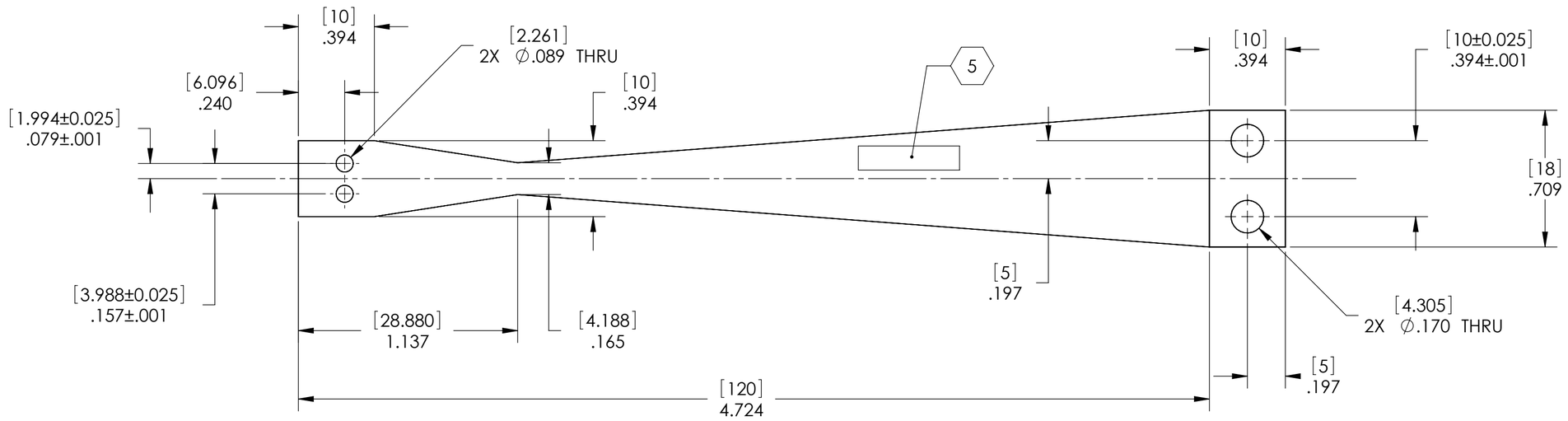
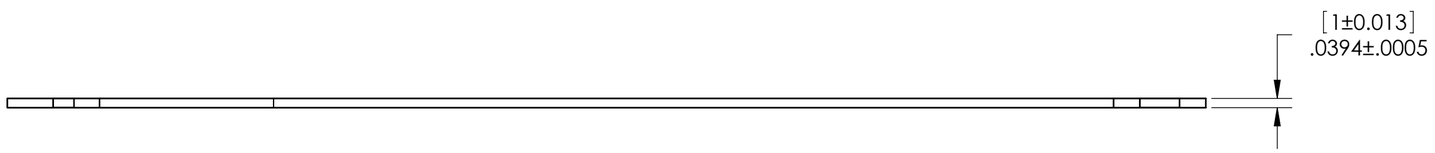
NOTES:
1. INTERPRET DRAWING PER ASME Y14.5-1994.
2. REMOVE ALL SHARP EDGES, R.02 MIN.
3. DO NOT SCALE FROM DRAWING.
4. ALL MACHINING FLUIDS MUST BE FULLY SYNTHETIC, FULLY WATER SOLUBLE AND FREE OF SULFUR, SILICONE, AND CHLORINE.
5. SCRIBE, ENGRAVE, OR MECHANICALLY STAMP (NO INKS OR DYES) DRAWING PART NUMBER, REVISION (AND VARIANT OR "TYPE" IF APPLICABLE) ON NOTED SURFACE OF PART FOLLOWED ON THE NEXT LINE WITH A THREE DIGIT SERIAL NUMBER. SERIAL NUMBERS START AT 500 FOR THE FIRST ARTICLE AND PROCEED CONSECUTIVELY. USE MINIMUM 0.12" HIGH CHARACTERS, UNLESS THE SIZE OF THE PART DICTATES SMALLER CHARACTERS. A VIBRATORY TOOL MAY BE USED. EXAMPLE: DXXXXXXX-VY, TYPE-XX, S/N XXX
6. ALL PARTS SHALL BE MANUFACTURED IN ACCORDANCE WITH LIGO SPECIFICATION E0900023.

REV.	DATE	DCN #	DRAWING TREE #
A	28 MAR 2008	E080113-00	-
B	17 APR 2008	E080169-00	-
C	24 APR 2008	E080179-00	-
v1	28 JUL 2010	E1000255	-



MATERIAL GRAIN DIRECTION



INTERNAL LIGO NOTES:

1. EXCEL SPREADSHEET REF T0900365-v2
2. SHAPE FACTOR FOR UPPER BLADE = 1.54 AND YOUNGS MODULUS USED IS 1.86e11 Pa.
3. LOAD ON UPPER BLADE (FLAT) = 1.75 kg AND UNCOUPLED LOAD = 1.75 kg.
4. PREDICTED UNCOUPLED SUSPENSION FREQUENCY = 2.13 Hz.
5. PREDICTED FIRST BLADE INTERNAL FREQUENCY = 261 Hz.
6. MAXIMUM STRESS = 687 MPa
7. MID TO MID DEFLECTION = 54.6 mm.
8. LENGTH IS 120 mm (130 mm INCLUDING CLAMPING LENGTH), THICKNESS IS 1 mm AND WIDTH IS 18 mm.
9. RADIUS IS 121.5 mm CALCULATED USING BLADE EQUATIONS.
10. IN THE CURVED SKETCH IN SW PART ADD MID TO MID DEFLECTION AND ADJUST RADIUS UNTIL DESIRED LENGTH IS ATTAINED.
11. IN SW PART, BLADE IS DRAWN WITH SHEET METAL AND EXTRUDED VERTICALLY DOWNWARDS.
12. ON SW DRAWING, SOLIDWORKS RADIUS VALUE IS THE VALUE MEASURED DIRECT FROM SW USING THE DIMENSION TOOL.

VIEWS PRIOR TO FORMING

NOTES AND TOLERANCES: (UNLESS OTHERWISE SPECIFIED)

DIMENSIONS ARE IN INCHES [MM]

TOLERANCES:
.XX ± .01
.XXX ± .005

ANGULAR ± 0.5°

MATERIAL MARAGING STEEL C250

FINISH 32 µinch

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY
MASSACHUSETTS INSTITUTE OF TECHNOLOGY

SYSTEM ADVANCED LIGO

SUB-SYSTEM SUS

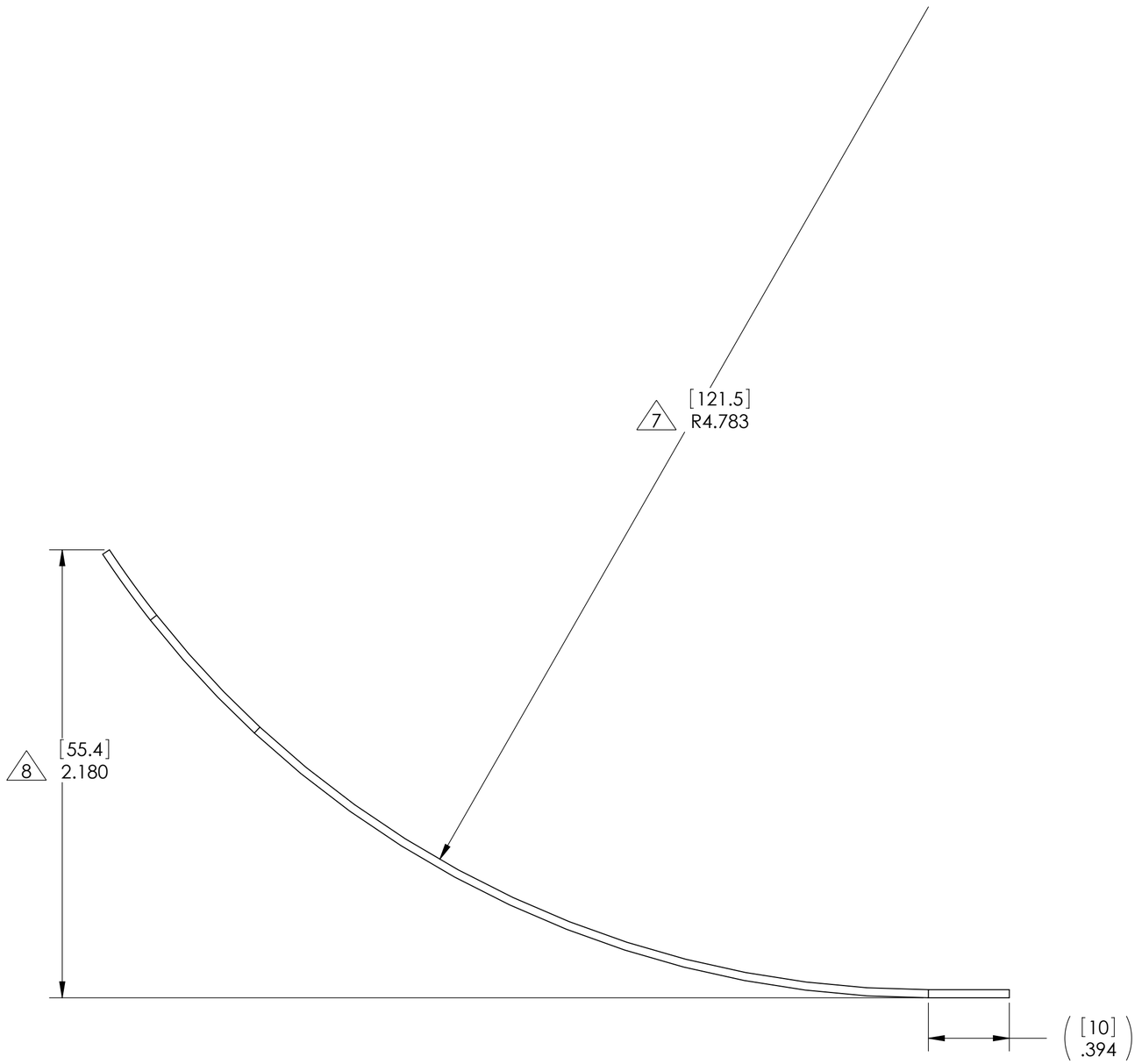
NEXT ASSY OMC: UPPER MASS

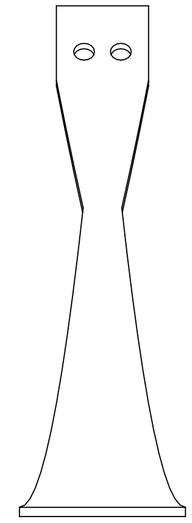
PART NAME OMC LOWER BLADE

DESIGNER	C. TORRIE	JAN 2008	
DRAFTER	C. TORRIE	JAN 2008	
CHECKER	B. KIRSNER	JUL 2008	
APPROVAL			

SIZE C **DWG. NO.** D080019 **REV.** v1

SCALE: 2:1 **PROJECTION:** SHEET 1 OF 2





VIEWS AFTER FORMING AND HEAT TREATMENT

7 THE RADIUS OF THE CURVATURE IS THE INSIDE RADIUS

8 THE OVERALL DEFLECTION IS MEASURED FROM THE BOTTOM OF THE BASE POINT TO THE HIGHEST POINT ON THE TIP

LIGO CALIFORNIA INSTITUTE OF TECHNOLOGY MASSACHUSETTS INSTITUTE OF TECHNOLOGY		
SIZE C	DWG. NO. D080019	REV. V1
SCALE: 2:1	PROJECTION:	SHEET 2 OF 2