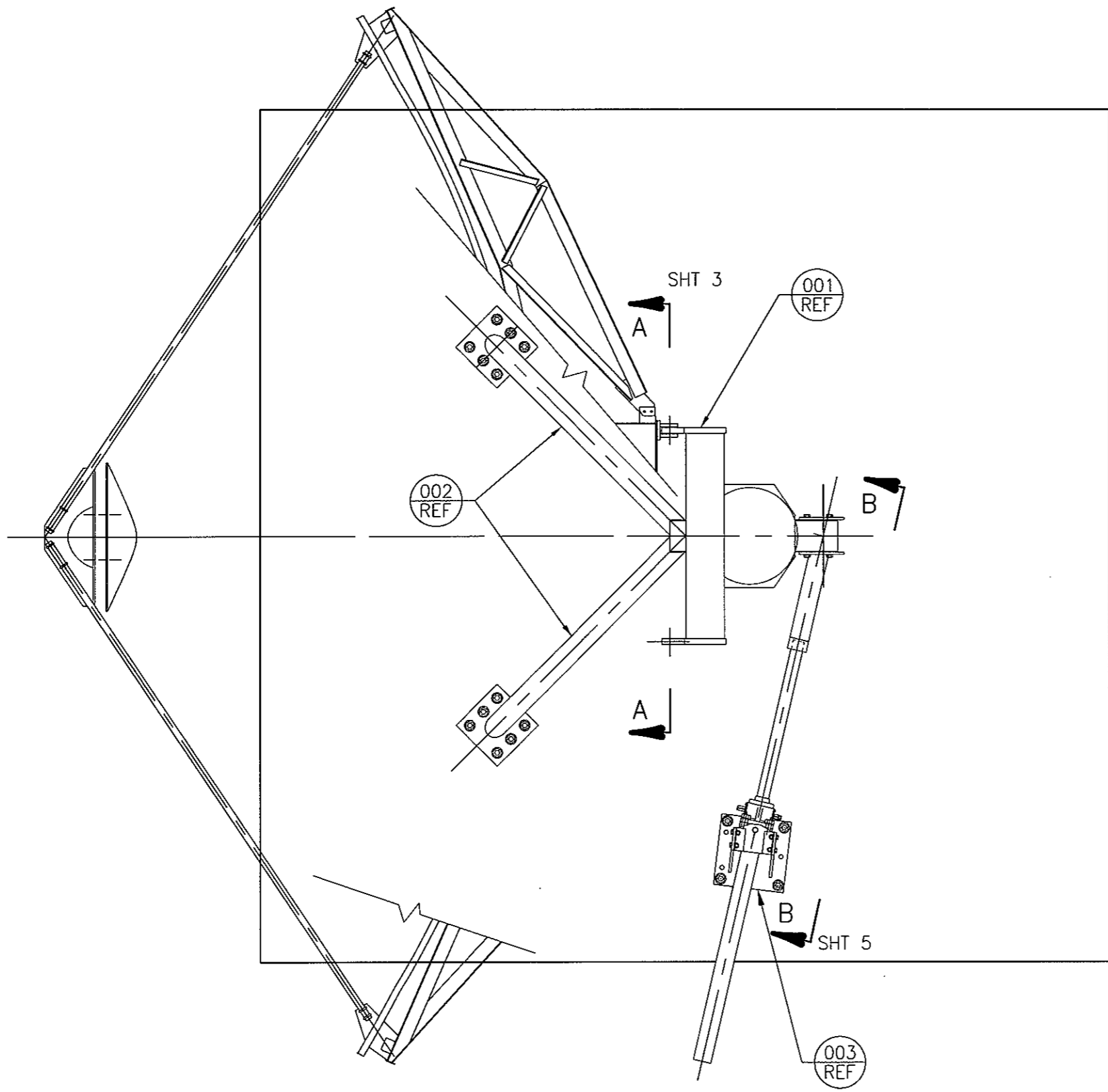
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© 000388-02/-02G

ANTENNA ASSEMBLY - SIDE VIEW

EA
- EST. WEIGHT -


DO NOT SCALE DRAWING				SATCOM Technologies CONFIDENTIAL AND PROPRIETARY			
MECHANICAL	ADDITIONAL APPROVALS	DATE	APPROVALS	DATE	2600 N. LONGVIEW ST. KILGORE, TX USA 75662-6842		
			DRAWN C.KEMP	12/14/92	TITLE: ANTENNA INSTL AZ±60°, EL 5_90, MANUAL MODEL 8.1/9.0 KPC/KPK		
			CHECKED G.ROBERTS	01/11/93			
			DESIGNER B.SACK	06/11/91			
			PROJECT MGR C.BUSSE	01/11/93			
UNLESS OTHERWISE SPECIFIED: INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: DETAILS ± 1/16 .XX ± .03 ± 1° ASSY'S ± 1/8 .XXX ± .005 COMMERCIAL TOLERANCES TO STOCK SIZES APPLY. PART TO BE FREE OF BURRS & SHARP EDGES.				EXPORT CONTROL WARNING- the disclosure of this document or its contents to non-U.S. persons, or the transmission of its contents outside the United States must be in compliance with U.S. Export Laws and Regulations. The bearer of this document is under obligation to know the applicable restrictions for the dissemination of its contents that relate to U.S. Export Laws and Regulations or any other U.S. government approvals.			
DRILL HOLE TOLERANCE (DRILL)	CLEARANCE HOLE TOLERANCE (CHT)	CODE ID. NO. 1GD22		SIZE B	DWG NO. 000388	REV F	
.013 to .125=+.005/-0.001	+0.0125/-0.0000	SCALE: 1/50		CONTRACT NO.	SHEET 1 of 5		
.126 to .250=+.007/-0.003							
.251 to .750=+.008/-0.003							
.751 to 1.000=+.009/-0.004							
1.001 to 2.000=+.012/-0.005							

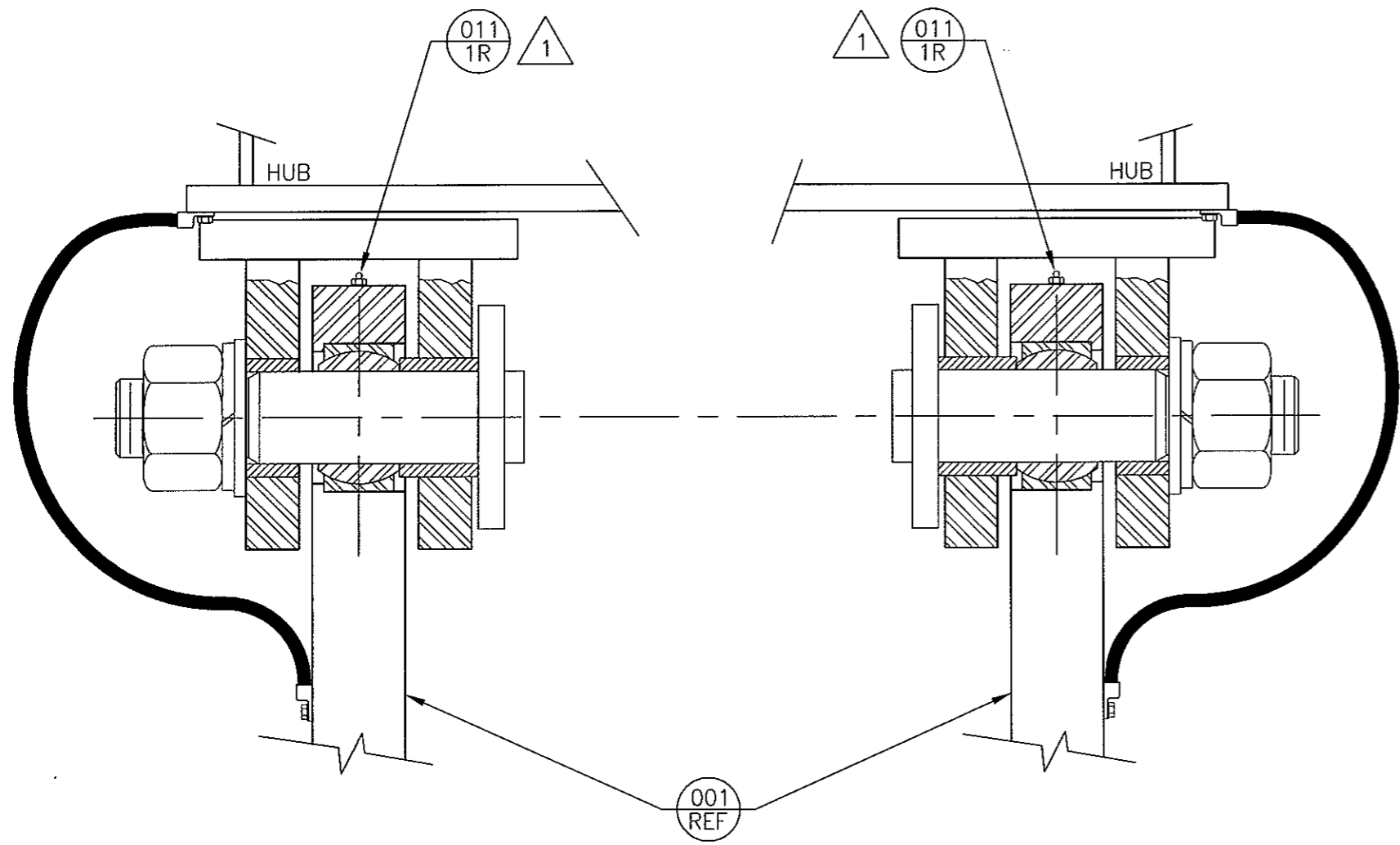


PLAN VIEW

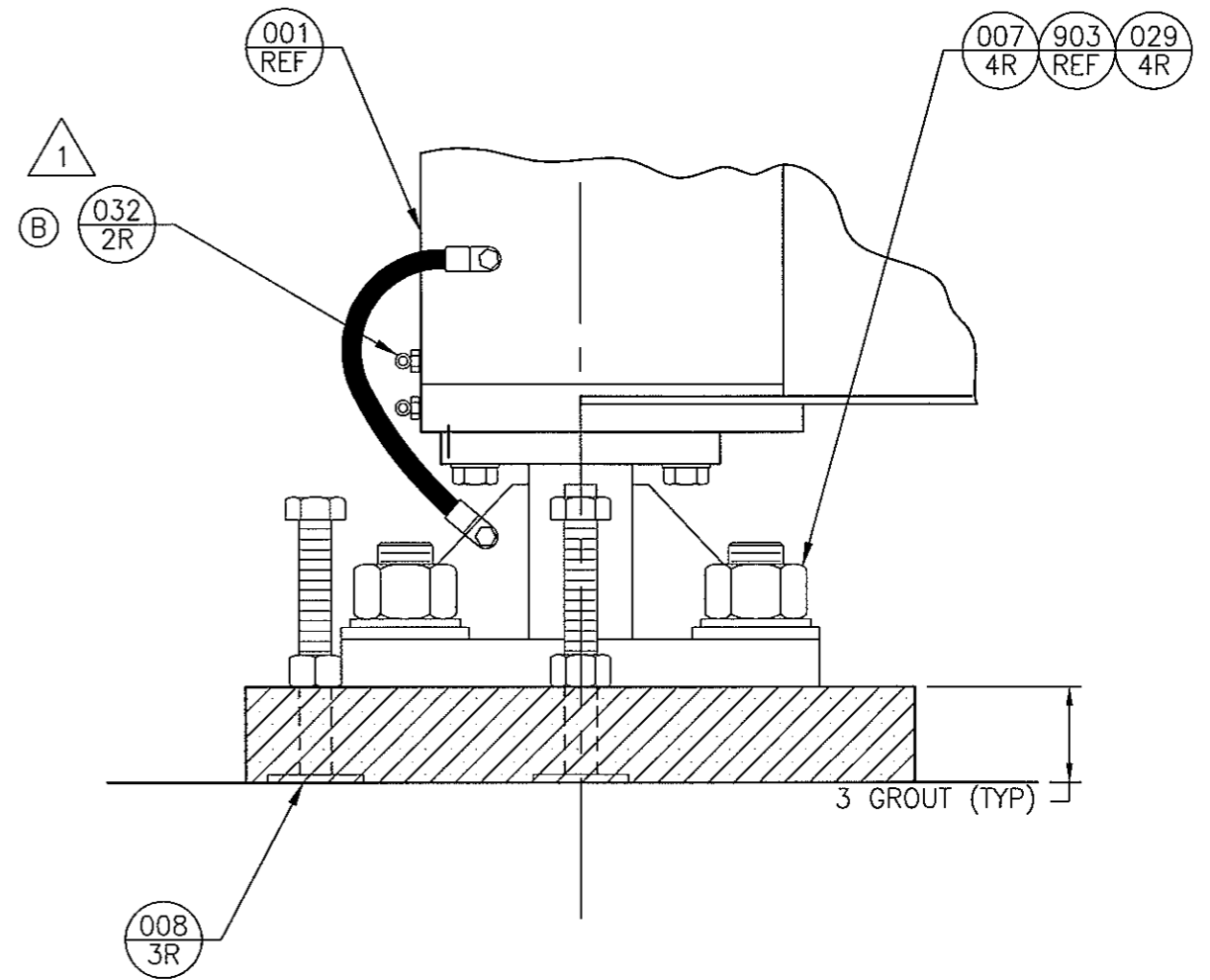
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		2600 N. LONGVIEW ST. KILGORE, TX USA 75662-6842		
		CODE ID. NO.	SIZE	DWG NO.
1GD22		B	000388	F
SCALE: 1/40	CONTRACT NO.		SHEET 2 OF 5	




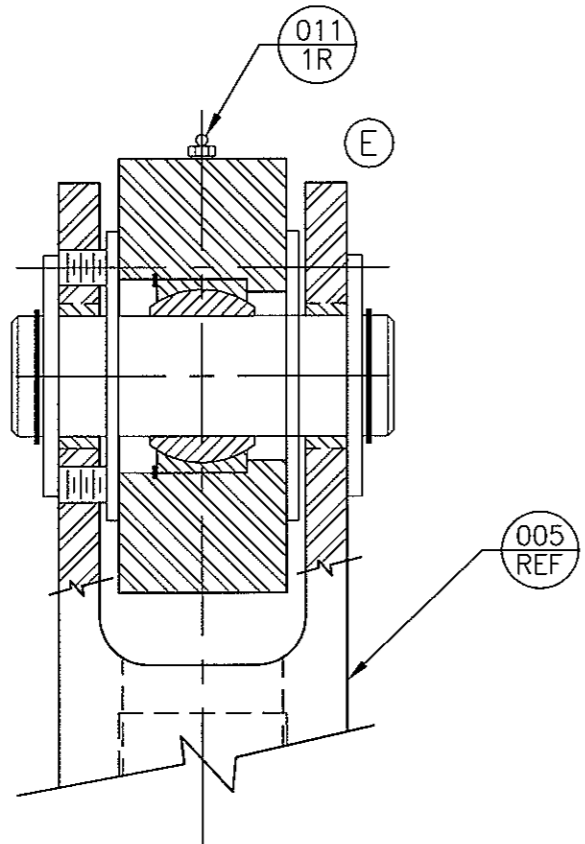
SECTION A-A - ELEVATION AXIS PIN INSTL
 SCALE: 1/3
 (SHT 2)



DETAIL E - LOWER AZIMUTH PINTLE INSTL
 SCALE: 1/6
 (SHT 1) 1-PLC

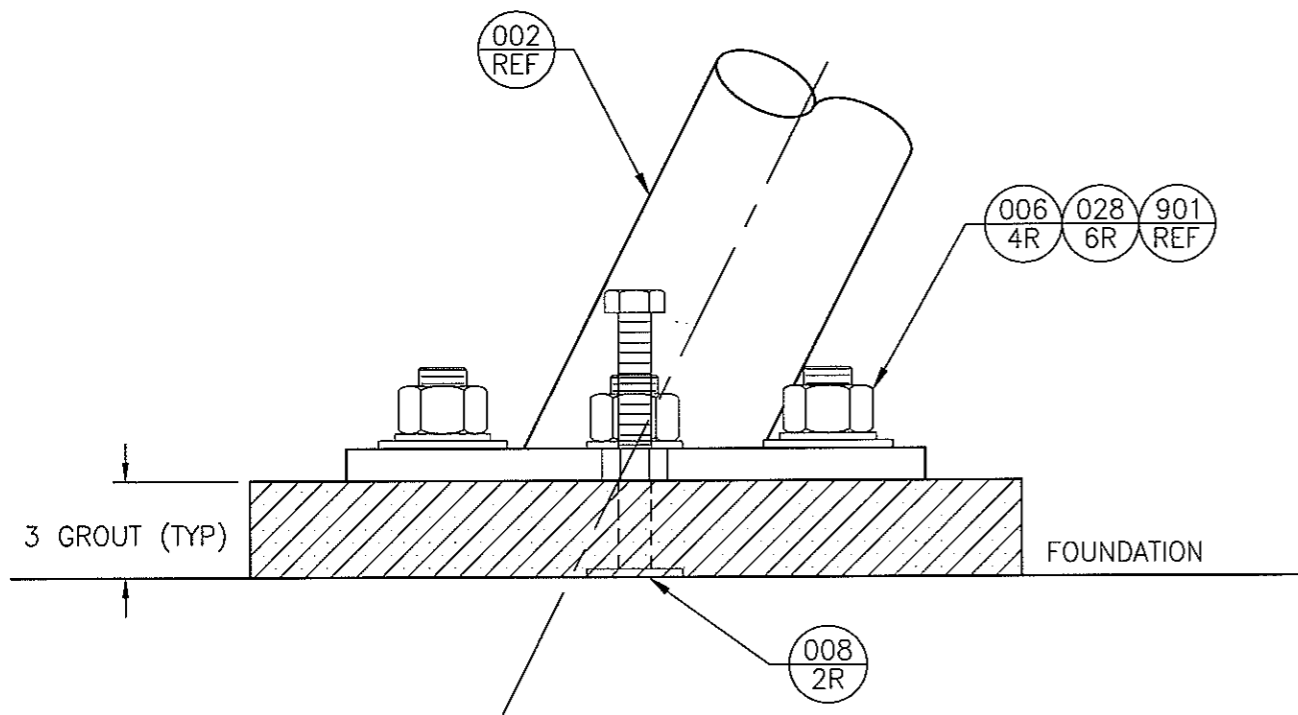
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	CODE ID. NO.	SIZE	DWG NO.	REV
	1GD22	B	000388	F
	SCALE: 1/6	CONTRACT NO.		SHEET 3 OF 5



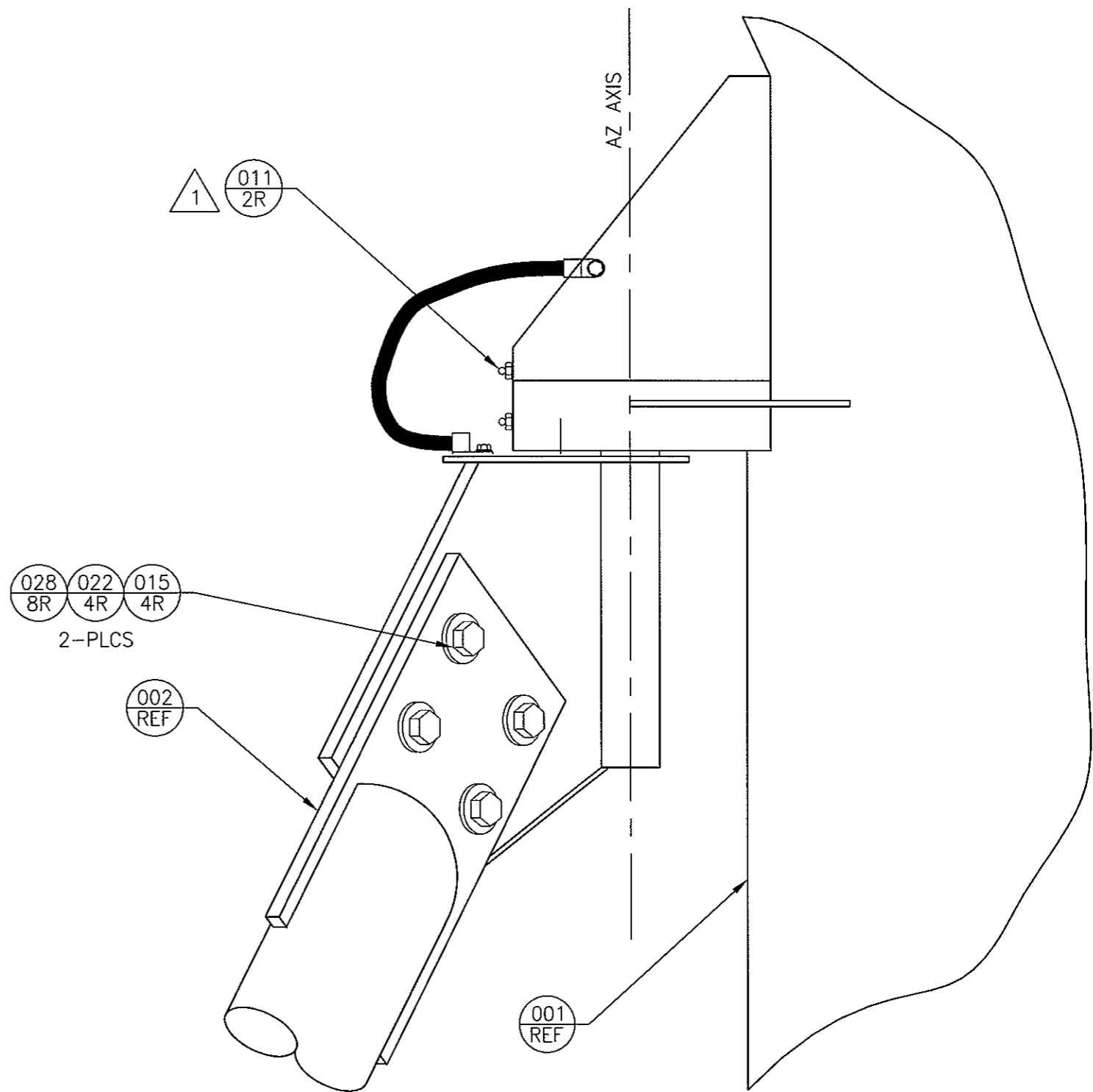
SECTION G-G - ELEVATION INSTL

SCALE: 1/1
(SHT 1)



DETAIL F - LEG ASSEMBLY INSTL

2-PLCS
(SHT 1)



DETAIL D - UPPER LEG INSTL

(SHT 1)

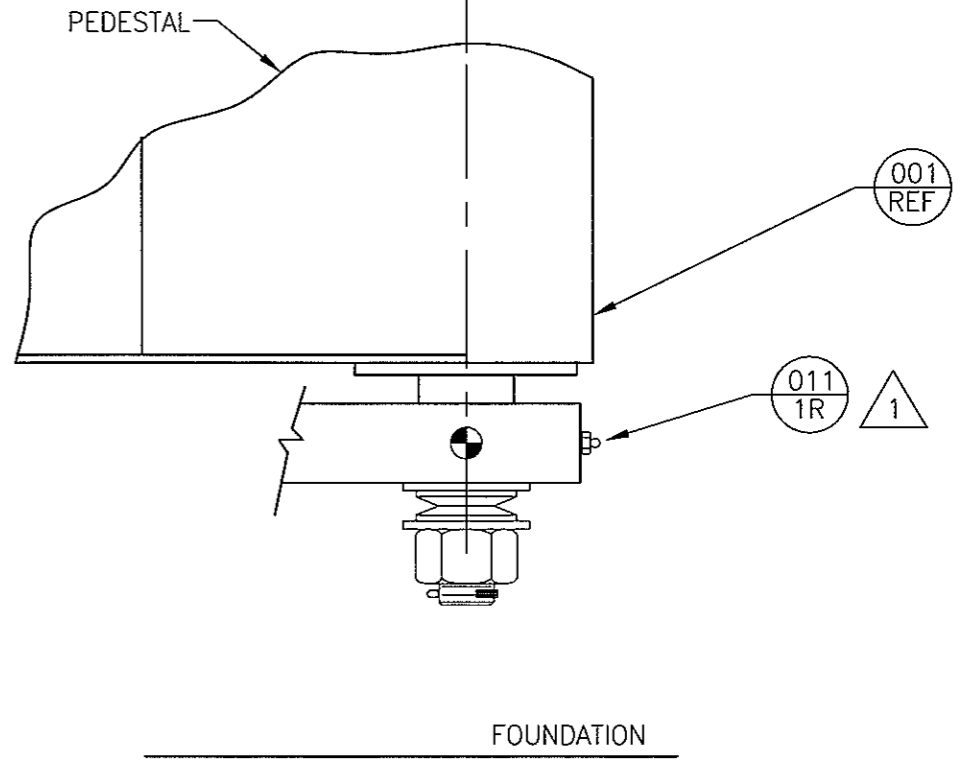
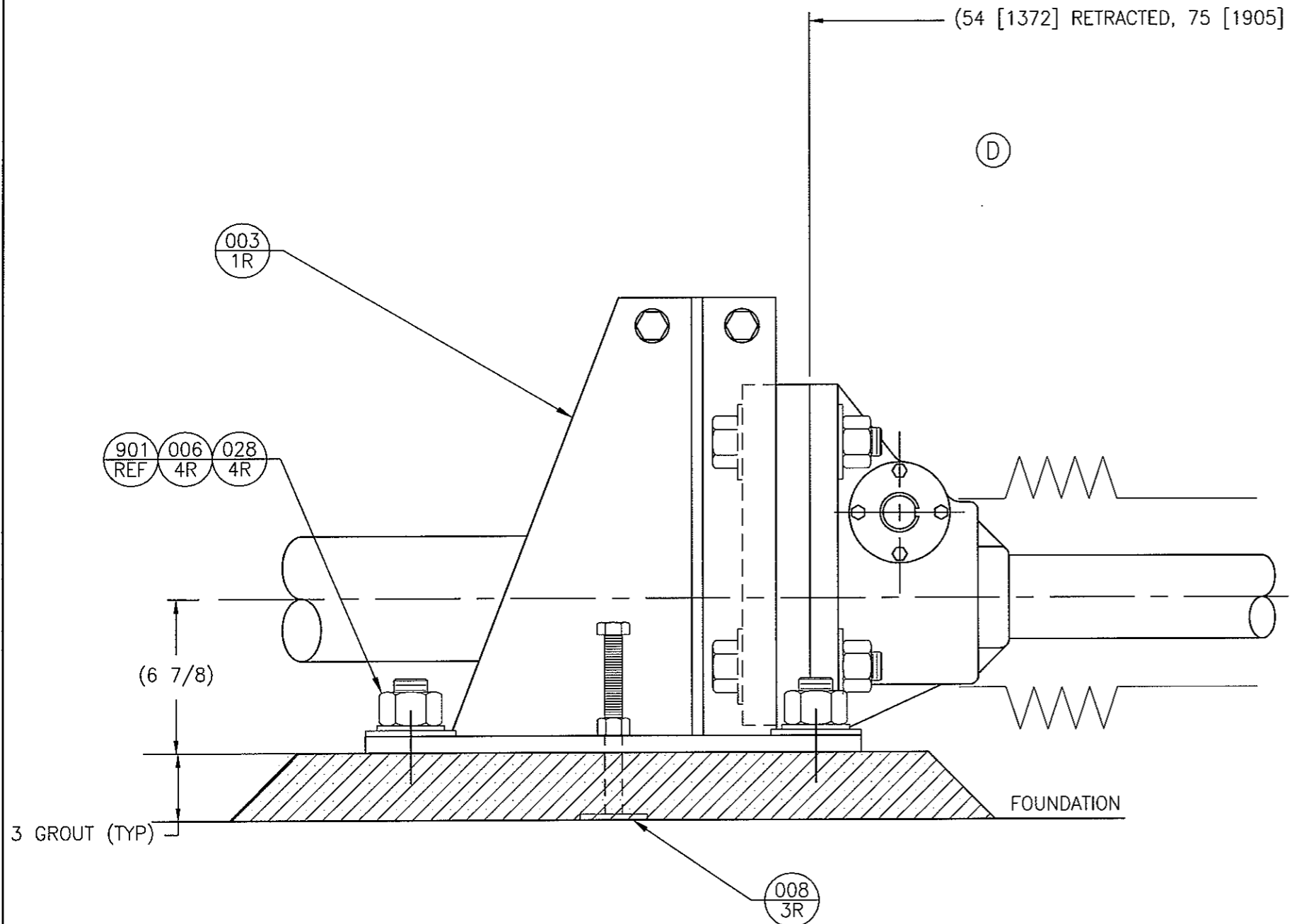
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CODE ID. NO.	SIZE	DWG NO.	REV
1GD22	B	000388	F
SCALE: 1/6	CONTRACT NO.		SHEET 4 OF 5



VIEW B-B -AZIMUTH JACK/TRUNNION INSTL
(SHT 2)

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	<small>CODE ID. NO.</small> 1GD22	<small>SIZE</small> B	<small>DWG NO.</small> 000388	<small>REV</small> F
<small>SCALE:</small> 1/6	<small>CONTRACT NO.</small>	<small>SHEET 5 OF 5</small>		

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08 TIME 9:31:04

CATALOGUE#: R000101-C PSM: M STATUS: RELEASED DRAWING: D-000459 REV: C
 DESCRIPTION: REF INSTL 8KP 125MPH CATEGORY: ANTENNA ENTERED: 12/18/1992
 CLASS: BAS REVISED: 12/21/2004 REV: C
 SUBCLASS: INSTL APPROVED: 12/05/2005
 JOB#: 9318 PENDING: REV
 REVISION: B 041191 12/21/04 JVL/SK OLD CAT#: 671350-01 01/05/99 JTB SIZE: D DWG CAT: I ID: CAB

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV	
001	021702-01P	1.00			R	C	S	SUBREF AL 8KPC			D-021702	B1	
002	R000107-P	1.00			R	C	M	APEX WLDMNT 8M CASS 125MPH	BASAPX	WLDMNT	D-000473	C	
006	R000111	4.00			R	C	S	RADIAL BEAM WLDMNT 8KP NON DEICED CASS	BASRAD	WLDMNT	D-000482	A	
007	R000112	4.00			R	C	S	RADIAL BEAM WLDMNT 8KP NON DEICED CASS	BASRAD	WLDMNT	D-000483	A	
008	R000113	4.00			R	C	S	RADIAL BEAM WLDMNT 8KP NON DEICED CASS	BASRAD	WLDMNT	D-000484	A	
009	R000114	4.00			R	C	S	RADIAL BEAM WLDMNT 8KP NON DEICED CASS	BASRAD	WLDMNT	D-000485	A	
010	R000164-P	4.00			R	C	M	APEX LEG 8.1M ANT CASS 125MPH	BASAPX	DETAIL	B-000032	F	
011	R000165	16.00			R	C	S	LACING REF 8M	BASRAD	DETAIL	D-000460	A	
012	R000167	16.00			R	C	S	LACING REF 8M	BASRAD	DETAIL	D-000460	A	
013	R000168	16.00			R	C	S	LACING REF 8M	BASRAD	DETAIL	D-000460	A	
014	R000169	8.00			R	C	S	LACING REF 8M	BASRAD	DETAIL	D-000460	A	
015	R000170	8.00			R	C	S	LACING REF 8M	BASRAD	DETAIL	D-000460	A	
016	R000171	3.00			R	C	S	BLOCK ADJUSTMENT SUBREF	BASAPX	DETAIL	B-000486	A	
017	R000533	6.00			R	C	S	PL WASHER 1/4 X 3 OD X 7/8 ID AL6061-	BASPED	DETAIL	NONE	00	
018	R000526	8.00			R	C	S	PL APEX PIPE SADDLE	BASAPX	DETAIL	B-000033	A	
019	H61034-39	16.00			EA	R	P	S	BOLT U 1 1/2 PIPE 3/8-16UNC X	BOLT	SS		
019S	H61034-39	2.00			EA	R	P	S	BOLT U 1 1/2 PIPE 3/8-16UNC X	BOLT	SS		
020	H14317-99	4.00			EA	R	P	S	SCR CAP HH 1/2-13UNC X 3 1/2FT SSF593	CAPSCR	SS		
020S	H14317-99	1.00			EA	R	P	S	SCR CAP HH 1/2-13UNC X 3 1/2FT SSF593	CAPSCR	SS		
021	H80003-29	136.00			EA	R	P	S	BOLT ASSY 1/2-13UNC X 1 1/2 A325 HDG	BOLTA	HDG		
021S	H80003-29	14.00			EA	R	P	S	BOLT ASSY 1/2-13UNC X 1 1/2 A325 HDG	BOLTA	HDG		
022	H60000-19	128.00			EA	R	P	S	STUD ASSY PNL 1/2-13UNC X 6 SS18-8	BASPNL	NONE	00	
022S	H60000-19	12.00			EA	R	P	S	STUD ASSY PNL 1/2-13UNC X 6 SS18-8	BASPNL	NONE	00	
025	H14167-39	8.00			EA	R	P	S	SCR CAP HH 3/8-16UNC X 3 1/2 SSF593	CAPSCR	SS		
025S	H14167-39	1.00			EA	R	P	S	SCR CAP HH 3/8-16UNC X 3 1/2 SSF593	CAPSCR	SS		
026	H20013-39	8.00			EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
026S	H20013-39	1.00			EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
027	H30011-39	40.00			EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
027S	H30011-39	4.00			EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
028	H40057-39	48.00			EA	R	P	S	FW (AW) 3/8 X 1 SS18-8	FW	SS	NONE	00
028S	H40057-39	5.00			EA	R	P	S	FW (AW) 3/8 X 1 SS18-8	FW	SS	NONE	00
029	H80015-29	48.00			EA	R	P	S	BOLT ASSY 5/8-11 UNC X 2 A325 HDG	BOLTA	HDG		
029S	H80015-29	5.00			EA	R	P	S	BOLT ASSY 5/8-11 UNC X 2 A325 HDG	BOLTA	HDG		
031	H22019-39	3.00			EA	R	P	S	NUT JAM 3/4-10UNC SSF594	JAMNUT	SS		
031S	H22019-39	1.00			EA	R	P	S	NUT JAM 3/4-10UNC SSF594	JAMNUT	SS		
032	H40086-29	15.00			EA	R	P	S	FW (AW) 3/4 X 2 F436 HDG	FW	HDG		
032S	H40086-29	2.00			EA	R	P	S	FW (AW) 3/4 X 2 F436 HDG	FW	HDG		
033	H20019-119	6.00			EA	R	P	S	NUT HEX 3/4-10UNC SSF594 CAD	HEXNUT	CAD		
033S	H20019-119	1.00			EA	R	P	S	NUT HEX 3/4-10UNC SSF594 CAD	HEXNUT	CAD		

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08 TIME 9:31:04

CATALOGUE#: R000101-C PSM: M STATUS: RELEASED DRAWING: D-000459 REV: C


BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM DESCRIPTION	CLASS	SUBCL	DRAWING	REV
034	H60169-19	3.00		EA	R	P	S ALL THD ROD 3/4-10UNC X 12 GR5 ZINC	ATR	ZINC		
035	H96000-39	6.00		EA	R	P	S WASHER SET SPHERICAL 3/4 SS18-8		SS		
036	R000100-C	1.00			R	C	M HUB ASSY 8/9M CASS 125 MPH	BASHUB	ASSY	D-000461	E
037	019295-01C	8.00			R	C	M PNL ASSY 8M MULTI RIB DESIGN	BASPNL		D-019295	A
038	019296-01C	4.00			R	C	M MOD PNL 8M QUADLEG MULTI-RIB			D-019296	A
039	019296-02C	4.00			R	C	M MOD PNL 8M QUADLEG MULTI-RIB			D-019296	A
901R	H55031-39			EA	R	P	S SCR MCH PH PHH #4-40UNC X 3/4 SSF879	MCHSCR	SS	NONE	00

END OF BOM:R000101-C

REVISONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASELINE. REPLACES 671350(B);	03/02/93	CLK/
B	00-0325; RENAME BUBBLES 3,4,5 TO 37,38,39	2/14/00	JJL/GPR
C	EC 04-1191	12/06/04	JJL/SPK

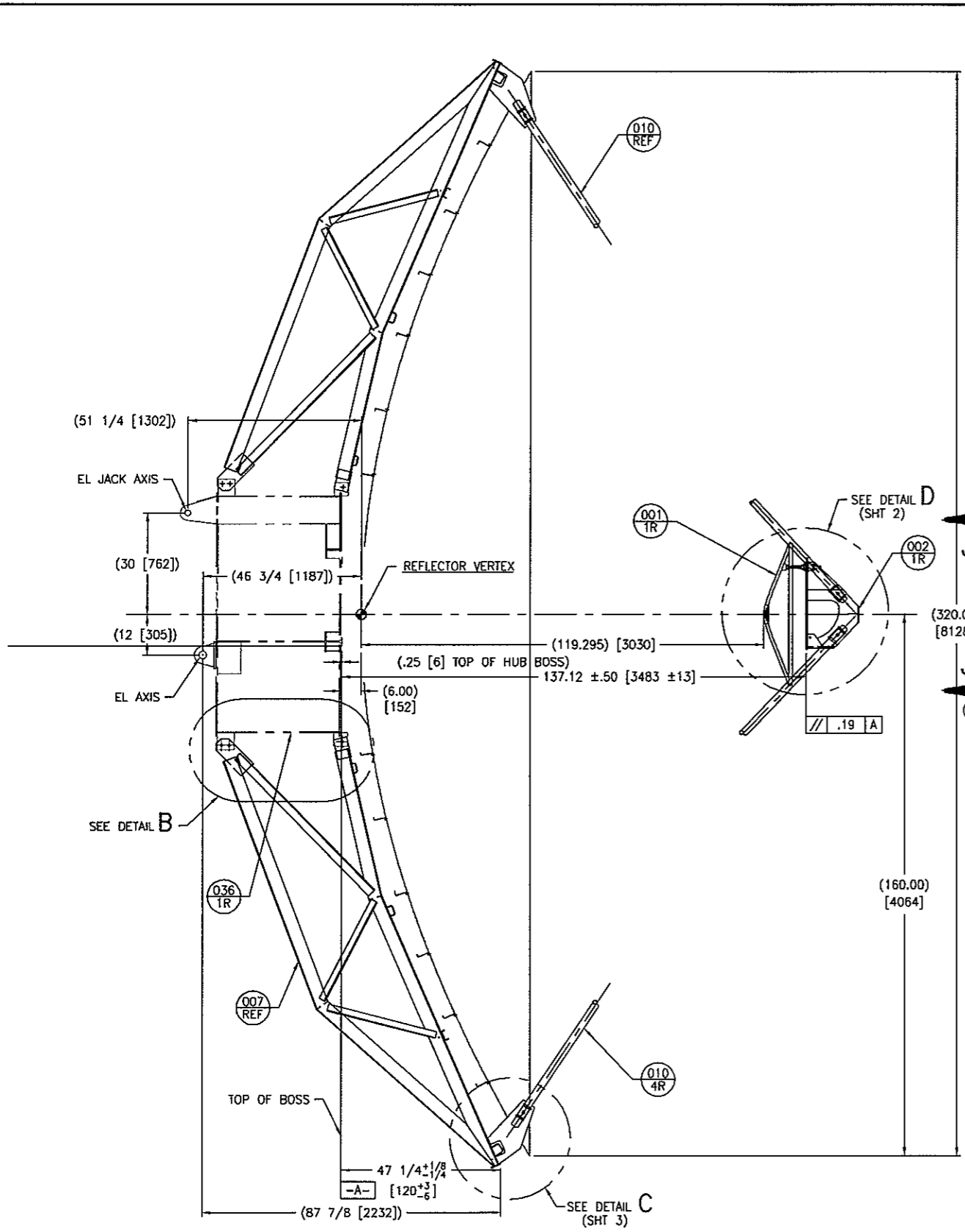
QTY	ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	NOTES	
	4	039	019296-02P	MODIFICATION, PANEL, 8M QUADLEG,	
	4	038	019296-01P	MODIFICATION, PANEL, 8M QUADLEG,	
	8	037	019295-01P	ASSY PANEL 8M (BOTH SIDES PNTD)	
	1	036	R000100-P	HUB ASSY 8/9M CASS 125 MPH	
	6	035	H96000-39	SPHWSHR SET 3/4 18-8 SS CL-150	
	3	034	H60169-19	ALL THD ROD 3/4-10UNC X 12 GR5 ZINC	
	6	033	H20019-119	HEX NUT 3/4-10UNC SSF594 CAD	
	15	032	H40086-29	FW (AW) 3/4 X 2 F436 HDG	
	3	031	H22019-39	JAM NUT 3/4-10UNC SSF594	
	48	029	H80015-29	BOLT ASSY 5/8-11UNC X 2 A325 HDG	
	48	028	H40057-39	FW (AW) 3/8 X 1 SS18-8	
	40	027	H30011-39	HELICAL LW 3/8 SS18-8	
	8	026	H20013-39	HEX NUT 3/8-16UNC SSF594	
	8	025	H14167-39	HH CAP SCR 3/8-16UNC X 3 1/2 SSF593	
	128	022	H60000-19	PANEL STUD ASSY 1/2-13UNC X 6	
	136	021	H80003-29	BOLT ASSY 1/2-13UNC X 1 1/2 A325 HDG	
	4	020	H14317-99	HH CAP SCR 1/2-13UNC X 3 1/2 FT SSF593	
	16	019	H61034-39	U-BOLT 1 1/2 PIPE 3/8-16UNC X 4 SS18-8	
	8	018	R000526	PLATE, APEX PIPE SADDLE	
	6	017	R000533	PLATEWASHER, ROUND	
	3	016	R000171	BLOCK, SUBREFLECTOR ADJUSTMENT	
	8	015	R000170-P	REF LACING 8M	
	8	014	R000169-P	REF LACING 8M	
	16	013	R000168-P	REF LACING 8M	
	16	012	R000167-P	REF LACING 8M	
	16	011	R000165-P	REF LACING 8M	
	4	010	R000164-P	APEX LEG (8M) PAINTED	
	4	009	R000114-P	RADIAL BEAM WLDMNT 8KP CASS 125 MPH	
	4	008	R000113-P	RADIAL BEAM WLDMNT 8KP CASS 125 MPH	
	4	007	R000112-P	RADIAL BEAM WLDMNT 8KP CASS 125 MPH	
	4	006	R000111-P	RADIAL BEAM WLDMNT 8KP CASS 125 MPH	
	1	002	R000107-P	APEX WLDMNT 8M CASS 125 MPH	
	1	001	573292-02P	SUBREFLECTOR PAINTED (ALUM) 8M KPC/KPK	
	-01	ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	NOTES

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DRILL HOLE TOLERANCE (DRILL) .013 thru .125 = +.005/- .001 .126 thru .250 = +.007/- .003 .251 thru .750 = +.008/- .003 .751 thru 1.000 = +.009/- .004 1.001 thru 2.000 = +.012/- .005		STRUCTURAL	DATE	APPROVALS	DATE
CLEARANCE HOLE TOLERANCE (CHT) +.03125/- .00000		ELECTRICAL	DATE	APPROVALS	DATE
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UNLESS OTHERWISE SPECIFIED: PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.		PROJECT C.BUSSE 06/02/93		TITLE: REFLECTOR INSTALLATION CASSEGRAIN, 125 MPH WIND MODEL 8.1 KPC/KPK	
		PRODUCT MGR CSEVN		CODE ID. NO. 1GD22 SIZE D DIM. NO. 000459 REV C	
				SCALE: 1/20 CONTRACT NO. SHEET 1 OF 4	

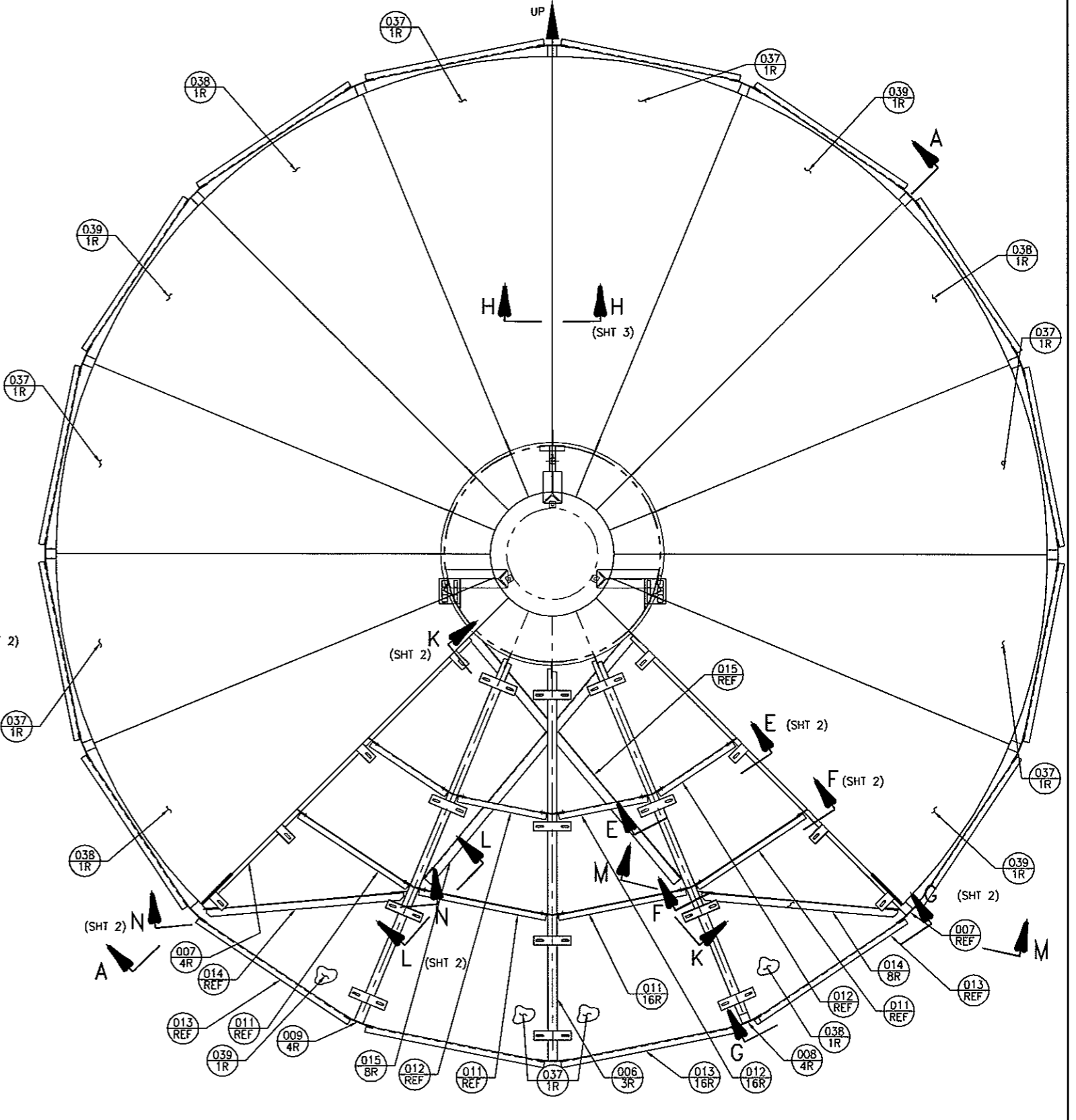
NOTES:
1. DIMENSIONS IN [] ARE METRIC (MILLIMETERS).

--- # EA
- EST. WEIGHT -

REGRIND



SECTION A-A

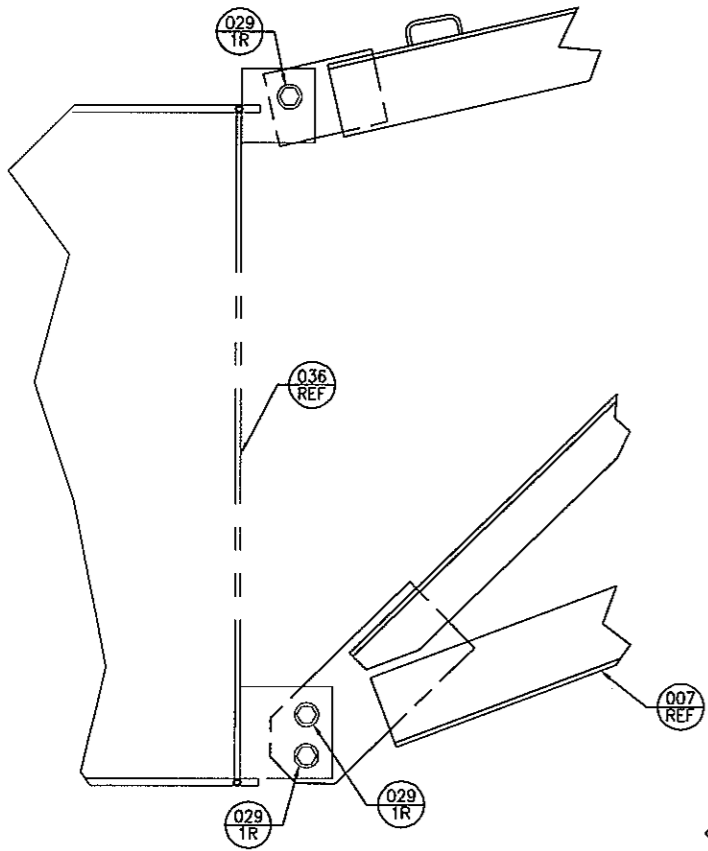


R000101-P

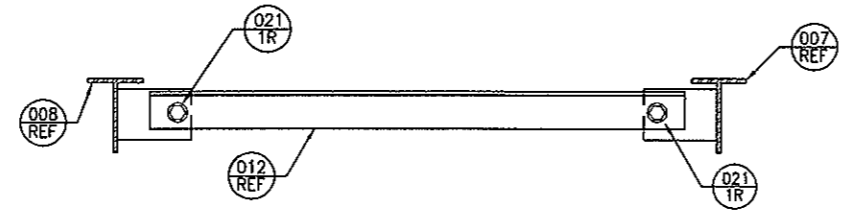
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	<small>CODE NO.</small> 1G022	<small>SIZE</small> D	<small>DRW NO.</small> 000459	<small>REV</small> C
	<small>SCALE</small> 1/20	<small>CONTRACT NO.</small>	<small>SHEET</small> 2	<small>OF</small> 4

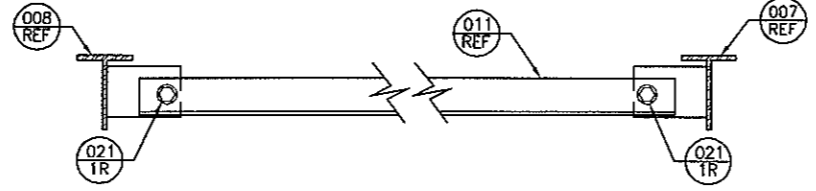
FORM 102



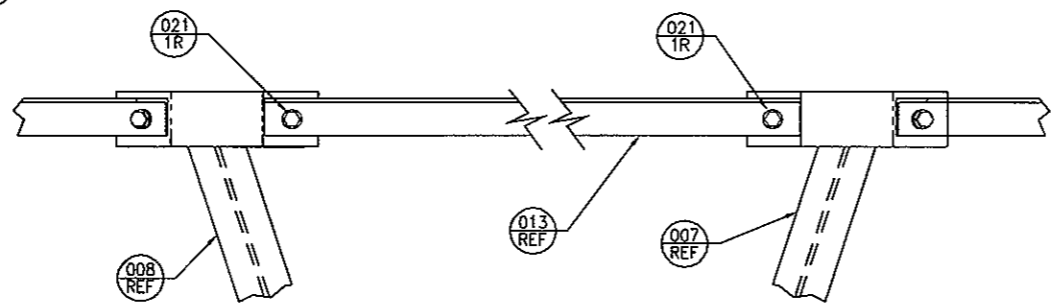
DETAIL B
16-PLCS
SCALE: 1/10
(ROTATED 90° CCW)
(SHT 1)



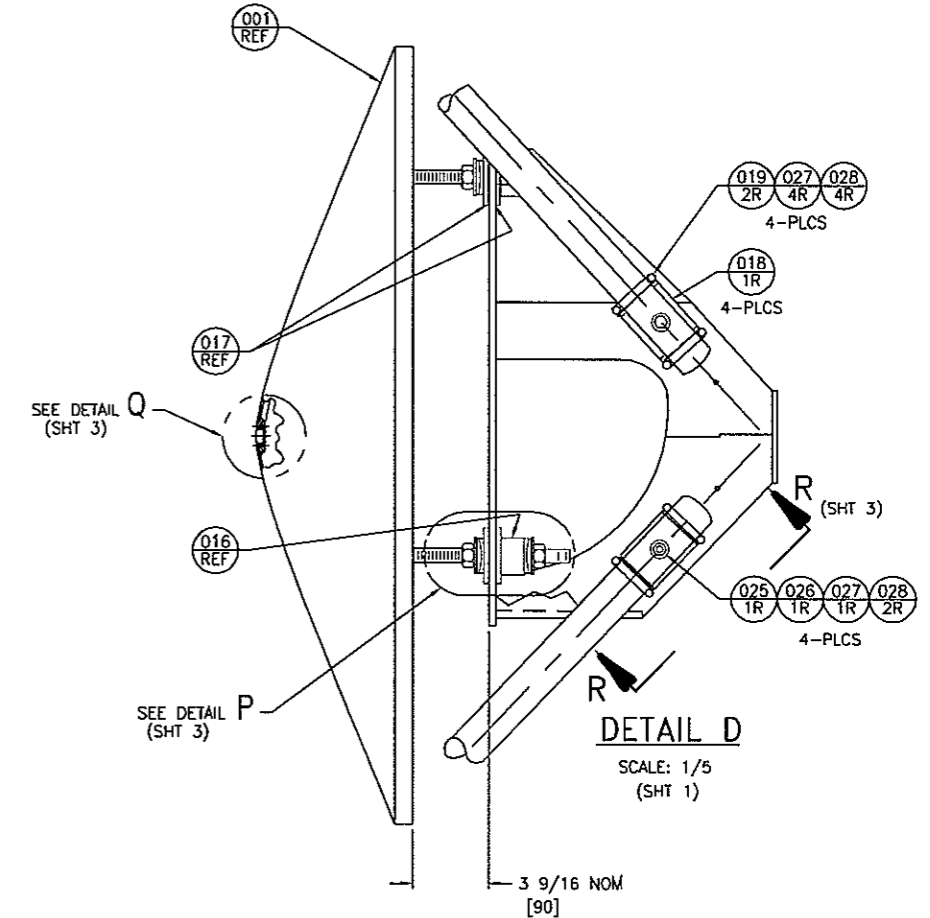
SECTION E-E
16-PLCS
SCALE: 1/5
(SHT 1)



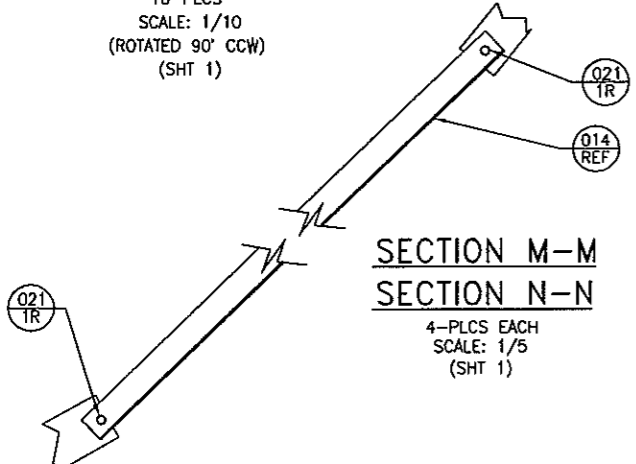
SECTION F-F
16-PLCS
SCALE: 1/5
(SHT 1)



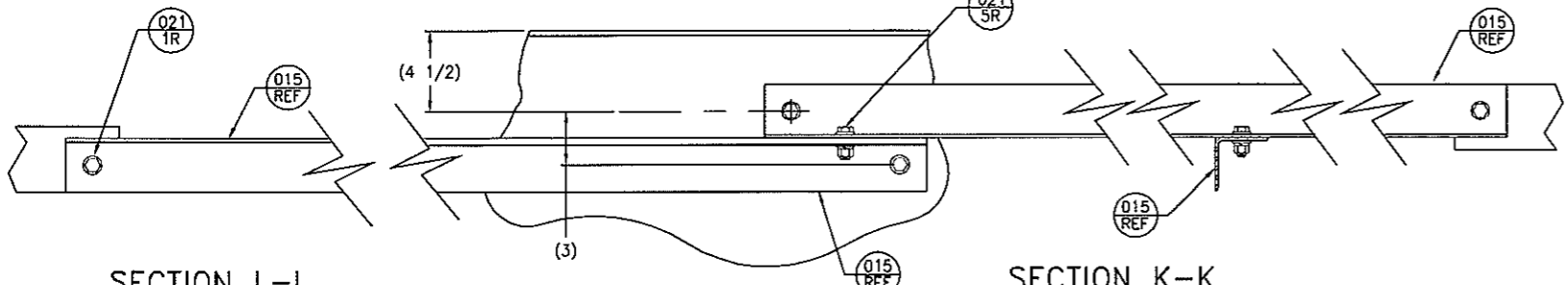
SECTION G-G
16-PLCS
SCALE: 1/5
(SHT 1)



DETAIL D
SCALE: 1/5
(SHT 1)

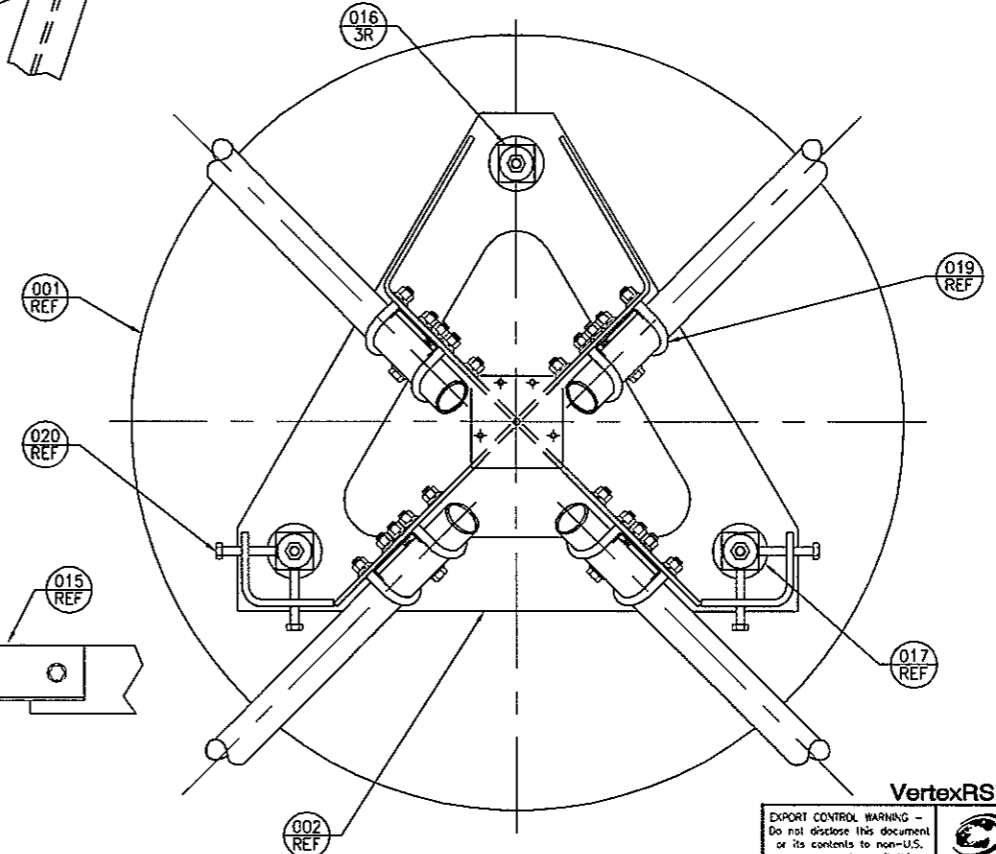


SECTION M-M
SECTION N-N
4-PLCS EACH
SCALE: 1/5
(SHT 1)



SECTION L-L
4-PLCS
SCALE: 1/5
(SHT 1)

SECTION K-K
4-PLCS
SCALE: 1/5
(SHT 1)



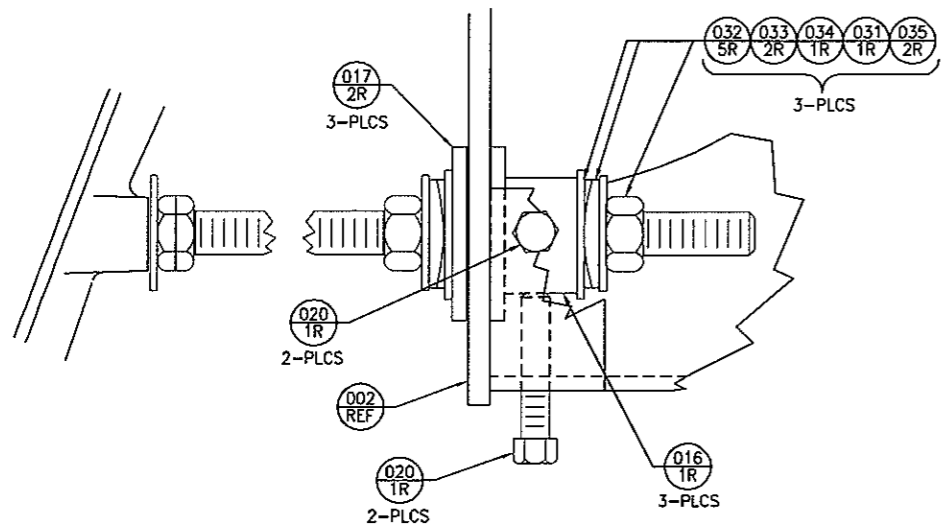
VIEW J-J
SCALE: 1/5
(SHT 1)

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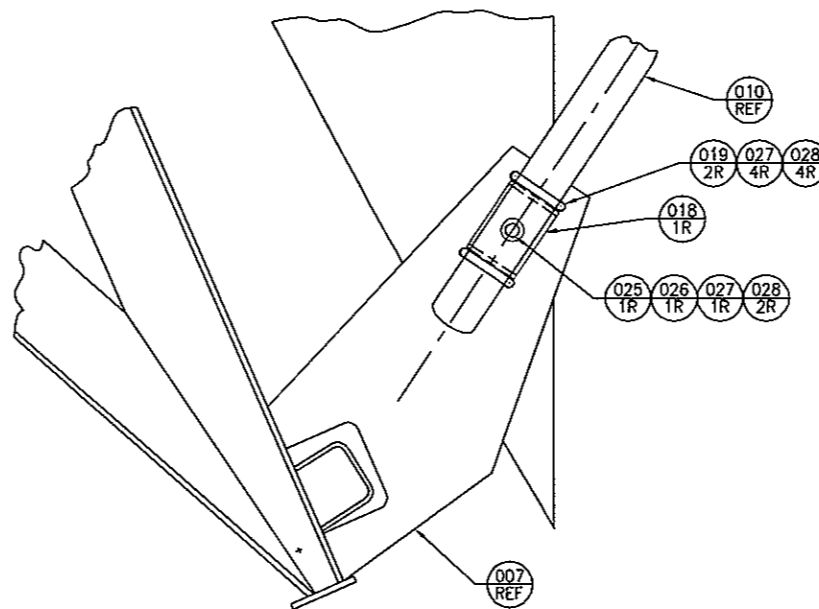
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VertexRSI GENERAL DYNAMICS		ANTENNA PRODUCTS 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
CODE ID. NO. 1GD22	SIZE D	DWG NO. 000459	REV C
SCALE: 1/10	CONTRACT NO.	SHEET 3	OF 4

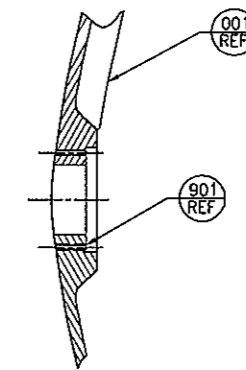
DFOR1102



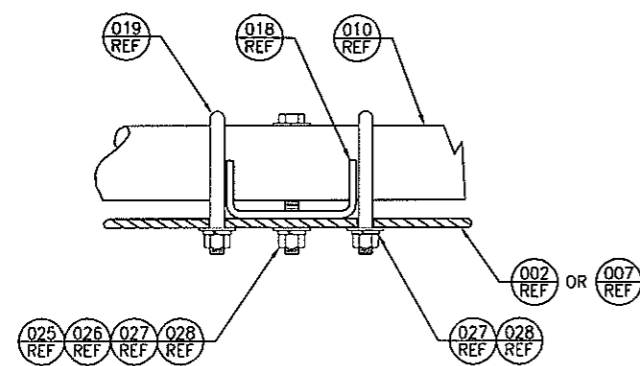
DETAIL P
SCALE: NONE
APEX/SUBREFLECTOR HARDWARE
(SHT 2)



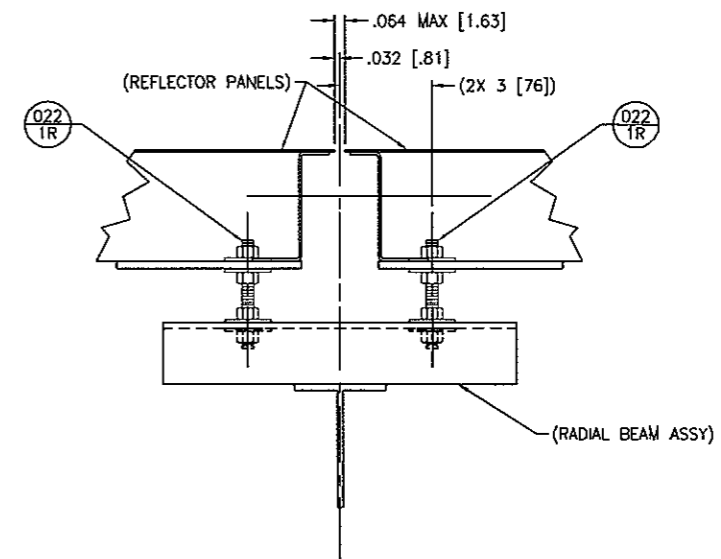
DETAIL C
4-PLCS
(SHT 1)
SCALE: 1/4



DETAIL Q
SCALE: NONE
MIRROR DETAIL
(SHT 2)



VIEW R-R
SCALE: NONE
SADDLE/APEX INSTL
8-PLCS
(SHT 2)



SECTION H-H
SCALE: 1/3
64-PLCS
(SHT 1)

VertexRSI CONFIDENTIAL AND PROPRIETARY

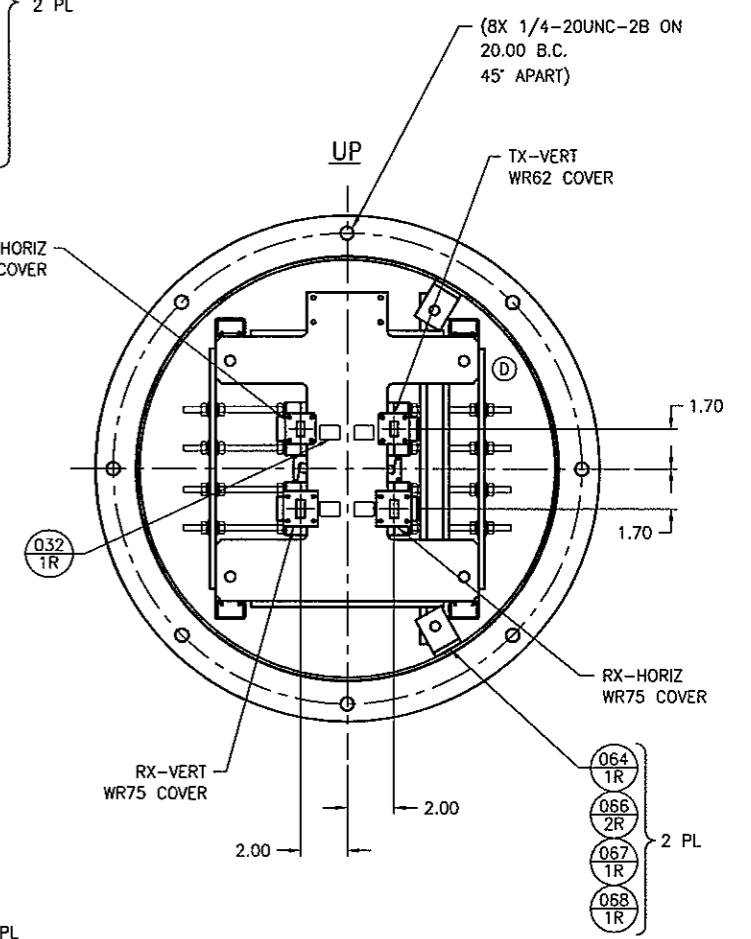
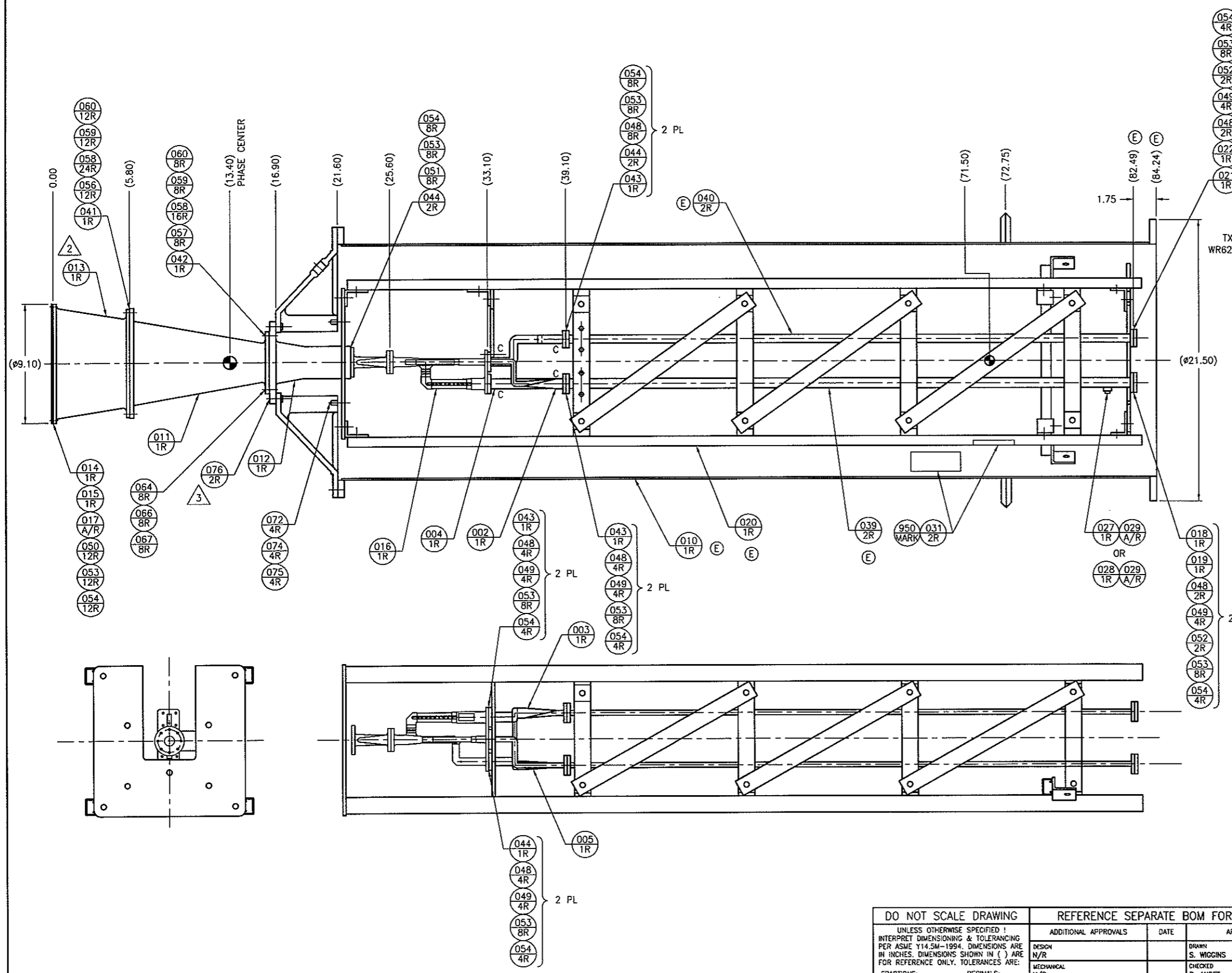
EXPORT CONTROL WARNING -
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Corporation and required
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ANTENNA PRODUCTS
2600 N. LONGVIEW ST,
KILGORE, TEXAS 75662 USA

CODE ID. NO. 1GD22	SIZE D	DWG NO. 000459	REV C
SCALE: 1/2	CONTRACT NO.	SHEET 4 OF 4	

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	--	--
B	ECR - 96-0583	04/10/96	SW/DC
C	ECR - 97-0245	11/27/96	DRB/DKM
D	ECR - 97-0503	04/08/97	ASD/DRB
E	ECR - 97-1290	07/23/97	MH/DM



- NOTES:
1. A "C" NEXT TO A FLANGE INDICATES A COVER FLANGE. A "CG" NEXT TO A FLANGE INDICATES A COVER GROOVE FLANGE.
 2. RUNOUT OF LAST SECTION FEED HORN WHEN ATTACHED TO FEED TUBE TO BE .030 TIR OR LESS.
 3. DRILL AND PIN 1ST SECTION HORN FLANGE TO CONE FLANGE AFTER RUNOUT. PINS SHOULD BE ABOUT 160° APART. DRILLED HOLE SHALL BE Ø.128.
 4. THE DISTANCE BETWEEN THE VERTEX AND THE PHASE CENTER AS NOTED MATCHES THE OPTICAL GEOMETRY FOR THE 9.0M FEED ASSEMBLY. THE DIFFERENCE BETWEEN THE 8.1M AND THE 9.0M IS .032 AND THEREFORE IS WELL WITHIN THE OPERATING TOLERANCES. THE OPTICAL GEOMETRY DRAWINGS ARE LISTED ON THE COMPONENT B.O.M.S AS REFERENCE ONLY.

DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO		VertexRSI CONFIDENTIAL AND PROPRIETARY	
UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DETAILS ± 1/16 ASSY'S ± 1/8 ANGLES ± 1° DECIMALS: .XX ± .03 .XXX ± .005		ADDITIONAL APPROVALS DATE		VertexRSI ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
UNLESS OTHERWISE SPECIFIED ! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.		DESIGN N/R		TITLE: FEED ASSY, 8/9M, KU-BAND CASS, FR, LP MODEL K81KCFRL/K90KCFRL	
TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.		MECHANICAL N/R		DRAWN S. WIGGINS 06/06/95	
		STRUCTURAL N/R		CHECKED P. AUDET 06/22/95	
		ELECTRICAL N/R		DESIGNER N/R	
				MANUFACTURING S. BLACK 06/22/95	
				PROJECT J. KING 06/23/95	
				PRODUCT MGR R.G. RADTKE 06/23/95	
				CODE ID. NO. 1GD22	
				SIZE D DWG. NO. 009172	
				SHEET 1 OF 1	
				SCALE: 1/4 CONTRACT NO. 10084	

2FORALDI

EA - EST. WEIGHT -

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08 TIME 9:31:07

CATALOGUE#: R000302 PSM: M STATUS: RELEASED DRAWING: D-000789 REV: A

DESCRIPTION: FEED INSTL 8/9KP KU-BND CASS CATEGORY: ANTENNA ENTERED: 3/12/1993

CLASS: AFS REVISED: 0/00/0000 REV: A

SUBCLASS: INSTL APPROVED: 6/10/1993

JOB#: 9318 PENDING: REV

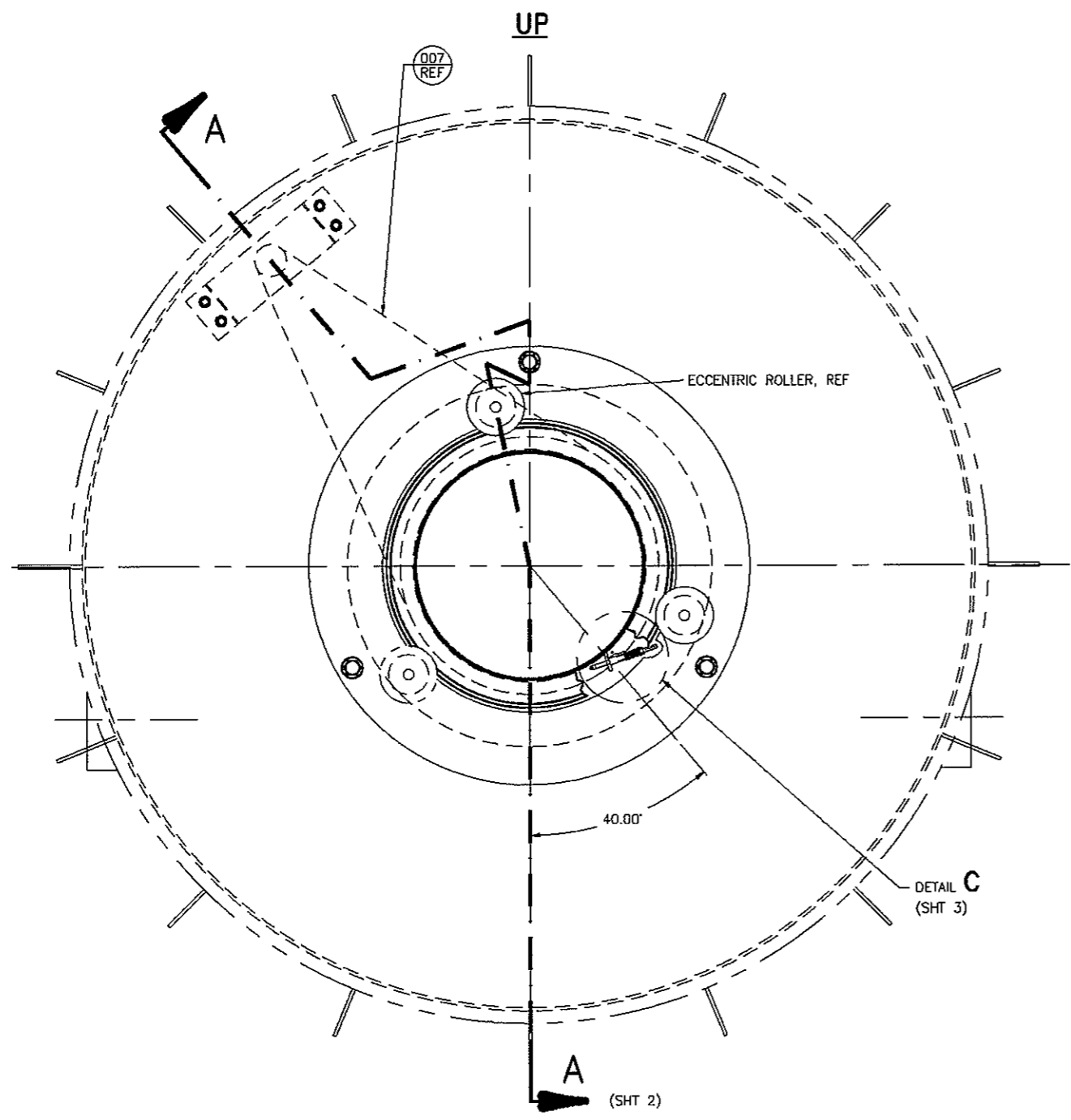
REVISION: A 06/08/93 CAB 113 OLD CAT#: 370371-01 SIZE: D DWG CAT: I ID: CAB

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV	
001	R000305	1.00			R	C	S	FEED POSITIONER WLDMNT, 18 OD TUBE	AFS	WLDMNT	574735	C	
002	R000306	1.00			R	C	S	FEED POSITIONER WLDMNT, 18 OD TUBE	AFS	WLDMNT	574735	C	
003	R000304	1.00			R	C	S	CNDT GALV EMT SPCR	AFS	DETAIL	NONE	00	
004	R007199	1.00			R	C	S	BOLT CHAIN BINDER ATR 5/16-18	AFS	DETAIL	B-000132	B	
005	P91790-19	2.00			EA	R	P	S	RING RTNG EXT 0.125 SHAFT OD SS	RETRNG			
005S	P91790-19	1.00			EA	R	P	S	RING RTNG EXT 0.125 SHAFT OD SS	RETRNG			
006	P90020-19	1.00			EA	R	P	S	LINK MASTER 3/8SS		NONE	00	
007	P90150-19	8.00			FT	R	P	S	CHAIN FITCH ROLLER 3/8 SS		NONE	00	
008	H67030-39	2.00			EA	R	P	S	PIN SPR 1/8 X 1 1/2 SS18-8	PIN	SS		
009	H14007-39	5.00			EA	R	P	S	SCR CAP HH 1/4-20UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
010	H40045-39	9.00			EA	R	P	S	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
010S	H40045-39	1.00			EA	R	P	S	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
011	H40050-39	2.00			EA	R	P	S	FW (AN) 5/16 X 11/16 SS18-8	FW	SS	NONE	00
012	H30009-39	5.00			EA	R	P	S	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00
013	P99590-19	44.00			EA	R	P	S	WASHER SPR				
014	H20011-39	5.00			EA	R	P	S	NUT HEX 1/4-20UNC SSF594	HEXNUT	SS	NONE	00
014S	H20011-39	1.00			EA	R	P	S	NUT HEX 1/4-20UNC SSF594	HEXNUT	SS	NONE	00
015	H20012-39	2.00			EA	R	P	S	NUT HEX 5/16-18UNC SSF594	HEXNUT	SS	NONE	00

END OF BOM:R000302

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASELINE, REPLACES 370371(A);	03/04/93	KJS/

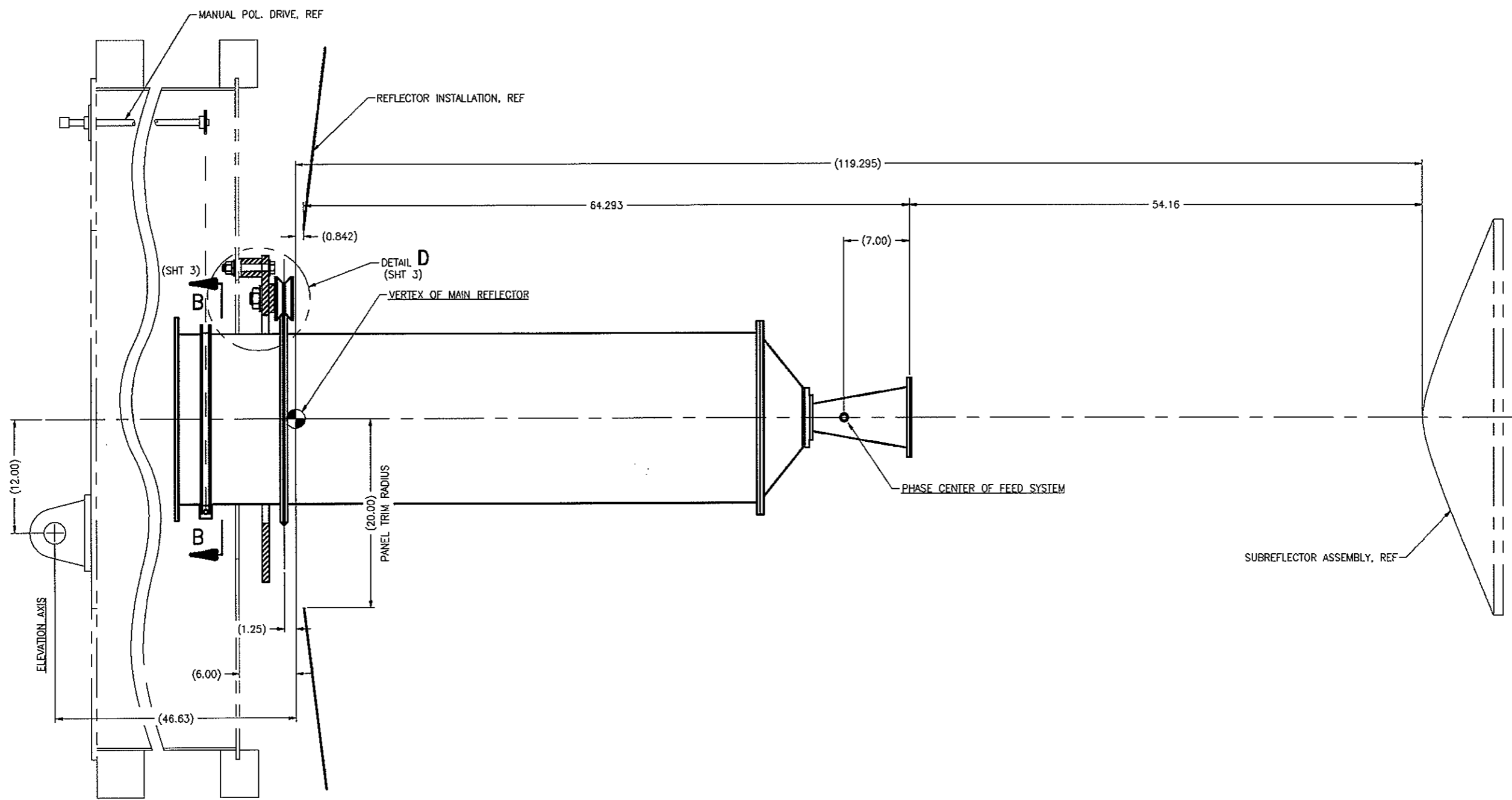


FEED ASSEMBLY INSTALLATION
FRONT VIEW OF HUB
R000302

EA
 - EST. WEIGHT -

DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED, INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1984. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DETAILS ± 1/16 ASSY'S ± 1/8 DECIMALS: .XX ± .03 .XXX ± .005 ANGLES ± 1° UNLESS OTHERWISE SPECIFIED, PARTS TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY. TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.	REFERENCE SEPARATE BOM FOR SPECIFIC INFO				VertexRSI CONFIDENTIAL AND PROPRIETARY				
	DESIGN	ADDITIONAL APPROVALS	DATE	APPROVALS	DATE	VertexRSI ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA			TITLE:
MECHANICAL			DRWN K.SPEICHER	03/04/93	FEED INSTL KU-BAND MODEL 8.1/9.0 KPK				CODE ID. NO.
STRUCTURAL			CHECKED G.ROBERTS	03/09/93					1GD22
ELECTRICAL			DESIGNER J.HILL	07/03/95	SIZE D	DWG NO. 000789	REV A		
			MANUFACTURING D.DAVIS	02/21/93	SCALE 1/6	CONTRACT NO.	SHEET 1 OF 3		
			PROJECT C.BUSSE	02/22/93					
			PRODUCT MGR J.FORTIER						

DFORM1 D1

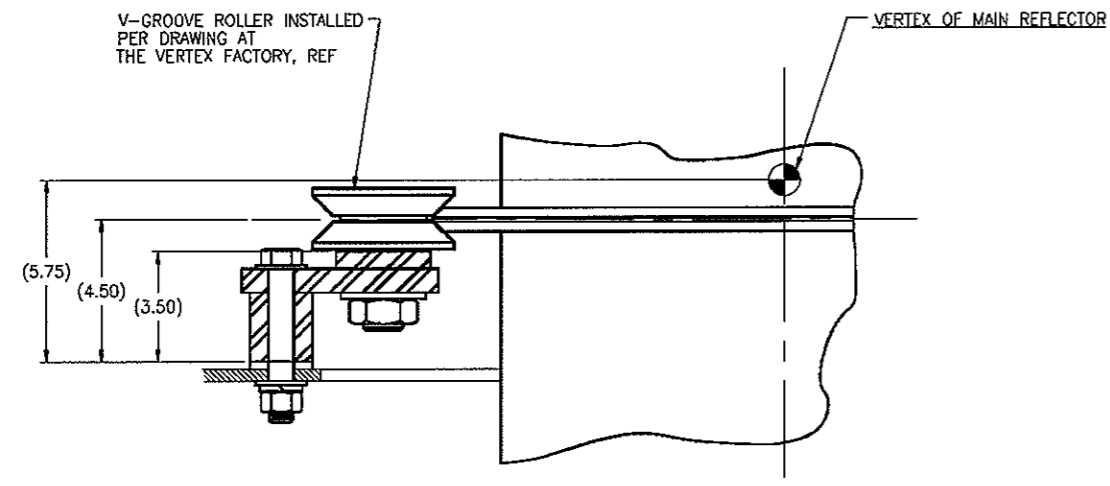


SECTION A-A
FEED ASSEMBLY INSTALLATION

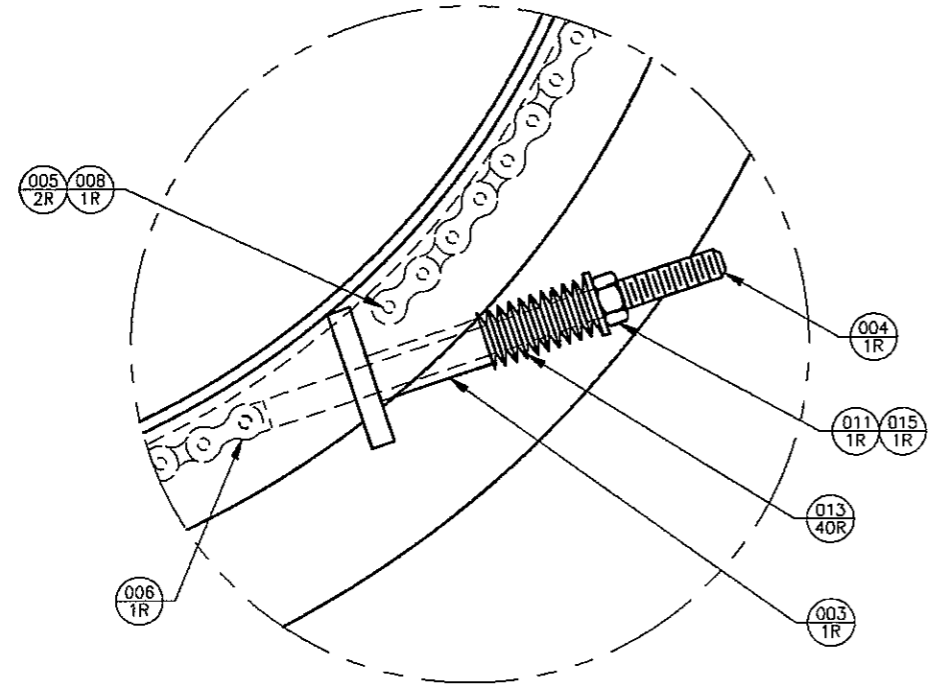
VertexRSI CONFIDENTIAL AND PROPRIETARY

				ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
CODE ID. NO.	SIZE	DWG NO.	REV		
1GD22	D	000789	A		
SCALE:	1/8	CONTRACT NO.		SHEET	2 of 3

DFORM102

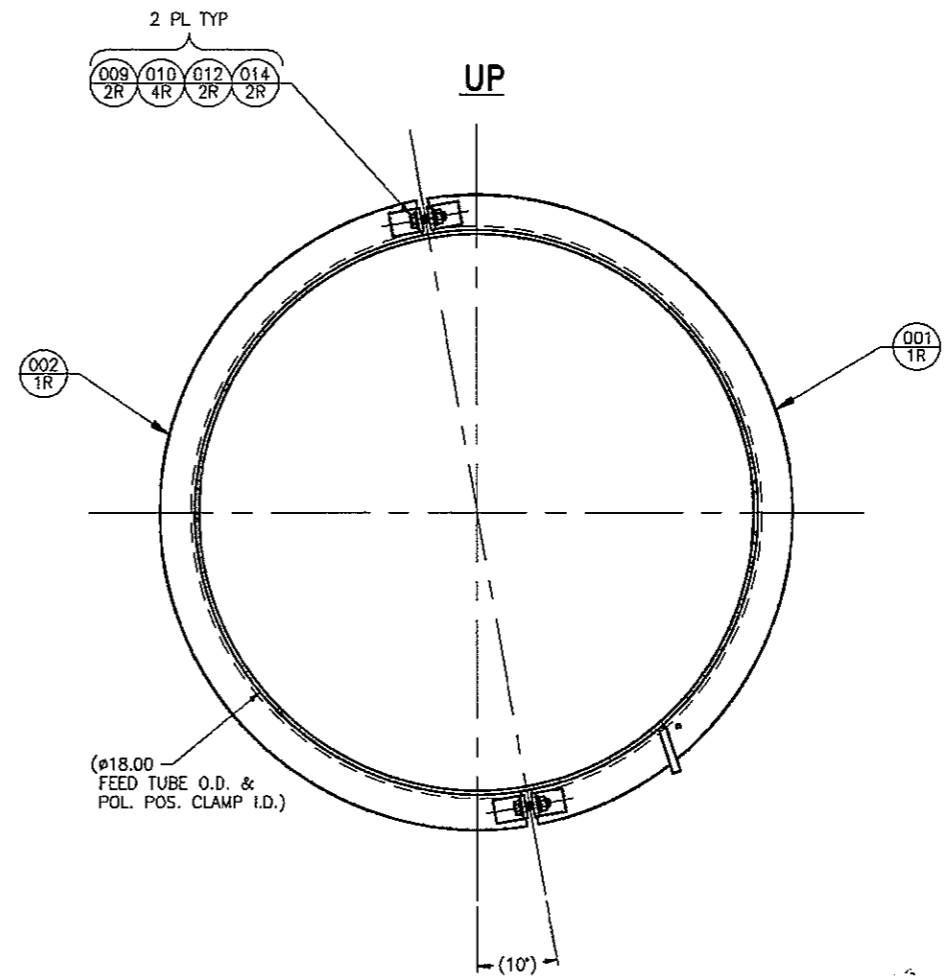


DETAIL D



DETAIL C - CHAIN INSTALLATION

SCALE: FULL



SECTION B-B - FEED TUBE POLAR POSITIONING

VertexRSI CONFIDENTIAL AND PROPRIETARY



ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

CODE NO. 1GD22	SIZE D	DRG NO. 000789	REV A
SCALE: 1/3	CONTRACT NO.	SHEET 3 OF 3	

DFORM102

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:31:09

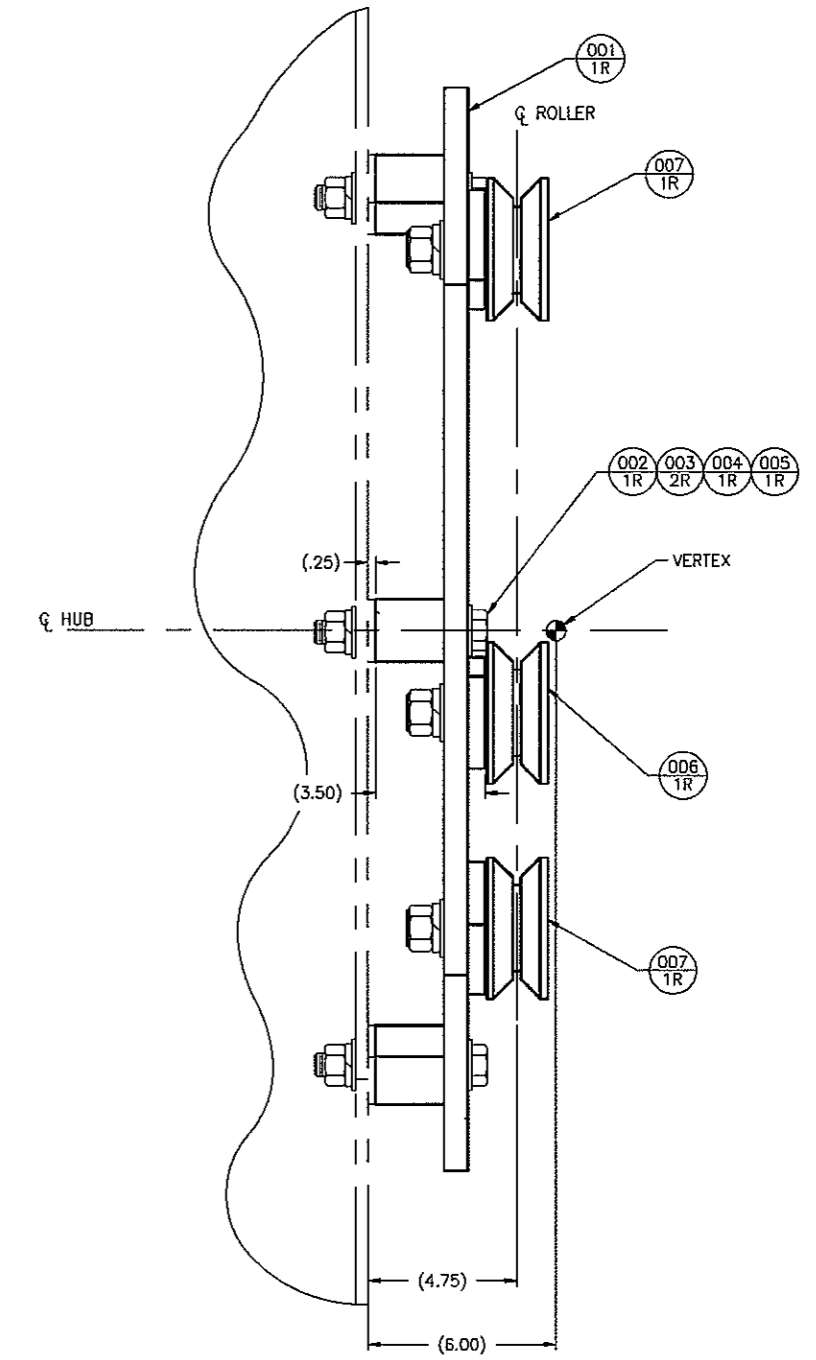
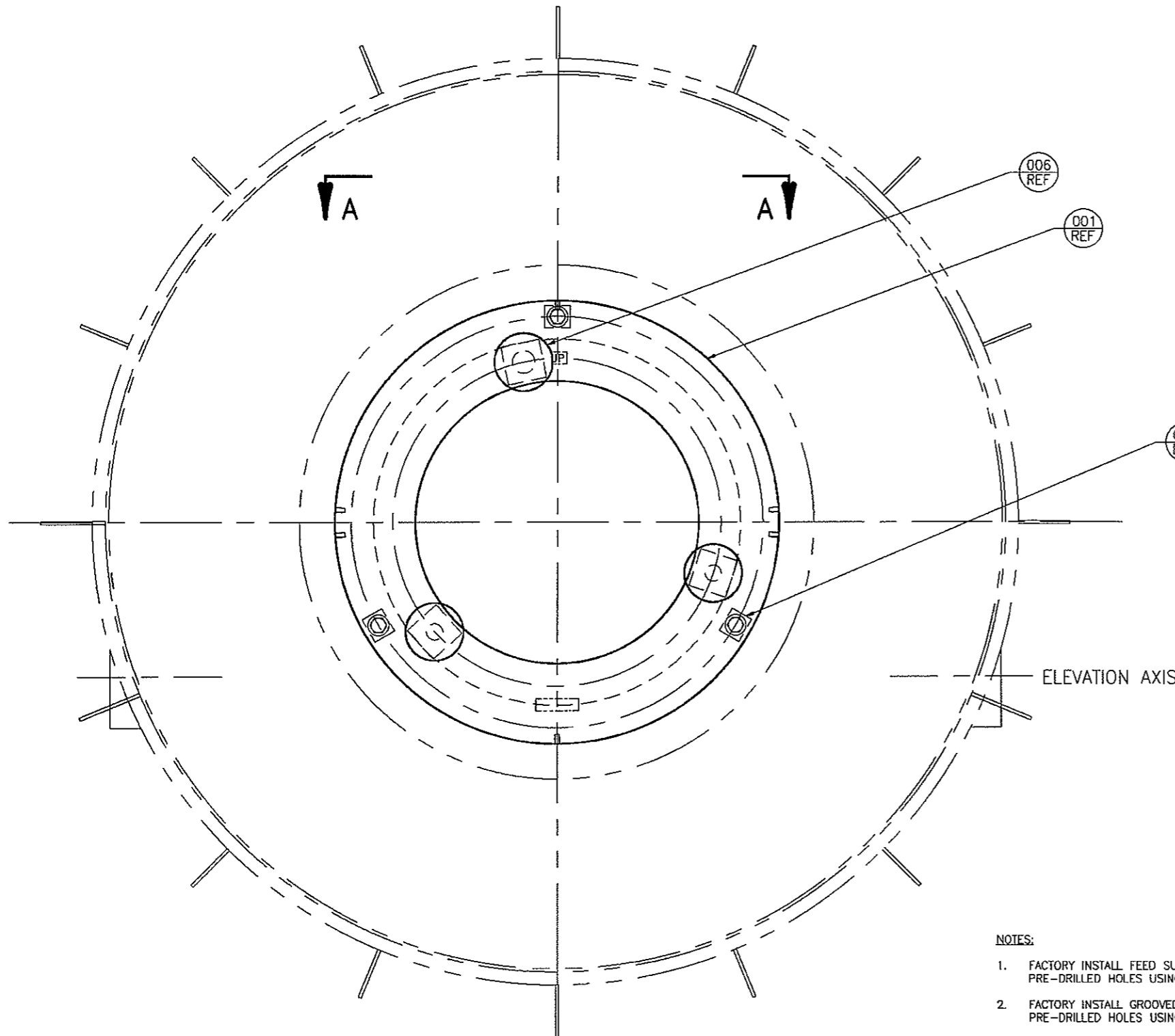
 CATALOGUE#: R003033 PSM: M STATUS: RELEASED DRAWING: D-001807 REV: A
 DESCRIPTION: FEED RING INSTL 8/9KPK LINEAR CATEGORY: ANTENNA ENTERED: 7/09/1993
 POL 18DIA CLASS: AFSRNG REVISED: 0/00/0000 REV: A
 SUBCLASS: INSTL APPROVED: 9/16/1993
 JOB#: 9318 PENDING: REV
 REVISION: A 07/09/93 CAB OLD CAT#: 370351-01 SIZE: D DWG CAT: I ID: CAB

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
001	R003034	1.00			R	C	S	PL WLDMNT FEED SPRT 8/9M	AFS	DETAIL	D-001808	C
002	H04542-29	3.00			EA	R	P	BOLT HH 3/4-10UNC X 5 A325 HDG	HHBOLT	HDG		
003	H40084-29	6.00			EA	R	P	FW (AN) 3/4 X 1 15/32 F436 HDG	FW	HDG		
004	H30017-29	3.00			EA	R	P	LW HELICAL 3/4 HDG	LW	HDG		
005	H21019-29	3.00			EA	R	P	NUT HH 3/4-10UNC A563 DH HDG	HHNUT	HDG		
006	P99820-1	1.00			EA	R	P	ROLLER GROOVED 0.180			A-170463	B
007	P99815-1	2.00			EA	R	P	ROLLER GROOVED			A-170462	A

END OF BOM:R003033

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASELINE, REPLACES 370351-01(B)	07/13/93	KJS/



VIEW A-A
 ROTATED 90° CCW
 SCALE: 1/6

NOTES:

1. FACTORY INSTALL FEED SUPPORT PLATE (ITEM 001) IN EXISTING PRE-DRILLED HOLES USING HARDWARE SUPPLIED.
2. FACTORY INSTALL GROOVED ROLLERS (ITEMS 006 AND 007) IN EXISTING PRE-DRILLED HOLES USING HARDWARE SUPPLIED WITH ROLLER.

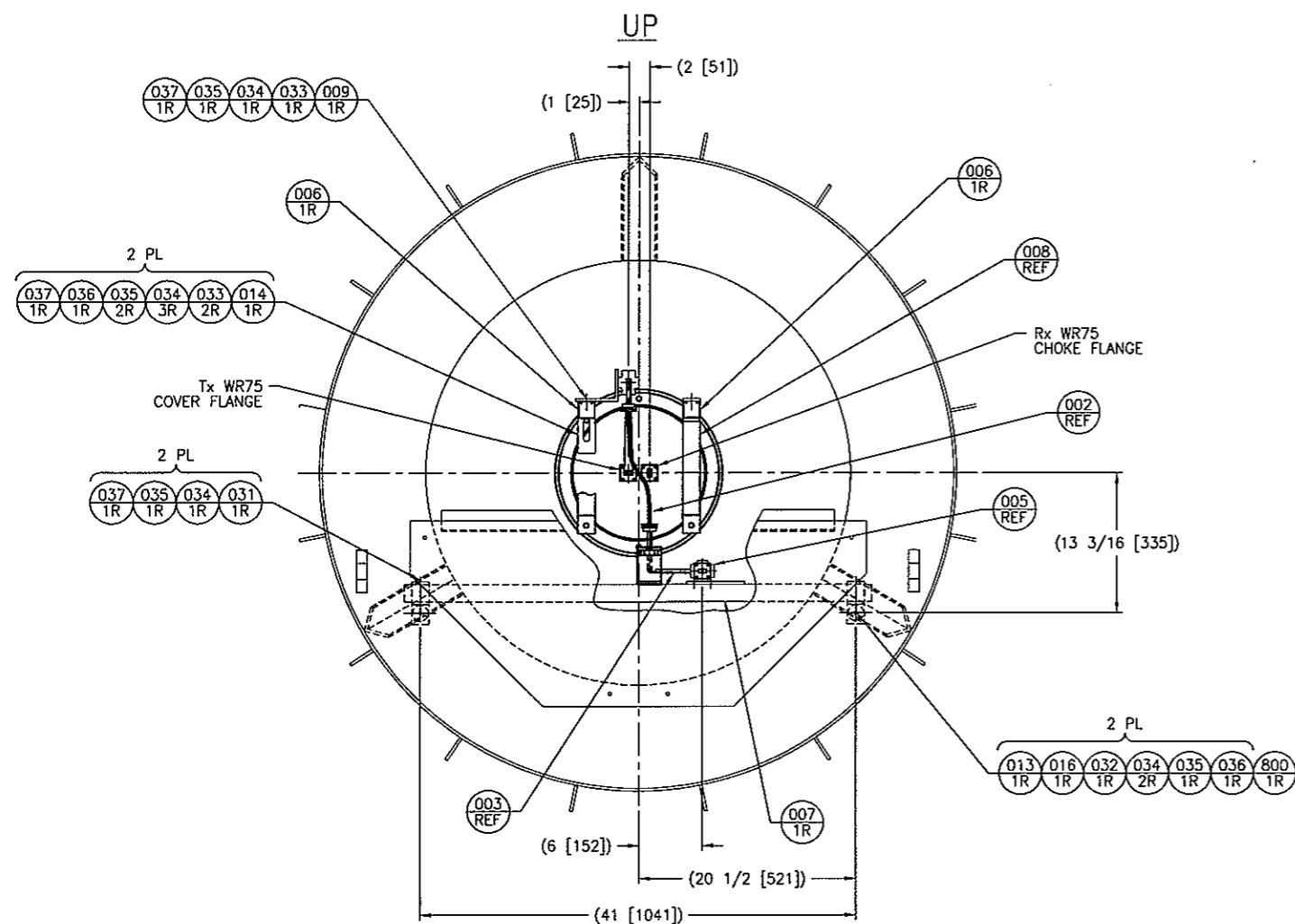
FEED SUPPORT RING INSTALLATION
FRONT VIEW

DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED, INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DETAILS ± 1/16, ASSY'S ± 1/8 DECIMALS: .XX ± .03, .XXX ± .005 ANGLES ± 1° UNLESS OTHERWISE SPECIFIED, PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY. TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.	REFERENCE SEPARATE BOM FOR SPECIFIC INFO				VertexRSI CONFIDENTIAL AND PROPRIETARY			
	ADDITIONAL APPROVALS DESIGN MECHANICAL STRUCTURAL ELECTRICAL	DATE 	APPROVALS DRAWN CHECKED DESIGNER MANUFACTURING	DATE 07/12/93 07/24/93 09/14/93				
TITLE: FEED SUPPT RING INSTL LINEAR POLARIZATION MODEL 8.1/9.0 KPK				CODE NO. 1G022	SIZE D	DWG NO. 001807	REV A	
SCALE: 1/5				CONTRACT NO.		SHEET 1 OF 1		

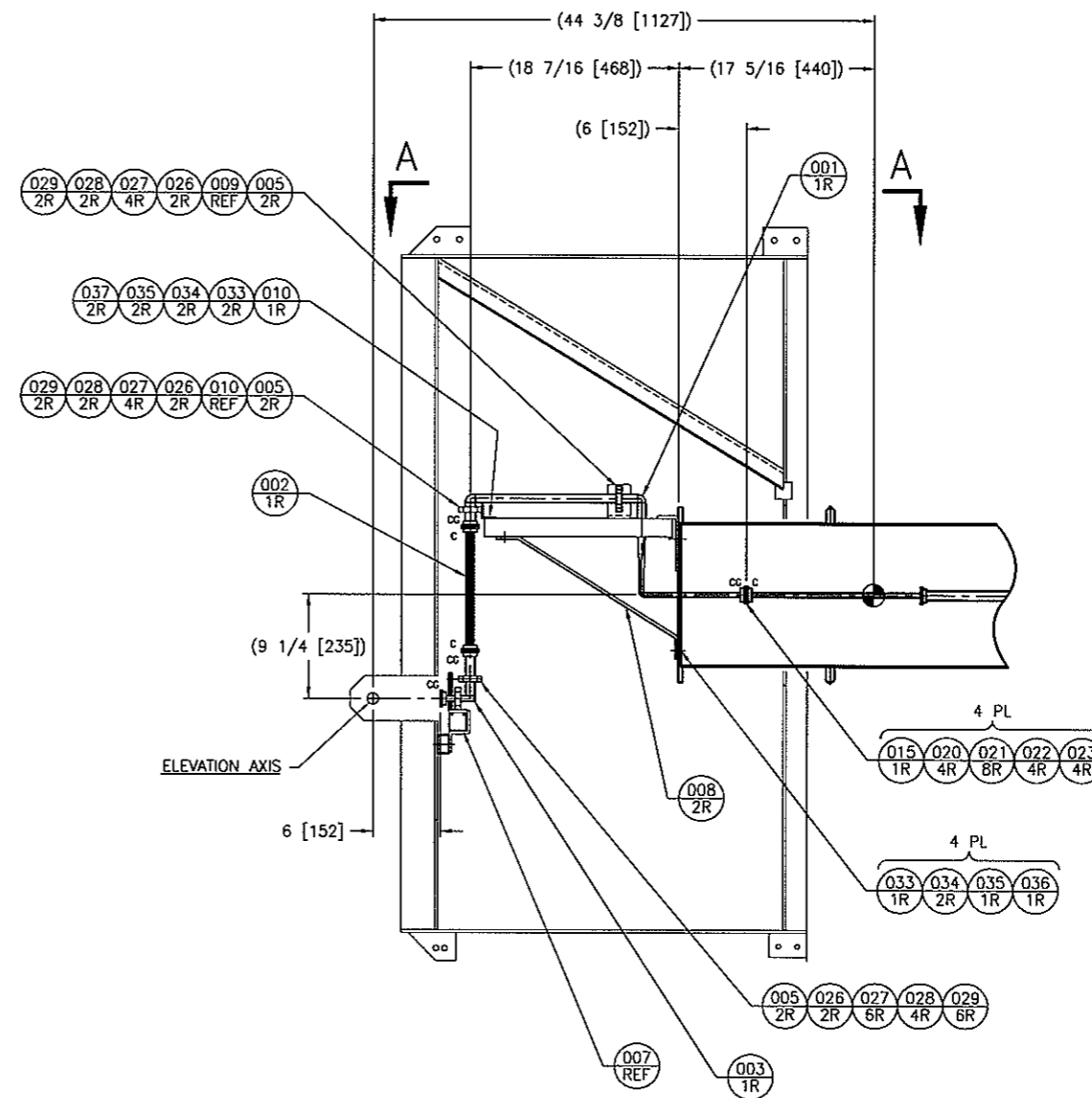
EA
 - EST. WEIGHT -

DFOR41D1

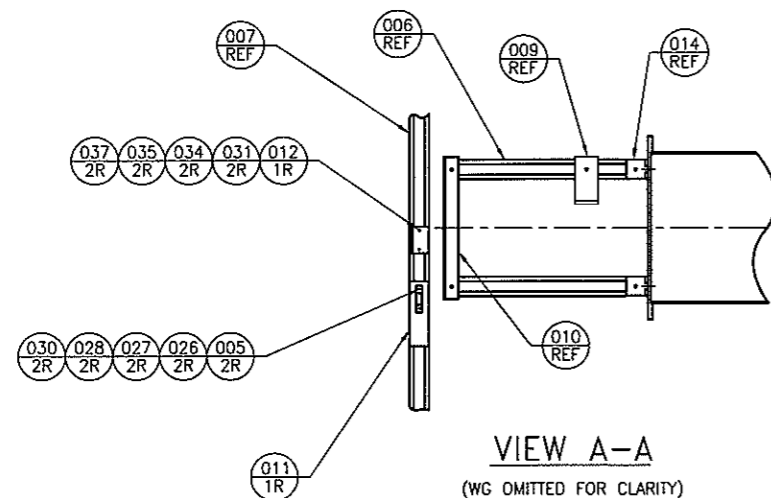
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	-	-



REAR VIEW



SIDE VIEW



VIEW A-A
(WG OMITTED FOR CLARITY)

R014001

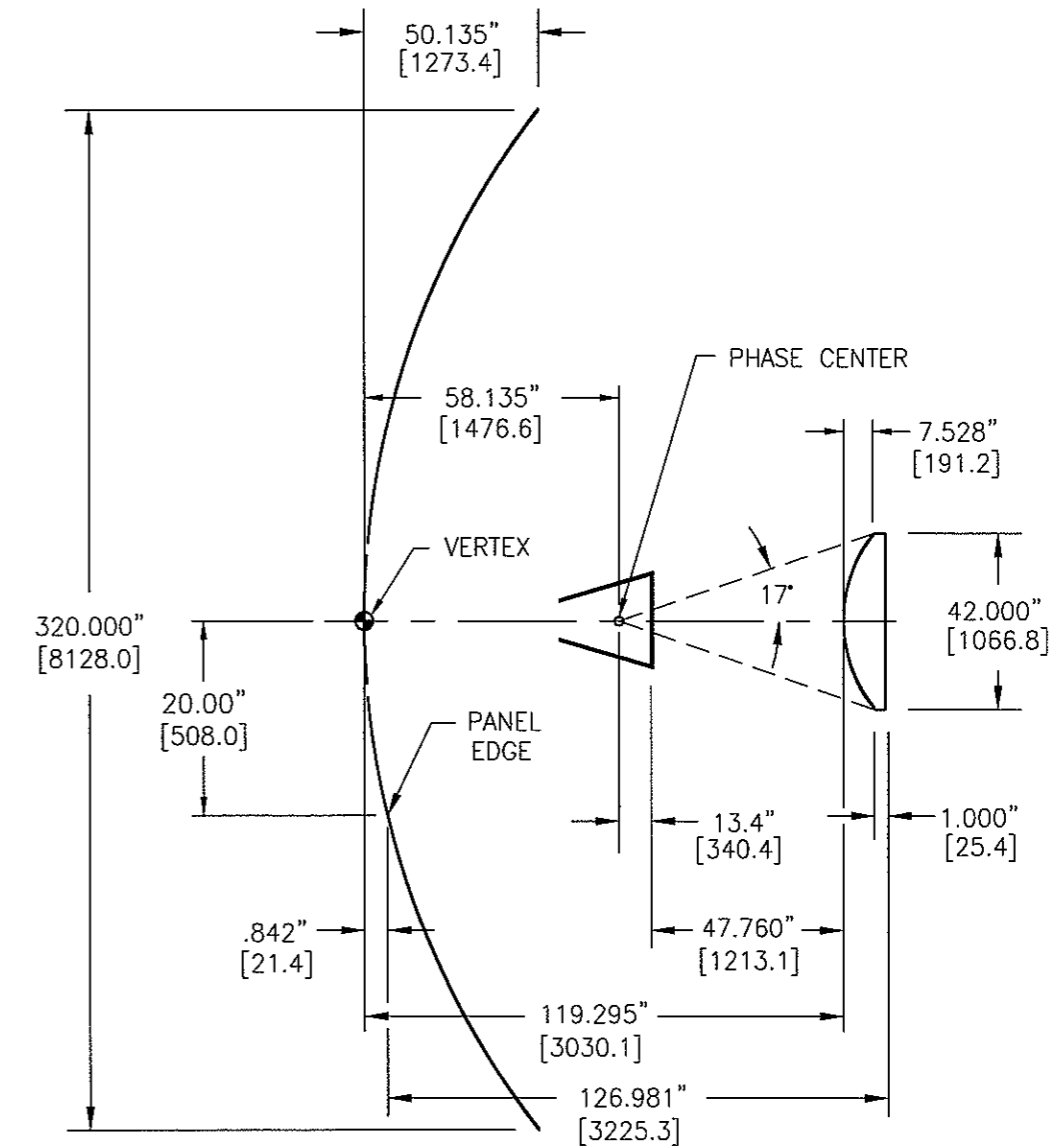
NOTES:

1. A "C" NEXT TO A FLANGE INDICATES A COVER FLANGE.
A "CG" NEXT TO A FLANGE INDICATES A COVER GROOVE FLANGE.

DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO		VertexRSI CONFIDENTIAL AND PROPRIETARY	
UNLESS OTHERWISE SPECIFIED: INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: DETAILS ± 1/16 .XX ± .03 ASSY'S ± 1/8 .XXX ± .005 ANGLES ± 1°		ADDITIONAL APPROVALS	DATE	APPROVALS	DATE
DESIGN	DP JOHNSON	04/06/95	DRAWN	AL BAERGEN	03/31/95
MECHANICAL	N/R		CHECKED	P AUDET	04/06/95
STRUCTURAL	N/R		DESIGNER	AL BAERGEN	04/06/95
ELECTRICAL	N/R		MANUFACTURING	P AUDET	04/06/95
			PROJECT	SD LUCY	04/07/95
			PRODUCT MGR	RG RADTKE	04/07/95
TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.					
		VertexRSI		ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
		TITLE:		HUB INTEGRATION, TX SINGLE TX WG RUN 6.1 KPK LP ANTENNA	
		CODE ID. NO.	SIZE	DWG. NO.	REV
		1GD22	D	008646	A
		SCALE:	CONTRACT NO.	SHEET	OF
		1/8	10086	1	1

MAIN REF. SPEC	400-0363
SUB REF. SPEC	400-0270

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	-	-
B	ECR - 97-0331	12/13/96	MDM/ADC
C	ECR - 97-1346	08/05/97	MDM/DRB



1. DIMENSIONS IN [] ARE IN MILLIMETERS.

TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.	UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY.	UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE: FRACTIONS: DETAILS ± 1/16 ASSY'S ± 1/8 DECIMALS: .XX ± .03 .XXX ± .005 ANGLES ± 1°	DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED ! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.
--	---	---	--

REFERENCE SEPARATE BOM FOR SPECIFIC INFO				VertexRSI CONFIDENTIAL AND PROPRIETARY			
ADDITIONAL APPROVALS	DATE	APPROVALS	DATE	ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA			
DESIGN N/R		DRAWN S. WIGGINS	06/15/95	TITLE: OPTICAL GEOMETRY, 8.1M, KPK, CASS 3 SECT HORN 10.7 - 18.4 GHz			
MECHANICAL N/R		CHECKED P. AUDET	06/23/95				
STRUCTURAL N/R		DESIGNER R. CHUGH	06/23/95				
ELECTRICAL N/R		MANUFACTURING N/R					
		PROJECT N/R		CODE ID. NO.	SIZE	DWG NO.	REV
		PRODUCT MGR R.C. RADTKE	06/26/95	1GD22	A	009267	C
				SCALE: NONE	CONTRACT NO. 10084	SHEET 1 OF 1	

AFORM1G1

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08 TIME 9:31:10

 CATALOGUE#: R001261 PSM: M STATUS: RELEASED DRAWING: D-000133 REV: R
 DESCRIPTION: DRV INSTL MTZ 25T/35T RF60/63 CATEGORY: ANTENNA ENTERED: 9/11/1992
 JACK MS 25T/35T GMTR RF60/63 CLASS: ACSMTR REVISED: 3/23/2004 REV: R
 200MM VOLTAGE TBD IEC SUBCLASS: INSTL APPROVED: 4/13/2004
 JOB#: 9318 PENDING: REV
 REVISION: A 05/26/93 JBJ OLD CAT#: 370373-01 SIZE: D DWG CAT: I ID: JBJ

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
001	GEARMOTOR	1.00		EA	R	P	P	TBD - GMTR PER CONTRACT	MOTOR		NONE	00
002	R001239	1.00			R	C	S	CPLG CVR WLDMNT 25/35T-RF40/60	ACSMTR	WLDMNT	D-000224	C
003	P28290-1	1.00		EA	R	P	S	CPLG HALF	CPLG			
004	P28280-1	1.00		EA	R	P	S	CPLG HALF	CPLG			
005	P33050-19	1.00		EA	R	P	S	CPLG INSERT SPIDER POLYURETHAN	CPLG		NONE	00
006	P55030-19	1.00	2.00	IN	R	P	S	KEYSTOCK SQ 1/4 SS	KSTOCK	SS	NONE	00
007	P55040-19	1.00	2.00	IN	R	P	S	KEYSTOCK SQ 5/16 SS	KSTOCK	SS		
008	H14158-39	8.00		EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
009	H14160-39	4.00		EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 3/4 SSF593	CAPSCR	SS	NONE	00
010	H20013-39	4.00		EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
011	H30011-39	4.00		EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
012	H40055-39	8.00		EA	R	P	S	FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
013	H57613-39	1.00		EA	R	P	S	SSCR CP HS 3/8-16UNC X 3/8 SSF880 SL	SETSCR	SS		
014	H57620-39	1.00		EA	R	P	S	SSCR CP HS 1/2-13UNC X 1/2 SSF880 SL	SETSCR	SS		
900	M92605-19			EA	R	P	P	UNDERCOATING RBRIZED AEROSL				

END OF BOM:R001261

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:31:11

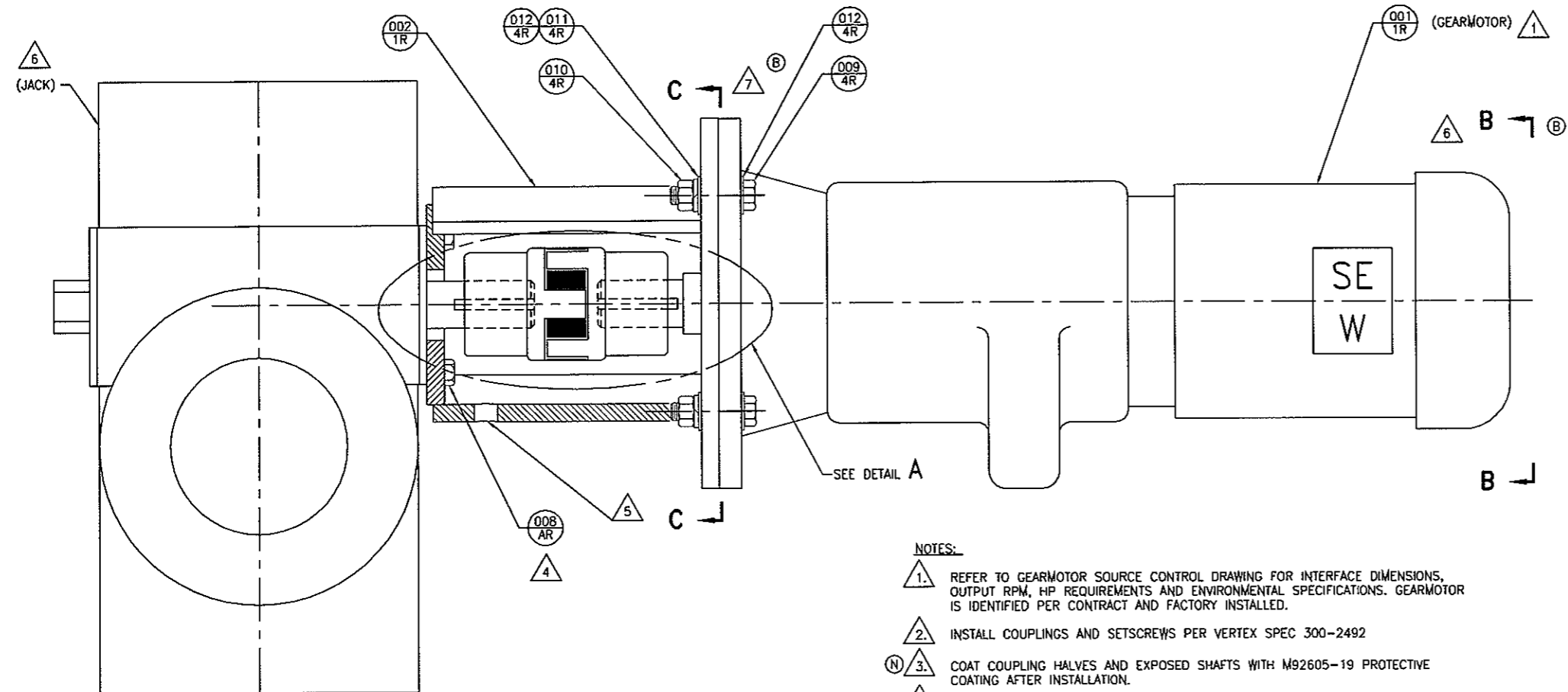
CATALOGUE#: R000540	PSM: M	STATUS: RELEASED	DRAWING: D-000133	REV: R
DESCRIPTION: DRV INSTL MTZ 20T-RF60/63 JACK		CATEGORY: ANTENNA	ENTERED: 9/11/1992	
MS 20T GMTR RF60/63 200MM		CLASS: ACSMTR	REVISED: 3/23/2004	REV: R
VOLTAGE TBD IEC		SUBCLASS: INSTL	APPROVED: 4/13/2004	
		JOB#: 9318	PENDING:	REV
REVISION: A 05/26/93 JBJ		OLD CAT#: 370528-03	SIZE: D DWG CAT: I	ID: JBJ

BILL OF MATERIAL

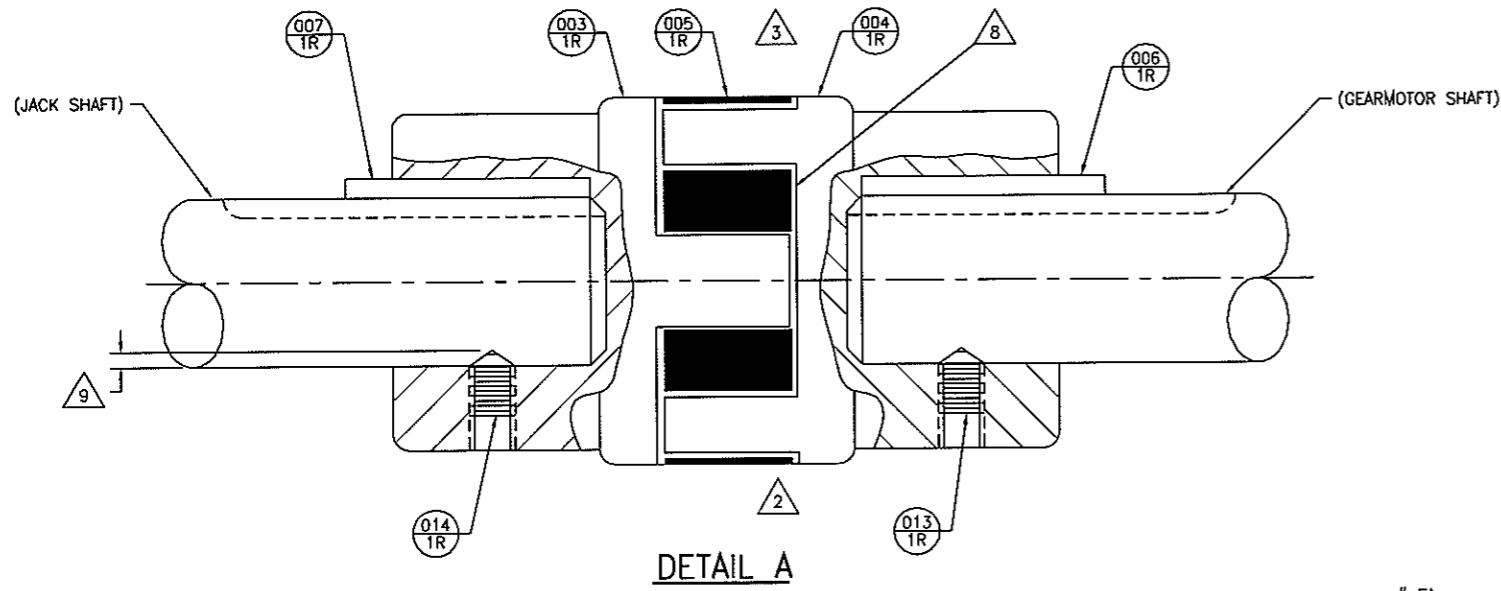
ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
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002	R000535	1.00			R	C	S	CPLG CVR WLDMNT 20T-RF60	ACSMTR	WLDMNT	D-000231	D
003	P28140-1	1.00		EA	R	P	S	CPLG HALF	CPLG			
004	P28160-1	1.00		EA	R	P	S	CPLG HALF	CPLG			
005	P33030-19	1.00		EA	R	P	S	INSERT CPLG SPIDER PLASTIC	CPLG			
006	P55030-19	1.00	1.50	IN	R	P	S	KEYSTOCK SQ 1/4 SS	KSTOCK	SS	NONE	00
007	P55030-19	1.00	1.50	IN	R	P	S	KEYSTOCK SQ 1/4 SS	KSTOCK	SS	NONE	00
008	H14083-39	6.00		EA	R	P	S	SCR CAP HH 5/16-18UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
009	H14160-39	4.00		EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 3/4 SSF593	CAPSCR	SS	NONE	00
010	H20013-39	4.00		EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
011	H30011-39	4.00		EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
012	H40055-39	8.00		EA	R	P	S	FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
013	H57613-39	1.00		EA	R	P	S	SSCR CP HS 3/8-16UNC X 3/8 SSF880 SL	SETSCR	SS		
014	H57613-39	1.00		EA	R	P	S	SSCR CP HS 3/8-16UNC X 3/8 SSF880 SL	SETSCR	SS		
900	M92605-19			EA	R	P	P	UNDERCOATING RBRIZED AEROSL				

END OF BOM:R000540

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASELINE; REPLACES 370543(A), 370528(A) AND 370373(A).	9/15/93	CLK/KL
B	ADDED VIEWS B-B-C-C, AND NOTE 7; REV NOTE 6 ADDED RF70-RF83 TO CHART.	7/22/93	JCH/
C	ADDED R007445 MOTOR DRIVE PER DDP 907	1/26/94	MSB/LEB
D	ADDED SHT 6; SHT 3, ADDED 16.4 EL 75 TON PER DDP1166,1167	03/31/94	JCF/GPR
E	ECR A94-0111/DDP A94-1386; ADDED VIEWS AND JACK SIZES AS SHOWN	06/13/94	JDP/LEB
F	ADD 5 TON MOTORIZED DRIVE INSTLL., CORRECTED 16M VIEWS; ECO 94-0443/DDP A94-1610	08/29/94	MWD/LEB
G	ECO 95-0515/DDP A95-0225; ADDED R017005 & R017006 TO 50 TON (RF80/RF83);	02/02/95	RWB/WM
H	ECO 95-0753 ADD 8.1/9 METER 35 TON JACK VIEW WITH THE MOTOR ON THE LEFT BDITOM	03/21/95	HDE/KL
J	ECR 96-0932; ADDED R003515 TO RF70 & RF73 25TON, & ADDED R016504 TO RF70 & RF73 20TON.	06/13/96	MSS/KLL
K	ECR 97-0177, ADDED D13110-01 TO RF40, (SEE SHT 2 AND 6)	10/31/96	DKT/CLS
L	ECR 99-0033, ADDED SECTION BB&CC 16M HW EL, ADDED ROWS FOR R77&R87 GERMOTORS	10/12/98	JRJ/GPR
M	EC #00-0497; ADDED NOTES #8 & 9; DETAIL A, LL SIDE, ADDED NOTE #9 FLAG; WITHIN "MOTORIZED DRIVE INSTALLATION" CHART, LAST 4 FRAME NUMBERS, RF77 WERE R77 (2 PLCS), RF87 WERE R87 (2 PLCS); SHT #4, 16.4 AZ 100T, NOTE : RIGHT WAS LEFT, 8 HOLES WERE 6 & ROT'D 10 ° CW; 8.1/9,0 AZ 35T (XT HW), 4 HOLES WERE 6; SHT #6, 11.1 AZ 75T (XT), 8 HOLES WERE 6; 16.4 HW EL 100T, 8 HOLES WERE 6; 16.4 EL 75T, 8 HOLES WERE 6	04/28/00	JUL/RRY
N	EC 01-0702; MTZ DRV INSTL CHART,ADD'D 150T/1 3/4 COL, ADD'D 000133-02 TO CHART UNDER 75 & 150T & ALONG RF77; ADD'D RF60/200mm/1,625 ROW, ADD'D R028029 TO THIS ROW UNDER 50T/1 1/2; NOTE #3, M92605-19 WAS PDRP 710	01/16/02	RRY/SPK
P	EC #03-0033	10/10/02	JRF/SPK
Q	EC #03-0205	01/02/03	JDH/SPK
R	EC 03-0958	11/10/03	RRY/GPR



- NOTES:**
1. REFER TO GERMOTOR SOURCE CONTROL DRAWING FOR INTERFACE DIMENSIONS, OUTPUT RPM, HP REQUIREMENTS AND ENVIRONMENTAL SPECIFICATIONS. GERMOTOR IS IDENTIFIED PER CONTRACT AND FACTORY INSTALLED.
 2. INSTALL COUPLINGS AND SETSCREWS PER VERTEX SPEC 300-2492
 3. COAT COUPLING HALVES AND EXPOSED SHAFTS WITH M92605-19 PROTECTIVE COATING AFTER INSTALLATION.
 4. REMOVE ALL EXISTING BOLTS AND REPLACE EACH WITH ITEM 008 CAPSCREWS AT INSTALLATION, RETAIN LOCKWASHERS. (TYP OF 4, 6, OR 8 AS REQ'D)
 5. INSTALL COUPLING COVER WITH DRAIN HOLE ON BOTTOM SIDE.
 6. REFER TO FOLLOWING SHEETS FOR SPECIFIC MOTOR DRIVE ORIENTATION VIEWS.
 7. REFER TO FOLLOWING SHEETS FOR SPECIFIC COUPLING COVER ORIENTATION VIEWS.
 8. CpLg GAP S.B. 1/16"-1/8" MAX
 9. SEE SPECIFICATION 300-2492 FOR SET SCREW DEPTH.



MOTORIZED DRIVE INSTALLATION											
GERMOTOR TYPE			JACK TYPE								
			5TON	10TON	20TON	25TON	35TON	50TON	75TON	100TON	150TON
FLANGE CODE	FLANGE	SHAFT OD	3/4	1	1	1 3/8	1 3/8	1 1/2	1 3/4	1 3/4	1 3/4
(N) 40	200mm	1.000	R00017	R000968	R001262	R003268	R003268	000133-01			
(P) 60	200mm	1.250		R000544	R000540	R001261	R001261	R003240	R003273		
(P,N) 67A	200mm	1.375						R025668			
(P) 67B	250mm	1.375									
(P,J,B) 77A	250mm	1.625			R016504	R003515	R003515	R003271			
(P) 77B	300mm	1.625						R003268	000133-02	000133-02	000133-02
(P,J,B) 87	300mm	2.125				R007445	R007445	R017000	R003274	R003275	
(P) 97	350mm	2.125									
(P,Q,G,C,B) 37	200mm	1.000	R025874								
(P,Q) 37	200mm	1.000		R024167							
(P,Q,G,C,B) 37	200mm	1.000			024615-01						
(P,Q) 37	200mm	1.000				025726-01	025726-01				

DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED, INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: .XX ± .03 ± .1" DECIMALS: .XX ± .03 ± .1" ANGLES: ± 1° ASSY'S ± 1/8 .XXX ± .005 DRILL HOLE TOLERANCE (DRILL) .013 thru .125 = +.005/-0.01 .126 thru .250 = +.007/-0.03 .251 thru .750 = +.008/-0.03 .751 thru 1.000 = +.009/-0.04 1.001 thru 2.000 = +.012/-0.05 CLEARANCE HOLE TOLERANCE (CH) +.03125/-0.0000	REFERENCE SEPARATE BOM FOR SPECIFIC INFO	VerteXRSI CONFIDENTIAL AND PROPRIETARY		
	ADDITIONAL APPROVALS	DATE	APPROVALS	DATE
MECHANICAL G. ATCHLEY		12/3/93	DRAWN C. KEMP	12/28/92
STRUCTURAL			CHECKED K. LINDSEY	05/25/93
ELECTRICAL			DESIGNER	
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UNLESS OTHERWISE SPECIFIED, PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.			PROJECT C. HALL	05/26/93
			PRODUCT MGR J. PORTER	
			DESIGN	

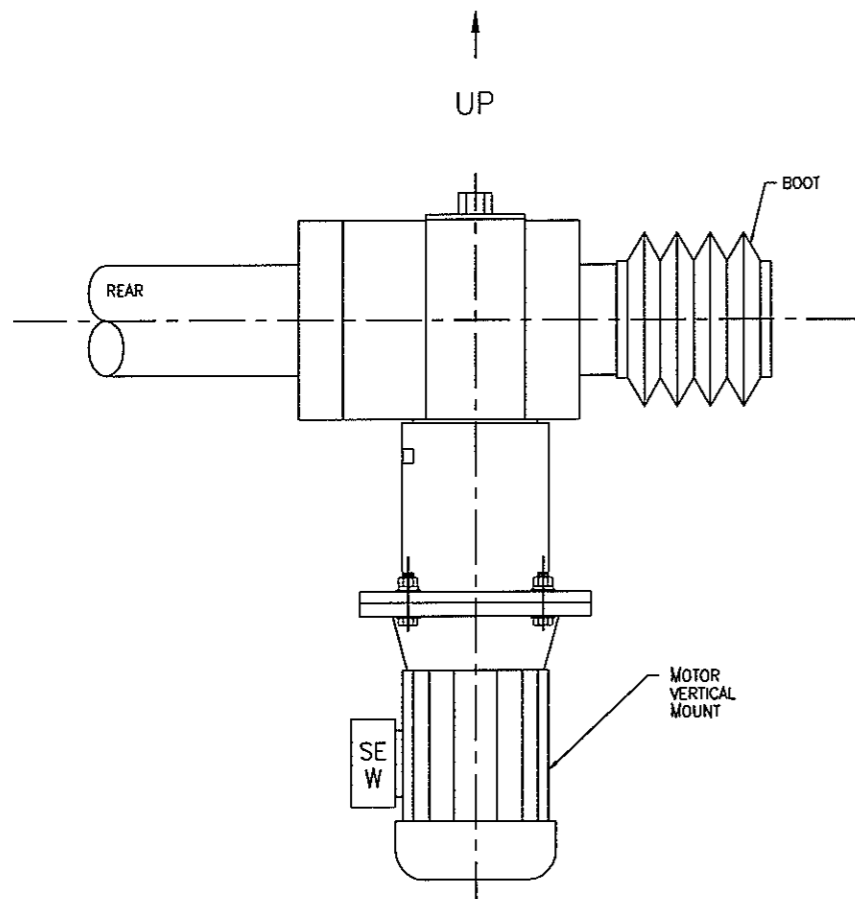
VerteXRSI
GENERAL DYNAMICS

ANTENNA PRODUCTS
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

TITLE: **MOTORIZED DRIVE INSTL.**

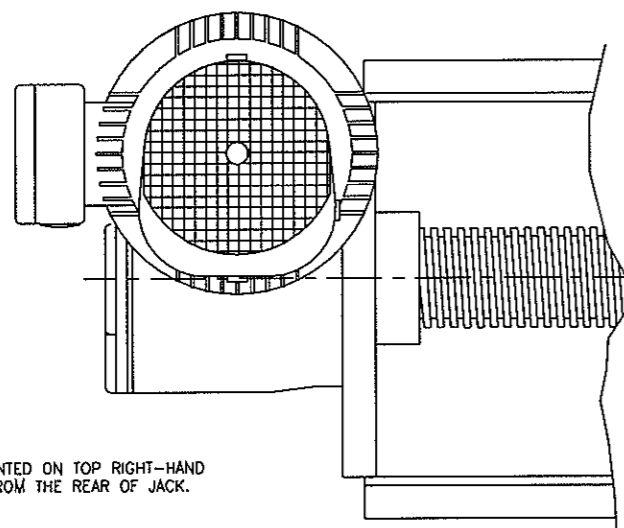
CODE ID. NO. 1GD22 SIZE D DWG NO. 000133 REV R

SCALE: 1/2 CONTRACT NO. SHEET 1 OF 6



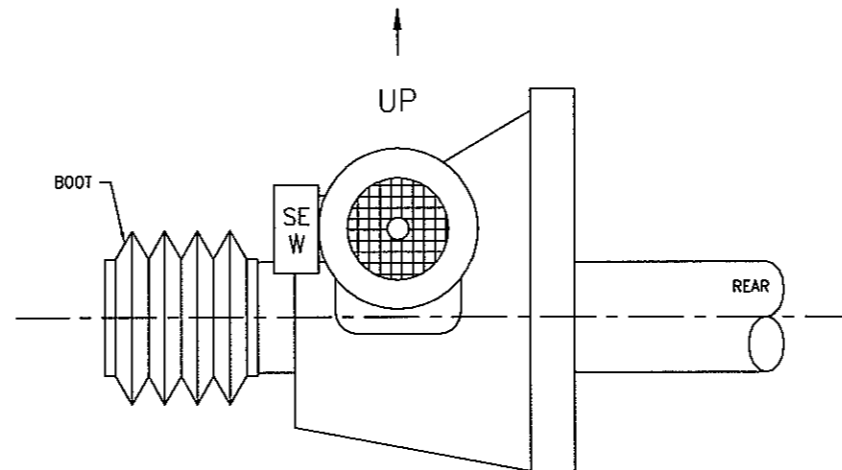
3.5/4.5 AZ. 10 TON

NOTE: MOTOR IS MOUNTED ON BOTTOM OF JACK WITH INPUT SHAFT ON RIGHT-HAND SIDE AS VIEWED FROM REAR.



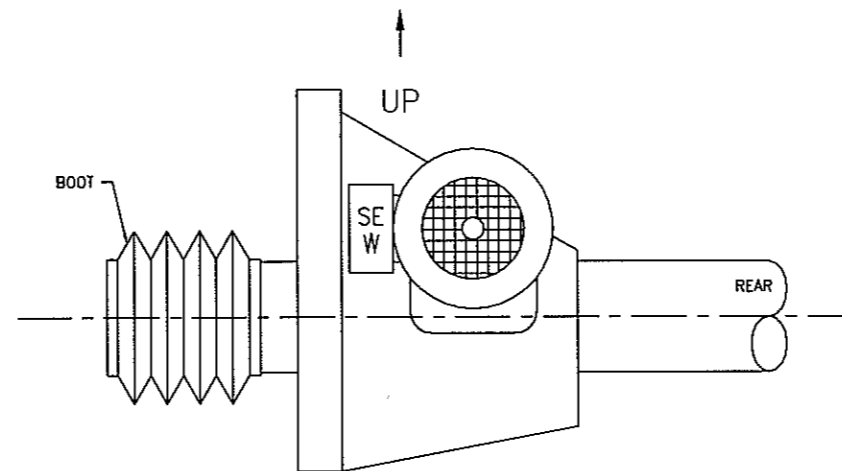
NOTE: MOTOR IS MOUNTED ON TOP RIGHT-HAND SIDE VIEWED FROM THE REAR OF JACK.

Ⓢ 6.1 AZ. 50 TON SUPER X



- Ⓢ 6.1 AZ. 5 TON (MOBILE)
- 6.1 AZ. 20 TON
- 7.2/8.1 AZ. 25 TON
- Ⓢ 8/9 AZ. 50 TON (XT)
- 9.0 AZ. 35 TON
- 11.0 AZ. 50 TON
- 18.3 AZ. 75 TON (CONDUIT) Ⓢ

NOTE: MOTOR IS MOUNTED ON TOP LEFT-HAND SIDE VIEWED FROM THE REAR OF JACK.

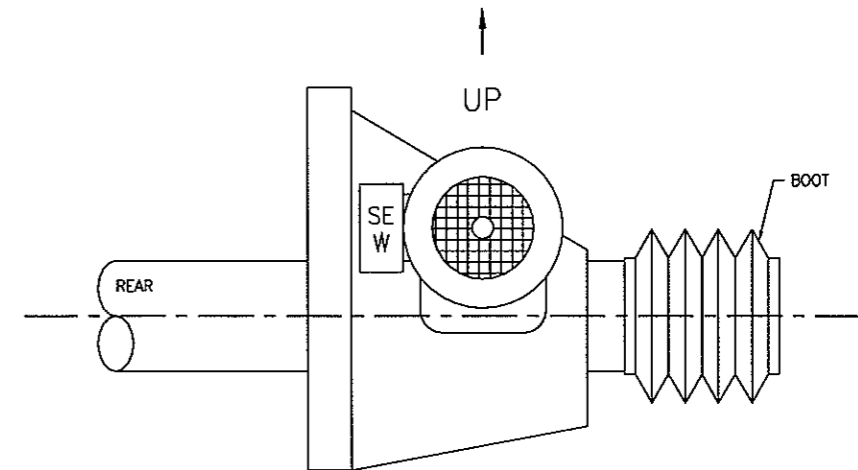


Ⓢ 8.1/9.0 AZ. 35 TON (XT HW)

NOTE: MOTOR IS MOUNTED ON TOP LEFT-HAND SIDE VIEWED FROM THE REAR OF (INVERTED) JACK.

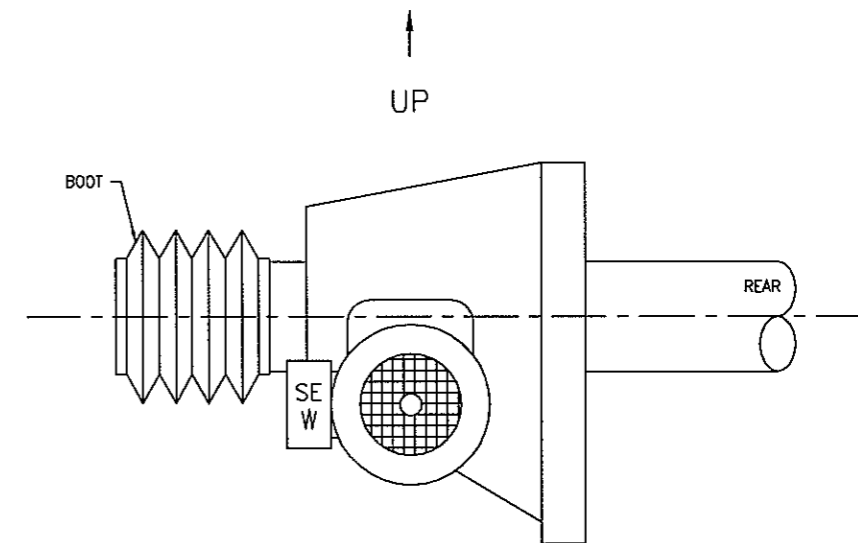
VIEW B-B

AZIMUTH JACK - MOTOR ORIENTATION



- 15.2 AZ. 75 TON
- 13.1 AZ. 50 TON
- 21.0 AZ. 100 TON

NOTE: MOTOR IS MOUNTED ON TOP RIGHT-HAND SIDE VIEWED FROM THE REAR OF JACK.

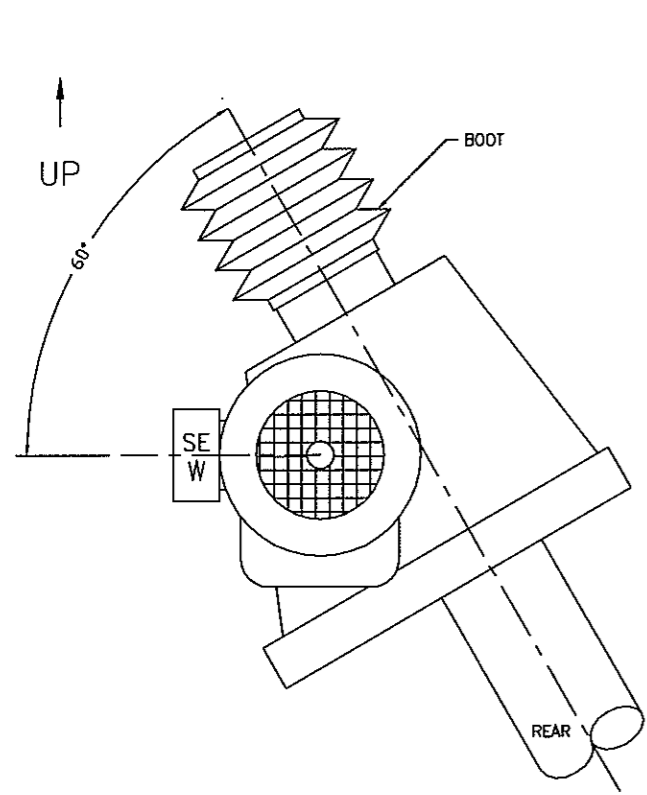


Ⓢ 11.1 AZ. 75 TON (XT)

NOTE: MOTOR IS MOUNTED ON BOTTOM LEFT-HAND SIDE VIEWED FROM THE REAR OF JACK.

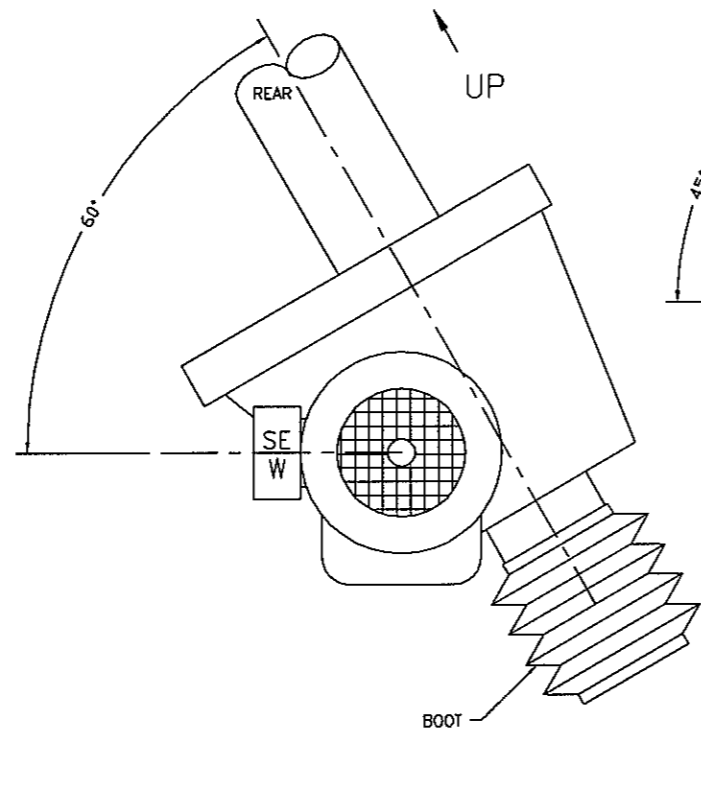
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CODE NO.	SIZE	DWG NO.	REV		
1GD22	D	000133	R		
SCALE: 1/2	CONTRACT NO.	SHEET 2	OF 6		



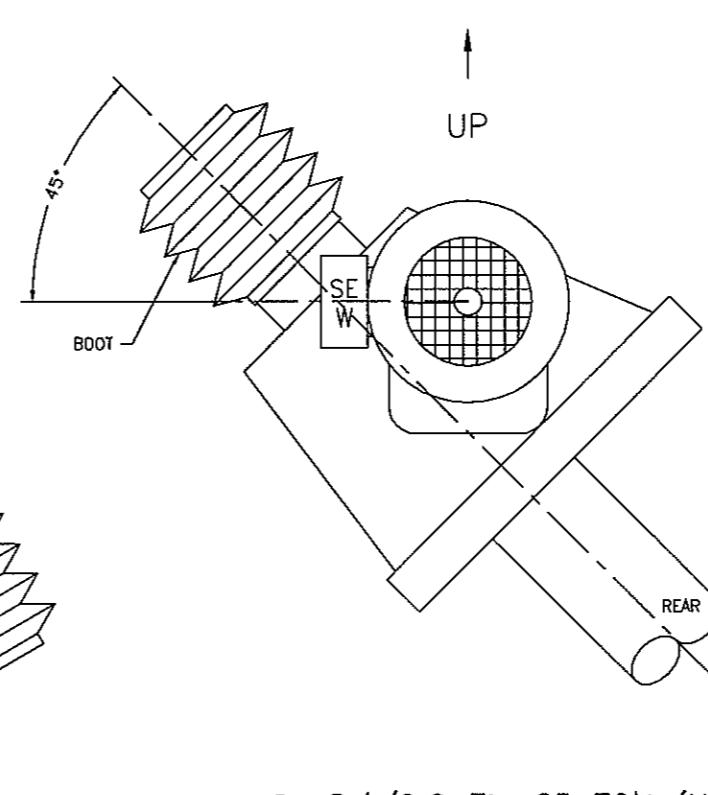
3.5/4.5 EL. 10 TON
8.1/9.0 EL. 20 TON

NOTE: MOTOR IS MOUNTED ON BOTTOM LEFT-HAND SIDE AS VIEWED FROM REAR OF JACK.



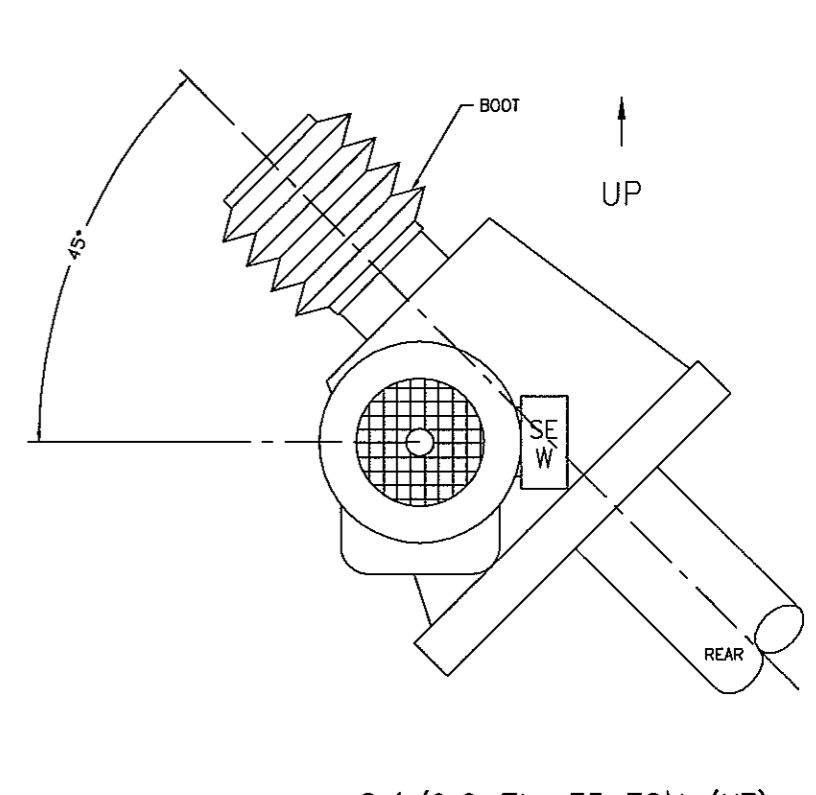
6.1 EL. 10 TON
7.2 EL. 20 TON

NOTE: MOTOR IS MOUNTED ON BOTTOM RIGHT-HAND SIDE AS VIEWED FROM REAR OF JACK.



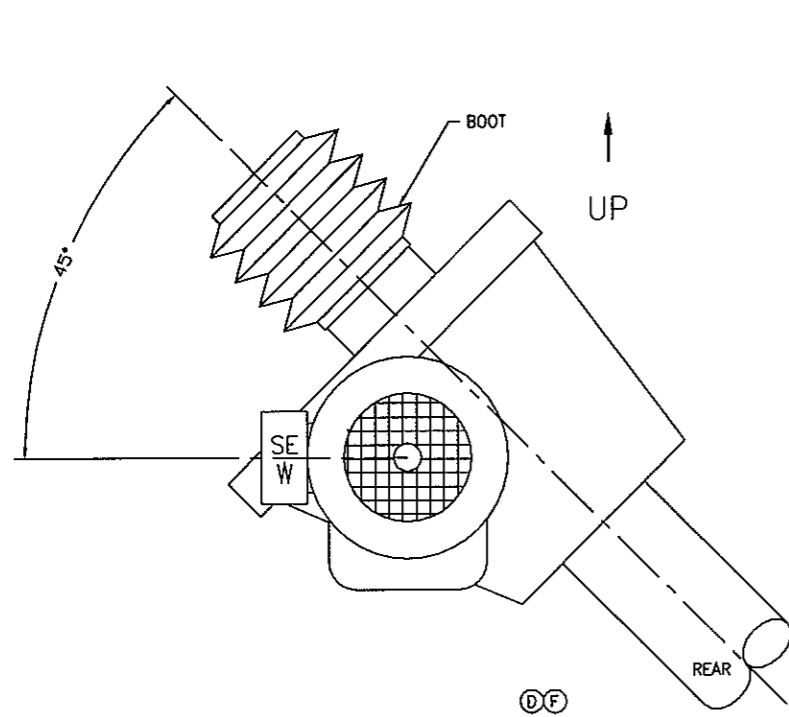
Ⓔ 8.1/9.0 EL. 25 TON (XT)

NOTE: MOTOR IS MOUNTED ON TOP LEFT-HAND SIDE AS VIEWED FROM REAR OF JACK.



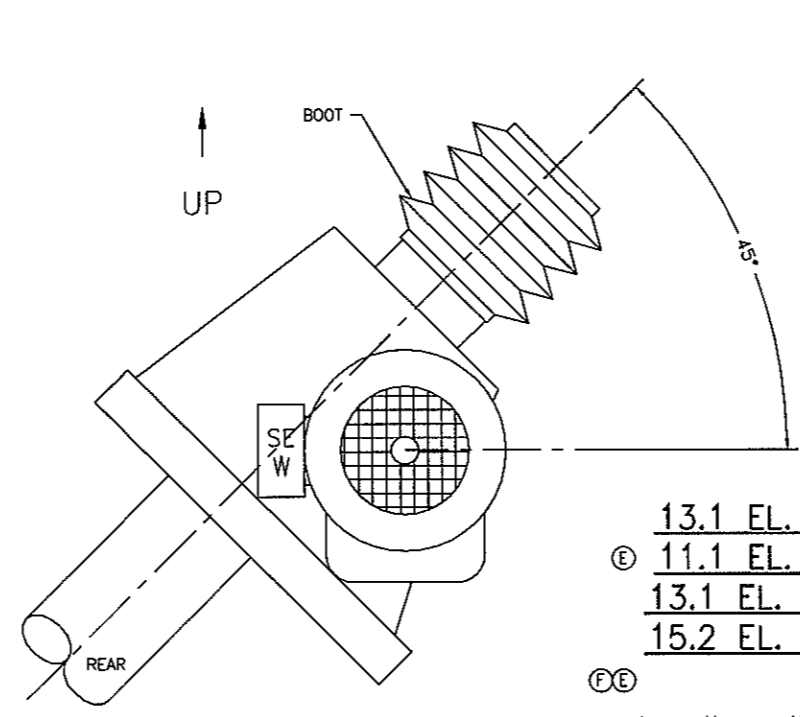
Ⓕ 8.1/9.0 EL. 35 TON (XT)

NOTE: MOTOR IS MOUNTED ON BOTTOM LEFT-HAND SIDE AS VIEWED FROM REAR OF JACK.



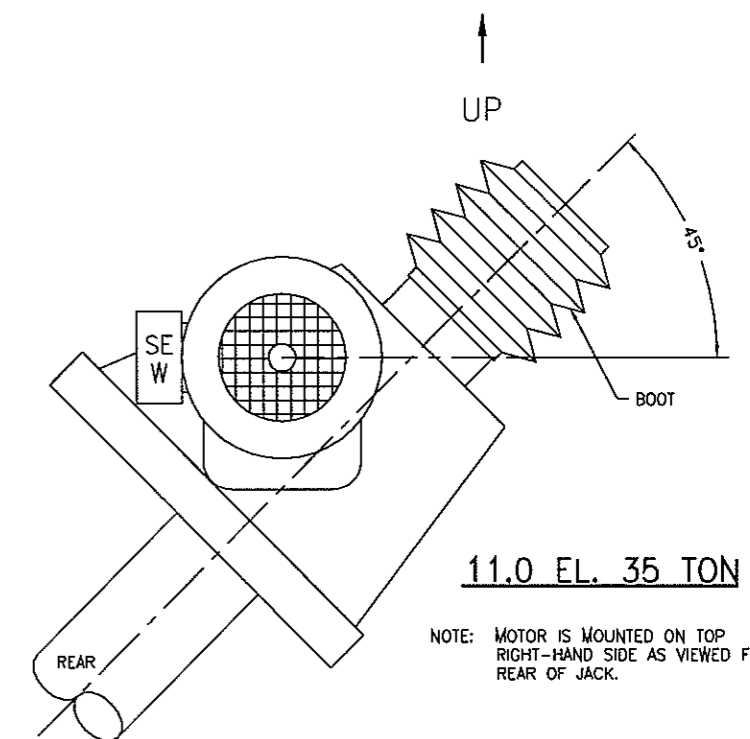
18.3/21.0 EL. 100 TON
 Ⓒ 16.4 HW EL. 100 TON

NOTE: MOTOR IS MOUNTED ON BOTTOM LEFT-HAND SIDE AS VIEWED FROM REAR OF JACK.



13.1 EL. 50 TON
 Ⓔ 11.1 EL. 35 TON
13.1 EL. 100 TON
15.2 EL. 100 TON

Ⓕ NOTE: MOTOR IS MOUNTED ON BOTTOM RIGHT-HAND SIDE AS VIEWED FROM REAR OF JACK.



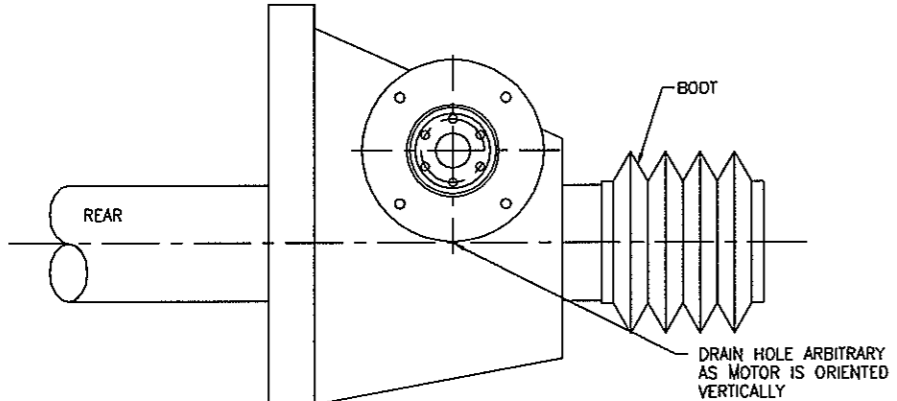
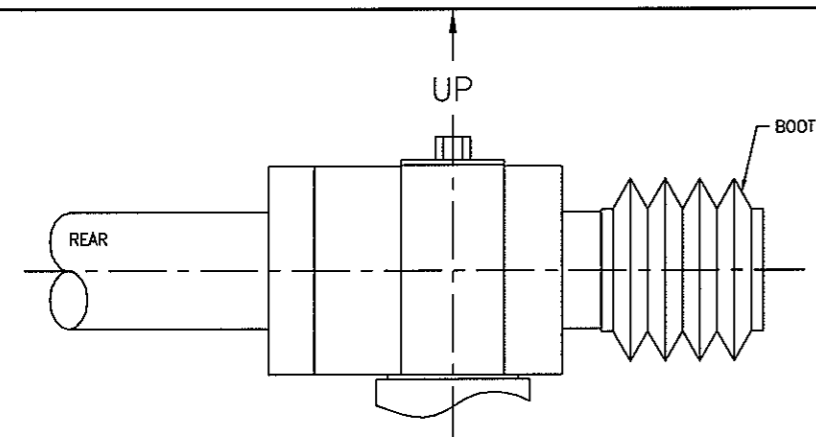
11.0 EL. 35 TON

NOTE: MOTOR IS MOUNTED ON TOP RIGHT-HAND SIDE AS VIEWED FROM REAR OF JACK.

VIEW B-B
ELEVATION JACK - MOTOR ORIENTATION

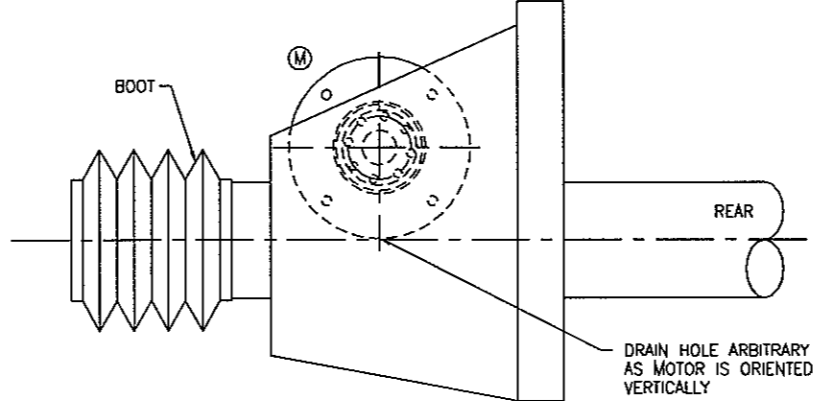
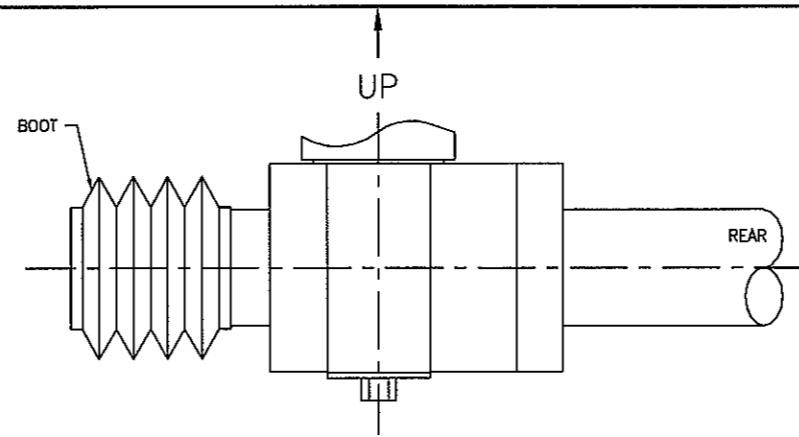
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CODE NO. 1G022	SIZE D	DWG NO. 000133	REV R
SCALE: 1/4	CONTRACT NO.	SHEET 3	OF 6



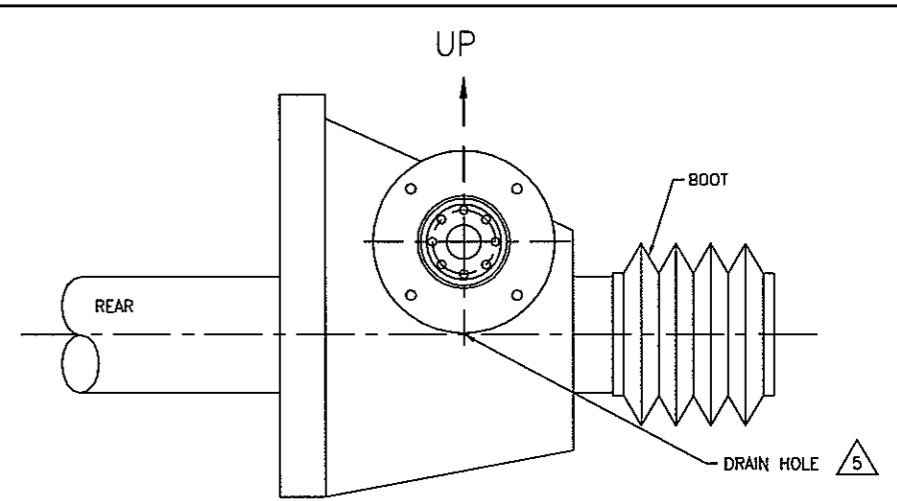
3.5/4.5 AZ. 10 TON

NOTE: COVER IS MOUNTED ON BOTTOM OF JACK WITH INPUT SHAFT ON RIGHT-HAND SIDE AS VIEWED FROM REAR.



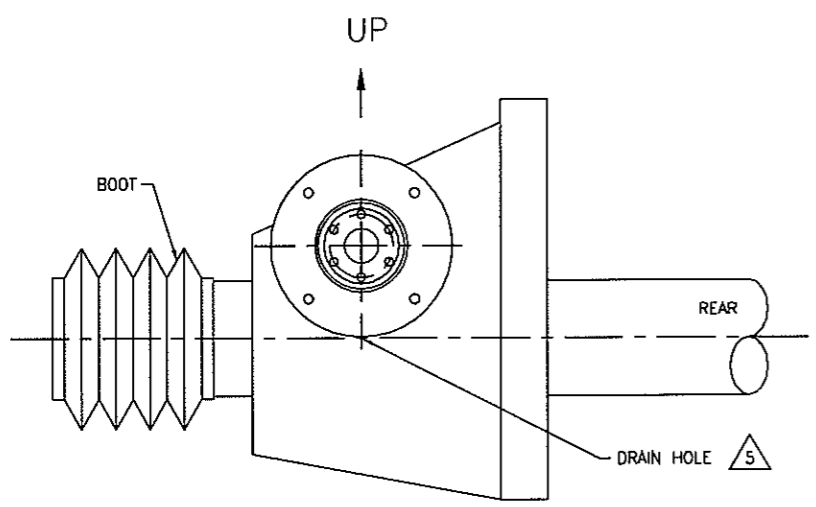
Ⓢ 16.4 AZ. 100 TON

NOTE: COVER IS MOUNTED ON TOP OF JACK WITH INPUT SHAFT ON LEFT-HAND SIDE AS VIEWED FROM REAR.



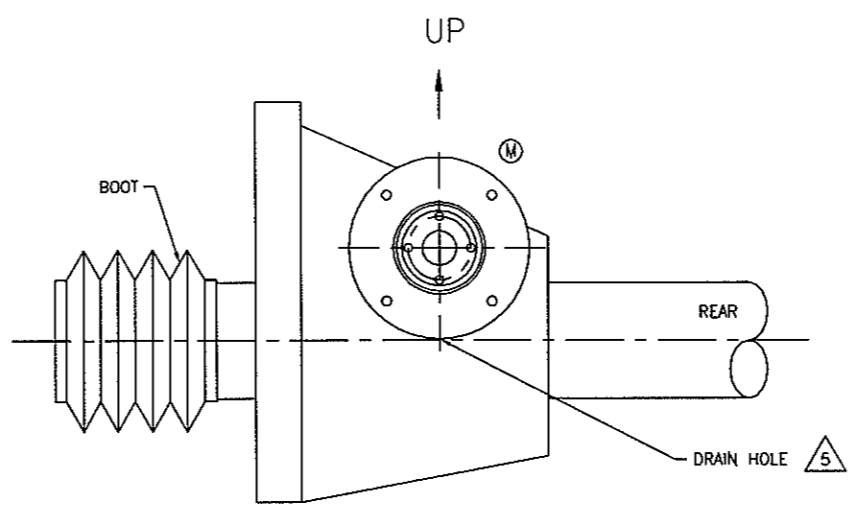
13.1 AZ. 50 TON
15.2 AZ. 75 TON
21.0 AZ. 100 TON

NOTE: COVER IS MOUNTED ON TOP RIGHT-HAND SIDE AS VIEWED FROM REAR OF JACK.



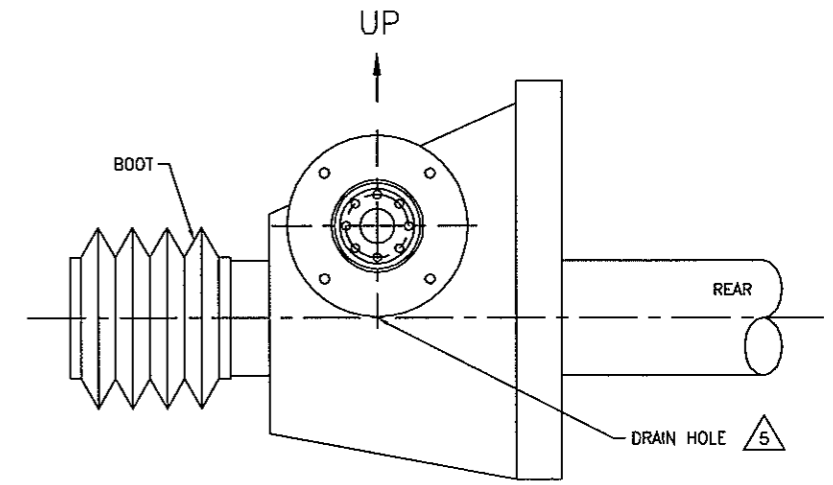
Ⓢ 6.1 AZ. 5 TON (MOBILE)
6.1 AZ. 20 TON

NOTE: COVER IS MOUNTED ON TOP LEFT-HAND SIDE AS VIEWED FROM REAR OF JACK.



Ⓢ 8.1/9.0 AZ. 35 TON (XT HW)

NOTE: COVER IS MOUNTED ON TOP LEFT-HAND SIDE AS VIEWED FROM REAR OF INVERTED JACK.



7.2/8.1 AZ. 25 TON
Ⓢ 8.1/9.0 AZ. 50 TON (XT)
9.0 AZ. 35 TON
11.0 AZ. 50 TON
18.3 AZ. 75 TON

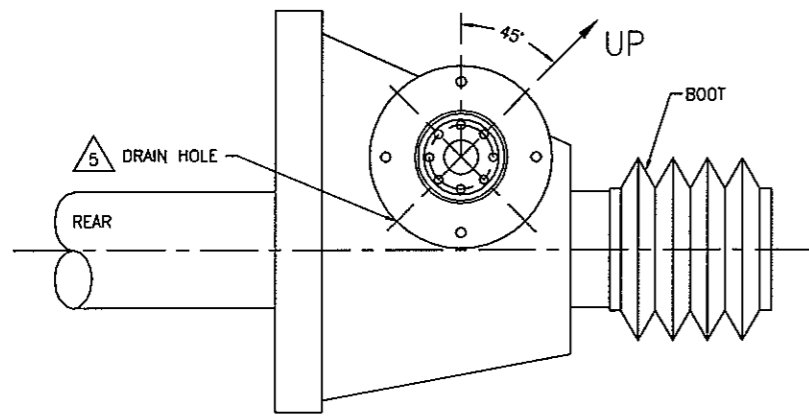
NOTE: COVER IS MOUNTED ON TOP LEFT-HAND SIDE AS VIEWED FROM REAR OF JACK.

SECTION C-C
AZIMUTH JACK - COUPLING COVER ORIENTATION

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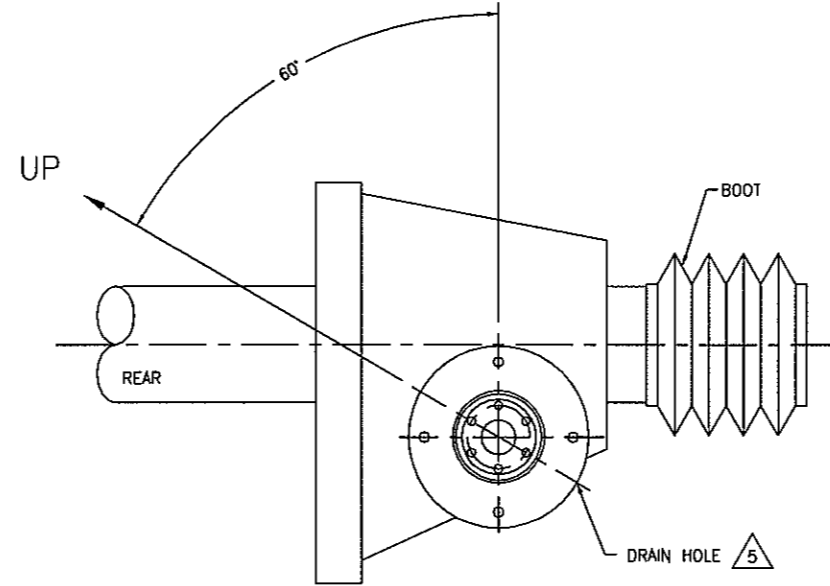
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CODE NO.	SIZE	DRG NO.	REV		
1GD22	D	000133	R		
SCALE: 1/4	CONTRACT NO.		SHEET 4 OF 6		

DFORM12Z



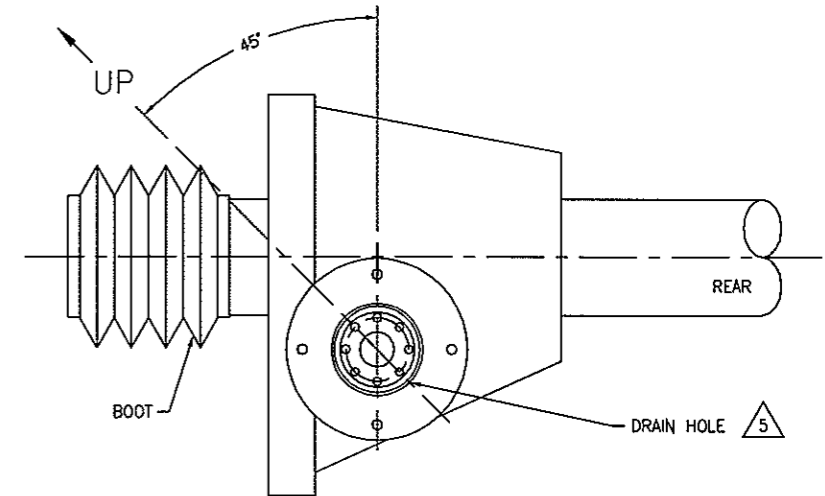
11.0 EL. 35 TON

NOTE: COVER IS MOUNTED ON TOP RIGHT-HAND SIDE AS VIEWED FROM REAR OF JACK.



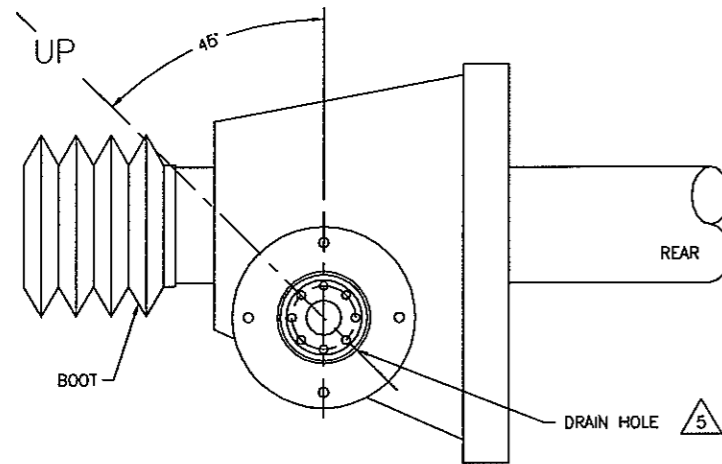
6.1 EL. 10 TON
7.2 EL. 20 TON

NOTE: COVER IS MOUNTED ON BOTTOM RIGHT-HAND SIDE AS VIEWED FROM REAR OF JACK.



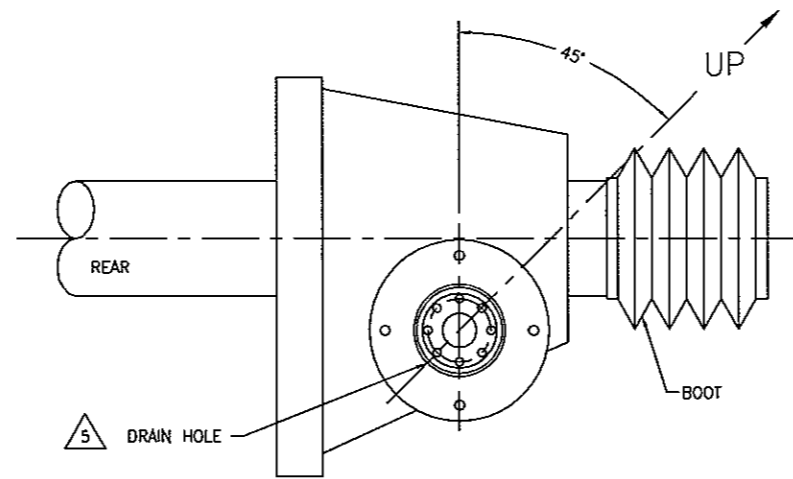
18.3 EL. 100 TON
21.0 EL. 100 TON

NOTE: COVER IS MOUNTED ON BOTTOM LEFT-HAND SIDE AS VIEWED FROM REAR OF JACK.



8.1/9.0 EL. 35 TON (XT) (H)

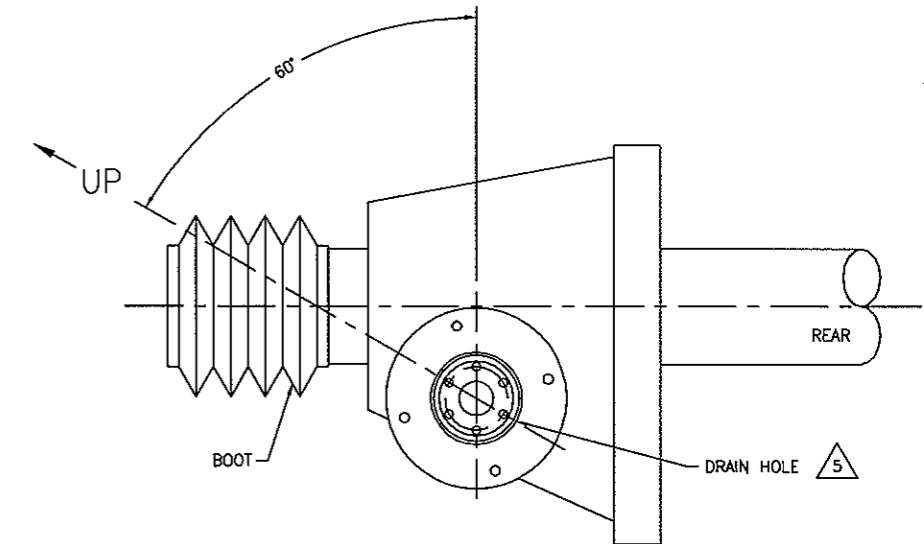
NOTE: COVER IS MOUNTED ON BOTTOM LEFT-HAND SIDE AS VIEWED FROM REAR OF JACK.



13.1 EL. 50 TON
11.1 EL. 35 TON (XT)
13.1 EL. 100 TON

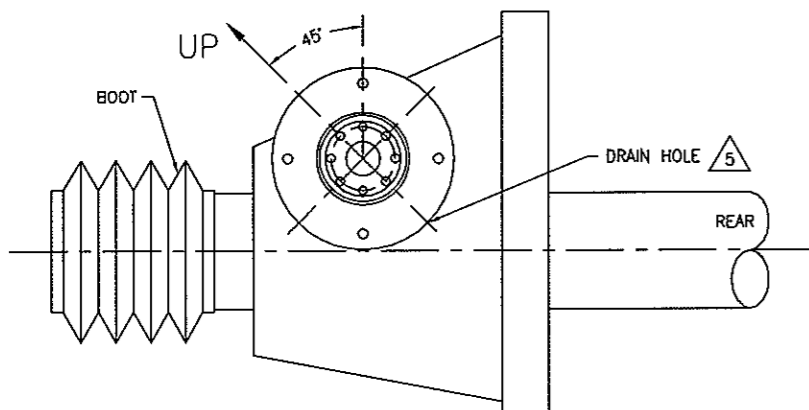
15.2 EL. 100 TON

NOTE: COVER IS MOUNTED ON BOTTOM RIGHT-HAND SIDE AS VIEWED FROM REAR OF JACK.



3.5/4.5 EL. 10 TON
8.1/9.0 EL. 20 TON

NOTE: COVER IS MOUNTED ON BOTTOM LEFT-HAND SIDE AS VIEWED FROM REAR OF JACK.



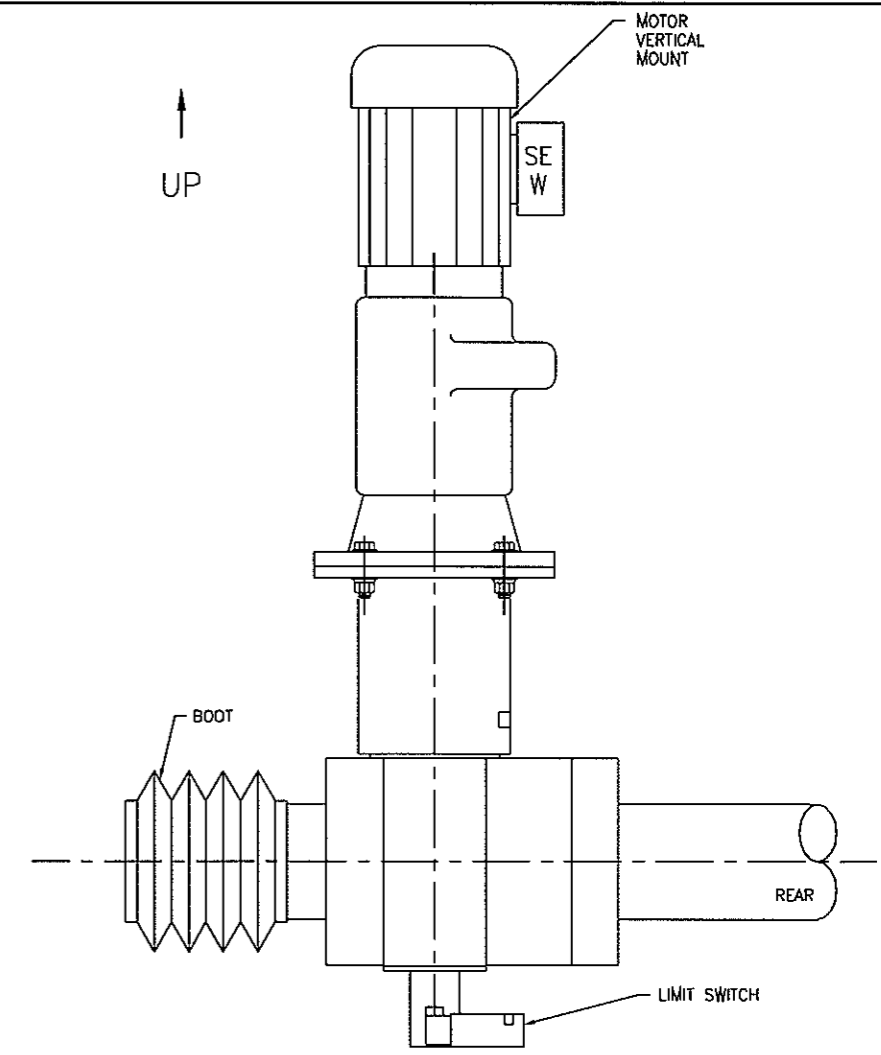
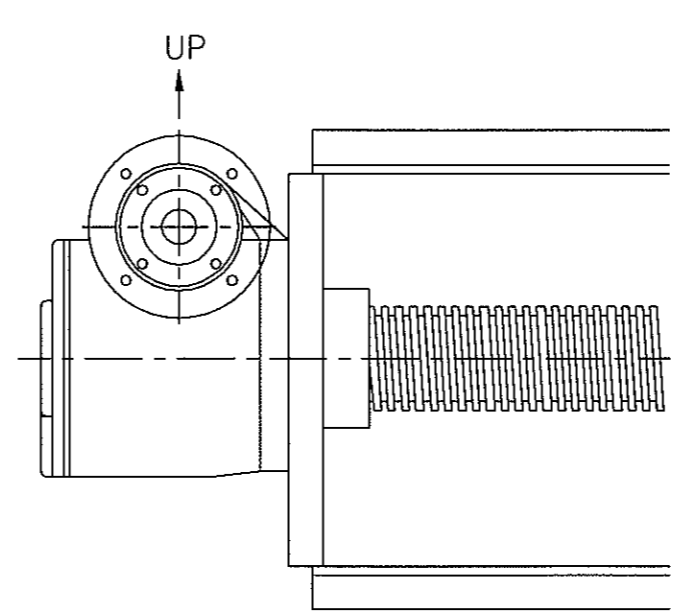
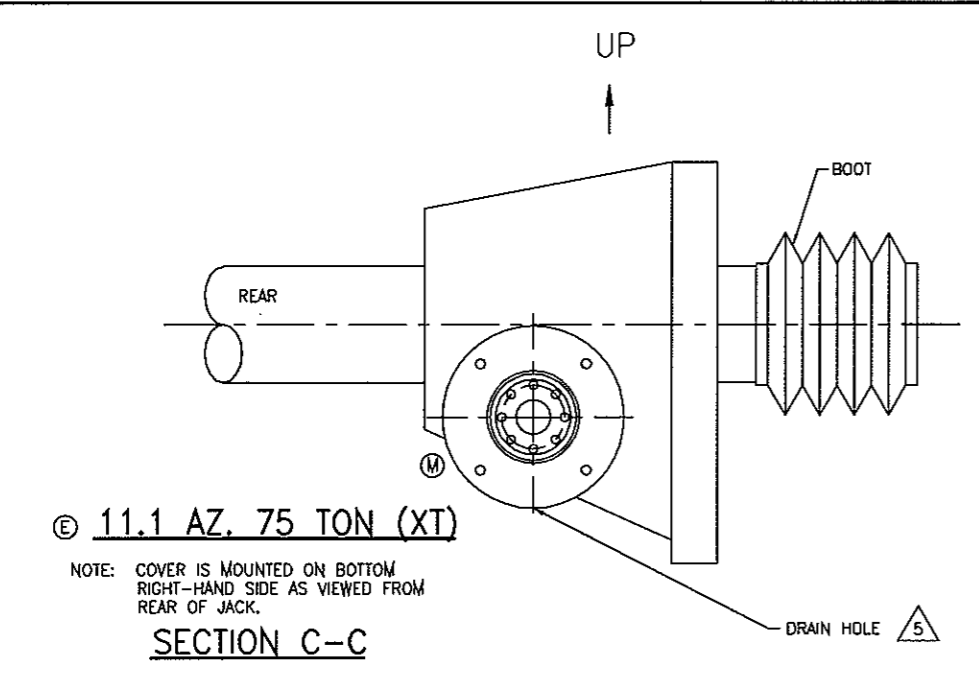
8.1/9.0 EL. 25 TON (XT)

NOTE: COVER IS MOUNTED ON TOP LEFT-HAND SIDE AS VIEWED FROM REAR OF JACK.

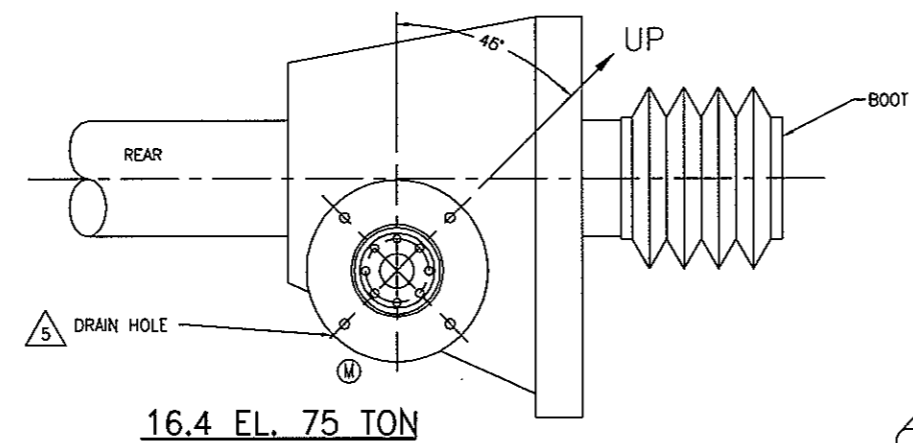
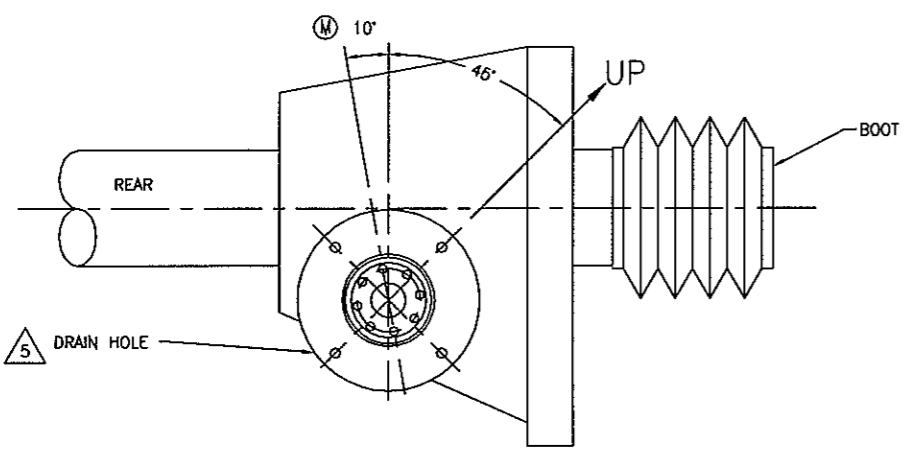
SECTION C-C
ELEVATION JACK - COUPLING COVER ORIENTATION

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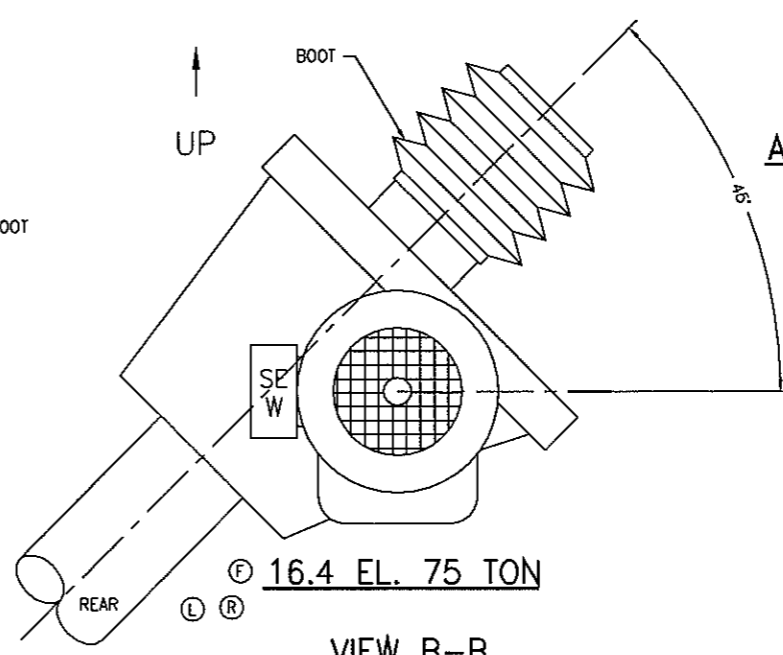
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CODE ID. NO.	SIZE	DRG. NO.	REV.				
1GD22	D	000133	R				
SCALE: 1/4	CONTRACT NO.		SHEET 5 of 6				



AZIMUTH JACK - MOTOR ORIENTATION



ELEVATION JACK - COUPLING COVER ORIENTATION



ELEVATION JACK - MOTOR ORIENTATION

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CODE ID. NO.	SIZE	DWG. NO.	REV				
1G022	D	000133	R				
SCALE: 1/4	CONTRACT NO.		SHEET 6 OF 6				

DFOR14DZ

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:31:13

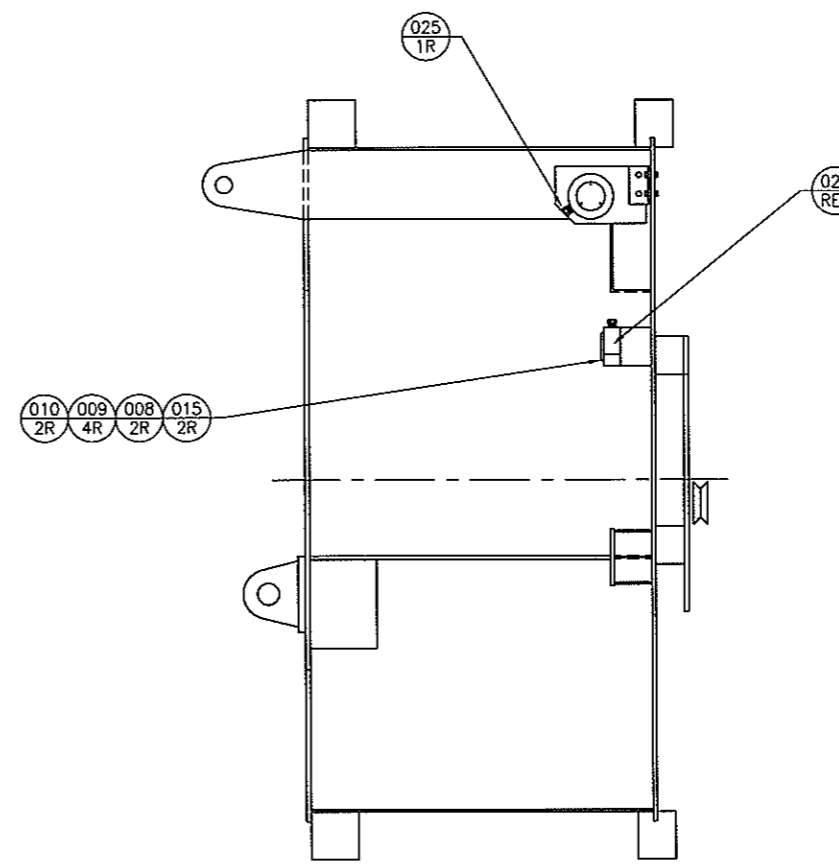
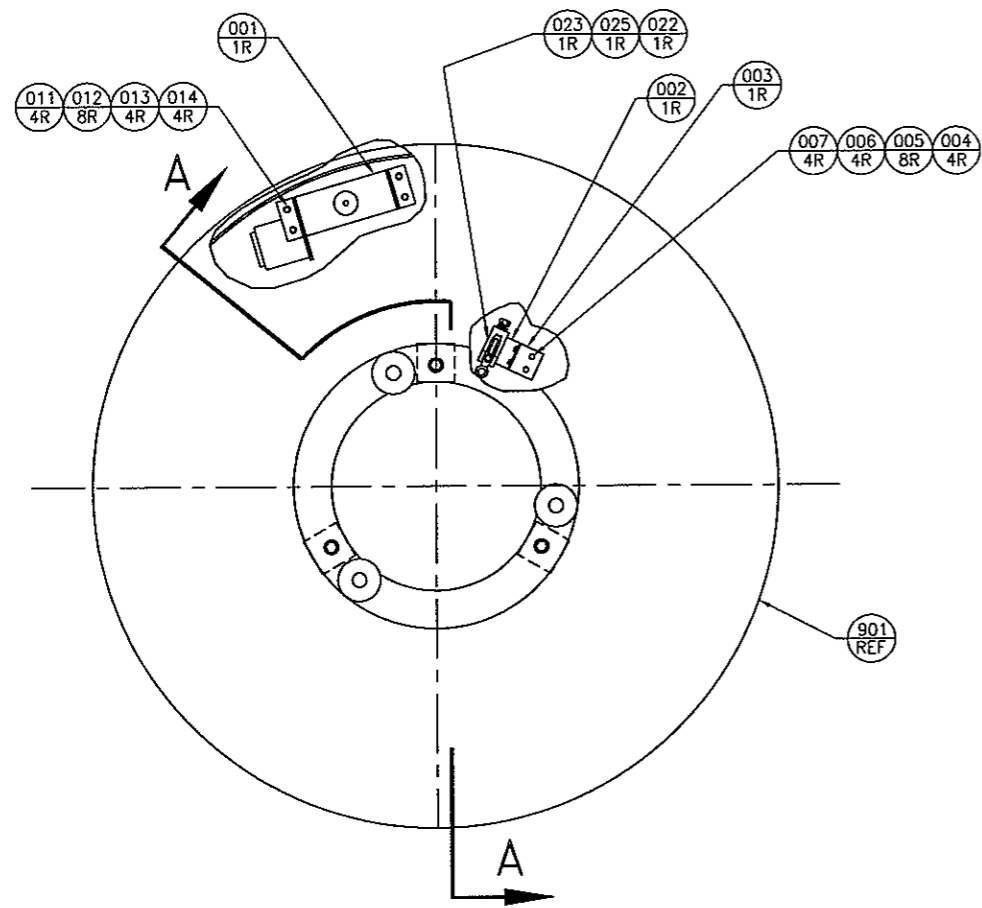
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 SZ11 XDCR 220VAC 1PH 50HZ CLASS: ACSMTR REVISED: 4/13/1994 REV: B
 SUBCLASS: INSTL APPROVED: 4/18/1994
 JOB#: 9418 PENDING: REV
 REVISION: 12/3/93 OLD CAT#: 573529-03(A) SIZE: D DWG CAT: I ID: WPS

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV	
001	R007703	1.00			R	C	M	DRV ASSY MTZ POL 18 6/7/8/9M	ACSKDR	ASSY	D-003619	C	
002	R000777	1.00			R	C	S	ANGLE MTG FPD LIMIT SWITCH	ACSKDR	DETAIL	B-000158	B	
003	R000778	1.00			R	C	S	ANGLE MTG FPD LIMIT SWITCH	ACSKDR	DETAIL	B-000157	A	
004	H14159-39	4.00			EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
005	H40055-39	8.00			EA	R	P	S	FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
006	H30011-39	4.00			EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
007	H20013-39	4.00			EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
008	H55110-39	2.00			EA	R	P	S	SCR MCH PH PHH #10-24UNC X 2 SSF879	MCHSCR	SS		
009	H40036-39	4.00			EA	R	P	S	FW (A) #10 X 1/2 SS18-8	FW	SS	NONE	00
010	H30007-39	2.00			EA	R	P	S	LW HELICAL #10 SS18-8	LW	SS	NONE	00
011	H04309-29	4.00			EA	R	P	S	BOLT HH 1/2-13UNC X 1 1/2 A325 HDG	HHBOLT	HDG		
012	H40066-29	8.00			EA	R	P	S	FW (AN) 1/2 X 1 1/16 F436 HDG	FW	HDG		
013	H21015-29	4.00			EA	R	P	S	NUT HH 1/2-13UNC A563-DH HDG	HHNUT	HDG		
014	H30013-29	4.00			EA	R	P	S	LW HELICAL 1/2 HDG	LW	HDG		
015	H20009-39	2.00			EA	R	P	S	NUT HEX #10-24UNC SSF594	HEXNUT	SS	NONE	00
022	P92310-1	1.00			EA	R	P	S	LEVER ARM W/SS HDW	LMTSW		NONE	00
023	E01290-1	1.00			EA	R	P	S	SWITCH LIMIT W/SS SHFT-40FT F	LMTSW		NONE	00
025	P70080-1	2.00			EA	R	P	S	CORD GRIP 1/2NPT CG-1850	CONN		NONE	00

END OF BOM:R007773

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE PER DDP 965.	2/07/94	JCH/LEB
B	ADDED R009993 & R009994; DDP1208	3/31/94	JCH/LEB



SECTION A-A

R007773
R007774
R009993 (B)
R009994 (B)

DO NOT SCALE DRAWING	REFERENCE SEPARATE BOM FOR SPECIFIC INFO				VertexRSI CONFIDENTIAL AND PROPRIETARY			
<p>UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: DETAILS ± 1/16 .XX ± .03 ASSY'S ± 1/8 .XXX ± .005 ANGLES ± 1°</p> <p>UNLESS OTHERWISE SPECIFIED ! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.</p> <p>TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.</p>	DESIGN	DATE	APPROVALS	DATE	<p>VertexRSI ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA</p> <p>TITLE: MOTORIZED POLARIZ INSTL 120/220 VAC CONFIG MODEL 8.1/9.0 KPC/KPK</p> <p>CODE ID. NO. 1GD22 SIZE D DWG. NO. 004450 REV B</p> <p>SCALE: 10 CONTRACT NO. SHEET 1 OF 1</p>			
	ADDITIONAL APPROVALS	DATE	APPROVALS	DATE				
	MECHANICAL		DRAWN J HUEGEL	02/07/94				
	STRUCTURAL		CHECKED L BOWEN	02/11/94				
	ELECTRICAL		DESIGNER					
		MANUFACTURING R HUGHEY	02/11/94					
		PRODUCT B SACK	02/11/94					
		PRODUCT MGR						

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:31:14

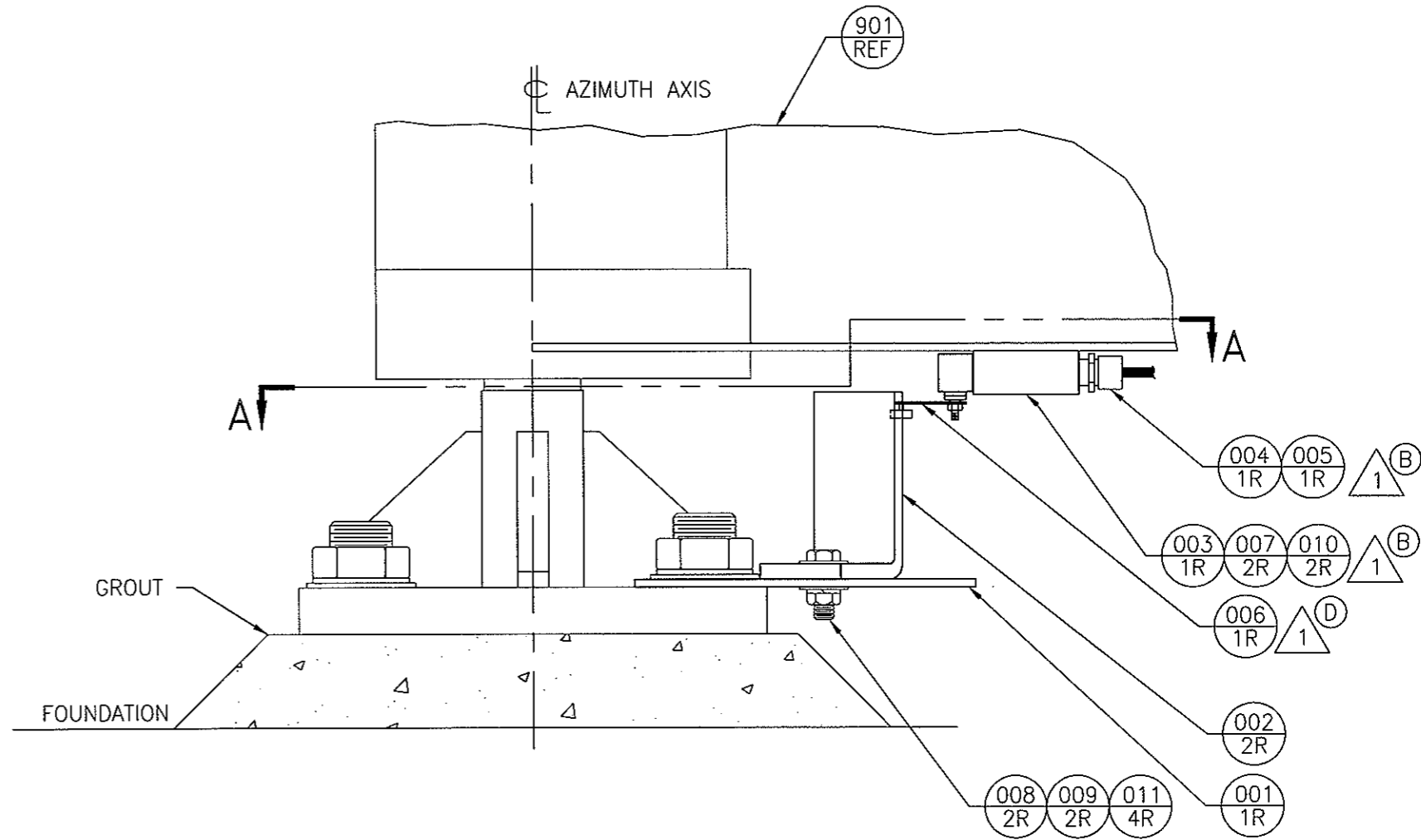
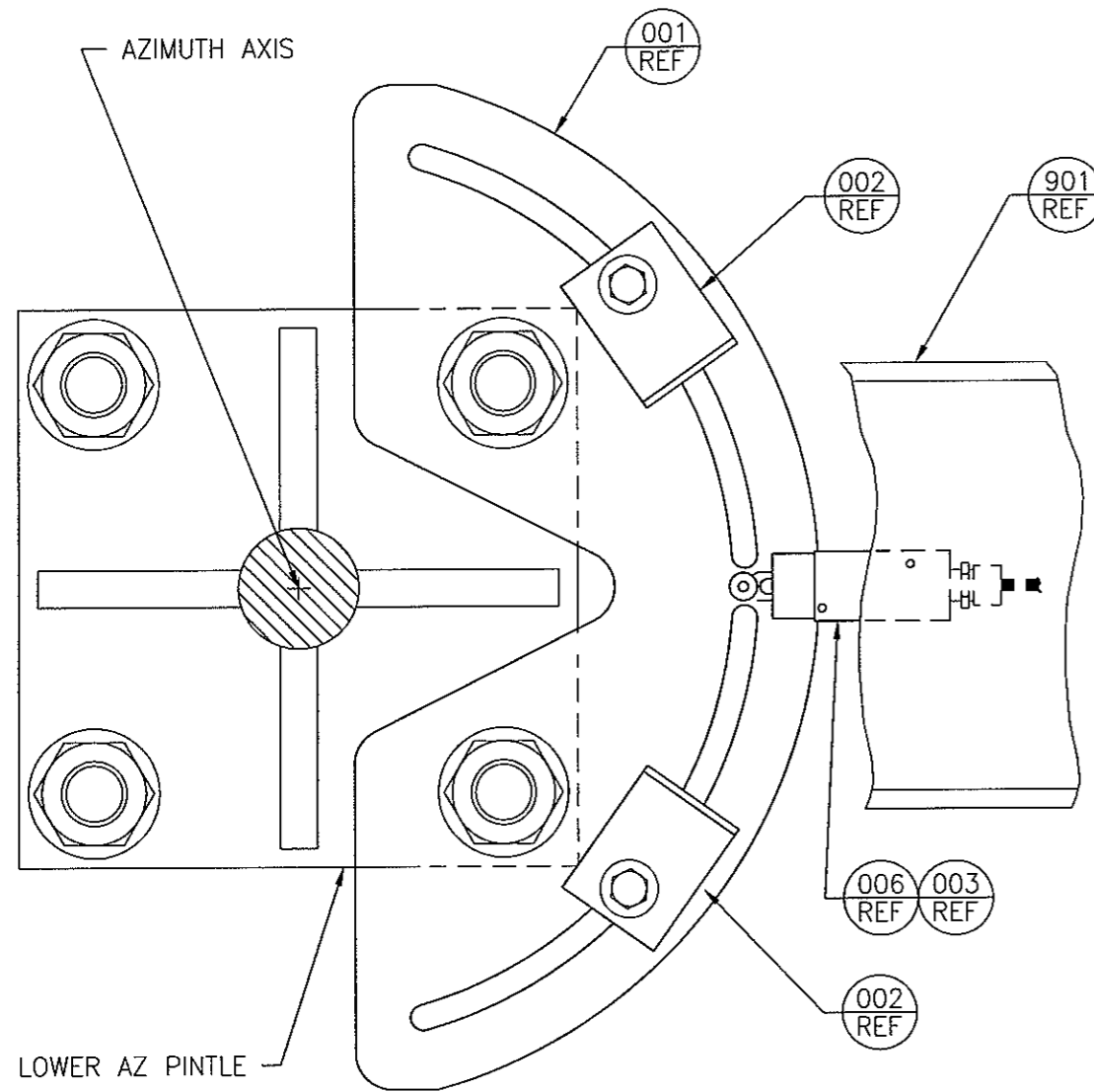
CATALOGUE#: R007439	PSM: M	STATUS: RELEASED	DRAWING: B-004446	REV: D
DESCRIPTION: LIMIT SWITCH INSTL 8/9KP AZ		CATEGORY: ANTENNA	ENTERED: 1/27/1994	
STD TRV ADJ +/- 60		CLASS: ACSLMT	REVISED: 3/30/1995	REV: D
		SUBCLASS: INSTL	APPROVED: 4/03/1995	
		JOB#: 9418	PENDING:	REV
REVISION: G 96-0646 4/8/96 MS/KL		OLD CAT#: 370359-01 A WPS 2/15/94	SIZE: B DWG CAT: I	ID: WPS

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM DESCRIPTION	CLASS	SUBCL	DRAWING	REV
001	R007427-C	1.00			R	C	S PL AZ LIMIT SWITCH STOP 8/9KP	ACSLMT	DETAIL	D-004437	B
002	572106-06	2.00			R	C	S PL	ACSLMT	DETAIL	D-572106	D
008	H04455-29	2.00		EA	R	P	S BOLT HH 5/8-11UNC X 1 1/2 A325 HDG	HHBOLT	HDG		
008S	H04455-29	1.00		EA	R	P	S BOLT HH 5/8-11UNC X 1 1/2 A325 HDG	HHBOLT	HDG		
009	H21017-29	2.00		EA	R	P	S NUT HH 5/8-11UNC A563-DH HDG	HHNUT	HDG		
009S	H21017-29	1.00		EA	R	P	S NUT HH 5/8-11UNC A563-DH HDG	HHNUT	HDG		
011	H40078-29	4.00		EA	R	P	S FW (AN) 5/8 X 1 5/16 F436 HDG	FW	HDG		
011S	H40078-29	1.00		EA	R	P	S FW (AN) 5/8 X 1 5/16 F436 HDG	FW	HDG		
800	R012834	1.00			R	C	M LIMIT SWITCH INSTL FACTORY AZ	ACSLMT		B-004446	D

END OF BOM:R007439

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASE; RPLCS 370359-01(A); PER DDP941	01/28/94	JEL/kl
B	ECR 94-0536/DDP A94-1683; ADDED R012834 AND NOTE 1.	01/18/94	TLR/kl
C	SHOW 002 TO SCALE EC 95-0667	03/03/95	JDH/TRD
D	ECR 95-0732, ADDED NOTE 1 AT ITEM 006	03/20/95	TD/JDH



SECTION A-A

R007439
 (B) 800/1R R012834 (FACTORY INSTL.)

NOTES:
 (B) 1. FOR FACTORY INSTALLATION ONLY - R012834.

DO NOT SCALE DRAWING	REFERENCE SEPARATE BOM FOR SPECIFIC INFO				VertexRSI CONFIDENTIAL AND PROPRIETARY			
UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: DETAILS ± 1/16 .XX ± .03 ASSY'S ± 1/8 .XXX ± .005 ANGLES ± 1° UNLESS OTHERWISE SPECIFIED ! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY. TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.	ADDITIONAL APPROVALS	DATE	APPROVALS	DATE	VertexRSI ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA AZ LIMIT SWITCH INSTL STAND TRAVEL; ADJ +/- 60 MODEL 8.1/9.0 KPC/KPK			
	DESIGN N/R		DRAWN J. LUNDQUIST	1/28/94				
	MECHANICAL N/R		CHECKED L. BOWEN	1/28/94				
	STRUCTURAL N/R		DESIGNER N/R					
ELECTRICAL N/R		MANUFACTURING ROY HUGHEY	1/28/94		CODE ID. NO.	SIZE	DWG NO.	REV
			PROJECT BILL SACK		1GD22	B	004446	D
			PRODUCT MGR N/R		SCALE: 1/5	CONTRACT NO. 2737	SHEET 1 OF 1	

--- # EA
 - EST. WEIGHT -

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:31:16

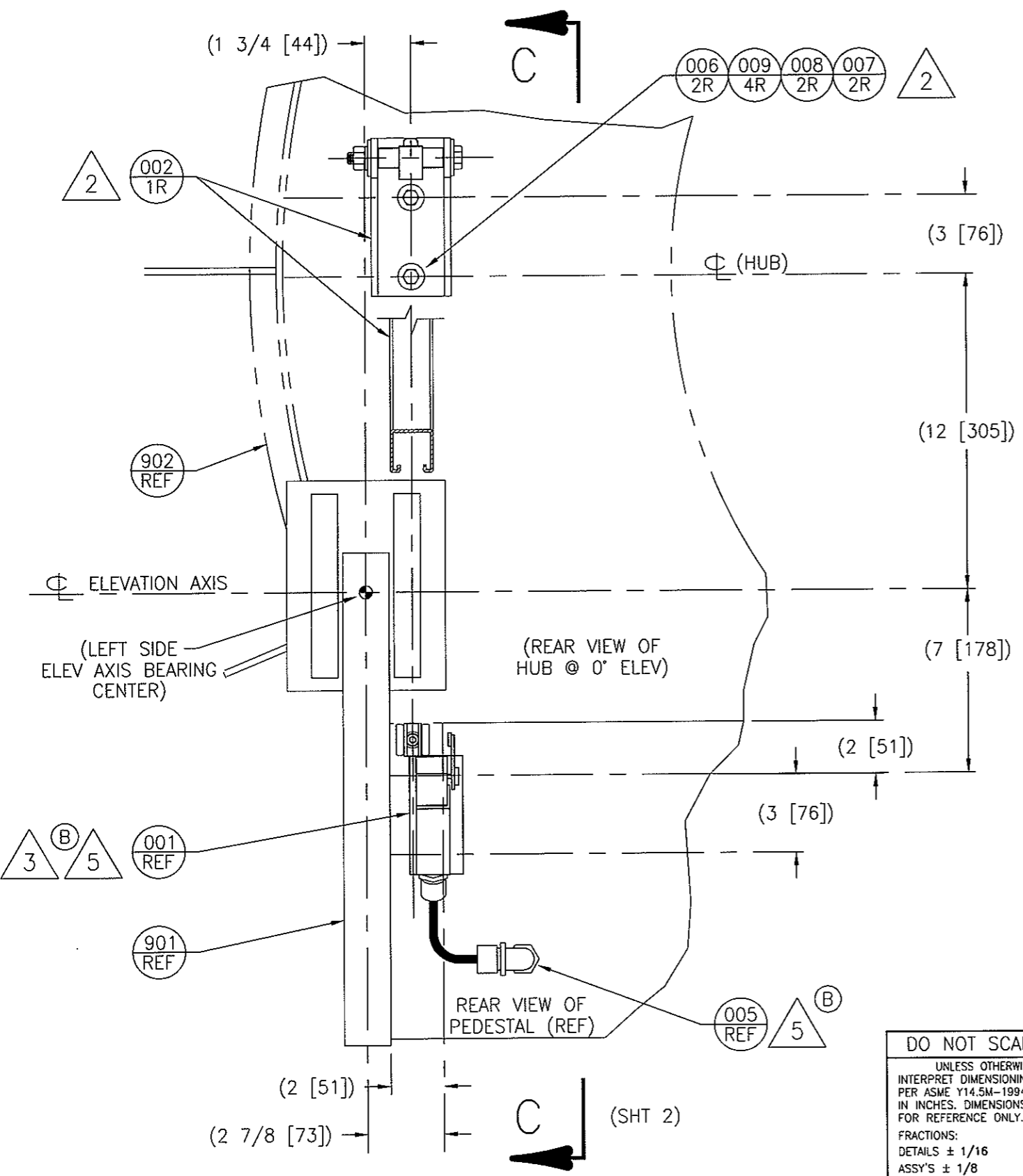
 CATALOGUE#: R007466 PSM: M STATUS: RELEASED DRAWING: B-004448 REV: B
 DESCRIPTION: LIMIT SWITCH INSTL EL 8/9KP CATEGORY: ANTENNA ENTERED: 1/27/1994
 STD TRV ADJ 0-90 CLASS: ACSLMT REVISED: 2/10/1995 REV: B
 SUBCLASS: INSTL APPROVED: 2/13/1995
 JOB#: 2737 PENDING: REV
 REVISION: C 950989 5/16/95 MSS/JRK OLD CAT#: 370359-03 (A) WPS SIZE: B DWG CAT: I ID: WPS

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
002	R007426	1.00			R	C	S	ARM ASSY SWITCH LIMIT EL	ACSLMT	ASSY	B-000277	E
006	H14158-39	2.00			EA	R	P	SCR CAP HH 3/8-16UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
006S	H14158-39	1.00			EA	R	P	SCR CAP HH 3/8-16UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
007	H20013-39	2.00			EA	R	P	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
007S	H20013-39	1.00			EA	R	P	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
008	H30011-39	2.00			EA	R	P	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
008S	H30011-39	1.00			EA	R	P	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
009	H40055-39	4.00			EA	R	P	FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
009S	H40055-39	1.00			EA	R	P	FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
800	R012832-C	1.00			R	C	M	EL LIMIT SWITCH FACTORY INSTL	ACSLMT		B-004448	B

END OF BOM:R007466

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASE; RPLCS 370359-03(A) PER DDP941	01/28/94	JEL/kl
B	ECR 94-0539/DDP A94-1683; ADDED R012832 AND NOTE 5.	01/18/95	TLR/kl



- NOTES:
- ADJUST AS REQUIRED TO TRIP LEVER ARM. STOPS MUST BE SET TO TRIP SWITCH WITHIN MECHANICAL TRAVEL.
 - INSTALL ITEM 002 ARM ASSEMBLY USING 3/8 HARDWARE AND PRE-DRILLED HOLES IN ITEM 902 HUB.
 - INSTALL ITEM 001 ROLLER ASSEMBLY USING 3/8 HARDWARE AND PRE-TAPPED HOLES IN ITEMS 901 PEDESTAL.
 - DIMENSIONS IN [] ARE METRIC (MILLIMETERS).
 - FOR FACTORY INSTALLATION ONLY- R012832.

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE:
 FRACTIONS: DETAILS ± 1/16 ASSY'S ± 1/8
 DECIMALS: .XX ± .03 .XXX ± .005
 ANGLES ± 1°

UNLESS OTHERWISE SPECIFIED ! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.

TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.

ADDITIONAL APPROVALS		DATE	APPROVALS	DATE
DESIGN			DRAWN	
N/R			J. LUNDQUIST	01/28/94
MECHANICAL			CHECKED	
N/R			L. BOWEN	01/30/94
STRUCTURAL			DESIGNER	
N/R			N/R	
ELECTRICAL			MANUFACTURING	
N/R			R. HUGHEY	01/30/94
			PROJECT	
			B. SACK	01/30/94
			PRODUCT MGR	
			N/R	

VertexRSI CONFIDENTIAL AND PROPRIETARY

VertexRSI ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

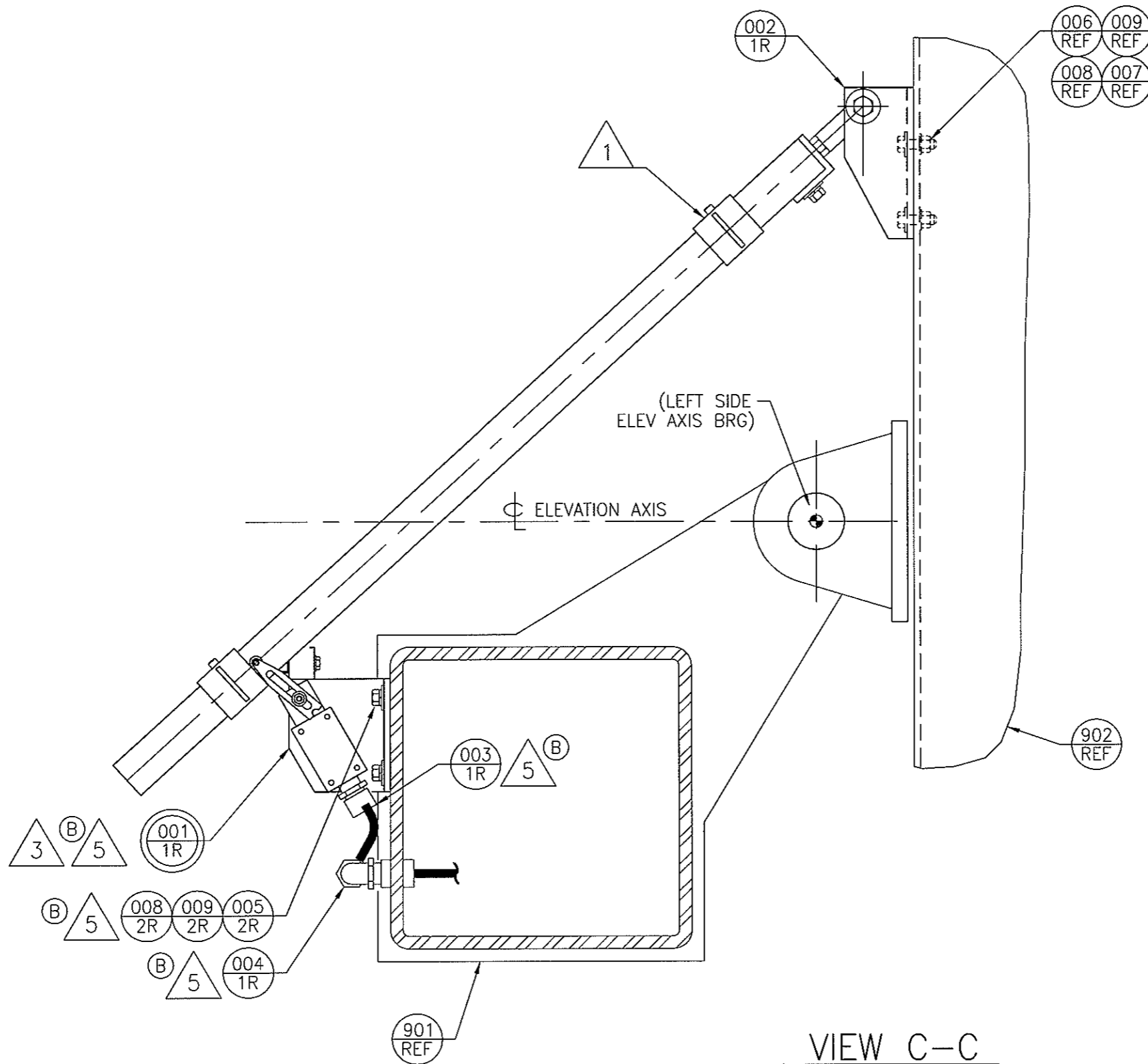
TITLE:
**EL LIMIT SWITCH INSTL
STD TRAVEL ADJ 0-90 DEG
MODEL 8.1/9.0 KPC/KPK**

CODE ID. NO.	SIZE	DWG. NO.	REV
1GD22	B	004448	B

SCALE: 1/5 CONTRACT NO. 2737 SHEET 1 OF 2

R007466

(B) 800 1R R012832 (FACTORY INSTL.) # EA
- EST. WEIGHT -



VIEW C-C

VertexRSI CONFIDENTIAL AND PROPRIETARY

VertexRSI ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

CODE ID. NO.	SIZE	DWG NO.	REV
1GD22	B	004448	B
SCALE: 1/5	CONTRACT NO. 2737	SHEET 2 OF 2	

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

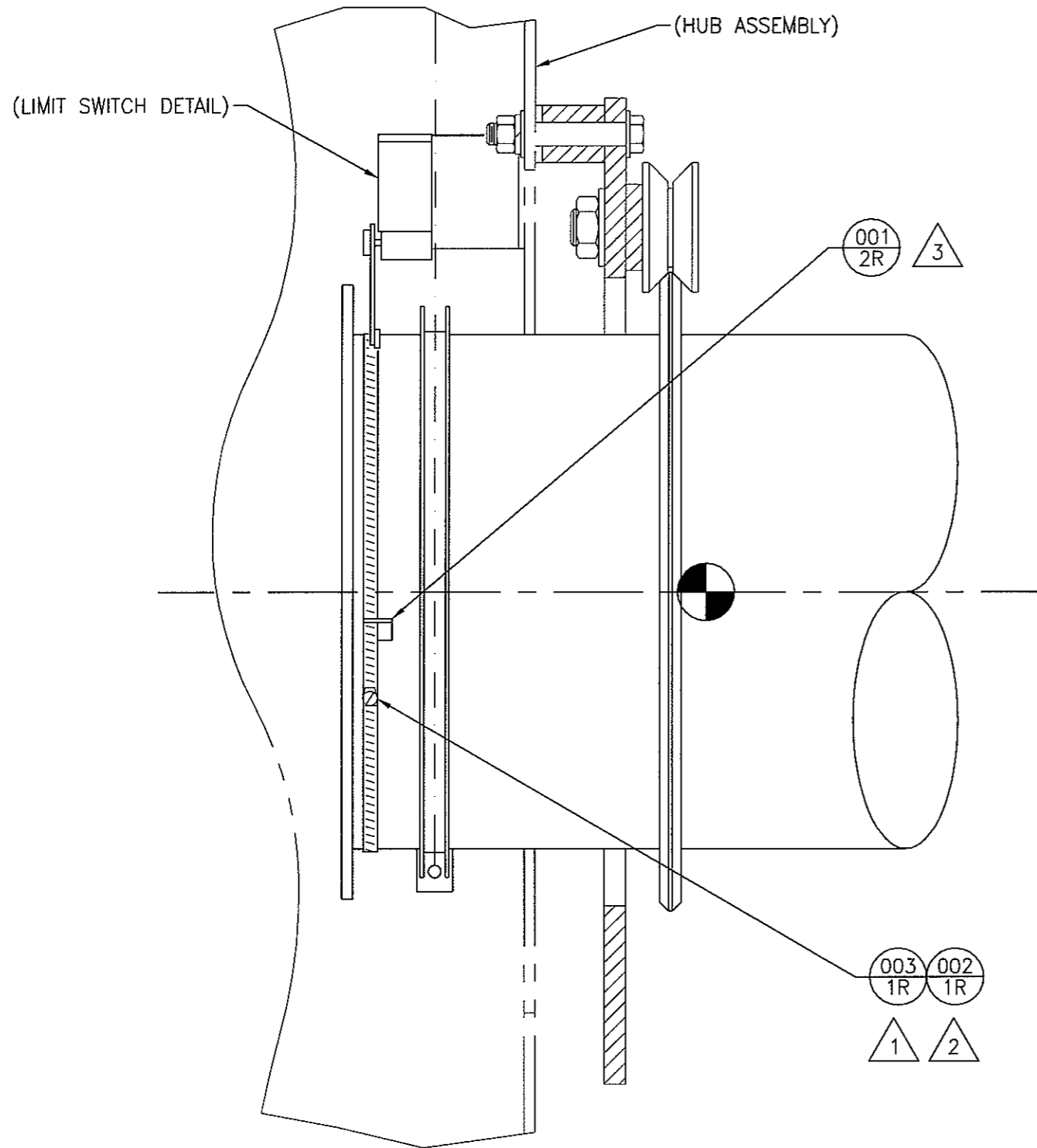
PRINT DATE 3/24/08 TIME 9:31:19

CATALOGUE#: R000658	PSM: M	STATUS: RELEASED	DRAWING: B-000283	REV: A
DESCRIPTION: STOP INSTL LIMIT SWITCH POL IEA		CATEGORY: ANTENNA	ENTERED: 9/21/1992	
		CLASS: ACSLMT	REVISED: 0/00/0000	REV: A
		SUBCLASS: INSTL	APPROVED: 7/27/1993	
		JOB#: 9318	PENDING:	REV
REVISION: A 06/21/93 JBJ		OLD CAT#: 370560-01	SIZE: B DWG CAT: I	ID: JBJ

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
001	R000659	2.00			R	C	S	L LIMIT SWITCH STOP 2 1/2	ACSLMT	DETAIL	B-000284	C
002	P19710-1	1.00			EA	R	P	BUCKEL WORM DRV SS	CLAMP			
003	P19700-1	6.00			FT	R	P	BND WORM DRV 0.5 SS	CLAMP			

END OF BOM:R000658



R000658

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASELINE; REPLACES 370560(A)	6/23/93	JCH/

NOTES:

- 1. CLAMP BAND IN-LINE WITH LIMIT SWITCH LEVER ARM AND ITEM 001 ANGLE TO ACHIEVE DESIRED TRAVEL. TIGHTEN ITEM 002 BUCKLE TO LOCK IN POSITION.
- 2. CUT EXCESS BAND FOR NEAT APPEARANCE.
- 3. ADJUST POSITION OF ITEM 001 STOPS TO TRIP POL LIMIT SWITCH TRAVEL AT ±90°.

--- # EA
- EST. WEIGHT -

DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO		VertexRSI CONFIDENTIAL AND PROPRIETARY	
UNLESS OTHERWISE SPECIFIED, INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: DETAILS ± 1/16 .xx ± .03 ± 1° ASSY'S ± 1/8 .xxx ± .005		ADDITIONAL APPROVALS	DATE	APPROVALS	DATE
DRILL HOLE TOLERANCE (DRILL) .013 thru .125 = +.005/- .001 .126 thru .250 = +.007/- .003 .251 thru .750 = +.008/- .003 .751 thru 1.000 = +.009/- .004 1.001 thru 2.000 = +.012/- .005		MECHANICAL N/R		DRAWN J. HUEGEL	06/23/93
CLEARANCE HOLE TOLERANCE (CHT) +.03125/- .00000		STRUCTURAL N/R		CHECKED K. LINDSEY	07/22/93
		ELECTRICAL N/R		DESIGNER D. BEAKLEY	10/21/93
		EXPORT CONTROL WARNING - Do not disclose this document or its contents to non-U.S. citizens, or transmit this document or its contents outside the United States without the written permission of Vertex Communications Corporation and required U.S. Government approvals.		MANUFACTURING D. DAVIS	
		UNLESS OTHERWISE SPECIFIED, PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.		PROJECT 07/22/93	
				PRODUCT MGR	
				DESIGN N/R	
		CODE ID. NO.	SIZE	DRG NO.	REV
		1GD22	B	000283	A
		SCALE:	CONTRACT NO.	SHEET	OF
		1/5		1	1

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:31:21

CATALOGUE#: 013754-01P PSM: M STATUS: RELEASED DRAWING: D-013754 REV: D

DESCRIPTION: POSN XDCR 8/9KP AZ 11 CPLG CATEGORY: ANTENNA ENTERED: 1/24/1997
 2 LEG 125MPH W/VERN OPTION PTD CLASS: ACSXDR REVISED: 6/19/1998 REV: D
 SUBCLASS: INSTL APPROVED: 7/13/1998
 JOB#: PENDING: REV
 REVISION: C 981050 6/18/98 KBN/JDH OLD CAT#: NEW 2/17/97 CRW/CLS SIZE: D DWG CAT: I ID: CLS

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV	
007	011887-02GP	1.00			R	C	S	XDCR BASE PL WLDMNT 3 LEG 8/9KX	ACSXDR	WLDMNT	D-011887	D	
008	011887-03GP	1.00			R	C	S	XDCR STAND PIPE WLDMNT AZ	ACSXDR	WLDMNT	D-011887	D	
017	013840-01P	1.00			R	C	S	POSN XDCR FIXED PIN ADJ ASSY	ACSXDR	ASSY	D-013840	B	
026	H20015-119	12.00			EA	R	P	S	NUT HH 1/2-13UNC A563-DH CAD PL SS	HHNUT	CAD		
026S	H20015-119	2.00			EA	R	P	S	NUT HH 1/2-13UNC A563-DH CAD PL SS	HHNUT	CAD		
029	P20060-1	1.00			EA	R	P	S	CPLG 1/8 X 1/4	CPLG	A-033709	A	
038	R010975-P	1.00			R	C	S	PL XDCR PTD 8/9M	ACSXDR	DETAIL	D-006557	F	
039	H14008-39	3.00			EA	R	P	S	SCR CAP HH 1/4-20UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
039S	H14008-39	1.00			EA	R	P	S	SCR CAP HH 1/4-20UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
040	H20011-39	3.00			EA	R	P	S	NUT HEX 1/4-20UNC SSF594	HEXNUT	SS	NONE	00
040S	H20011-39	1.00			EA	R	P	S	NUT HEX 1/4-20UNC SSF594	HEXNUT	SS	NONE	00
041	H40045-39	9.00			EA	R	P	S	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
041S	H40045-39	1.00			EA	R	P	S	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
042	H30009-39	3.00			EA	R	P	S	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00
042S	H30009-39	1.00			EA	R	P	S	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00
043	P99170-19	3.00			EA	R	P	S	CLEAT RSLVR W/SCR	CLTS		NONE	00
044	P70100-1	1.00			EA	R	P	S	CORD GRIP 1/2NPT CG-3150	CONN		NONE	00
047	P65050-19	2.00			EA	R	P	S	CLAMP HOSE 13/16-1 1/2 SS	CLAMP	SS		
048	V99680-1	1.00			EA	R	P	S	CVR RSLVR		313061	A	
051	011887-01GP	1.00			R	C	S	XDCR RISER PL WLDMNT AZ	ACSXDR	WLDMNT	D-011887	D	
052	H04319-29	3.00			EA	R	P	S	BOLT HH 1/2-13UNC X 4 A325 HDG	HHBOLT	HDG		
053	H21015-29	3.00			EA	R	P	S	NUT HH 1/2-13UNC A563-DH HDG	HHNUT	HDG		
054	H40066-29	18.00			EA	R	P	S	FW (AN) 1/2 X 1 1/16 P436 HDG	FW	HDG		
054S	H40066-29	2.00			EA	R	P	S	FW (AN) 1/2 X 1 1/16 P436 HDG	FW	HDG		
055	H30013-29	9.00			EA	R	P	S	LW HELICAL 1/2 HDG	LW	HDG		
055S	H30013-29	2.00			EA	R	P	S	LW HELICAL 1/2 HDG	LW	HDG		
056	H60109-39	3.00			EA	R	P	S	ALL THD ROD 1/2-13UNC X 6 SS18-8	ATR	SS		

END OF BOM:013754-01P

NOTES:

1. LEVEL THE FIXED PIN TO GRAVITY AND ALIGN THIS PIN AXIS TO WITHIN 0.005" OF THE TRUE ANTENNA AZIMUTH AXIS PER VERTEX ALIGNMENT PROCEDURE 500-0231. **IMPORTANT:** ANTENNA VERTICALITY MUST HAVE BEEN SET PRIOR TO THIS ALIGNMENT.
2. PLACE THE PROVIDED WASHERS BETWEEN THE TWO PLATES TO EASE ADJUSTMENTS AND ALLEVIATE UNEVEN SURFACES.
3. ASSEMBLE ADJUSTMENT CAMS AND ROTATE INTO THE EXACT POSITION SHOWN. IF THE CAMS ARE CLOCKED 180 FROM THIS POSITION THE FIXED PIN BASE WILL NOT BE MOVED LINEARLY.
4. ADJUST THE ALL THREAD BOLTS NEARLY FLUSH WITH THE TOP NUTS. EXPOSURE ABOVE THE NUT MAY CAUSE INTERFERENCE WITH ALIGNMENT GAUGES.
5. EXACT ALIGNMENT OF VERNIER AND RUBBER COUPLING IS NOT CRITICAL TO PROPER PERFORMANCE. POSITION CENTER WITHIN 1/4" RADIAL AND 10 DEGREES PARALLEL.
6. FOR WIRING AND CABLE CONNECTIONS REFER TO CABLE INSTL DRAWING.
7. DISCARD BOLTS WHEN VERNIER ASSY IS USED IN COMBINATION WITH TRANSDUCER ASSY.
8. INSTALL J-BOX BRACKET 009 (17 & 19 ENCODERS ONLY) BEFORE ALIGNING XDUCER BASE PLATE.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	02/06/97	CLS/GPR
B	ECR 97-0646; ITEM 18 WAS 011200-01	03/04/97	DKT/CLS
C	ECR 97-1080; ITEMS 039 WAS H14084-39, 040 WAS H20012-39, 041 WAS H40050-39, 042 WAS H30010-39.	07/03/97	MSS/CLS
D	EC 98-1050; REMOVED ITEMS (43) FOR -04, (17)FOR -02 - -04, (14)P20067, (46)DRE001& (18)010032-01. ADDED (23) & (25)FOR -02 - -04, (38) & (27)FOR -02,& (46)FOR -04. REPLACED (11)P20135-1, (15)013865-01 & (24)P99143-1, & (49)P20070-1.	06/19/98	KBN/JDH

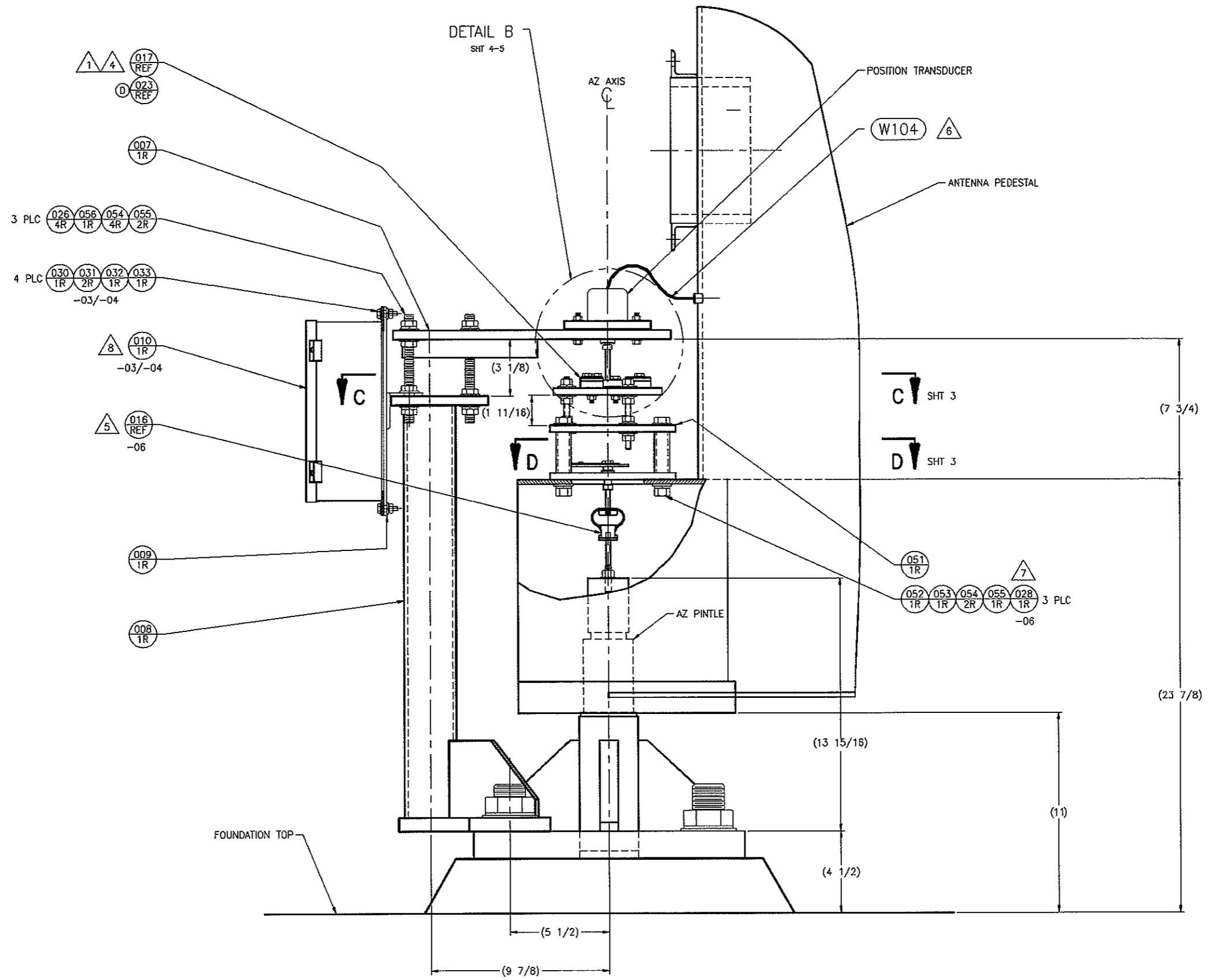
QTY	REV	ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	NOTES
		3	056	H60109-39	ALL THD ROD 1/2-13UNC X 6 SS18-8
3		9	055	H30013-29	HELICAL LW 1/2 A325 HDG
6		18	054	H40066-29	FW (AN) 1/2 X 1 1/16 F436 HDG
3		3	053	H21015-29	HH NUT 1/2-13UNC A325 HDG
		3	052	H04319-29	HH BOLT 1/2-13UNC X 4 A325 HDG
		1	051	011887-01	XDUCR WLDMNT, RISER PLATE
			050	200204-01	RESOLVER ASSEMBLY SIZE 20
			049	P20189-1	CPLG PWR-R-FLEX #PFC-13
			048	V99680-1	COVER RESOLVER
			047	P65050-19	CLAMP HOSE 5/8-1 1/2 SS
		4	046	P99246-19	CLEAT SCREW #4-40UNC SS PIC #L3-9
			045		
			044	P70100-1	CABLE GRIP 1/2 HUB CG-3150
			043	P99170-19	CLEAT RESOLVER W/ SCREW BERG #S0-11
		3	042	H30009-39	HELICAL LW 1/4 SS18-8
		9	041	H40045-39	FW (AN) 1/4 X 11/16 SS18-8
-06	-04	-03	-02	-01	ITEM NO. PART OR IDENTIFYING NO. NOMENCLATURE OR DESCRIPTION NOTES

QTY	REV	ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	NOTES
		3	040	H20011-39	HEX NUT 1/4-18UNC SSF594
		3	039	H14008-39	HH CAP SCR 1/4-18UNC X 1 1/2 SSF593
			038	R010975	TRANSDUCER PLATE
			037		
			036	P99145-1	BORE RDCR 3/16 X 1/4 X 3/8
			035		
			034		
		4	033	H20011-39	HEX NUT 1/4-20UNC SSF594
		4	032	H30009-39	HELICAL LW 1/4 SS18-8
		8	031	H40045-39	FW (AN) 1/4 X 5/8 SS18-8
		4	030	H14006-39	HH CAP SCR 1/4-20UNC X 1 SSF593
			029	P20060-1	CPLG BERG C020-4
3			028	H04309-29	HH BOLT 1/2-13UNC X 1 1/2 A325 HDG
			027	P20505-1	CPLG CLAMP "1/4" 0.312ID, 303SS 7/8OD
		12	026	H20015-119	HH NUT 1/2-13UNC A194 CAD PL SS
		2	025	P20510-1	CLAMP 1/2 CPLG BORE SIZE #1329-3
		1	024	P99142-1	BORE RDCR M10 X 1/2 X 5/8 STD #A
		1	023	013840-02	POS XDUCR FIXED PIN ADJMNT ASSY
			022	H40021-39	FW #6 X 1/4 SS18-8
			021	H56082-39	SH CAP SCR #6-32UNC X 1/2 SSF837
		1	020	P18255-1	ENCODER OPTICAL 17BIT #ROC417 HEIDENHEIM
			019	DRE010	ENCODER ABSOLUTE OPTICAL ROTARY
			018		
			017	013840-01	POS XDUCR FIXED PIN ADJUSTMENT ASSEMBLY
1			016	013839-01	POS XDUCR VERNIER ASSY (AZ/EL CPLG)
			015	013865-02	POS XDUCR ADAPTER DETAIL #19
			014		
		1	013	013842-02	BASE PLATE DETAIL #17
			012	013842-01	BASE PLATE DETAIL #19
		1	011	P20231-1	CPLG PWR-R-FLEX PFC#33, 1/2 X 1/2
		1	010	800499-01	OPTICAL ENCODER JUNCTION BOX ASSY
		1	009	013847-01	XDUCR WLDMNT, ENCODER J-BOX
		1	008	011887-03	XDUCR WLDMNT, (8/9KX) STAND PIPE
		1	007	011887-02	XDUCR WLDMNT, BASE PLATE
			006	013754-06	POSITION VERNIER INSTALLATION
			005		
			004	013754-04	#17 TRANSDUCER INSTALLATION (8/9M KP)
			003	013754-03	#19 TRANSDUCER INSTALLATION (8/9M KP)
			002	013754-02	#20 TRANSDUCER INSTALLATION (8/9M KP)
			001	013754-01	#11 TRANSDUCER INSTALLATION (8/9M KP)
-06	-04	-03	-02	-01	ITEM NO. PART OR IDENTIFYING NO. NOMENCLATURE OR DESCRIPTION NOTES

LIST OF MATERIALS OR PARTS LIST		LIST OF MATERIALS OR PARTS LIST	
DO NOT SCALE DRAWING	UNLESS OTHERWISE SPECIFIED 1 INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DETAILS ± 1/16 ASSY'S ± 1/8 DECIMALS: .XX ± .03 .XXX ± .005 ANGLES ± 1°	REFERENCE SEPARATE BOM FOR SPECIFIC INFO	UNLESS OTHERWISE SPECIFIED 1 PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY. TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.

VertexRSI CONFIDENTIAL AND PROPRIETARY			
		ANTENNA PRODUCTS DIVISION 2800 N. LONGVIEW ST KILGORE, TEXAS 75662 USA	
TITLE: AZ XDUCER INSTL 8/9KP 2 LEG 125MPH W/VERNIER OPTION			
CODE ID. NO.	SIZE	DWG. NO.	REV
1G022	D	013754	D
SCALE: 1/3	CONTRACT NO. 5138	SHEET 1 of 5	

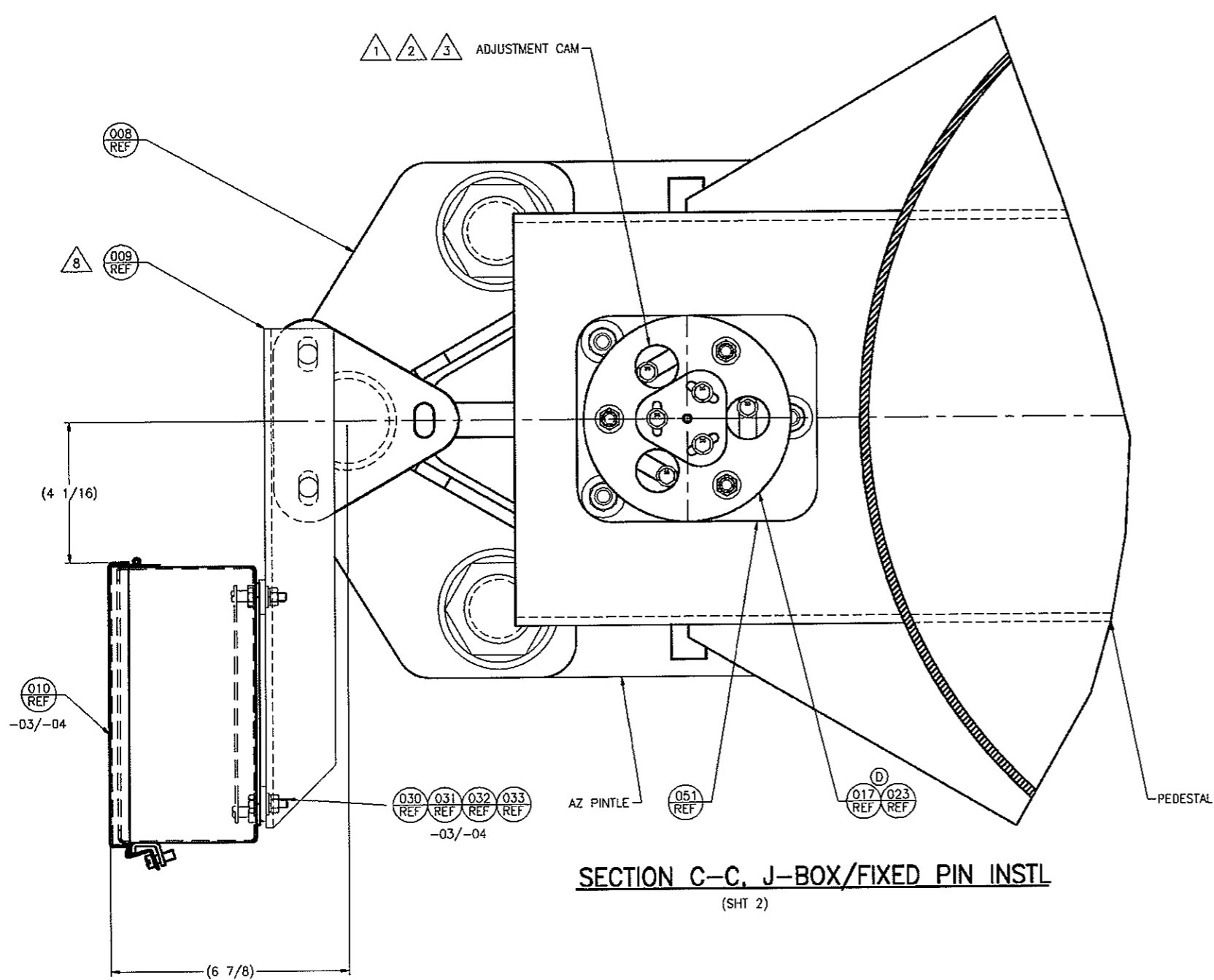
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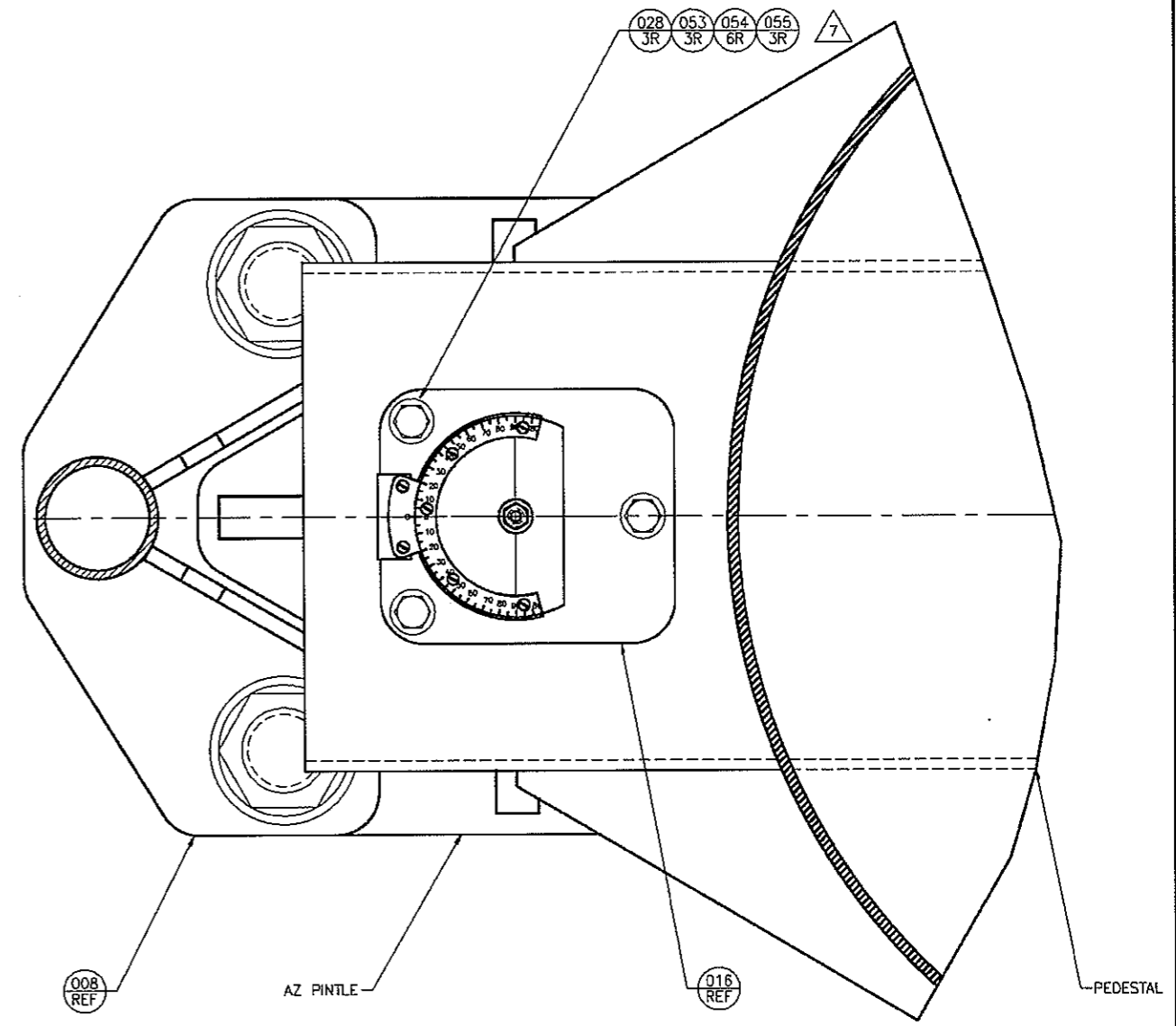
013754-01.-02.-03.-04.-06. XDUCER/VERNIER INSTL.

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ANTEENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA			
CODE ID. NO.	SIZE	DWG. NO.	REV
1GD22	D	013754	D
SCALE: 1/3	CONTRACT NO. 5138	SHEET 2 OF 5	



SECTION C-C, J-BOX/FIXED PIN INSTL
(SHT 2)



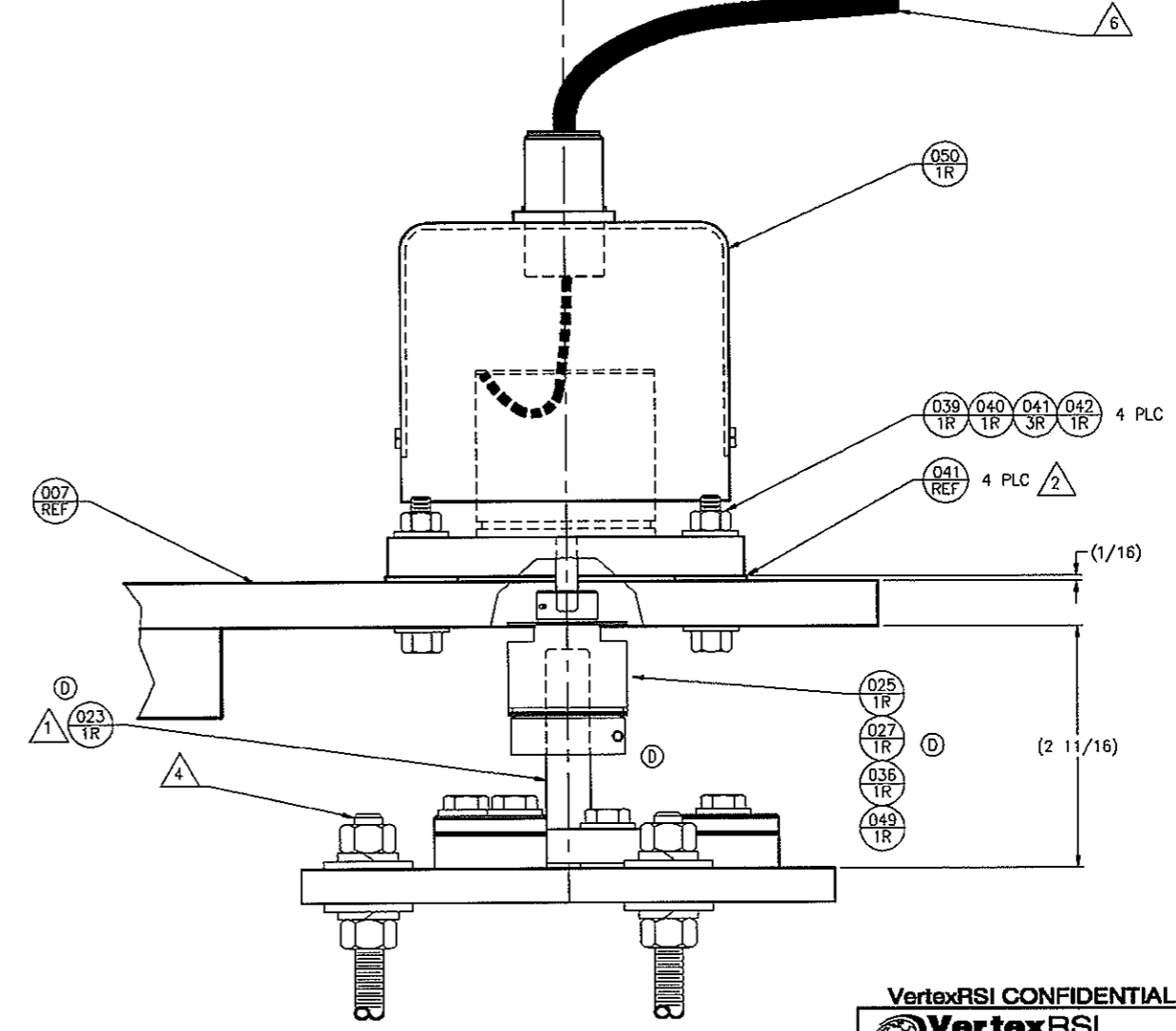
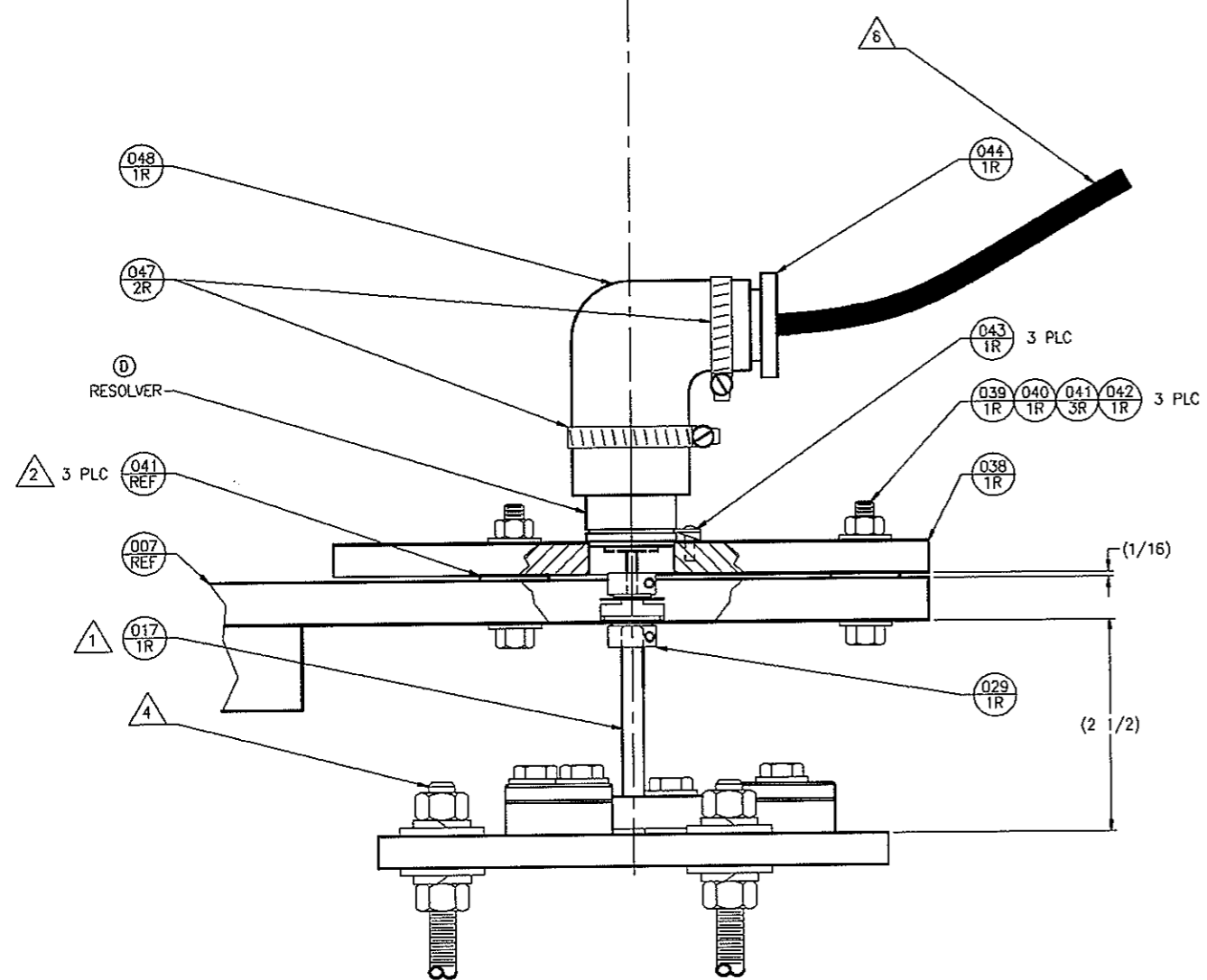
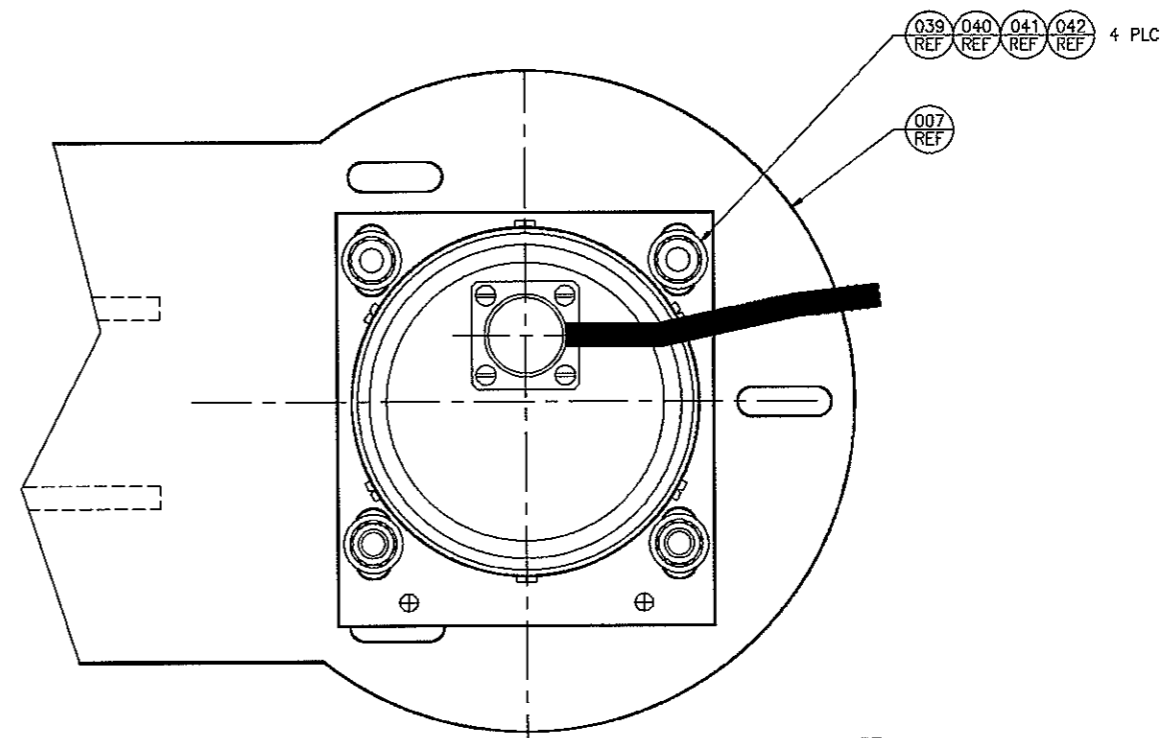
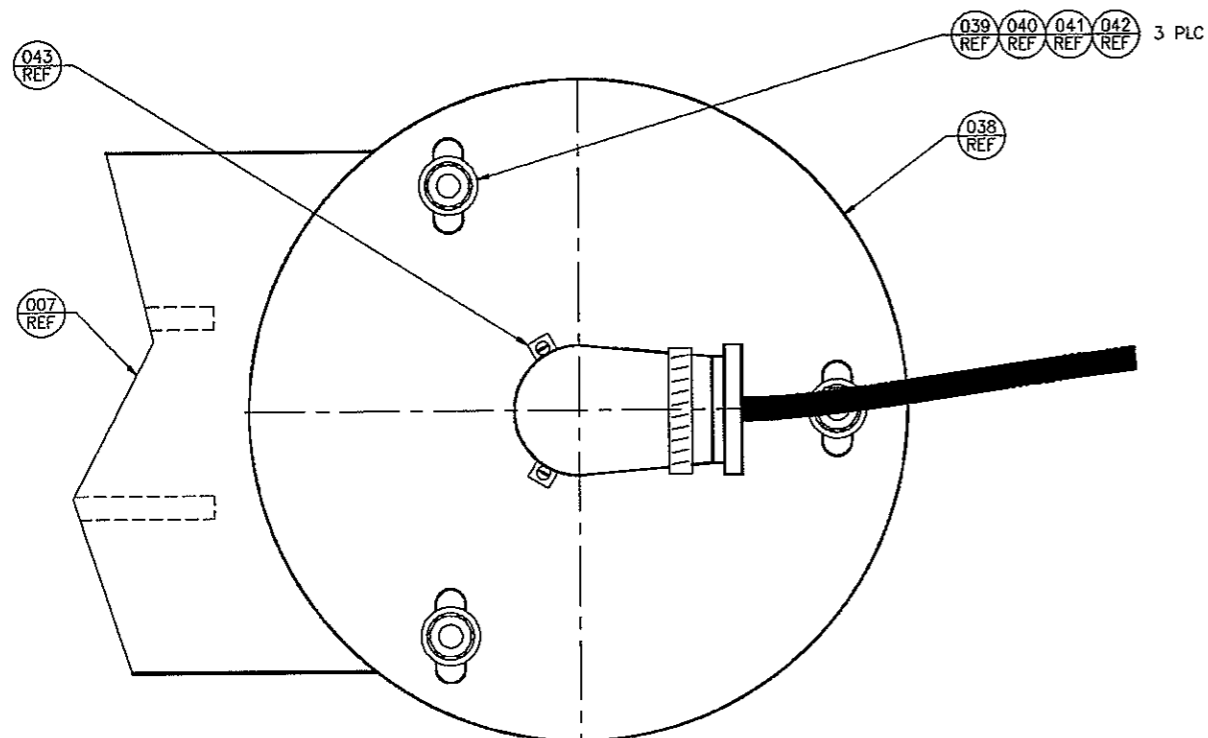
SECTION D-D, 013754-06 VERNIER INSTL
(SHT 2)

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ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

CASE ID. NO.	SIZE	TRAC. NO.	REV
1GD22	D	013754	D
SCALE: 1/2	CONTRACT NO. 5138	SHEET 3 OF 5	

DFORSH102

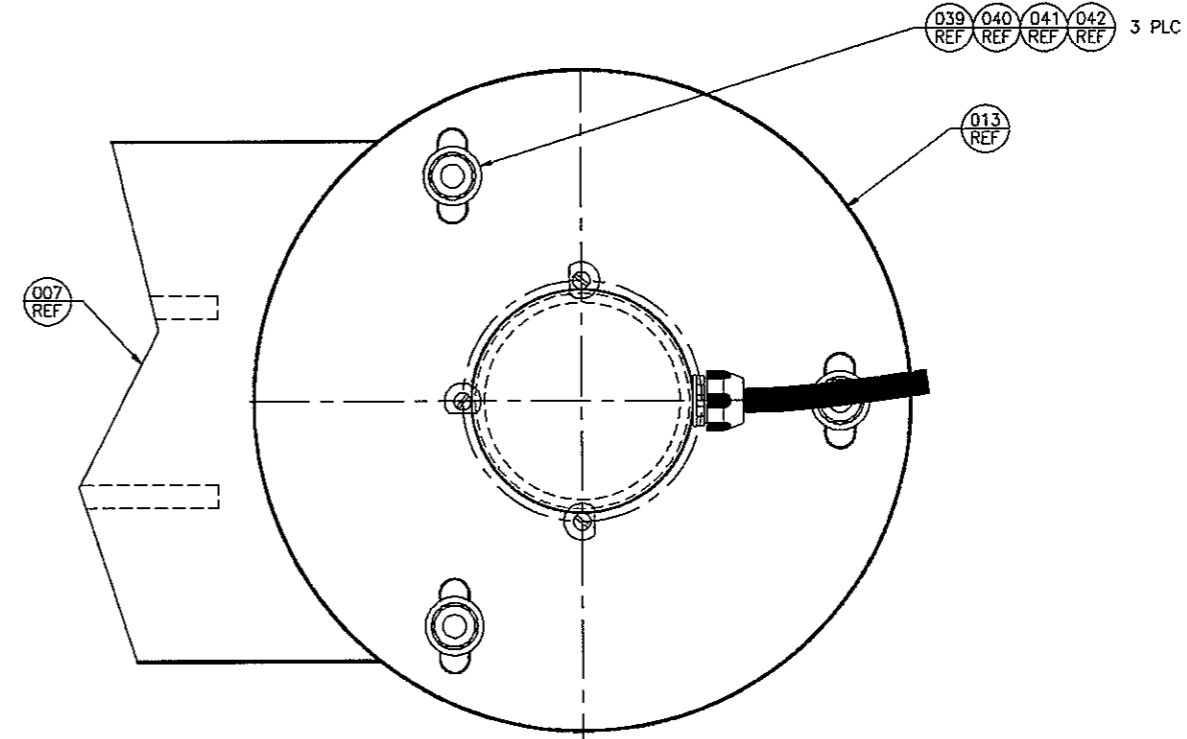
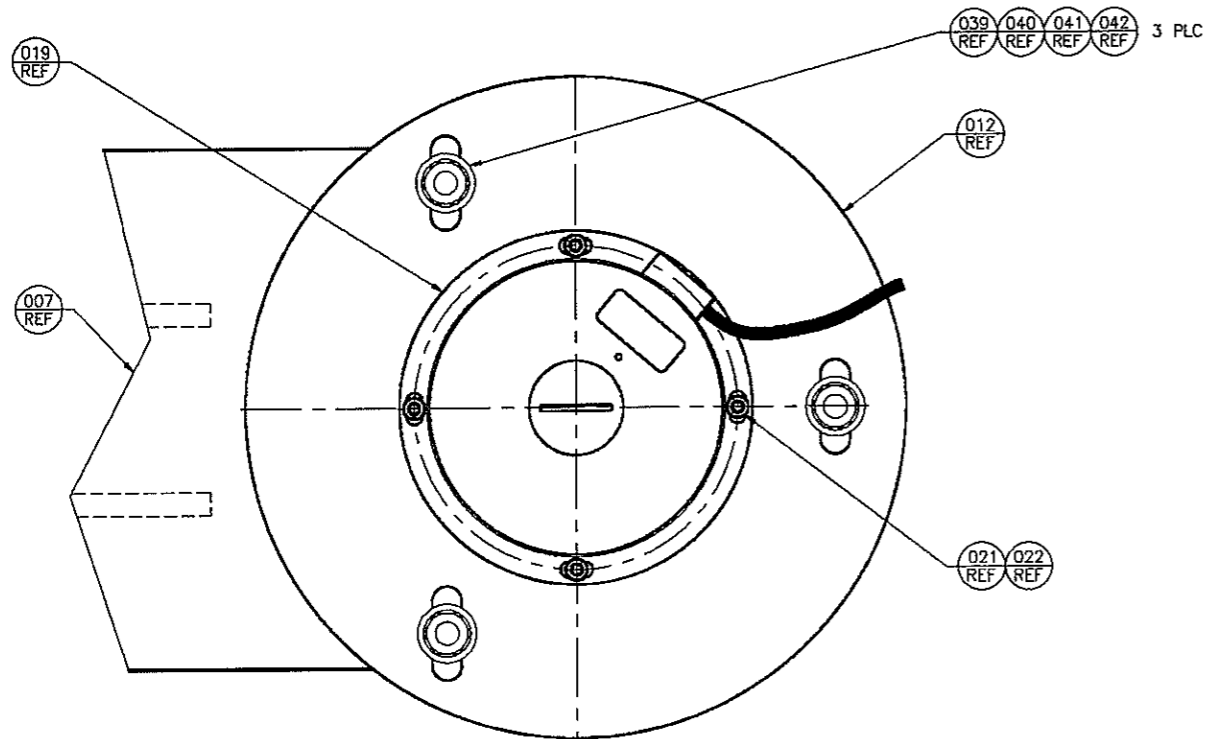


DETAIL B -01. #11 RESOLVER
(FROM SHT 2)

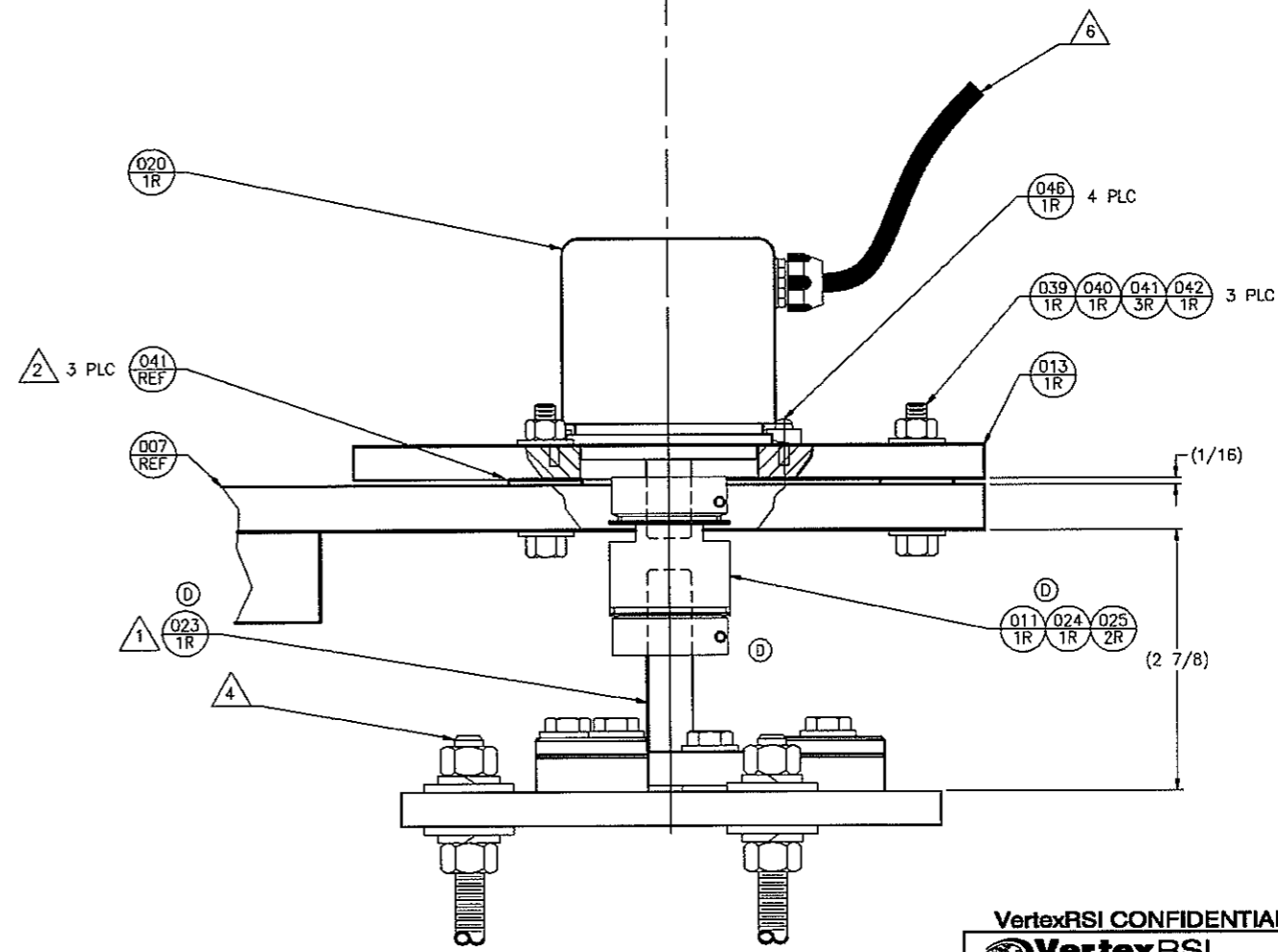
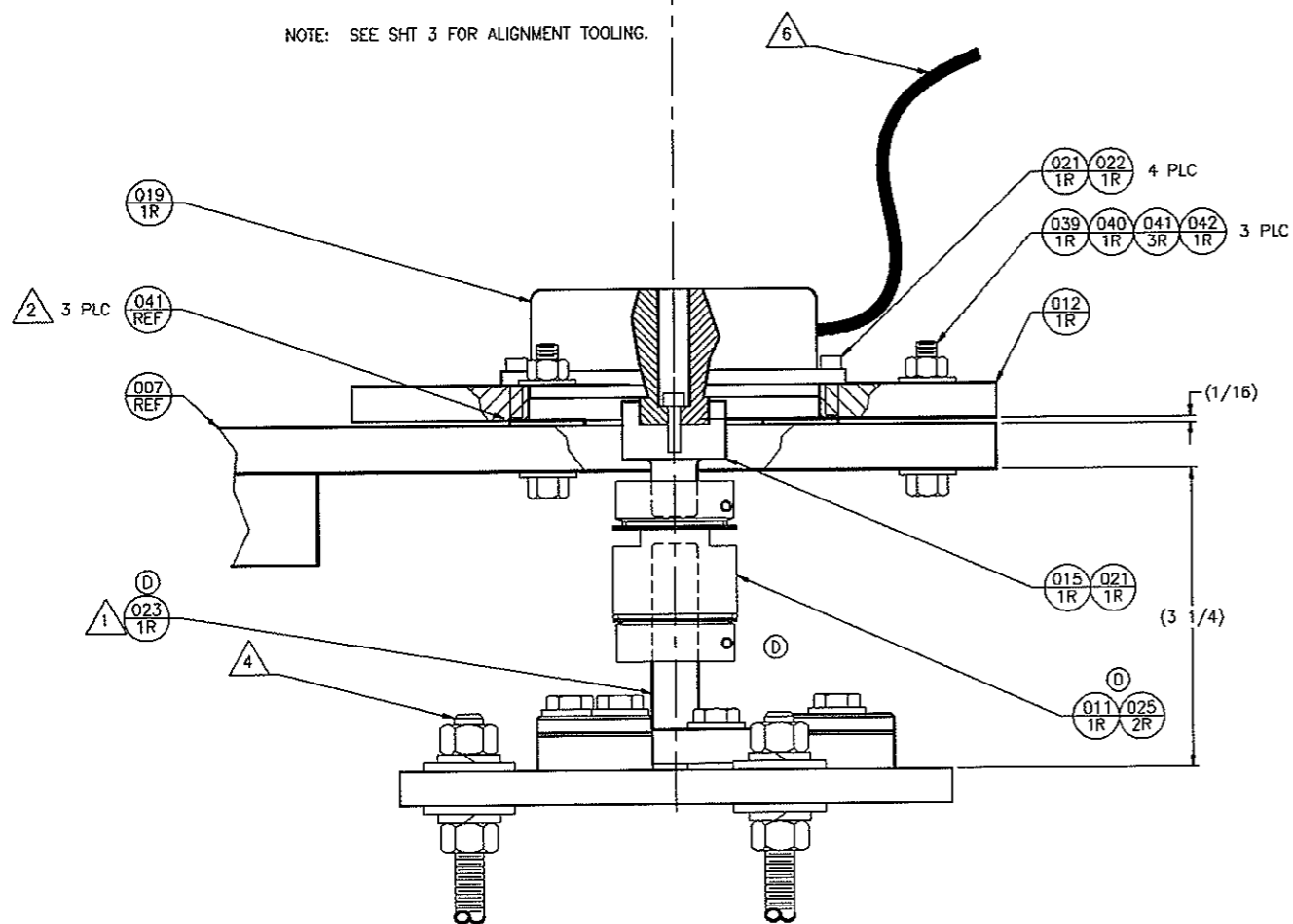
DETAIL B -02. #20 RESOLVER
(FROM SHT 2)

VertexRSI CONFIDENTIAL AND PROPRIETARY			
VertexRSI		ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
CODE ID. NO.	SIZE	DWG. NO.	REV
1G022	D	013754	D
SCALE	CONTRACT NO.	SHEET	OF
1/1	5138	4	5

DFORM102



NOTE: SEE SHIT 3 FOR ALIGNMENT TOOLING.



DETAIL B -03. #19 ENCODER
(FROM SHIT 2)

DETAIL B -04. #17 ENCODER
(FROM SHIT 2)

VertexRSI CONFIDENTIAL AND PROPRIETARY			
		ANTENNA PRODUCTS DIVISION 2800 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
CODE ID. NO.	SIZE	DWG. NO.	REV.
1G022	D	013754	D
SCALE: 1/1	CONTRACT NO. 5138	SHEET 5 OF 5	

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:31:24

CATALOGUE#: 013872-01P PSM: M STATUS: RELEASED DRAWING: D-013872 REV: E

DESCRIPTION: POSN XDCR 8/9KP EL 11 CPLG CATEGORY: ANTENNA ENTERED: 2/03/1997
 2 LEG 125MPH W/VERN OPTION PTD CLASS: ACSXDR REVISED: 3/01/2007 REV: E
 SUBCLASS: INSTL APPROVED: 3/13/2007
 JOB#: PENDING: REV
 REVISION: C 981050 6/17/98 KBN/JDH OLD CAT#: NEW 2/18/97 CRW/CLS SIZE: D DWG CAT: I ID: CLS

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
007	011887-02GP	1.00			R	C	S	XDCR BASE PL WLDMNT 3 LEG 8/9KX	ACSXDR	WLDMNT	D-011887	D
009	011933-01GP	1.00			R	C	S	XDCR WLDMNT BASE MT 8/9M	ACSXDR	WLDMNT	D-011933	B
010	011933-02GP	1.00			R	C	S	XDCR WLDMNT, PIN BASE 8/9M	ACSXDR	WLDMNT	D-011933	B
015	H14159-39	4.00			EA	R	P	SCR CAP HH 3/8-16UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
015S	H14159-39	1.00			EA	R	P	SCR CAP HH 3/8-16UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
016	H20013-39	4.00			EA	R	P	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
016S	H20013-39	1.00			EA	R	P	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
017	H40057-39	8.00			EA	R	P	FW (AW) 3/8 X 1 SS18-8	FW	SS	NONE	00
017S	H40057-39	1.00			EA	R	P	FW (AW) 3/8 X 1 SS18-8	FW	SS	NONE	00
018	H30011-39	4.00			EA	R	P	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
018S	H30011-39	1.00			EA	R	P	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
026	H20015-119	12.00			EA	R	P	NUT HH 1/2-13UNC A563-DH CAD PL SS	HHNUT	CAD		
026S	H20015-119	2.00			EA	R	P	NUT HH 1/2-13UNC A563-DH CAD PL SS	HHNUT	CAD		
027	013840-01P	1.00			R	C	S	POSN XDCR FIXED PIN ADJ ASSY	ACSXDR	ASSY	D-013840	B
029	H04315-29	4.00			EA	R	P	BOLT HH 1/2-13UNC X 3 A325 HDG	HHBOLT	HDG		
030	P20060-1	1.00			EA	R	P	CPLG 1/8 X 1/4	CPLG		A-033709	A
038	R010975-P	1.00			R	C	S	PL XDCR PTD 8/9M	ACSXDR	DETAIL	D-006557	F
039	H14008-39	3.00			EA	R	P	SCR CAP HH 1/4-20UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
039S	H14008-39	1.00			EA	R	P	SCR CAP HH 1/4-20UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
040	H20011-39	3.00			EA	R	P	NUT HEX 1/4-20UNC SSF594	HEXNUT	SS	NONE	00
040S	H20011-39	1.00			EA	R	P	NUT HEX 1/4-20UNC SSF594	HEXNUT	SS	NONE	00
041	H40045-39	9.00			EA	R	P	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
041S	H40045-39	1.00			EA	R	P	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
042	H30009-39	3.00			EA	R	P	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00
042S	H30009-39	1.00			EA	R	P	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00
043	P99170-19	3.00			EA	R	P	CLEAT RSLVR W/SCR	CLTS		NONE	00
044	P70100-1	1.00			EA	R	P	CORD GRIP 1/2NPT CG-3150	CONN		NONE	00
045	R017293-P	4.00			R	C	S	SPCR PTD 8/9M	ACSXDR	DETAIL	NONE	00
047	P65050-19	2.00			EA	R	P	CLAMP HOSE 13/16-1 1/2 SS	CLAMP	SS		
048	V99680-1	1.00			EA	R	P	CVR RSLVR			313061	A
051	011887-01GP	1.00			R	C	S	XDCR RISER PL WLDMNT AZ	ACSXDR	WLDMNT	D-011887	D
052	H04321-29	3.00			EA	R	P	BOLT HH 1/2-13UNC X 4 1/2 A325 HDG	HHBOLT	HDG		
053	H21015-29	3.00			EA	R	P	NUT HH 1/2-13UNC A563-DH HDG	HHNUT	HDG		
054	H40066-29	22.00			EA	R	P	FW (AN) 1/2 X 1 1/16 F436 HDG	FW	HDG		
054S	H40066-29	2.00			EA	R	P	FW (AN) 1/2 X 1 1/16 F436 HDG	FW	HDG		
055	H30013-29	9.00			EA	R	P	LW HELICAL 1/2 HDG	LW	HDG		
055S	H30013-29	1.00			EA	R	P	LW HELICAL 1/2 HDG	LW	HDG		
056	H60109-39	3.00			EA	R	P	ALL THD ROD 1/2-13UNC X 6 SS18-8	ATR	SS		

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08 TIME 9:31:24

 CATALOGUE#: 013872-01P PSM: M STATUS: RELEASED DRAWING: D-013872 REV: E

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
800	013872-31	1.00			R	C	M	POSN XD CR PED MOD 8/9KP DRILL/	ACSXDR	DETAIL	D-013872	E

 END OF BOM:013872-01P


NOTES:

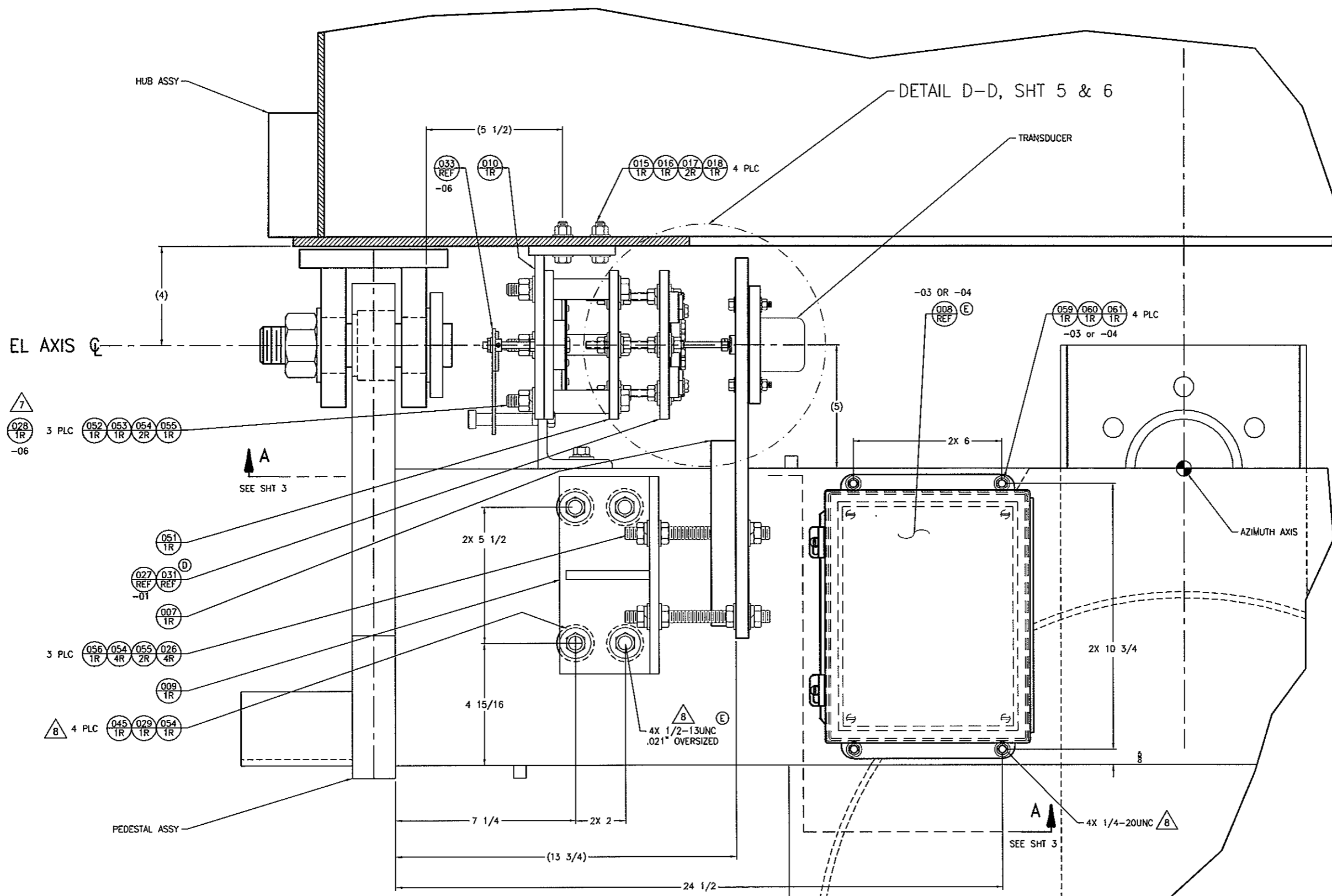
1. LEVEL THE FIXED PIN TO GRAVITY AND ALIGN THIS PIN AXIS TO WITHIN 0.005" OF THE TRUE ANTENNA AZIMUTH AXIS PER VERTEX ALIGNMENT PROCEDURE 500-0321. **IMPORTANT:** ANTENNA VERTICALITY MUST HAVE BEEN SET PRIOR TO THIS ALIGNMENT.
2. PLACE THE PROVIDED WASHERS BETWEEN THE TWO PLATES TO EASE ADJUSTMENTS AND ALLEVIATE UNEVEN SURFACES.
3. ASSEMBLE ADJUSTMENT CAMS AND ROTATE INTO THE EXACT POSITION SHOWN. IF THE CAMS ARE CLOCKED 180 FROM THIS POSITION THE FIXED PIN BASE WILL NOT BE MOVED LINEARLY.
4. ADJUST THE ALL THREAD BOLTS NEARLY FLUSH WITH THE TOP NUTS. EXPOSURE ABOVE THE NUT MAY CAUSE INTERFERENCE WITH ALIGNMENT GAUGES.
5. EXACT ALIGNMENT OF VERNIER AND RUBBER COUPLING IS NOT CRITICAL TO PROPER PERFORMANCE. POSITION CENTER WITHIN 1/4" RADIAL AND 10 DEGREES PARALLEL.
6. FOR WIRING AND CABLE CONNECTIONS REFER TO CABLE INSTL DRAWING.
7. DISCARD BOLTS WHEN VERNIER ASSY IS USED IN COMBINATION WITH TRANSDUCER ASSY.
8. DRILL AND TAP 1/2-13UNC .021" OVERSIZED THRU HOLES IN TOP OF PEDESTAL AS SHOWN FOR -01, -02, -03, -04. DRILL AND TAP 1/4-20UNC THRU HOLES IN TOP OF PEDESTAL FOR J-BOX FOR -03 OR -04 ONLY.
9. ITEMS #008, 019, 020 & 050 TO BE SUPPLIED BY THE CONTROL SYSTEM.

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	02/03/97	CLS/GPR
B	ECR 97-0646; ITEM 036 WAS 011200-01	03/04/97	DKT/CLS
C	ECR 97-1080; ITEMS 039 WAS H14084-39, 041 WAS H20012-39, 041 WAS H40050-39, & 042 WAS H30010-39.	07/03/97	MSS/CLS
D	EC 98-1050; ADDED ITEMS (12)&(31) FOR -02 -04, (23)&(57) FOR -02, & (24)&(46) FOR -04. REMOVED (46)DRE001, (25)P20067-1, (36)010032-01, (27) FOR -02 -04, & (43) FOR -04, (24) WAS P20135-1, (32) WAS *-01, (37) WAS P99143-1, & (49) WAS P20070-1.	06/22/98	KBN/JDH
E	EC 07-0112; SHT #1, BOM, ITEMS #019, 020 & 050, QTY REF WAS 1; NOTE #8, ADD'D ".021" OVERSIZED, ADD'D NOTE 9; SHT #2, ADD'D ".021" OVERSIZED, ITEM BUBBLE #008, REF WAS 1R; SHT #5, #20 RSLVR, ITEM BUB #050, REF WAS 1R; #19 ENCDR, ITEM BUB #019, REF WAS 1R, #17 ENCDR, ITEM BUB #020, REF WAS 1R	02/28/07	RRY/GPR

QTY	REV	ITEM NO.	PART OR IDENTIFYING NO.	DESCRIPTION	NOTES
		800	013872-31	PEDESTAL MODIFICATION	8
		061	H30009-39	HELICAL LW 1/4 SS18-8	
		060	H40045-39	FW (AN) 1/4 X 5/8 SS18-8	
		059	H14006-39	HH CAP SCR 1/4-20UNC X 1 SSF593	
		058			
		057	P99145-1	BORE RDCR 3/16 X 1/4 X 3/8	
		056	H60109-39	ALL THD ROD 1/2-13UNC X 6 SS18-8	
		055	H30013-29	HELICAL LW 1/2 A325 HDG	
		054	H40066-29	FW (AN) 1/2 X 1 1/16 F436 HDG	
		053	H21015-29	HH NUT 1/2-13UNC A325 HDG	
		052	H04321-29	HH BOLT 1/2-13UNC X 4 1/2 A325 HDG	
		051	011887-01	XDUCR WLDMNT, RISER PLATE	
		REF	050	200204-01	RESOLVER ASSEMBLY SIZE 20
		049	P20189-1	CPLG PWR-R-FLEX #PFC-13	
		048	V99680-1	COVER RESOLVER	
		047	P65050-19	CLAMP HOSE 5/8-1 1/2 SS	
		046	P99246-19	CLEAT SCREW #4-40UNC SS PIC #L3-9	
		045	R017293	SPACER DETAIL	
		044	P70100-1	CABLE GRIP 1/2 HUB CG-3150	
		043	P99170-19	CLEAT RESOLVER W/ SCREW BERG #SO-11	
		042	H30009-39	HELICAL LW 1/4 SS18-8	
		041	H40045-39	FW (AN) 1/4 X 11/16 SS18-8	
		ITEM NO.	PART OR IDENTIFYING NO.	NOVENCATURE OR DESCRIPTION	NOTES
		QUANTITY REQUIRED		LIST OF MATERIALS OR PARTS LIST	

QTY	REV	ITEM NO.	PART OR IDENTIFYING NO.	DESCRIPTION	NOTES
		040	H20011-39	HEX NUT 1/4-18UNC SSF594	
		039	H14008-39	HH CAP SCR 1/4-18UNC X 1 1/2 SSF593	
		038	R010975	TRANSDUCER PLATE	
		037	P99142-1	BORE RDCR M10 X 1/2 X 5/8 STD #A	
		036			
		035	013842-02	BASE PLATE DETAIL #17	
		034	013842-01	BASE PLATE DETAIL #19	
		033	013841-01	POS XDCR VERNIER ASSY (AZ/EL SWING)	
		032	013865-02	POS XDCR, ADAPTER DETAIL, #19	
		031	013840-02	POS XDCR FIXED PIN ADJMNT ASSY	
		030	P20060-1	CPLG BERG C020-4	
		029	H04315-29	HH BOLT 1/2-13UNC X 3 A325 HDG	
		028	H04310-29	HH BOLT 1/2-13UNC X 1 3/4 A325 HDG	
		027	013840-01	POS XDCR FIXED PIN ADJUSTMENT ASSEMBLY	
		026	H20015-119	HH NUT 1/2-13UNC A194 CAD PL SS	
		025			
		024	P20231-1	CPLG PWR-R-FLEX PFC#33, 1/2 X 1/2	
		023	P20505-1	CPLG CLAMP "1/4" 0.132ID, 303SS 7/8OD	
		022	H40021-39	FW #6 X 1/4 SS18-8	
		021	H56082-39	SH CAP SCR #6-32UNC X 1/2 SSF837	
		REF	020	P18255-1	ENCODER OPTICAL 17BIT #ROC417 HEIDENHEIM
		REF	019	DRE010	ENCODER ABSOLUTE OPTICAL ROTARY
		018	H30011-39	HELICAL LW 3/8 SS18-8	
		017	H40057-39	FW (AN) 3/8 X 1 SS18-8	
		016	H20013-39	HEX NUT 3/8-16UNC SSF594	
		015	H14159-39	HH CAP SCR 3/8-16UNC X 1 1/2 SSF593	
		014	H14157-39	HH CAP SCR 3/8-16UNC X 1 SSF593	
		013	H00228-39	SH SHD SCR 1/2 X 2 1/2 SS18-8	
		012	P20510-1	CLAMP 1/2 CPLG BORE SIZE #1329-3	
		011	R002865	ANGLE, EL ACTUATOR ARM INTERFACE	
		010	011933-02	XDUCR WLDMNT, PIN MOUNT	
		009	011933-01	XDUCR WLDMNT, BASE MOUNT	
		REF	008	800499-01	OPTICAL ENCODER JUNCTION BOX ASSY
		007	011887-02	XDUCR WLDMNT, BASE PLATE	
		006	013872-06	POSITION VERNIER INSTALLATION (8/9 KP)	
		005			
		004	013872-04	#17 TRANSDUCER INSTALLATION (8/9M KP)	
		003	013872-03	#19 TRANSDUCER INSTALLATION (8/9M KP)	
		002	013872-02	#20 TRANSDUCER INSTALLATION (8/9M KP)	
		001	013872-01	#11 TRANSDUCER INSTALLATION (8/9M KP)	
		ITEM NO.	PART OR IDENTIFYING NO.	NOVENCATURE OR DESCRIPTION	NOTES
		QUANTITY REQUIRED		LIST OF MATERIALS OR PARTS LIST	

DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO		SATCOM Technologies CONFIDENTIAL AND PROPRIETARY	
UNLESS OTHERWISE SPECIFIED: INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: DETAILS ± 1/16 .XX ± .03 ± 1" ASSY'S ± 1/8 .XXX ± .005		ADDITIONAL APPROVALS		 2600 N. LONGVIEW ST. KILGORE, TX USA 75662-6842	
DRILL HOLE TOLERANCE (DRILL) .013 thru .125 = +.005/-0.01 .126 thru .250 = +.007/-0.003 .251 thru .750 = +.008/-0.003 .751 thru 1.000 = +.009/-0.004 1.001 thru 2.000 = +.012/-0.005		EXPORT CONTROL WARNING - Do not disclose this document or its contents to non-U.S. persons, or transmit this document or its contents outside the United States without the written permission of Vertex Communications Corporation and required U.S. Government approval.		EL XDUCER INSTL 8/9KP 2 LEG 125MPH W/VERNIER OPTION	
CLEARANCE HOLE TOLERANCE (CHT) +.03125/-0.0000		UNLESS OTHERWISE SPECIFIED: PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.		CODE NO. 1GD22 SIZE D DTC NO. 013872 REV E	
--- # EA - EST. WEIGHT -		SCALE: 1/3		CONTRACT NO. 513B SHEET 1 OF 6	



013872-01,-02,-03,-04,-06 TRANSDUCER/VERNIER INSTALLATION

VIEW LOOKING DOWN ON PEDESTAL WITH EL AT 0°

SATCOM Technologies CONFIDENTIAL AND PROPRIETARY

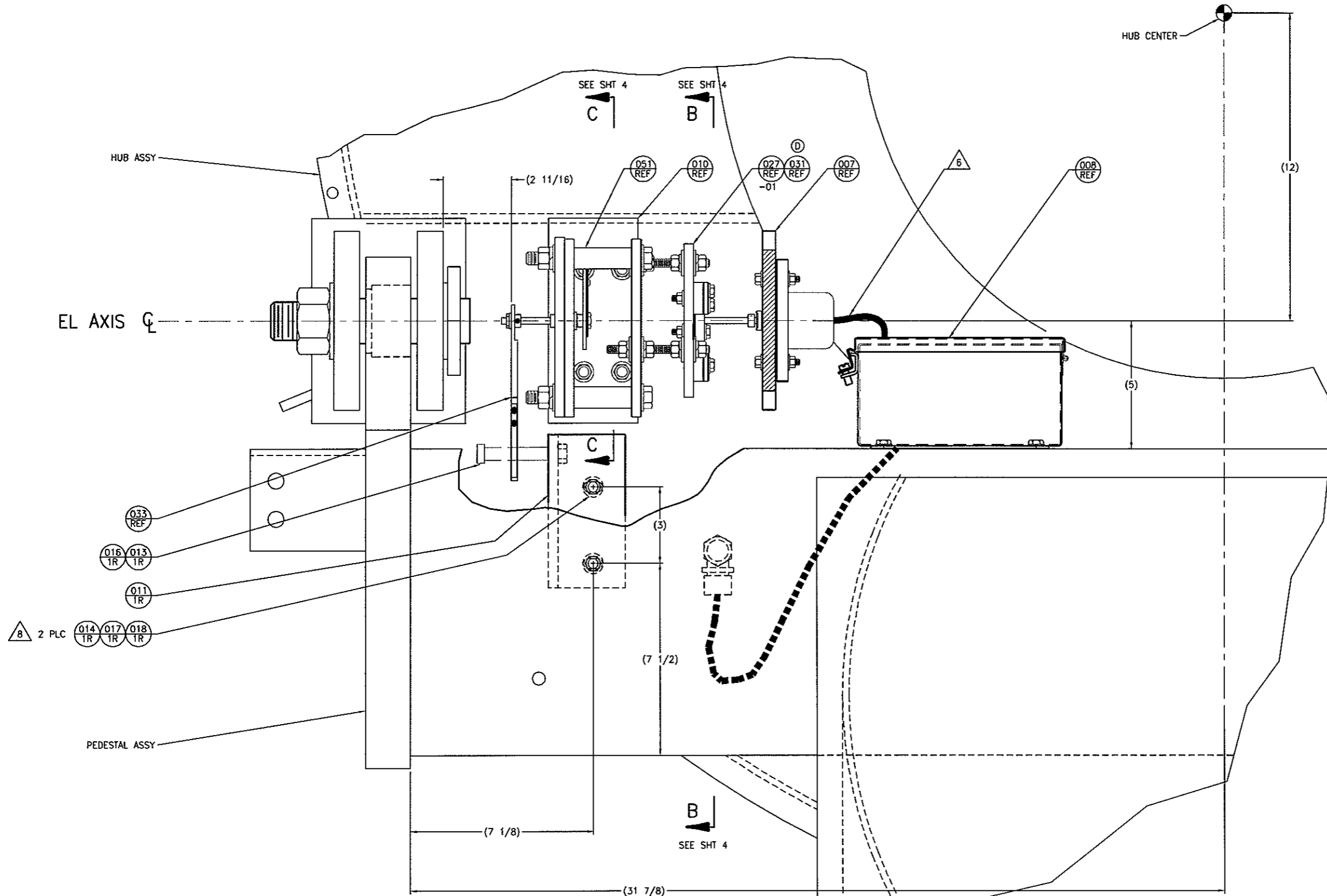
EXPORT CONTROL WARNING - Do not disclose this document or its contents to non-U.S. persons or transmit this document or its contents outside the United States without the written permission of Vertex Communications Corporation and required U.S. Government approval.

Vertex RSI
GENERAL DYNAMICS

2600 N. LONGVIEW ST.
KILGORE, TX USA 75662-6842

CODE D. NO.	SIZE	DWG. NO.	REV
1GD22	D	013872	E
SCALE: 1/2	CONTRACT NO. 5138	SHEET 2	OF 6

DFORM 102



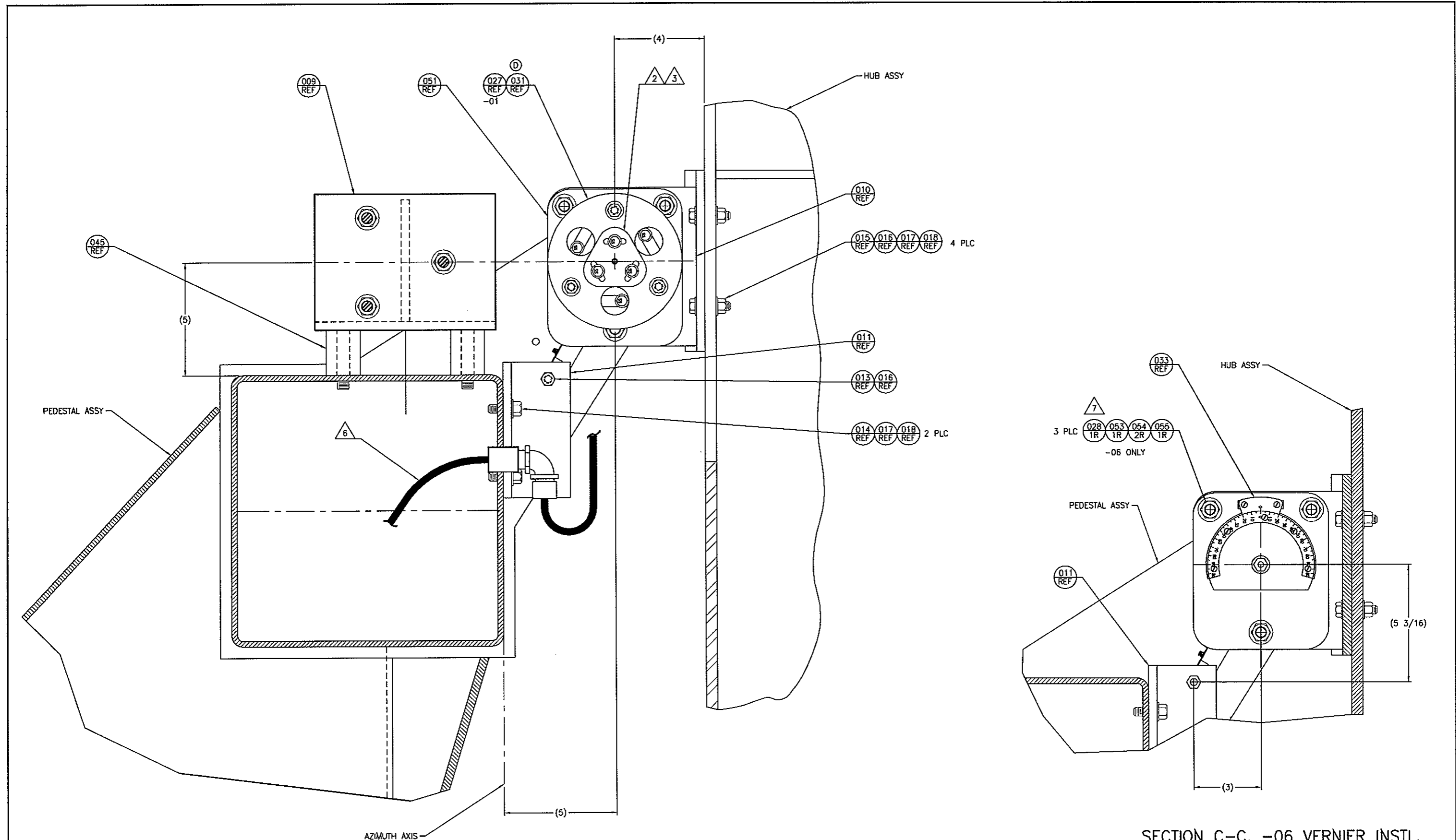
VIEW A-A

VIEW LOOKING FROM REAR OF PEDESTAL WITH EL AT 0°
(ITEM 9 REMOVED FOR CLARITY)
(SHT 2)

SATCOM Technologies CONFIDENTIAL AND PROPRIETARY

EXPORT CONTROL WARNING - Do not disclose this document or its contents to non-U.S. persons, or transmit this document or its contents outside the United States without the written permission of Vertex Communications Corporation and requires U.S. Government approval.				2600 N. LONGVIEW ST. KILGORE, TX USA 75662-6842	
CODE ID. NO.	SIZE	DWG. NO.	REV		
tGD22	D	013872	E		
SCALE: 1/2	CONTRACT NO.	SHEET	OF		
	5138	3	6		

DFORM102



SECTION B-B
FROM SHT 3

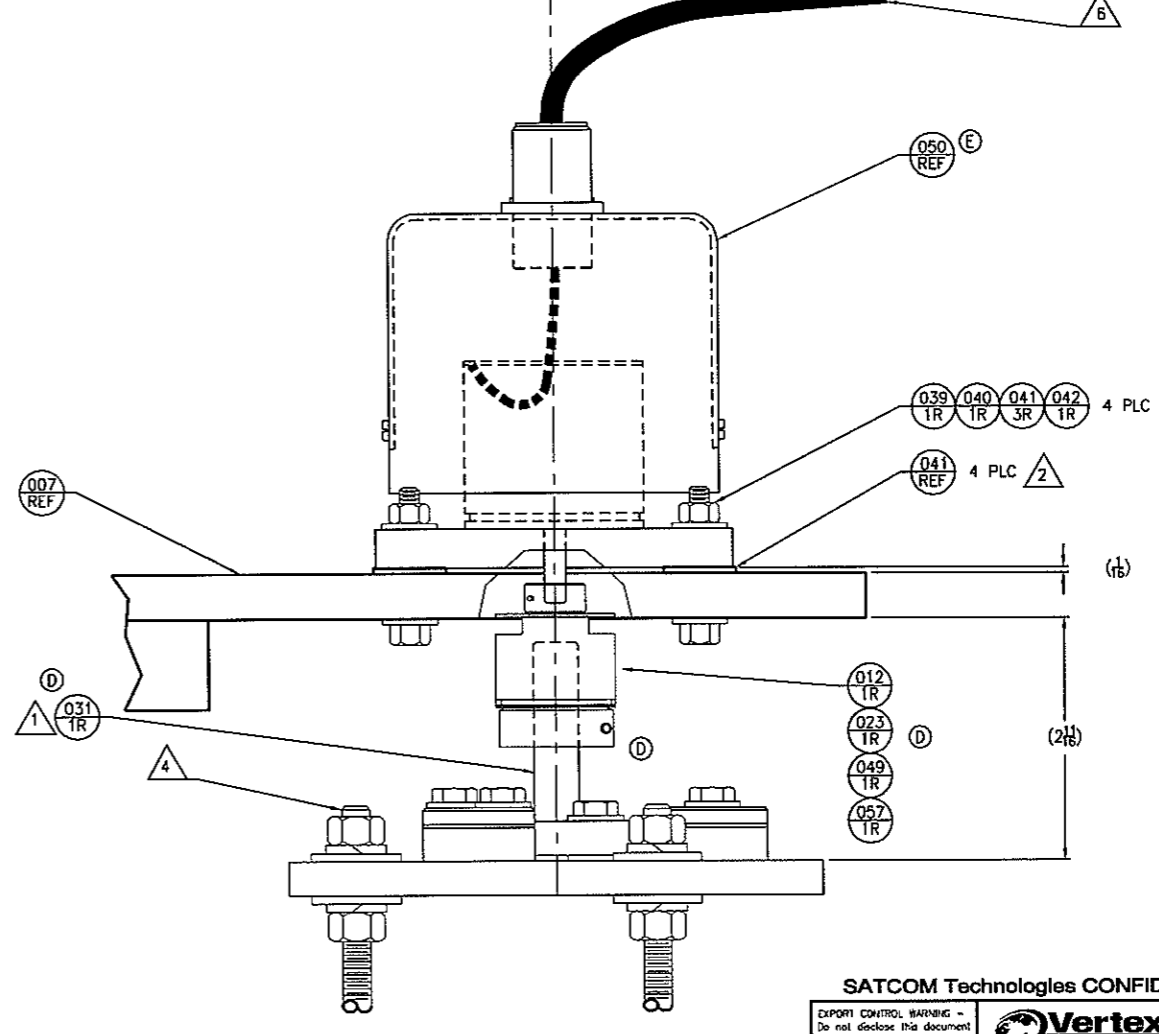
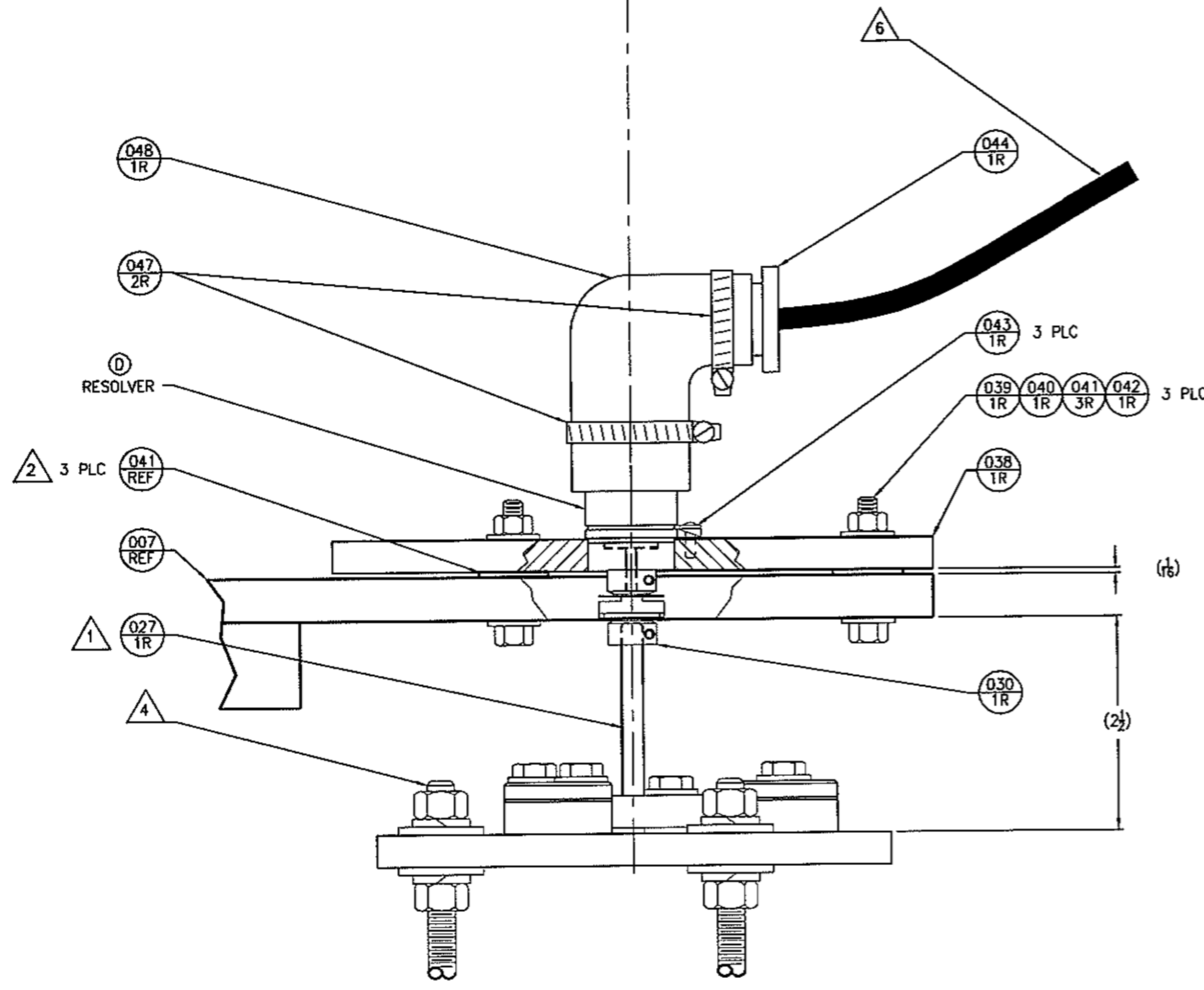
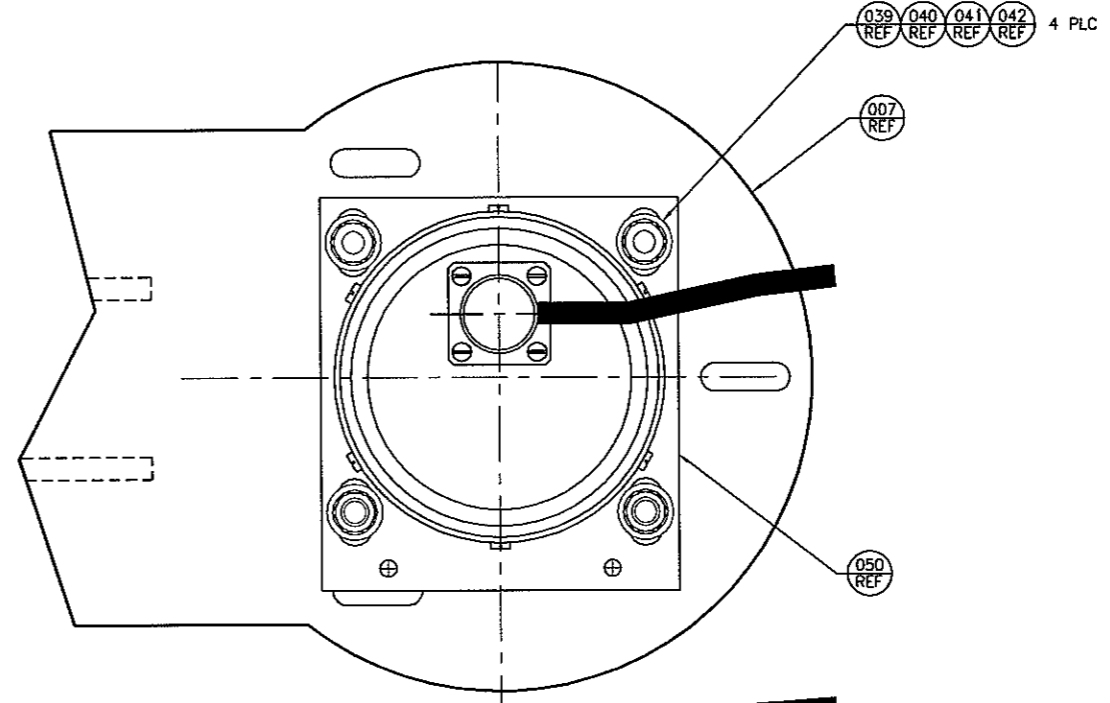
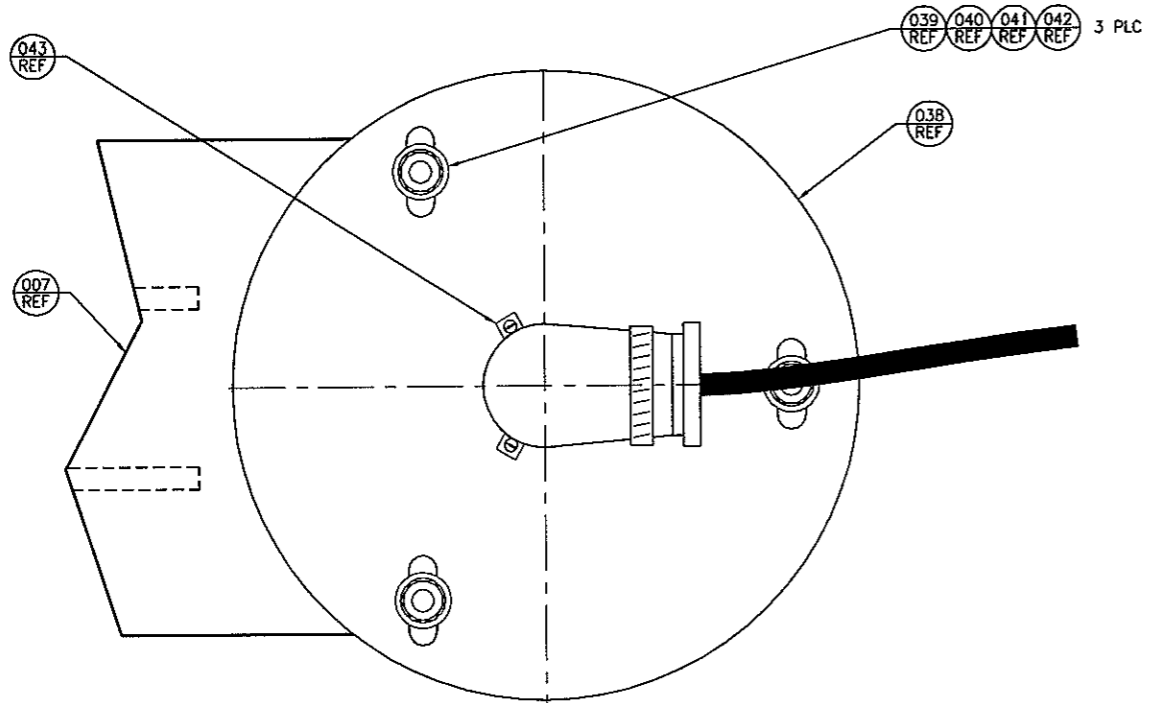
SECTION C-C, -06 VERNIER INSTL.

FROM SHT 3

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CODE NO.	SIZE	QWG NO.	REV		
16D22	D	013872	E		
SCALE: 1/2	CONTRACT NO. 5138		SHEET 4 OF 6		

DFORM102



DETAIL D-D -01, #11 RESOLVER
(FROM SHT 2, ROTATED 90° CCW)

DETAIL D-D -02, #20 RSLVR
(FROM SHT 2, ROTATED 90° CCW)

SATCOM Technologies CONFIDENTIAL AND PROPRIETARY

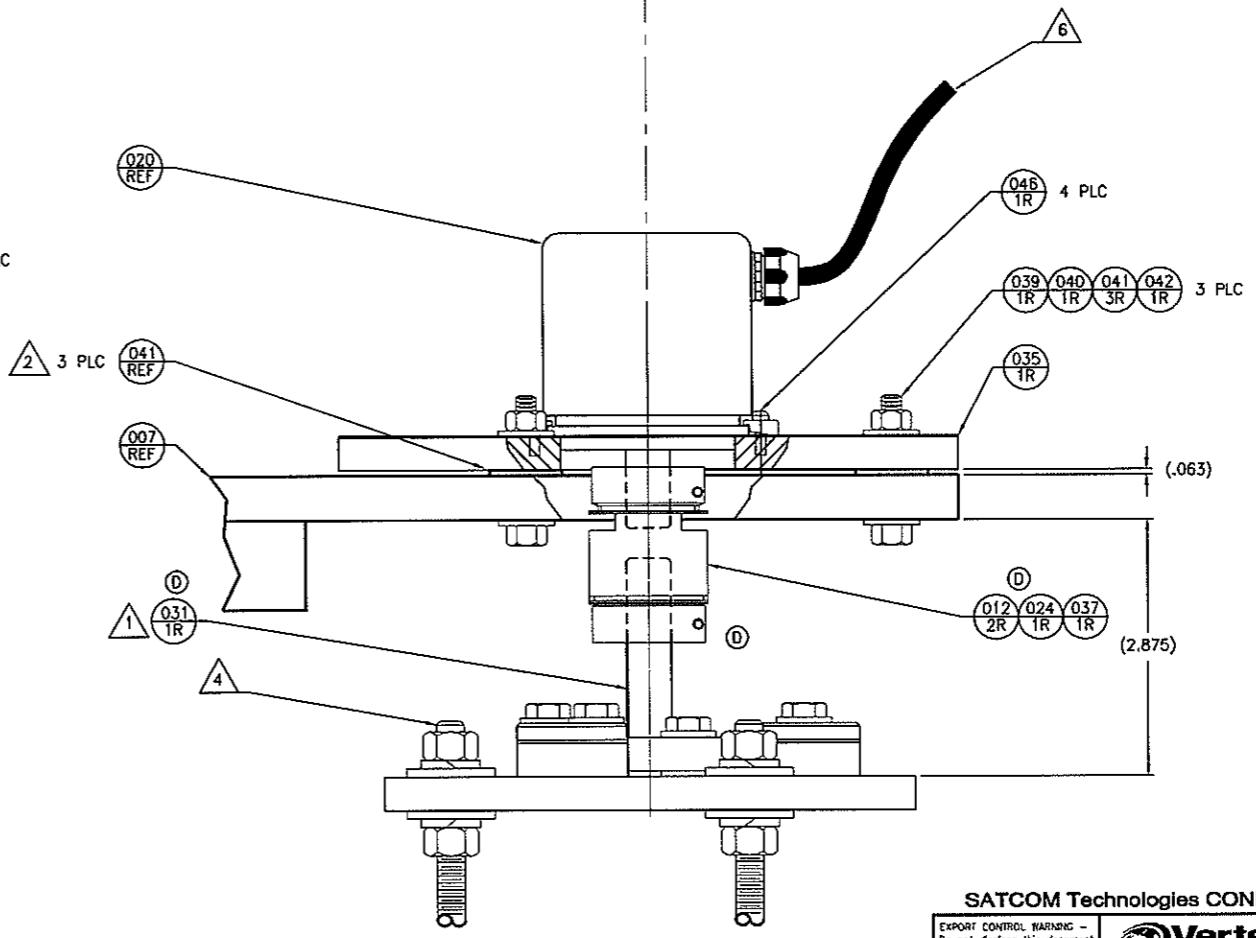
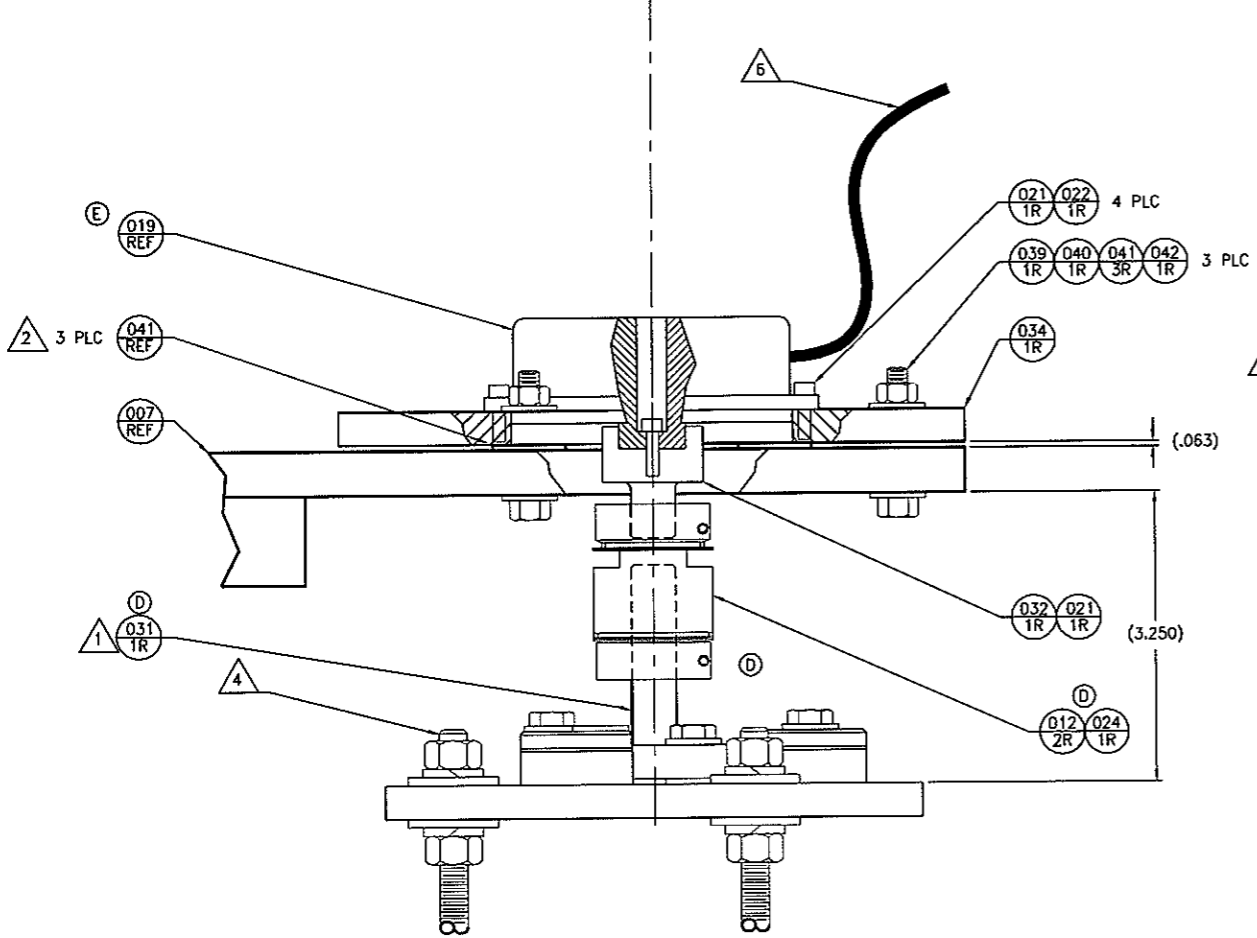
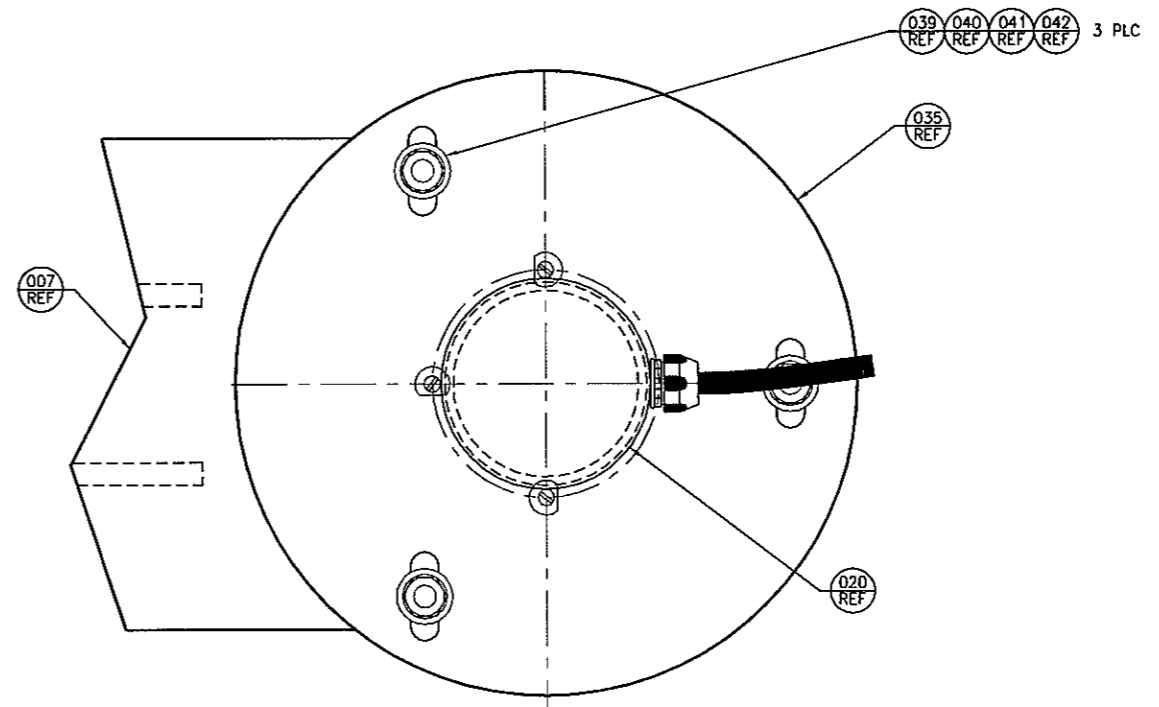
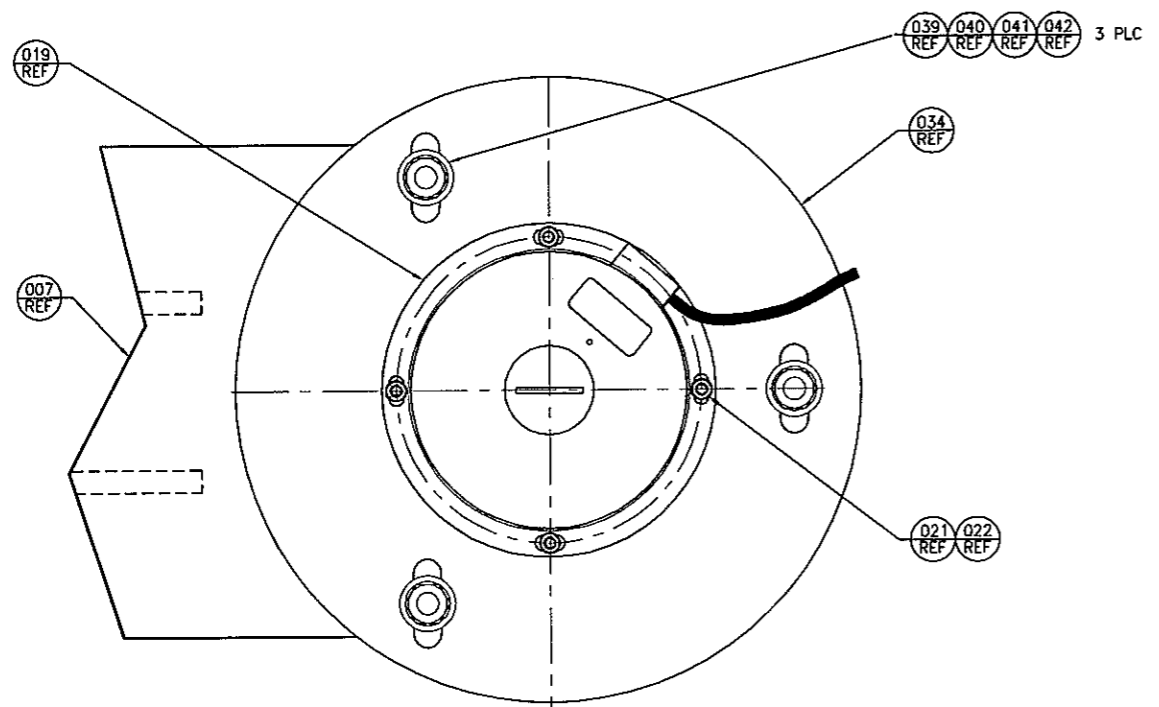
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VertecRSI
GENERAL DYNAMICS

2600 N. LONGVIEW ST.
KILGORE, TX USA 75662-6842

CODE D. NO.	SIZE	DRG NO.	REV
1GD22	D	013872	E
SCALE: 1/1	CONTRACT NO. 5138	SHEET 5	OF 6

DFORM122



DETAIL D-D -03, #19 ENCODER
(FROM SHT 2, ROTATED 90° CCW)

DETAIL D-D -04, #17 ENCODER
(FROM SHT 2, ROTATED 90° CCW)

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Vertex RSI
GENERAL DYNAMICS

2600 N. LONGVIEW ST.
KILGORE, TX USA 75662-6842

CODE ID. NO.	SIZE	DWG. NO.	REV
1GD22	D	013872	E
SCALE: 1/1	CONTRACT NO. 5138	SHEET 6	OF 6

DFORM102

VERTEKRSI-KILGORE, TX FACILITY

SINGLE LEVEL BILL OF MATERIAL SUMMARY PRINT DATE 3/24/08 TIME 9:31:27

CATALOGUE#: 023528-01 PSM: M STATUS: RELEASED DRAWING: D-023528 REV: A

DESCRIPTION: CNDT INSTL ACS 8/9KP STD CATEGORY: INTEGRAT ENTERED: 5/17/2000

CLASS: ACSCDT REVISED: 5/17/2000 REV: A

SUBCLASS: INSTL APPROVED: 5/22/2000

JOB#: EE005 PENDING: REV

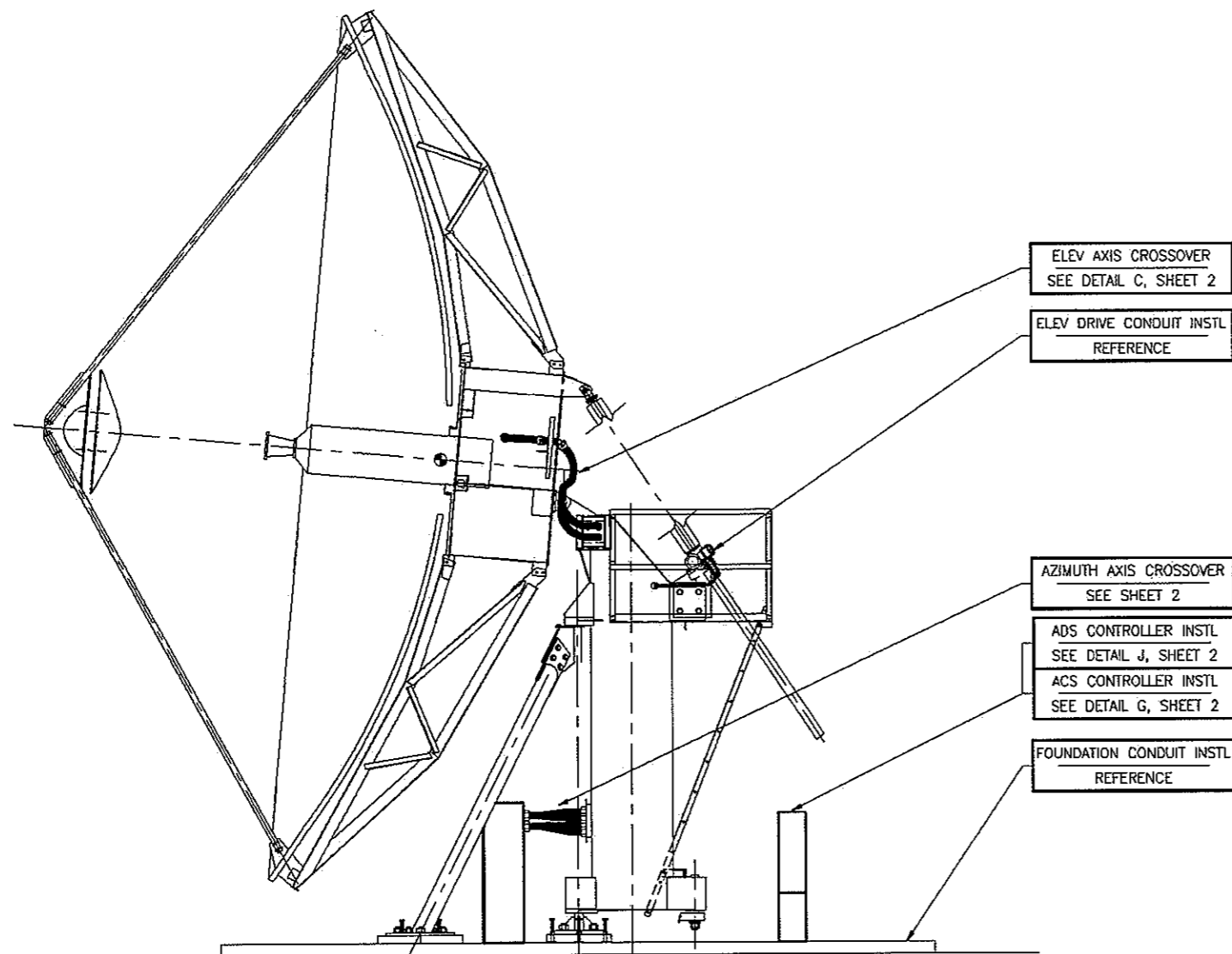
REVISION: A 05/31/00 JED/KBS OLD CAT#: NEW A 05/31/00 JED/KBS SIZE: D DWG CAT: I ID: JED

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV	
007	R000378	1.00			R	C	S	ANGLE CNDT BRKT 2 C	ACSCDT	DETAIL	B-000082	C	
008	R000379	1.00			R	C	S	PL WASHER 2 1/2 ID X 0.125 X 5 X 5LG	ACSCDT	DETAIL	B-000049	M	
009	P99071-19	4.00			EA	R	P	S	ANCHOR 1/2 X 3 3/4				
009S	P99071-19	1.00			EA	R	P	S	ANCHOR 1/2 X 3 3/4				
010	P24090-19	2.00			EA	R	P	S	CPLG CNDT 2 RIGID GALV THD	CPLG			
011	E20155-19	30.00			FT	R	P	S	CNDT 2 EFC	CNDT	XFLEX		
012	P72290-1	13.00			EA	R	P	S	CONN CNDT 2 STR TYPE LT STD TEMP	CONN			
012S	P72290-1	2.00			EA	R	P	S	CONN CNDT 2 STR TYPE LT STD TEMP	CONN			
013	P72385-1	1.00			EA	R	P	S	CONN CNDT 2 45DEG TYPE LT STD TEMP	CONN			
014	P37070-19	8.00			EA	R	P	S	BSHG CNDT 2	BSHG			
014S	P37070-19	2.00			EA	R	P	S	BSHG CNDT 2	BSHG			
015	E91090-19	9.00			EA	R	P	S	NUT LOCK CNDT 2	LCKNUT			
015S	E91090-19	2.00			EA	R	P	S	NUT LOCK CNDT 2	LCKNUT			
016	M15201-19	4.00			EA	R	P	S	ADPTR CNDT FEM 2 PVC	ADPTR	PVC		
017	P93597-19	1.00			EA	R	P	S	NIPPLE CNDT 2 X 4	NIPPLE			
021	P37050-19	1.00			EA	R	P	S	BSHG CNDT 1 1/2	BSHG			
021S	P37050-19	1.00			EA	R	P	S	BSHG CNDT 1 1/2	BSHG			
022	E91080-19	1.00			EA	R	P	S	NUT LOCK CNDT 1 1/2	LCKNUT	NONE	00	
024	M15161-19	1.00			EA	R	P	S	ADPTR CNDT FEM 1 1/2 PVC	ADPTR	PVC		
025	P98389-19	1.00			EA	R	P	S	PLUG KNOCKOUT 1 1/2	PLUG			
026	M91040-19	1.00			EA	R	P	S	CEMENT PVC CNDT 1/2 PINT	CNDT	PVC		
027	M91065-19	1.00			EA	R	P	S	SEALANT SILICONE COMPOUND 10.1 FL OZ		NONE	00	
028	H14158-39	2.00			EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
028S	H14158-39	1.00			EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
029	H40055-39	4.00			EA	R	P	S	FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
029S	H40055-39	1.00			EA	R	P	S	FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
030	H30011-39	2.00			EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
030S	H30011-39	1.00			EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
031	H20013-39	2.00			EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
031S	H20013-39	1.00			EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
033	P72255-1	2.00			EA	R	P	S	CONN CNDT 1 1/2 STR TYPE LT STD TEMP	CONN			
034	E20105-19	3.00			FT	R	P	S	CNDT 1 1/2 EFC	CNDT	XFLEX		
035	E49660-1	6.00			EA	R	P	S	SEALANT DUCT SEAL 1LB BOX				

END OF BOM:023528-01

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	05/17/00	JED/KBS



SIDE VIEW
CONDUIT INSTALLATION

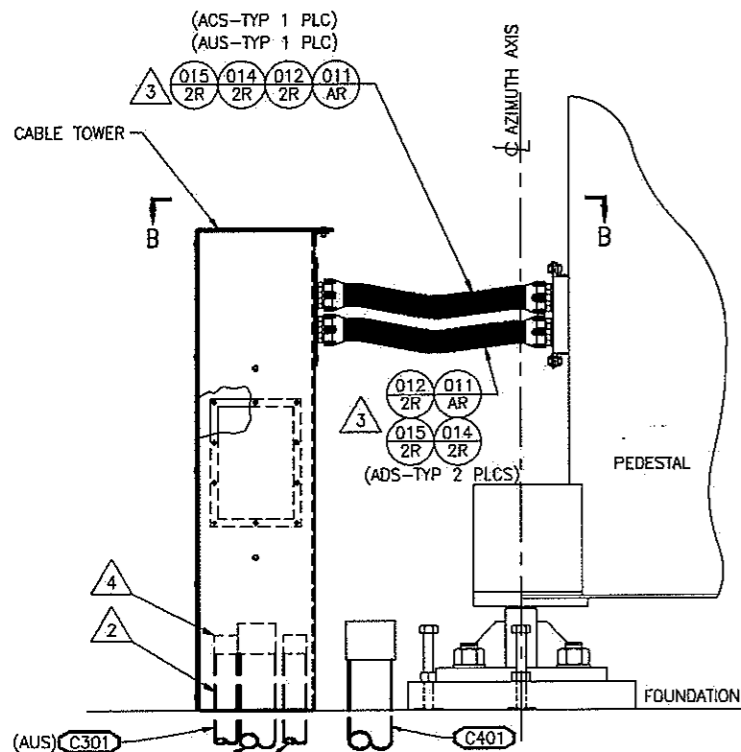
NOTES:

1. **COOD** INDICATES CONDUIT ID NUMBER, REFERENCE VERTEX CABLE INSTL DRAWING FOR CONDUIT AND CABLE SCHEDULES.
2. CUSTOMER SUPPLIED CONDUITS. CONDUITS ARE INSTALLED PER SYSTEM AS REQUIRED BY CONTRACT. REFERENCE FOUNDATION CONDUIT LAYOUT DRAWING FOR CONDUIT STUB-UP LOCATIONS AND INSTALLATION.
3. AFTER CABLE TOWER IS IN PLACE, CUT AZIMUTH AXIS CROSSOVER CONDUIT TO LENGTH AS REQUIRED PER SYSTEM. CUT SUFFICIENT LENGTH TO CROSS THRU THE AXIS AND ALLOW FOR FULL ROTATION OF PEDESTAL. REMOVE EXISTING CONDUIT INTERFACE PLATES ON PEDESTAL AND CABLE TOWER AND INSTALL CONDUIT FITTINGS WITH LOCKNUTS PROVIDED. REINSTALL INTERFACE PLATES USING EXISTING HARDWARE WITH THREADS AND NUTS EXTERNAL.
4. TRIM CONDUIT STUB-UPS AS REQUIRED.
5. INSTALL (ITEM 017) CONDUIT NIPPLE IN (ITEM 007) ANGLE BRACKET AND TIGHTEN USING (ITEM 015) LOCKNUTS OR (ITEM 010) COUPLING AS REQUIRED. ON DEICED ANTENNAS, INSTALLER TO TRIM DEICE PANELS ϕ 2 3/4 INCH HOLE AROUND EACH CONDUIT NIPPLE AS REQ'D. INSTALL (ITEM 008) RECTANGULAR FLATWASHER AND (ITEM 010) RIGID COUPLING TO COVER AND TIGHTEN.
6. CUT FLEX CONDUIT FOR ELEVATION AXIS CROSSOVER TO LENGTH AS REQUIRED PER SYSTEM ROUTE FLEX THROUGH THE ELEVATION AXIS AND TERMINATE ON REFLECTOR INTERFACE COUPLING. (REFER TO NOTE 5)
7. INSTALL OUTDOOR CONTROLLER OVER CONDUIT STUB-UPS AND ANCHOR TO FOUNDATION USING HARDWARE SUPPLIED.
8. FIELD CUT ϕ 2 1/2" HOLES FOR 2" CONDUIT ENTRY.
9. REFERENCE SYSTEM TOP ASSEMBLY FOR SPECIFIC OUTDOOR CONTROLLER REQUIRED.
10. CUT (ITEM 011) CONDUIT TO LENGTH AS REQUIRED PER SYSTEM FOR HUB. INSTALL FROM REFLECTOR RADIAL INTERFACE COUPLING TO PRE-DRILLED HUB ENTRANCE USING FITTINGS AND BUSHINGS PROVIDED.
11. CONDUIT NIPPLE (ITEM 017) AND OUTER COUPLING (ITEM 010) ARE REQUIRED WHEN INSTALLING ELEV AXIS CROSSOVER ON DEICED ANTENNAS.
12. FIELD CUT ϕ 2" HOLE FOR 1 1/2" CONDUIT ENTRY.
13. MATCH DRILL 7/16 ϕ HOLE FOR MOUNTING HARDWARE (2 PER ANGLE). INSTALL CONDUIT TERMINATION ANGLE AS REQUIRED USING 3/8 INCH MOUNTING HARDWARE.
14. SEAL ALL UNDERGROUND CONDUITS AT BOTH ENDS WITH DUCT SEAL (ITEM 035). THIS SEAL IS TO PREVENT AN ACCUMULATION OF CONDENSATION.
15. FIELD CUT ϕ 3 5/8" HOLE FOR 3" CONDUIT ENTRY.

DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO				VertexRSI CONFIDENTIAL AND PROPRIETARY			
UNLESS OTHERWISE SPECIFIED INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DETAILS \pm 1/16 ASSY'S \pm 1/8 DECIMALS: .XX \pm .03 .XXX \pm .003 ANGLES \pm 1°		DESIGN	DATE	APPROVALS	DATE	 VertexRSI ANTENNA PRODUCTS DIVISION 2800 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA			
UNLESS OTHERWISE SPECIFIED PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.		MECHANICAL							
TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.		STRUCTURAL				CONDUIT INSTALLATION MODEL 8/9M KPC/KPK			
		ELECTRICAL	05/17/00			CODE NO.	SIZE	DWG NO.	REV
		JE DINES				1GD22	D	023528	A
						SCALE: 1/30	CONTRACT NO. 11624	SHEET 1 OF 2	

DFORM1D1

EA
- EST. WEIGHT -

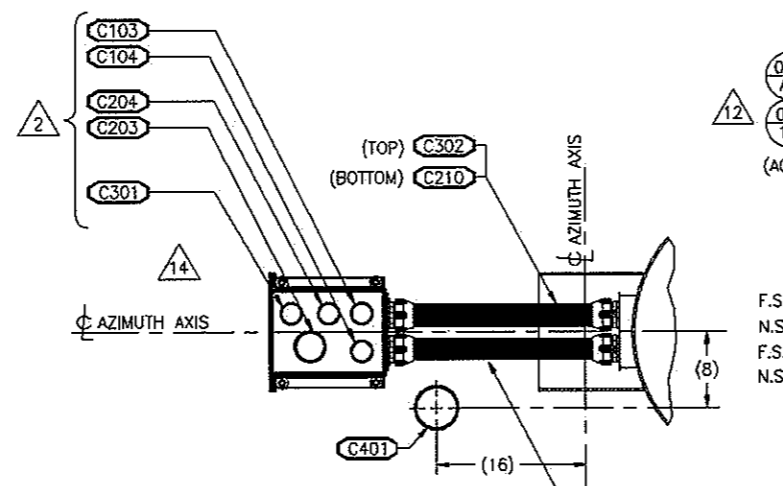


DETAIL A

AZIMUTH AXIS CROSSOVER

SCALE: 1/10
(SHT 1)

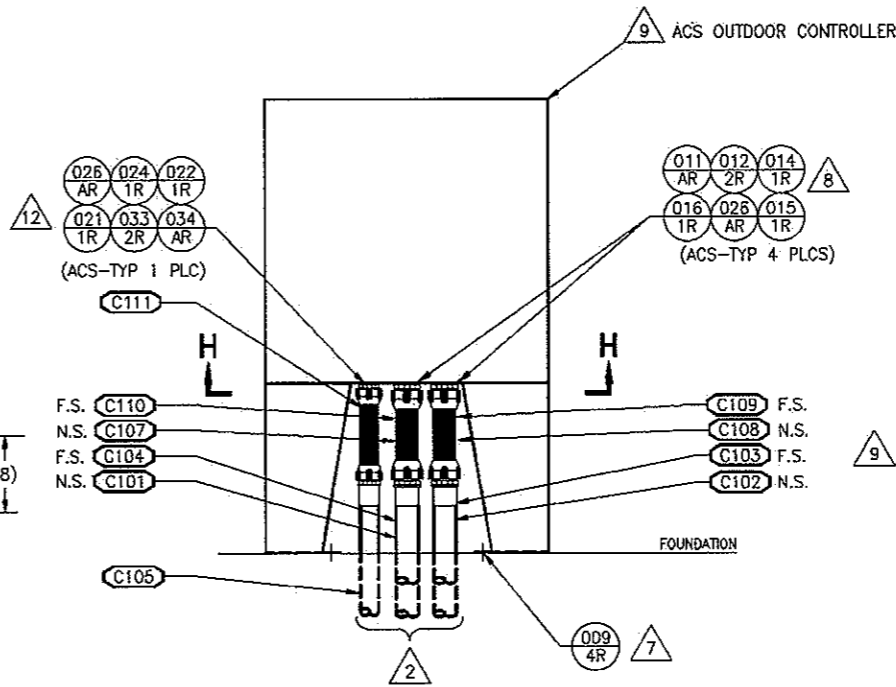
- F.S.(ADS) C203
- N.S.(ADS) C204
- F.S.(ACS) C104
- N.S.(ACS) C103



VIEW B-B

AZIMUTH CROSSOVER

- C113 (TOP)
- C209 (BOTTOM)

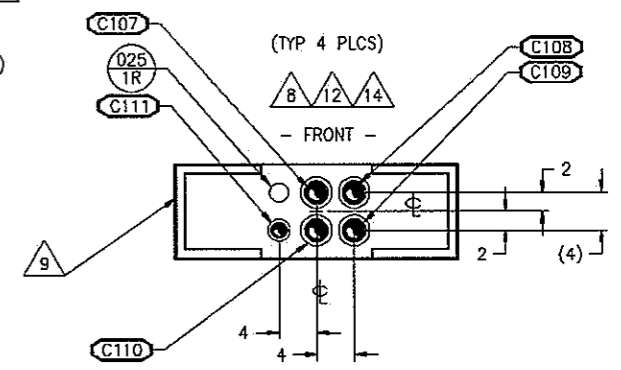


DETAIL G

ACS CONTROLLER CONDUIT INSTL.

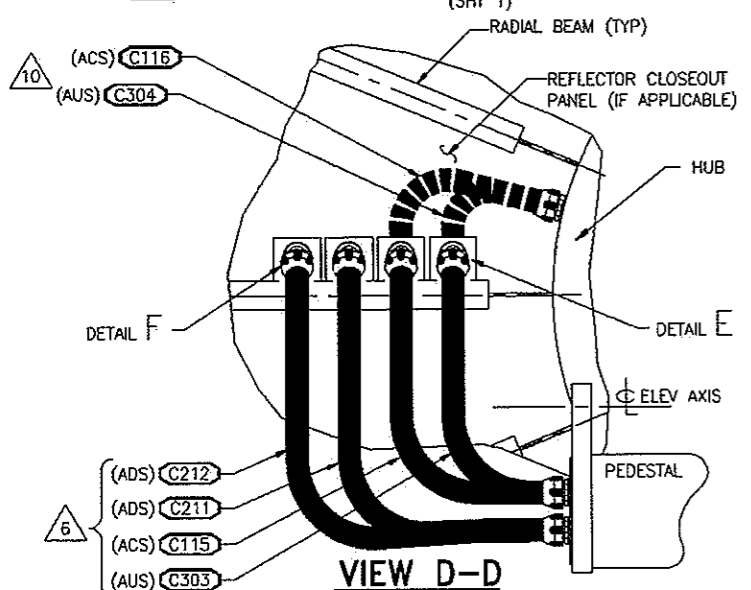
(REAR VIEW)

(SHT 1)



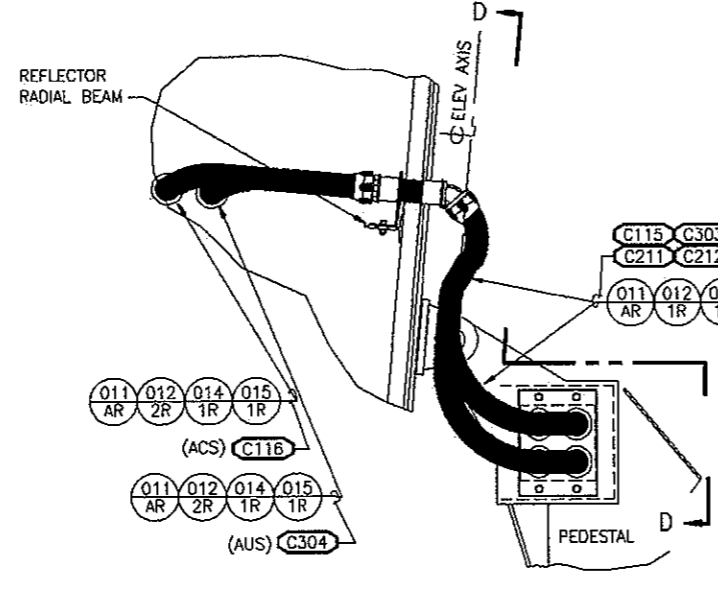
SECTION H-H

CONTROLLER CONDUIT ENTRY



VIEW D-D

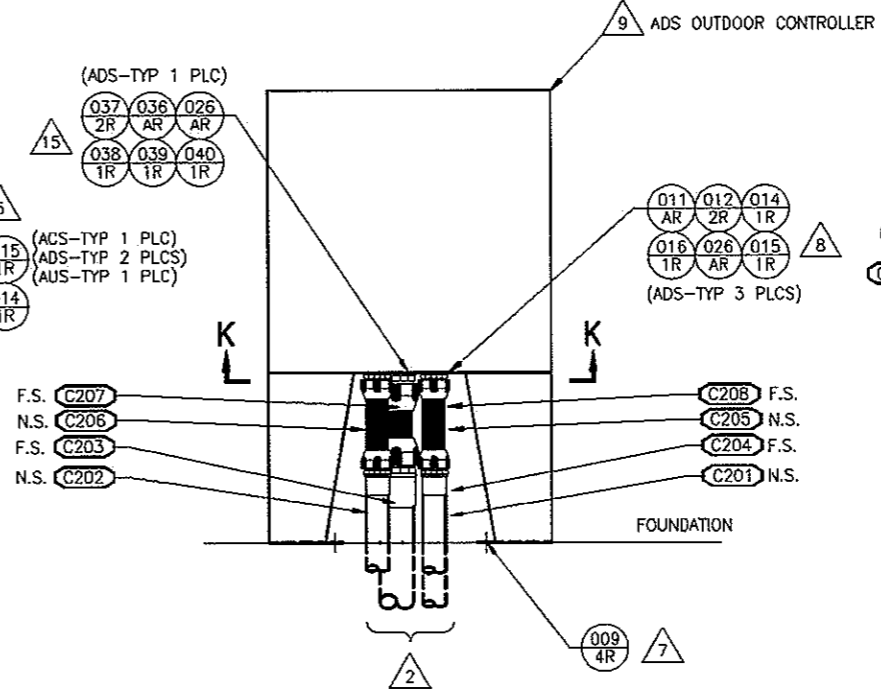
ELEV AXIS CROSSOVER



DETAIL C

ELEV AXIS CROSSOVER

(SHT 1)

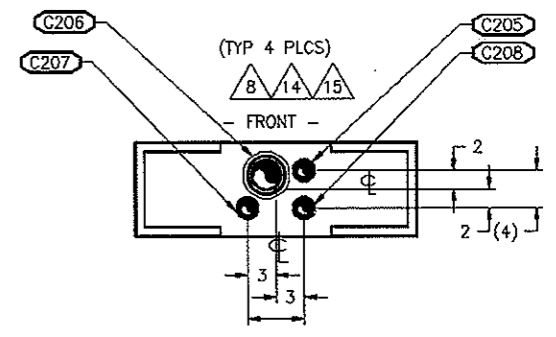


DETAIL J

ADS CONTROLLER CONDUIT INSTL.

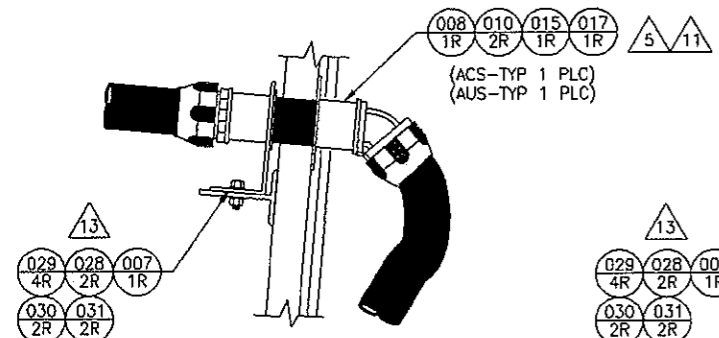
(REAR VIEW)

(SHT 1)



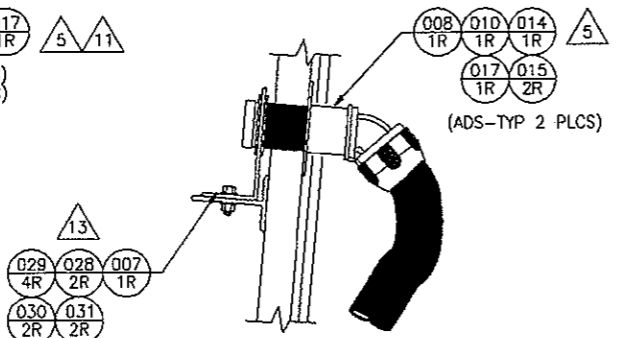
SECTION K-K

CONTROLLER CONDUIT ENTRY



DETAIL E

SCALE: 1/5



DETAIL F

SCALE: 1/5

VertexRSI CONFIDENTIAL AND PROPRIETARY

VertexRSI			
ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA			
CODE ID. NO.	SIZE	DRG. NO.	REV.
16022	D	023528	A
SCALE: 1/10	CONTRACT NO. 11624	SHEET 2 OF 2	

DFOR102

SINGLE LEVEL BILL OF MATERIAL SUMMARY PRINT DATE 3/24/08 TIME 9:31:29

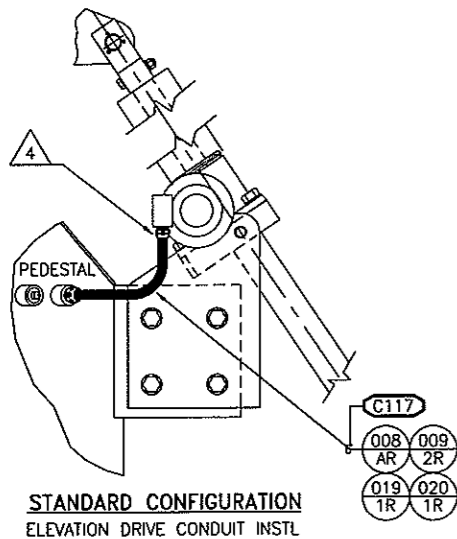
CATALOGUE#: 014587-01 PSM: M STATUS: RELEASED DRAWING: D-014587 REV: B

DESCRIPTION: CNDT INSTL MOT 8/9/9.3KP STD AZ & EL MOTS
 CATEGORY: INTEGRAT ENTERED: 4/29/1997
 CLASS: ACSCDT REVISED: 9/03/1997 REV: B
 SUBCLASS: INSTL APPROVED: 9/08/1997
 JOB#: 9708 PENDING: REV
 REVISION: A 05/27/97 JED/GPR OLD CAT#: NEW A 05/27/97 JED/GPR SIZE: D DWG CAT: I ID: JED

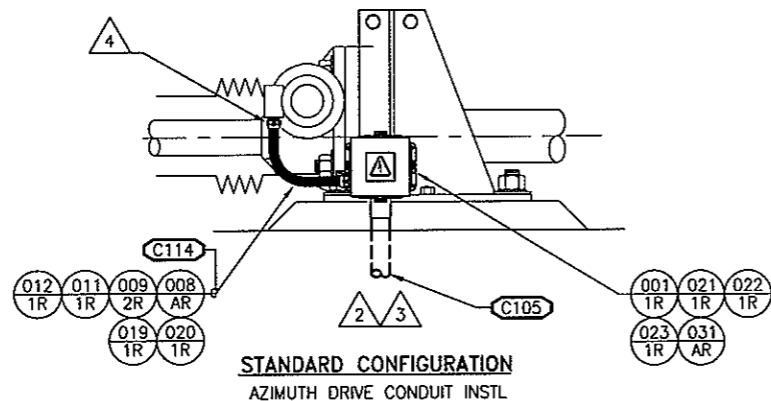
BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
001	012688-01	1.00			R	C	S	REMOTE MOT JBOX ASSY	AACBUT	INSTL	D-012688	A
008	E20065-19	10.00			FT	R	P	S	CNDT			
009	P72245-1	4.00			EA	R	P	S	CONN	CNDT		
011	E91040-19	1.00			EA	R	P	S	CONN	CNDT		
011S	E91040-19	1.00			EA	R	P	S	NUT LOCK	CNDT		
012	P37030-19	1.00			EA	R	P	S	NUT LOCK	CNDT		
012S	P37030-19	1.00			EA	R	P	S	NUT LOCK	CNDT		
019	P69995-19	2.00			EA	R	P	S	BSHG	CNDT		
020	P37002-19	2.00			EA	R	P	S	BSHG	CNDT		
020S	P37002-19	1.00			EA	R	P	S	ENLARGER	MALE	3/4F X 1/2M MI	FTTG
021	M15161-19	1.00			EA	R	P	S	ENLARGER	MALE	3/4M X 1F MI	FTTG
022	P93605-19	1.00			EA	R	P	S	ENLARGER	MALE	3/4M X 1F MI	FTTG
022S	P93605-19	1.00			EA	R	P	S	ADPTR	CNDT	FEM 1 1/2 PVC	ADPTR PVC
023	P34370-19	1.00			EA	R	P	S	NIPPLE	CNDT	CHASE 1	NIPPLE
031	M91040-19	1.00			EA	R	P	S	NIPPLE	CNDT	CHASE 1	NIPPLE
032	M91065-19	1.00			EA	R	P	S	BSHG	RDCR	THD 1 1/2M X 1F	BSHG
					EA	R	P	S	CEMENT	PVC	CNDT 1/2 PINT	CNDT PVC
					EA	R	P	S	SEALANT	SILICONE	COMPOUND 10.1 FL OZ	NONE 00

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	04/29/97	JED/GPR
B	REVISED PER ECR #97-1456	08/29/97	JED/KBS

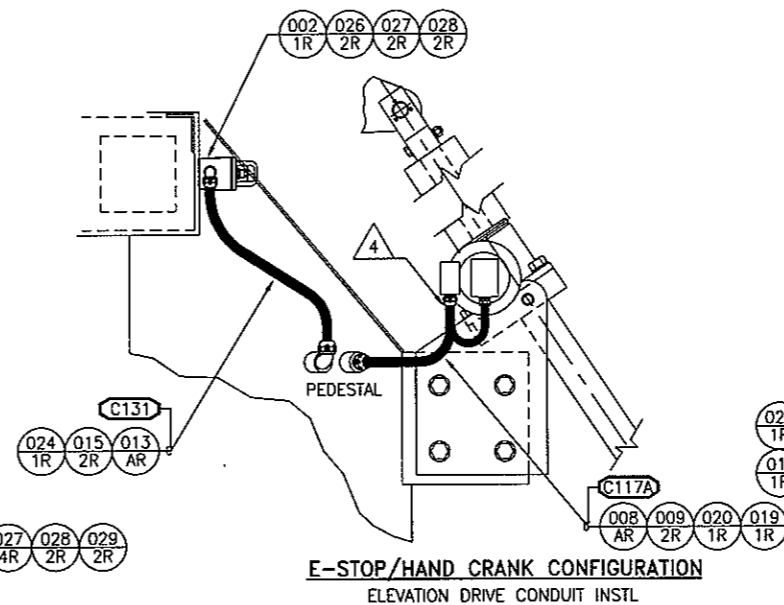


STANDARD CONFIGURATION
ELEVATION DRIVE CONDUIT INSTL



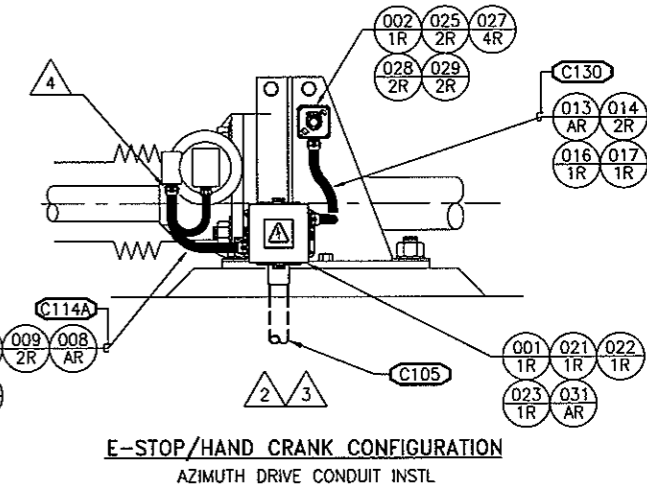
STANDARD CONFIGURATION
AZIMUTH DRIVE CONDUIT INSTL

014587-01

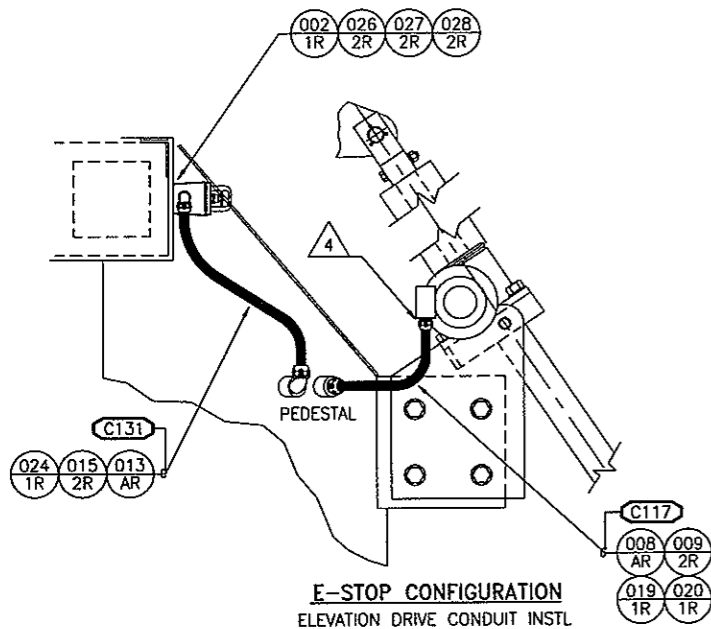


E-STOP/HAND CRANK CONFIGURATION
ELEVATION DRIVE CONDUIT INSTL

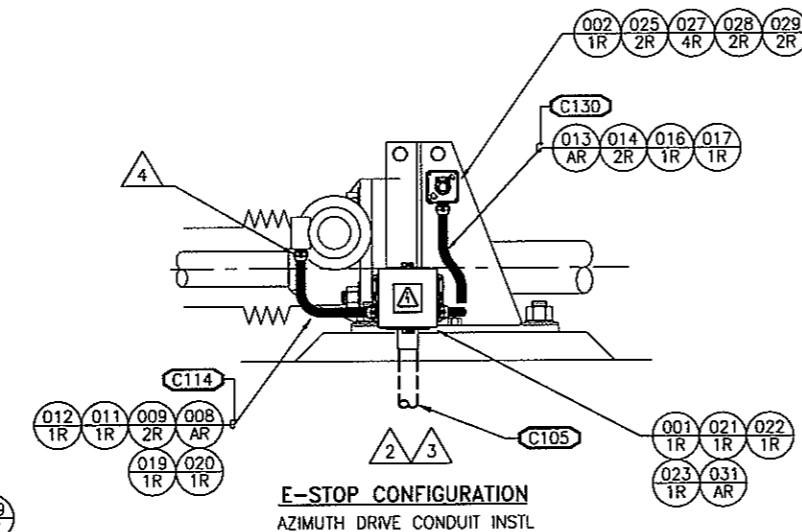
014587-04



E-STOP/HAND CRANK CONFIGURATION
AZIMUTH DRIVE CONDUIT INSTL

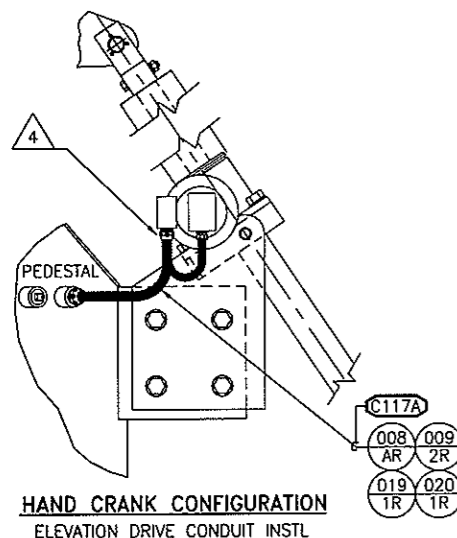


E-STOP CONFIGURATION
ELEVATION DRIVE CONDUIT INSTL

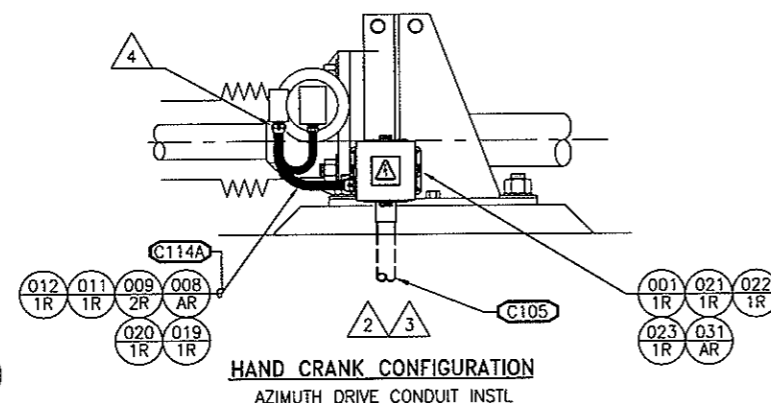


E-STOP CONFIGURATION
AZIMUTH DRIVE CONDUIT INSTL

014587-02



HAND CRANK CONFIGURATION
ELEVATION DRIVE CONDUIT INSTL



HAND CRANK CONFIGURATION
AZIMUTH DRIVE CONDUIT INSTL

014587-03

NOTES:

1. C000 INDICATES CONDUIT ID NUMBER, REFERENCE VERTEX CABLE CABLE INSTALLATION DRAWINGS FOR CONDUIT AND CABLE SCHEDULES.
2. CUSTOMER SUPPLIED CONDUITS. CONDUITS ARE INSTALLED PER SYSTEM AS REQUIRED BY CONTRACT. REFERENCE FOUNDATION CONDUIT LAYOUT DRAWING FOR CONDUIT STUB-UP LOCATIONS AND INSTALLATIONS.
3. TRIM CONDUIT STUB-UPS AS REQUIRED.
4. INSTALL (ITEM 019) CONDUIT FITTING WHEN GEARMOTOR IS SUPPLIED WITH 1/2" CONDUIT ENTRY.

DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO				VertexRSI CONFIDENTIAL AND PROPRIETARY			
UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DETAILS ± 1/16 ASSY'S ± 1/8 DECIMALS: .XX ± .03 .XXX ± .005 ANGLES ± 1°		ADDITIONAL APPROVALS	DATE	APPROVALS	DATE	 ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA			
UNLESS OTHERWISE SPECIFIED ! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.		DESIGN N/R		DRAWN JE DINES	04/29/97	CONDUIT INSTALLATION AZIMUTH & ELEVATION MOTORS MODEL 8/9/9.3 KP			
TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.		MECHANICAL N/R		CHECKED GP ROBERTS	07/02/97	CODE ID. NO.	SIZE	DWG. NO.	REV
		STRUCTURAL N/R		DESIGNER JE DINES	04/29/97	1G022	D	014587	B
		ELECTRICAL HL KREWSON	07/16/97	MANUFACTURING MW CARTER	07/21/97	SCALE: 1/10	CONTRACT NO. 9708	SHEET 1 OF 1	
				PROJECT JR KING	07/16/97				
				PRODUCT MGR DL BEAKLEY	07/16/97				

SINGLE LEVEL BILL OF MATERIAL SUMMARY PRINT DATE 3/24/08 TIME 9:31:31

CATALOGUE#: 012503-02 PSM: M STATUS: RELEASED DRAWING: D-012503 REV: B

DESCRIPTION: CBL INSTL ACS 8/9/9.3KP-LP CATEGORY: INTEGRAT ENTERED: 4/30/1997

CLASS: ACSCAB REVISED: 10/28/2004 REV: B

SUBCLASS: INSTL APPROVED: 11/23/2004

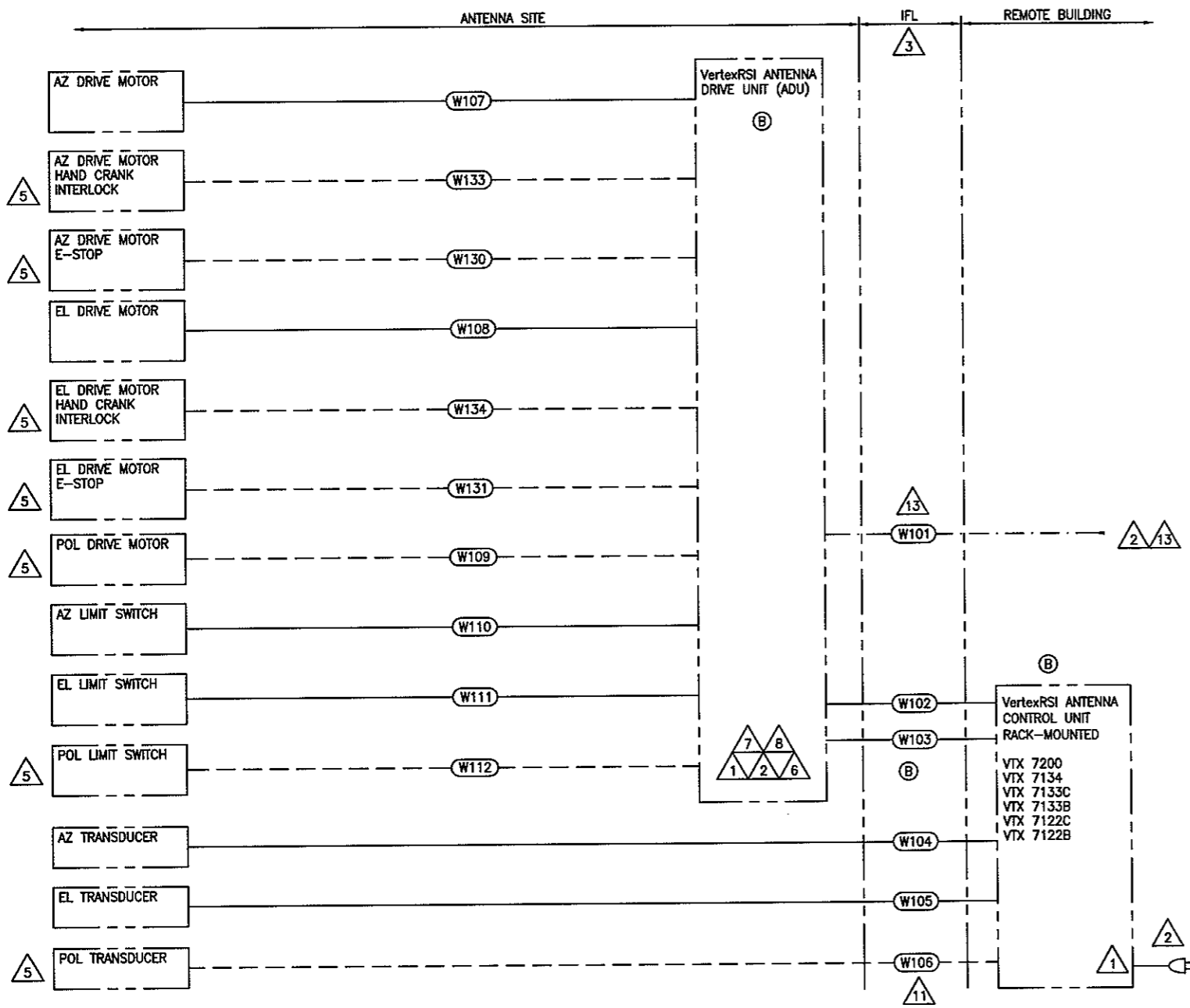
JOB#: 9708 PENDING: REV

REVISION: B 041021 10/28/04 JD/BS OLD CAT#: NEW 07/29/96 JED/GPR SIZE: D DWG CAT: I ID: JED

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
001	E12085-19	170.00		FT	R	P	S	CBL,TRAY #18AWG 4C	CABLE			
002	E12085-19	60.00		FT	R	P	S	CBL,TRAY #18AWG 4C	CABLE			
003	E12160-19	90.00		FT	R	P	S	CBL,TRAY #12AWG 4C	CABLE			
004	E16360-19			FT	R	P	S	CBL #22AWG 3PR	CABLE	NONE		00
005	E16450-19			FT	R	P	S	CBL #22AWG 25C 150V	CABLE			
006	E16360-19			FT	R	P	S	CBL #22AWG 3PR	CABLE	NONE		00
007	CTB055	32.00		EA	R	P	S	SPLICE CAP TELEPHONE CBL				
007S	CTB055	3.00		EA	R	P	S	SPLICE CAP TELEPHONE CBL				
008	P74030-19	8.00		EA	R	P	S	FORK CRIMP #12-10AWG #10 STUD				
008S	P74030-19	2.00		EA	R	P	S	FORK CRIMP #12-10AWG #10 STUD				
009	P74006-19	4.00		EA	R	P	S	CONN BUTT CRIMP #16-14AWG	CONN	NONE		00
009S	P74006-19	1.00		EA	R	P	S	CONN BUTT CRIMP #16-14AWG	CONN	NONE		00
010	P74009-19	8.00		EA	R	P	S	BUTT CRIMP #12-10AWG	CONN			
010S	P74009-19	2.00		EA	R	P	S	BUTT CRIMP #12-10AWG	CONN			
012	P70080-1	4.00		EA	R	P	S	CORD GRIP 1/2NPT CG-1850	CONN	NONE		00
012S	P70080-1	1.00		EA	R	P	S	CORD GRIP 1/2NPT CG-1850	CONN	NONE		00
013	P70080-1	5.00		EA	R	P	S	CORD GRIP 1/2NPT CG-1850	CONN	NONE		00
013S	P70080-1	1.00		EA	R	P	S	CORD GRIP 1/2NPT CG-1850	CONN	NONE		00
014	P70080-1	1.00		EA	R	P	S	CORD GRIP 1/2NPT CG-1850	CONN	NONE		00
015	P70100-1	1.00		EA	R	P	S	CORD GRIP 1/2NPT CG-3150	CONN	NONE		00
016	M90461-19	60.00		EA	R	P	S	TIE CBL 14 1/2		NONE		00
017	E93120-19	4.00		EA	R	P	S	RING FORK #18-14AWG #8 STUD				
017S	E93120-19	1.00		EA	R	P	S	RING FORK #18-14AWG #8 STUD				
018	F34200-19	4.00		EA	R	P	S	BSHG RDCR THD 3/4M X 1/2F	BSHG			
018S	F34200-19	1.00		EA	R	P	S	BSHG RDCR THD 3/4M X 1/2F	BSHG			
020	P99955-19	20.00		EA	R	P	S	SCR TEKS #10-16 X 3/4 SS410 W/ZINC PL	SCR	ZINC		
021	P68097-19	20.00		EA	R	P	S	CLAMP CUSHIONED LOOP 0.31				
024	F005027			FT	R	P	S	CBL #24AWG 2PR IS 300V RS422	CABLE	NONE		00
025	M93105-19	1.00		EA	R	P	S	CBL MARKER SELF LAM 1 X 3/4		NONE		00
031	P74035-19	12.00		EA	R	P	S	FORK CRIMP #22-18AWG #8 STUD				
031S	P74035-19	2.00		EA	R	P	S	FORK CRIMP #22-18AWG #8 STUD				
033	E49660-1	2.00		EA	R	P	S	SEALANT DUCT SEAL 1LB BOX				
999	GENERIC CBL-MRP	9,999.00		FT	R	P	P	TBD - GENERIC ITEM FOR CABLE.				

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	04/30/97	JED/GPR
B	EC 04-1021	10/28/04	JED/BHS



- NOTES:
- ① REFER TO ELECTRICAL WIRING SCHEMATIC DRAWING FOR PROPER CABLE CONNECTIONS. INSTALL PER LOCAL CODES AND PRACTICES. THIS MAY IMPLY THE USE OF ISOLATORS OR SPECIAL DISCONNECTS, WHICH ARE THE RESPONSIBILITY OF OTHERS. REFER TO VertexRSI CONTROLLER OPERATION AND MAINTENANCE MANUALS FOR EQUIPMENT START-UP AND OPERATIONAL REQUIREMENTS.
 - ② VOLTAGE AND FREQUENCY ARE CONTRACT SPECIFIC AS THE SITE DICTATES. INSTALLER SHALL VERIFY EQUIPMENT RATINGS AGAINST AVAILABLE SITE POWER. INSTALLER TO VERIFY SITE VOLTAGE AND PHASE ROTATION PRIOR TO INSTALLATION. CUSTOMER SUPPLIED POWER FEEDER TO THE ANTENNA DRIVE UNIT SHALL BE 3-PHASE, 4-WIRE PLUS GROUND.
CUSTOMER SUPPLIED POWER TO RACK EQUIPMENT SHALL BE 1-PHASE, 2-WIRE PLUS GROUND. AN ELECTRICAL CORD (PIGTAIL) IS PROVIDED WITH THE RACK EQUIPMENT. CUSTOMER TO PROVIDE PLUG AND CORRESPONDING RECEPTACLE AT THE RACK.
 - ③ CUSTOMER SUPPLIED CONDUITS. REFER TO THE VertexRSI FOUNDATION CONDUIT INSTALLATION FOR CONDUIT STUB-UP LOCATIONS AND INSTALLATION REQUIREMENTS.
 - ④ PROVIDE SERVICE LOOP FOR ROTATING EQUIPMENT.
 - ⑤ CONFIGURATION OPTIONS DETERMINED BY CONTRACT REQUIREMENTS. CABLING IS FURNISHED AND INSTALLED AS THE CONTRACT REQUIRES.
 - ⑥ LABEL ALL CABLES AT EACH END WITH PROPER CABLE NUMBERS USING WIRE MARKERS (ITEM 025).
 - ⑦ COLOR TAG ALL GROUND AND NEUTRAL WIRES PER LOCAL CODES AND PRACTICES.
 - ⑧ PULL CABLES THROUGH UNDERGROUND CONDUIT FROM ANTENNA DRIVE UNIT (ADU) TO CABLE TOWER. ROUTE CABLE FROM THE TOWER TO THE ANTENNA PEDESTAL USING THE APPROPRIATE AZIMUTH AXIS CROSSOVER CONDUIT. REFER TO VertexRSI CONDUIT INSTALLATION DRAWING FOR ACS CONDUIT INSTALLATION. SUPPORT CABLES USING CABLE TIES (ITEM 016) AS REQUIRED.
 - ⑨ INSTALL CABLES FROM THE ANTENNA PEDESTAL TO THE REFLECTOR USING THE APPROPRIATE ELEVATION AXIS CROSSOVER CONDUIT. REFER TO THE VertexRSI CONDUIT DRAWING FOR ACS CONDUIT INSTALLATION. ROUTE CABLES IN CONDUIT TO THE HUB.
 - ⑩ SUPPORT CABLES IN HUB AS REQUIRED USING LOOP CLAMPS AND SCREWS (ITEMS 020 AND 021).
 - ⑪ CABLE LENGTHS TO BE DETERMINED BY THE CUSTOMER'S IFL REQUIREMENTS. REFER TO CABLE SCHEDULE FOR APPROXIMATE LENGTHS. INSTALLER TO VERIFY LENGTHS PRIOR TO INSTALLATION.
 - ⑫ (C000) INDICATES CONDUIT IDENTIFICATION NUMBER. REFER TO CONDUIT SCHEDULE FOR SIZE AND FILL.
(W000) INDICATES CABLE IDENTIFICATION NUMBER. REFER TO CABLE SCHEDULE FOR DESCRIPTION.
 - ⑬ CABLE TO BE SIZED AND SUPPLIED BY CUSTOMER ACCORDING TO VOLTAGE DROP AND CURRENT DRAW. REFERENCE VertexRSI POWER REQUIREMENTS DOCUMENT FOR CORRECT VOLTAGE AND CURRENT DRAW.
 - ⑭ SEAL CONDUITS WITH DUCT SEAL (ITEM 033) AT BOTH ENDS. THIS SEAL IS TO PREVENT AN ACCUMULATION OF CONDENSATION IN THE CONTROLLER.
 - ⑮ TRIM EXCESS LENGTH FROM ALL CABLES TO ENSURE SHORTEST POSSIBLE RUN (ITEMS 001 THRU 006 AND 032 AS APPLICABLE).
 - ⑯ CABLE W103 IS ONLY REQUIRED FOR SYSTEMS THAT HAVE A PMCU WITH ANTENNA POSITION DISPLAY.

CABLE BLOCK DIAGRAM
ANTENNA CONTROL SYSTEM

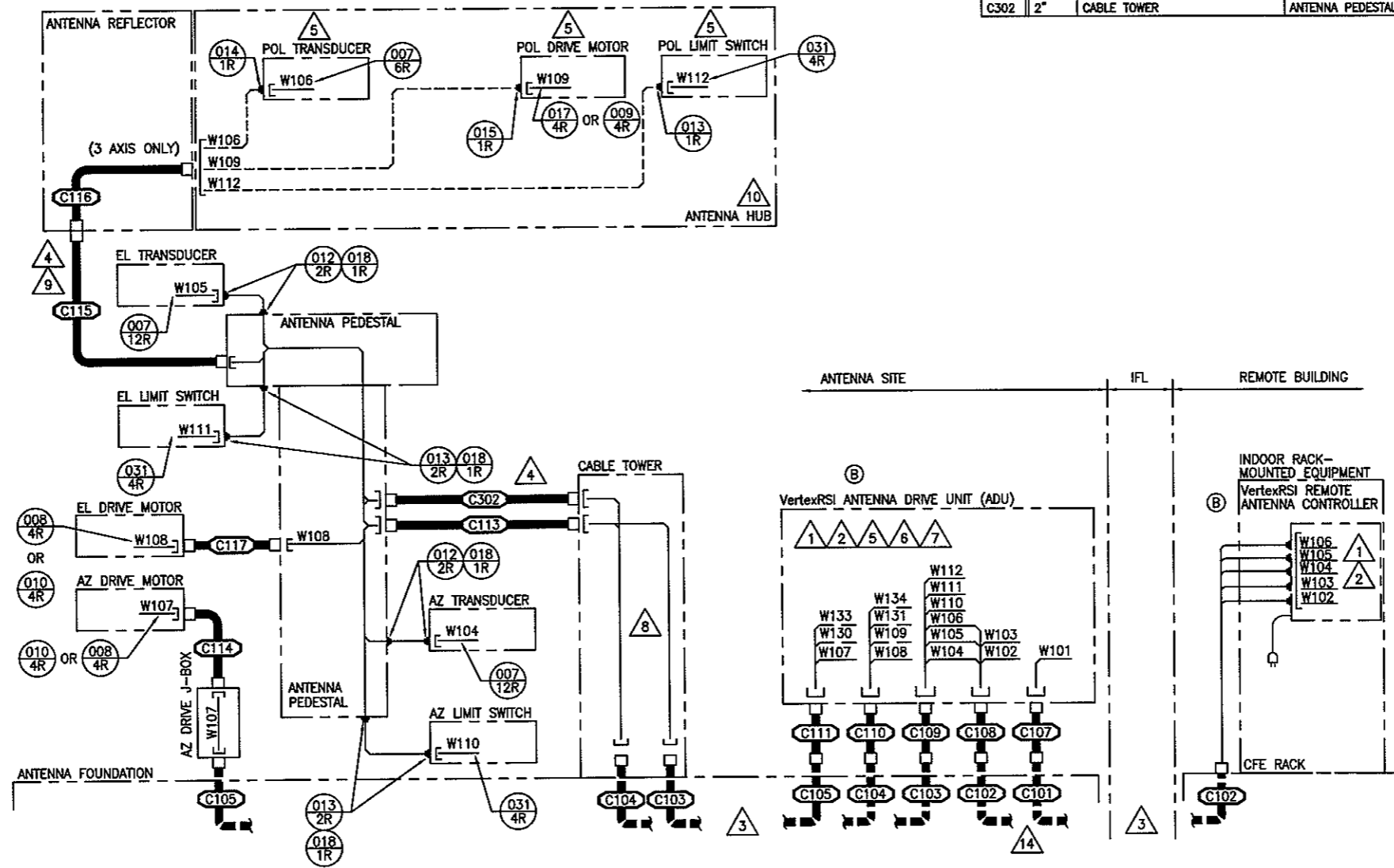
DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO				VertexRSI CONFIDENTIAL AND PROPRIETARY			
UNLESS OTHERWISE SPECIFIED 1 INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DETAILS ± 1/16 ASSY'S ± 1/8 DECIMALS: .XX ± .03 .XXX ± .005 ANGLES ± 1°		ADDITIONAL APPROVALS	DATE	APPROVALS	DATE	 ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA			
UNLESS OTHERWISE SPECIFIED 1 PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.		DESIGN		DRW	04/30/97	CABLE INSTALLATION, ACS VERTEX CONTROLLER MODEL 8/9/9.3KP			
TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.		M/ECHANICAL		CHEKED	07/02/97				
		STRUCUTURAL		DESIGNER	04/30/97	CODE NO. NO.	SIZE	DWG NO.	REV
		ELECTRICAL	07/16/97	MANUFACTURING	07/21/97	1GD22	D	012503	B
				PROJECT	07/18/97	SCALE	CONTRACT NO.	SHEET	OF
				PRODUCT MGR	07/18/97	1/1	9708	1	3
				DL BEAKLEY					

EA
- EST. WEIGHT -

DFORM101

CABLE SCHEDULE - ANTENNA CONTROL SYSTEM				VertexRSI CONTROLLERS			
ID#	CABLE DESCRIPTION	TERMINATION POINT	ORIGINATION POINT	FUNCTION	ITEM#	LENGTH	NOTES
W101	5 CONDUCTOR CABLE	VTX ANTENNA DRIVE UNIT	CUSTOMER PWR SOURCE	OU-POWER	CFE	IFLP	2,11,13,15
W102	-SEE BOM FOR DETAILS-	VTX ANTENNA DRIVE UNIT	VTX ACS REMOTE UNIT	OU-CONTROL	005	IFLC	11,15
W103	-SEE BOM FOR DETAILS-	VTX ANTENNA DRIVE UNIT	VTX ACS REMOTE UNIT	PMCU-DISPLAY	024	IFLC	11,15,16
W104	-SEE BOM FOR DETAILS-	TRANSDUCER - AZIMUTH	VTX ACS REMOTE UNIT	SIGNAL-POSITION	004	IFLC+30'	11,15
W105	-SEE BOM FOR DETAILS-	TRANSDUCER - ELEVATION	VTX ACS REMOTE UNIT	SIGNAL-POSITION	004	IFLC+50'	11,15
W106	-SEE BOM FOR DETAILS-	TRANSDUCER - POLARIZATION	VTX ACS REMOTE UNIT	SIGNAL-POSITION	006	IFLC+60'	5,11,15
W107	-SEE BOM FOR DETAILS-	DRIVE MOTOR - AZ	VTX ANTENNA DRIVE UNIT	DRIVE POWER	003	40'	15
W108	-SEE BOM FOR DETAILS-	DRIVE MOTOR - EL	VTX ANTENNA DRIVE UNIT	DRIVE POWER	003	50'	15
W109	-SEE BOM FOR DETAILS-	DRIVE MOTOR - POLARIZATION	VTX ANTENNA DRIVE UNIT	DRIVE POWER	002	60'	5,15
W110	-SEE BOM FOR DETAILS-	LIMIT SWITCH - AZIMUTH	VTX ANTENNA DRIVE UNIT	LIMIT CONTROL	001	50'	15
W111	-SEE BOM FOR DETAILS-	LIMIT SWITCH - ELEVATION	VTX ANTENNA DRIVE UNIT	LIMIT CONTROL	001	60'	15
W112	-SEE BOM FOR DETAILS-	LIMIT SWITCH - POLARIZATION	VTX ANTENNA DRIVE UNIT	LIMIT CONTROL	001	60'	5,15
W130	-SEE BOM FOR DETAILS-	E-STOP - AZ	VTX ANTENNA DRIVE UNIT	DRIVE CONTROL	032	45'	5,15
W131	-SEE BOM FOR DETAILS-	E-STOP - EL	VTX ANTENNA DRIVE UNIT	DRIVE CONTROL	032	55'	5,15
W133	-SEE BOM FOR DETAILS-	HAND CRANK - AZ	VTX ANTENNA DRIVE UNIT	DRIVE CONTROL	001	45'	5,15
W134	-SEE BOM FOR DETAILS-	HAND CRANK - EL	VTX ANTENNA DRIVE UNIT	DRIVE CONTROL	001	55'	5,15

CONDUIT SCHEDULE - ANTENNA CONTROL SYSTEM				MODEL 8/9/9.3 KP	
ID#	SIZE	TERMINATION POINT	ORIGINATION POINT	CONDUIT FILL	NOTES
C101	2"	FNDTN @ ANTENNA DRIVE UNIT	CUSTOMER POWER SOURCE	W101	3
C102	2"	FNDTN @ ANTENNA DRIVE UNIT	ANTENNA CONTROL SOURCE	W102,W103,W104,W105,W106	3
C103	2"	FNDTN @ CABLE TOWER	FNDTN @ ANTENNA DRIVE UNIT	W104,W105,W106,W110,W111,W112	3
C104	2"	FNDTN @ CABLE TOWER	FNDTN @ ANTENNA DRIVE UNIT	W108,W109,W131,W132,W134	3
C105	1 1/2"	AZ DRIVE MOTOR J-BOX	FNDTN @ ANTENNA DRIVE UNIT	W107,W130,W133	3
C107	2"	BOTTOM OF ANTENNA DRIVE UNIT	C101 STUB-UP @ ANTENNA DRIVE UNIT	W101	-
C108	2"	BOTTOM OF ANTENNA DRIVE UNIT	C102 STUB-UP @ ANTENNA DRIVE UNIT	W102,W103,W104,W105,W106	-
C109	2"	BOTTOM OF ANTENNA DRIVE UNIT	C103 STUB-UP @ ANTENNA DRIVE UNIT	W104,W105,W106,W110,W111,W112	-
C110	2"	BOTTOM OF ANTENNA DRIVE UNIT	C104 STUB-UP @ ANTENNA DRIVE UNIT	W108,W109,W131,W134	-
C111	1 1/2"	BOTTOM OF ANTENNA DRIVE UNIT	C105 STUB-UP @ ANTENNA DRIVE UNIT	W107,W130,W133	-
C113	2"	CABLE TOWER	ANTENNA PEDESTAL (LOWER)	W104,W105,W106,W110,W111,W112	-
C114	1"	AZIMUTH DRIVE MOTOR	AZ DRIVE MOTOR J-BOX	W107	-
C114A	1"	AZIMUTH DRIVE MOTOR	AZ DRIVE MOTOR J-BOX	W107,W133	-
C115	2"	ANTENNA REFLECTOR RADIAL	ANTENNA PEDESTAL (UPPER)	W106,W109,W112	-
C116	2"	ANTENNA REFLECTOR RADIAL	ANTENNA HUB	W106,W109,W112	-
C117	1"	ELEVATION DRIVE MOTOR	ANTENNA PEDESTAL	W108	-
C117A	1"	ELEVATION DRIVE MOTOR	ANTENNA PEDESTAL	W108,W134	-
C130	3/4"	AZ DRIVE MTR E-STOP	AZ DRIVE MOTOR J-BOX	W130	-
C131	3/4"	EL DRIVE MOTOR E-STOP	ANTENNA PEDESTAL	W131	-
C302	2"	CABLE TOWER	ANTENNA PEDESTAL (LOWER)	W108,W109,W131,W134	-



ROUTING DIAGRAM
ANTENNA CONTROL SYSTEM

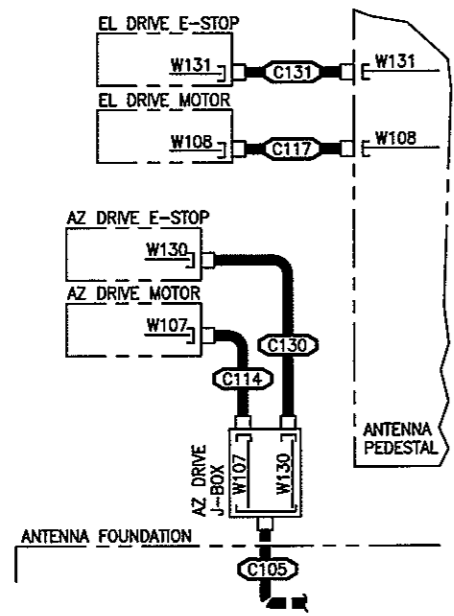
VertexRSI CONFIDENTIAL AND PROPRIETARY

VertexRSI

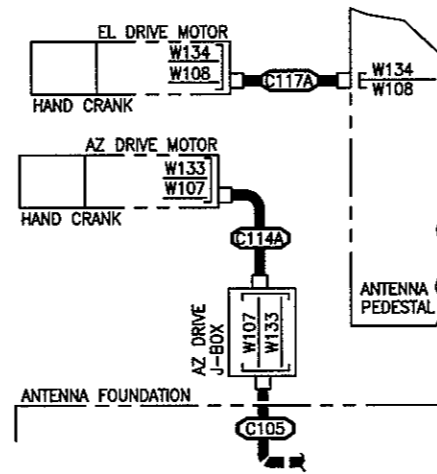
ANTENNA PRODUCTS DIVISION
2500 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

CODE NO.	SIZE	DWG NO.	REV
1GD22	D	012503	B
SCALE	CONTRACT NO.	SHEET	OF
1/1	9708	2	3

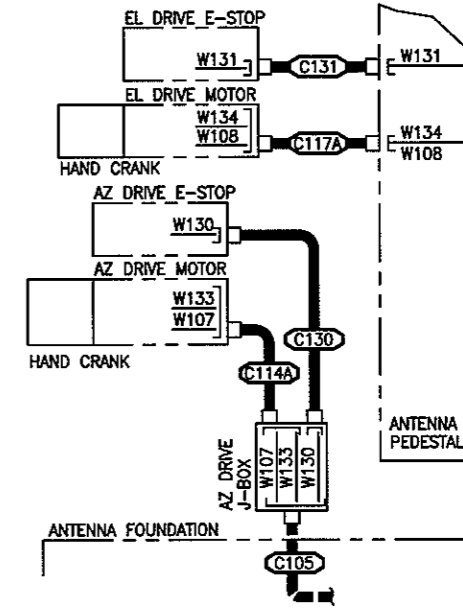
DF094102



E-STOP CONFIGURATION \triangle
ROUTING DIAGRAM



HAND CRANK CONFIGURATION \triangle
ROUTING DIAGRAM



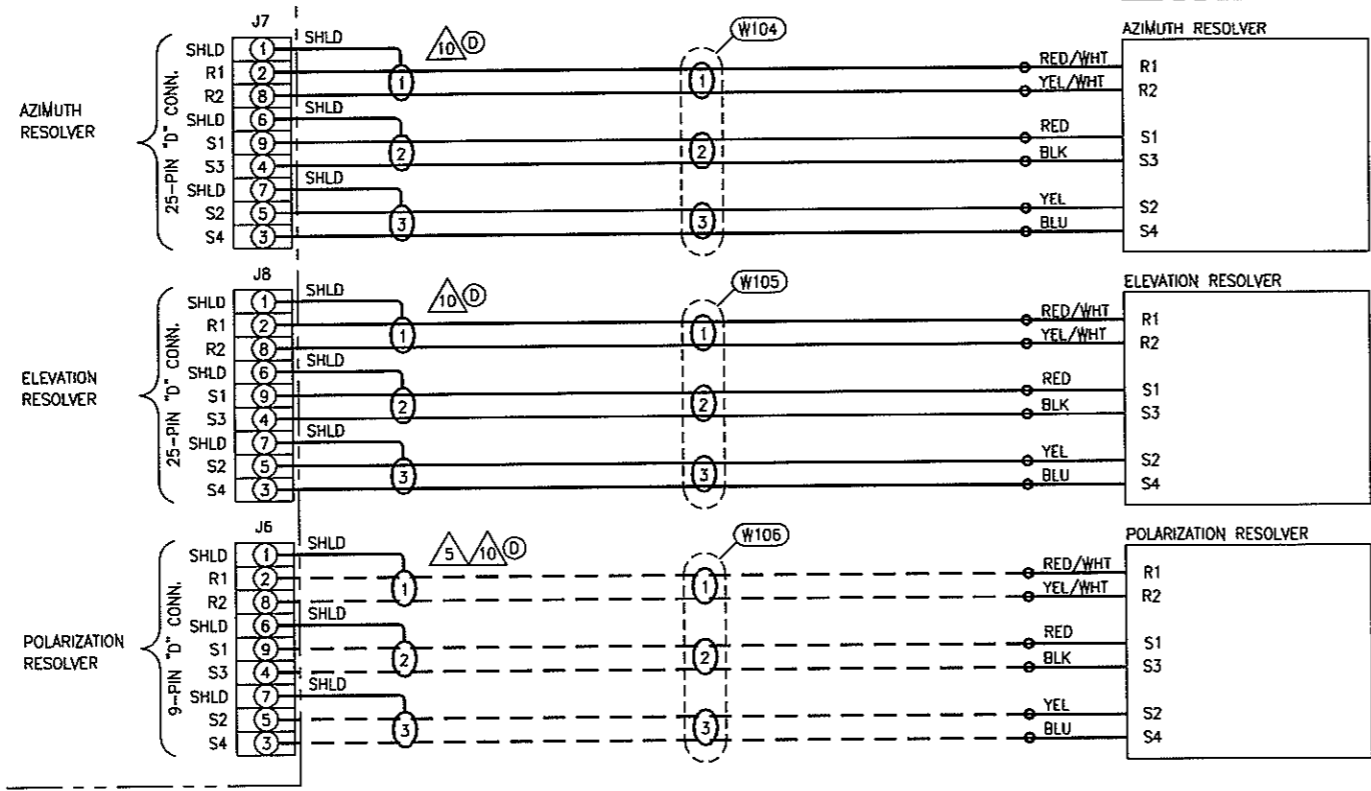
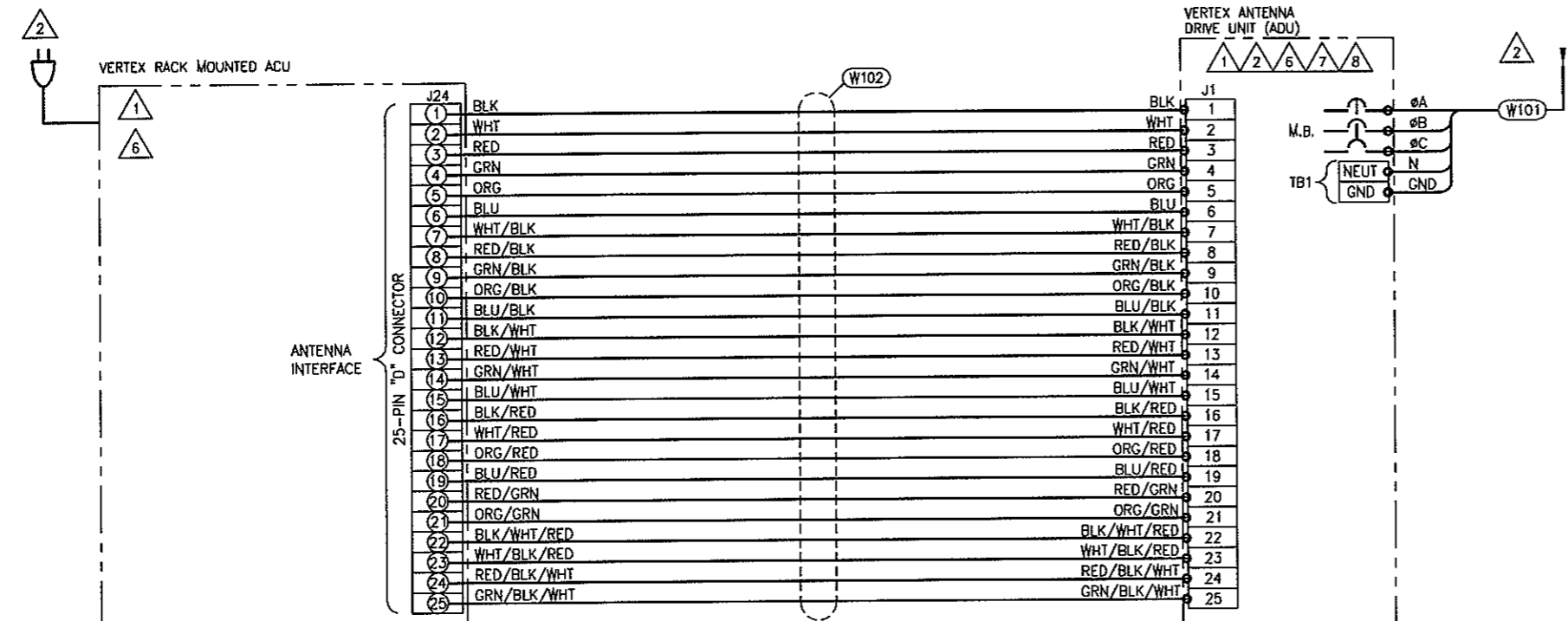
E-STOP/HAND CRANK CONFIGURATION \triangle
ROUTING DIAGRAM

DFORM 102

VertexRSI CONFIDENTIAL AND PROPRIETARY

		ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
CODE NO. 1GD22	SIZE D	DWG NO. 012503	REV B
SCALE 1/1	CONTRACT NO. 9708	SHEET 3 OF 3	

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASELINE, REPLACES 370366	06/11/93	TB
B	REVISED PER ECR #96-1106	07/19/96	JED/HLK
C	REVISED PER ECR #97-0255	11/22/96	JED/HLK
D	REVISED PER ECR #97-0823	04/16/97	KBS/HLK



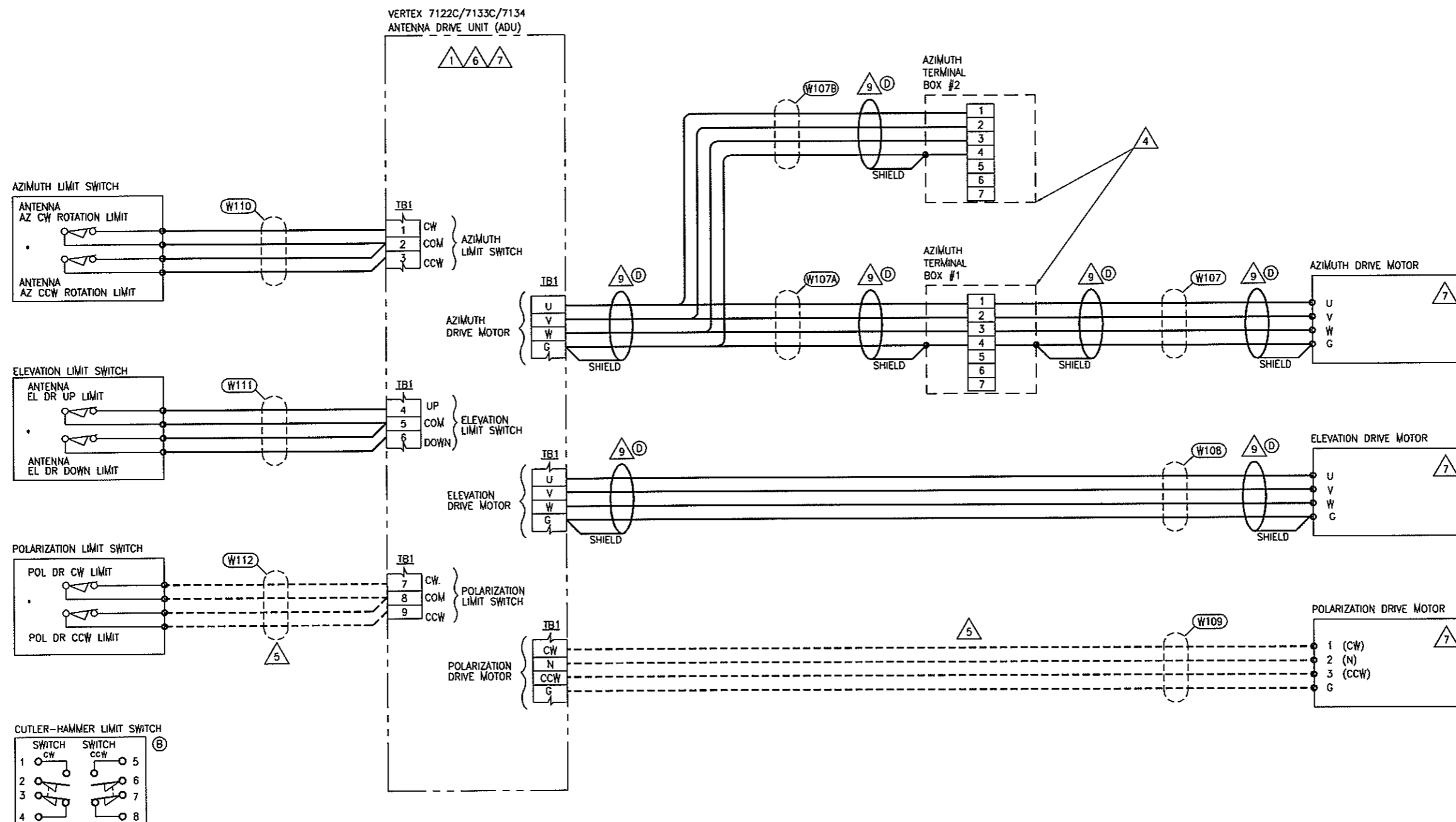
- NOTES:
1. REFERENCE VERTEX CONTROLLER O & M MANUALS FOR START-UP & OPERATING INSTRUCTIONS.
 2. VOLTAGE & FREQUENCY ARE CONTRACT SPECIFIC AS THE SITE DICTATES. INSTALLER SHALL VERIFY EQUIPMENT RATING AGAINST AVAILABLE POWER AT THE SITE. INSTALLER TO VERIFY SITE VOLTAGE & PHASE ROTATION PRIOR TO INSTALLATION.

CUSTOMER SUPPLIED POWER FEEDER TO THE OUTDOOR MOTOR CONTROLLER SHALL BE 3-PHASE, 4-WIRE, PLUS GROUND.

CUSTOMER SUPPLIED POWER TO RACK EQUIPMENT SHALL BE 1-PHASE, 2-WIRE, PLUS GROUND. ELECTRICAL CORD IS PROVIDED WITH THE EQUIPMENT (2-WIRE PLUS GROUND). CUSTOMER TO PROVIDE PLUG & CORRESPONDING RECEPTACLE AT EQUIPMENT RACK.
 3. REFERENCE VERTEX ACS ELECTRICAL CABLE DRAWING FOR CABLE DESCRIPTION & INSTALLATION.
 4. AZIMUTH TERMINAL BOXES ARE INSTALLED ONLY ON ANTENNAS WHICH HAVE MULTIPLE AZIMUTH JACK POSITIONS.
 5. POLARIZATION CABLING IS INSTALLED AS REQUIRED BY CONTRACT. REFERENCE ACS TOP ASSEMBLY.
 6. LABEL ALL CABLES AT EACH END WITH PROPER CABLE NUMBERS USING WIRE MARKERS SUPPLIED WITH ACU INSTALLATION.
 7. COLOR TAG ALL GROUND WIRES WITH TAPE OR SLEEVES AS REQUIRED BY LOCAL CODES AND PRACTICES. REFERENCE VERTEX SPEC 400-0304 FOR PROPER WIRE MARKING DESIGNATIONS.
 8. COLOR TAG ALL NEUTRAL WIRES WITH TAPE OR SLEEVES AS REQUIRED BY LOCAL CODES AND PRACTICES. REFERENCE VERTEX SPEC 400-0304 FOR PROPER WIRE MARKING DESIGNATIONS.
 9. WHEN SHIELDED MOTOR CABLES ARE PROVIDED ATTACH SHIELDS TO GROUND AT THE ANTENNA DRIVE UNIT, AT THE TERMINAL BOXES AND AT THE MOTOR.
 10. RESOLVER CABLE SHIELDS MUST BE TIED TO GROUND ONLY AT THE RACK MOUNTED ANTENNA CONTROL UNIT.

DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: DETAILS ± 1/16 .XX ± .03 ± 1° ASSY'S ± 1/8 .XXX ± .005	REFERENCE SEPARATE BOM FOR SPECIFIC INFO		VertexRSI CONFIDENTIAL AND PROPRIETARY	
	ADDITIONAL APPROVALS MECHANICAL N/R STRUCTURAL N/R ELECTRICAL M. BALLY	DATE 07/23/93	APPROVALS DRAWN: T. BRANTLEY CHECKED: M. BALLY DESIGNED: M. BALLY PROJECT MGR: J.D. HILL DESIGN N/R	DATE 06/11/93 07/23/93 07/23/93 07/23/93
DRILL HOLE TOLERANCE (DRILL) .013 thru .125 = +.005/- .001 .126 thru .250 = +.007/- .003 .251 thru .750 = +.009/- .005 .751 thru 1.000 = +.009/- .004 1.001 thru 2.000 = +.012/- .005	EXPORT CONTROL WARNING - Do not disclose this document or its contents to non-U.S. citizens, or transmit this document or its contents outside the United States without the written permission of Vertex Communications Corporation and required U.S. Government approvals.	MANUFACTURING N/R PROJECT J. JOHNSON PRODUCT MGR J.D. HILL	UNLESS OTHERWISE SPECIFIED: PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.	ROOT ID. NO. 1GD22 SIZE D DWG NO. 001402 REV D
CLEARANCE HOLE TOLERANCE (CH) +.03125/- .00000	SCALE: 1/1	CONTRACT NO. 9318	SHEET 1 OF 2	

020901D1



* NORMALLY CLOSED CONTACT. OPENS WHEN FULL LIMIT IS REACHED.

VertexRSI CONFIDENTIAL AND PROPRIETARY

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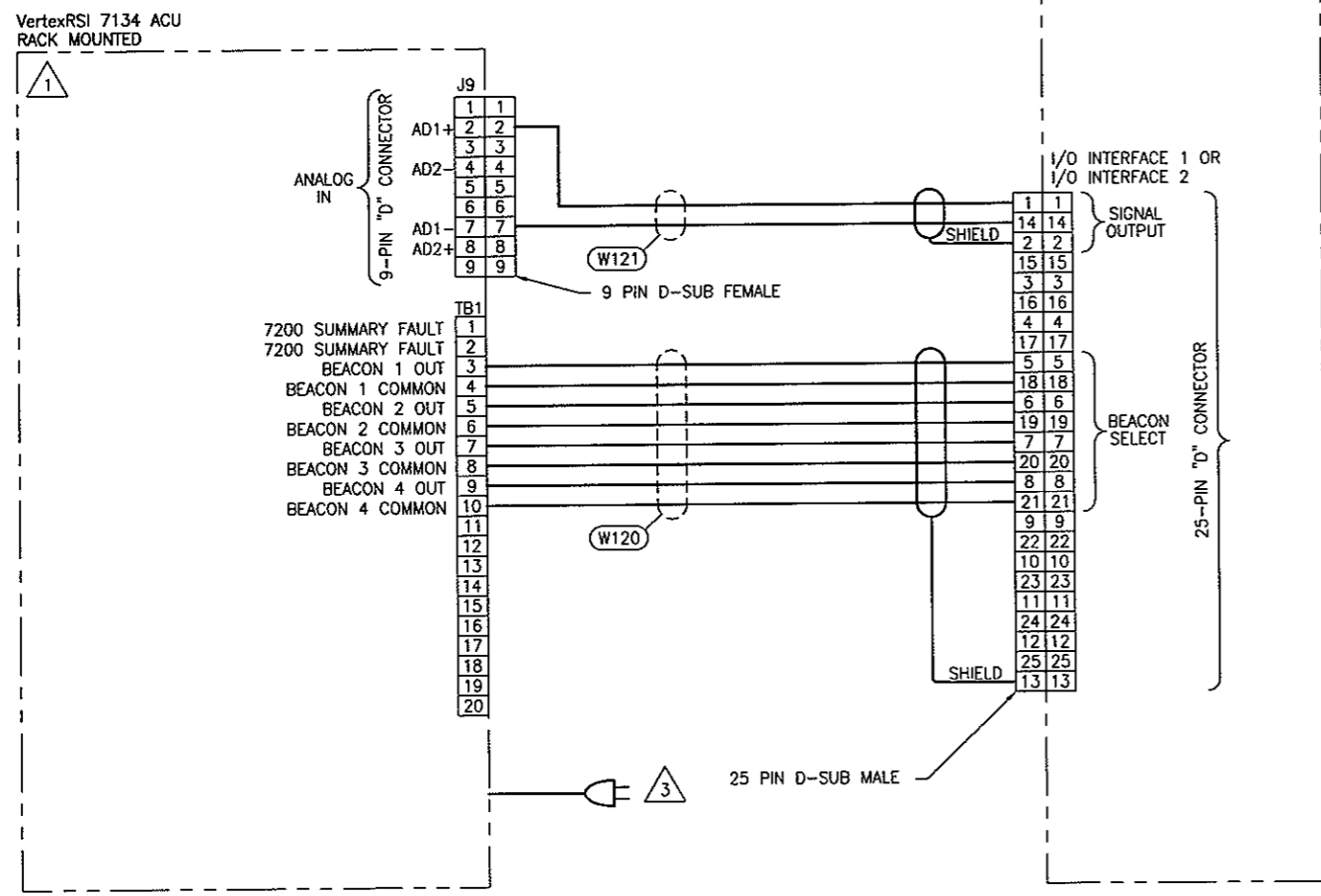
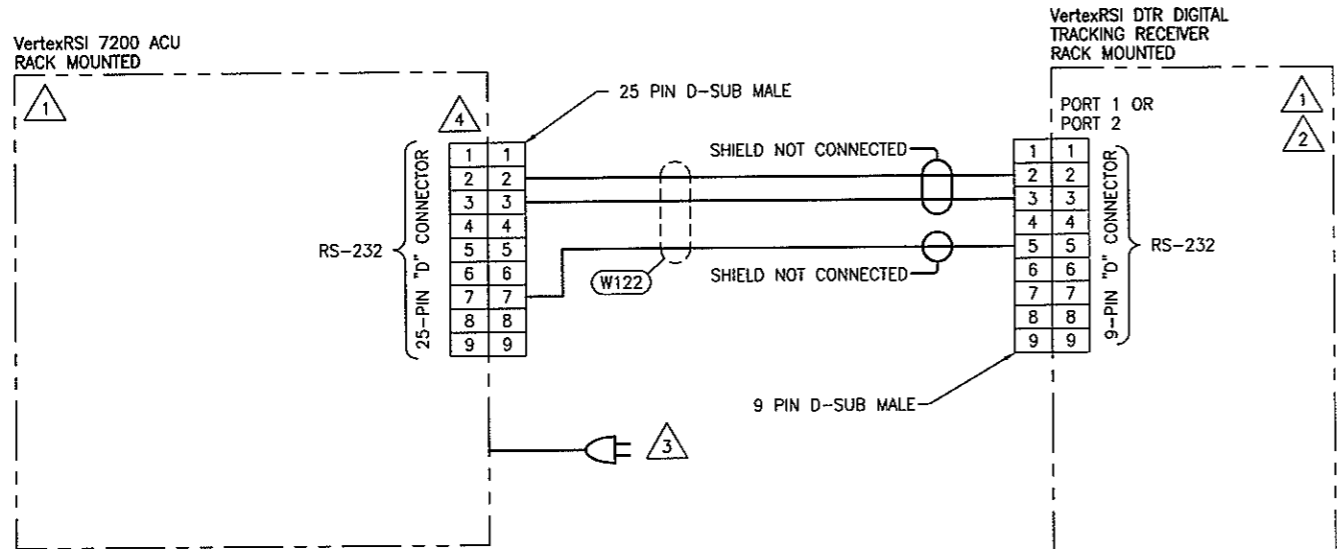


ANTENNA PRODUCTS
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

CODE NO. NO.	SIZE	DRG NO.	REV
1GD22	D	001402	D
SCALE: 1/1	CONTRACT NO. 9318	SHEET 2 OF 2	

02FORM102

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	06/23/00	KBS/JED
A1	EC 04-0344	04/14/04	KBS/KLL



- NOTES:
1. REFER TO TRACKING RECEIVER OPERATION AND MAINTENANCE MANUAL FOR START-UP AND OPERATING INSTRUCTIONS.
 2. CABLES W120, W121 AND W122 ARE SUPPLIED WITH THE RECEIVER AND ARE EQUIPPED WITH PREWIRED MATING CONNECTORS FOR TERMINATIONS TO EQUIPMENT. (W120 AND W121 FURNISHED WITH 7134 SYSTEM, W122 FURNISHED WITH 7200 SYSTEM)
 3. VOLTAGE AND FREQUENCY ARE CONTRACT SPECIFIC AS THE SITE DICTATES. INSTALLER SHALL VERIFY EQUIPMENT RATING AGAINST AVAILABLE POWER AT THE SITE. INSTALLER TO VERIFY SITE VOLTAGE PRIOR TO INSTALLATION.

CUSTOMER SUPPLIED POWER TO RACK EQUIPMENT SHALL BE 1-PHASE, 2-WIRE, PLUS GROUND. ELECTRICAL CORD IS PROVIDED WITH THE EQUIPMENT (2-WIRE PLUS GROUND). CUSTOMER TO PROVIDE PLUG AND CORRESPONDING RECEPTACLE AT EQUIPMENT RACK.
 4. REFER TO 7200 OPERATION AND MAINTENANCE MANUAL FOR RS-232 PORT DESIGNATIONS.

DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO		VertexRSI CONFIDENTIAL AND PROPRIETARY	
UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: DETAILS ± 1/16 .XX ± .03 ASSY'S ± 1/8 .XXX ± .005 ANGLES ± 1°		ADDITIONAL APPROVALS	DATE	APPROVALS	DATE
UNLESS OTHERWISE SPECIFIED ! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.		DESIGN KB STODDARD	07/06/00	DRAWN KB STODDARD	06/23/00
TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.		MECHANICAL		CHECKED JE DINES	06/29/00
		STRUCTURAL		DESIGNER KB STODDARD	06/23/00
		ELECTRICAL		MANUFACTURING RC HUGHEY	07/03/00
				PROJECT DE WOODY	07/05/00
				PRODUCT MGR MJ RABENHORST	07/05/00
		VertexRSI		ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
		TITLE:		WIRING SCHEMATIC ACS DIGITAL TRACKING RECEIVER DTR - 7134/7200 ACU	
		CODE ID. NO.	SIZE	DWG NO.	REV
		1GD22	D	023862	A
		SCALE:	1/1	CONTRACT NO.	516713K
				SHEET	1 OF 1

DFORM1D1

EA
- EST. WEIGHT -

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:31:36

CATALOGUE#: 011852-01 PSM: M STATUS: RELEASED DRAWING: D-011852 REV: B

DESCRIPTION: HUB INTG 9KPK LP DUAL TX WR62 CATEGORY: INTEGRAT ENTERED: 4/24/1996
 WG W/WG CLASS: RFSHTX REVISED: 7/29/1997 REV: B
 SUBCLASS: INSTL APPROVED: 9/11/1997
 JOB#: 10663 PENDING: REV
 REVISION: B 971330 8/26/97 CJA/BHS OLD CAT#: A 04/24/96 ADS/DK SIZE: D DWG CAT: ID: ADS

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
001	R004905	2.00			R	C	M	C #B-22SH HDG X 16.00 LG	CHAN		NONE	00
002	P98040-19	2.00			EA	R	P	S L 2-HOLE 90DEG HDG		HDG	NONE	00
003	P98045-19	2.00			EA	R	P	S CLIP L 3-HOLE 90DEG HDG		HDG	NONE	00
004	573430-08	2.00			R	C	M	STRAP SPRT			DETAIL B-000997	A
005	R015376	2.00			R	C	M	WG WR62 STR TX C/C A=3.00	* WR62	ASSY	A-010150	C
007	R016384	1.00			R	C	M	WG WR62 E-E-H BENDS TX CG/CG:*	WR62	FORMED	A-011854	A
008	R016385	1.00			R	C	M	WG WR62 E-E-H BENDS TX CG/CG:*	WR62	FORMED	A-011855	A
009	011520-18	2.00			EA	R	P	P WG WR62 FLEX HIGH PWR JACKETED			A-011520	A
010	R016381	1.00			R	C	M	WG WR62 H-H-BENDS TX CG/CG *:	WR62	FORMED	A-011867	A
011	R016382	1.00			R	C	M	WG WR62 H-H-BENDS TX CG/CG *:	WR62	FORMED	A-011867	A
012	R016377	1.00			R	C	M	WG WR62 E-H BENDS TX CG/CG *:	WR62	FORMED	A-009836	D
013	R016378	1.00			R	C	M	WG WR62 E-H BENDS TX CG/CG *:	WR62	FORMED	A-009836	D
014	471218-04	3.00			R	C	M	SPCR SPRT WR75 WG HGR	SPACER	DETAIL	B-018886	B
015	R004907	1.00			R	C	M	C B22SH X 4.50LG	CHAN		NONE	00
016	R004906	1.00			R	C	M	C #B-22SH X 6.50 +/-0.06LG	CHAN		NONE	00
017	R000301	1.00			R	C	M	C B22SH-HDG X 18LG	CHAN	DETAIL	NONE	00
018	R004903	1.00			R	C	M	C B22SH HDG X 44 LG	CHAN		NONE	00
019	018885-01	2.00			R	C	M	ANGLE SPRT WR62/75 WG HGR	ANGLE	DETAIL	B-018885	B
020	P98110-19	2.00			EA	R	P	S L 90DEG SLOT HDG		HDG	NONE	00
021	P98045-19	2.00			EA	R	P	S CLIP L 3-HOLE 90DEG HDG		HDG	NONE	00
022	018884-01	2.00			R	C	M	ANGLE SPRT WR62/75 WG HGR	ANGLE	DETAIL	B-018884	A
023	P98050-19	2.00			EA	R	P	S BRKT U 5-HOLE HDG		HDG		
024	R001862	2.00			R	C	M	BRKT SPRT WG WR62	FB	6061	B-000954	A
025	370192-01	8.00			R	C	S	HGR WG WR62 RIGID HALF HGR	WR62		B-370192	D
026	R002541	2.00			R	C	M	C B22SH-HDG X 15LG	CHAN		NONE	00
028	F002231	12.00			EA	R	P	S GSRT O-RING WR62 0.905 X 0.141			NONE	00
028S	F002231	2.00			EA	R	P	S GSRT O-RING WR62 0.905 X 0.141			NONE	00
031	H40022-39	96.00			EA	R	P	S FW (BN) #6 X 5/16 SS18-8	FW	SS	NONE	00
031S	H40022-39	10.00			EA	R	P	S FW (BN) #6 X 5/16 SS18-8	FW	SS	NONE	00
032	H30005-39	48.00			EA	R	P	S LW HELICAL #6 SS18-8	LW	SS	NONE	00
032S	H30005-39	5.00			EA	R	P	S LW HELICAL #6 SS18-8	LW	SS	NONE	00
033	H20007-39	48.00			EA	R	P	S NUT HEX #6-32UNC SSF594	HEXNUT	SS	NONE	00
033S	H20007-39	5.00			EA	R	P	S NUT HEX #6-32UNC SSF594	HEXNUT	SS	NONE	00
034	H56085-39	48.00			EA	R	P	S SCR CAP SH #6-32UNC X 3/4 SS	CAPSCR	SS	NONE	00
034S	H56085-39	5.00			EA	R	P	S SCR CAP SH #6-32UNC X 3/4 SS	CAPSCR	SS	NONE	00
035	P99295-19	3.00			EA	R	P	S NUT RETAINER TOP 1/4-20UNC	NUT		NONE	00
035S	P99295-19	1.00			EA	R	P	S NUT RETAINER TOP 1/4-20UNC	NUT		NONE	00
036	H40045-39	11.00			EA	R	P	S FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:31:36

CATALOGUE#: 011852-01

PSM: M

STATUS: RELEASED

DRAWING: D-011852

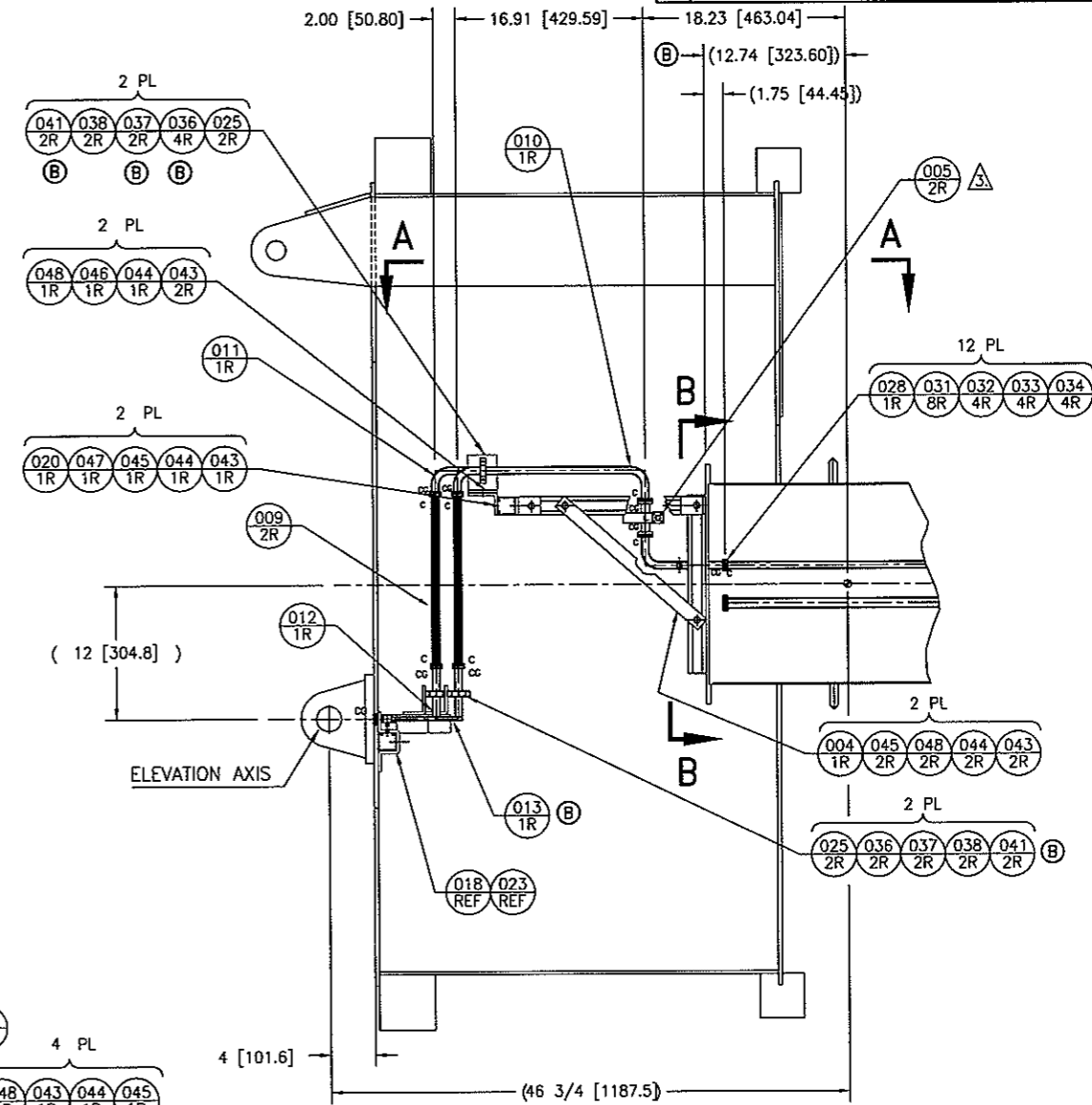
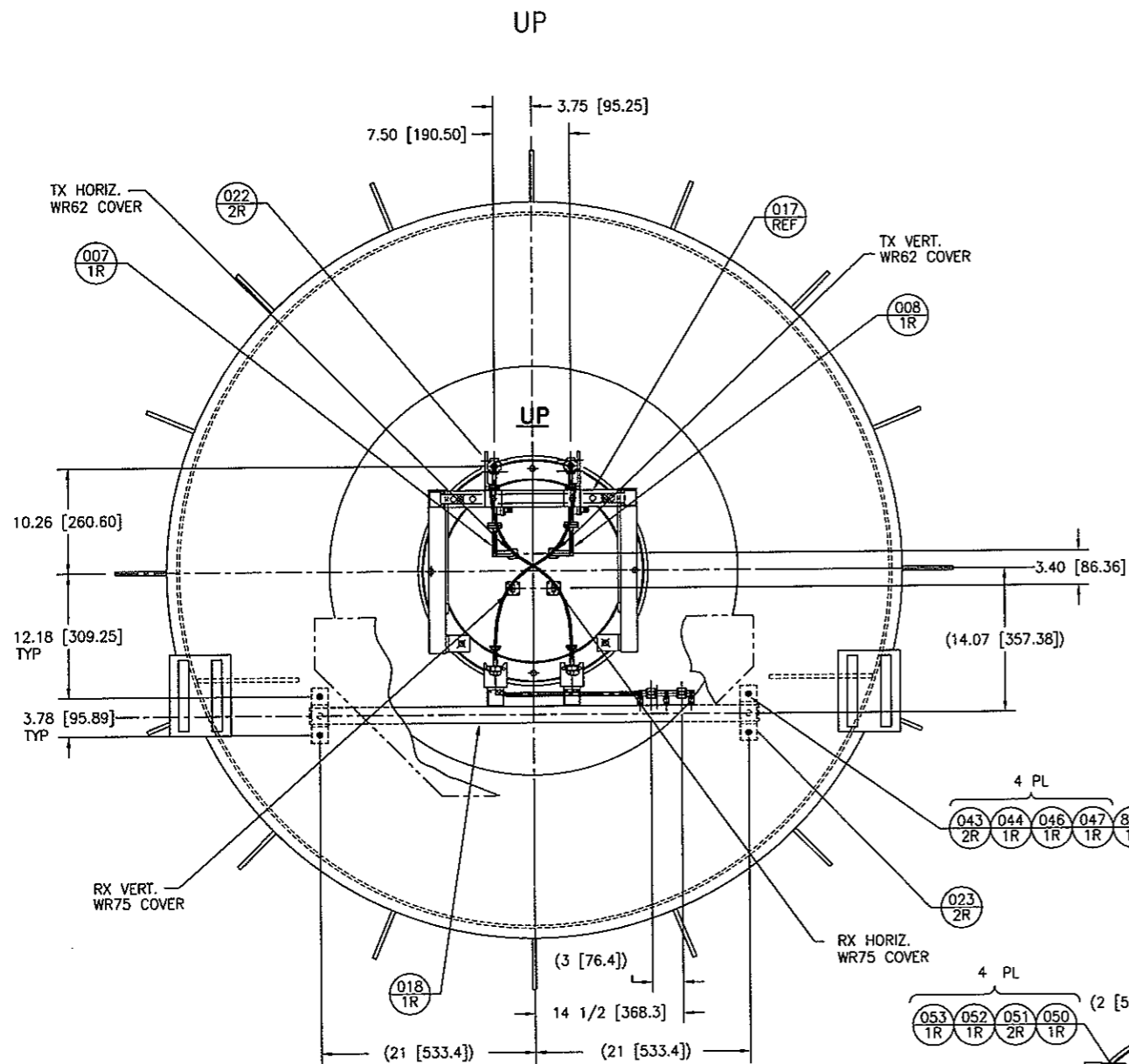
REV: B

BILL OF MATERIAL

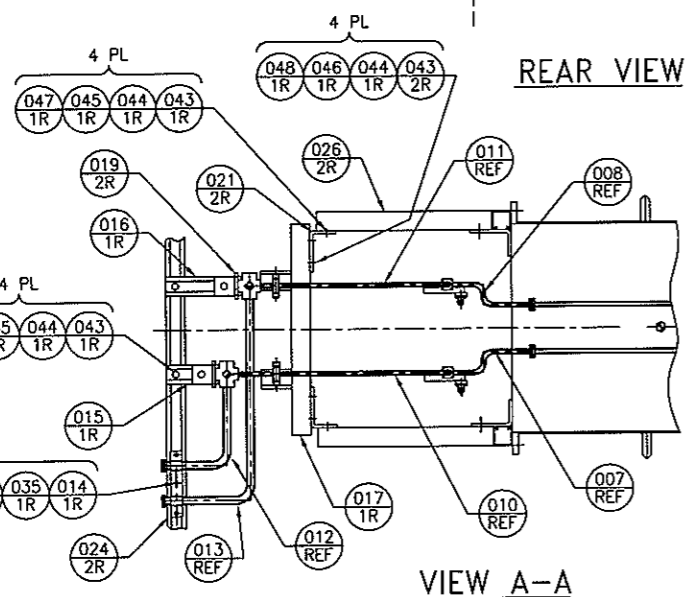
ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV		
036S	H40045-39	2.00			EA	R	P	S	FW (AN)	1/4 X 5/8 SS18-8	FW	SS	NONE	00
037	H30009-39	11.00			EA	R	P	S	LW HELICAL	1/4 SS18-8	LW	SS	NONE	00
037S	H30009-39	1.00			EA	R	P	S	LW HELICAL	1/4 SS18-8	LW	SS	NONE	00
038	H20011-39	8.00			EA	R	P	S	NUT HEX	1/4-20UNC SSF594	HEXNUT	SS	NONE	00
038S	H20011-39	1.00			EA	R	P	S	NUT HEX	1/4-20UNC SSF594	HEXNUT	SS	NONE	00
041	H14012-39	11.00			EA	R	P	S	SCR CAP HH	1/4-20UNC X 2 1/2 SSF593	CAPSCR	SS		
041S	H14012-39	2.00			EA	R	P	S	SCR CAP HH	1/4-20UNC X 2 1/2 SSF593	CAPSCR	SS		
043	H40055-39	38.00			EA	R	P	S	FW (AN)	3/8 X 13/16 SS18-8	FW	SS	NONE	00
043S	H40055-39	4.00			EA	R	P	S	FW (AN)	3/8 X 13/16 SS18-8	FW	SS	NONE	00
044	H30011-39	28.00			EA	R	P	S	LW HELICAL	3/8 SS18-8	LW	SS	NONE	00
044S	H30011-39	3.00			EA	R	P	S	LW HELICAL	3/8 SS18-8	LW	SS	NONE	00
045	P99300-19	18.00			EA	R	P	S	NUT RETAINER TOP	3/8-16UNC	NUT		NONE	00
045S	P99300-19	2.00			EA	R	P	S	NUT RETAINER TOP	3/8-16UNC	NUT		NONE	00
046	H20013-39	10.00			EA	R	P	S	NUT HEX	3/8-16UNC SSF594	HEXNUT	SS	NONE	00
046S	H20013-39	1.00			EA	R	P	S	NUT HEX	3/8-16UNC SSF594	HEXNUT	SS	NONE	00
047	H14159-39	14.00			EA	R	P	S	SCR CAP HH	3/8-16UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
047S	H14159-39	2.00			EA	R	P	S	SCR CAP HH	3/8-16UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
048	H14158-39	14.00			EA	R	P	S	SCR CAP HH	3/8-16UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
048S	H14158-39	2.00			EA	R	P	S	SCR CAP HH	3/8-16UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
050	H14310-39	4.00			EA	R	P	S	SCR CAP HH	1/2-13UNC X 1 3/4 SSF593	CAPSCR	SS	NONE	00
050S	H14310-39	1.00			EA	R	P	S	SCR CAP HH	1/2-13UNC X 1 3/4 SSF593	CAPSCR	SS	NONE	00
051	H40066-39	8.00			EA	R	P	S	FW (AN)	1/2 X 1 1/16 SS18-8	FW	SS		
051S	H40066-39	1.00			EA	R	P	S	FW (AN)	1/2 X 1 1/16 SS18-8	FW	SS		
052	H30013-39	4.00			EA	R	P	S	LW HELICAL	1/2 SS18-8	LW	SS	NONE	00
052S	H30013-39	1.00			EA	R	P	S	LW HELICAL	1/2 SS18-8	LW	SS	NONE	00
053	H20015-39	4.00			EA	R	P	S	NUT HEX	1/2-13UNC SSF594	HEXNUT	SS	NONE	00
053S	H20015-39	1.00			EA	R	P	S	NUT HEX	1/2-13UNC SSF594	HEXNUT	SS	NONE	00
800	R003786	1.00					R	C	M	HUB MOD 9M TX			D-002400	A
900	B-008684				EA	R	P	P	FEED INTFC	8/9M KU-BND FR LP	AFS	SPEC	B-008684	B

END OF BOM:011852-01

REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	-	-

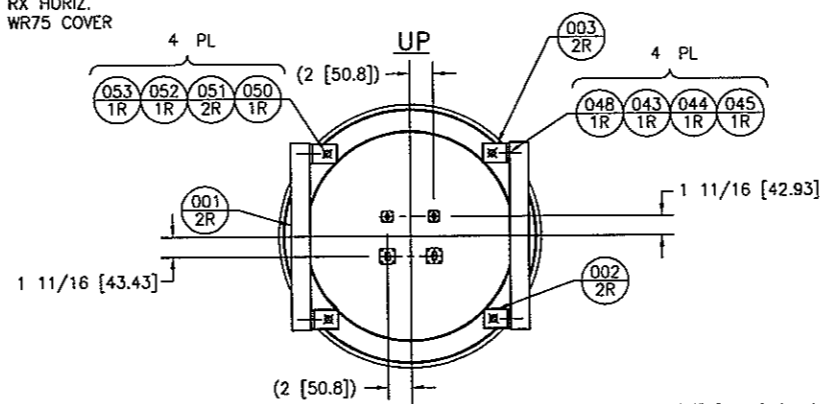


SIDE VIEW



REAR VIEW

VIEW A-A



VIEW B-B

ⓑ 011852-01 WITH WAVEGUIDE
 ⓑ 011852-02 WITH CROSSGUIDE COUPLERS

NOTES:

1. A "C" NEXT TO A FLANGE INDICATES A COVER BUTT FLANGE.
 A "CG" NEXT TO A FLANGE INDICATES A COVER GROOVE FLANGE
 2. DIMENSIONS SHOWN IN BRACKETS [] INDICATE MILLIMETERS.
- ⓑ ⓐ INSTALL CROSSGUIDE COUPLERS W/ARROW POINTING TOWARD TRANSMITTER WHEN REQUIRED.

AVG. LENGTH OF WG		DO NOT SCALE DRAWING		SATCOM Technologies CONFIDENTIAL AND PROPRIETARY	
RIGID WG.	FLEX WG.	ADDITIONAL APPROVALS	DATE	APPROVALS	DATE
65.61"	18.00"	MECHANICAL N/R		DRAWN A. SMITH	04/24/96
		STRUCTURAL N/R		CHECKED S. WIGGINS	04/29/96
		ELECTRICAL N/R		DESIGNER A. SMITH	04/24/96
		EXPORT CONTROL WARNING - the disclosure of this document or its contents to non-U.S. persons, or the transmission of its contents outside the United States must be in compliance with U.S. Export Laws and Regulations. The bearer of this document is under obligation to know the applicable restrictions for the dissemination of its contents that relate to U.S. Export Laws and Regulations or any other U.S. government approvals.		MANUFACTURING RCH	05/16/96
		DRILL HOLE TOLERANCE (DRILL)		PROJECT J. KING	05/16/96
		CLEARANCE HOLE TOLERANCE (CHT)		PRODUCT MGR D. BEAKLEY	05/15/96
				DESIGN D. KEDUN	05/02/96
ESTIMATED WEIGHT		CODE ID. NO.		SIZE	
# EA - EST. WEIGHT -		1GD22		D	
		CONTRACT NO.		DWG. NO.	
		10322		011852	
		SHEET 1 OF 1		REV B	

SINGLE LEVEL BILL OF MATERIAL SUMMARY PRINT DATE 3/24/08 TIME 9:31:39

CATALOGUE#: 007208-02 PSM: M STATUS: RELEASED DRAWING: B-007208 REV: E

DESCRIPTION: AXIS KOVER INSTL 8/9KPK DUAL TX WR62 CATEGORY: INTEGRAT ENTERED: 10/10/1994
 DUAL WR62 TX WG RUNS CLASS: RFSXTX REVISED: 8/20/1999 REV: E
 SUBCLASS: INSTL APPROVED: 9/08/1999
 JOB#: 2909 PENDING: REV
 REVISION: B 98-0854 04/08/98 KS/BS OLD CAT#: NEW 07/08/96 ADS/DK SIZE: B DWG CAT: I ID: ALB

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV	
005	R019701	2.00			R	C	M	WG WR62 FORMED E-BEND TX C/CG	WR62	FORMED	A-009839	E	
006	R011554	1.00			R	C	M	WG WR62 E-TW FORMED BEND TX :*	WR62	FORMED	A-007216	E	
007	R011555	1.00			R	C	M	WG WR62 E-TW FORMED BENDS TX:*	WR62	FORMED	A-007216	E	
008	R011556	2.00			R	C	M	WG WR62 STR TX CG/CG A=55.00	** WR62	ASSY	A-010150	C	
009	R011557	1.00			R	C	M	WG WR62 FORMED H-BEND TX C/CG	WR62	ASSY	A-012863	B	
010	R011558	1.00			R	C	M	WG WR62 FORMED H-BEND TX C/CG	WR62	FORMED	A-012863	B	
013	011520-12	4.00			EA	R	P	S	WG WR62 FLEX HIGH PWR JACKETED		A-011520	A	
015	F002231	12.00			EA	R	P	S	GSKT O-RING WR62 0.905 X 0.141		NONE	00	
015S	F002231	2.00			EA	R	P	S	GSKT O-RING WR62 0.905 X 0.141		NONE	00	
017	R011617	2.00			R	C	M	ANGLE SPRT WR62 WG HORIZ FLGS	ANGLE	DETAIL	B-007258	C	
018	018890-01	2.00			R	C	M	BRKT SPRT WR75 WG HGR	MOUNT	DETAIL	B-018890	A	
020	371411-01	2.00			R	C	M	ANGLE SPRT WR62 WG HORIZ FLGS	ANGLE	DETAIL	B-371411	C	
022	370192-01	4.00			R	C	S	HGR WG WR62 RIGID HALF HGR	WR62		B-370192	D	
023	H45410-19	2.00			EA	R	P	S	BW 5/8 X 1 1/2 X 1 1/2 TYPE A HDG	BW	HDG		
029	H56085-39	32.00			EA	R	P	S	SCR CAP SH #6-32UNC X 3/4 SS	CAPSCR	SS	NONE	00
029S	H56085-39	4.00			EA	R	P	S	SCR CAP SH #6-32UNC X 3/4 SS	CAPSCR	SS	NONE	00
030	H53062-39	16.00			EA	R	P	S	SCR CAP SH #6-32UNC X 1 1/4 SSF837	CAPSCR	SS	NONE	00
030S	H53062-39	2.00			EA	R	P	S	SCR CAP SH #6-32UNC X 1 1/4 SSF837	CAPSCR	SS	NONE	00
033	H60036-39	2.00			EA	R	P	S	ALL THD ROD 1/4-20UNC X 7 SS18-8	ATR	SS	NONE	00
033S	H60036-39	1.00			EA	R	P	S	ALL THD ROD 1/4-20UNC X 7 SS18-8	ATR	SS	NONE	00
034	H14082-39	8.00			EA	R	P	S	SCR CAP HH 5/16-18UNC X 1 SSF593	CAPSCR	SS		
034S	H14082-39	1.00			EA	R	P	S	SCR CAP HH 5/16-18UNC X 1 SSF593	CAPSCR	SS		
035	H14084-39	2.00			EA	R	P	S	SCR CAP HH 5/16-18UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
035S	H14084-39	1.00			EA	R	P	S	SCR CAP HH 5/16-18UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
037	H40022-39	96.00			EA	R	P	S	FW (BN) #6 X 5/16 SS18-8	FW	SS	NONE	00
037S	H40022-39	10.00			EA	R	P	S	FW (BN) #6 X 5/16 SS18-8	FW	SS	NONE	00
038	H40045-39	8.00			EA	R	P	S	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
038S	H40045-39	1.00			EA	R	P	S	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
039	H40050-39	10.00			EA	R	P	S	FW (AN) 5/16 X 11/16 SS18-8	FW	SS	NONE	00
039S	H40045-39	1.00			EA	R	P	S	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
041	H30005-39	48.00			EA	R	P	S	LW HELICAL #6 SS18-8	LW	SS	NONE	00
041S	H30005-39	5.00			EA	R	P	S	LW HELICAL #6 SS18-8	LW	SS	NONE	00
042	H30009-39	4.00			EA	R	P	S	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00
042S	H30009-39	1.00			EA	R	P	S	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00
043	H30010-39	10.00			EA	R	P	S	LW HELICAL 5/16 SS18-8	LW	SS	NONE	00
043S	H30010-39	1.00			EA	R	P	S	LW HELICAL 5/16 SS18-8	LW	SS	NONE	00
045	H20007-39	48.00			EA	R	P	S	NUT HEX #6-32UNC SSF594	HEXNUT	SS	NONE	00
045S	H20007-39	5.00			EA	R	P	S	NUT HEX #6-32UNC SSF594	HEXNUT	SS	NONE	00

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:31:39

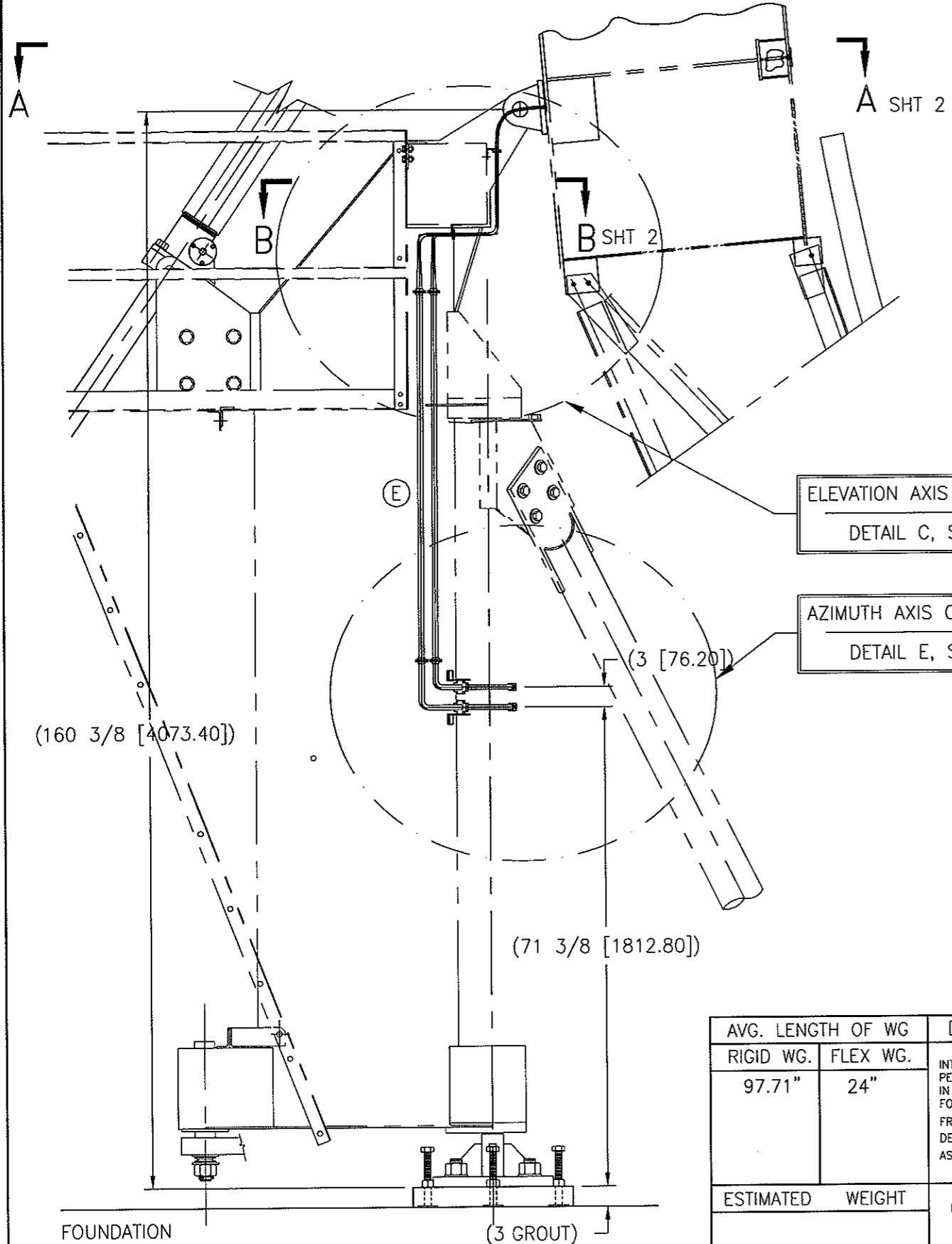
CATALOGUE#: 007208-02 PSM: M STATUS: RELEASED DRAWING: B-007208 REV: E

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
046	H20011-39	8.00		EA	R	P	S	NUT HEX 1/4-20UNC SSF594	HEXNUT SS	NONE		00
046S	H20011-39	1.00		EA	R	P	S	NUT HEX 1/4-20UNC SSF594	HEXNUT SS	NONE		00
800	007208-99	1.00		R	C	M		PED MOD 8/9KPK AXIS XOVER WR62	RFSXTX DETAIL B-007208			E

END OF BOM:007208-02

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE.	-	-
B	REVISED PER EC# 95-0185	11/08/94	ALB/PA
C	REVISED PER EC# 96-1049	07/03/96	ADS/DLB
D	REVISED PER EC# 98-0854	04/08/98	KDS/BHS
E	REVISED PER EC# 99-0806	08/20/99	SAH/BHS

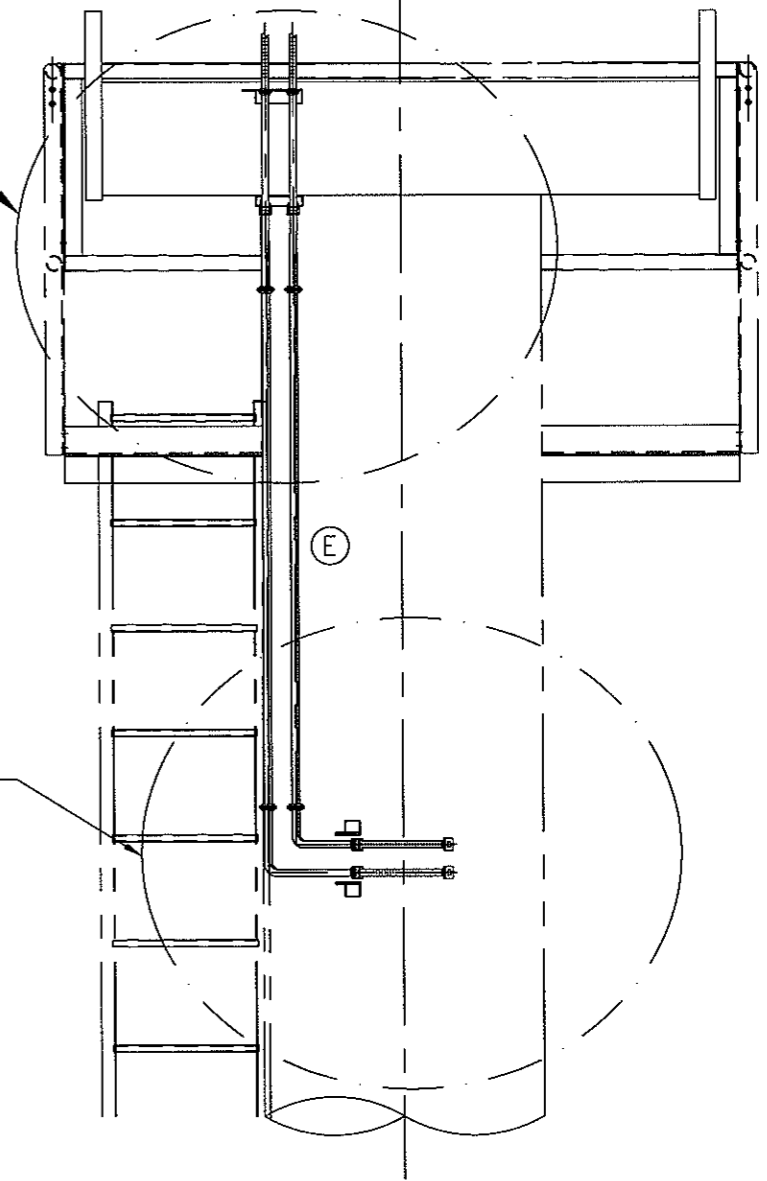


ELEVATION AXIS CROSSOVER
DETAIL D, SHEET 3

ELEVATION AXIS CROSSOVER
DETAIL C, SHEET 3

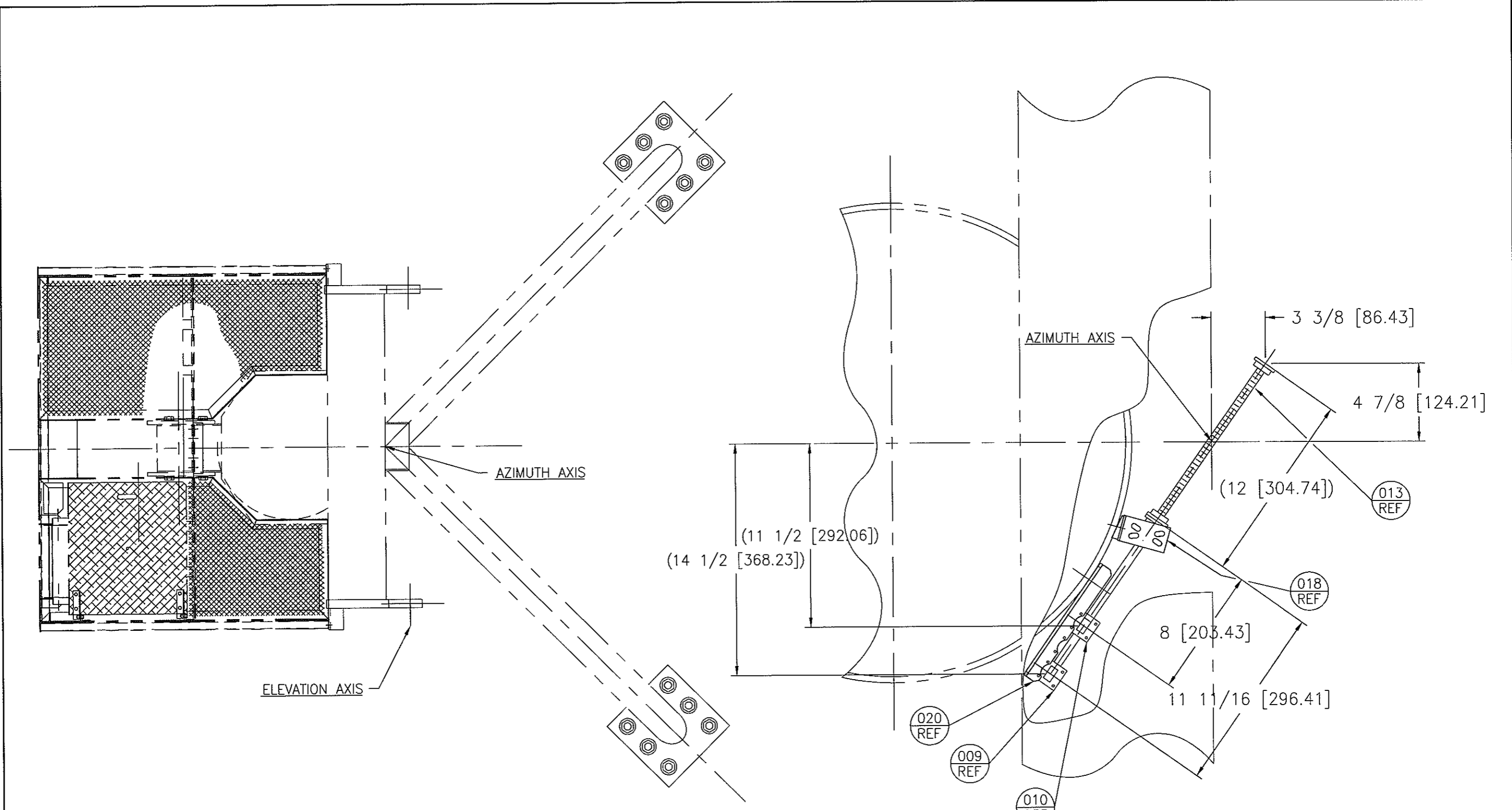
AZIMUTH AXIS CROSSOVER
DETAIL E, SHEET 4

AZIMUTH AXIS CROSSOVER
DETAIL F, SHEET 4



- 007208-01, SINGLE RUN
- 007208-02, DUAL RUN
- 007208-03, 2nd RUN ADD-ON
- 007208-99, PEDESTAL MODIFICATION

AVG. LENGTH OF WG		DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: DETAILS ± 1/16 .XX ± .03 ASSY'S ± 1/8 .XXX ± .005 ANGLES ± 1°	REFERENCE SEPARATE BOM FOR SPECIFIC INFO		VertexRSI CONFIDENTIAL AND PROPRIETARY			
RIGID WG.	FLEX WG.		ADDITIONAL APPROVALS	DATE	APPROVALS	DATE	VertexRSI ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
97.71"	24"	DESIGN DP JOHNSON	10/27/94	DRAWN AL BAERGEN	10/10/94	TITLE: AXIS CROSSOVER, TX 1 & 2 WR62 WG W/FLEX 8/9KPK ANTENNA		
ESTIMATED WEIGHT		MECHANICAL N/R		CHECKED P AUDET	10/25/94	CODE ID. NO.		
- EST. WEIGHT -		STRUCTURAL N/R		DESIGNER AL BAERGEN	10/27/94	1GD22	SIZE	
		ELECTRICAL N/R		MANUFACTURING P AUDET	10/27/94	B	DWG NO.	
				PROJECT JR KING	10/28/94	007208	REV	
				PRODUCT MGR RG RADTKE	10/28/94	E		
						SCALE: 1/20	CONTRACT NO. 2909	
							SHEET 1 OF 5	



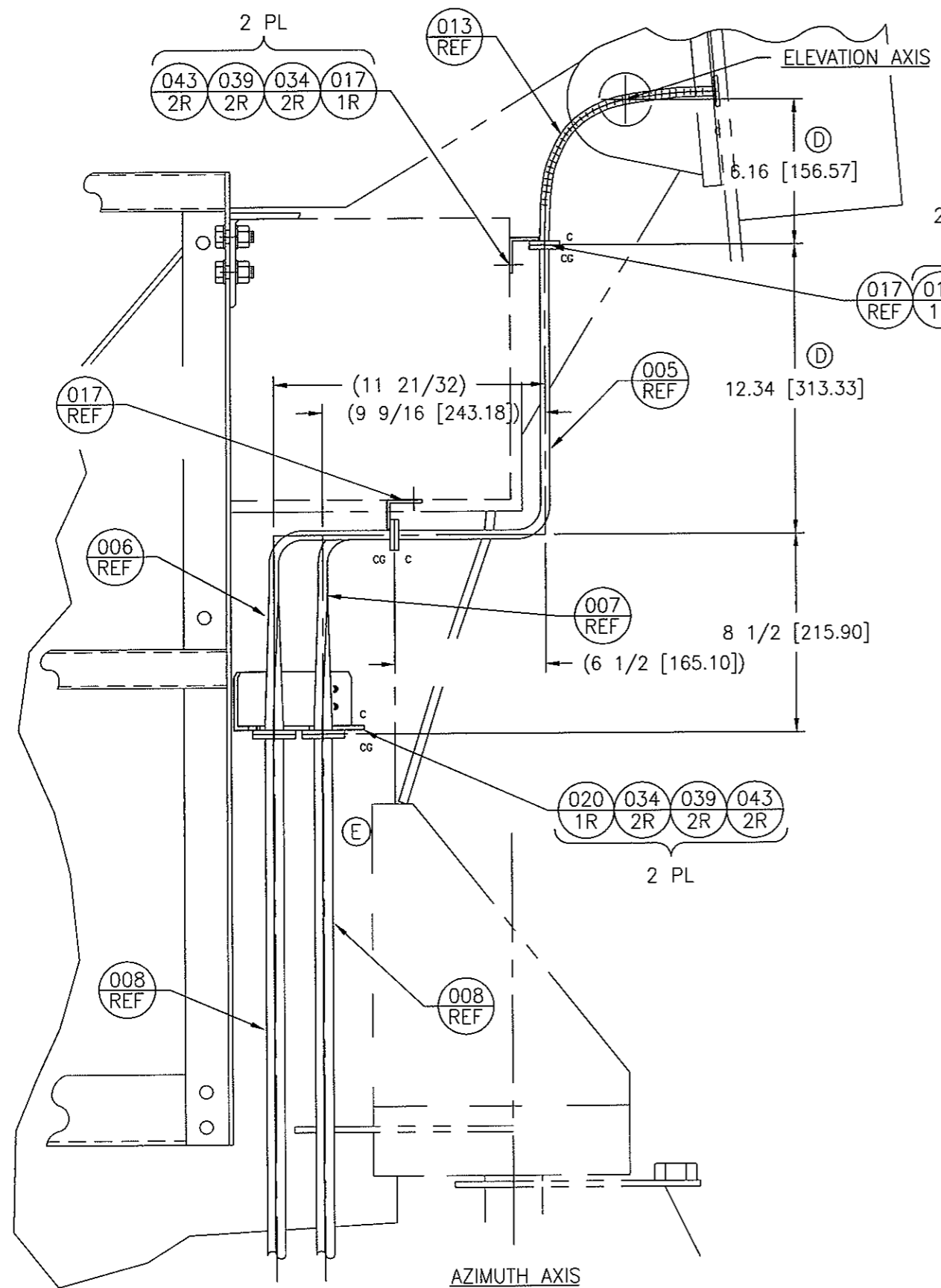
VIEW A-A
- PLAN VIEW -

VIEW B-B
SCALE: 1/6

VertexRSI CONFIDENTIAL AND PROPRIETARY

VertexRSI ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

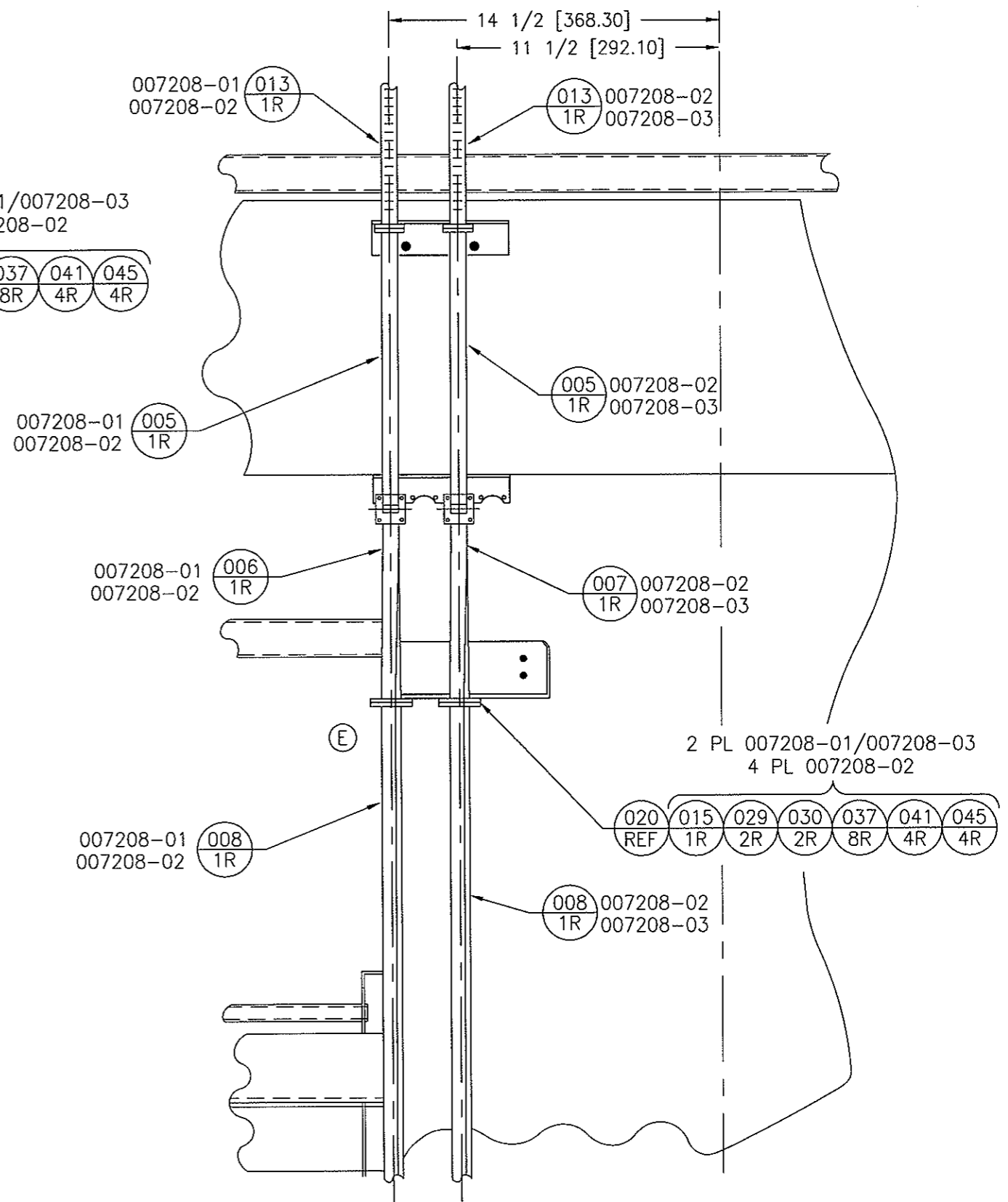
CODE ID. NO.	SIZE	DWG NO.	REV
1GD22	B	007208	E
SCALE: 1/20	CONTRACT NO. 2909	SHEET 2 OF 5	



DETAIL C
ELEVATION AXIS CROSSOVER
- SIDE VIEW -

2 PL 007208-01/007208-03
4 PL 007208-02

017 REF 015 1R 029 2R 030 2R 037 8R 041 4R 045 4R

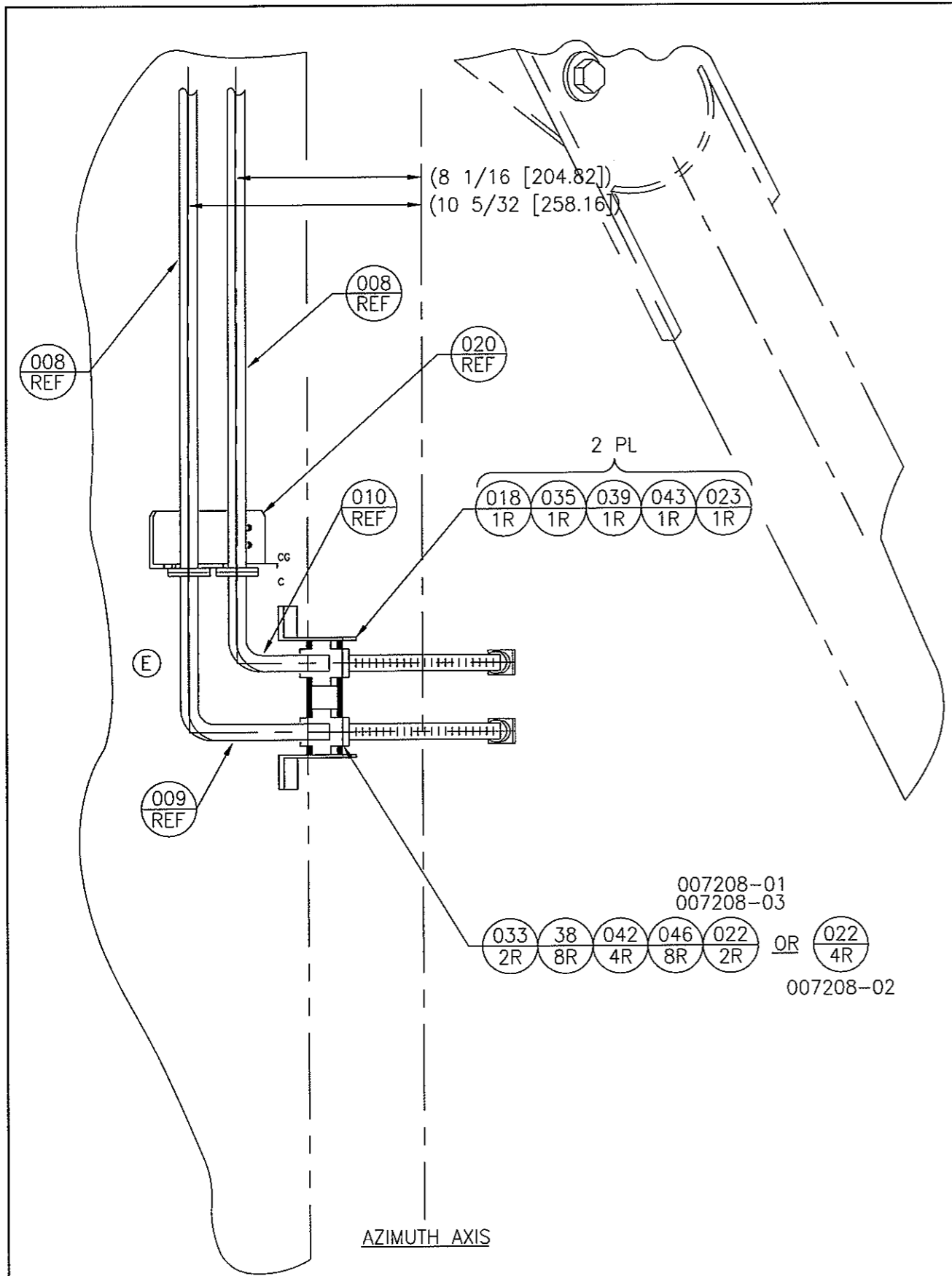


DETAIL D
ELEVATION AXIS CROSSOVER
- FRONT VIEW -

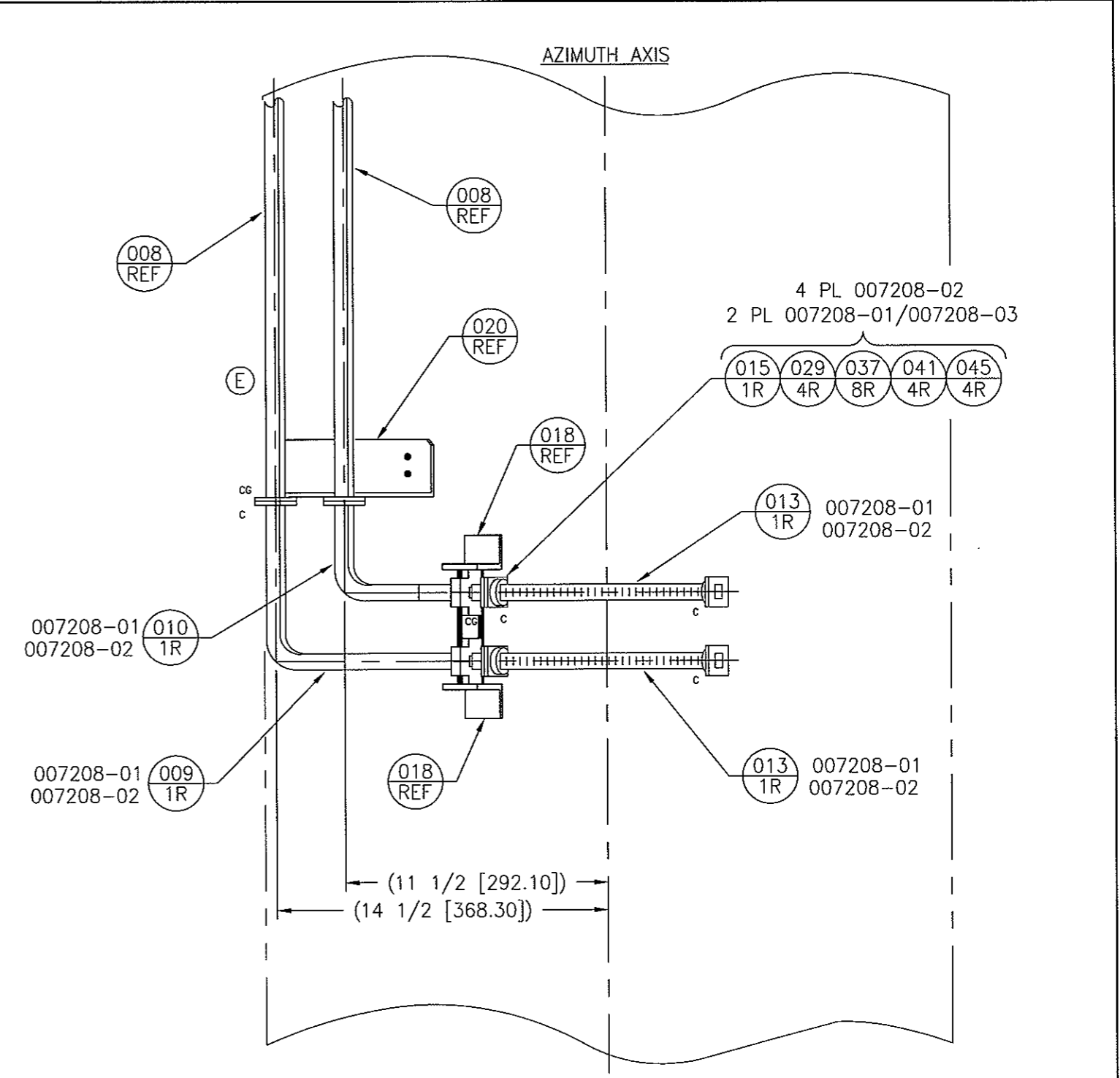
VertexRSI CONFIDENTIAL AND PROPRIETARY

VertexRSI ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

CODE ID. NO.	SIZE	DWG NO.	REV
1GD22	B	007208	E
SCALE: 1/6	CONTRACT NO. 2909	SHEET 3 OF 5	



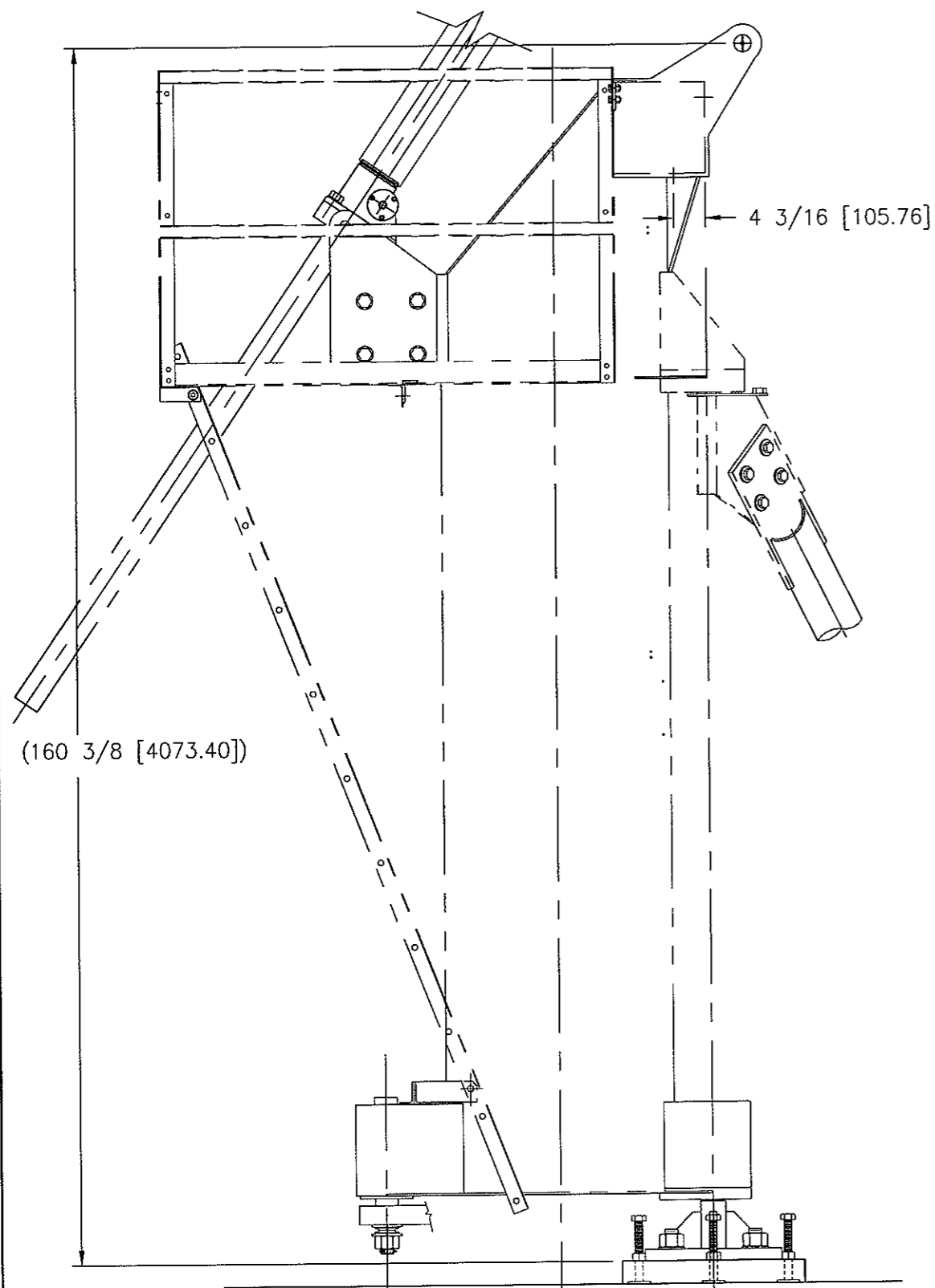
DETAIL E
AZIMUTH AXIS CROSSOVER
- SIDE VIEW -



DETAIL F
AZIMUTH AXIS CROSSOVER
- FRONT VIEW -

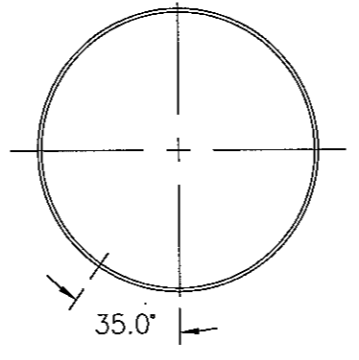
VertexRSI CONFIDENTIAL AND PROPRIETARY

		ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
CODE ID. NO.	SIZE	DWG NO.	REV
1GD22	B	007208	E
SCALE: 1/6	CONTRACT NO. 2909	SHEET 4 OF 5	

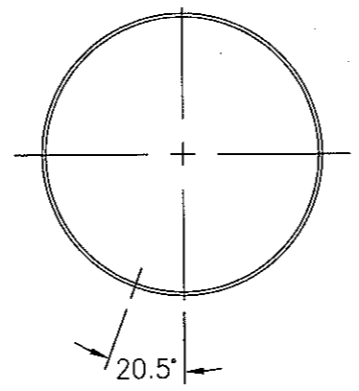


FOUNDATION

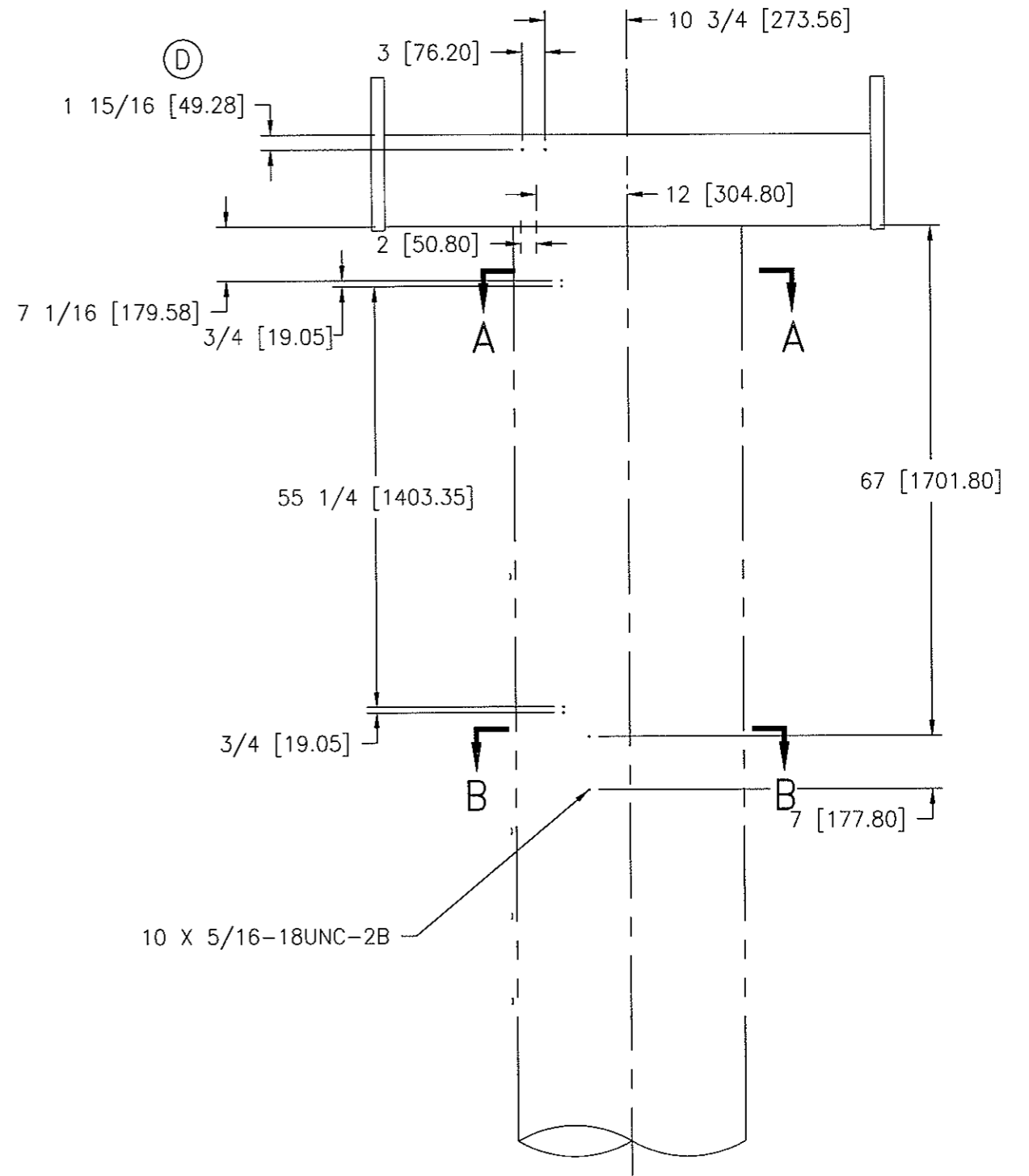
SIDE VIEW



SECTION A-A



SECTION B-B



FRONT VIEW

007208-99, PEDESTAL MODIFICATION

VertexRSI CONFIDENTIAL AND PROPRIETARY

VertexRSI ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

CODE ID. NO.	SIZE	DWG NO.	REV
1GD22	B	007208	E
SCALE: 1/20	CONTRACT NO. 2909	SHEET 5 OF 5	

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

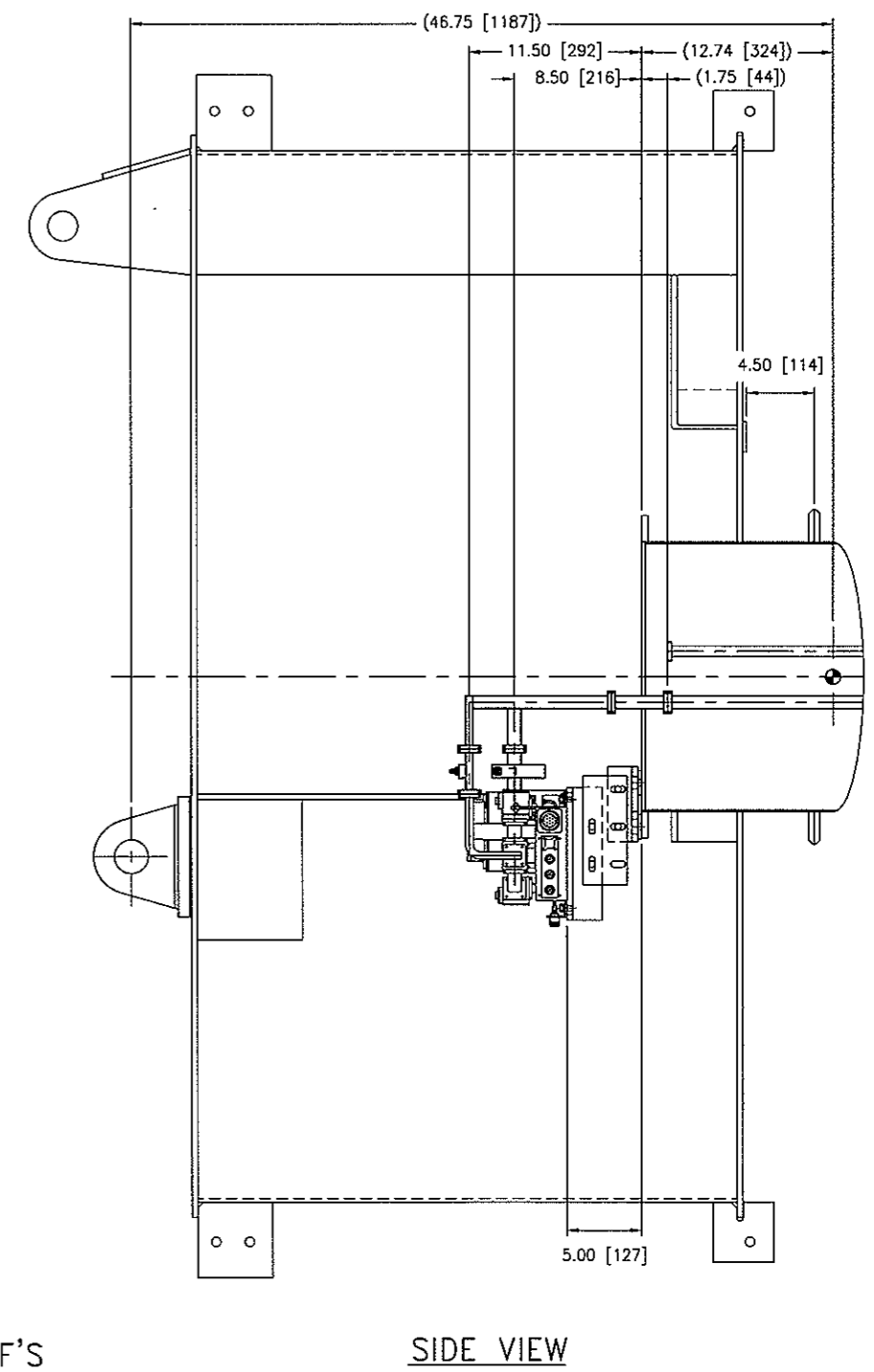
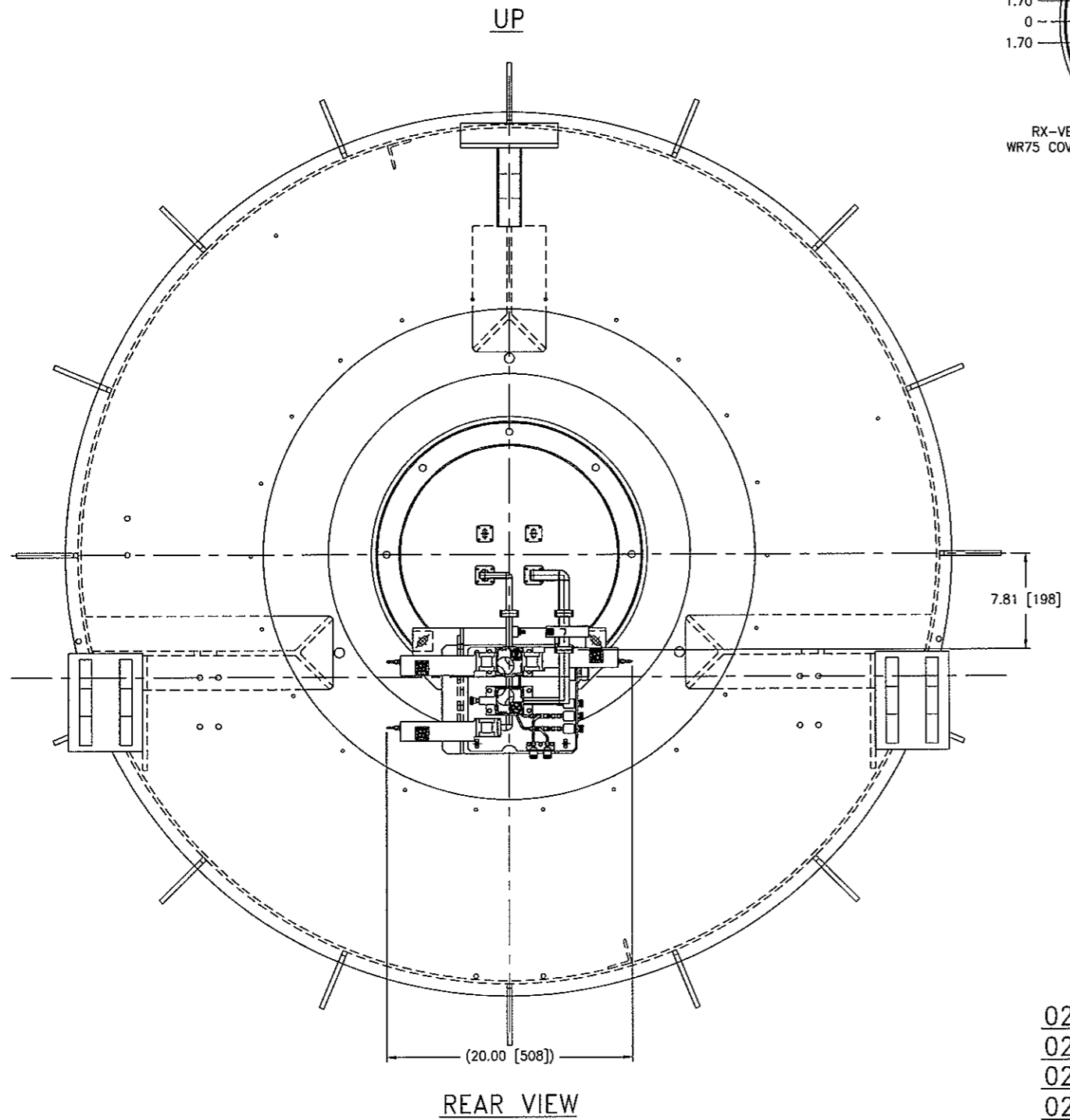
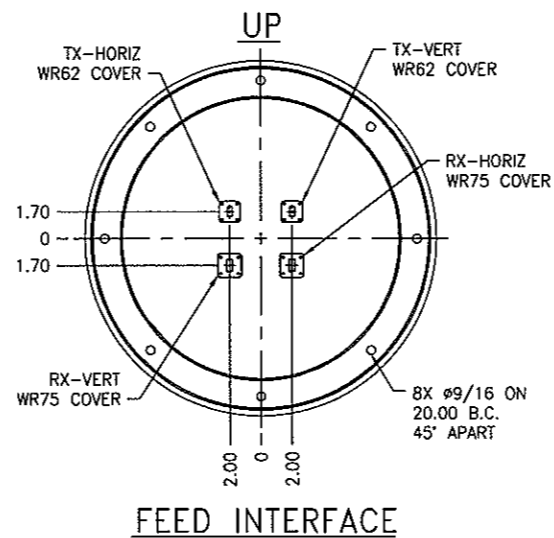
TIME 12:48:05

 CATALOGUE#: 026058-02 PSM: M STATUS: RELEASED DRAWING: D-026058 REV: A
 DESCRIPTION: HUB INTG 8/9KPK LP 1:2 CATEGORY: INTEGRAT ENTERED: 4/06/2001
 RX VEPI WR75 WG RUNS W/WG CLASS: RFSHRX REVISED: 4/09/2001 REV: A
 SUBCLASS: INSTL APPROVED: 4/18/2001
 JOB#: 12004 PENDING: REV
 REVISION: A 04/09/01 LDG/BHS OLD CAT#: NEW 04/09/01 LDG/BHS SIZE: D DWG CAT: ID: LDG

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV	
001	R024354	1.00			R	C	M	WG WR75 EH RX CG/CG	WR75	ASSY	A-013367	E	
002	R024355	1.00			R	C	M	WG WR75 EHT RX CG/CG A=3.11 *:	WR75	ASSY	170231	B	
004	LNA 1:2-KU	1.00			EA	R	P	P	LNA SYS KU-BND 1:2 LRK-1200		NONE	00	
005	R017433	2.00			R	C	M	WG WR75 STR RX C/C A=3.00	** WR75	ASSY	A-010150	C	
006	R020335	2.00			R	C	M	WG WR75 STR RX CG/C	WR75	ASSY	A-010150	C	
008	023906-01	1.00			R	C	M	MT ASSY 1:2 KU LNA/LNB 20 B.C.	MOUNT	ASSY	B-023906	B	
009	P99558-19	3.00			EA	R	P	S	WASHER SQ 7/16 HOLE HDG		HDG		
012	H14160-39	3.00			EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 3/4 SSF593	CAPSCR	SS	NONE	00
012S	H14160-39	1.00			EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 3/4 SSF593	CAPSCR	SS	NONE	00
013	H40057-39	6.00			EA	R	P	S	FW (AW) 3/8 X 1 SS18-8	FW	SS	NONE	00
013S	H40057-39	1.00			EA	R	P	S	FW (AW) 3/8 X 1 SS18-8	FW	SS	NONE	00
014	H30011-39	3.00			EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
014S	H30011-39	1.00			EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
015	H20013-39	3.00			EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
015S	H20013-39	1.00			EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
017	H14007-39	4.00			EA	R	P	S	SCR CAP HH 1/4-20UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
017S	H14007-39	1.00			EA	R	P	S	SCR CAP HH 1/4-20UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
018	H40045-39	8.00			EA	R	P	S	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
018S	H40045-39	1.00			EA	R	P	S	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
019	H30009-39	4.00			EA	R	P	S	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00
019S	H30009-39	1.00			EA	R	P	S	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00
020	H20011-39	4.00			EA	R	P	S	NUT HEX 1/4-20UNC SSF594	HEXNUT	SS	NONE	00
020S	H20011-39	1.00			EA	R	P	S	NUT HEX 1/4-20UNC SSF594	HEXNUT	SS	NONE	00
022	P40920-1	2.00			EA	R	P	S	GASKET WR75		A-019022	A	
022S	P40920-1	1.00			EA	R	P	S	GASKET WR75		A-019022	A	
023	P40931-19	6.00			EA	R	P	S	GSKT O-RING 1.114 X 0.07 50S		NONE	00	
023S	P40931-19	1.00			EA	R	P	S	GSKT O-RING 1.114 X 0.07 50S		NONE	00	
024	H56082-39	4.00			EA	R	P	S	SCR CAP SH #6-32UNC X 1/2 SSF837	CAPSCR	SS	NONE	00
024S	H56082-39	1.00			EA	R	P	S	SCR CAP SH #6-32UNC X 1/2 SSF837	CAPSCR	SS	NONE	00
025	H56086-39	28.00			EA	R	P	S	SCR CAP SH #6-32UNC X 7/8 SSF837	CAPSCR	SS	NONE	00
025S	H56086-39	3.00			EA	R	P	S	SCR CAP SH #6-32UNC X 7/8 SSF837	CAPSCR	SS	NONE	00
026	H40022-39	60.00			EA	R	P	S	FW (BN) #6 X 5/16 SS18-8	FW	SS	NONE	00
026S	H40022-39	6.00			EA	R	P	S	FW (BN) #6 X 5/16 SS18-8	FW	SS	NONE	00
027	H30005-39	32.00			EA	R	P	S	LW HELICAL #6 SS18-8	LW	SS	NONE	00
027S	H30005-39	4.00			EA	R	P	S	LW HELICAL #6 SS18-8	LW	SS	NONE	00
028	H20007-39	28.00			EA	R	P	S	NUT HEX #6-32UNC SSF594	HEXNUT	SS	NONE	00
028S	H20007-39	3.00			EA	R	P	S	NUT HEX #6-32UNC SSF594	HEXNUT	SS	NONE	00
900	B-008684				EA	R	P	P	FEED INTFC 8/9M KU-BND FR LP	AFS	SPEC	B-008684	B

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	04/09/01	LDG/BHS

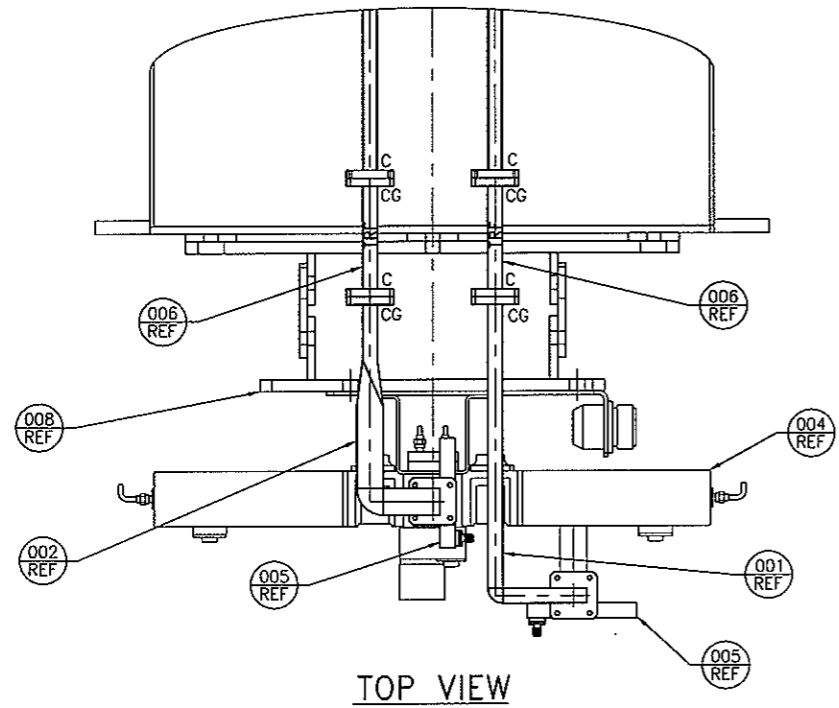


- 026058-01 - W/CGC'S
- 026058-02 - W/WAVEGUIDE
- 026058-03 - W/CGC'S & TRF'S
- 026058-04 - W/WAVEGUIDE & TRF'S

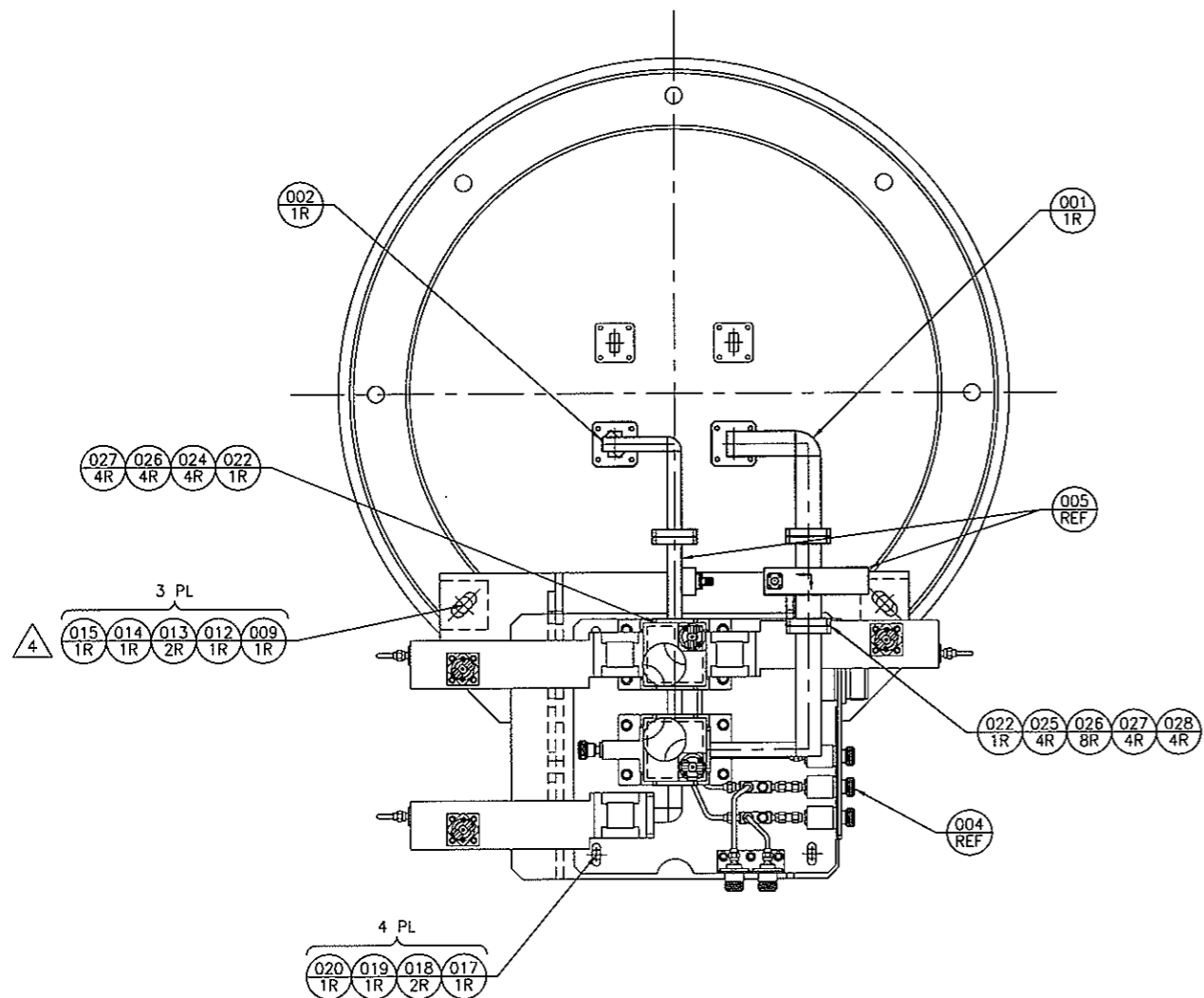
- NOTES:
- DIMENSIONS SHOWN IN BRACKETS [] INDICATE MILLIMETERS.
 - A "C" NEXT TO A FLANGE INDICATES A COVER FLANGE.
A "CG" NEXT TO A FLANGE INDICATES A COVER GROOVE FLANGE.
 - INSTALL CROSSGUIDE COUPLER, ITEM 005, WITH ARROW POINTING TOWARD LNA ASSEMBLY.
 - ITEM 009, B201 WASHER, IS PROVIDED AS A SPACER. TWO OF THESE WILL BE REPLACED BY ANGLE CLIPS SUPPLIED ON TRANSMIT INSTALLATION.

AVG. LENGTH OF WG		DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO				VertexRSI CONFIDENTIAL AND PROPRIETARY			
RIGID WG.	FLEX WG.	UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DETAILS ± 1/16 .XX ± .03 ASSY'S ± 1/8 .XXX ± .005 ANGLES ± 1°		ADDITIONAL APPROVALS	DATE	APPROVALS	DATE	ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA			
20.11"	N/R			DESIGN		DRAWN L. GARY	04/09/01	VertexRSI TITLE: HUB INTG INSTL, RX 1:2 VEPI LNA ASSEMBLY 8/9KPK LP ANTENNA CODE ID. NO. 1GD22 SIZE D DWG NO. 026058 REV A SCALE: 1/6 CONTRACT NO. 12004 SHEET 1 OF 2			
				MECHANICAL		CHECKED BH SMITH	04/09/01				
				STRUCTURAL		DESIGNER L. GARY	04/09/01				
				ELECTRICAL		MANUFACTURING RG HUGHEY	04/10/01				
ESTIMATED WEIGHT		UNLESS OTHERWISE SPECIFIED ! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.				PROJECT JR KING	04/11/01				
# EA - EST. WEIGHT -		TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.				PRODUCT MGR MJ RABENHORST	04/11/01				

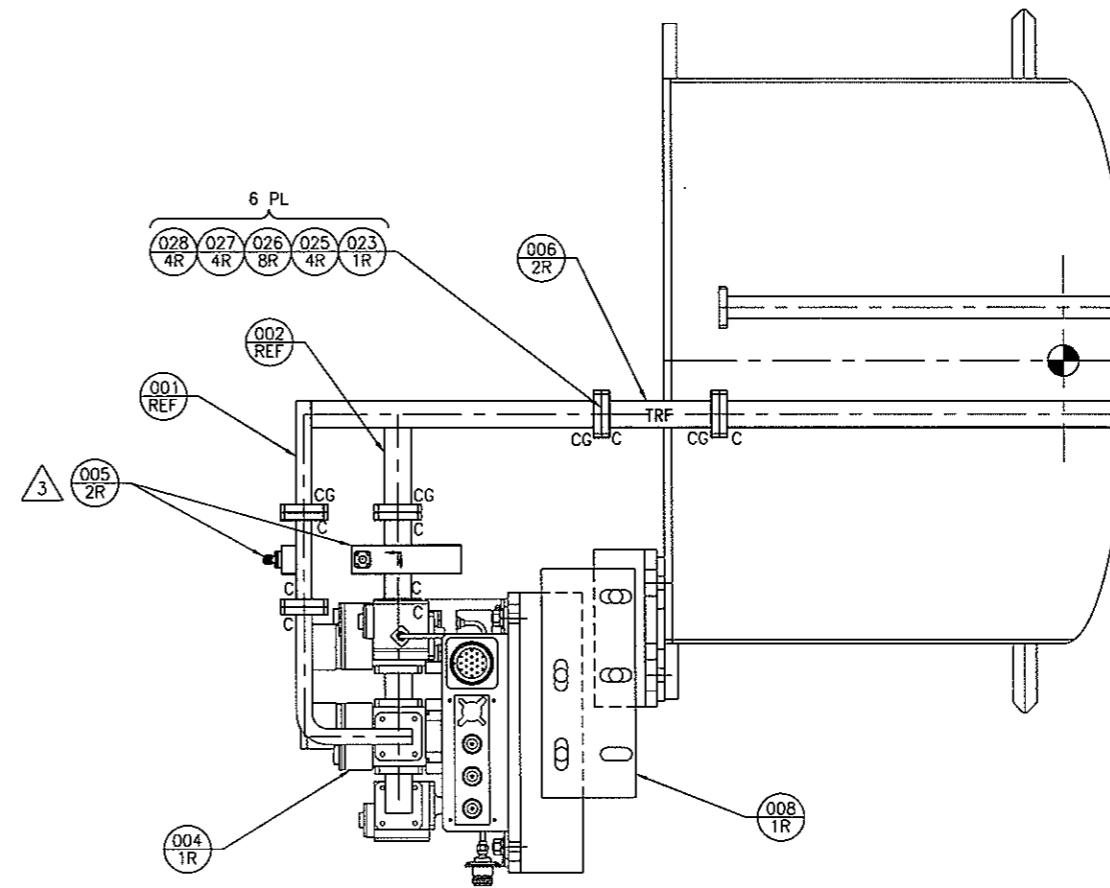
DFORM 101



TOP VIEW



REAR VIEW



SIDE VIEW

VertexRSI CONFIDENTIAL AND PROPRIETARY



ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

CODE ID. NO.	SIZE	DWG. NO.	REV.
1G022	D	026058	A
SCALE: 1/3	CONTRACT NO. 12004	SHEET 2 OF 2	

SINGLE LEVEL BILL OF MATERIAL SUMMARY PRINT DATE 3/24/08 TIME 9:32:14

CATALOGUE#: R000630 PSM: M STATUS: RELEASED DRAWING: B-001003 REV: D

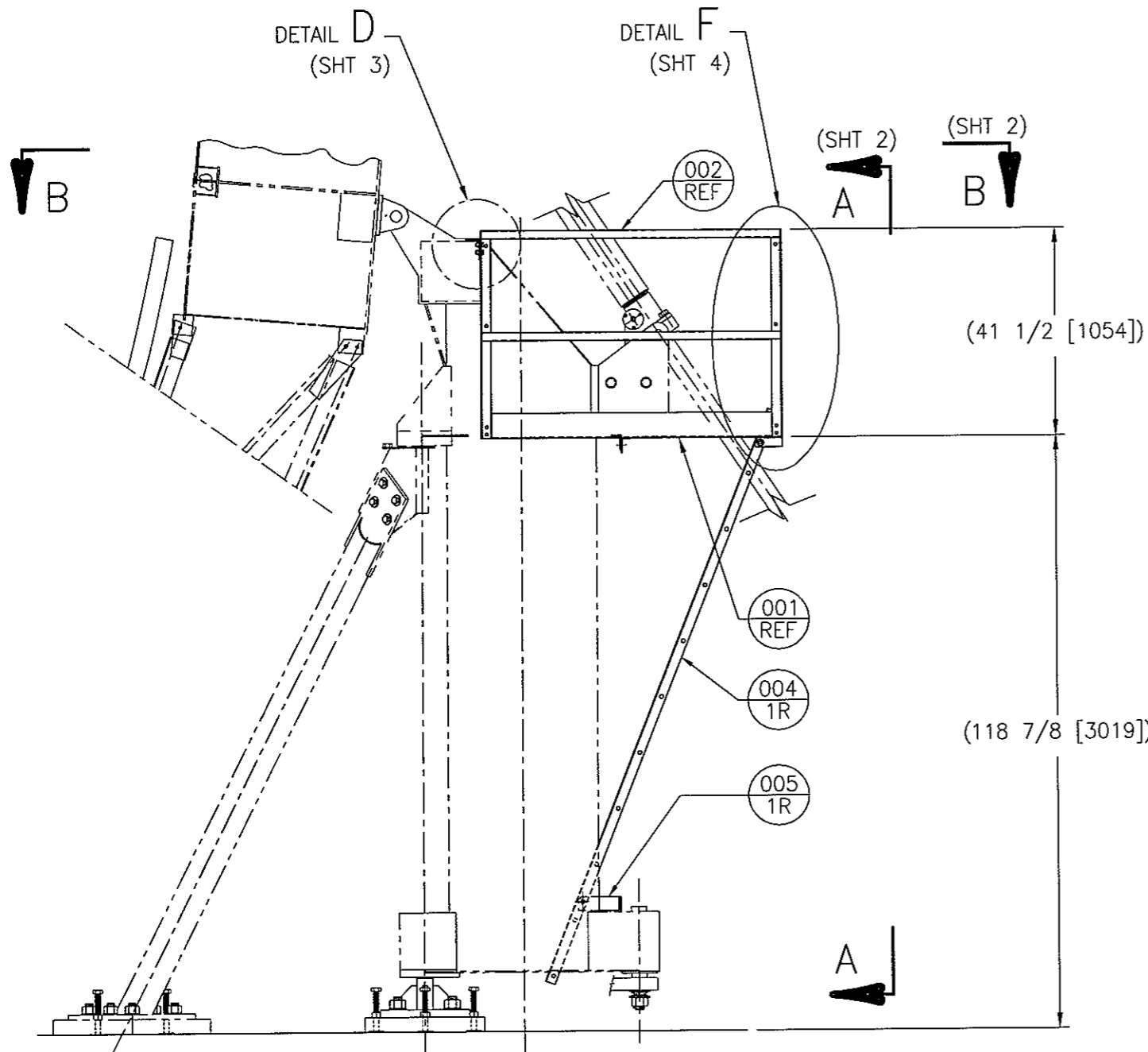
DESCRIPTION: ACCESS INSTL PLATFORM/LADDER CATEGORY: ANTENNA ENTERED: 5/13/1993
 8/9KP STD TRV 120DEG AZ CLASS: AACPLT REVISED: 11/13/1997 REV: D
 SUBCLASS: INSTL APPROVED: 11/24/1997
 JOB#: 9318 PENDING: REV
 REVISION: A 06/10/93 CAB 114 OLD CAT#: 370386-01 SIZE: B DWG CAT: I ID: CAB

BILL OF MATERIAL

ITEM	SUB PART	CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV	
001	R000686		1.00				R	C	S		AACPLT	ASSY	D-001004	C
002	R000690		2.00				R	C	S		AACPLT	DETAIL	D-001087	E
003	R000694		1.00				R	C	S		AACPLT	DETAIL	D-001087	E
004	R000695		1.00				R	C	S		AACPLT	DETAIL	D-001087	E
005	R000738		1.00				R	C	S		AACPLT	WLDMNT	D-001087	E
010	H04309-29		16.00				EA	R	P	S		HHBOLT	HDG	
011	H04455-29		10.00				EA	R	P	S		HHBOLT	HDG	
012	H40066-29		32.00				EA	R	P	S		FW	HDG	
013	H40078-29		20.00				EA	R	P	S		FW	HDG	
014	H21015-29		16.00				EA	R	P	S		HHNUT	HDG	
015	H21017-29		10.00				EA	R	P	S		HHNUT	HDG	

END OF BOM:R000630

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASELINE, REPLACES 370386-01(C);	05/04/93	CLK/
B	PER ECO# 94-0212/DDP A94-1454 REV VIEW E-E TO SHOW NEW ATTACHMENT BRACKET.	06/27/94	MML/GPR
C	ADDED BOM TO DWG ECO # 96-0345	01/17/96	MR/JDH
D	EC98-0114; SHT 2, ADD 2R TO VIEW B-B.	11/13/97	MSS/JDH



QTY REQD	ITEM NO.	VERTEX PART NUMBER	NOMENCLATURE OR DESCRIPTION	VENDOR/MFG. PART NUMBER	NOTES	
	10	015	H21017-29	HH NUT 5/8-11UNC A325 HDG		
	16	014	H21015-29	HH NUT 1/2-13UNC A325 HDG		
	20	013	H40078-29	FW (AN) 5/8 X 1 5/16 F436 HDG		
	32	012	H40066-29	FW (AN) 1/2 X 1 1/16 F436 HDG		
	10	011	H04455-29	HH BOLT 5/8-11UNC X 1 1/2 A325 HDG		
	16	010	H04309-29	HH BOLT 1/2-13UNC X 1 1/2 A325 HDG		
		009				
		008				
		007				
		006				
	1	005	R000738	LADDER SUPT WLDMNT, PLATFORM (8/9M)		
	1	004	R000695	LADDER WLDMNT, PLATFORM (8/9M)		
	1	003	R000694	HANDRAIL WLDMNT, PLATFORM (8/9M)		
	2	002	R000690	HANDRAIL WLDMNT, PLATFORM (8/9M)		
	1	001	R000686	PLATFORM ASSY, ACCESS (8/9M)		
	-01	ITEM NO.	VERTEX PART NUMBER	NOMENCLATURE OR DESCRIPTION	VENDOR/MFG. PART NUMBER	NOTES

PLATFORM INSTALLATION

SIDE VIEW
R000630

DO NOT SCALE DRAWING

UNLESS OTHERWISE SPECIFIED !
INTERPRET DIMENSIONING & TOLERANCING
PER ASME Y14.5M-1994. DIMENSIONS ARE
IN INCHES. DIMENSIONS SHOWN IN () ARE
FOR REFERENCE ONLY. TOLERANCES ARE:
FRACTIONS: DECIMALS:
DETAILS ± 1/16 .XX ± .03
ASSY'S ± 1/8 .XXX ± .005
ANGLES ± 1°

UNLESS OTHERWISE SPECIFIED !
PART TO BE FREE OF BURRS & SHARP
EDGES. COMMERCIAL TOLERANCES TO
STOCK SIZES APPLY.

TO CONVERT TO METRIC SYSTEM,
MULTIPLY INCHES SHOWN ON DRAWING
BY 25.4 TO OBTAIN MILLIMETERS.

--- # EA
- EST. WEIGHT -

REFERENCE SEPARATE BOM FOR SPECIFIC INFO

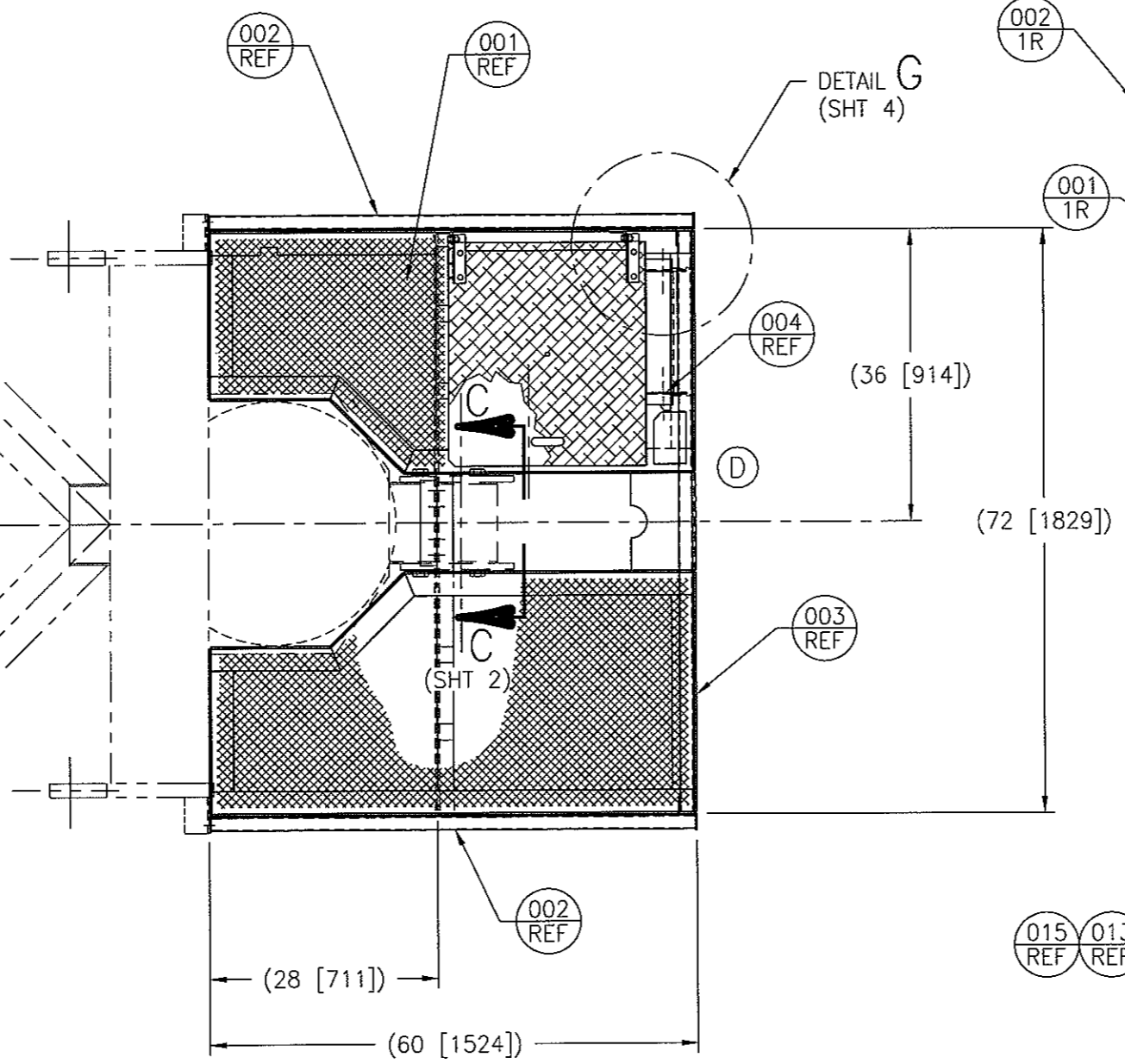
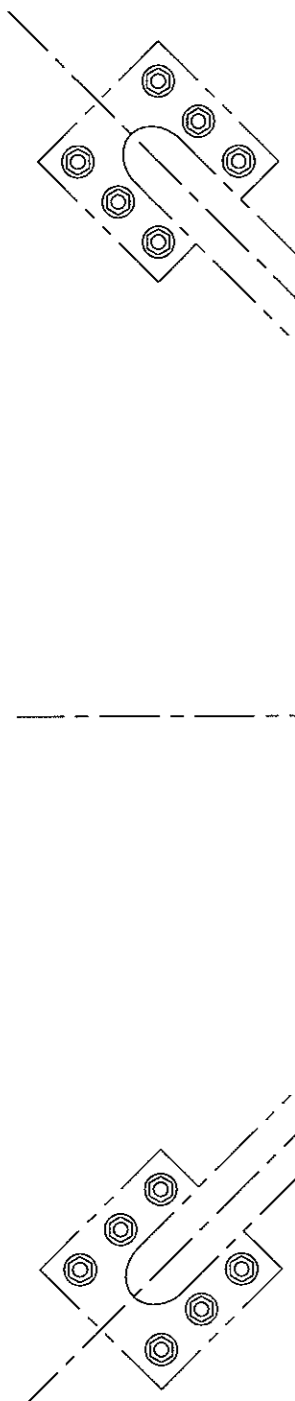
ADDITIONAL APPROVALS	DATE	APPROVALS	DATE
DESIGN		DRAWN C.KEMP	05/04/93
MECHANICAL		CHECKED K.LINDSEY	05/07/93
STRUCTURAL		DESIGNER P.SZAFRAN	06/14/93
ELECTRICAL		MANUFACTURING D.DAVIS	06/16/93
		PROJECT C.BUSSE	
		PRODUCT MGR J.PORTER	

VertexRSI CONFIDENTIAL AND PROPRIETARY

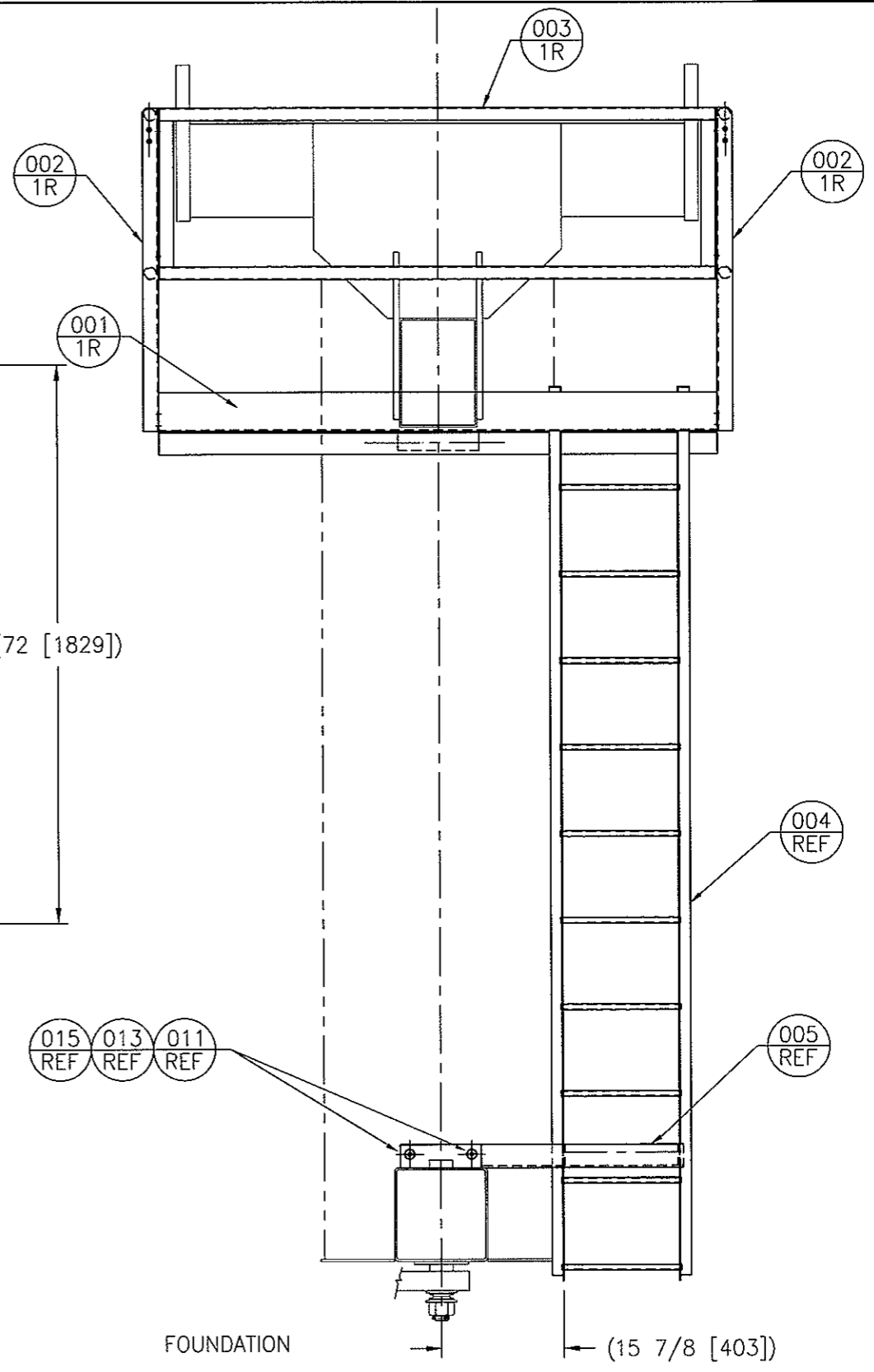
VertexRSI ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

TITLE:
PLATFORM INSTL 8/9KP

CODE ID. NO.	SIZE	DWG NO.	REV
1GD22	B	001003	D
SCALE: 1/30	CONTRACT NO.	SHEET 1 OF 4	



VIEW B-B
 PLATFORM INSTALLATION - PLAN VIEW
 (SHT 1)

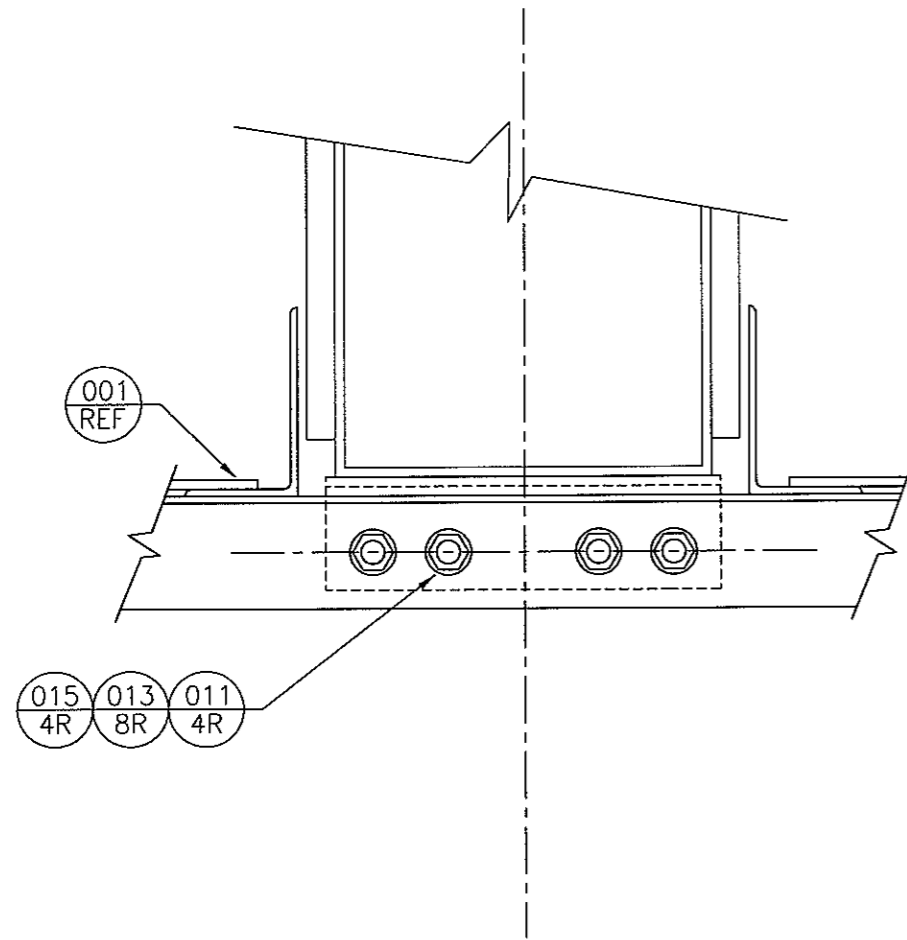


VIEW A-A

VertexRSI CONFIDENTIAL AND PROPRIETARY

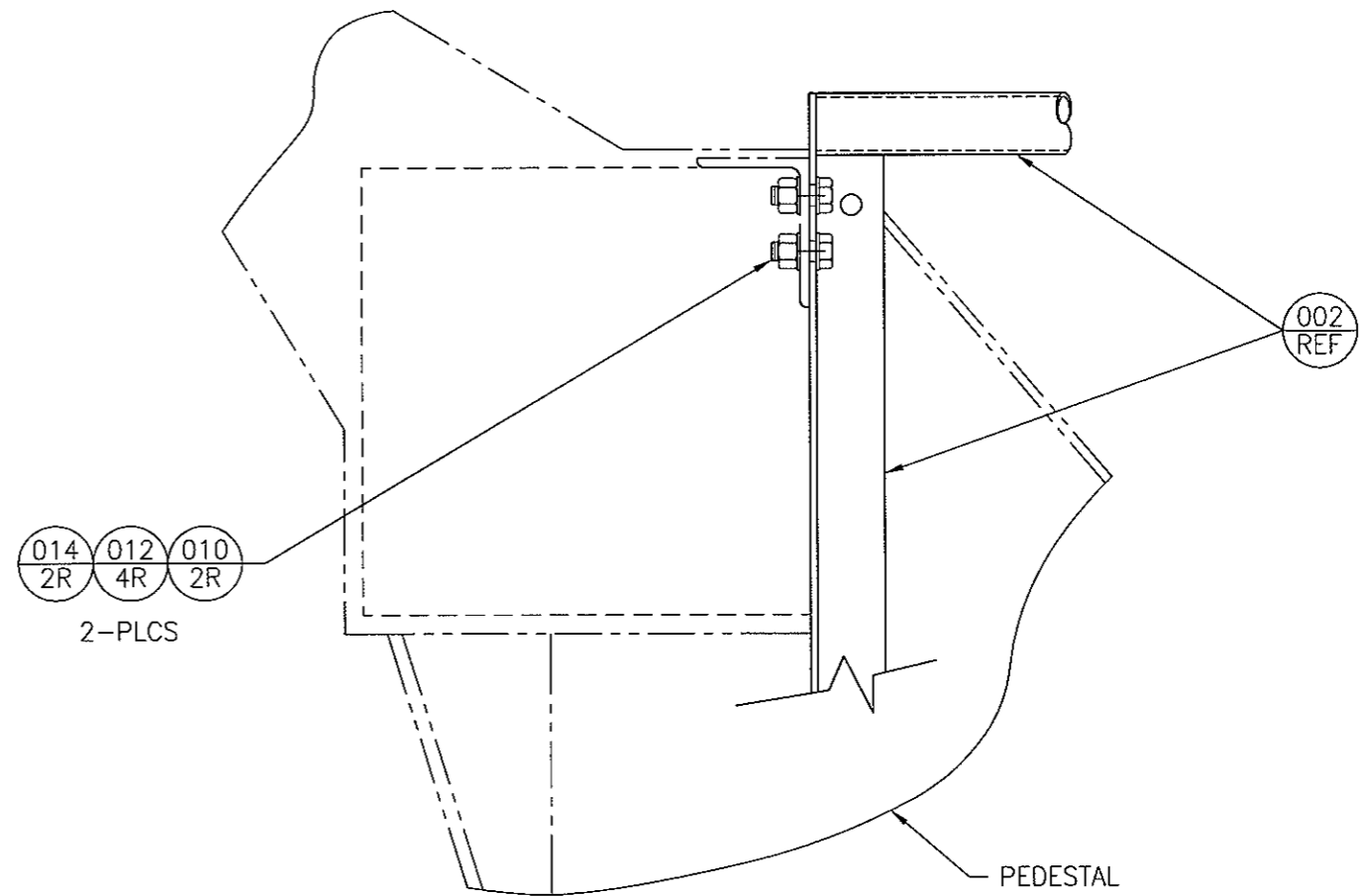
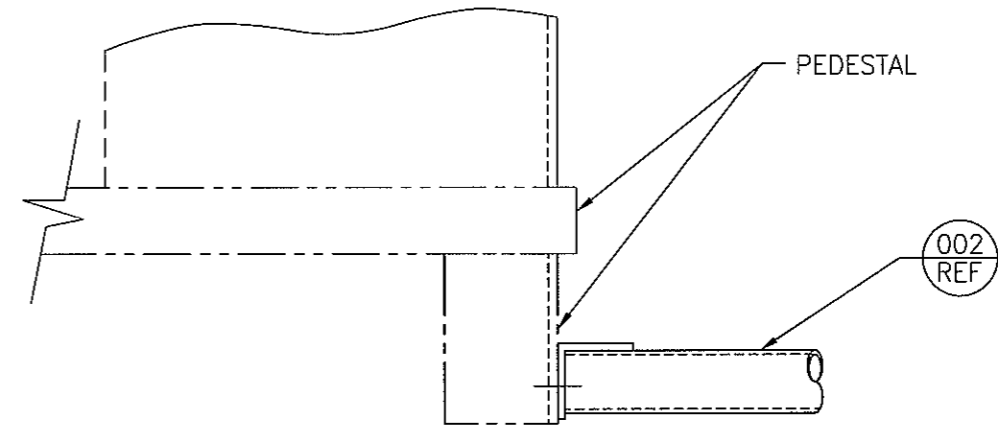
VertexRSI ANTENNA PRODUCTS DIVISION
 2600 N. LONGVIEW ST.
 KILGORE, TEXAS 75662 USA

CODE ID. NO.	SIZE	DWG. NO.	REV
1GD22	B	001003	D
SCALE: 1/20	CONTRACT NO.	SHEET 2 OF 4	



SECTION C-C

PLATFORM TO UPPER PINTLE INSTL
SCALE: 1/5



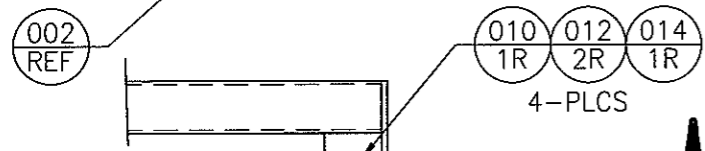
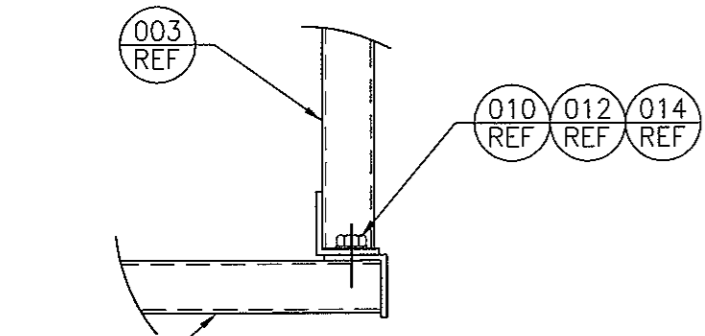
DETAIL D

HANDRAIL TO PEDESTAL INSTL.
(SHT 1)

VertexRSI CONFIDENTIAL AND PROPRIETARY

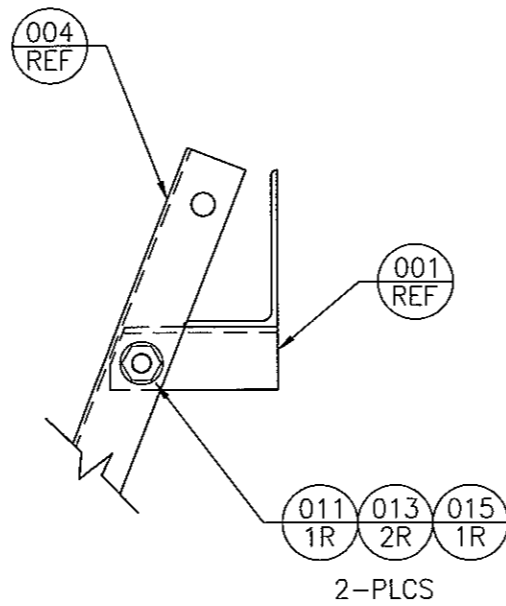
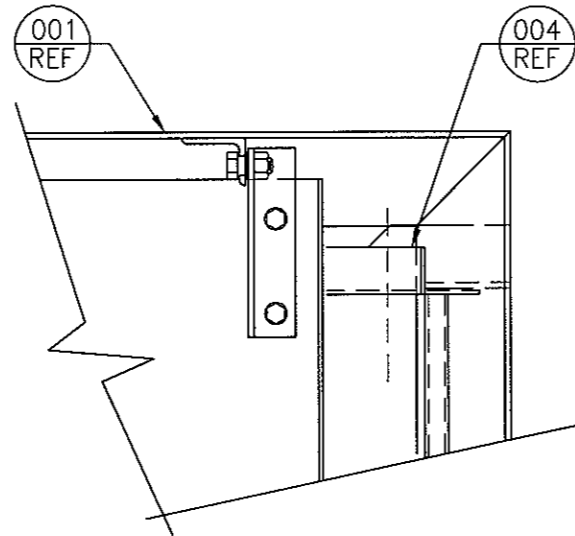
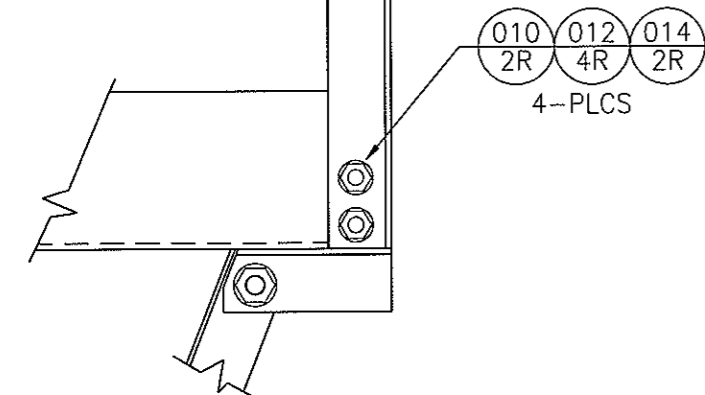
VertexRSI ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

CODE ID. NO.	SIZE	DWG NO.	REV
1GD22	B	001003	D
SCALE: 1/5	CONTRACT NO.		SHEET 3 OF 4

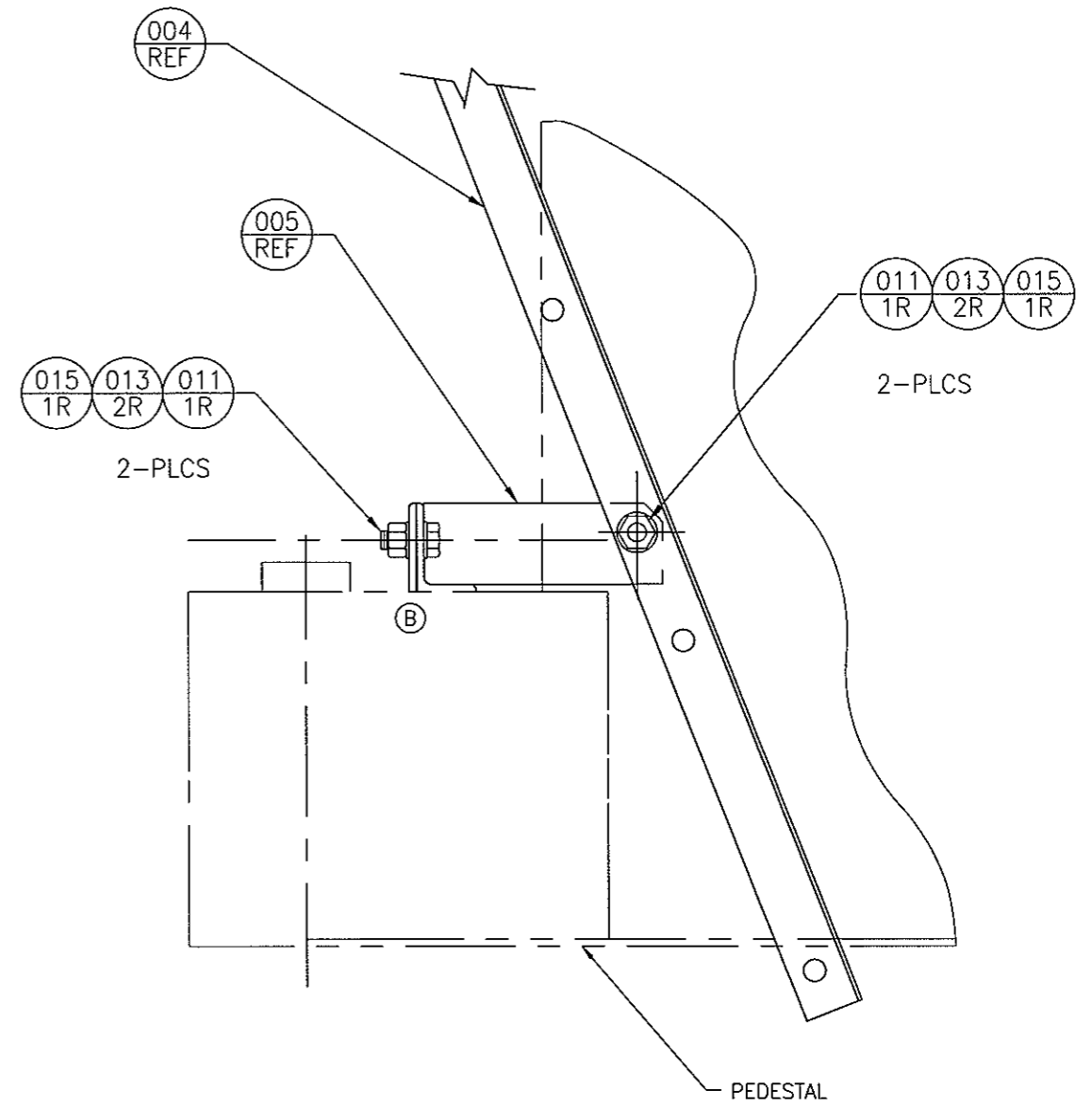


002 REF

DETAIL F
(SHT 1)



DETAIL G
(SHT 2)



VIEW E-E
LOWER LADDER INSTL.
(SHT 1)

VertexRSI CONFIDENTIAL AND PROPRIETARY

VertexRSI ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

CODE ID. NO.	SIZE	DWG NO.	REV
1GD22	B	001003	D
SCALE: 1/6	CONTRACT NO.		SHEET 4 OF 4

SINGLE LEVEL BILL OF MATERIAL SUMMARY PRINT DATE 3/24/08 TIME 9:32:15

CATALOGUE#: R007967 PSM: M STATUS: RELEASED DRAWING: B-004753 REV: D

DESCRIPTION: INACTIVE FOR NEW INSTL-SEE R007967A CATEGORY: INTEGRAT ENTERED: 2/16/1994
 ELEC KIT LPS 8.1/9.0KP LPN-2/0 CLASS: AACLPN REVISED: 3/16/2007 REV: D
 DOWN COND LTG PROTECT INSTL SUBCLASS: INSTL APPROVED: 3/20/2007
 JOB#: 9404 PENDING: REV
 REVISION: D 070271 3/12/07 DGH/BHS OLD CAT#: 573388-01 (D) SIZE: B DWG CAT: I ID: HLK

BILL OF MATERIAL

ITEM	SUB PART	CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
004	E30140-19		225.00		FT	R	P	S	CBL 2/0 1C WELDING	CABLE			
005	R009357		1.00			R	C	S	INACTIVE FOR NEW INSTL.-SEE R009364A	AACLPN	DETAIL B-005653		B
006	R007963		2.00			R	C	S	SPCR BI-METALLIC INTFC	AACLPN	DETAIL A-004744		A
007	P60028-19		34.00		EA	R	P	S	CLAMP BEAM 15/16 1/4-20 TAPPED	CLAMP	HDG		
008	P68222-19		34.00		EA	R	P	S	HGR CNDT 1/2 SS	CLAMP			
008S	P68222-19		4.00		EA	R	P	S	HGR CNDT 1/2 SS	CLAMP			
009	M90461-19		40.00		EA	R	P	S	TIE CBL 14 1/2		NONE		00
011	R008330		1.00			R	C	S	MTG BRKT LIGHTNING ROD	AACLPN	DETAIL B-004638		A
012	P60320-19		2.00		EA	R	P	S	CLAMP LIGHTNING ROD	CLAMP	NONE		00
013	P98360-1		2.00		EA	R	P	S	*ROD LIGHTNING 5/8 DIA X 24				
014	H55554-39		34.00		EA	R	P	S	SCR ST PH PHH 1/4-20UNC X 1/2 SS	SCR	SS		
014S	H55554-39		4.00		EA	R	P	S	SCR ST PH PHH 1/4-20UNC X 1/2 SS	SCR	SS		
015	H55161-39		10.00		EA	R	P	S	SCR MCH PH 1/4-20UNC X 1 1/4 SSF879	MCHSCR	SS	NONE	00
015S	H55161-39		1.00		EA	R	P	S	SCR MCH PH 1/4-20UNC X 1 1/4 SSF879	MCHSCR	SS	NONE	00
016	H14006-39		4.00		EA	R	P	S	SCR CAP HH 1/4-20UNC X 1 SSF593	CAPSCR	SS	NONE	00
016S	H14006-39		1.00		EA	R	P	S	SCR CAP HH 1/4-20UNC X 1 SSF593	CAPSCR	SS	NONE	00
017	H40045-39		8.00		EA	R	P	S	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
017S	H40045-39		1.00		EA	R	P	S	FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
018	H20011-39		4.00		EA	R	P	S	NUT HEX 1/4-20UNC SSF594	HEXNUT	SS	NONE	00
018S	H20011-39		1.00		EA	R	P	S	NUT HEX 1/4-20UNC SSF594	HEXNUT	SS	NONE	00
019	H30009-39		48.00		EA	R	P	S	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00
019S	H30009-39		5.00		EA	R	P	S	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00
020	H14158-39		2.00		EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
020S	H14158-39		1.00		EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00
021	H40055-39		6.00		EA	R	P	S	FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
021S	H40055-39		1.00		EA	R	P	S	FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
022	H30011-39		3.00		EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
022S	H30011-39		1.00		EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
023	H20013-39		3.00		EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
023S	H20013-39		1.00		EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
024	H32011-39		1.00		EA	R	P	S	LW EXT TOOTH 3/8 SS18-8	LW	SS	NONE	00
024S	H32011-39		1.00		EA	R	P	S	LW EXT TOOTH 3/8 SS18-8	LW	SS	NONE	00
027	H14163-39		1.00		EA	R	P	S	SCR CAP HH 3/8-16UNC X 2 1/2 SSF593	CAPSCR	SS		
027S	H14163-39		1.00		EA	R	P	S	SCR CAP HH 3/8-16UNC X 2 1/2 SSF593	CAPSCR	SS		
028	R009646-G		1.00			R	C	S	BRKT,LPN MTG,LIGHTNING ROD	AACLPN	DETAIL D-005787		D
029	P60713-19		10.00		EA	R	P	S	STRAP CNDT 1-HOLE DBL TBG 1/2 HDG	TBG	HDG		
030	P60350-1		3.00		EA	R	P	S	*CLAMP PARALLEL ADJ BRONZE	AACLPN			

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:32:15

 CATALOGUE#: R007967 PSM: M STATUS: RELEASED DRAWING: B-004753 REV: D

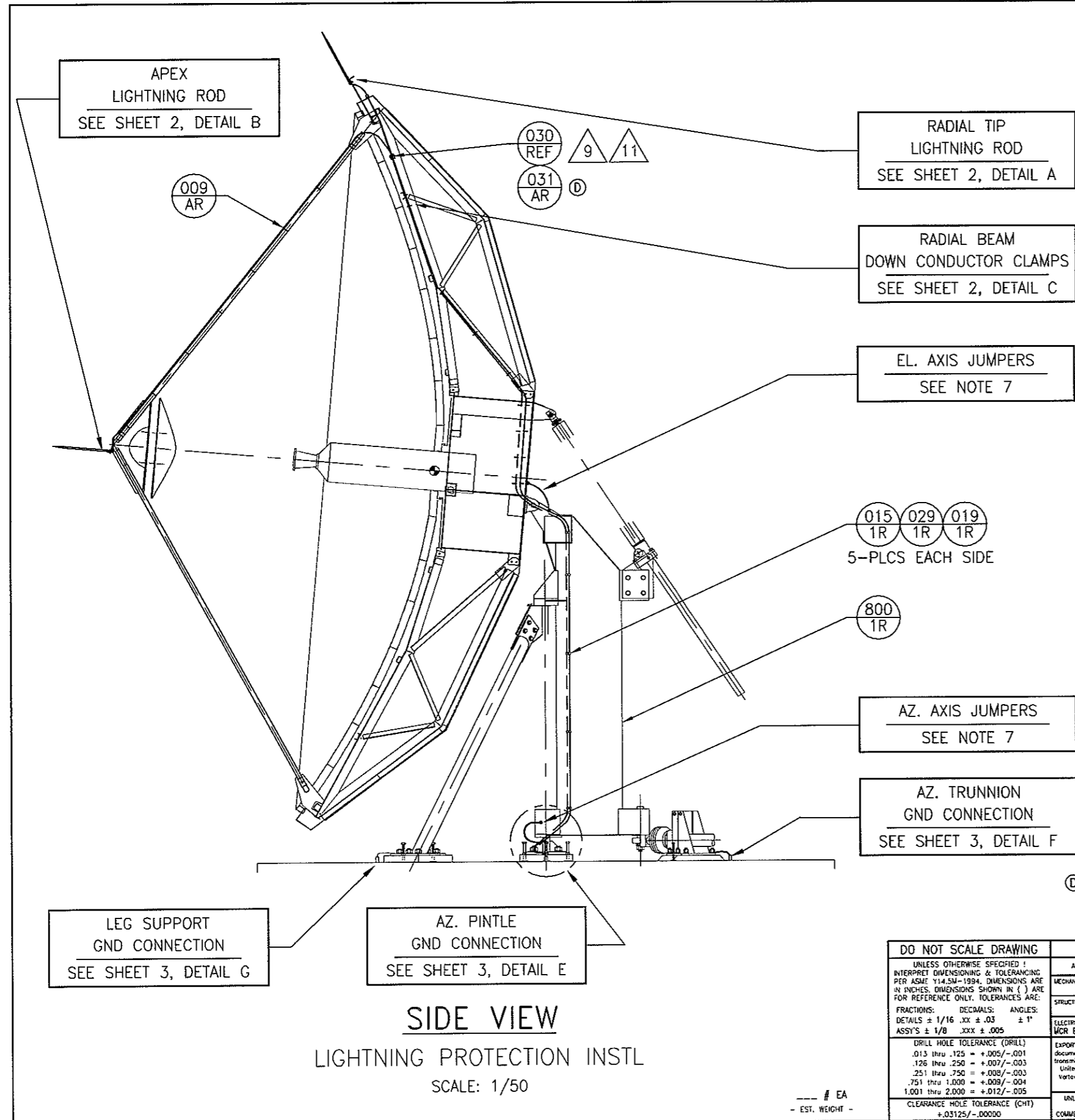
BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
800	R008377	1.00			R	C	M	MOD PED 8/9KFC/K LIGHTNING	AACLPN	DETAIL	D-005069	C

 END OF BOM:R007967

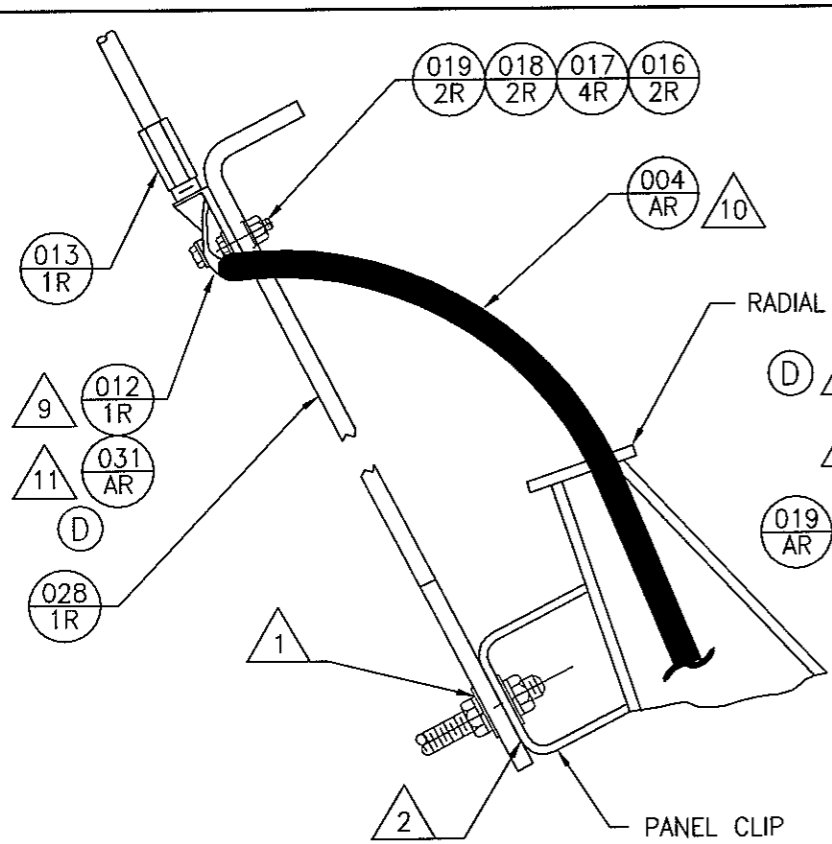
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASELINE; REPLACES 573388	02/26/94	JCS/JL
B	EC 95-1172	07/17/95	JED/HK
C	EC 96-1024	06/27/96	JED/HLK
D	EC 07-0271	03/07/07	DGH/BHS

- NOTES:
1. MOUNT BRACKET TO PANEL CLIP PRIOR TO PANEL INSTALLATION.
 2. REMOVE PAINT TO BARE METAL FROM MOUNTING SURFACE AND WIREBRUSH BRACKET. DO NOT REMOVE GALVANIZING.
 3. MOUNT TO PRE-DRILLED APEX ASSEMBLY AS SHOWN.
 4. CUSTOMER SHALL PROVIDE A GROUND FIELD AND #2/0 AWG (10.6 mm) MINIMUM GROUND CABLE FOR ANTENNA CONNECTION TO THE GROUND FIELD.
 5. CUSTOMER SHALL PROVIDE A MECHANICAL CONNECTOR OR THERMAL WELD TO CONNECT THE GROUND CABLE TO THE ANTENNA. A 3/8-16UNC TAPPED HOLE IS PROVIDED IN THE BASE PLATE FOR CONNECTION. ALL GROUNDING CONNECTIONS SHALL MEET LOCAL CODES.
 6. CUSTOMER SHALL PROVIDE A MECHANICAL CONNECTOR OR THERMAL WELD TO CONNECT THE GROUND CABLE TO THE ANTENNA. CUSTOMER MAY CONNECT THE GROUND CABLE WITH THE DOWN CONDUCTORS IN THE 3-WIRE LUG (ITEM 005) FURNISHED FOR DOWN CONDUCTOR CONNECTION TO THE PINTLE. ALL GROUNDING CONNECTIONS SHALL MEET LOCAL CODES.
 7. ELEVATION AND AZIMUTH AXIS JUMPER CABLES ARE PREVIOUSLY INSTALLED ON ANTENNA INSTALLATION DRAWING.
 8. REFERENCE FOUNDATION CONDUIT LAYOUT FOR LOCATION OF GROUND FIELD STUB-UPS IN PAD.
 9. REMOVE CONDUCTOR INSULATION FOR FULL LENGTH OF CLAMP OR LUG.
 10. DOWN CONDUCTORS SHOULD BE STRAIGHT AND FOLLOW THE MOST DIRECT PATH TO EARTH. WHEN A BEND IS REQUIRED, THE BEND RADIUS SHOULD BE A MINIMUM OF 8 INCHES (200MM).
 11. BEFORE INSERTING COPPER GND CABLE INTO ANY ALUMINUM LUG OR CLAMP, APPLY A LIBERAL COATING OF ITEM 031 TO THE BARE CONDUCTOR.

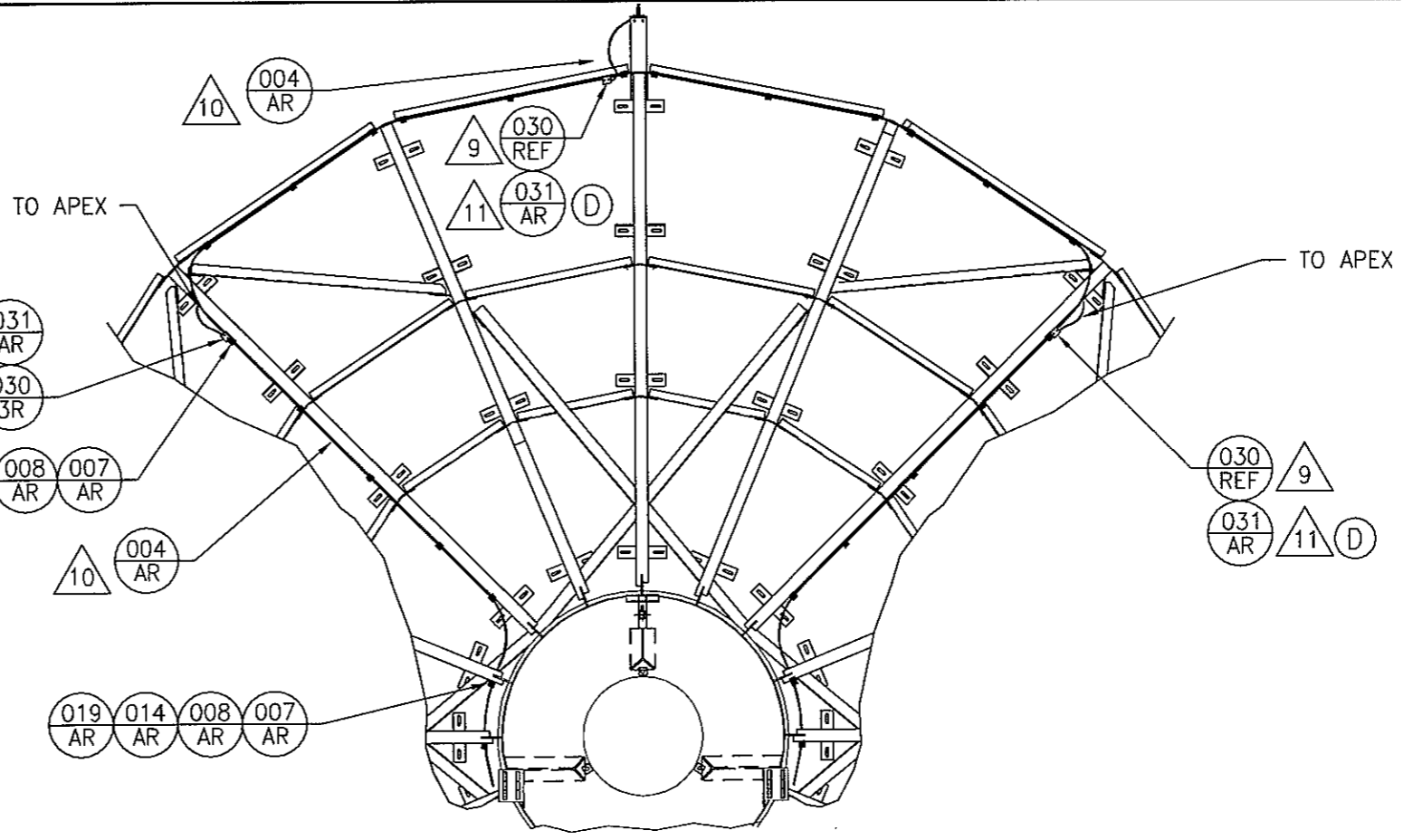


SIDE VIEW
LIGHTNING PROTECTION INSTL
 SCALE: 1/50

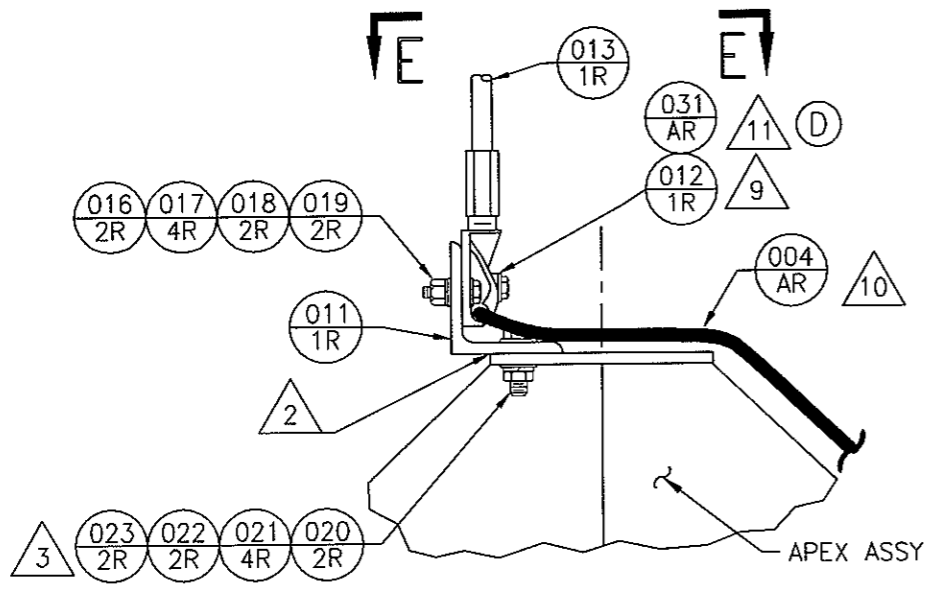
DO NOT SCALE DRAWING	REFERENCE SEPARATE BOM FOR SPECIFIC INFO		SATCOM Technologies CONFIDENTIAL AND PROPRIETARY	
UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: DETAILS ± 1/16 .XX ± .03 ± 1° ASSY'S ± 1/8 .XXX ± .005	ADDITIONAL APPROVALS	DATE	APPROVALS	DATE
DRILL HOLE TOLERANCE (DRILL) .013 thru .125 = +.005/- .001 .126 thru .250 = +.007/- .003 .251 thru .750 = +.008/- .003 .751 thru 1.000 = +.009/- .004 1.001 thru 2.000 = +.012/- .005	MECHANICAL		DRAWN J.C. STEPH	02/28/94
	STRUCTURAL		CHECKED L. LARWIN	04/04/94
	ELECTRICAL	04/07/94	DESIGNER HL. KRENSON	02/28/94
	WCR BALLY		MANUFACTURING RG. HUGHLEY	04/18/94
			PROJECT JR. KING	07/26/94
			PRODUCT MGR RG. RADTKE	05/26/94
			DESIGN	
	EXPORT CONTROL WARNING - Do not disclose this document or its contents to non-U.S. persons, or transmit this document or its contents outside the United States without the written permission of Vertex Communications Corporation and required U.S. Government approvals.			
	UNLESS OTHERWISE SPECIFIED, PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.			
	CLEARANCE HOLE TOLERANCE (CHT) +.03125/- .00000			
	--- # EA - EST. WEIGHT -			
	TITLE: ELECTRICAL KIT, LPS DOWN CONDUCTOR CONFIG MODEL 8.1/9.0 KP/KX		CODE NO. NO. 1GD22	SIZE B
		DATE 004753	REV D	
	SCALE: 1/50	CONTRACT NO. 9404	SHEET 1 OF 3	



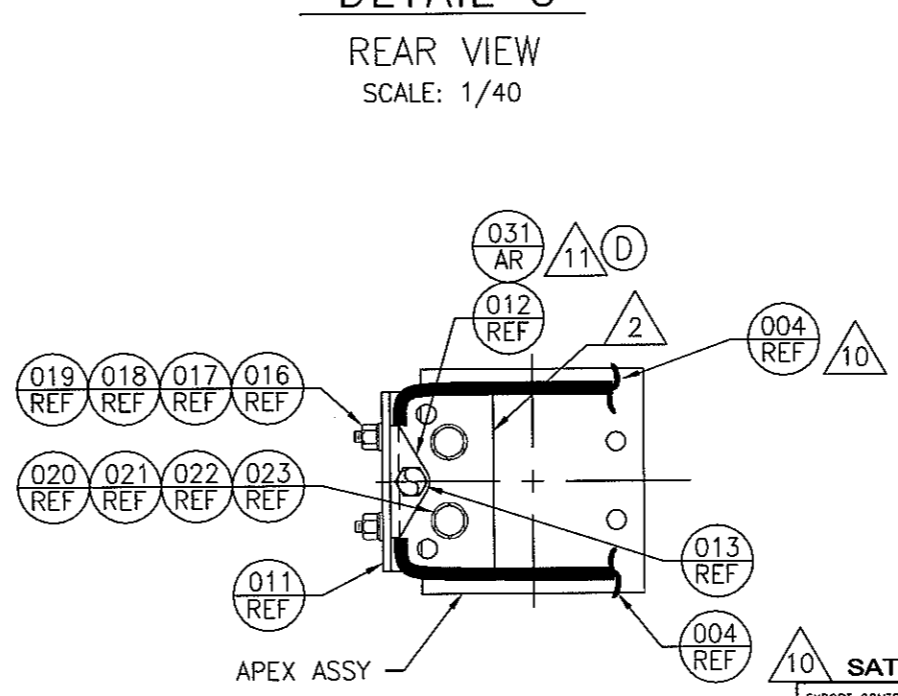
DETAIL A
RADIAL TIP LIGHTNING ROD



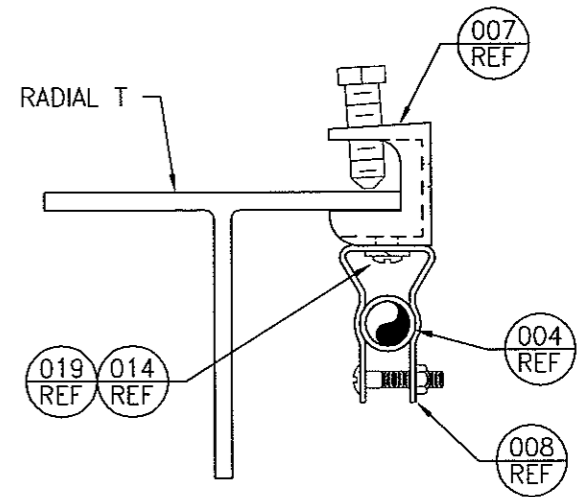
DETAIL C
REAR VIEW
SCALE: 1/40



DETAIL B
APEX LIGHTNING ROD



VIEW E-E



DETAIL D
RADIAL CROSS SECTION
SCALE: 1/2

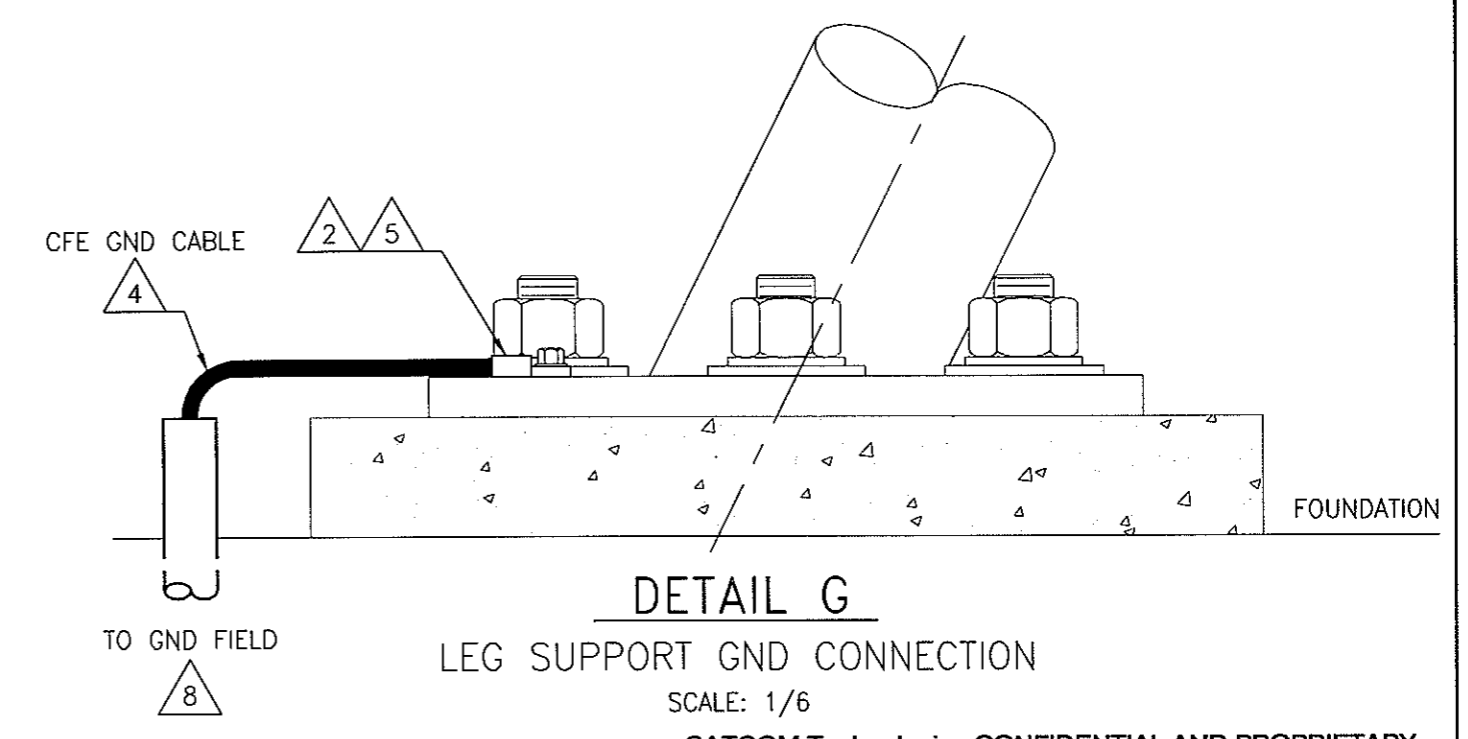
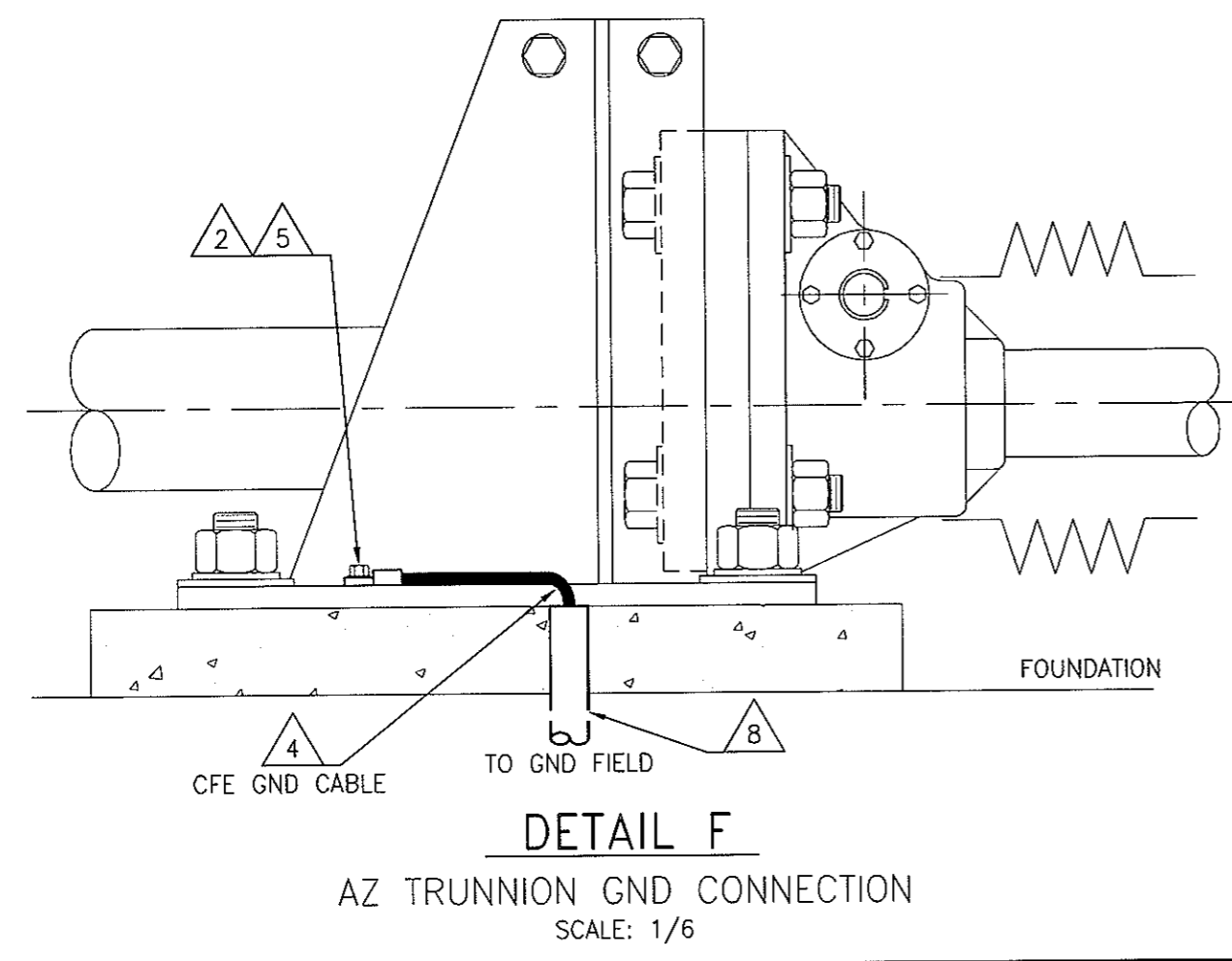
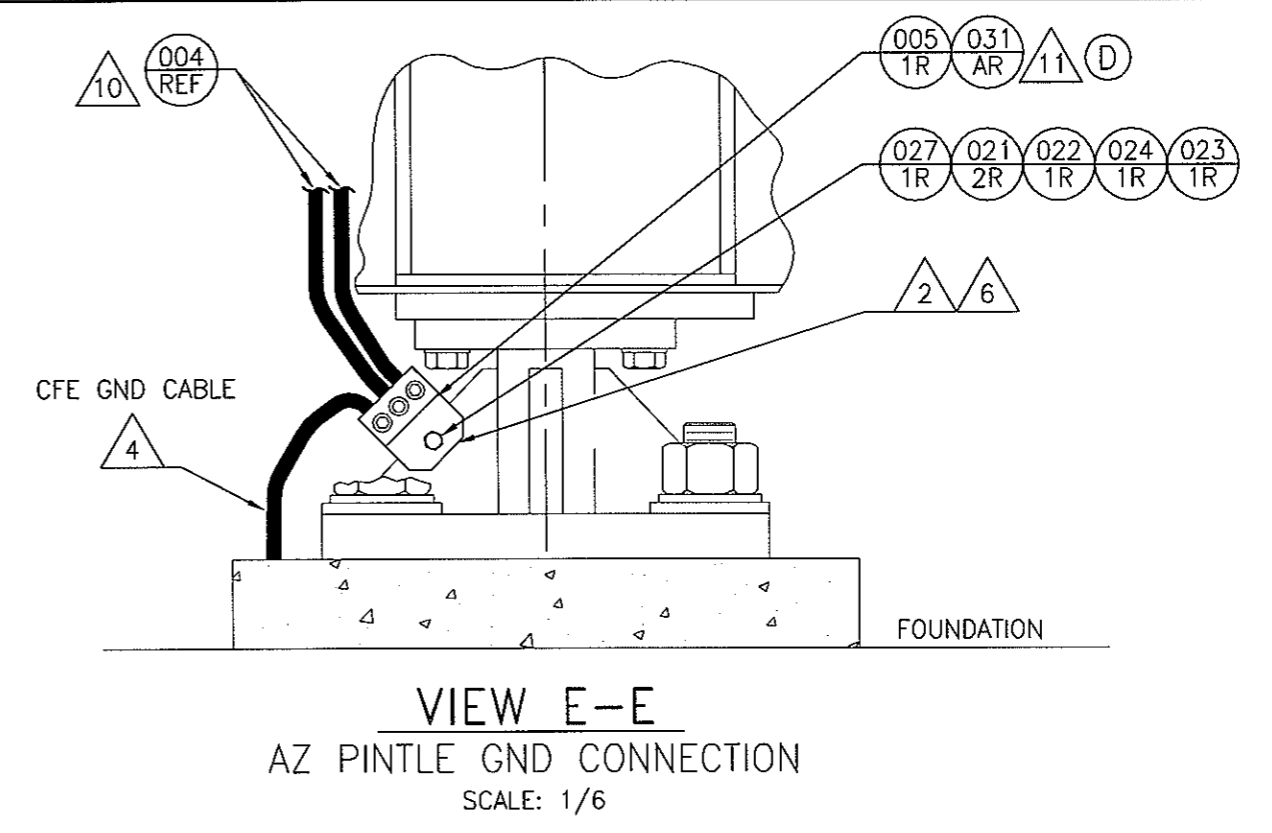
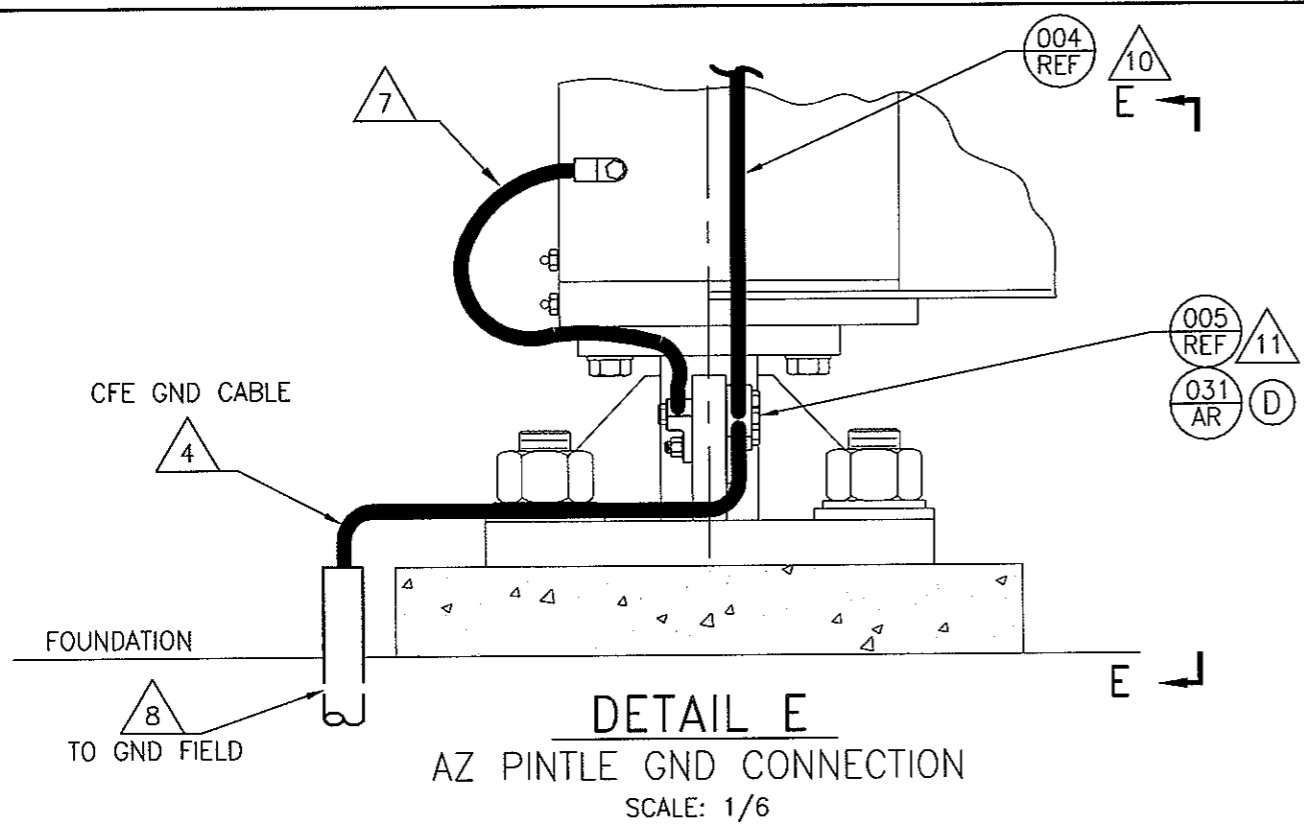
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VertexRSI
GENERAL DYNAMICS

2600 N. LONGVIEW ST.
KILGORE, TX USA 75662-6842

CODE ID. NO.	SIZE	DWG NO.	REV
1GD22	B	004753	D
SCALE: 1/4	CONTRACT NO.	9404	SHEET 2 OF 3



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		<small>2600 N. LONGVIEW ST. KILGORE, TX USA 75662-6842</small>	
CODE ID. NO.	SIZE	DWG. NO.	REV.
1GD22	B	004753	D
SCALE: 1/6	CONTRACT NO.	9404	SHEET 3 OF 3

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:32:17

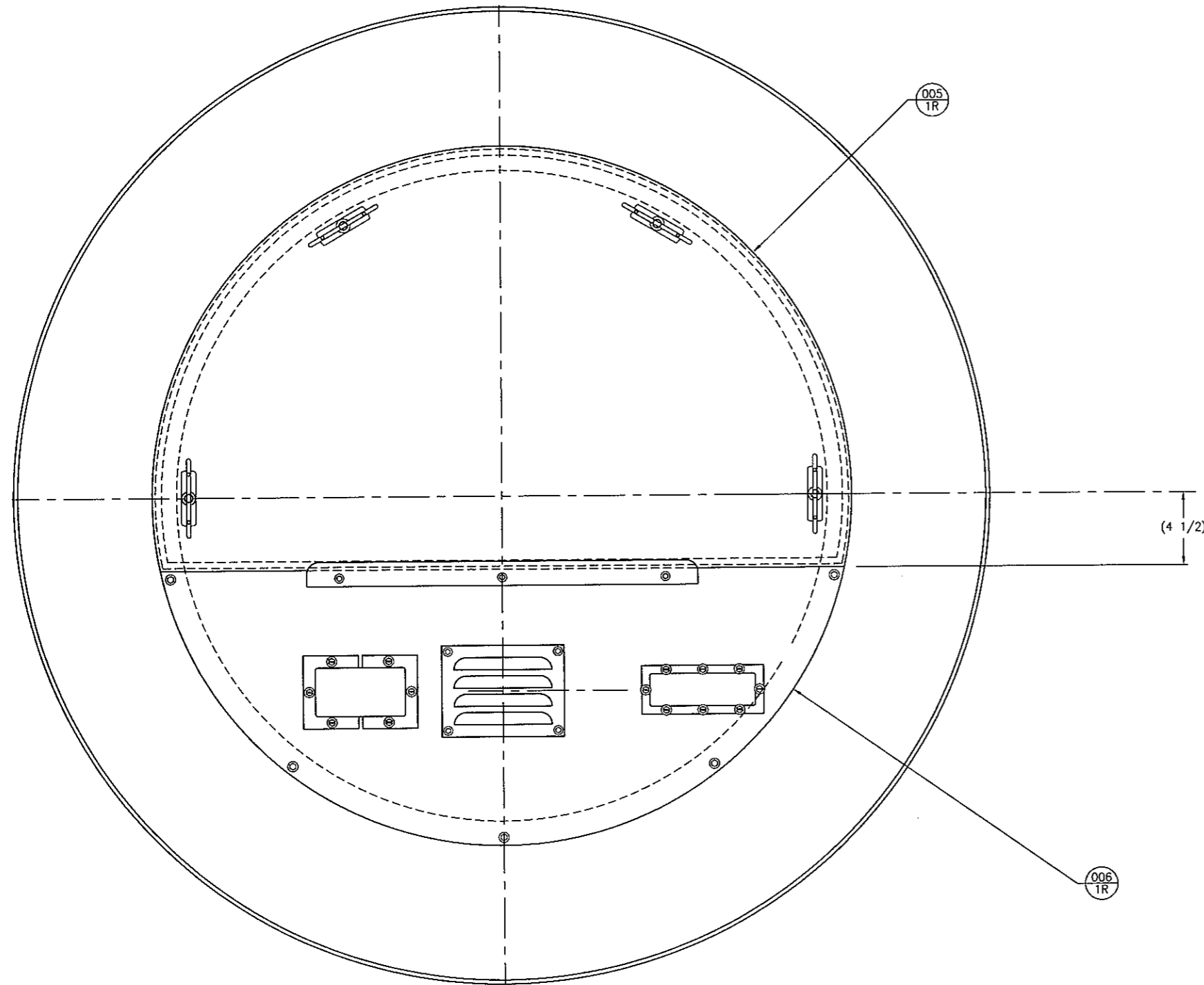
CATALOGUE#:	030947-01C	PSM:	M	STATUS:	RELEASED	DRAWING:	D-030947	REV:	B
DESCRIPTION:	HUB CVR INSTL (8/9M) 2-PC AL	CATEGORY:	ANTENNA	ENTERED:	5/09/2003				
		CLASS:	AACHCL	REVISED:	8/01/2003			REV:	B
		SUBCLASS:	INSTL	APPROVED:	8/20/2003				
		JOB#:	SE39	PENDING:				REV	
REVISION:	B 030756 7/16/03 JDH/GPR	OLD CAT#:	NEW 05/09/03 JDH/GPR	SIZE:	D	DWG CAT:	I	ID:	JDH

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
005	030917-01C	1.00			R	C	S	UPR HUB CVR ASSY			D-030917	A
006	030924-01C	1.00			R	C	S	LWR HUB CVR ASSY 8/9			D-030924	B

END OF BOM:030947-01C

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	05/09/03	JDH/GPR
B	EC 03-0756	07/16/03	JDH/GPR



QTY	ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	NOTES
	010			
	009			
	008			
	007			
1	006	030924-01	LWR HUB CVR ASSY 8/9	
1	005	030917-01	UPPER HUB CVR ASSY	
	004			
	003			
	002			
	001	030947-01	HUB CVR INSTL TWO PIECE ALUM 8/9M	
	-D1			

030947-01

DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO		VertexRSI CONFIDENTIAL AND PROPRIETARY			
UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: DETAILS ± 1/16 .XX ± .03 ASSY'S ± 1/8 .XXX ± .005 ANGLES ± 1°		ADDITIONAL APPROVALS	DATE	APPROVALS	DATE		
UNLESS OTHERWISE SPECIFIED ! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.		DESIGN		DRWN	05/09/03		
TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.		MECHANICAL		CHECKED	05/19/03		
		STRUCTURAL		DESIGNER	05/19/03		
		ELECTRICAL		MANUFACTURING	05/20/03		
				PROJECT	05/27/03		
				PRODUCT MGR	05/27/03		
				SPK			
				CODE ID. NO.	SIZE	DWG NO.	REV
				1GD22	D	030947	B
				SCALE: 1/4	CONTRACT NO. SE39	SHEET 1 OF 1	

DFORM-01

EA
- EST. WEIGHT -

SINGLE LEVEL BILL OF MATERIAL SUMMARY PRINT DATE 3/24/08 TIME 9:32:19

CATALOGUE#: R008381 PSM: M STATUS: RELEASED DRAWING: D-005081 REV: A

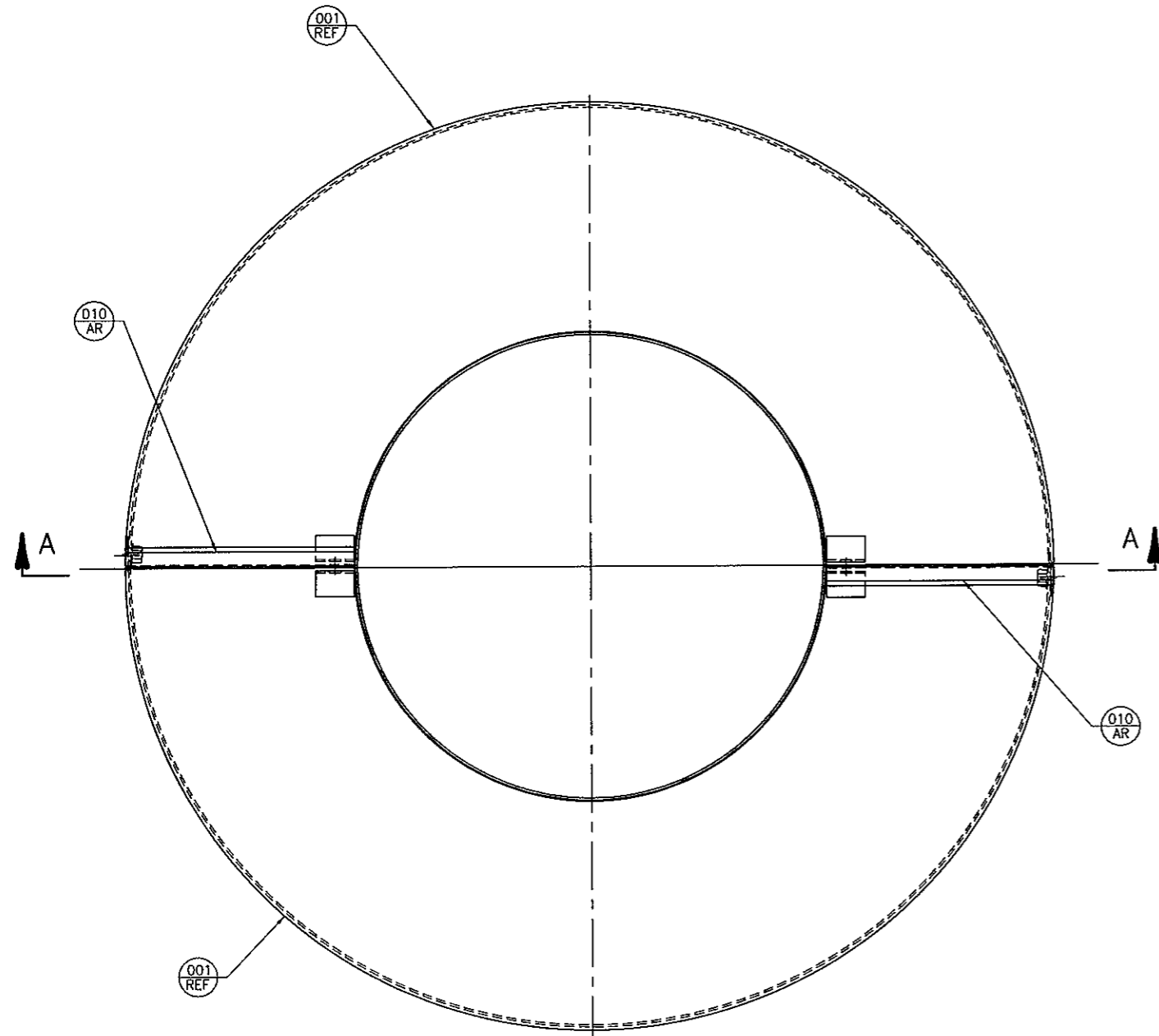
DESCRIPTION: RAINSHIELD INSTL KU-BND 8/9M CATEGORY: ANTENNA ENTERED: 3/07/1994
 FEED TUBE 18 OD CLASS: AACHCL REVISED: 3/07/1994 REV: A
 SUBCLASS: INSTL APPROVED: 4/25/1994
 JOB#: 2768 PENDING: REV
 REVISION: A 03/07/94 GOR/JAP OLD CAT#: 670167-01(E) SIZE: D DWG CAT: I ID: GOR

BILL OF MATERIAL

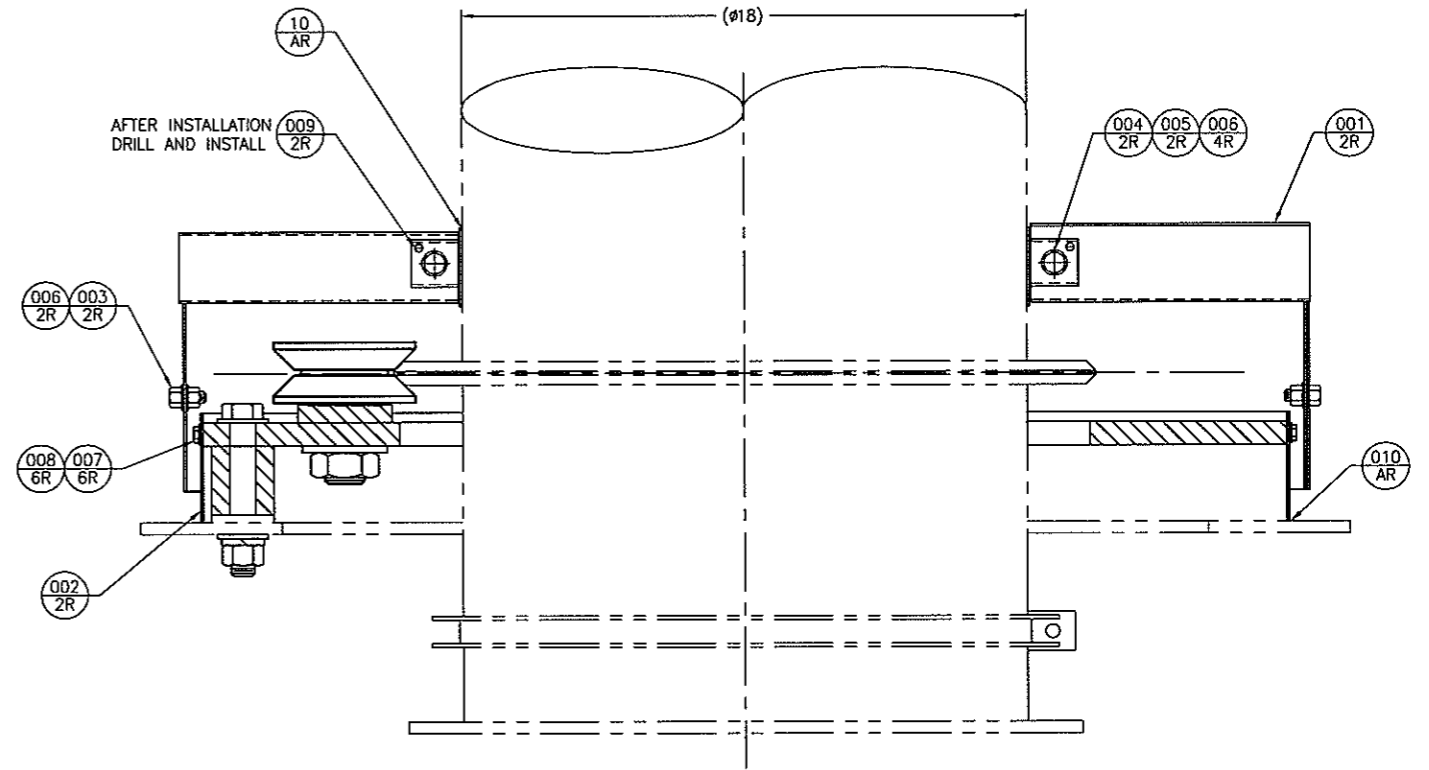
ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM DESCRIPTION	CLASS	SUBCL	DRAWING	REV
001	R008382	2.00			R	C	S RAINSHIELD WLDMNT 9M FEED TUBE 18 DIA	AACHCL	WLDMNT	D-005087	B
002	R008400	2.00			R	C	S PL RAINSHIELD ROLLUP,SHT 0.125	AACHCL	DETAIL	D-005462	A
003	H14156-39	2.00			EA	R	P S SCR CAP HH 3/8-16UNC X 3/4 SSF593	CAPSCR	SS	NONE	00
003S	H14156-39	1.00			EA	R	P S SCR CAP HH 3/8-16UNC X 3/4 SSF593	CAPSCR	SS	NONE	00
004	H14164-99	2.00			EA	R	P S SCR CAP HH 3/8-16UNC X 2 3/4FT SSF593	CAPSCR	SS		
004S	H14164-99	1.00			EA	R	P S SCR CAP HH 3/8-16UNC X 2 3/4FT SSF593	CAPSCR	SS		
005	H20013-39	2.00			EA	R	P S NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
005S	H20013-39	2.00			EA	R	P S NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
006	H40055-39	6.00			EA	R	P S FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
006S	H40055-39	1.00			EA	R	P S FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
007	H14002-39	6.00			EA	R	P S SCR CAP HH 1/4-20UNC X 1/2 SSF593	CAPSCR	SS	NONE	00
007S	H14002-39	1.00			EA	R	P S SCR CAP HH 1/4-20UNC X 1/2 SSF593	CAPSCR	SS	NONE	00
008	H40045-39	6.00			EA	R	P S FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
008S	H40045-39	1.00			EA	R	P S FW (AN) 1/4 X 5/8 SS18-8	FW	SS	NONE	00
009	H52702-19	2.00			EA	R	P S SCR ST HH 1/4-14 X 7/8 A325 ZINC	SCR	ZINC		
009S	H52702-19	1.00			EA	R	P S SCR ST HH 1/4-14 X 7/8 A325 ZINC	SCR	ZINC		
010	M91065-19	1.00			EA	R	P S SEALANT SILICONE COMPOUND 10.1 FL OZ			NONE	00

END OF BOM:R008381

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	JBS BASE; REPL 670167-01(E); DDP 1085.	3/23/94	MSB/KL



R008381



SECTION A-A

DO NOT SCALE DRAWING UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: DETAILS ± 1/16 .XX ± .03 ASSY'S ± 1/8 .XXX ± .005 ANGLES ± 1° UNLESS OTHERWISE SPECIFIED ! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY. TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.	REFERENCE SEPARATE BOM FOR SPECIFIC INFO				VertexRSI CONFIDENTIAL AND PROPRIETARY					
	ADDITIONAL APPROVALS		DATE	APPROVALS		DATE			ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
	DESIGN			DRW	M. BEHREND	03/23/94	TITLE: RAINSHIELD INSTALLATION MODEL 8.1/9.0 METER			
	MECHANICAL			CHECKED	K. LINDSEY	04/04/94	CODE ID. NO. 1GD22 SIZE D DWG NO. 005081		REV A	
STRUCTURAL			DESIGNER			SCALE: 1/3 CONTRACT NO. 2768 SHEET 1 OF 1				
ELECTRICAL			MANUFACTURING	J. JACOBUS	04/16/94					
			PROJECT	G. HALL	04/20/94					
			PRODUCT MGR							

EA
- EST. WEIGHT -

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:32:25

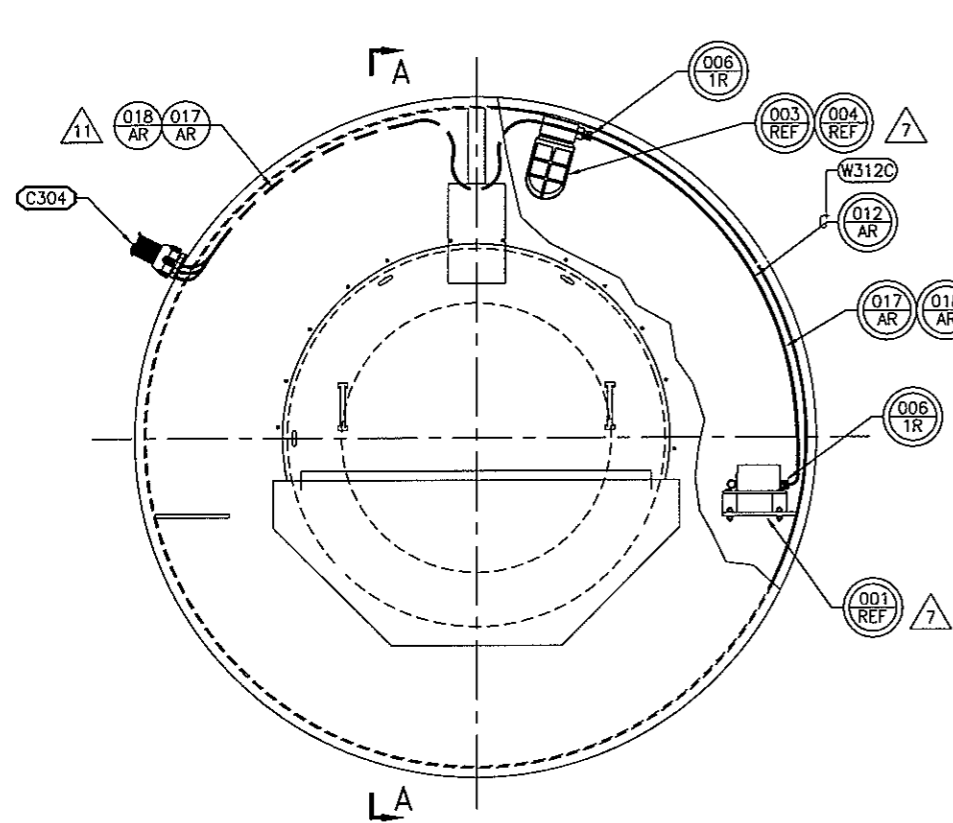
 CATALOGUE#: 024865-03 PSM: M STATUS: RELEASED DRAWING: D-024865 REV: A
 DESCRIPTION: ELEC KIT AUS 8/9 L/S/A 230V CB CATEGORY: INTEGRAT ENTERED: 10/13/2000
 FIELD INSTL CLASS: AACHUT REVISED: 10/13/2000 REV: A
 SUBCLASS: INSTL APPROVED: 12/05/2000
 JOB#: EE005 PENDING: REV
 REVISION: A 10/13/00 JED/KBS OLD CAT#: NEW 10/13/00 JED/KBS SIZE: D DWG CAT: I ID: JED

BILL OF MATERIAL

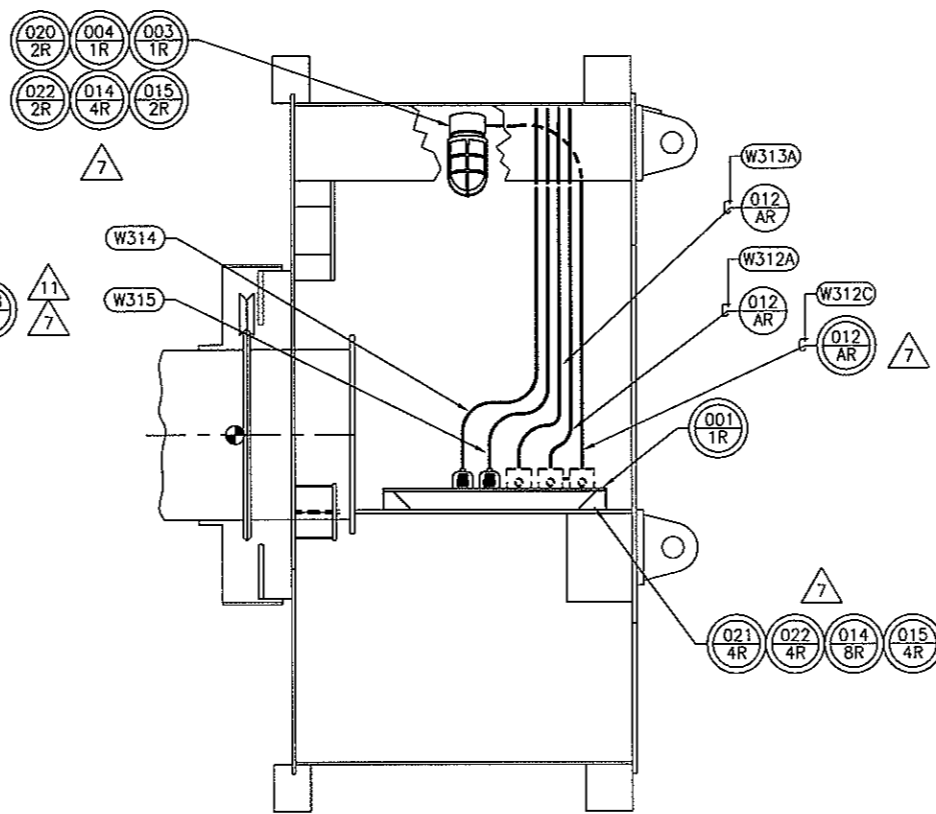
ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
004S	E97015-1	1.00		EA	R	P	S	BULB LT 100W 230V 50HZ				
005	P70080-1	2.00		EA	R	P	S	CORD GRIP 1/2NPT CG-1850	CONN		NONE	00
006	P70100-1	4.00		EA	R	P	S	CORD GRIP 1/2NPT CG-3150	CONN		NONE	00
008	E91010-19	4.00		EA	R	P	S	LOCKNUT CNDT 1/2	LCKNUT		NONE	00
009	P37010-19	4.00		EA	R	P	S	BSHG CNDT 1/2	BSHG		NONE	00
010	P74035-19	6.00		EA	R	P	S	FORK CRIMP #22-18AWG #8 STUD				
010S	P74035-19	2.00		EA	R	P	S	FORK CRIMP #22-18AWG #8 STUD				
011	P74033-19	4.00		EA	R	P	S	FORK CRIMP #16-14AWG #10 STUD	WIRE			
011S	P74033-19	2.00		EA	R	P	S	FORK CRIMP #16-14AWG #10 STUD	WIRE			
012	E12135-19	110.00		FT	R	P	S	CBL TRAY #14AWG 3C	CABLE		NONE	00
017	P68100-19	25.00		EA	R	P	S	CLAMP CUSHIONED LOOP 3/8	CLAMP		NONE	00
018	P99955-19	25.00		EA	R	P	S	SCR TEKS #10-16 X 3/4 SS410 W/ZINC PL	SCR	ZINC		
019	M93105-19	1.00		EA	R	P	S	CBL MARKER SELP LAM 1 X 3/4			NONE	00
024	E98115-19	2.00		EA	R	P	S	RING CRIMP #16-14AWG #10 STUD			NONE	00
800	024865-04	1.00		R	C	M		ELEC KIT AUS 8/9 L/S/A 230V CB	AACHUT INSTL		D-024865	A

END OF BOM:024865-03

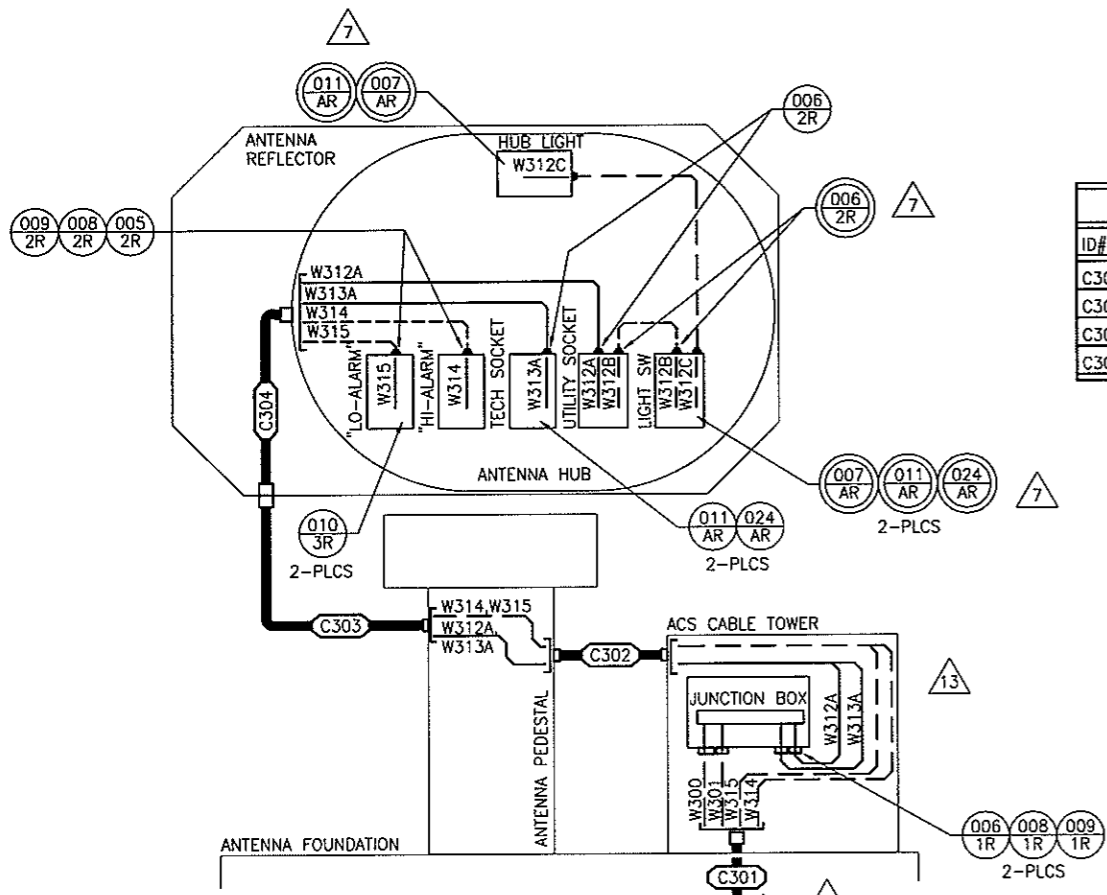
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	10/13/00	JED/KBS



REAR VIEW - HUB



SECTION A-A
SIDE VIEW - HUB



ROUTING DIAGRAM
ANTENNA UTILITY KIT

CONDUIT SCHEDULE - ANTENNA ELECTRICAL KIT, AUS					
ID#	SIZE	TERMINATION POINT	ORIGINATION POINT	CONDUIT FILL	NOTES
C301	2" CFE	FNDTN @ CABLE TOWER	CFE POWER SOURCE	W300, W301	9
C302	2" FLEX	ANTENNA PEDESTAL (LOWER)	ANTENNA CABLE TOWER	W315, W314, W313A, W312A	-
C303	2" FLEX	ANTENNA REFL INTERFACE	ANTENNA PEDESTAL (UPPER)	W315, W314, W313A, W312A	-
C304	2" FLEX	ANTENNA HUB	ANTENNA REFL INTERFACE	W315, W314, W313A, W312A	-

NOTES:

1. (C000) INDICATES CONDUIT ID. NUMBER. REFERENCE THIS DRAWING FOR CONDUIT SCHEDULE.
2. (W000) INDICATES CABLE ID. NUMBER. REFERENCE UTILITY SCHEMATIC FOR CABLE SCHEDULE AND TERMINATIONS.
3. CUSTOMER TO SUPPLY 120VAC, 1 ϕ , 60Hz OR 220-240VAC, 1 ϕ , 50 Hz POWER TO OPERATE HUB UTILITY LIGHT AND SOCKET. FIELD INSTALLER TO TERMINATE CABLE AT CABLE TOWER JUNCTION BOX POWER INTERFACE.
4. CUSTOMER TO SUPPLY TECHNICAL POWER SUPPLY SOURCE FOR HUB UTILITY TECHNICAL SOCKETS. FIELD INSTALLER TO TERMINATE CABLE AT CABLE TOWER JUNCTION BOX POWER INTERFACE..
5. CABLES FOR HUB HI/LO TEMPERATURE ALARMS TO BE TERMINATED IN CABLE TOWER JUNCTION BOX.
6. INSTALL ALL CABLES ACCORDING TO LOCAL CODES AND PRACTICES.
7. (7) FACTORY INSTALLED ITEMS ARE INDICATED BY DOUBLE ITEM BUBBLES. (000 AR)
8. LABEL ALL CABLES AT EACH END WITH PROPER CABLE NUMBERS USING WIRE MARKERS (ITEM 019).
9. CUSTOMER SUPPLIED CONDUITS, REFERENCE VertexRSI FOUNDATION CONDUIT INSTALLATION FOR CONDUIT STUB-UP LOCATIONS AND INSTALLATION REQUIREMENTS.
10. COLOR TAG ALL GROUND AND NEUTRAL WIRES PER LOCAL CODES AND PRACTICES.
11. (11) SUPPORT CABLES IN HUB USING (ITEMS 017 AND 018) AS REQUIRED.
12. CIRCUIT BREAKERS FACTORY INSTALLED IN JUNCTION BOX.
13. (13) CONNECT W312A TO A 8A BREAKER FOR 120V OR A 4A BREAKER FOR 220-240V, CONNECT W313A TO BREAKER CBT, 8A FOR 120V OR 4A FOR 220-240V. MARK LABEL IN CABLE TOWER J-BOX LIGHT/ SOCKET FOR CABLE W312A AND TECH SOCKET FOR W313A.

DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO		VertexRSI CONFIDENTIAL AND PROPRIETARY	
UNLESS OTHERWISE SPECIFIED ! INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: DETAILS \pm 1/16 .XX \pm .03 ASSYS \pm 1/8 .XXX \pm .005 ANGLES \pm 1'		ADDITIONAL APPROVALS DATE APPROVALS DATE		VertexRSI ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
DESIGN		DRAWN	JE DINES	10/13/00	TITLE: ELEC KIT AUS L/S/A CB MODEL 8/9M
MECHANICAL		CHECKED	KB STODDARD	12/01/00	
STRUCTURAL		DESIGNER	JE DINES	10/13/00	EDGE ID. NO. SIZE DWG NO. REV
ELECTRICAL		MANUFACTURING	RG HUGHIEY	12/04/00	
		PROJECT	MJ RABENHORST	12/04/00	1GD22 D 024865 A
		PRODUCT MGR	MJ RABENHORST	12/04/00	SCALE: 1/10 CONTRACT NO. EE005 SHEET 1 OF 1
TO CONVERT TO METRIC SYSTEM, MULTIPLY INCHES SHOWN ON DRAWING BY 25.4 TO OBTAIN MILLIMETERS.					

--- # EA
- EST. WEIGHT -

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

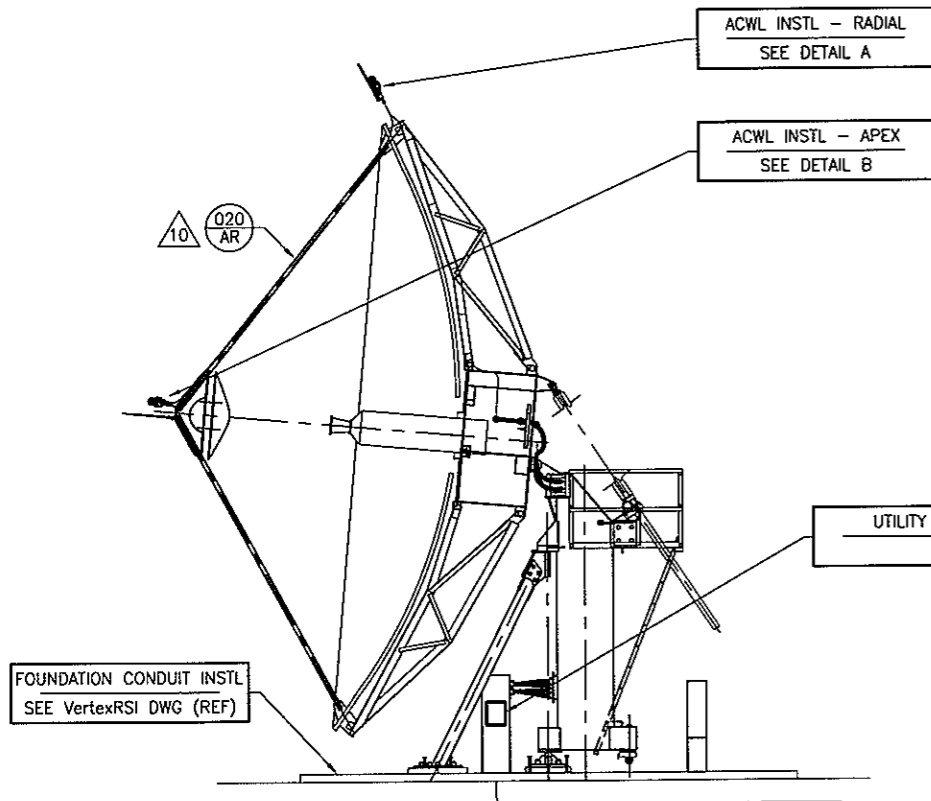
TIME 9:32:27

 CATALOGUE#: 024868-02 PSM: M STATUS: RELEASED DRAWING: D-024868 REV: A
 DESCRIPTION: ELEC KIT AUS 8/9KP ACWL 230V CB CATEGORY: INTEGRAT ENTERED: 10/13/2000
 CLASS: AACAWL REVISED: 10/17/2000 REV: A
 SUBCLASS: INSTL APPROVED: 11/28/2000
 JOB#: EE005 PENDING: REV
 REVISION: A 10/17/00 JED/KBS OLD CAT#: NEW 10/17/00 JED/KBS SIZE: D DWG CAT: I ID: JED

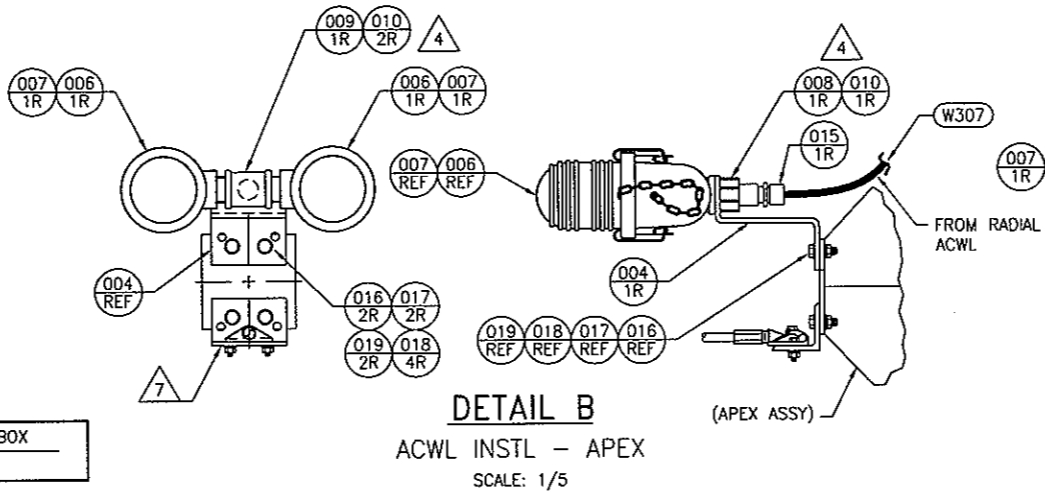
BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM DESCRIPTION	CLASS	SUBCL	DRAWING	REV
004	R007476-G	1.00			R	C	S BRKT FORMED (ACWL) GALV	AACAWL	DETAIL	NONE	00
006	P99986-1	4.00			EA	R	P S OBSTRUCTION LT 1 HUB				
007	P99998-1	4.00			EA	R	P S OBSTRUCTION LT BULB 116W 230V	AACAWL			
007S	P99998-1	4.00			EA	R	P S OBSTRUCTION LT BULB 116W 230V	AACAWL			
008	P000302	1.00			EA	R	P S CPLG RDCR 1LG-1/2SML	CPLG			
009	P93755-19	2.00			EA	R	P S PIPE TEE 1 SCH40 GALV				
010	P93400-19	6.00			EA	R	P S NIPPLE CNDT CLOSE 1 X 1 1/2	NIPPLE			
011	E12135-19	125.00			FT	R	P S CBL TRAY #14AWG 3C	CABLE		NONE	00
012	168003-004	1.00			EA	R	P S NIPPLE CLOSE 1/2 X 1 1/8			NONE	00
013	P34320-19	1.00			EA	R	P S BSHG RDCR THD 1M X 1/2F	BSHG			
014	P24152-1	1.00			EA	R	P S CPLG CNDT 1 RIGID 3-PC UNION MI	CPLG			
015	P70100-1	5.00			EA	R	P S CORD GRIP 1/2NPT CG-3150	CONN		NONE	00
016	H14159-39	2.00			EA	R	P S SCR CAP HH 3/8-16UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
016S	H14159-39	1.00			EA	R	P S SCR CAP HH 3/8-16UNC X 1 1/2 SSF593	CAPSCR	SS	NONE	00
017	H20013-39	2.00			EA	R	P S NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
017S	H20013-39	1.00			EA	R	P S NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00
018	H40055-39	4.00			EA	R	P S FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
018S	H40055-39	1.00			EA	R	P S FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00
019	H30011-39	2.00			EA	R	P S LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
019S	H30011-39	1.00			EA	R	P S LW HELICAL 3/8 SS18-8	LW	SS	NONE	00
020	M90463-19	100.00			EA	R	P S TIE CBL 30	CABLE			
022	M91016-19	1.00			EA	R	P S ADHESIVE LOCTITE #242 (BLUE)			NONE	00
023	E93110-19	18.00			EA	R	P S FORK CRIMP #18-14AWG #6 STUD				
028	E91010-19	2.00			EA	R	P S LOCKNUT CNDT 1/2	LCKNUT		NONE	00
029	P37010-19	2.00			EA	R	P S BSHG CNDT 1/2	BSHG		NONE	00
030	CTB005	10.00			EA	R	P S RING CRIMP #16-14AWG #8 STUD			NONE	00
031	E46027-1	1.00			EA	R	P S BOX BELL 1-GANG 4-1/2				
032	E49600-19	1.00			EA	R	P S CVR PL BLANK AL			NONE	00
033	M93105-19	1.00			EA	R	P S CBL MARKER SELF LAM 1 X 3/4			NONE	00

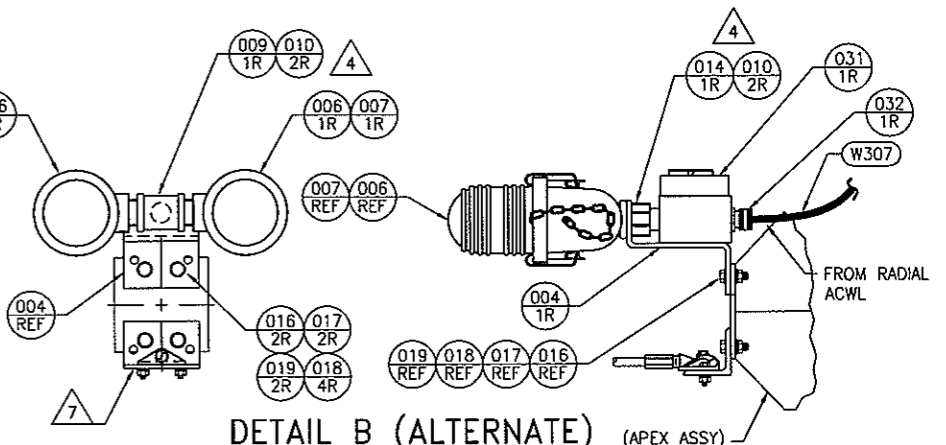
REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	10/17/00	JED/KBS



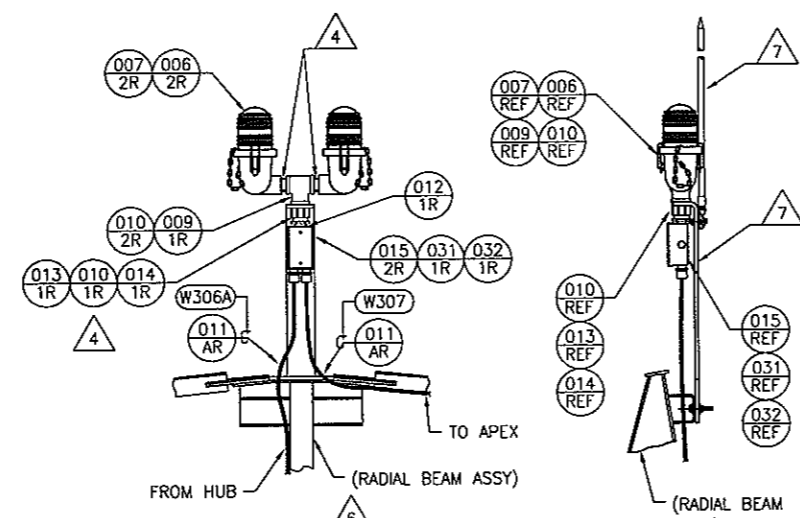
SIDE VIEW
AIRCRAFT WARNING LIGHT INSTL



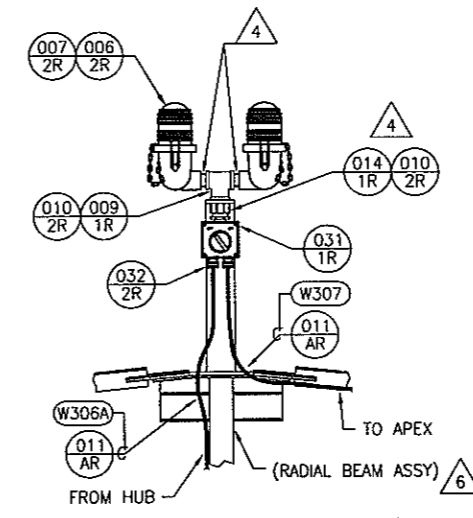
DETAIL B
ACWL INSTL - APEX
SCALE: 1/5



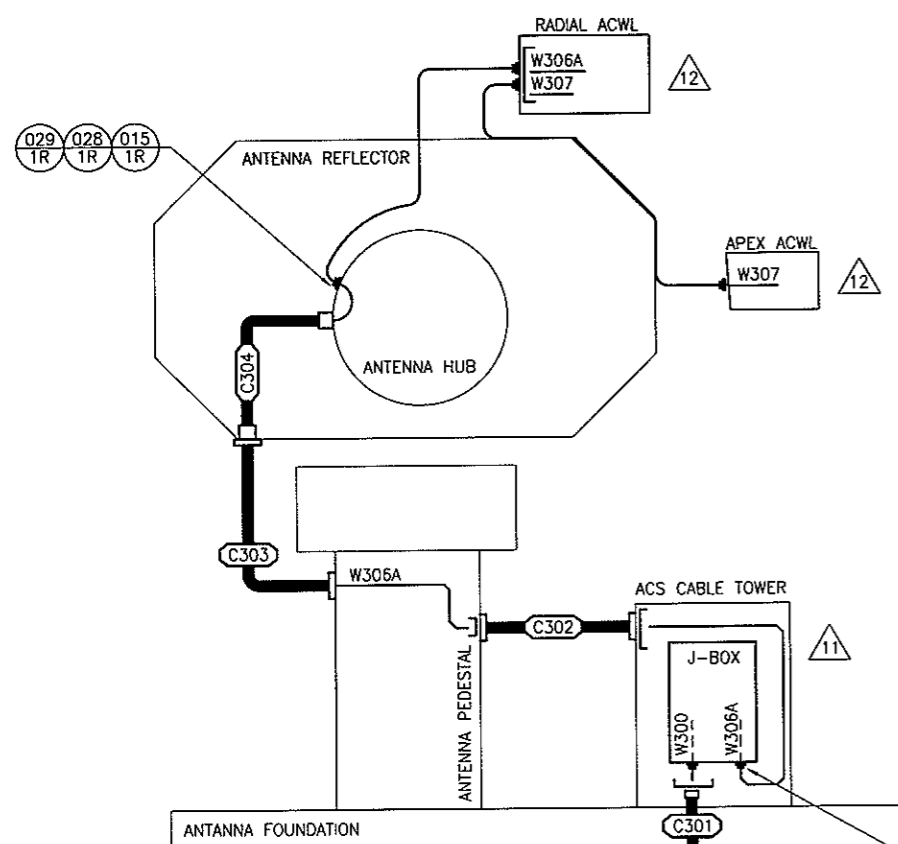
DETAIL B (ALTERNATE)
ACWL INSTL WITH ISOLATOR - APEX
SCALE: 1/5



DETAIL A
ACWL INSTL - RADIAL
SCALE: 1/10



DETAIL A (ALTERNATE)
ACWL INSTL WITH ISOLATOR - RADIAL
SCALE: 1/10



ROUTING DIAGRAM
ANTENNA UTILITY KIT

CONDUIT SCHEDULE - ANTENNA ELECTRICAL KIT, AUS					
ID#	SIZE	TERMINATION POINT	ORIGINATION POINT	CONDUIT FILL	NOTES
C301	2" PVC	FNDTN @ ACS CABLE TOWER	CUSTOMER POWER SOURCE	W300	3,5,8
C302	2" FLEX	ANTENNA PEDESTAL (LOWER)	ACS CABLE TOWER	W306A	3,5
C303	2" FLEX	ANTENNA REFL. INTERFACE	ANTENNA PEDESTAL (UPPER)	W306A	3,5
C304	2" FLEX	ANTENNA HUB	ANTENNA REFL. INTERFACE	W306A	3,5

NOTES:

1. (C000) INDICATES CONDUIT IDENTIFICATION NUMBER, REFERENCE CONDUIT INSTALLATION FOR ADDITIONAL CONDUIT FILL.
(W000) INDICATES CABLE ID. NUMBER, REFERENCE UTILITY SCHEDULE FOR CABLE SCHEDULE AND TERMINATIONS.
2. CUSTOMER TO SUPPLY 120VAC, 1Ø, 60Hz OR 220-240VAC, 1Ø, 50Hz POWER TO OPERATE AIRCRAFT WARNING LIGHTS. FIELD INSTALLER TO TERMINATE CABLE AT POWER PANEL IN REMOTE SHELTER.
3. INSTALL ALL CABLES ACCORDING TO LOCAL CODES AND PRACTICES.
4. USE LOCKTITE (ITEM 022) AS REQUIRED TO PROVIDE A SEALED CONNECTION ON CONDUIT NIPPLE (ITEM 010).
5. LABEL ALL CABLES WITH PROPER CABLE NUMBERS USING WIRE MARKERS (ITEM 033). PLACE LABELS AT EACH END AND ELSEWHERE ALONG CABLE LENGTH AS REQUIRED TO DISTINGUISH FROM OTHER CABLES.
6. ROUTE CABLES ALONG ANTENNA RADIALS USING CABLE TIES (ITEM 020) AS REQUIRED.
7. ITEMS NOT IDENTIFIED ARE PROVIDED WITH LIGHTNING PROTECTION SYSTEM ELECTRICAL KIT.
8. CABLE TO BE SIZED AND SUPPLIED BY CUSTOMER ACCORDING TO VOLTAGE DROP AND CURRENT DRAW. REFERENCE VertexRSI REQUIREMENTS DOCUMENT FOR CORRECT VOLTAGE AND CURRENT DRAW.
9. COLOR TAG ALL GROUND AND NEUTRAL WIRES PER LOCAL CODES AND PRACTICES.
10. ROUTE CABLE ALONG ANTENNA APEX QUAD LEGS USING CABLE TIES (ITEM 020) AS REQUIRED.
11. CONNECT W306A TO A 8A BREAKER FOR 120V OR A 4A BREAKER FOR 220-240V. MARK LABEL IN CABLE TOWER J-BOX ACWL.
12. TERMINATE CABLE USING CRIMP CONNECTORS (ITEMS 023 AND 030) AS REQUIRED.

DO NOT SCALE DRAWING		REFERENCE SEPARATE BOM FOR SPECIFIC INFO	
DESIGN	DATE	APPROVALS	DATE
DESIGN		DRAWN JE DINES	10/17/00
MECHANICAL		CHECKED KB STODDARD	11/21/00
STRUCTURAL		DESIGNER JE DINES	10/17/00
ELECTRICAL	10/17/00	MANUFACTURING RG HUGHLEY	11/28/00
		PROJECT MJ RABENHORST	11/28/00
		PRODUCT MGR MJ RABENHORST	11/28/00

VertexRSI CONFIDENTIAL AND PROPRIETARY			
VertexRSI		ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA	
ELEC KIT AUS 8/9KP CB AIRCRAFT WARNING LIGHTS			
CODE ID. NO.	SIZE	DWG NO.	REV
1GD22	D	024868	A
SCALE: 1/50	CONTRACT NO. EE005	SHEET 1 OF 1	

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:32:29

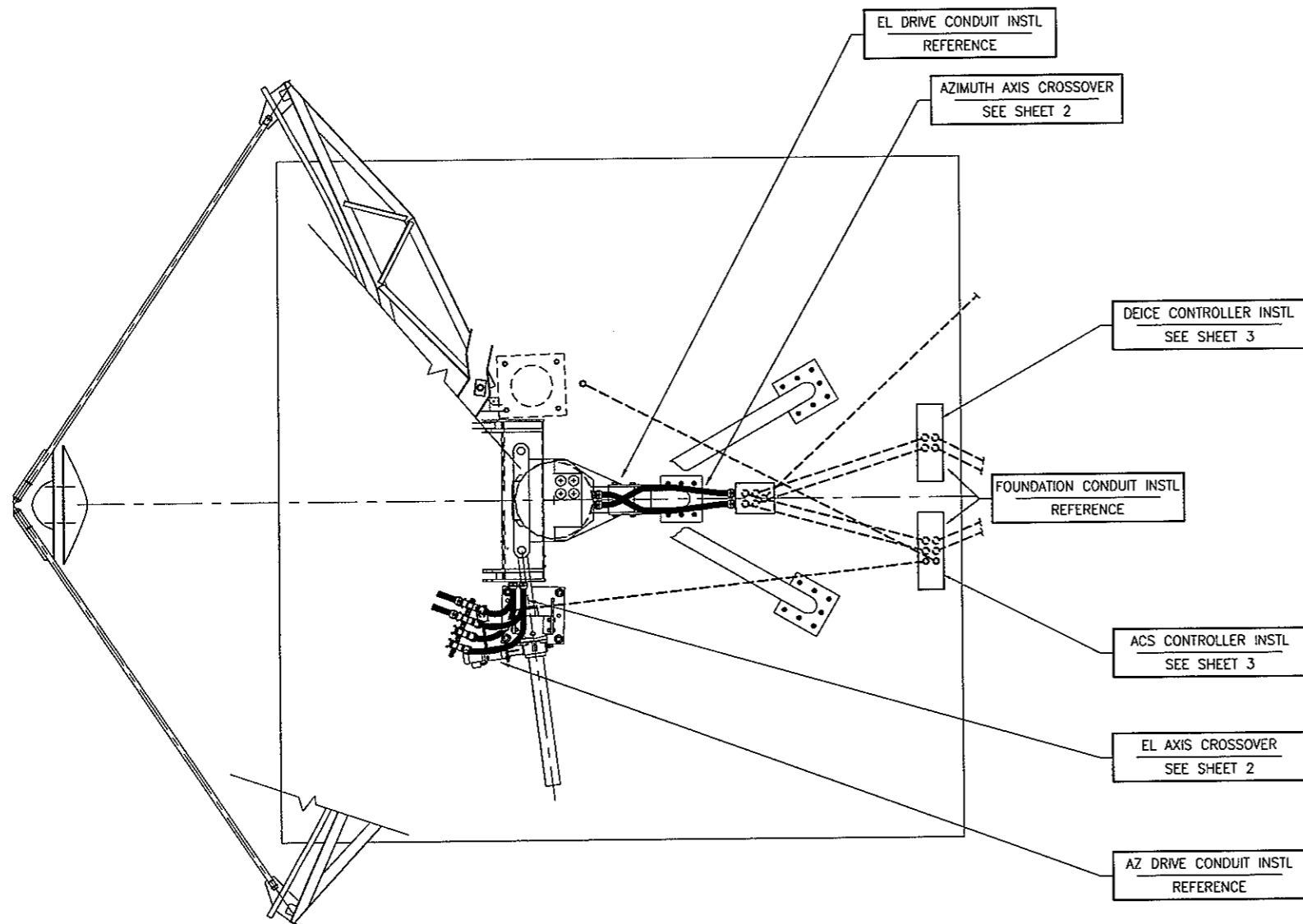
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 STD CLASS: ACSCDT REVISED: 5/31/2000 REV: A
 SUBCLASS: INSTL APPROVED: 6/14/2000
 JOB#: EE005 PENDING: REV
 REVISION: A 06/01/00 JED/KBS OLD CAT#: NEW A 06/01/00 JED/KBS SIZE: D DWG CAT: I ID: JED

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV		
007	R000378	1.00			R	C	S	ANGLE CNDT BRKT 2 C	ACSCDT	DETAIL	B-000082	C		
008	R000379	1.00			R	C	S	PL WASHER 2 1/2 ID X 0.125 X 5 X 5LG	ACSCDT	DETAIL	B-000049	M		
010	P24090-19	2.00			EA	R	P	S	CPLG CNDT 2 RIGID GALV THD	CPLG				
011	E20155-19	25.00			PT	R	P	S	CNDT 2 EFC	CNDT	XPFLX			
012	P72290-1	5.00			EA	R	P	S	CONN CNDT 2 STR TYPE LT STD TEMP	CONN				
012S	P72290-1	1.00			EA	R	P	S	CONN CNDT 2 STR TYPE LT STD TEMP	CONN				
013	P72385-1	1.00			EA	R	P	S	CONN CNDT 2 45DEG TYPE LT STD TEMP	CONN				
014	P37070-19	4.00			EA	R	P	S	BSHG CNDT 2	BSHG				
014S	P37070-19	1.00			EA	R	P	S	BSHG CNDT 2	BSHG				
015	E91090-19	5.00			EA	R	P	S	NUT LOCK CNDT 2	LCKNUT				
015S	E91090-19	1.00			EA	R	P	S	NUT LOCK CNDT 2	LCKNUT				
017	P93597-19	1.00			EA	R	P	S	NIPPLE CNDT 2 X 4	NIPPLE				
020	P60582-19	1.00			EA	R	P	S	STRAP CNDT 1-HOLE 2 SS	CNDT	SS			
027	M91065-19	1.00			EA	R	P	S	SEALANT SILICONE COMPOUND 10.1 FL OZ		NONE	00		
028	H14158-39	2.00			EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00	
028S	H14158-39	1.00			EA	R	P	S	SCR CAP HH 3/8-16UNC X 1 1/4 SSF593	CAPSCR	SS	NONE	00	
029	H40055-39	4.00			EA	R	P	S	FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00	
029S	H40055-39	1.00			EA	R	P	S	FW (AN) 3/8 X 13/16 SS18-8	FW	SS	NONE	00	
030	H30011-39	2.00			EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00	
030S	H30011-39	1.00			EA	R	P	S	LW HELICAL 3/8 SS18-8	LW	SS	NONE	00	
031	H20013-39	2.00			EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00	
031S	H20013-39	1.00			EA	R	P	S	NUT HEX 3/8-16UNC SSF594	HEXNUT	SS	NONE	00	
041	H30009-39	1.00			EA	R	P	S	LW HELICAL 1/4 SS18-8	LW	SS	NONE	00	
042	H52725-19	1.00			EA	R	P	S	SCR MCH ST HH #12-24UNC X 1 1/4 ZINC	MCHSCR	ZINC			
043	H40048-39	1.00			EA	R	P	S	FW 1/4 NAS620-C416 .468 OD X	*JNN	FW	SS	NONE	00

END OF BOM:023641-03

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	05/31/00	JED/KBS



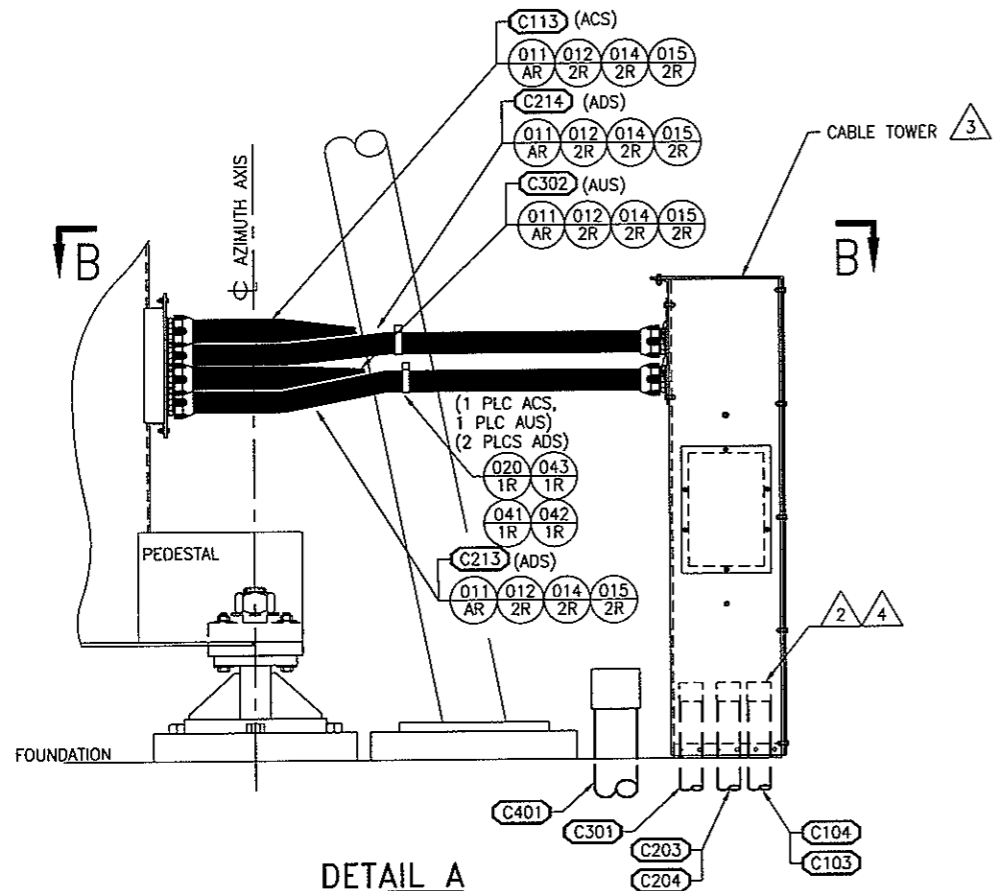
PLAN VIEW
ANTENNA CONDUIT INSTALLATION

NOTES:

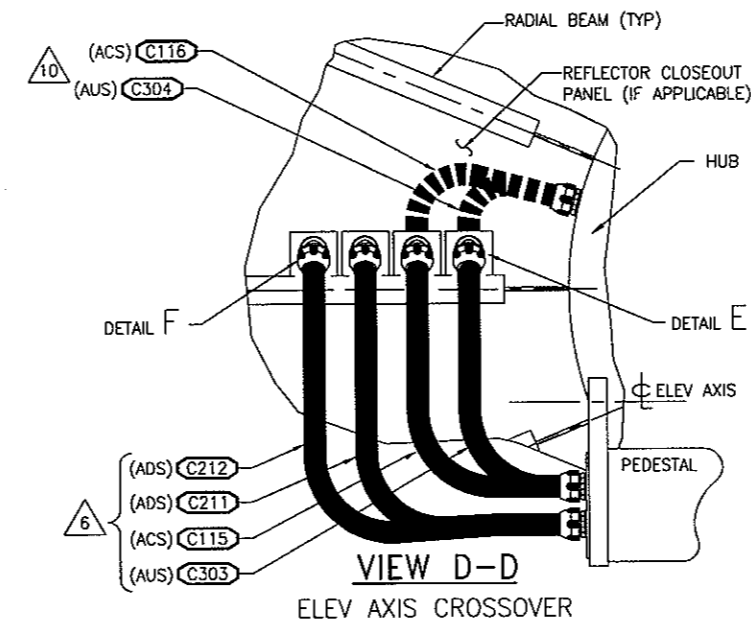
1. **COOD** INDICATES CONDUIT ID NUMBER, REFERENCE CABLE INSTL DRAWING FOR CONDUIT AND CABLE SCHEDULES.
2. CUSTOMER SUPPLIED CONDUITS. CONDUITS ARE INSTALLED PER SYSTEM AS REQUIRED BY CONTRACT. REFERENCE FOUNDATION CONDUIT LAYOUT DRAWING FOR CONDUIT STUB-UP LOCATIONS AND INSTALLATION.
3. AFTER CABLE TOWER IS IN PLACE, CUT AZIMUTH AXIS CROSSOVER CONDUIT TO LENGTH AS REQUIRED PER SYSTEM. CUT SUFFICIENT LENGTH TO CROSS THRU THE AXIS AND ALLOW FOR FULL ROTATION OF PEDESTAL. REMOVE EXISTING CONDUIT INTERFACE PLATES ON PEDESTAL AND CABLE TOWER AND INSTALL CONDUIT FITTINGS WITH LOCKNUTS PROVIDED. REINSTALL INTERFACE PLATES USING EXISTING HARDWARE WITH THREADS AND NUTS EXTERNAL.
4. TRIM CONDUIT STUB-UPS AS REQUIRED.
5. INSTALL (ITEM 017) CONDUIT NIPPLE IN (ITEM 007) ANGLE BRACKET AND TIGHTEN USING (ITEM 015) LOCKNUTS OR (ITEM 010) COUPLING AS REQUIRED. ON DEICED ANTENNAS, INSTALLER TO TRIM DEICE PANELS ϕ 2 3/4 INCH HOLE AROUND EACH CONDUIT NIPPLE AS REQ'D. INSTALL (ITEM 008) RECTANGULAR FLATWASHER AND (ITEM 010) RIGID COUPLING TO COVER AND TIGHTEN.
6. CUT FLEX CONDUIT FOR ELEVATION AXIS CROSSOVER TO LENGTH AS REQUIRED PER SYSTEM ROUTE FLEX THROUGH THE ELEVATION AXIS AND TERMINATE ON REFLECTOR INTERFACE COUPLING. (REFER TO NOTE 5)
7. INSTALL OUTDOOR CONTROLLER OVER CONDUIT STUB-UPS AND ANCHOR TO FOUNDATION USING HARDWARE SUPPLIED.
8. FIELD CUT ϕ 2 1/2" HOLES FOR 2" CONDUIT ENTRY.
9. REFERENCE SYSTEM TOP ASSEMBLY FOR SPECIFIC OUTDOOR CONTROLLER REQUIRED.
10. CUT (ITEM 011) CONDUIT TO LENGTH AS REQUIRED PER SYSTEM FOR HUB. INSTALL FROM REFLECTOR RADIAL INTERFACE COUPLING TO PRE-DRILLED HUB ENTRANCE USING FITTINGS AND BUSHINGS PROVIDED.
11. CONDUIT NIPPLE (ITEM 017) AND OUTER COUPLING (ITEM 010) ARE REQUIRED WHEN INSTALLING ELEV AXIS CROSSOVER ON DEICED ANTENNAS.
12. FIELD CUT ϕ 2" HOLE FOR 1 1/2" CONDUIT ENTRY.
13. MATCH DRILL 7/16 ϕ HOLE FOR MOUNTING HARDWARE (2 PER ANGLE). INSTALL CONDUIT TERMINATION ANGLE AS REQUIRED USING 3/8 INCH MOUNTING HARDWARE.
14. SEAL ALL UNDERGROUND CONDUITS AT BOTH ENDS WITH DUCT SEAL (ITEM 035). THIS SEAL IS TO PREVENT AN ACCUMULATION OF CONDENSATION.
15. FIELD CUT ϕ 3 5/8" HOLE FOR 3" CONDUIT ENTRY.

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	ADDITIONAL APPROVALS DESIGN MECHANICAL STRUCTURAL ELECTRICAL JE DINES	DATE 05/31/00	APPROVALS DRAWN JE DINES CHECKED KB STODDARD DESIGNER JE DINES MANUFACTURING RG HUGHEY PROJECT MGR MJ RABENHORST PRODUCT MGR MJ RABENHORST	DATE 05/31/00 06/08/00 05/31/00 06/13/00 06/13/00	TITLE: CONDUIT INSTALLATION 2 POS AXIS CROSSOVER MODEL 8/9M KX				
SCALE: 1/30		CONTRACT NO. EEO05		SHEET 1 of 3		CODE ID. NO. 1GD22	SIZE D	DWG NO. 023641	REV A

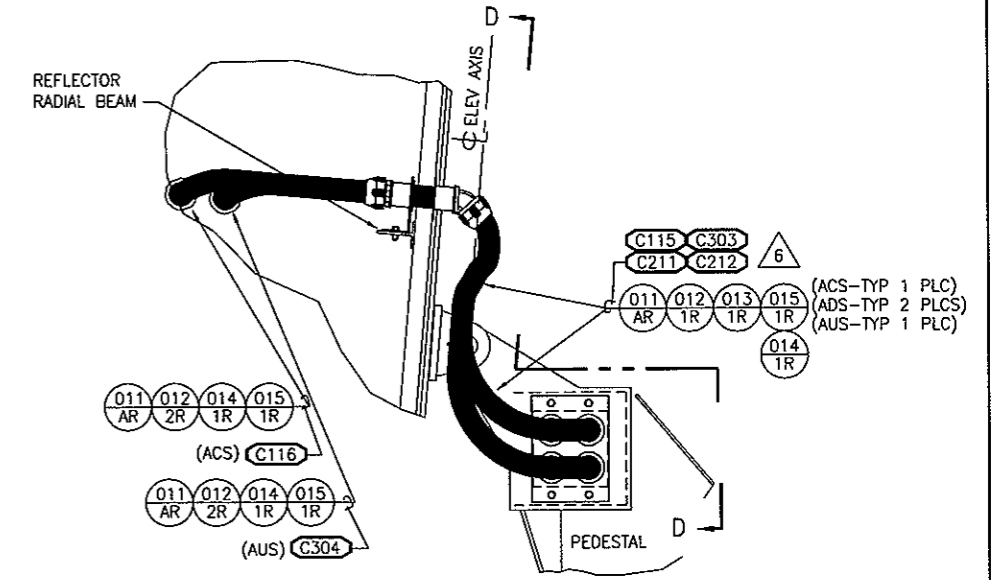
EA
- EST. WEIGHT -



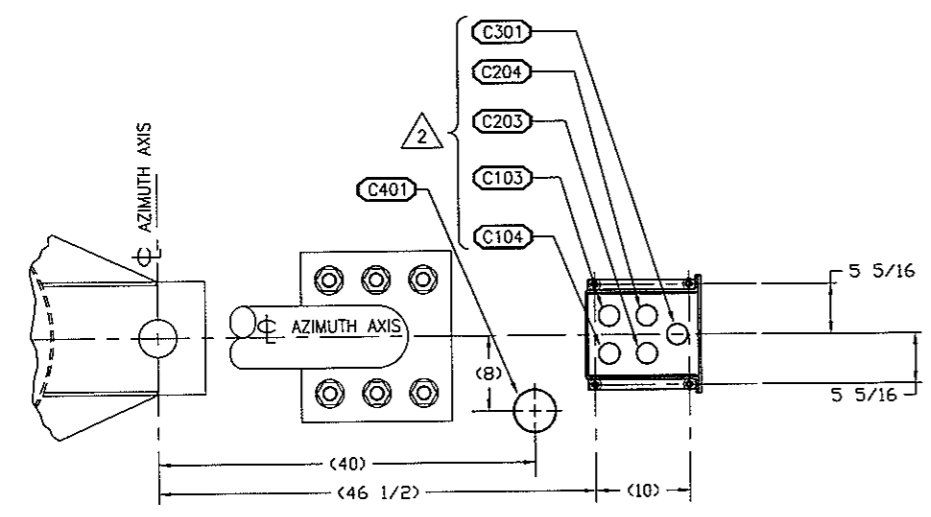
DETAIL A
AZIMUTH AXIS CROSSOVER
SCALE: 1/10



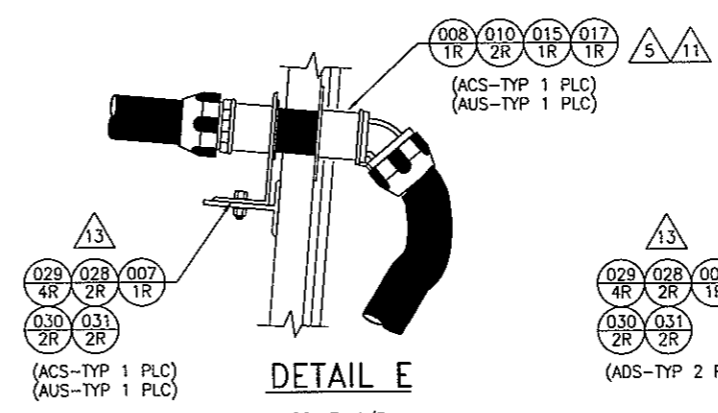
VIEW D-D
ELEV AXIS CROSSOVER



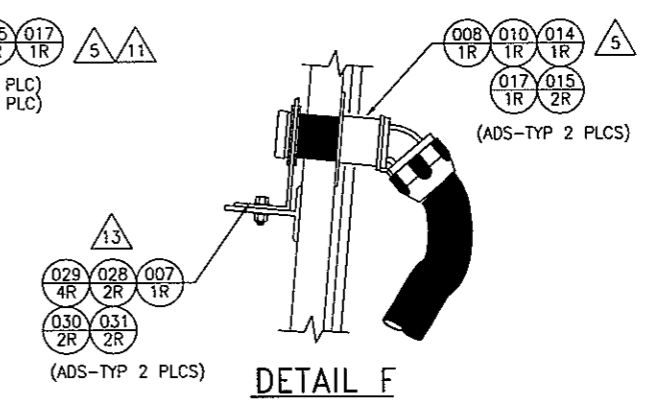
DETAIL C
ELEV AXIS CROSSOVER
(SHT 1)



VIEW B-B
AZIMUTH CROSSOVER
SCALE: 1/10



DETAIL E
SCALE: 1/5

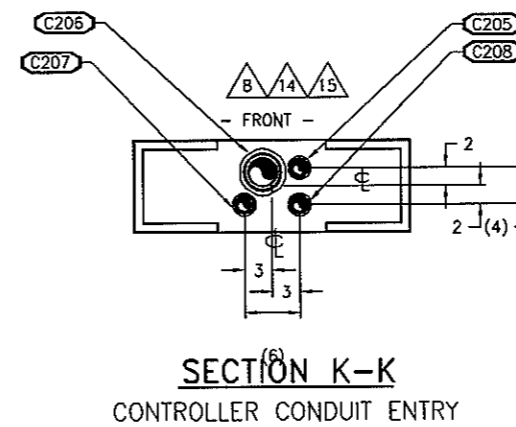
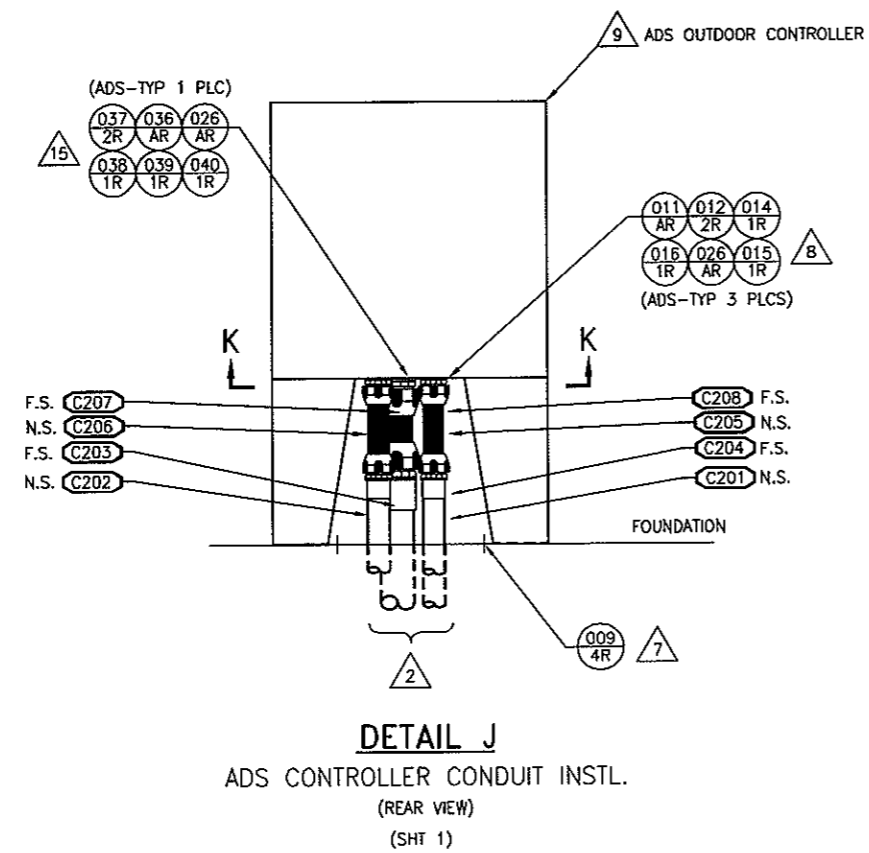
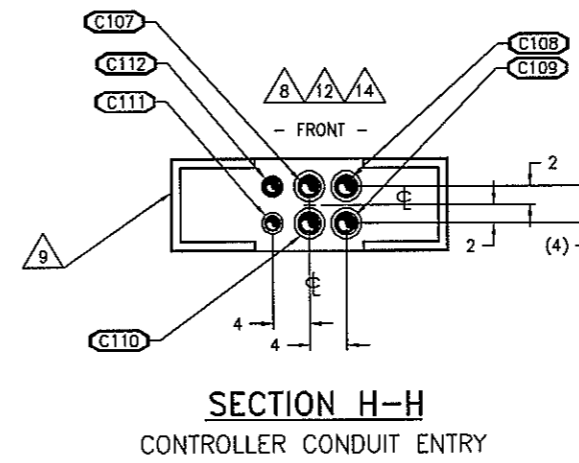
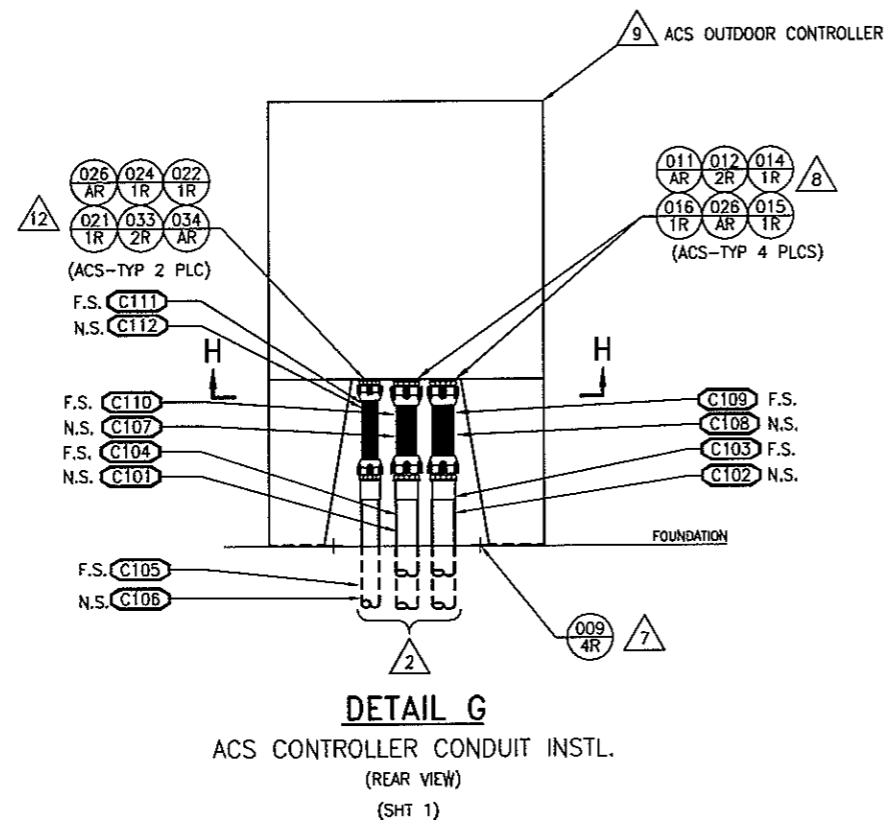


DETAIL F
SCALE: 1/5

VertexRSI CONFIDENTIAL AND PROPRIETARY

VertexRSI				ANTENNA PRODUCTS DIVISION 2600 N. LONGVIEW ST. KILGORE, TEXAS 75662 USA
CODE ID. NO.	SIZE	QWC NO.	REV	
1GD22	D			023641 A
SCALE: 1/10	CONTRACT NO.	EE005	SHEET	2 OF 3

DFORM1D2



VertexRSI CONFIDENTIAL AND PROPRIETARY

VertexRSI ANTENNA PRODUCTS DIVISION
2600 N. LONGVIEW ST.
KILGORE, TEXAS 75662 USA

CODE ID. NO. 1GD22	SIZE D	DWG. NO. 023641	REV. A
SCALE: 1/10	CONTRACT NO. EE005	SHEET 3 OF 3	

SINGLE LEVEL BILL OF MATERIAL

SUMMARY

PRINT DATE 3/24/08

TIME 9:32:31

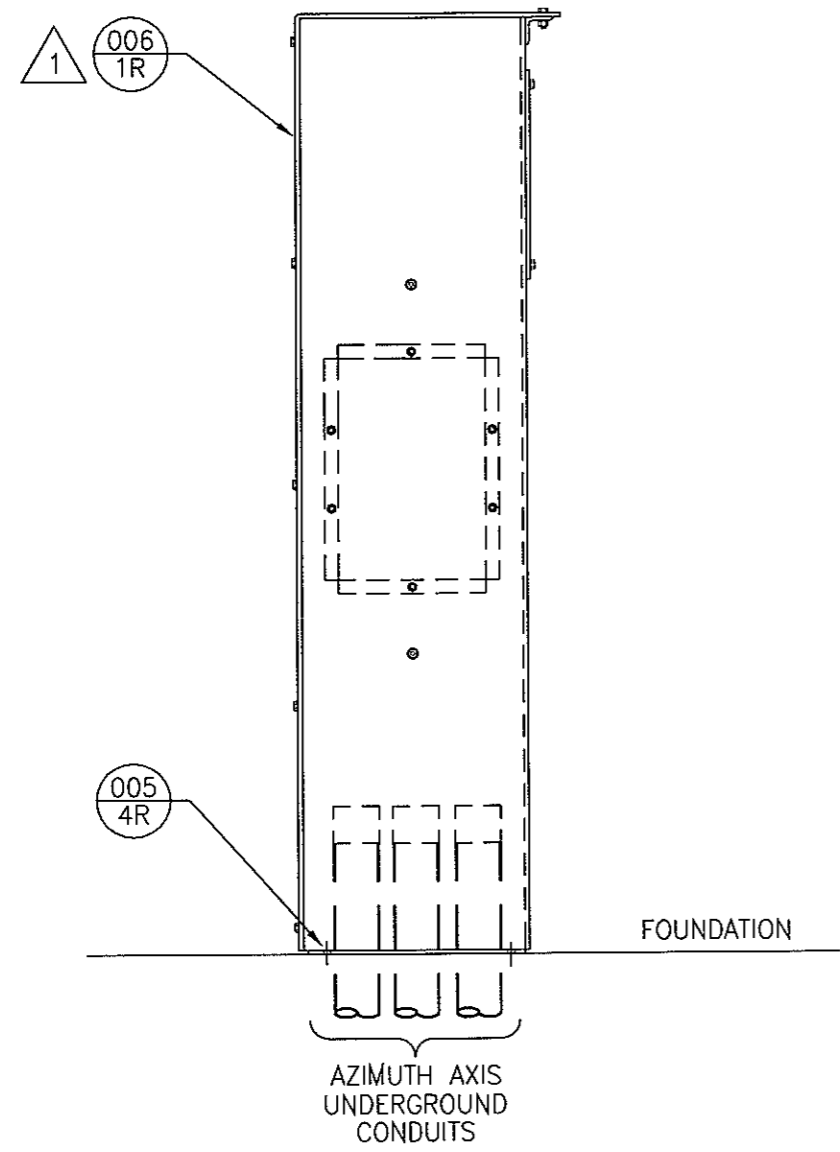
CATALOGUE#: 023634-01	PSM: M	STATUS: RELEASED	DRAWING: B-023634	REV: A
DESCRIPTION: CBL TOWER INSTL STD W/JBOX 120V AL		CATEGORY: INTEGRAT	ENTERED: 5/31/2000	
		CLASS: AACEUT	REVISED: 5/31/2000	REV: A
		SUBCLASS: INSTL	APPROVED: 10/10/2000	
		JOB#: EE005	PENDING:	REV
REVISION: A 05/31/00 JED/KBS		OLD CAT#: NEW 05/31/00 JED/KBS	SIZE: B DWG CAT: I	ID: JED

BILL OF MATERIAL

ITEM	SUB PART CATALOGUE	QTY	LNTH	UOM	ST	C/P	PSM	DESCRIPTION	CLASS	SUBCL	DRAWING	REV
005	P99071-19	4.00		EA	R	P	S	ANCHOR 1/2 X 3 3/4				
006	001931-01	1.00			R	C	M	CBL TWR ASSY 6/7/8/9M W/JBOX	AAC	ASSY	D-001931	D

END OF BOM:023634-01

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	05/31/00	JED/KBS



NOTES:
 1. PLACE CABLE TOWER ON FOUNDATION OVER CONDUIT STUB-UPS. MARK HOLES AT BASE FOR ANCHORS. MOVE TOWER AWAY AND DRILL FOUNDATION FOR ITEM 005 ANCHORS (TYP 4 PLCS). REPLACE TOWER AND FASTEN ANCHORS TO BASE. AFTER CABLES ARE INSTALLED, REPLACE REAR COVER USING EXISTING HARDWARE.

CABLE TOWER INSTALLATION

- 023634-01 023634-03
- 023634-02 023634-04

- 023634-05

--- # EA
 - EST. WEIGHT -

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	ADDITIONAL APPROVALS	DATE	APPROVALS	DATE
MECHANICAL		DRAWN JE DINES		05/31/00
STRUCTURAL		CHECKED KB STODDARD		10/09/00
ELECTRICAL		DESIGNER JE DINES		05/31/00
JE DINES	05/31/00	MANUFACTURING RG HUCHEY		10/10/00
EXPORT CONTROL WARNING - Do not disclose this document or its contents to non-U.S. Citizens, or transmit this document or its contents outside the United States without the written permission of Vertex Communications Corporation and required U.S. Government approvals.		PROJECT		10/10/00
UNLESS OTHERWISE SPECIFIED! PART TO BE FREE OF BURRS & SHARP EDGES. COMMERCIAL TOLERANCES TO STOCK SIZES APPLY.		PRODUCT MGR WJ RABENHORST		10/10/00
DRILL HOLE TOLERANCE (DRILL) .013 thru .125 = +.005/- .001 .126 thru .250 = +.007/- .003 .251 thru .750 = +.008/- .003 .751 thru 1.000 = +.009/- .004 1.001 thru 2.000 = +.012/- .005		DESIGN		
CLEARANCE HOLE TOLERANCE (CHT) +.03125/- .00000		CODE ID. NO.	SIZE	DRG. NO.
		1G022	B	023634
		SCALE: 1/10	CONTRACT NO. EE005	SHEET 1 OF 1
				REV A

CABLE SCHEDULE - ANTENNA ELECTRICAL KIT, AUS 4.8M Ka-BAND/6M/6.3M/7M					
ID#	DESCRIPTION	TERMINATION POINT	ORIGINATION POINT	LENGTH	NOTES
W300	CFE 3-CONDUCTOR CABLE	TERMINAL BOX	CUSTOMER INTERFACE	IFLP	9,11
W301	CFE 3-CONDUCTOR CABLE	TERMINAL BOX	CUSTOMER INTERFACE	IFLP	9,11
W306A	3-CONDUCTOR CABLE	ACWL JUNCTION BOX	TERMINAL BOX	60'	-
W306B	3-CONDUCTOR CABLE	RADIAL ACWL	ACWL JUNCTION BOX	35'	-
W307	3-CONDUCTOR CABLE	APEX ACWL	ACWL JUNCTION BOX	40'	-
W310A	3-CONDUCTOR CABLE	HUB FAN J-BOX	TERMINAL BOX	50'	-
W310B	3-CONDUCTOR CABLE	FAN THERMOSTAT	HUB FAN J-BOX	5'	-
W310C	3-CONDUCTOR CABLE	FAN	HUB FAN J-BOX	5'	-
W311A	3-CONDUCTOR CABLE	HUB HEATER J-BOX	TERMINAL BOX	55'	-
W311B	3-CONDUCTOR CABLE	HEATER THERMOSTAT	HUB HEATER J-BOX	5'	-
W311C	3-CONDUCTOR CABLE	HEATER	HUB HEATER J-BOX	10'	-
W312A	3-CONDUCTOR CABLE	HUB UTILITY SOCKET	TERMINAL BOX	45'	-
W312B	3-CONDUCTOR CABLE	HUB LIGHT SWITCH	HUB UTILITY SOCKET	2'	-
W312C	3-CONDUCTOR CABLE	HUB LIGHT	HUB LIGHT SWITCH	8'	-
W313A	3-CONDUCTOR CABLE	TECHNICAL SOCKET	TERMINAL BOX	45'	-
W314	CFE 2-CONDUCTOR CABLE	"HI-ALARM" THERMOSTAT	CUSTOMER INTERFACE	FLC+45'	5,11
W315	CFE, 2-CONDUCTOR CABLE	"LO-ALARM" THERMOSTAT	CUSTOMER INTERFACE	FLC+45'	5,11
W321	3-CONDUCTOR CABLE	RAINBLOWER CONTROL BOX	TERMINAL BOX	50'	-
W322	4-CONDUCTOR CABLE	MOISTURE PROBE	RAINBLOWER CONTROL BOX	40'	-
W323A	2-CONDUCTOR CABLE	HEATER BOX TEMP SWITCH	RAINBLOWER CONTROL BOX	8'	-
W323B	3-CONDUCTOR CABLE	HEATER BOX POWER	RAINBLOWER CONTROL BOX	8'	-
W324	3/5-CONDUCTOR CABLE	BLOWER MOTOR K _u /C BAND	RAINBLOWER CONTROL BOX	8'	-

(B)

CABLE SCHEDULE - ANTENNA ELECTRICAL KIT, AUS 11M					
ID#	DESCRIPTION	TERMINATION POINT	ORIGINATION POINT	LENGTH	NOTES
W300	CFE 3-CONDUCTOR CABLE	TERMINAL BOX	CUSTOMER INTERFACE	IFLP	9,11
W301	CFE 3-CONDUCTOR CABLE	TERMINAL BOX	CUSTOMER INTERFACE	IFLP	9,11
W306A	3-CONDUCTOR CABLE	ACWL JUNCTION BOX	TERMINAL BOX	125'	-
W306B	3-CONDUCTOR CABLE	RADIAL ACWL	ACWL JUNCTION BOX	50'	-
W307	3-CONDUCTOR CABLE	APEX ACWL	ACWL JUNCTION BOX	60'	-
W310A	3-CONDUCTOR CABLE	HUB FAN J-BOX	TERMINAL BOX	80'	-
W310B	3-CONDUCTOR CABLE	FAN THERMOSTAT	HUB FAN J-BOX	5'	-
W310C	3-CONDUCTOR CABLE	FAN	HUB FAN J-BOX	5'	-
W311A	3-CONDUCTOR CABLE	HUB HEATER J-BOX	TERMINAL BOX	80'	-
W311B	3-CONDUCTOR CABLE	HEATER THERMOSTAT	HUB HEATER J-BOX	5'	-
W311C	3-CONDUCTOR CABLE	HEATER	HUB HEATER J-BOX	10'	-
W312A	3-CONDUCTOR CABLE	HUB UTILITY SOCKET	TERMINAL BOX	80'	-
W312B	3-CONDUCTOR CABLE	HUB LIGHT SWITCH	HUB UTILITY SOCKET	5'	-
W312C	3-CONDUCTOR CABLE	HUB LIGHT	HUB LIGHT SWITCH	10'	-
W313A	3-CONDUCTOR CABLE	TECHNICAL SOCKET	TERMINAL BOX	80'	-
W314	CFE 2-CONDUCTOR CABLE	"HI-ALARM" THERMOSTAT	CUSTOMER INTERFACE	FLC+80'	5,11
W315	CFE, 2-CONDUCTOR CABLE	"LO-ALARM" THERMOSTAT	CUSTOMER INTERFACE	FLC+80'	5,11
W321	3-CONDUCTOR CABLE	RAINBLOWER CONTROL BOX	TERMINAL BOX	90'	-
W322	4-CONDUCTOR CABLE	MOISTURE PROBE	RAINBLOWER CONTROL BOX	70'	-
W323A	2-CONDUCTOR CABLE	HEATER BOX TEMP SWITCH	RAINBLOWER CONTROL BOX	10'	-
W323B	3-CONDUCTOR CABLE	HEATER BOX POWER	RAINBLOWER CONTROL BOX	10'	-
W324	3/5-CONDUCTOR CABLE	BLOWER MOTOR K _u /C BAND	RAINBLOWER CONTROL BOX	10'	-

(B)

CABLE SCHEDULE - ANTENNA ELECTRICAL KIT, AUS 8M/9M/9.3M					
ID#	DESCRIPTION	TERMINATION POINT	ORIGINATION POINT	LENGTH	NOTES
W300	CFE 3-CONDUCTOR CABLE	TERMINAL BOX	CUSTOMER INTERFACE	IFLP	9,11
W301	CFE 3-CONDUCTOR CABLE	TERMINAL BOX	CUSTOMER INTERFACE	IFLP	9,11
W306A	3-CONDUCTOR CABLE	ACWL JUNCTION BOX	TERMINAL BOX	50'	-
W306B	3-CONDUCTOR CABLE	RADIAL ACWL	ACWL JUNCTION BOX	30'	-
W307	3-CONDUCTOR CABLE	APEX ACWL	ACWL JUNCTION BOX	45'	-
W310A	3-CONDUCTOR CABLE	HUB FAN J-BOX	TERMINAL BOX	50'	-
W310B	3-CONDUCTOR CABLE	FAN THERMOSTAT	HUB FAN J-BOX	5'	-
W310C	3-CONDUCTOR CABLE	FAN	HUB FAN J-BOX	5'	-
W311A	3-CONDUCTOR CABLE	HUB HEATER J-BOX	TERMINAL BOX	50'	-
W311B	3-CONDUCTOR CABLE	HEATER THERMOSTAT	HUB HEATER J-BOX	5'	-
W311C	3-CONDUCTOR CABLE	HEATER	HUB HEATER J-BOX	10'	-
W312A	3-CONDUCTOR CABLE	HUB UTILITY SOCKET	TERMINAL BOX	50'	-
W312B	3-CONDUCTOR CABLE	HUB LIGHT SWITCH	HUB UTILITY SOCKET	5'	-
W312C	3-CONDUCTOR CABLE	HUB LIGHT	HUB LIGHT SWITCH	10'	-
W313A	3-CONDUCTOR CABLE	TECHNICAL SOCKET	TERMINAL BOX	50'	-
W314	CFE 2-CONDUCTOR CABLE	"HI-ALARM" THERMOSTAT	CUSTOMER INTERFACE	FLC+50'	5,11
W315	CFE, 2-CONDUCTOR CABLE	"LO-ALARM" THERMOSTAT	CUSTOMER INTERFACE	FLC+50'	5,11
W321	3-CONDUCTOR CABLE	RAINBLOWER CONTROL BOX	TERMINAL BOX	70'	-
W322	4-CONDUCTOR CABLE	MOISTURE PROBE	RAINBLOWER CONTROL BOX	60'	-
W323A	2-CONDUCTOR CABLE	HEATER BOX TEMP SWITCH	RAINBLOWER CONTROL BOX	8'	-
W323B	3-CONDUCTOR CABLE	HEATER BOX POWER	RAINBLOWER CONTROL BOX	8'	-
W324	3/5-CONDUCTOR CABLE	BLOWER MOTOR K _u /C BAND	RAINBLOWER CONTROL BOX	8'	-

(B)

CABLE SCHEDULE - ANTENNA ELECTRICAL KIT, AUS 13M					
ID#	DESCRIPTION	TERMINATION POINT	ORIGINATION POINT	LENGTH	NOTES
W300	CFE 3-CONDUCTOR CABLE	TERMINAL BOX	CUSTOMER INTERFACE	IFLP	9,11
W301	CFE 3-CONDUCTOR CABLE	TERMINAL BOX	CUSTOMER INTERFACE	IFLP	9,11
W306A	3-CONDUCTOR CABLE	ACWL JUNCTION BOX	TERMINAL BOX	90'	-
W306B	3-CONDUCTOR CABLE	RADIAL ACWL	ACWL JUNCTION BOX	50'	-
W307	3-CONDUCTOR CABLE	APEX ACWL	ACWL JUNCTION BOX	70'	-
W310A	3-CONDUCTOR CABLE	HUB FAN J-BOX	TERMINAL BOX	80'	-
W310B	3-CONDUCTOR CABLE	FAN THERMOSTAT	HUB FAN J-BOX	5'	-
W310C	3-CONDUCTOR CABLE	FAN	HUB FAN J-BOX	5'	-
W311A	3-CONDUCTOR CABLE	HUB HEATER J-BOX	TERMINAL BOX	80'	-
W311B	3-CONDUCTOR CABLE	HEATER THERMOSTAT	HUB HEATER J-BOX	5'	-
W311C	3-CONDUCTOR CABLE	HEATER #2	HUB HEATER J-BOX	6'	-
W311D	3-CONDUCTOR CABLE	HEATER #1	HUB HEATER J-BOX	10'	-
W312A	3-CONDUCTOR CABLE	HUB UTILITY SOCKET	TERMINAL BOX	80'	-
W312B	3-CONDUCTOR CABLE	HUB LIGHT SWITCH	HUB UTILITY SOCKET	5'	-
W312C	3-CONDUCTOR CABLE	HUB LIGHT #1	HUB LIGHT SWITCH	10'	-
W312D	3-CONDUCTOR CABLE	HUB LIGHT #2	HUB LIGHT #1	10'	-
W313A	3-CONDUCTOR CABLE	TECHNICAL SOCKET	TERMINAL BOX	80'	-
W314	CFE 2-CONDUCTOR CABLE	"HI-ALARM" THERMOSTAT	CUSTOMER INTERFACE	FLC+80'	5,11
W315	CFE, 2-CONDUCTOR CABLE	"LO-ALARM" THERMOSTAT	CUSTOMER INTERFACE	FLC+80'	5,11
W321	3-CONDUCTOR CABLE	RAINBLOWER CONTROL BOX	TERMINAL BOX	80'	-
W322	4-CONDUCTOR CABLE	MOISTURE PROBE	RAINBLOWER CONTROL BOX	80'	-
W323A	2-CONDUCTOR CABLE	HEATER BOX TEMP SWITCH	RAINBLOWER CONTROL BOX	8'	-
W323B	3-CONDUCTOR CABLE	HEATER BOX POWER	RAINBLOWER CONTROL BOX	8'	-
W324	3/5-CONDUCTOR CABLE	BLOWER MOTOR K _u /C BAND	RAINBLOWER CONTROL BOX	8'	-

(B)

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	ORIGINAL RELEASE	12/04/98	JED/KBS
B	EC 01-0385	03/16/01	JED/KBS
C	EC 05-0399	02/22/06	RCH/BHS
D	EC 07-0673	07/19/07	DHX/BHS

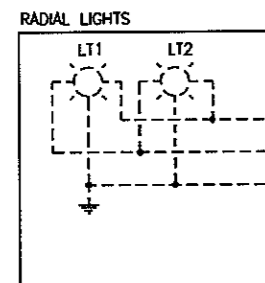
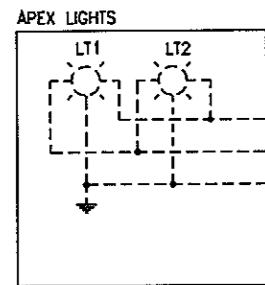
NOTES:

- WOOD INDICATES CABLE ID NUMBER. REFERENCE THIS DRAWING FOR CABLE SCHEDULE.
- CUSTOMER SUPPLIED POWER FEEDER TO TERMINAL BOX SHALL BE 1-PHASE, 2-WIRE, PLUS GROUND. VOLTAGE AND FREQUENCY ARE CONTRACT SPECIFIC AS THE SITE DICTATES. INSTALLER SHALL VERIFY EQUIPMENT RATINGS AGAINST AVAILABLE POWER AT THE SITE. TERMINATE CABLE AT CUSTOMER FURNISHED POWER SUPPLY INTERFACE.
- INSTALLER TO INSPECT AND VERIFY THAT ALL EQUIPMENT IS PROPERLY WIRED FOR SITE POWER VOLTAGE PRIOR TO START-UP.
- CUSTOMER TO SUPPLY TECHNICAL POWER SUPPLY SOURCE FOR ENVIRONMENTAL HUB TECHNICAL SOCKETS. FIELD INSTALLER TO TERMINATE CABLE AT CUSTOMER FURNISHED INTERFACE.
- CUSTOMER TO SUPPLY SIGNAL CABLES FOR ENVIRONMENTAL HUB HI/LO TEMPERATURE ALARMS.
- FIELD INSTALLER SHALL FIELD ASSIGN COLOR CODES OF CABLES. ALL PHASE, NEUTRAL, AND GROUND CONDUCTORS ARE TO BE COLOR CODED PER LOCAL CODES. FIELD INSTALLER SHALL PROVIDE AS-BUILT WIRING SCHEMATIC, IDENTIFYING COLOR CODES, TO SITE PERSONNEL PRIOR TO LEAVING SITE.
- CONNECT WIRES USING BUTT CONNECTIONS, RING TERMINALS OR FORK TERMINALS, AS REQUIRED.
- LABEL ALL CABLES AT EACH END WITH PROPER CABLE NUMBERS USING WIRE MARKERS.
- CABLE TO BE SIZED AND SUPPLIED BY CUSTOMER ACCORDING TO VOLTAGE DROP AND CURRENT DRAW. REFERENCE VertexRSI POWER REQUIREMENTS DOCUMENT FOR CORRECT VOLTAGE AND CURRENT DRAW. THIS MAY IMPLY THE USE OF ISOLATORS OR SPECIAL DISCONNECTS WHICH ARE THE RESPONSIBILITY OF OTHERS. ELECTRICAL KIT SUPPLIED WITH JUNCTION BOX ONLY.
- ALTERNATE CONFIGURATIONS DETERMINED BY CONTRACT REQUIREMENTS.
- FIELD LABEL CFE CABLES PER CUSTOMER REQUIREMENTS.
- HEATER #1 IS 1000W WHEN USED ALONE AND 500W WHEN USED WITH HEATER #2.
- WHEN ONLY ONE SOCKET SUPPLIED NOT REQUIRED WITH 4.8M ANTENNA (CF 015677).
- FOR 4.8M Ka-BAND RAINBLOWER SCHEMATICS REFER TO C-BAND RAINBLOWER SCHEMATICS ON SHEET 4 OF THIS DRAWING.

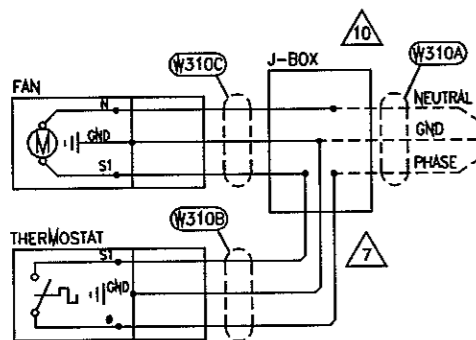
DFR001/01

--- # EA
- EST. WEIGHT -

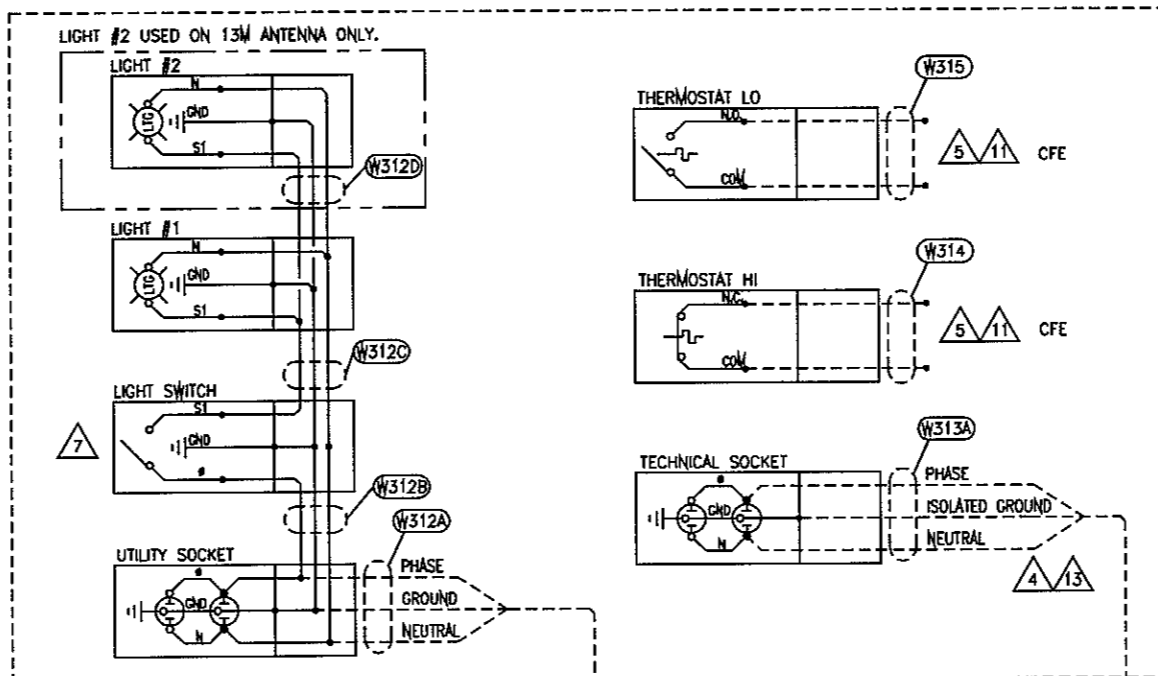
DO NOT SCALE DRAWING				SATCOM Technologies CONFIDENTIAL AND PROPRIETARY			
UNLESS OTHERWISE SPECIFIED, INTERPRET DIMENSIONING & TOLERANCING PER ASME Y14.5M-1994. DIMENSIONS ARE IN INCHES. DIMENSIONS SHOWN IN () ARE FOR REFERENCE ONLY. TOLERANCES ARE: FRACTIONS: DECIMALS: ANGLES: DETAILS ± 1/16 .xxx ± .03 ± 1° ASSY'S ± 1/8 .xxx ± .005 COMMERCIAL TOLERANCES TO STOCK SIZES APPLY. PART TO BE FREE OF BURRS & SHARP EDGES.				ADDITIONAL APPROVALS		DATE	
				APPROVALS		DATE	
MECHANICAL		DRAWN		JE DINES		07/14/00	
STRUCTURAL		CHECKED		XB STODDARD		10/06/00	
ELECTRICAL		DESIGNED		JE DINES		07/14/00	
JE DINES		07/14/00		MANUFACTURED		RG HUGHEY	
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DRILL HOLE TOLERANCE (DRILL)		CLEARANCE HOLE TOLERANCE (FIT)		PRODUCT MGR		WJ RABENHORST	
.013 to .125 ± .005/- .001		.126 to .250 ± .007/- .003		DESIGN		10/10/00	
.251 to .750 ± .008/- .003		.751 to 1.000 ± .009/- .004		SCALE		1/1	
1.001 to 2.000 ± .012/- .005		+ .03125/- .0000		CONTRACT NO.		EE005	
VertexRSI GENERAL DYNAMICS 2500 N. LONGVIEW ST. KILGORE, TX USA 75662-6842				UTILITY SCHEMATICS MODELS 4.8M Ka, 6M, 6.3M, 7M, 8M, 9M, 9.3M, 11M, 13M			
CODE NO.		SIZE		DWG NO.		REV	
1GD22		D		024055		D	
SHEET 1 OF 4							



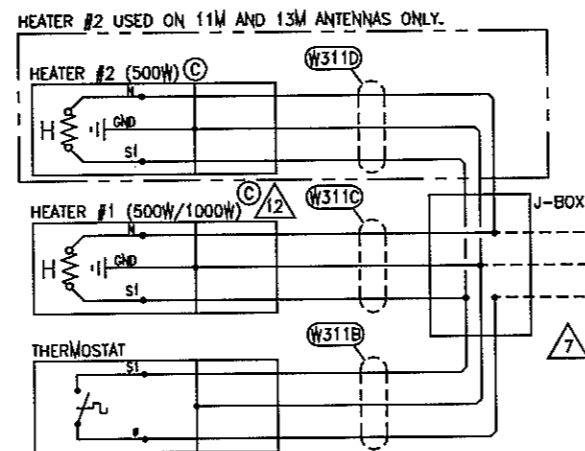
AIRCRAFT WARNING LIGHTS



VENT FAN (HUB)

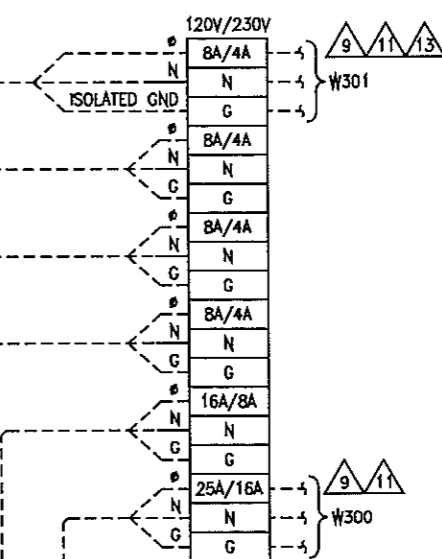


LIGHT/SOCKET/ALARM (HUB - PER CONTRACT REQUIREMENTS)



HEATER (HUB)

UTILITY WIRING SCHEMATIC WITHOUT ISOLATORS



--- FIELD WIRING
 _____ SHOP WIRING

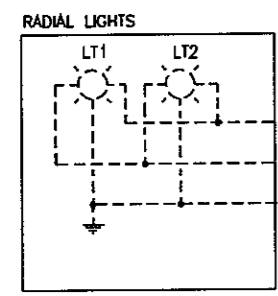
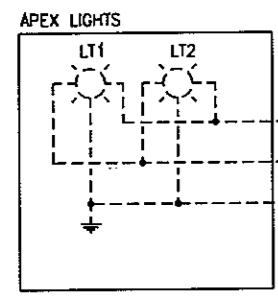
TO RAINBLOWER (SEE SHEET 4)

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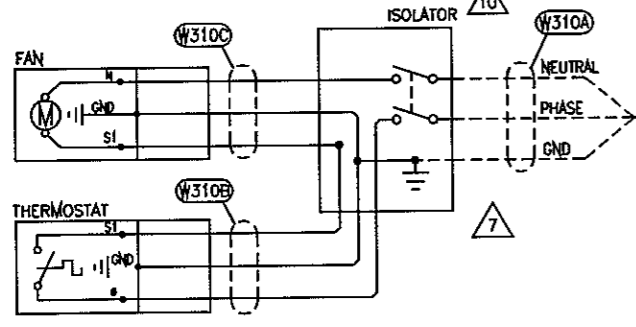
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CODE NO.	REV.	DATE	REV.
1GD22	D	024055	D
SCALE 1/1	CONTRACT NO. EEO05	SHEET 2 OF 4	

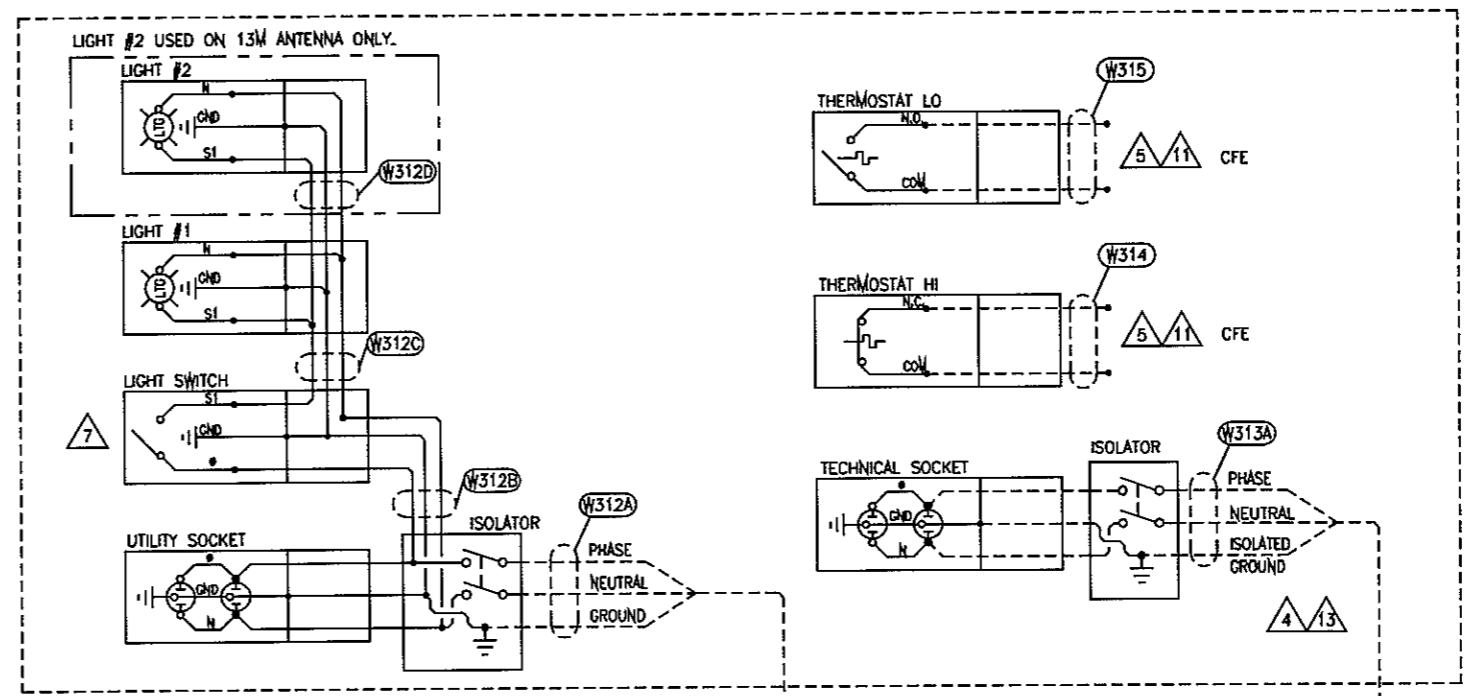
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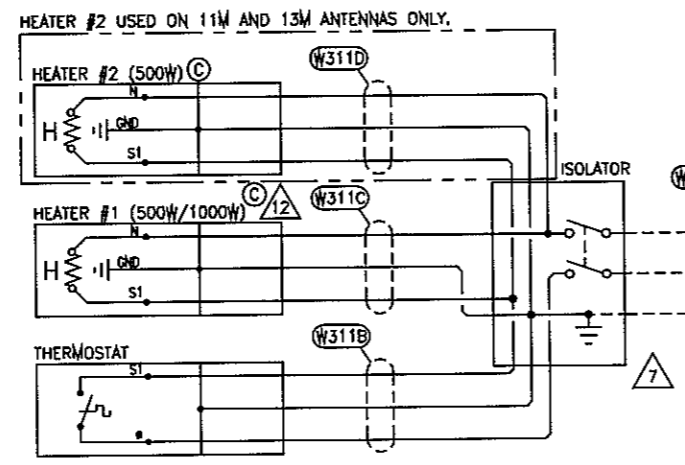
AIRCRAFT WARNING LIGHTS



VENT FAN (HUB)

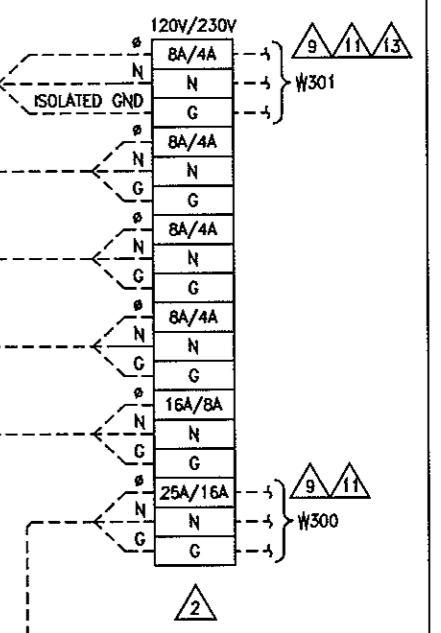


LIGHT/SOCKET/ALARM (HUB - PER CONTRACT REQUIREMENTS)



HEATER (HUB)

UTILITY WIRING SCHEMATIC WITH ISOLATORS



TO RAINBLOWER (SEE SHEET 4)

--- FIELD WIRING
 _____ SHOP WIRING

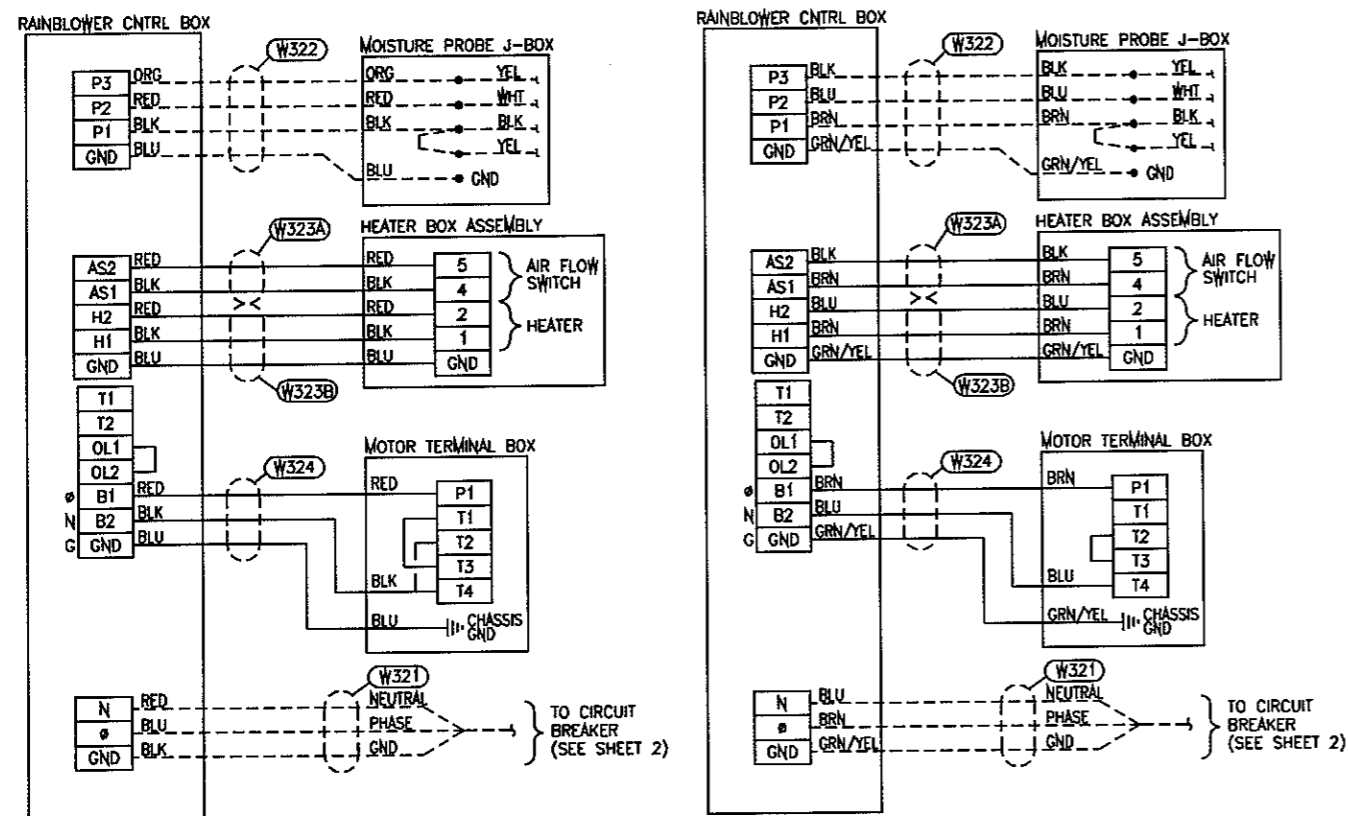
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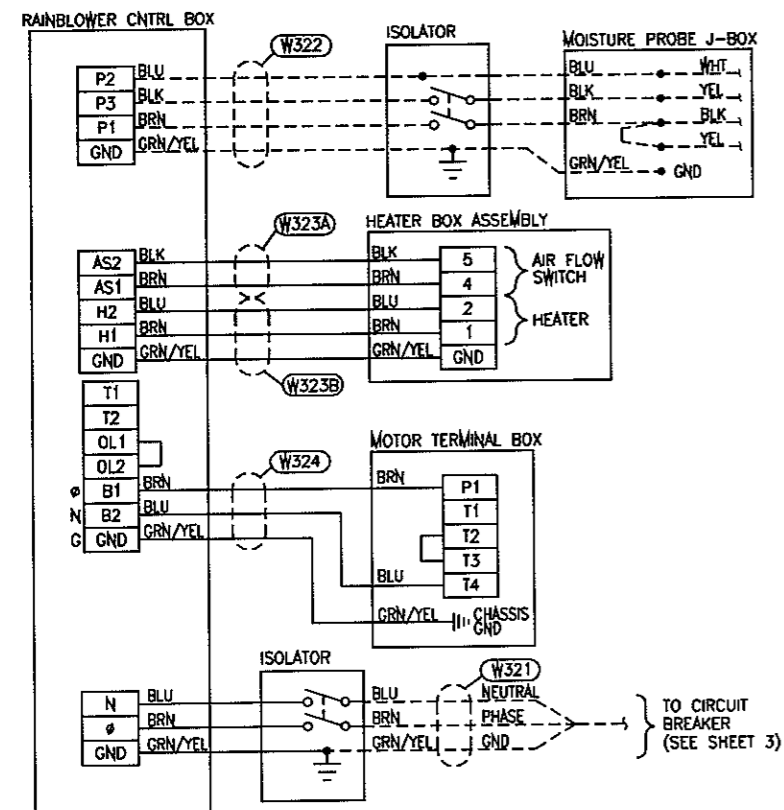


Ku-BAND WIRING SCHEMATIC

120VAC

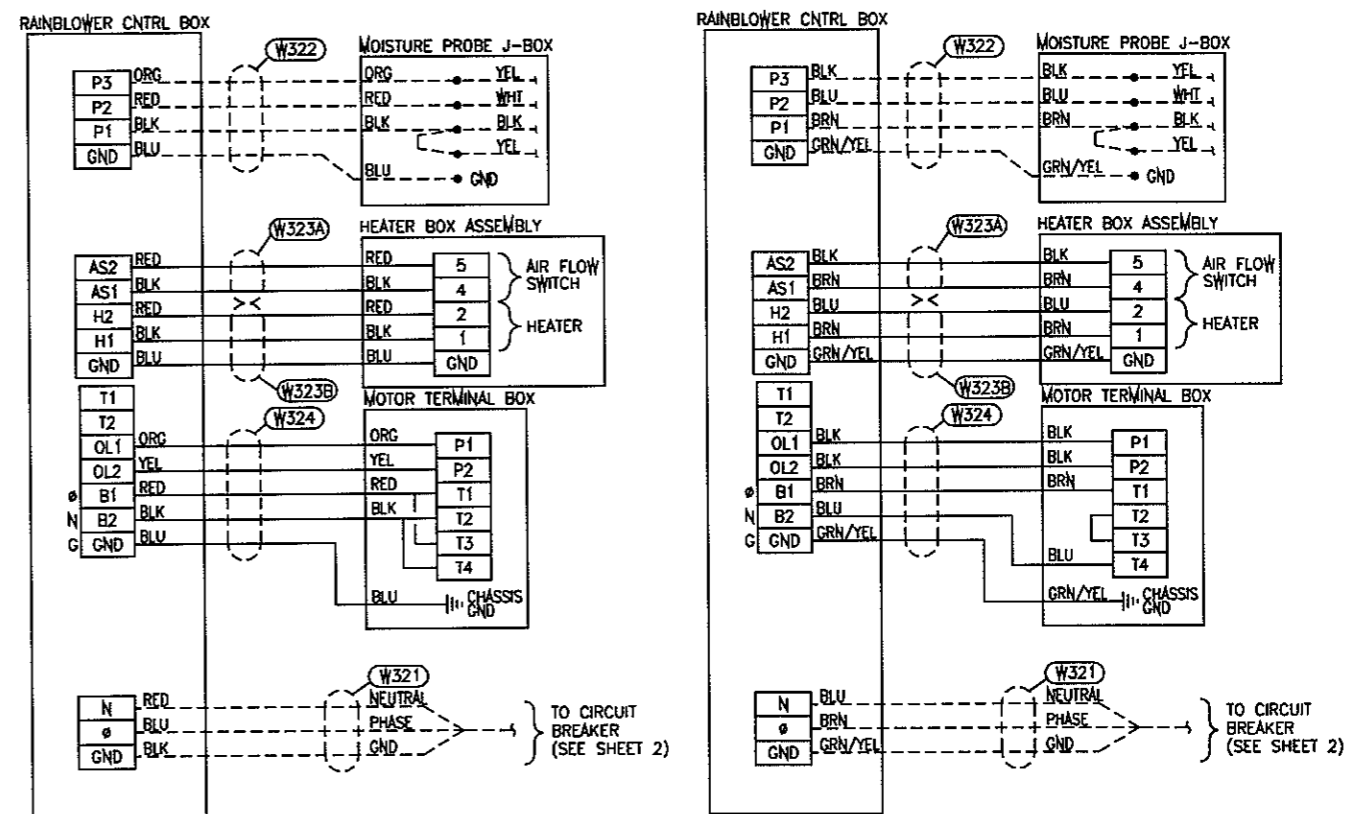
RAINBLOWER SYSTEM

220-240VAC



Ku-BAND WIRING SCHEMATIC

220-240VAC WITH ISOLATOR

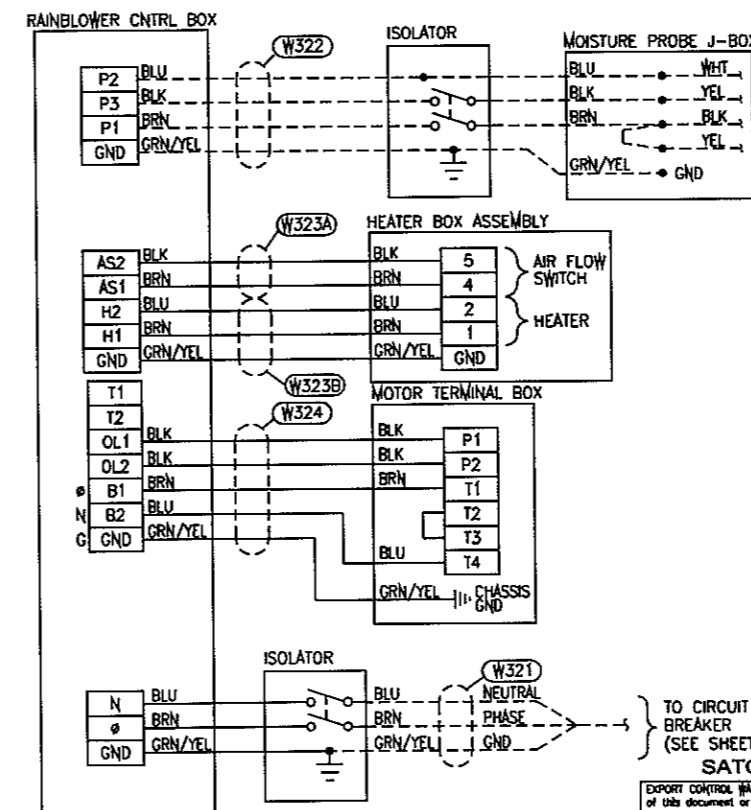


C-BAND WIRING SCHEMATIC

120VAC

RAINBLOWER SYSTEM

220-240VAC



C-BAND WIRING SCHEMATIC

220-240VAC WITH ISOLATOR

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1GD22	D	024055	D
SCALE	1/1	CONTRACT NO.	EE005
		SHEET	4 of 4