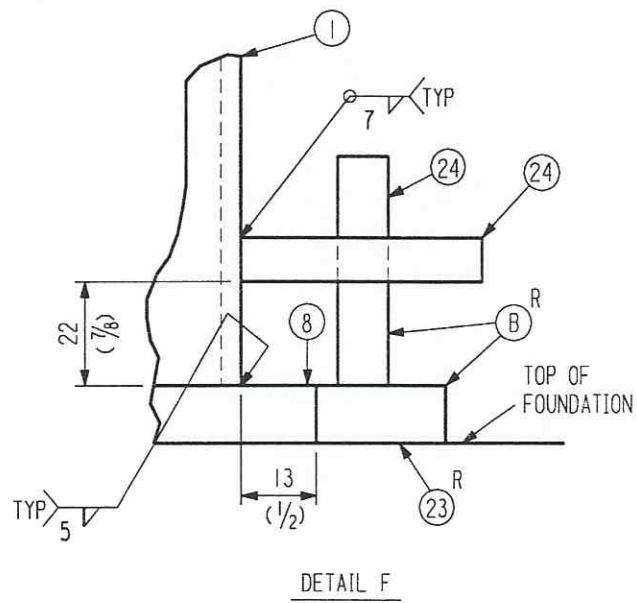


SEE SHT. #2

ELEVATION VIEW
(ALL DIMENSIONS AND PIECE MARKS ARE TYP)



APPROVED
M. Tellalian 9-13-96
 CBI DATE
J. Jones 9/23/96
 CALTECH DATE

REV. ENTIRE DWG.

NOTES:

1. POSITION PC. (7) SO CABLE (11) IS KEPT LEVEL. PC. (7) DOES NOT WELD TO PC. (1).
2. WORK THIS DRAWING WITH DRAWINGS #4 AND 16.
3. ALL SUPPORT COMPONENTS TO BE FABRICATED PER SPEC. C-SUPT-1.
4. PROVIDE TUBULAR MEMBERS (THAT ARE CLOSED ON THE ENDS) WITH 13 (1/2) DIA. HOLES ON ANY TWO OPPOSITE SIDES AT THE TUBE ENDS AS REQUIRED FOR GALVANIZING.
5. AFTER STACKING TWO BELLEVILLE WASHERS PER ANCHOR BOLT, FINGER TIGHTEN NUTS ON PC. (19). TIGHTEN NUTS IN INCREMENTS OF 1/2 TURN MAKING SURE TO ALTERNATE BETWEEN THE NUTS ON EACH END OF PC. (6). STOP TIGHTENING NUTS AS SOON AS BELLEVILLE WASHERS ARE COMPLETELY FLAT.

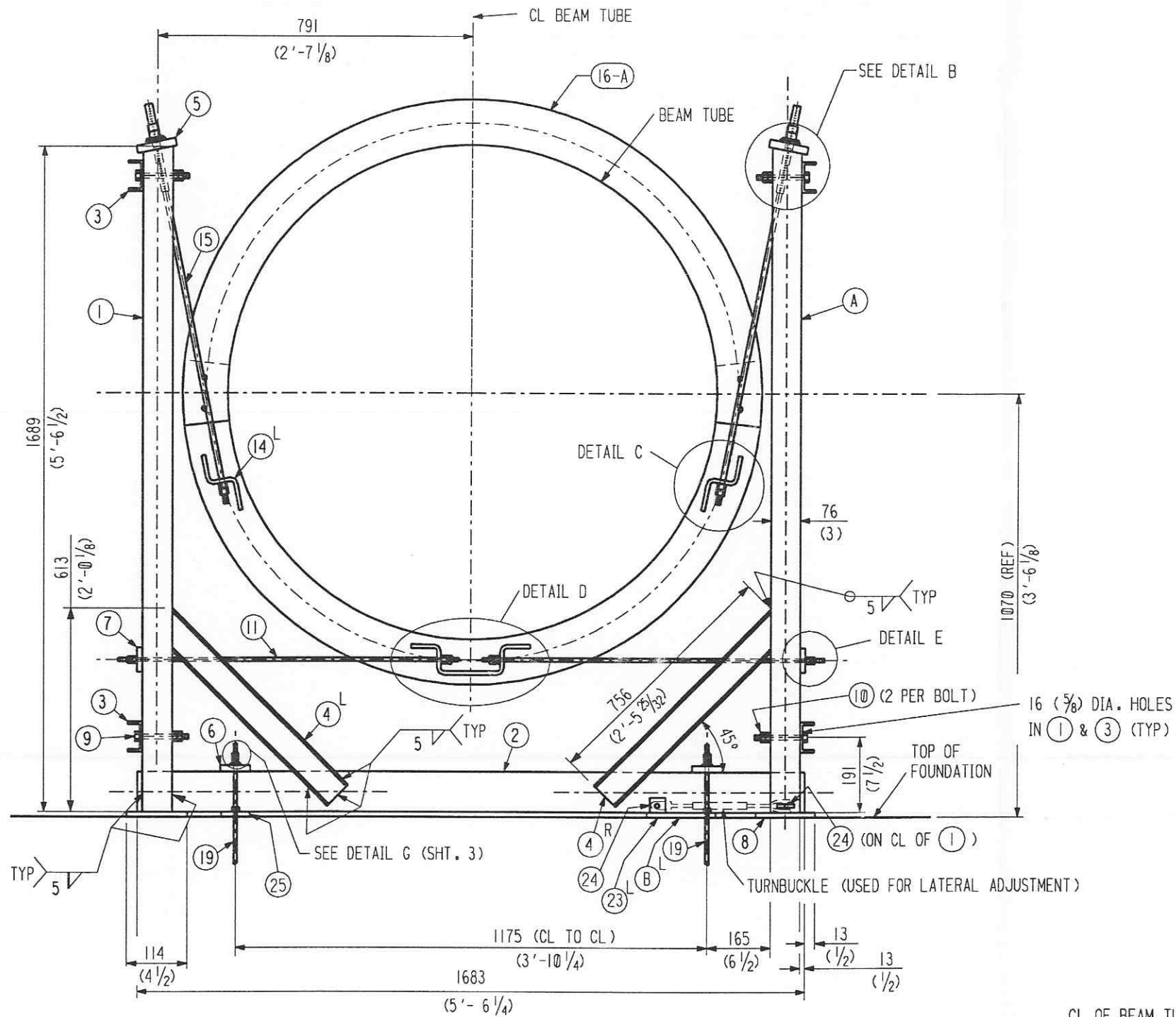
INDICATES CHANGE FROM PREVIOUS ISSUE

SHIP PC	MARK	ASSM PC	DESCRIPTION	LENGTH MM	SPEC	ID
2	19-A		GUIDED SUPPORT ASSEMBLY			
	19-1	8	TUBE 76 X 51 X 5 X SK (3 X 2 X 3/16 X 5'-6 1/2 LONG)	1689	A500 GR.B	C
	19-2	2	TUBE 102 X 102 X 5 (4 X 4 X 3/16 X 5'-6 1/4)	1683	A500 GR.B	C
	19-4 R/L	8	C 76 X 4.1 (C 3 X 4.1 X 2'-5 25/32 LONG) X SK	756	A36	C
	19-5	4	PL 102 X 10 (4 X 3/8) W/ HOLE	229 (9)	A36	C
	19-8	4	PL 114 X 13 (4 1/2 X 1/2)	229 (9)	A36	C
	19-24	2	PL SK X 13 (1/2)		A36	C
2	19-B R/L		ALIGNMENT BASE PLATE ASSEMBLY			
	19-23 R/L	2	PL SK X 13 (1/2)		A36	C
	19-24	2	PL SK X 13 (1/2)		A36	C
4	19-3		C 76 X 4.1 (C 3 X 4.1 X 6'-6 1/2 LONG) X SK	1994	A36	C
4	19-6		PL SK X 19 (3/4)		A36	C
4	19-7		PL 102 X 10 (4 X 3/8) W/ HOLE	203 (8)	A36	C
16	19-9		BOLT 13 (1/2) DIA HVY HEX	127 (5)	A307 GR.B	Ac
48	19-10		NUT 13 (1/2) DIA HVY HEX		A307 GR.B	Ac
4	19-11		CABLE 6 (1/4) DIA (7 X 19 OR 6 X 19) GALV. W/ TWO 13 (1/2) DIA 76 (3) LONG THREADED PLUGS ZINC PL.	940 (3'-1)	CS	C
4	19-12		WASHER 13 (1/2) DIA HVY DUTY HARDENED		F436	Ac
2	19-13		PL SK X 13 (1/2) (SHOP ATT. TO 16-A)		***	C
4	19-14 R/L		PL SK X 13 (1/2) (SHOP ATT. TO 16-A)		***	C
4	19-15		CABLE 10 (3/8) DIA (7 X 19 OR 6 X 19) GALV. W/ TWO 19 (3/4) DIA THREADED PLUGS ZINC PL., ONE 254 (10) LONG AND ONE 76 (3) LONG	1092 (3'-7)	CS	C
4	19-16		WASHER 19 (3/4) DIA HVY DUTY HARDENED		F436	Ac
16	19-17		NUT 19 (3/4) DIA HVY HEX		A307 GR.B	Ac
4	19-18		GROMMET X SK		*	C
8	19-19		ANCHOR BOLT 13 (1/2) DIA HILTI HY-150 (4 1/4 EMBED) W/ 3 NUTS AND ADHESIVE	279 (11)	A193-B7	C
16	19-20		BELLEVILLE WASHER 13 (1/2) DIA SPEC #B1000-073-S		SS	C
4	19-21		GROMMET X SK MICARTA		GRADE G11	C
4	19-22		GROMMET X SK MICARTA		GRADE G11	C
4	19-24		PL SK X 13 (1/2)		A36	C
2	19-25		PL SK X 13 (1/2)		A36	C
4	19-26		GROMMET X SK		*	C
4	19-27		PL SK X 10 (3/8)		A36	C
32	19-28		WASHER 13 (1/2) DIA HARDENED		F436	Ac

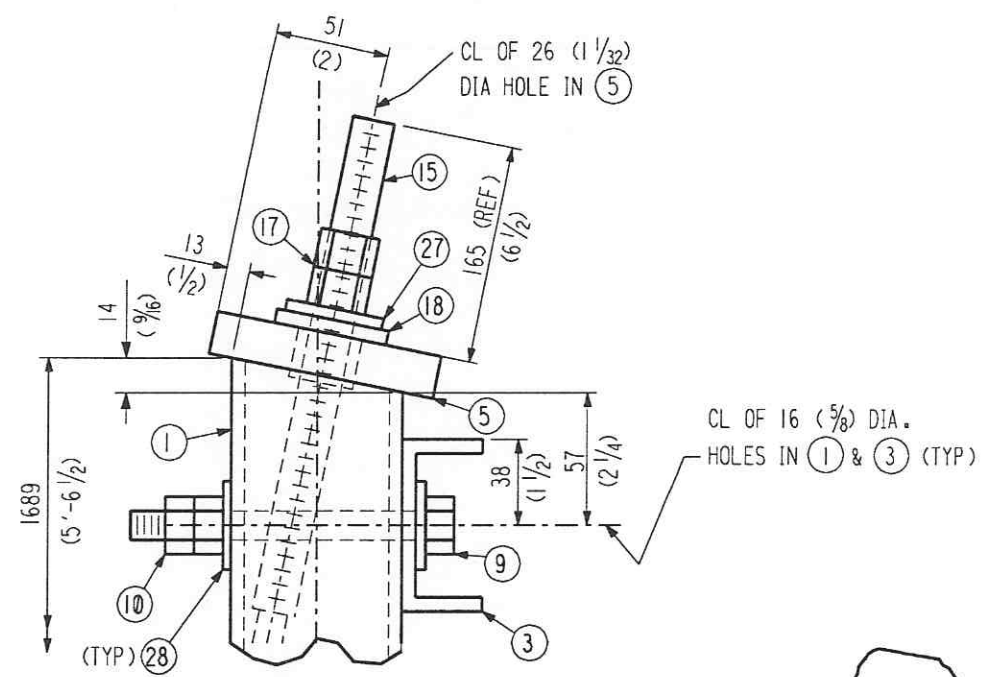
DETAILED AND BILLED FOR (1), (400) REQUIRED

CBI LIGO BEAM TUBE HANFORD, WA & LIVINGSTON, LA BEAM TUBE GUIDED SUPPORT ELEVATION		SUPPLIER'S / PURCHASER'S NO CONTRACT NO 953571
CUSTOMER'S NO BY WAW_CHKD DET DATE 3-15-94 M.J. TELLALIAN ENGINEERING ASSIGNED	DWG 19 SHT 1	REV 7
LIGO-D950044-07-B		

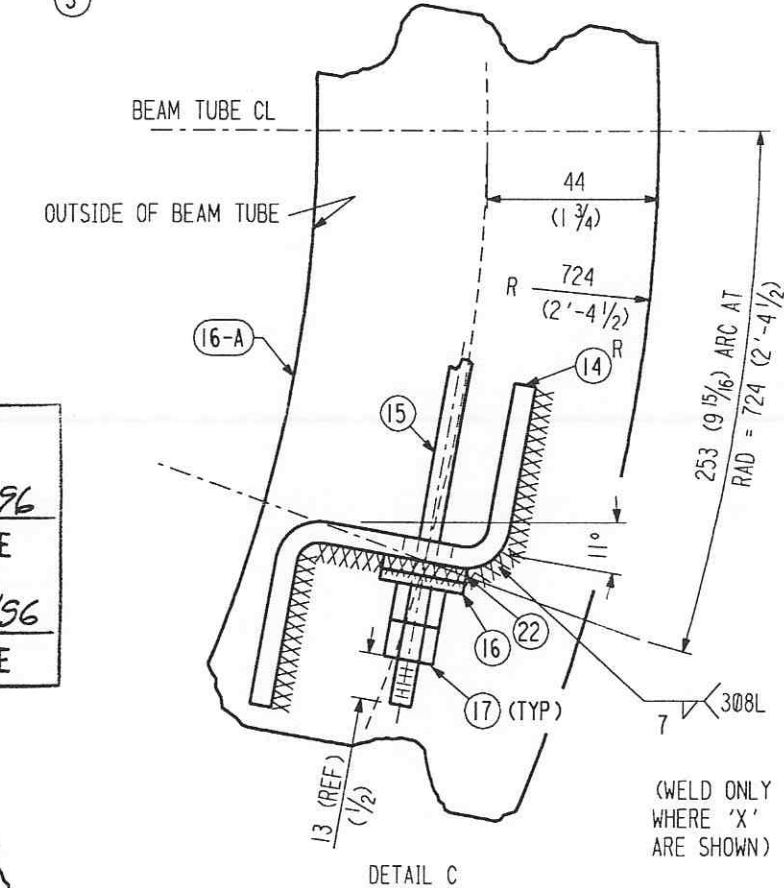
55710119.DCN



SECTION A-A
(ALL PIECE MARKS AND DIMENSIONS ARE TYP)

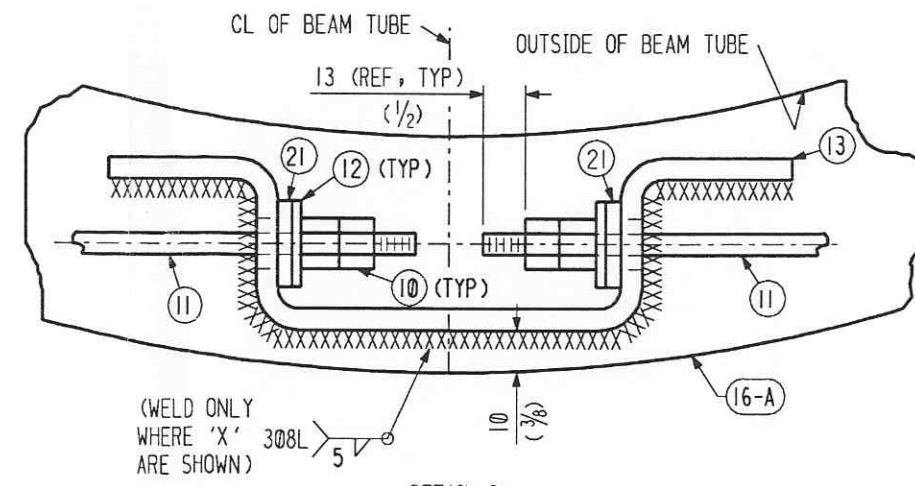


DETAIL B

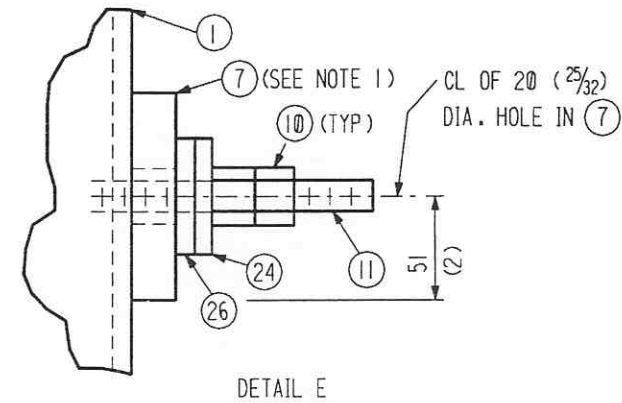


DETAIL C

APPROVED
M. Tellalian 9-13-96
 CBI DATE
J. Jones 9/23/96
 CALTECH DATE



DETAIL D



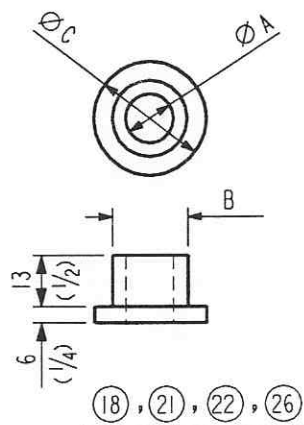
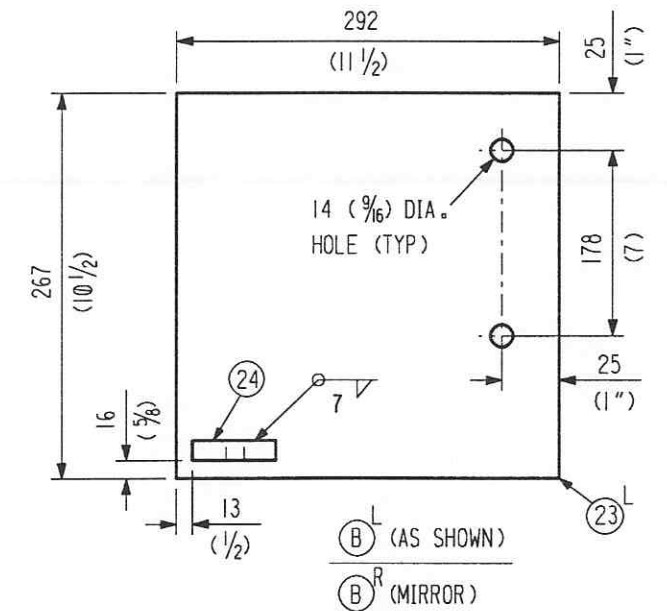
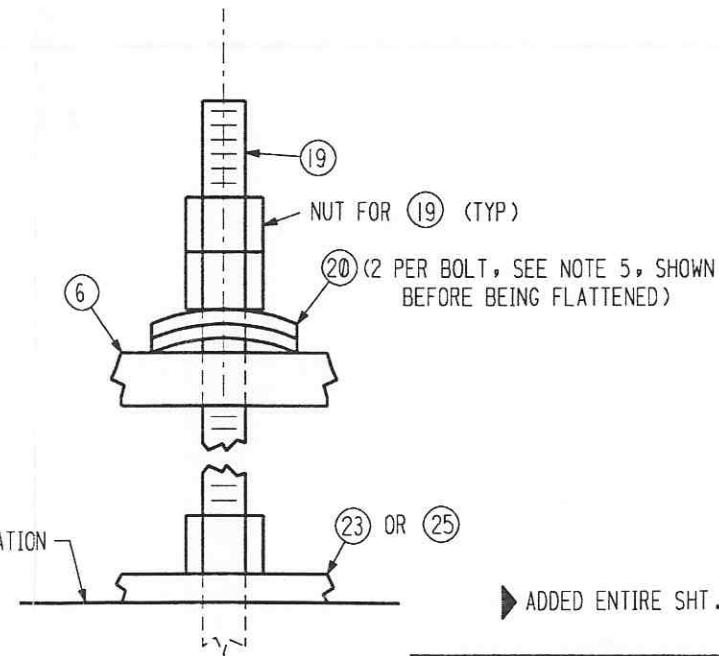
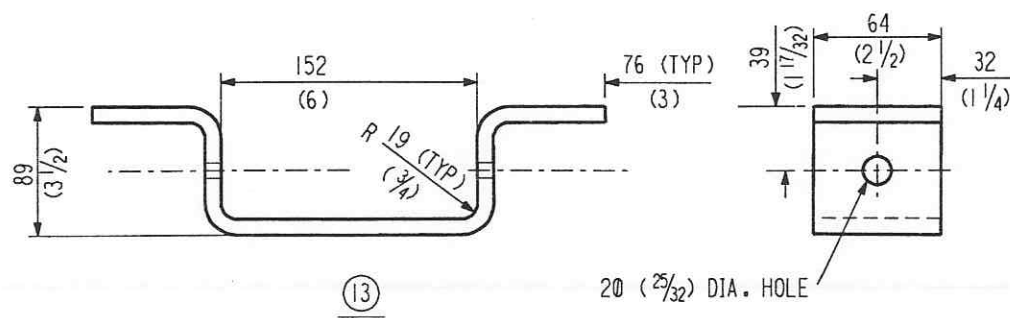
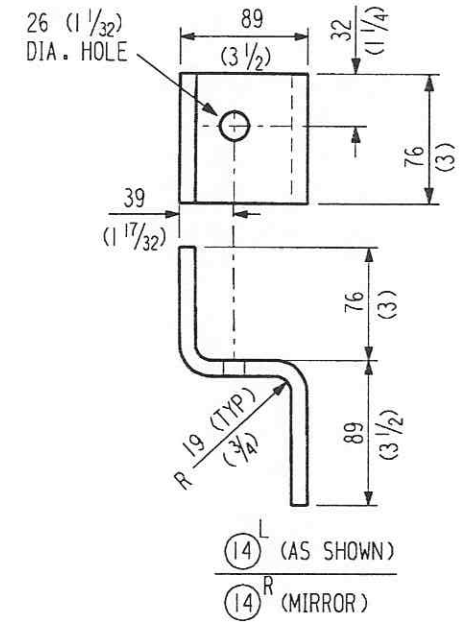
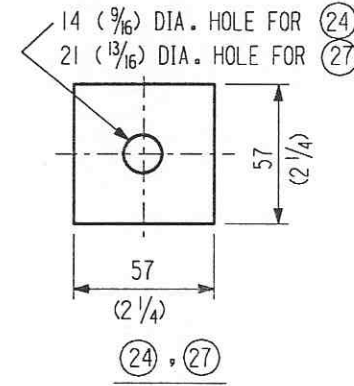
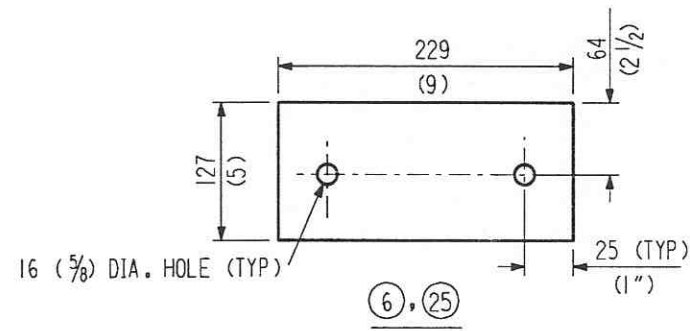
DETAIL E

REV. ENTIRE DWG.

INDICATES CHANGE FROM PREVIOUS ISSUE

DTR		REV. SH. 1		REVISIONS		REMARKS	
CHKD	MLT	DATE	4-28-96	ADDED ENTIRE SH. 1			
BY	DTR	DATE	5-3-96	REV. ENTIRE SH. 1			
CHKD	MLT	DATE	9-17-96				
CBI				SUPPLIER'S / PURCHASER'S NO			
LIGO BEAM TUBE HANFORD, WA & LIVINGSTON, LA							
BEAM TUBE GUIDED SUPPORT SECTION A-A AND DETAILS							
CUSTOMER'S NO				CONTRACT NO			
BY DTR				CHKD MLT		DATE 2/20/96	
M.J. TELLALIAN				DWG 19		REV 7	
ENGINEERING ASSIGNED				SHT 2			

55710219.DGN



GROMMET TABLE

PC.	A	B	C
(18)	20 (25/32)	25 (1")	51 (2)
(21), (26)	13 (17/32)	19 (3/4)	38 (1 1/2)
(22)	20 (25/32)	25 (1")	38 (1 1/2)

DETAIL G
(PC. (2) NOT SHOWN FOR CLARITY)

ADDED ENTIRE SHT.

APPROVED

M. Tellalian 9-13-96
CBI DATE

J. Jones 9/13/96
CALTECH DATE

CBI		SUPPLIER'S / PURCHASER'S NO	
LIGO BEAM TUBE HANFORD, WA & LIVINGSTON, LA			
BEAM TUBE GUIDED SUPPORT DETAILS			
CUSTOMER'S NO		CONTRACT NO	
BY DIR_CHKD_MLI DATE 2/20/96		953571	
M.J. TELLALIAN		DWG 19	REV 7
ENGINEERING ASSIGNED		SHT 3	