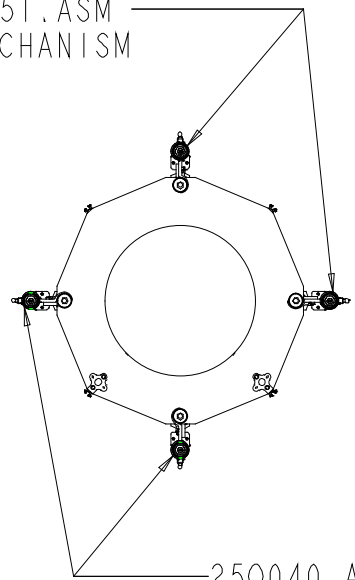
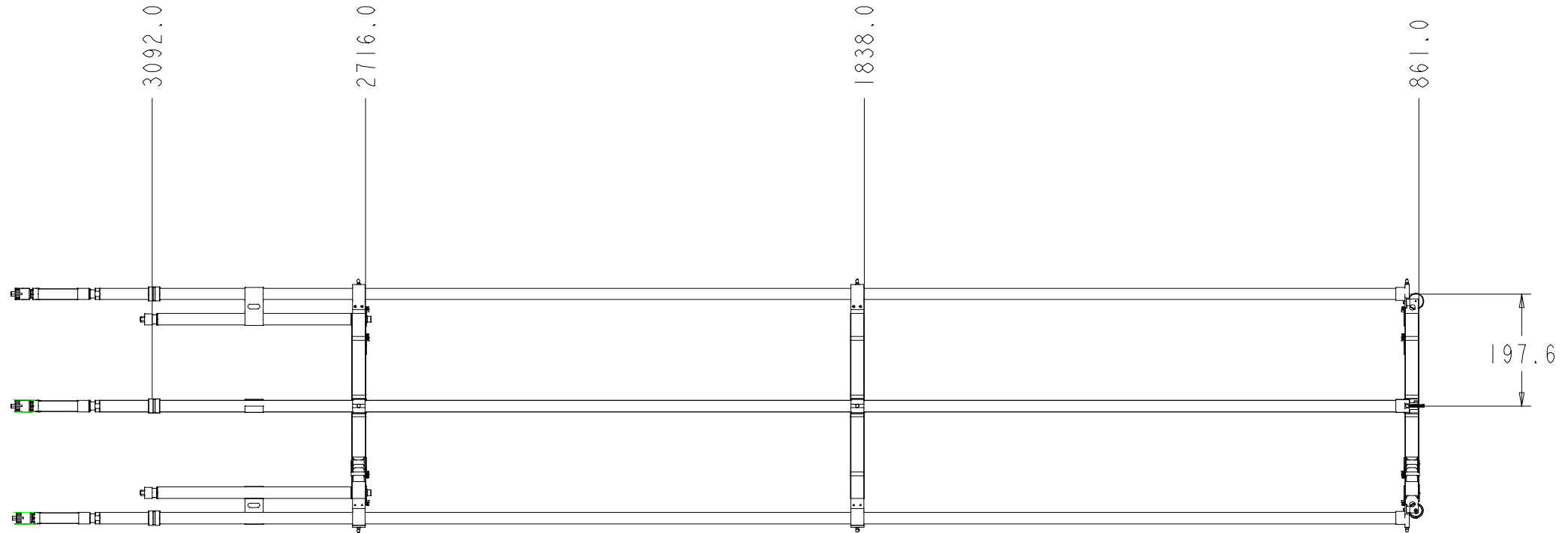


250051.ASM
POSITION MECHANISM



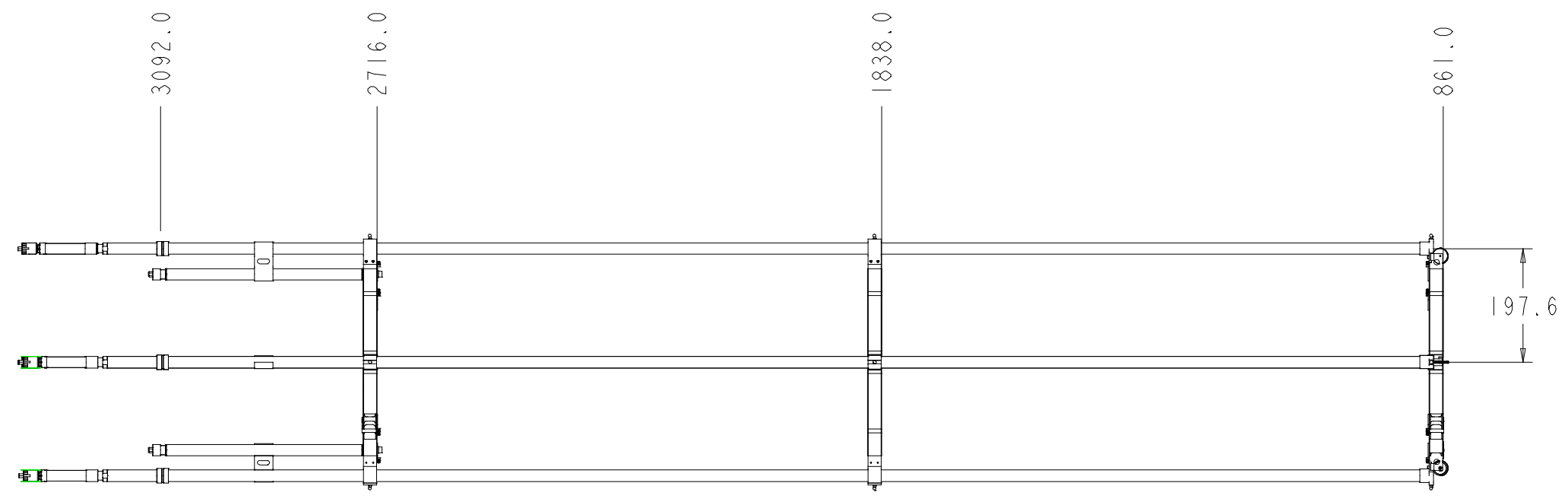
250040.ASM
TENSION MECHANISM



REV		DWG	CHK	ZONE	DATE	CHANGES		UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER NO.	ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA - BERKELEY						
									X.X ± 0.1	FRAC. ± 1/64	ACCT NO.	No.	DATE	DO NOT SCALE PRINTS					
									X.XX ± 0.01	Angles ± 0.50°	DEL TO	E Anderssen	DATE						
									X.XXX ± 0.001	FINISH 125 (µm)	SURFACE TREATMT		DATE						
									DO NOT SCALE PRINT		IDENT METHOD TAG		DATE						
									THREADS ARE CLASS 2		PROJECT NUMBER		DATE						
									CHAMFER ENDS OF ALL SCREW THREADS 30°		PROJECT NAME		DATE						
									CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS		DWG D Uken		DATE 14-Oct-03						
									BREAK EDGES .016 MAX. ON MACHINED WORK		CHK N Hartman		DATE						
									REMOVE BURRS, WELD SPLATTER & LOOSE SCALE		BY E Anderssen		DATE						
									IN ACCORDANCE WITH ASME Y14.5M & B46.1		APR E Anderssen		DATE						
MICROFILMED:		DWG. TYPE		SHOWN ON		SCALE:		PATENT CLEAR:		DESIGN ACCT. NO.		CATEGORY CODE		DWG. NO.		SIZE		REV.	
		ASSEM		250XXX		0.200		See WebJ		API000		2501514		1		1		1	

250051.ASM
POSITION MECHANISM

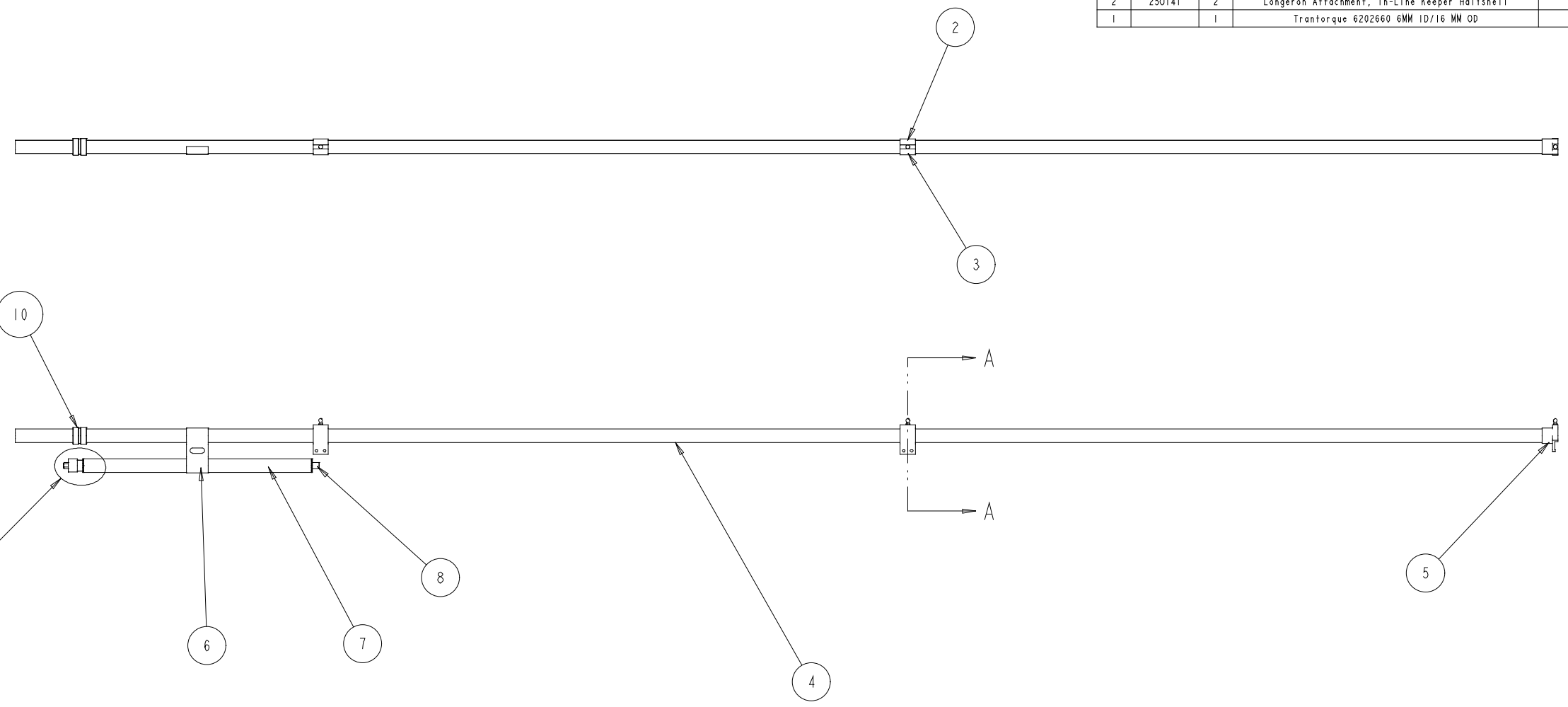
250040.ASM
TENSION MECHANISM



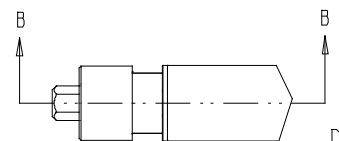
UNLESS OTHERWISE SPECIFIED				SHOP ORDERS		SER. NO. -
TOLERANCES	X.X ± 0.1	FRAC. ± 1/64	ACCT. NO.	No. 1	DATE ISSD	-
	X.XX ± 0.01	Angles ± 0.50°	DEL. TO	E. Anderssen	DATE RECD	-
	X.XXX ± 0.001	FINISH $\sqrt{25}$	SURFACE TREATMT			
DO NOT SCALE PRINT				IDENT. METHOD	TAG	
THREADS ARE CLASS 2				PROJECT NUMBER		
CHAMFER ENDS OF ALL SCREW THREADS 30°				PROJECT NAME		
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS				DWG. BY	D. Uken	DATE
BREAK EDGES .016 MAX. ON MACHINED WORK				CHK. BY	N. Hartman	DATE
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE				APPR. BY	E. Anderssen	DATE
IN ACCORDANCE WITH ASME Y14.5M & B46.1				ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA - BERKELEY ATLAS PIXEL DETECTOR BEAM PIPE AND SERVICES SUPPORT Main Assembly Side A		
MICROFILMED:		DWG. TYPE	ASSEM	SHOWN ON	SCALE: 0.200	DO NOT SCALE PRINTS
PATENT CLEAR:		DESIGN ACCT. NO.	250XXX	CATEGORY CODE	SHEET 2 OF 2	
See WebJ		API000	DWG. NO.	2501504	SIZE	1

REV	DWG	CHK	ZONE	DATE	CHANGES

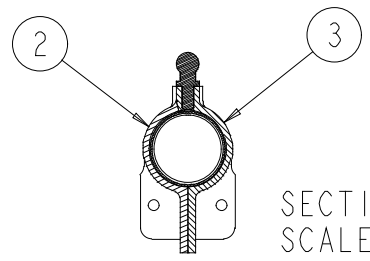
ITEM	PART NO	REQD	DESCRIPTION	MATERIAL
11	27A005	1	Strut Longeron Sealing Cap	Aluminum 6061-T6
10	250182	1	Longeron Tube Sleeve	PEEK
9	250181	1	Strut Longeron Tube Tranforq Adapter	Al 6061-T6
8	250180	1	Strut Longeron Tube Mount Bushing	Al 6061-T6
7	250179	1	Strut Longeron Tube, 20 MM Diameter	P30 1kT PW / YSH80 UDT EX1515
6	250178	1	Longeron Stabilizer Bracket	Aluminum 6061-T6
5	250176	1	Longeron Support Attachment, Barrel End Type	Al 6061-T6
4	250175	1	Main Longeron Tube, 20 mm Diameter	P30 1kT PW / YSH80 UDT EX1515
3	250142	2	Longeron Attachment, In-Line Tooling Ball Halfshell	Al 6061-T6
2	250141	2	Longeron Attachment, In-Line Keeper Halfshell	Al 6061-T6
1		1	Trantorque 6202660 6MM ID/16 MM OD	



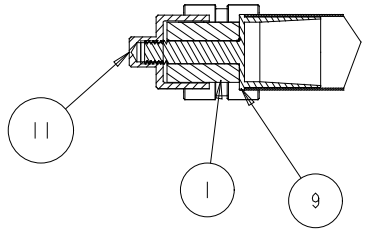
SEE DETAIL B



DETAIL B
SCALE 1.000



SECTION A-A
SCALE 1.000



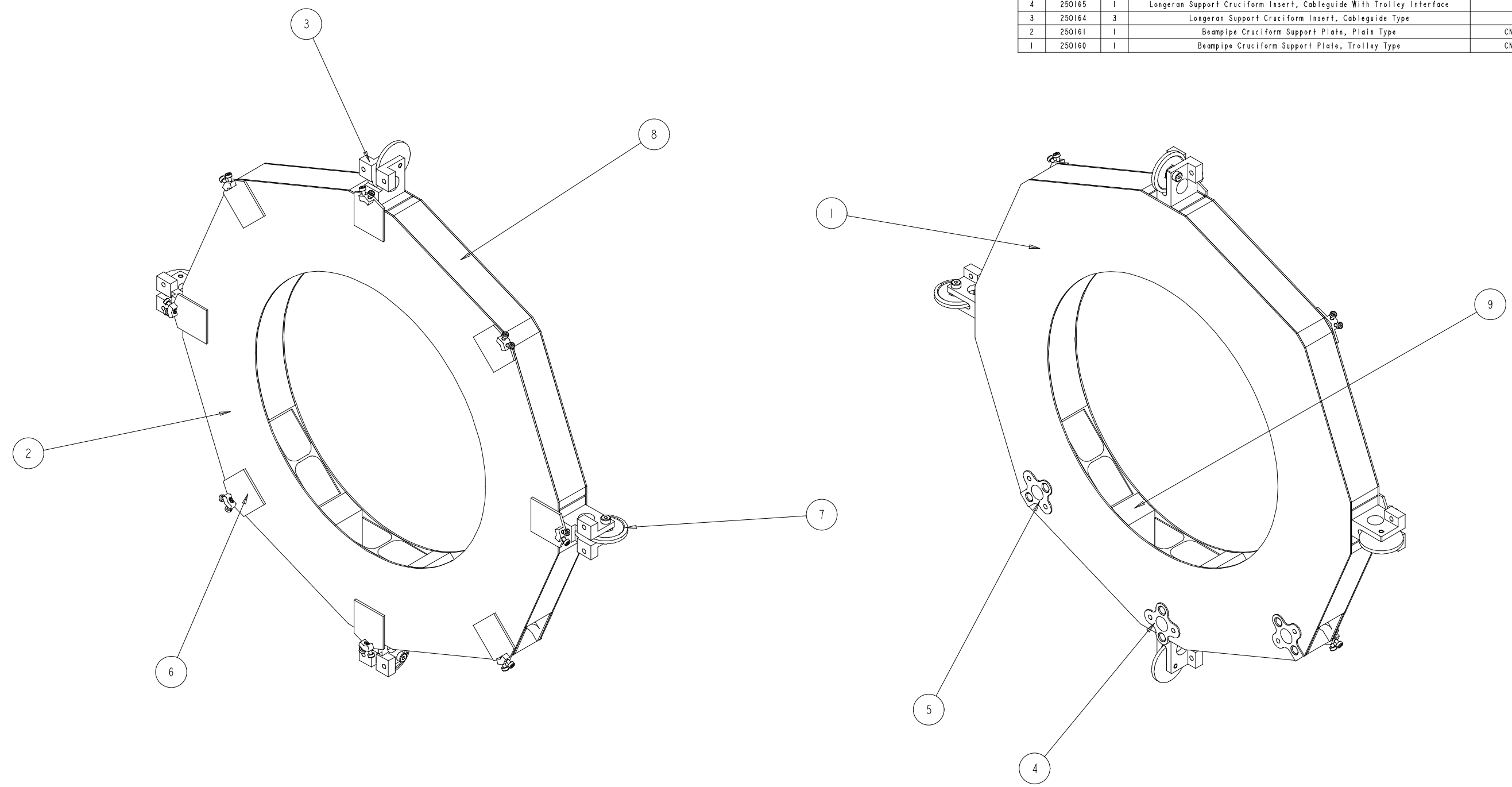
SECTION B-B

REV	DWG	CHK	ZONE	DATE	CHANGES

UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER NO. -
TOLERANCES	X.X ± 0.5	FRAC. ± 1/64	ACCT NO. 8	DATE -
	X.XX ± 0.05	Angles ± 1.00°	DEL TO E Anderssen	ISSD -
	X.XXX ± 0.010	FINISH 125 (μm)	DATE -	REQD -
DO NOT SCALE PRINT				
TREATMENT				
METHOD TAG				
PROJECT NAME				
PROJECT NUMBER				
PROJECT NAME				
DWG D Uken				
DATE 05-Sep-03				
CHK N Hartman				
DATE				
APR E Anderssen				
DATE				

ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY				UNIVERSITY OF CALIFORNIA - BERKELEY	
ATLAS PIXEL DETECTOR					
BEAM PIPE AND SERVICES SUPPORT					
Beampipe Support Longeron Assembly					
MICROFILMED:	DWG. TYPE	SHOWN ON	SCALE: 0.250	DO NOT SCALE PRINTS	
ASSEM 5015025051	ASSEM 5015025051	51	SHEET 1 OF 1		
PATENT CLEAR:	DESIGN ACCT. NO.	CATEGORY CODE	DWG. NO.	SIZE	REV.
See WebJO	AP1000	2501554	1		

ITEM	PART NO	REQD	DESCRIPTION	MATERIAL
9	27A002	2	Beampipe Cruciform Support Panel, Barrel Wedge	UCS-102-3/8-3.0 x 23mm thick
8	27A000	1	Beampipe Cruciform Support Panel, Fwd-Brl Segment	UCS-102-3/8-3.0 x 23mm thick
7	250172	4	Cable Guidewheel Assembly	
6	250171	8	Cruciform Vertex Tab	Al 6061-T6
5	250166	2	Trolley Interface Cruciform Insert, No Longer Support	Al 6061-T6
4	250165	1	Longeran Support Cruciform Insert, Cableguide With Trolley Interface	Al 6061-T6
3	250164	3	Longeran Support Cruciform Insert, Cableguide Type	Al 6061-T6
2	250161	1	Beampipe Cruciform Support Plate, Plain Type	CN60 PW 6k EX1515
1	250160	1	Beampipe Cruciform Support Plate, Trolley Type	CN60 PW 6k EX1515



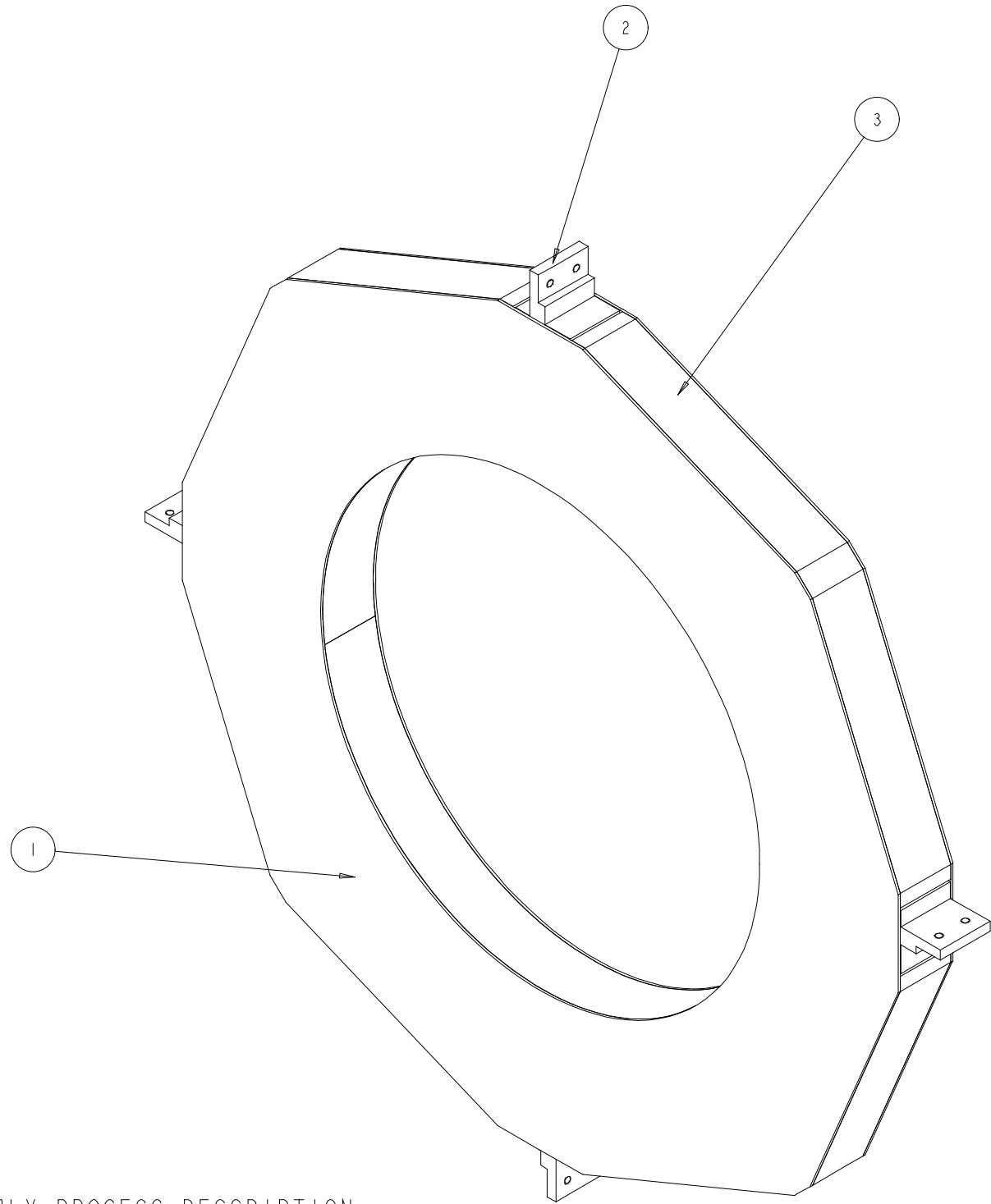
NOTE:

1. FOR ASSEMBLY PROCESS DESCRIPTION SEE 250197.DWG, SHEETS 2-6.

UNLESS OTHERWISE SPECIFIED		SHOP ORDERS		SER. NO. -
X.X ± 0.5	FRAC. ± 1/64	ACCT. NO. 2	DATE -	DO NOT SCALE PRINTS
X.XX ± 0.05	Angles ± 1.00°	DEL. TO E Anderssen	DATE -	
X.XXX ± 0.010	FINISH 125 (Ra)		DATE -	
DO NOT SCALE PRINT		SURFACE TREATMT		
THREADS ARE CLASS 2		IDENT METHOD TAG		
CHAMFER ENDS OF ALL SCREW THREADS 30°		PROJECT NUMBER		
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS		PROJECT NAME		
BREAK EDGES .016 MAX. ON MACHINED WORK		DWG. D Uken		
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE		CHK. N Hartman		
IN ACCORDANCE WITH ASME Y14.5M & B46.1		DATE 05-Sep-03		
REV. DWG. CHK. ZONE DATE		APR. E Anderssen		
CHANGES		DATE		

ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY			
UNIVERSITY OF CALIFORNIA - BERKELEY			
ATLAS PIXEL DETECTOR			
BEAM PIPE AND SERVICES SUPPORT			
Beampipe Support Cruciform, Barrel End			
MICROFILMED:	DWG. TYPE	SHOWN ON	SCALE: 0.750
	ASME 50150 250	51	SHEET 1 OF 1
PATENT CLEAR:	DESIGN ACCT. NO.	CATEGORY CODE	DWG. NO. 2501524
	See WebJO	API000	SIZE 1

DWG. NO.		SIZE		REV.		SH.		1	
2501534		1		1					
ITEM	PART NO.	REQD	DESCRIPTION			MATERIAL			
3	27A003	2	Beampipe Cruciform Support Panel, Middle Segment			UCS-102-3/8-3.0 x 23mm thick			
2	250167	4	Longeron Support Cruciform Insert, Standard Type			Al 6061-T6			
1	250161	2	Beampipe Cruciform Support Plate, Plain Type			CN60 PW 6k EX1515			

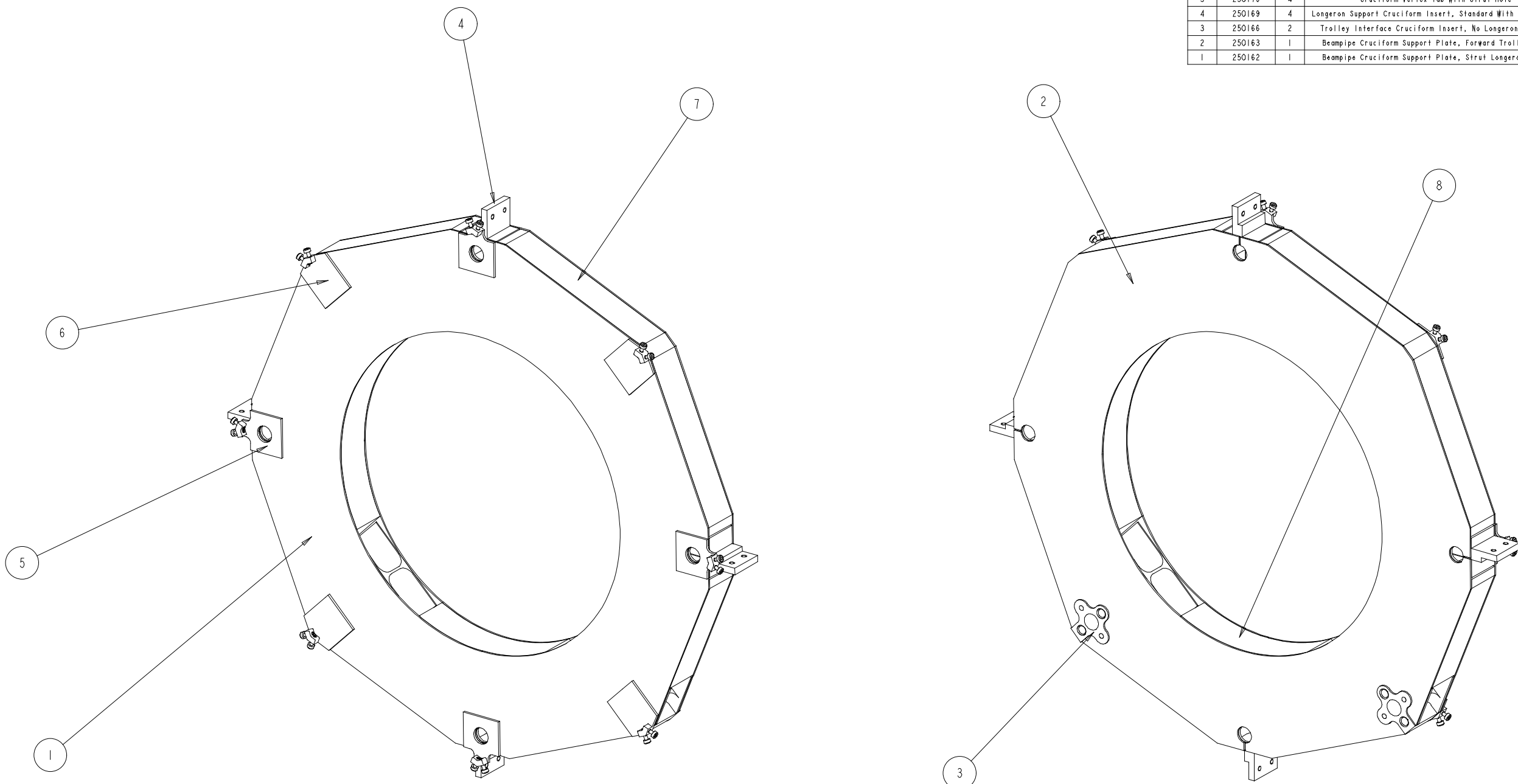


NOTE:

1. FOR ASSEMBLY PROCESS DESCRIPTION
SEE 250197.DWG, SHEETS 7-9.

				UNLESS OTHERWISE SPECIFIED				SHOP ORDERS				SER. NO. -				ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY			
				X.X ± 0.5 FRAC. ± 1/64				ACCT. NO. 2				DATE -				UNIVERSITY OF CALIFORNIA - BERKELEY			
				X.XX ± 0.05 Angles ± 1.00°				DEL TO E Anderssen				DATE -							
				X.XXX ± 0.010 FINISH $\sqrt{25}$				SURFACE TREATMT				DATE -				ATLAS PIXEL DETECTOR			
				DO NOT SCALE PRINT				IDENT METHOD TAG								BEAM PIPE AND SERVICES SUPPORT			
				THREADS ARE CLASS 2				PROJECT NAME								Beampipe Support Cruciform, Middle Position			
				CHAMFER ENDS OF ALL SCREW THREADS 30°				PROJECT NUMBER								MICROFILMED: DWG. TYPE SHOWN ON SCALE: 1.000 DO NOT SCALE PRINTS			
				CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS				DWG D Uken DATE 05-Sep-03								ASSEMBLY 150 250 51 SHEET 1 OF 1			
				BREAK EDGES .016 MAX. ON MACHINED WORK				CHK N Hartman DATE								PATENT CLEAR: DESIGN ACCT. NO. CATEGORY CODE DWG. NO. SIZE REV.			
				REMOVE BURRS, WELD SPLATTER & LOOSE SCALE				BY E Anderssen DATE								See WebJO AP1000 2501534 1			
				IN ACCORDANCE WITH ASME Y14.5M & B46.1															
REV	DWG	CHK	ZONE	DATE	CHANGES														

DWG. NO. 2501544				REV. 1 1		SH.		1	
ITEM	PART NO	REQD	DESCRIPTION			MATERIAL			
8	27A001	1	Beampipe Cruciform Support Panel, Forward Wedge			UCS-102-3/8-3.0 x 23mm thick			
7	27A000	1	Beampipe Cruciform Support Panel, Fwd-Brl Segment			UCS-102-3/8-3.0 x 23mm thick			
6	250171	4	Cruciform Vertex Tab			Al 6061-T6			
5	250170	4	Cruciform Vertex Tab With Strut Hole			Al 6061-T6			
4	250169	4	Longeron Support Cruciform Insert, Standard With Strut Hole			Al 6061-T6			
3	250166	2	Trolley Interface Cruciform Insert, No Longeron Support			Al 6061-T6			
2	250163	1	Beampipe Cruciform Support Plate, Forward Trolley Type			CN60 PW 6k EX1515			
1	250162	1	Beampipe Cruciform Support Plate, Strut Longeron Holes			CN60 PW 6k EX1515			



NOTE:
 1. FOR ASSEMBLY PROCESS DESCRIPTION SEE 250197.DWG, SHEETS 10-14.

UNLESS OTHERWISE SPECIFIED				SHOP ORDERS		SER NO. -		ERNEST ORLANDO LAWRENCE BERKELEY NATIONAL LABORATORY UNIVERSITY OF CALIFORNIA - BERKELEY ATLAS PIXEL DETECTOR BEAM PIPE AND SERVICES SUPPORT Beampipe Support Cruciform, Forward Position	
TOLERANCES	X.X ± 0.5	FRAC. ± 1/64	DEL TO	ACCT NO.	NO. 2	DATE	ISSD		
	X.XX ± 0.05	Angles ± 1.00°		DEL TO	E Anderssen	DATE	REQD		
	X.XXX ± 0.010	FINISH 125 (μm)	SURFACE TREATMT		IDENT METHOD TAG		MICROFILMED: ASME 50150 250 SCALE: 0.750 SHEET 1 OF 1		
DO NOT SCALE PRINT			PROJECT NAME		PROJECT NUMBER				
THREADS ARE CLASS 2			PROJECT NAME		PROJECT NUMBER		PATENT CLEAR: DESIGN ACCT. NO. CATEGORY CODE DWG. NO. SIZE REV. See WebJO AP1000 2501544 1		
CHAMFER ENDS OF ALL SCREW THREADS 30°			PROJECT NAME		PROJECT NUMBER				
CUT ROUND, 1.5 THREAD RELIEF ON MACHINED THREADS			PROJECT NAME		PROJECT NUMBER		DWG D Uken DATE 05-Sep-03 CHK N Hartman BY N Hartman DATE APP E Anderssen DATE		
BREAK EDGES .016 MAX. ON MACHINED WORK			PROJECT NAME		PROJECT NUMBER				
REMOVE BURRS, WELD SPLATTER & LOOSE SCALE			PROJECT NAME		PROJECT NUMBER		IN ACCORDANCE WITH ASME Y14.5M & B46.1		
			PROJECT NAME		PROJECT NUMBER				
REV	DWG	CHK	ZONE	DATE	CHANGES				