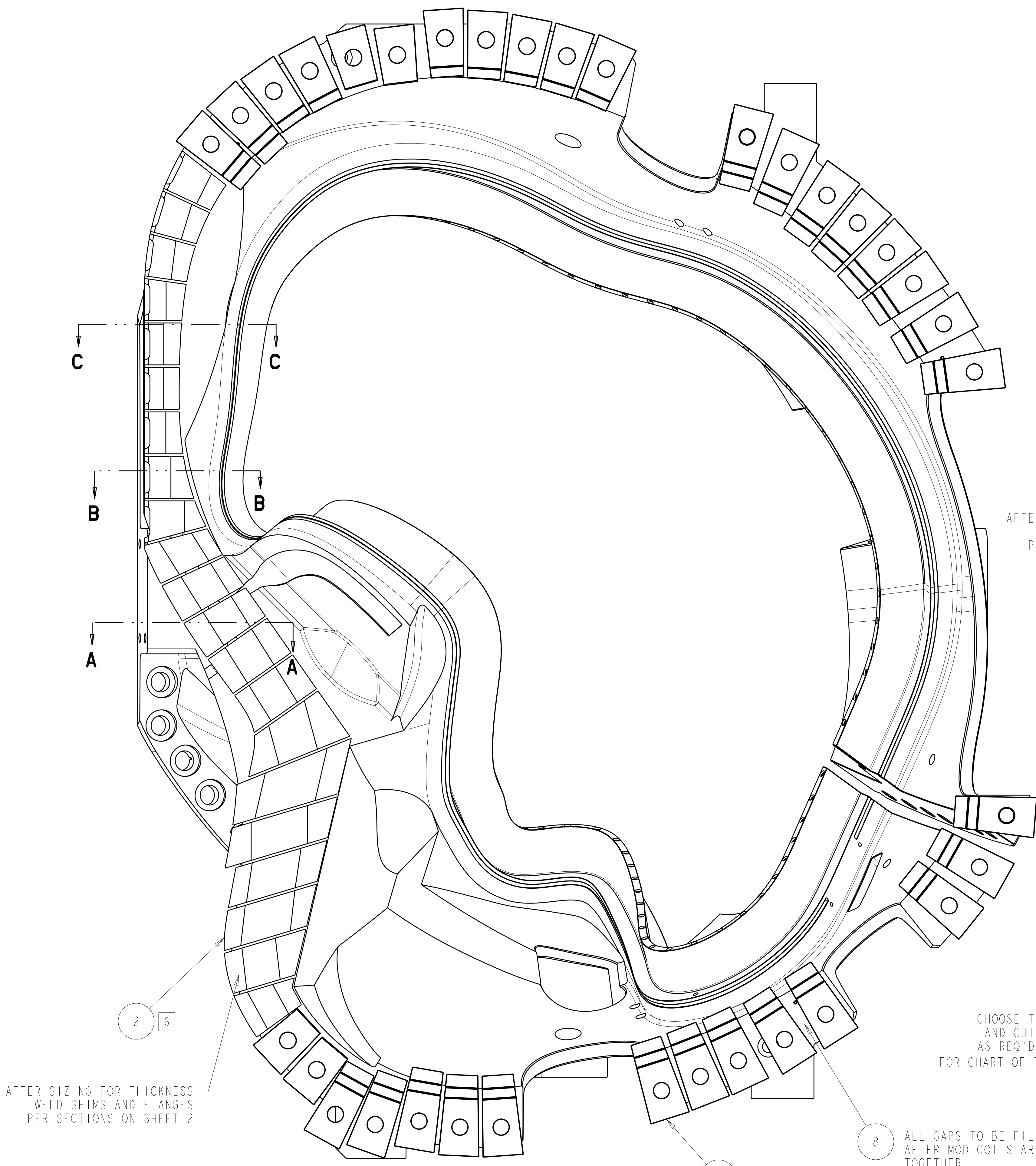
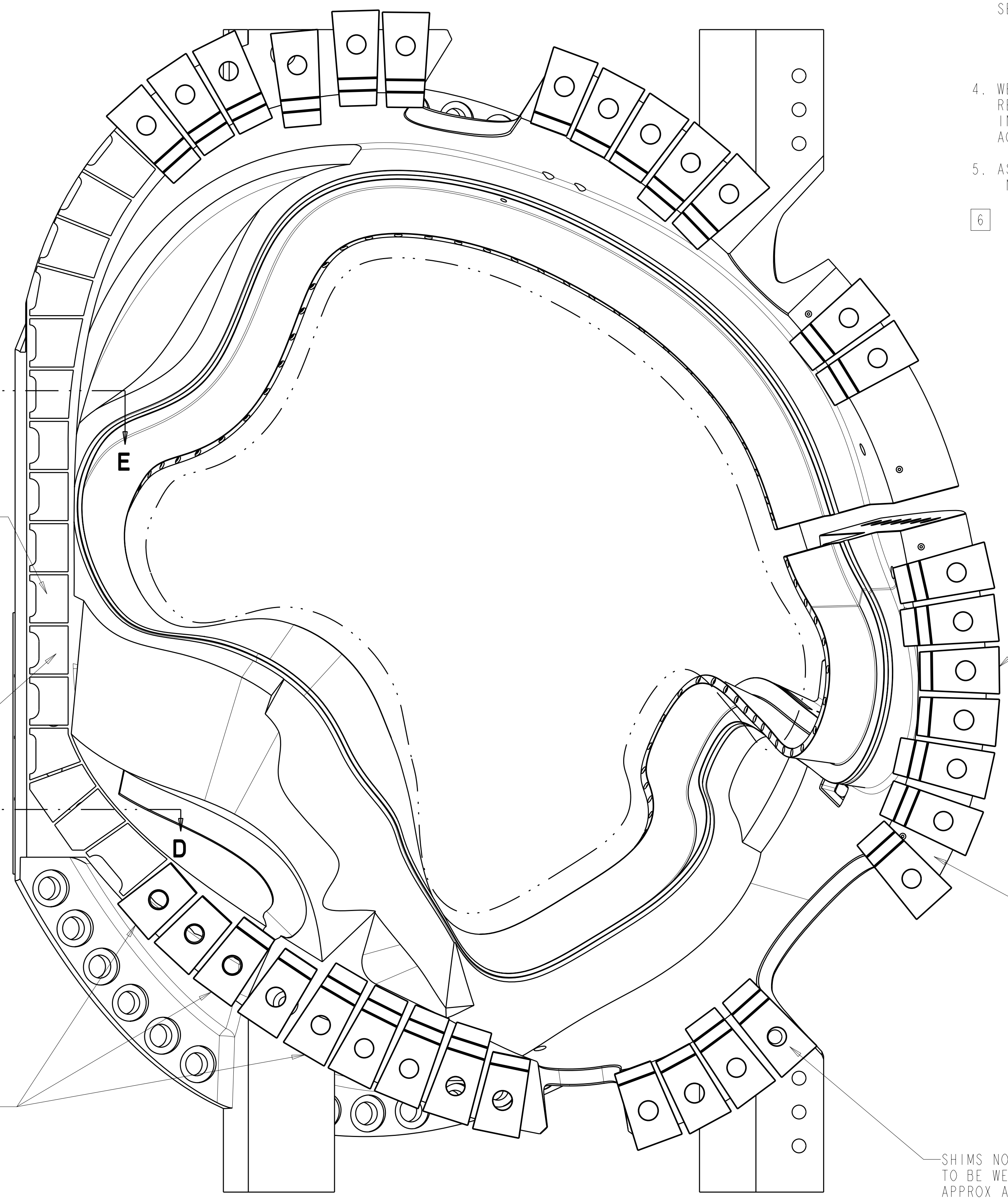


- NOTES
- DRAWING PREPARED IN ACCORDANCE WITH ASME Y14.100-2004.
 - INTERPRET DIMENSIONS AND TOLERANCES PER ASME Y14.5M-1994.
 - DIMENSIONS ARE IN INCHES
 - MAGNETIC PERMEABILITY NOT TO EXCEED 1.02 AS TESTED BY A SEVERN INDICATOR. AVAILABLE FROM:
SEVERN ENGINEERING
AUBURN, ALABAMA 36830
WWW.SEVERNGINEERING.COM
 - WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF PPPL PROCEDURE ENG-037. VISUAL WELD INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH THE ACCEPTANCE CRITERIA OF AWS D1.1 SECTION 6.
 - ASSEMBLE PER THIS DRAWING AND SPECIFICATION NCSX-CSPEC-185-01.
 - SEE SHIM DRAWINGS SE140-040, SE140-052, SE140-053, SE140-054 AND SE140-055 FOR ADDITIONAL INFORMATION.



A-B SHIMS LOOKING AT THE B COIL FLANGE
(A COIL REMOVED)



B-C SHIMS LOOKING AT THE C COIL FLANGE
(B COIL REMOVED)

AFTER SIZING FOR THICKNESS WELD SHIMS AND FLANGES PER SECTIONS ON SHEET 2

CHOOSE THICKNESS SHIM NECESSARY AND CUT TO LENGTH AT CUT LINES AS REQ'D. SEE DRAWING SE140-040 FOR CHART OF THICKNESS AVAILABLE.

ALL GAPS TO BE FILLED WITH F/N 8 AFTER MOD COILS ARE BOLTED TOGETHER

ALL GAPS TO BE FILLED WITH F/N 8 AFTER MOD COILS ARE BOLTED TOGETHER

SHIMS NOT LOCATED ON STUD TO BE WELDED IN PLACE APPROX AS SHOWN. GRIND OFF ALUMINA COATING AS REQ'D.

MODULAR COIL SHIM PLATE LAYOUT
SCALE .18

NOTE: MOD COILS SHOW AS PART ONLY FOR CLARITY SHIMS TO BE INSTALLED ON MOD COIL ASSEMBLIES

REV	DESCRIPTION	BY	DATE	CHK	DEPT	DATE	PE	REQ	DATE	ORNL	DOE	DATE
0	ORIGINAL ISSUE	GM	08/07									

AR	AR	AR										
			-8	FILLER	GREAT STUFF							8
			-7	PIPE 1-1/2 SCH 80 X 1-3/8" LG							ASTM A312	7
			-6	STUD Ø1/2 X 3/8" LG	316L SST						ASTM A276	6
			SE140-055	C-C INBOARD SHIMS								5
			SE140-054	A-A INBOARD SHIMS								4
			SE140-053	B-C INBOARD SHIMS								3
			SE140-052	A-B INBOARD SHIMS								2
			SE140-040	SINGLE HOLE SHIM								1

CAGE CODE	PART OR IDENTIFYING NO	NOMENCLATURE OR DESCRIPTION	MATERIAL	SPECIFICATION	FIND NO

PRELIMINARY
8-23-2007

WELDING ENGINEER
APPROVED G. GETTELFINGER DATE: 07/07

NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, IS MADE AS TO THE ACCURACY, COMPLETENESS OR USEFULNESS OF THE INFORMATION OR STATEMENTS CONTAINED IN THESE DRAWINGS, OR THAT THE USE OR DISCLOSURE OF ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS MAY NOT INFRINGE PRIVATE RIGHTS OF OTHERS. NO LIABILITY IS ASSUMED WITH RESPECT TO THE USE OF, OR FOR DAMAGES RESULTING FROM THE USE OF, ANY INFORMATION, APPARATUS, METHOD OR PROCESS DISCLOSED IN THESE DRAWINGS. DRAWINGS MADE AVAILABLE FOR INFORMATION TO BIDDER ARE NOT TO BE USED FOR OTHER PURPOSES, AND ARE TO BE RETURNED UPON REQUEST OF THE FORWARDING CONTRACTOR.

P THIS DRAWING PRODUCED ON PRO-ENGINEER

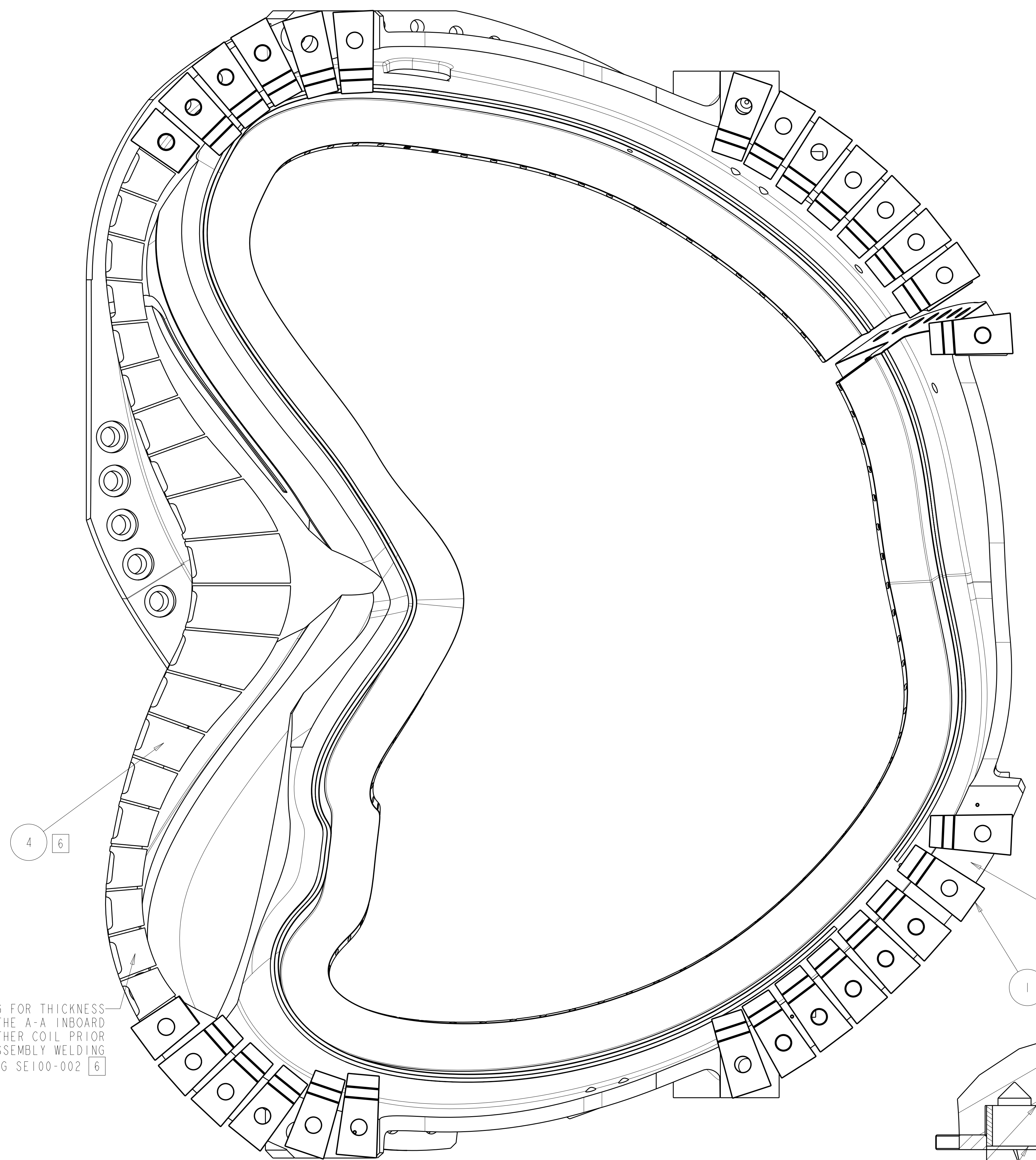
SCALE NOTED
TOLERANCES UNLESS OTHERWISE SPECIFIED
FRACTIONS ±.01
XX DECIMALS ±.01
XXX DECIMALS ±.005
ANGLES ±0'15"
BREAK SHARP EDGES OR MAX
FINISH ±.025 UNLESS OTHERWISE SPECIFIED

DES: D WILLIAMSON 08/2007
DRW: G MCGINNIS 08/2007
CHK: M COLE 08/2007
SECT: :
DEPT: :
PE: :
CR: :
PJ: :
RD: :
PPPL DRFT J SIEGEL 08/2007
VERSION NO. 8+
PLANT ORNL
BLDG 5700
FL 3
SHT 1
OF 2
TYPE S
CLASS U
RELEASE LEVEL WIP
SE140-046
REV 0

Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT contract DE-AC05-00OR22725 UT-BATTELLE, LLC. Oak Ridge, Tennessee
PROJECT NAME: NATIONAL COMPACT STELLARATOR EXPERIMENT
MODULAR COIL SHIM PLATE LAYOUT

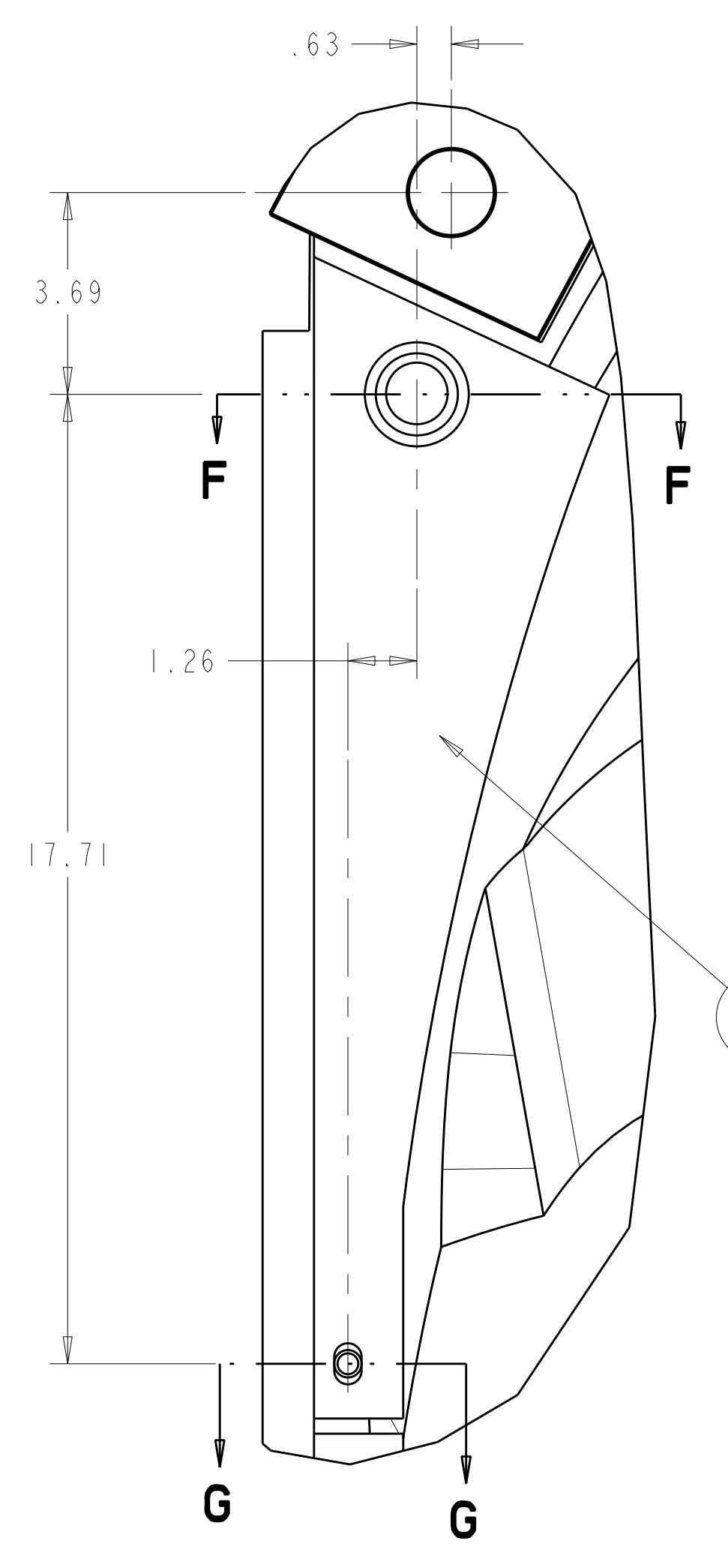
SE140-046

A



A-A SHIMS LOOKING AT THE A COIL FLANGE
(ONE A COIL REMOVED)

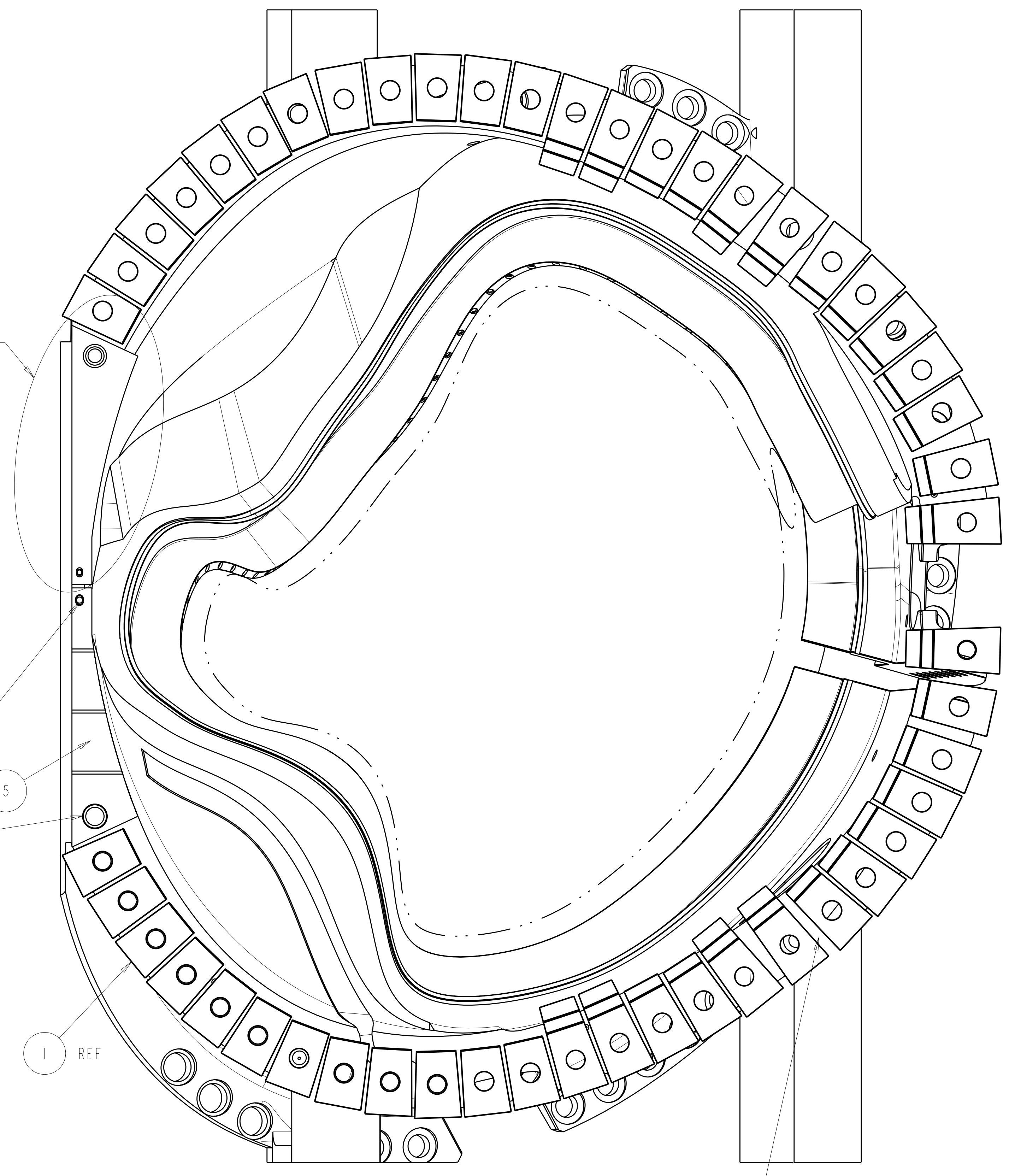
AFTER SIZING FOR THICKNESS
TACK WELD THE A-A INBOARD
SHIMS TO EITHER COIL PRIOR
TO FINAL ASSEMBLY WELDING
SEE DRAWING SE100-002



DETAIL A
SCALE 0.38

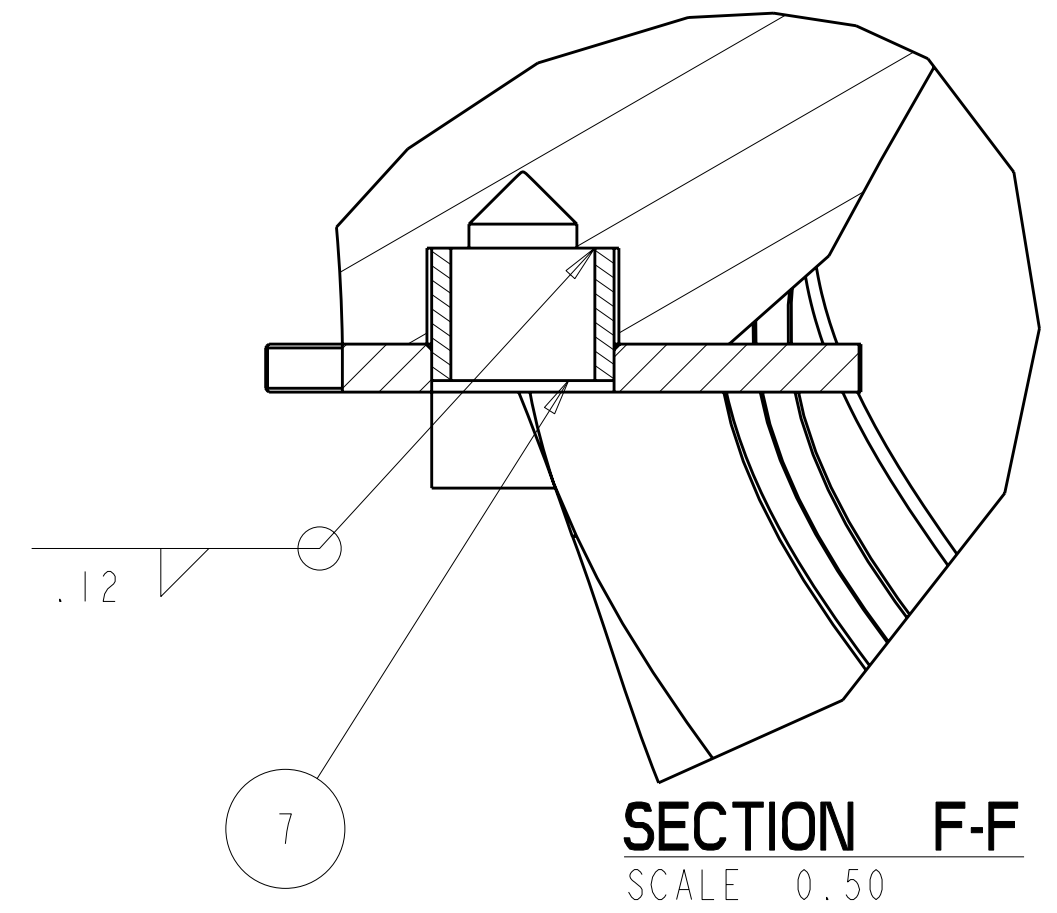
AFTER SIZING FOR THICKNESS
PRESS ALUMINA COATED SIDE
OF SHIM, F/N 5, ONTO 2 LOCATORS,
F/N 6 & 7, ON BOTH C COILS
DURING FINAL MACHINE ASSEMBLY
SEE DRAWING SE100-001

ALL GAPS TO BE FILLED WITH F/N 8
AFTER MOD COILS ARE BOLTED
TOGETHER

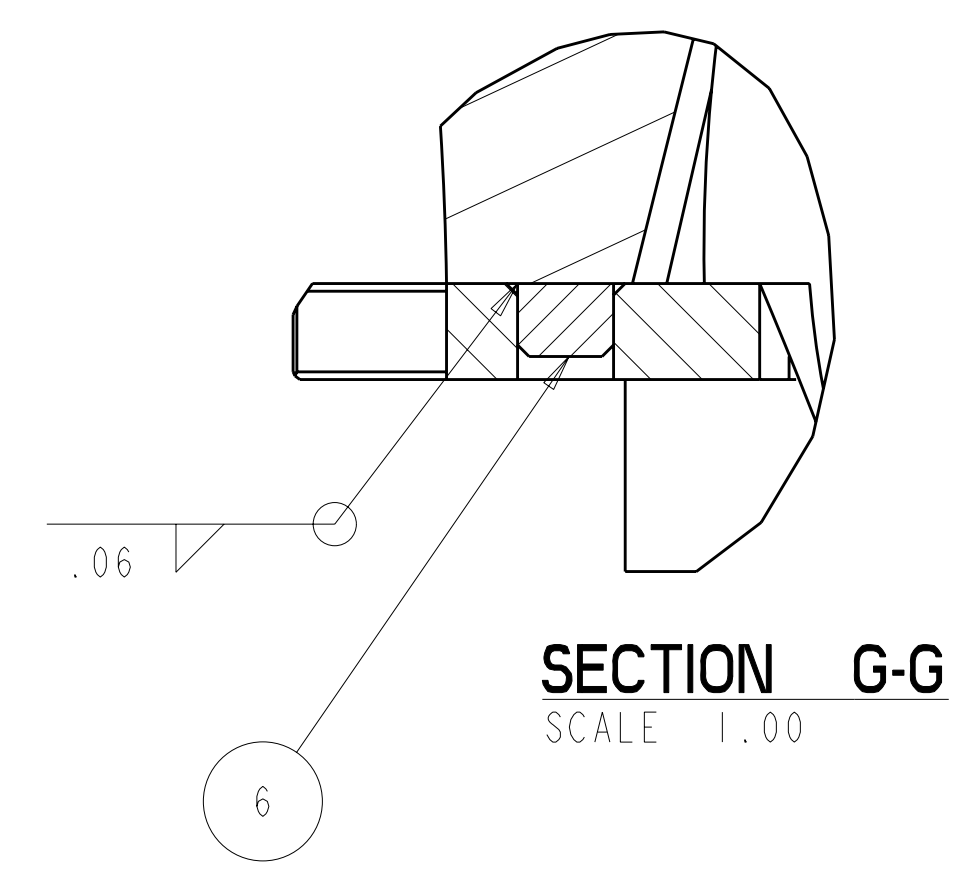


C-C SHIMS LOOKING AT THE C COIL FLANGE
(ONE C COIL REMOVED)

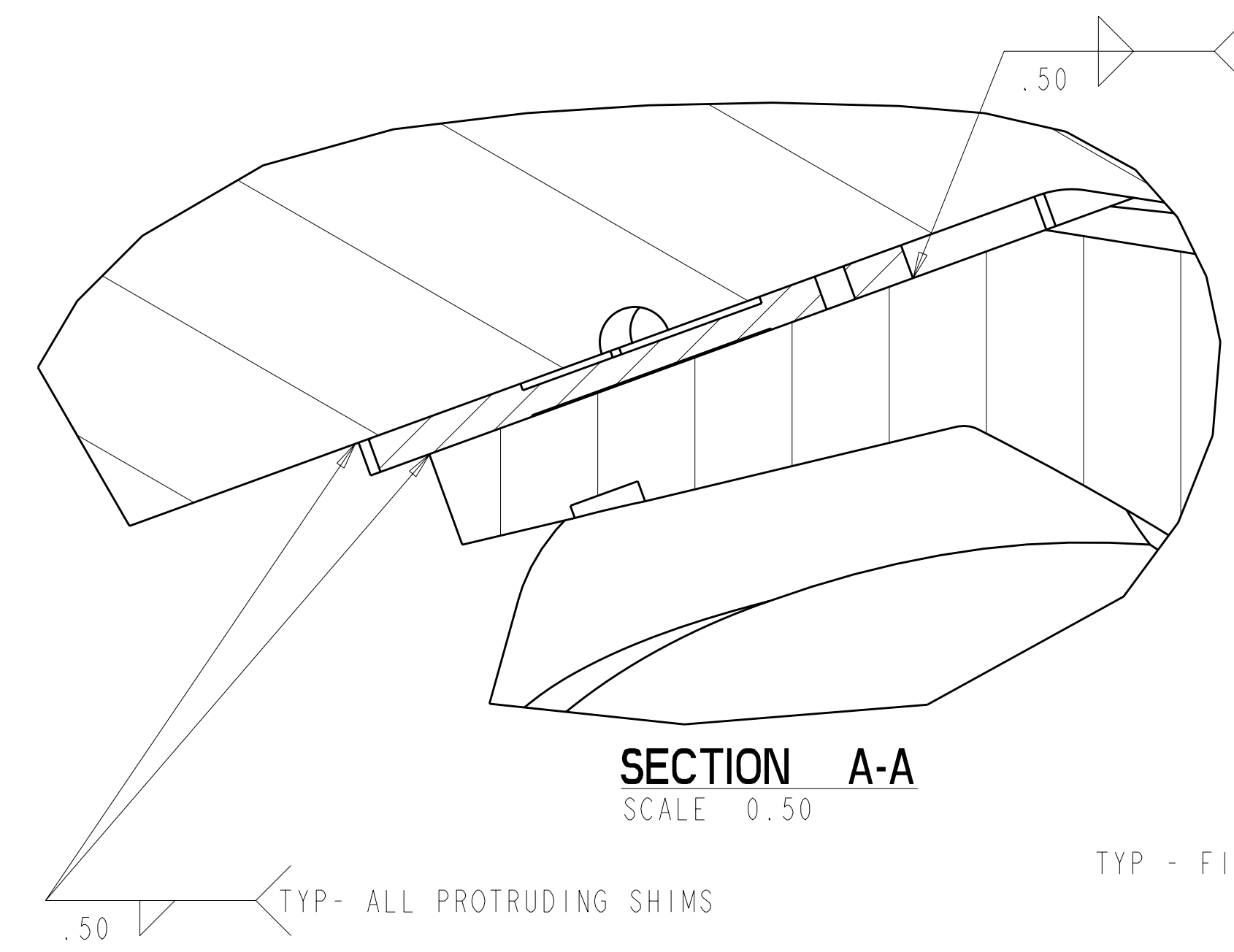
ALL GAPS TO BE FILLED WITH F/N 8
AFTER MOD COILS ARE BOLTED
TOGETHER



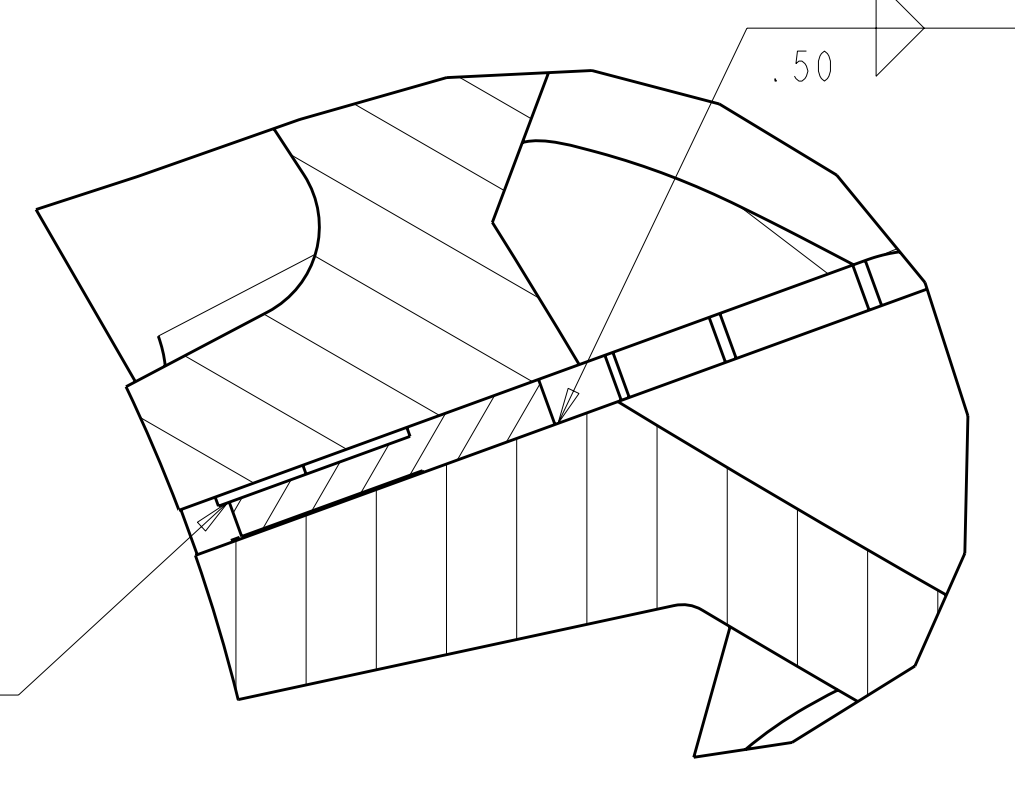
SECTION F-F
SCALE 0.50



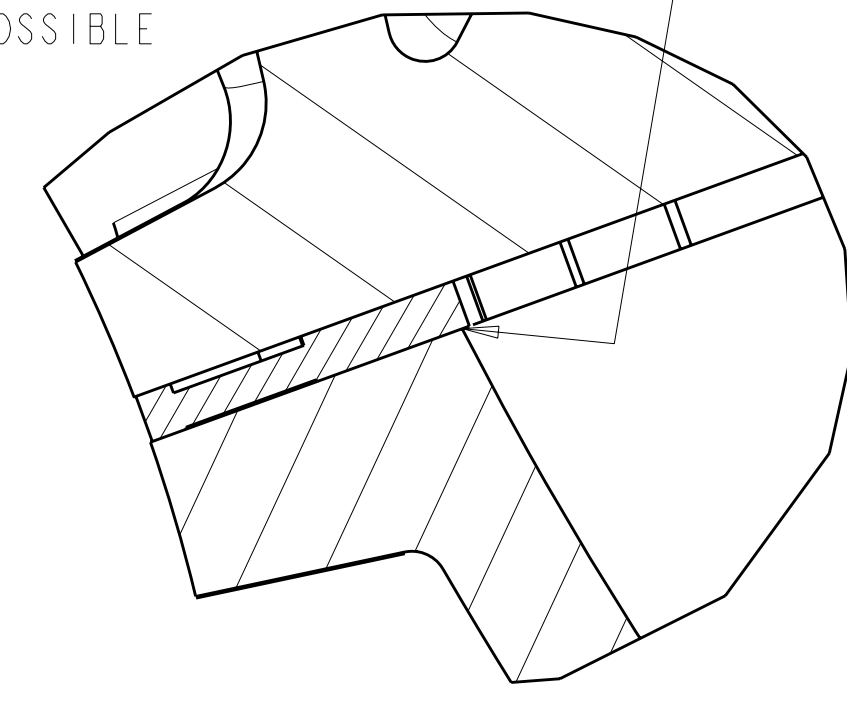
SECTION G-G
SCALE 1.00



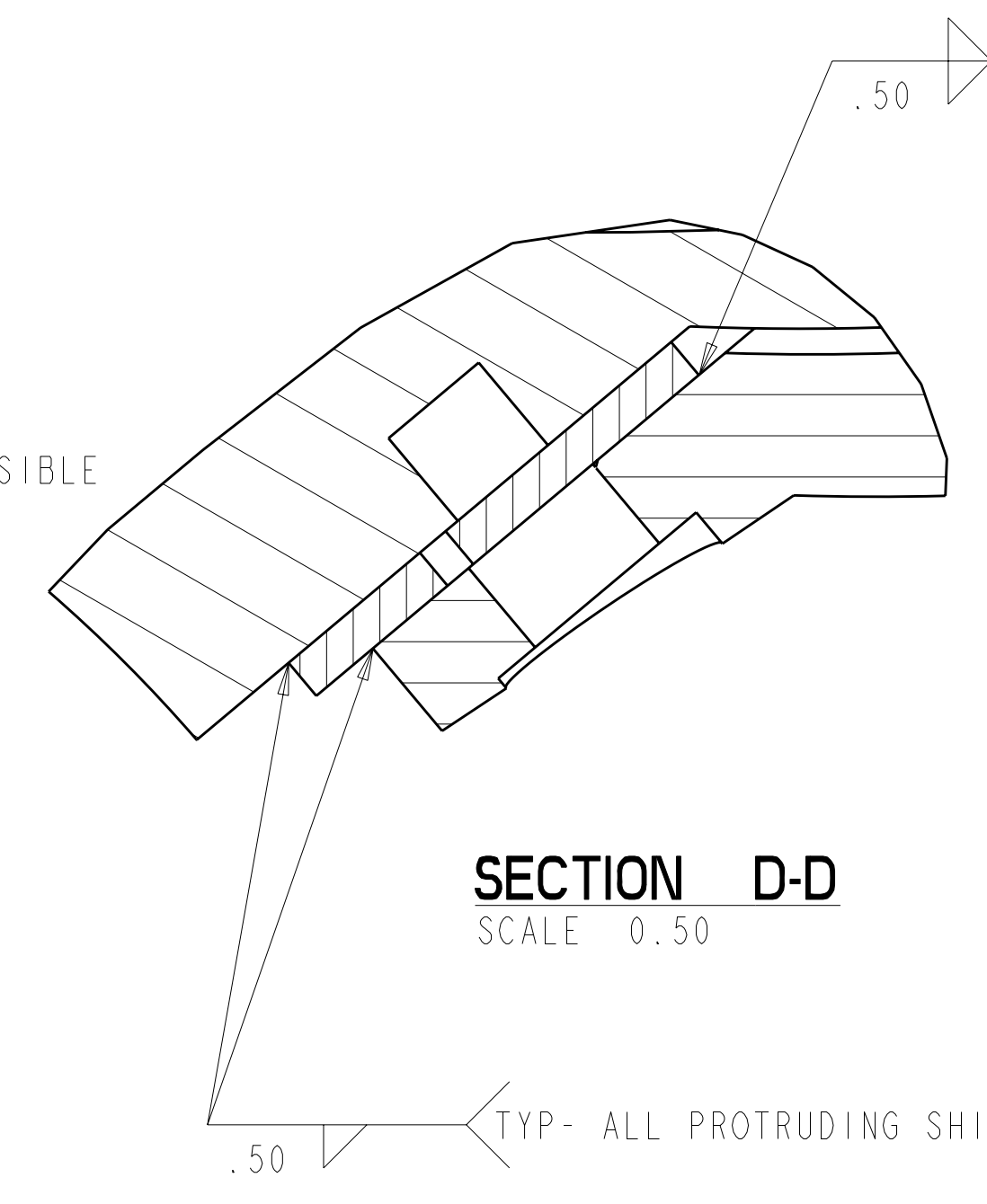
SECTION A-A
SCALE 0.50



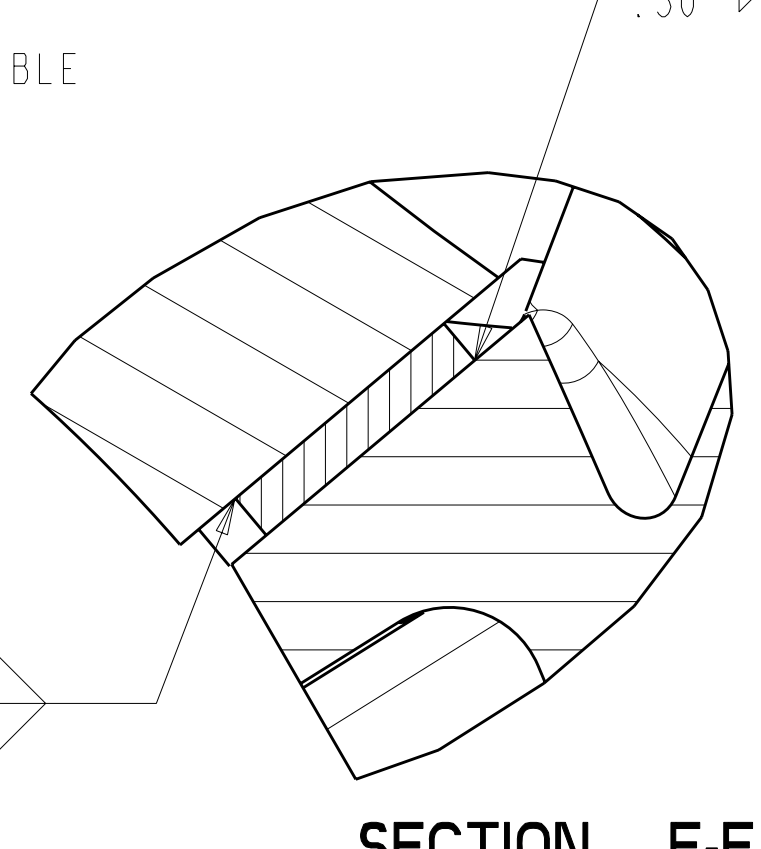
SECTION B-B
SCALE 0.50



SECTION C-C
SCALE 0.50



SECTION D-D
SCALE 0.50



SECTION E-E
SCALE 0.50

SEE SHEET 1 NOTE 3 FOR WELDING SPECIFICATION

TYP - FILL PLUG

TYP - WHEREVER POSSIBLE

TYP - WHEREVER POSSIBLE

TYP - WHEREVER POSSIBLE

TYP - FILL PLUG

TYP - WHEREVER POSSIBLE

TYP - ALL PROTRUDING SHIMS

PRELIMINARY
8-23-2007

Oak Ridge National Laboratory managed for the DEPARTMENT OF ENERGY under U.S. GOVERNMENT CONTRACT DE-AC05-00OR22725 UT-BATTELLE, LLC, Oak Ridge, Tennessee						
PROJECT NAME NATIONAL COMPACT STELLARATOR EXPERIMENT						
TITLE MODULAR COIL SHIM PLATE LAYOUT						
VERSION NO. 8+	PLANT ORNL	BLDG 5700	FL 3	SHT OF 2	TYPE S	CLASS U
RELEASE LEVEL WIP		SE140-046			REV 0	