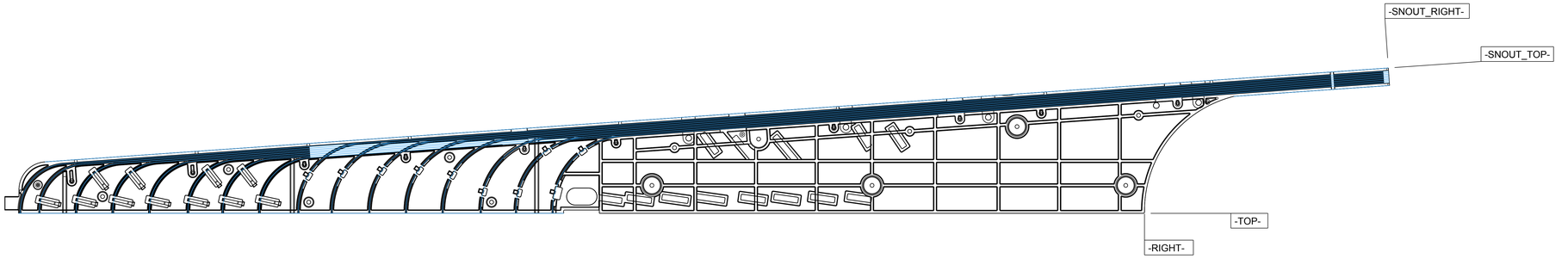
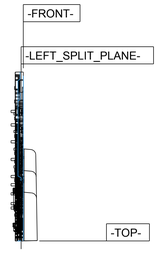
REV	DESCRIPTION	DATE





NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	02-Jun-11
.X	±0.1	DRAWN BY	T. Chase & J. Legatt	02-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES	±0.5	USED ON: NOvA manifolds		

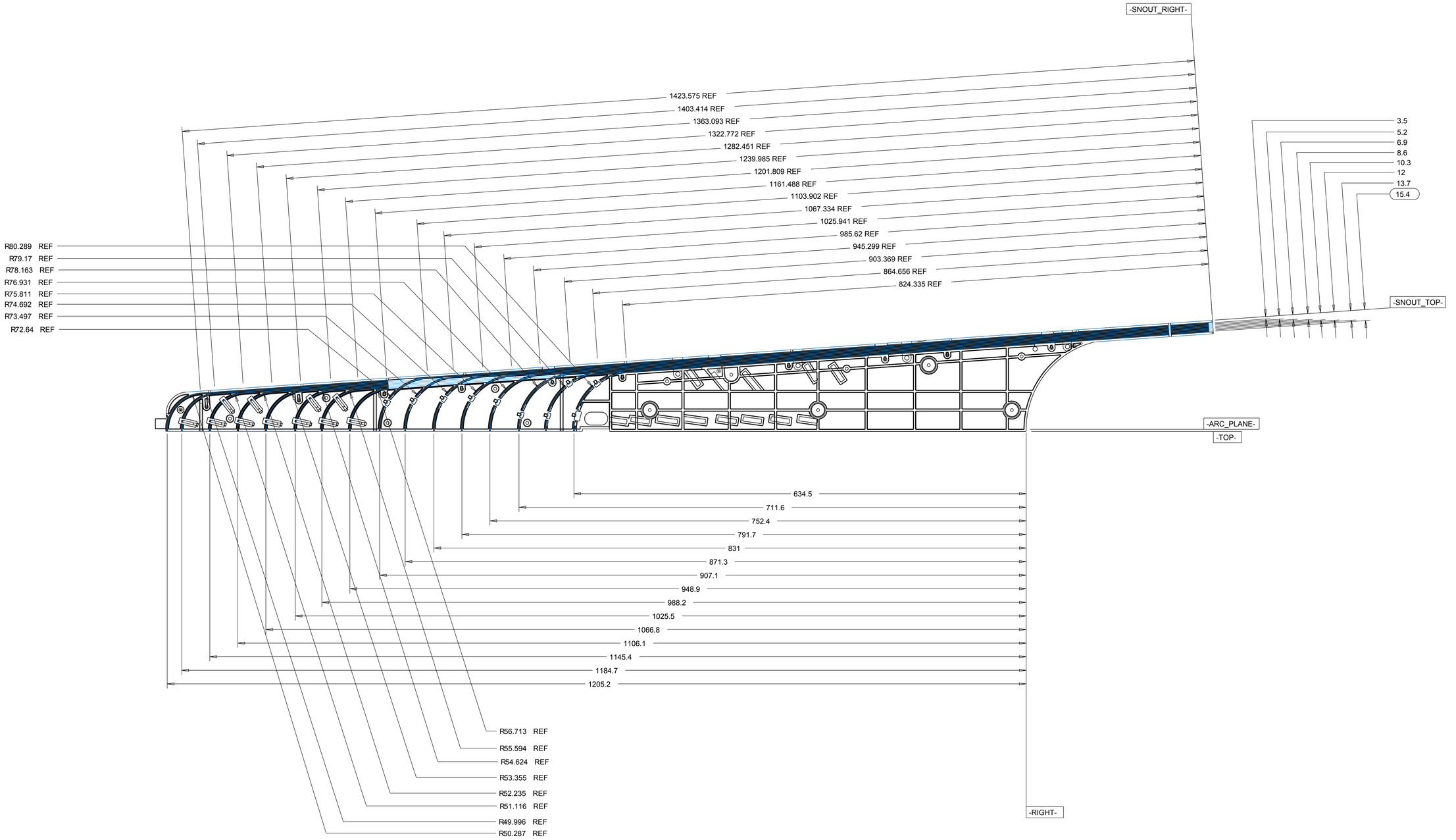
NOvA Experiment (Fermilab E929)

UNIVERSITY OF MINNESOTA

Far Detector Top Raceway

	Model Type:	Model File Name:	Drawing File Name:	
	PART	FD_4_RACEWAY_TOP	FD_4_RACEWAY_TOP	
	Scale: 0.500:1	Drawing Number	Revision	Sheet: 1 of 12
Finish	All dimensions are in mm unless specified otherwise			

REV	DESCRIPTION	DATE



NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	02-Jun-11
.X	±0.1	DRAWN BY	T. Chase & J. Legatt	02-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES	±0.5	USED ON: NOvA manifolds		

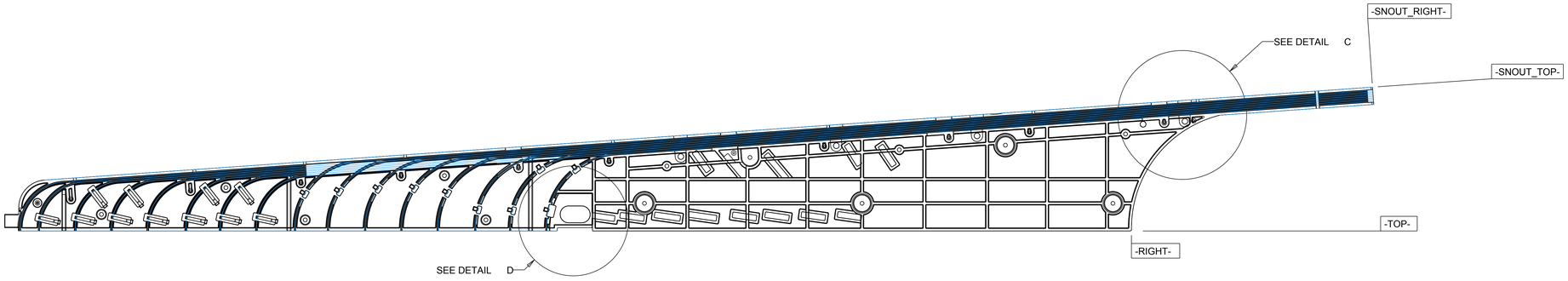
NOvA Experiment (Fermilab E929)

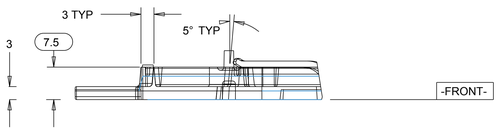
UNIVERSITY OF MINNESOTA

Far Detector Top Raceway

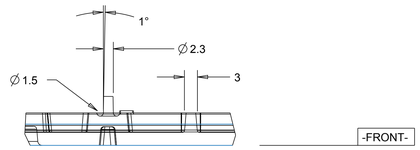
	Model Type:	Model File Name:	Drawing File Name
	PART	FD_4_RACEWAY_TOP	FD_4_RACEWAY_TOP
	Scale	Drawing Number	Revision / Sheet
	0.500:1		2 of 12
Finish	All dimensions are in mm unless specified otherwise		

REV	DESCRIPTION	DATE

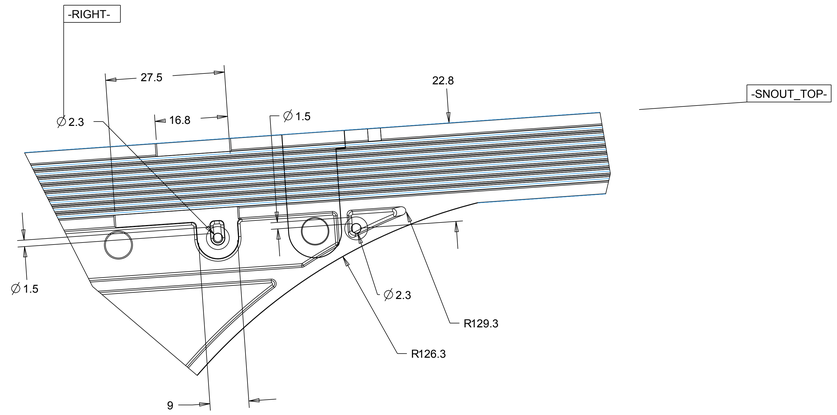




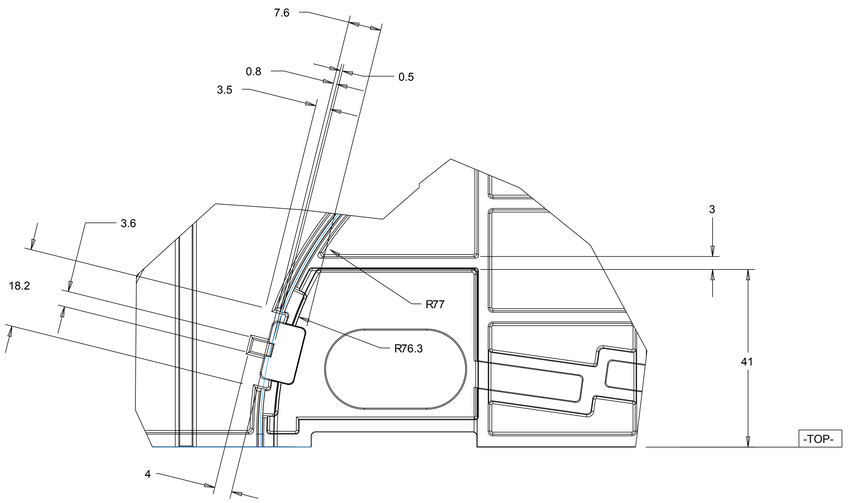
DETAIL A
SCALE 2.000



DETAIL B
SCALE 2.000



DETAIL C
SCALE 2.000



DETAIL D
SCALE 2.000

NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	02-Jun-11
.X	±0.1	DRAWN BY	T. Chase & J. Legatt	02-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES ±0.5		USED ON: NOvA manifolds		

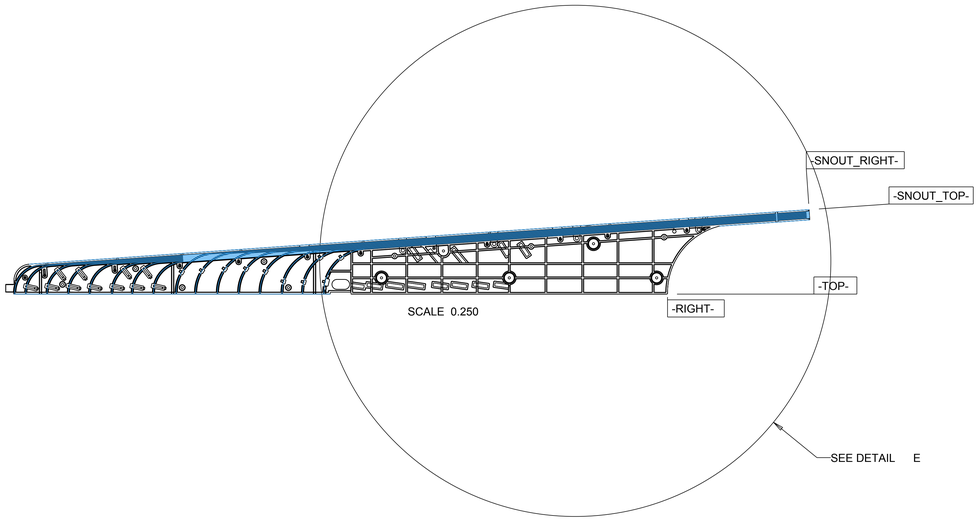
NOvA Experiment (Fermilab E929)

UNIVERSITY OF MINNESOTA

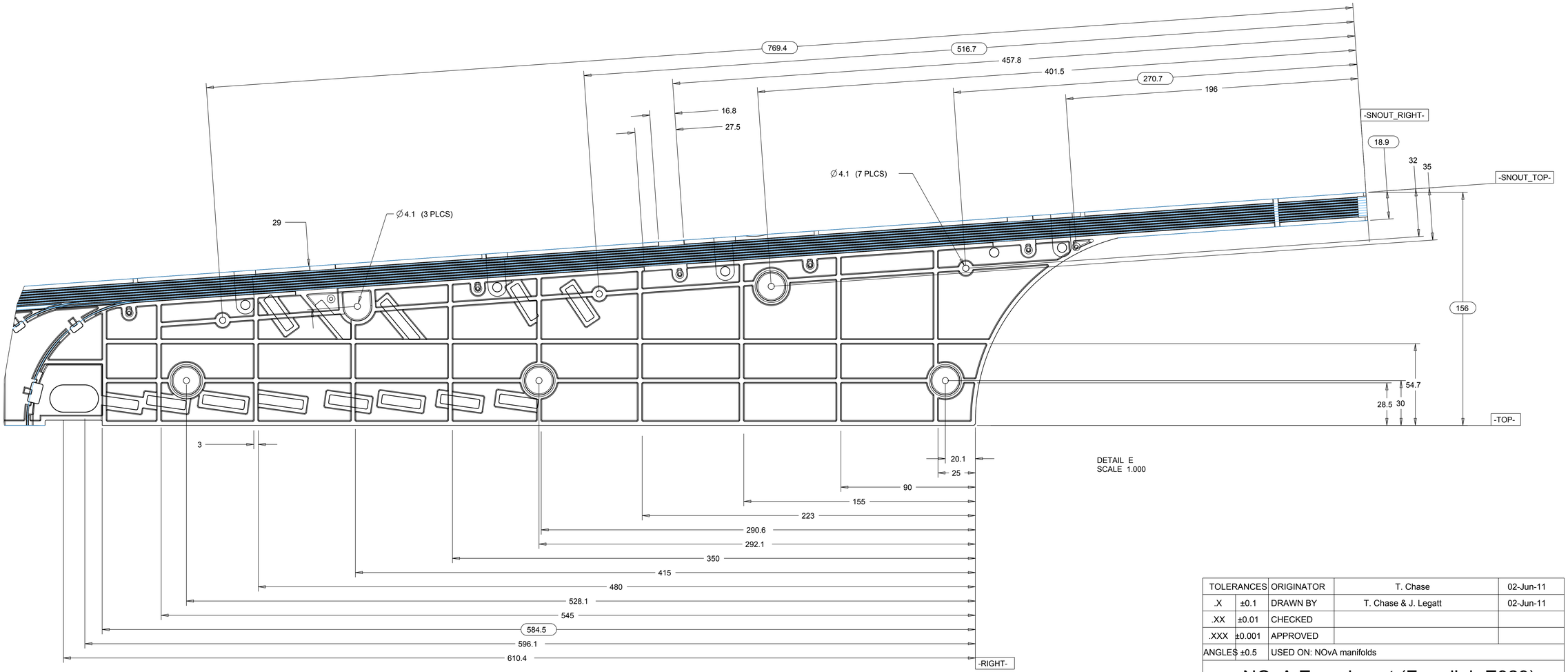
Far Detector Top Raceway

	Model Type: PART	Model File Name: FD_4_RACEWAY_TOP	Drawing File Name: FD_4_RACEWAY_TOP
	Scale: 0.500:1	Drawing Number	Revision / Sheet: 3 of 12
Finish	All dimensions are in mm unless specified otherwise		

REV	DESCRIPTION	DATE



SCALE 0.250



DETAIL E
SCALE 1.000

NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	02-Jun-11
.X	±0.1	DRAWN BY	T. Chase & J. Legatt	02-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES	±0.5	USED ON: NOvA manifolds		

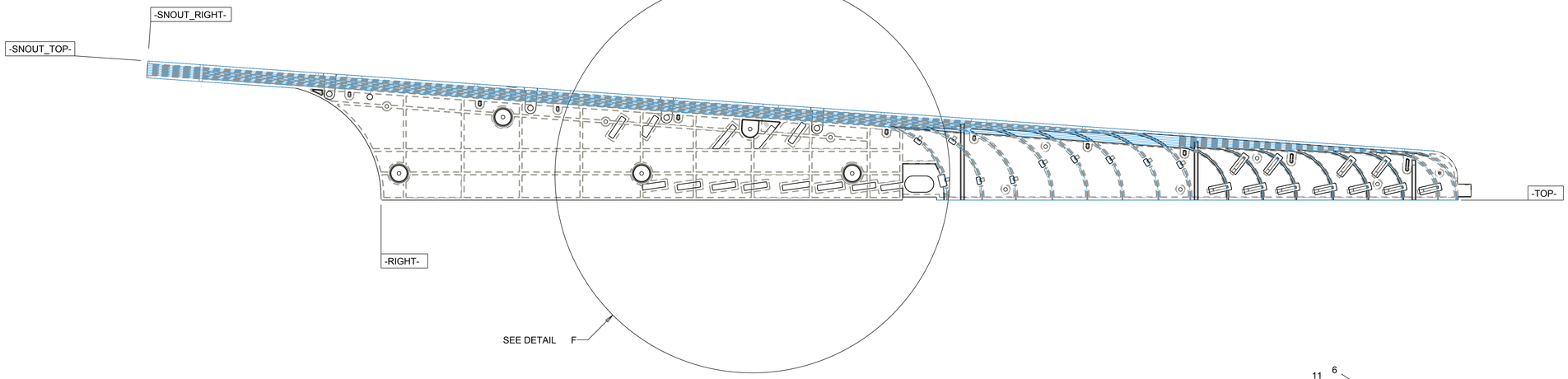
NOvA Experiment (Fermilab E929)

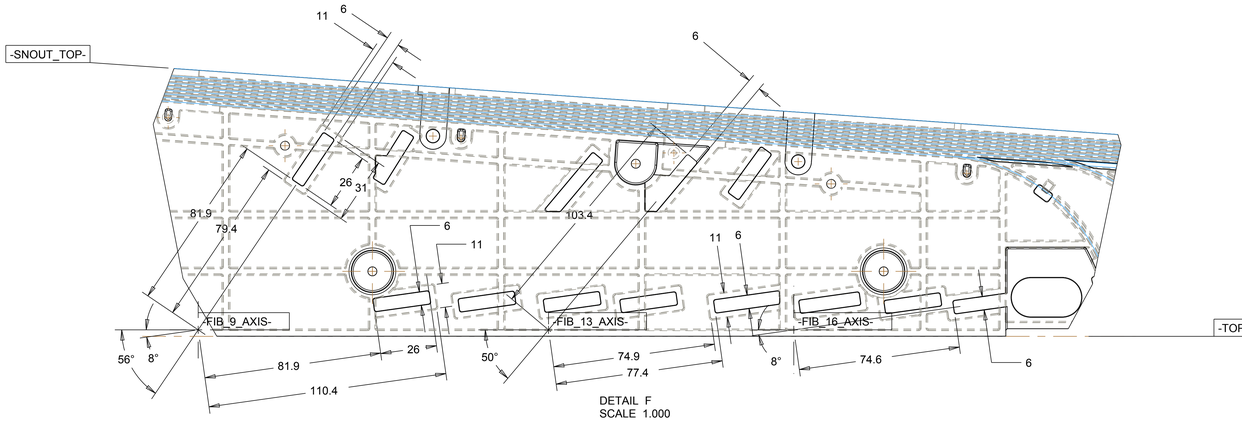
UNIVERSITY OF MINNESOTA

Far Detector Top Raceway

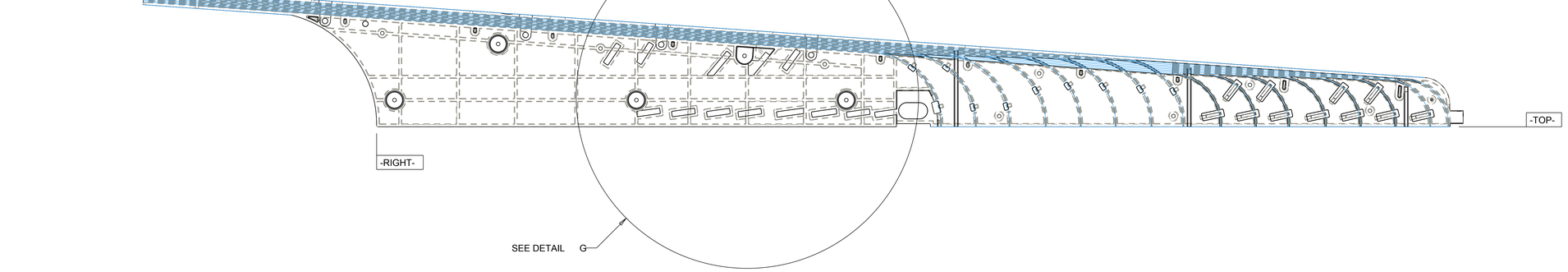
	Model Type:	Model File Name:	Drawing File Name
	PART	FD_4_RACEWAY_TOP	FD_4_RACEWAY_TOP
	Scale	Drawing Number	Revision / Sheet
	0.500:1		4 of 12
Finish	All dimensions are in mm unless specified otherwise		

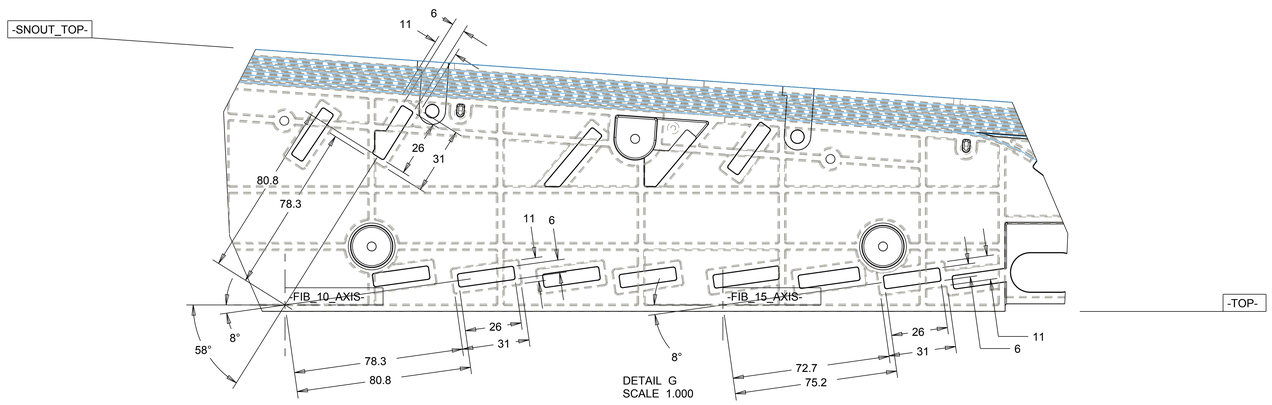
REV	DESCRIPTION	DATE





DETAIL F
SCALE 1.000





DETAIL G
SCALE 1.000

NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	02-Jun-11
.X	±0.1	DRAWN BY	T. Chase & J. Legatt	02-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES	±0.5	USED ON: NOva manifolds		

NOvA Experiment (Fermilab E929)

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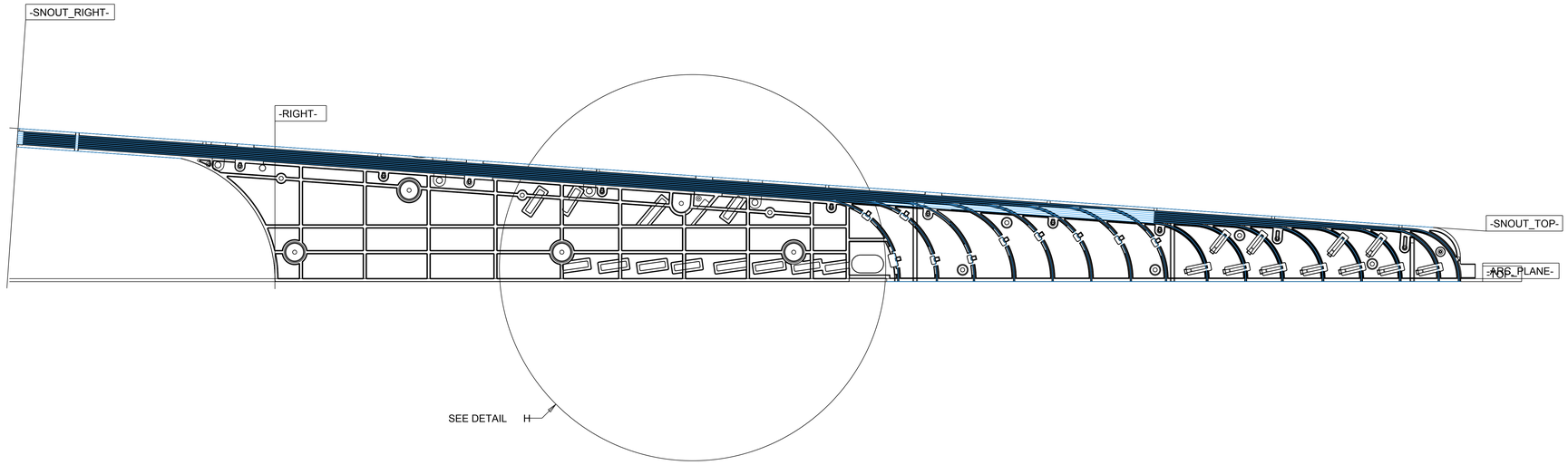
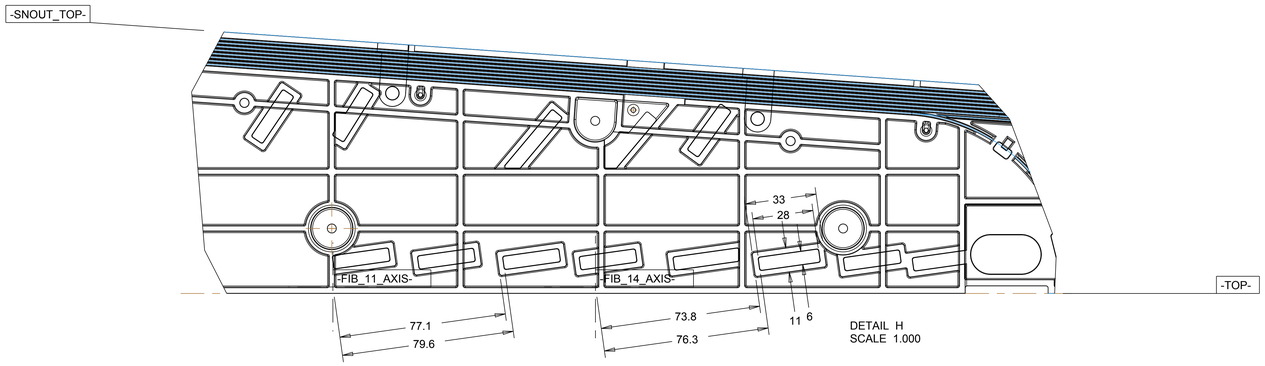
Far Detector Top Raceway

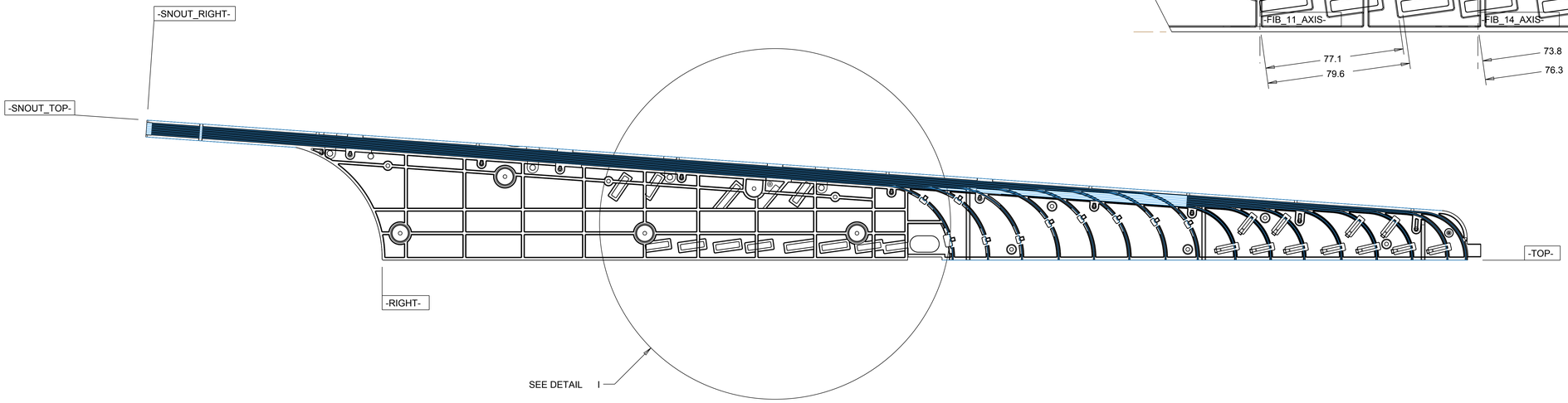
Finish	Model Type: PART	Model File Name: FD_4_RACEWAY_TOP	Drawing File Name: FD_4_RACEWAY_TOP
	Scale: 0.500:1	Drawing Number	Revision / Sheet: 5 of 12
	All dimensions are in mm unless specified otherwise		

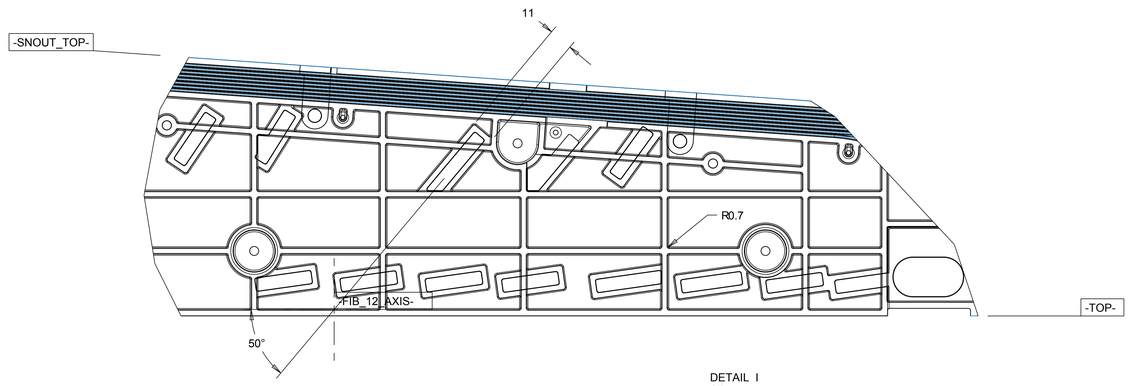
REV	DESCRIPTION	DATE





DETAIL H
SCALE 1.000





DETAIL I
SCALE 1.000

NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	07-Jun-11
.X	±0.1	DRAWN BY	T. Chase & J. Legatt	07-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES	±0.5	USED ON: NOva manifolds		

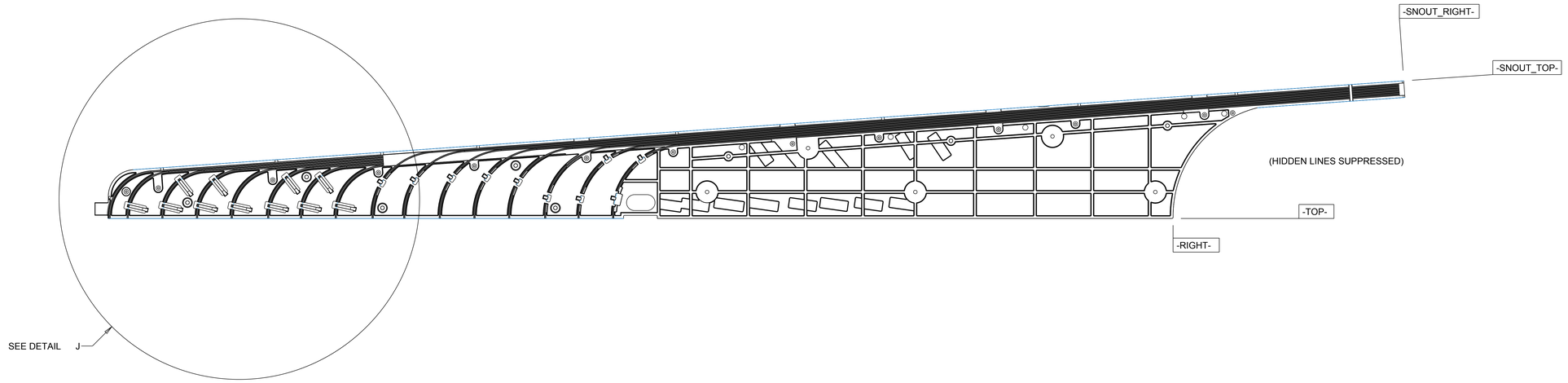
NOvA Experiment (Fermilab E929)

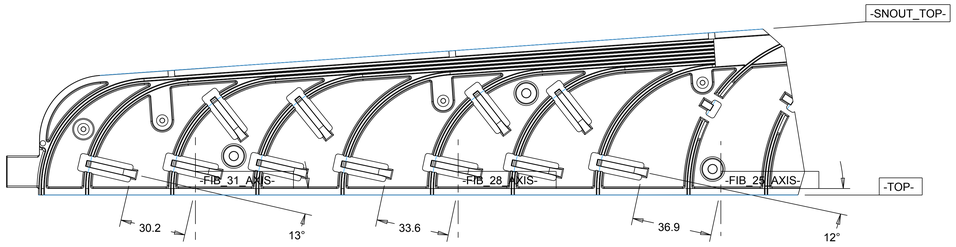
UNIVERSITY OF MINNESOTA

Far Detector Top Raceway

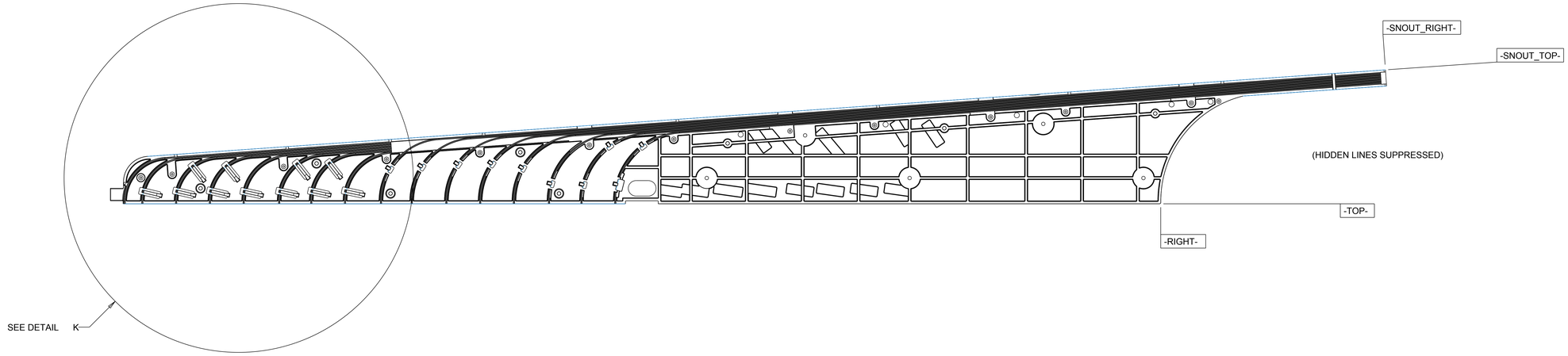
Finish	Model Type: PART	Model File Name: FD_4_RACEWAY_TOP	Drawing File Name: FD_4_RACEWAY_TOP
	Scale: 0.500:1	Drawing Number	Revision / Sheet: 6 of 12
	All dimensions are in mm unless specified otherwise		

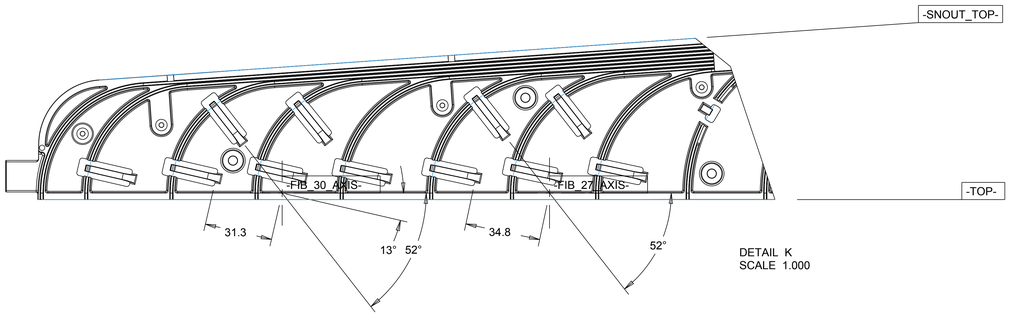
REV	DESCRIPTION	DATE





DETAIL J
SCALE 1.000





DETAIL K
SCALE 1.000

NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	16-Jun-11
.X	±0.1	DRAWN BY	T. Chase & J. Legatt	16-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES ±0.5		USED ON: NOvA manifolds		

NOvA Experiment (Fermilab E929)

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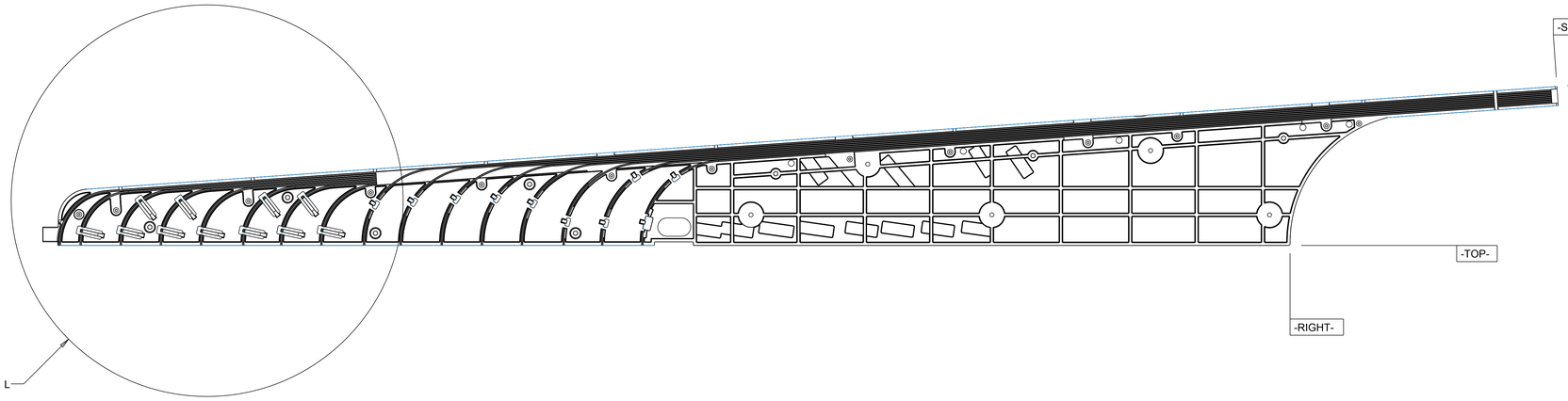
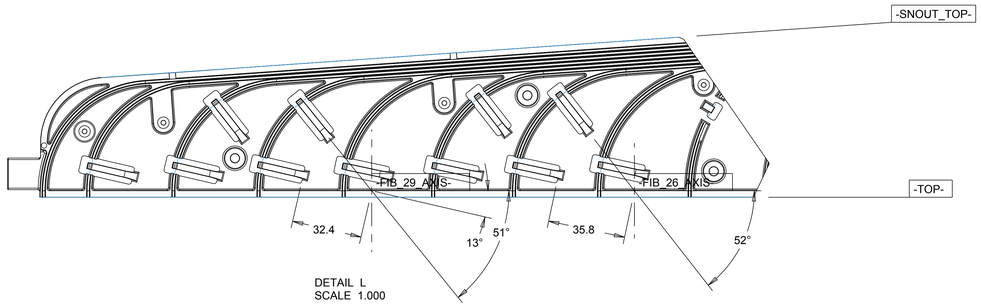
Far Detector Top Raceway

Finish	Model Type: PART	Model File Name: FD_4_RACEWAY_TOP	Drawing File Name: FD_4_RACEWAY_TOP
	Scale: 0.500:1	Drawing Number	Revision / Sheet: 7 of 12
	All dimensions are in mm unless specified otherwise		

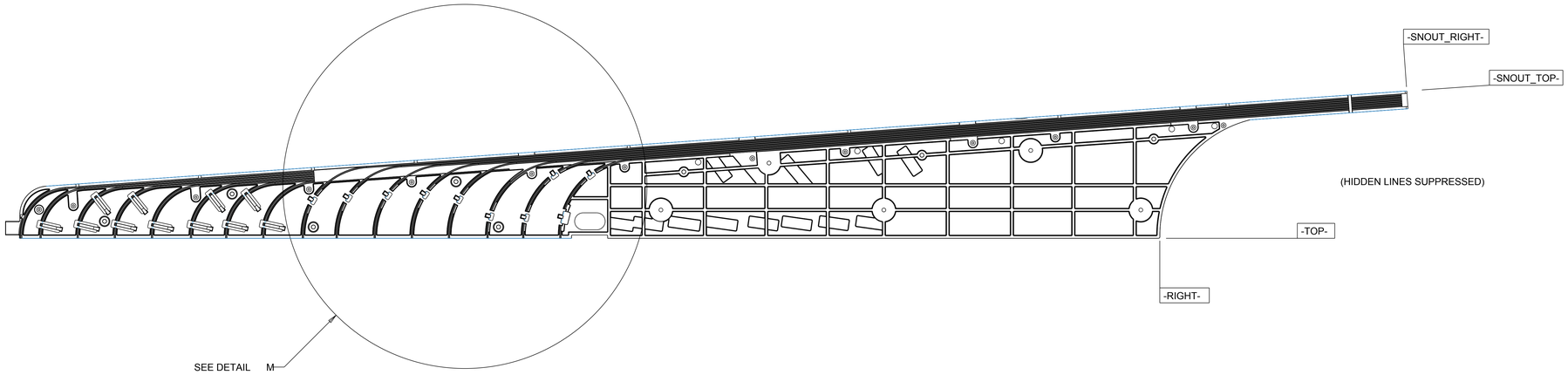
REV	DESCRIPTION	DATE



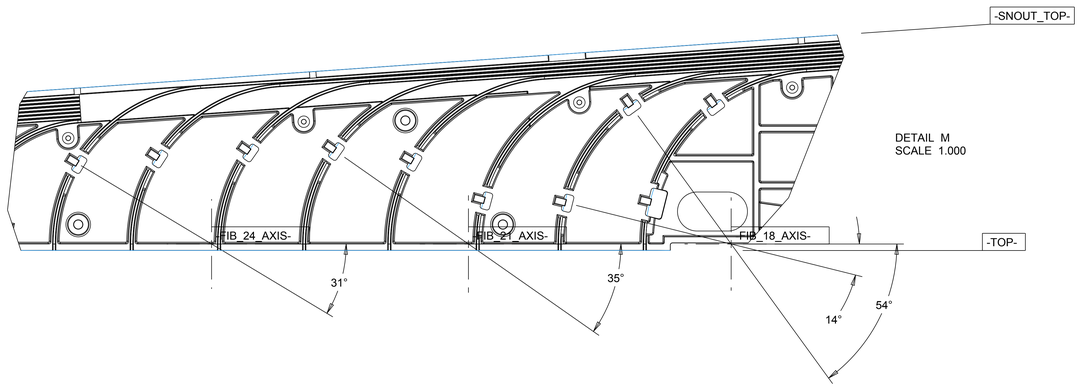
(HIDDEN LINES SUPPRESSED)



DETAIL L
SCALE 1.000



(HIDDEN LINES SUPPRESSED)



DETAIL M
SCALE 1.000

NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	16-Jun-11
.X	±0.1	DRAWN BY	T, Chase & J. Legatt	16-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES	±0.5	USED ON: NOvA manifolds		

NOvA Experiment (Fermilab E929)

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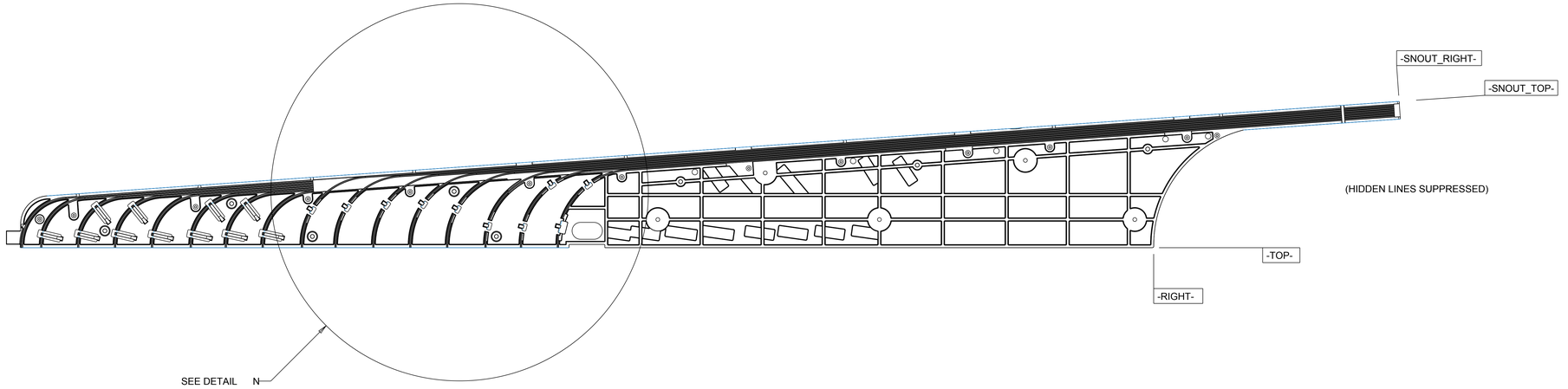
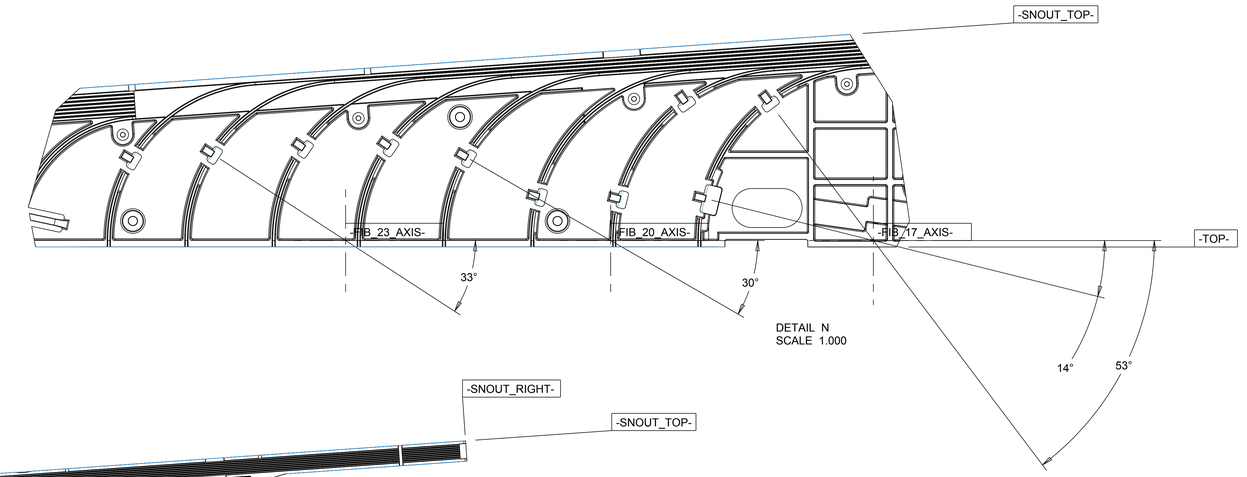
Far Detector Top Raceway

	Model Type:	Model File Name:	Drawing File Name
	PART	FD_4_RACEWAY_TOP	FD_4_RACEWAY_TOP
	Scale	Drawing Number	Revision / Sheet
	0.500:1		8 of 12
Finish	All dimensions are in MM unless specified otherwise		

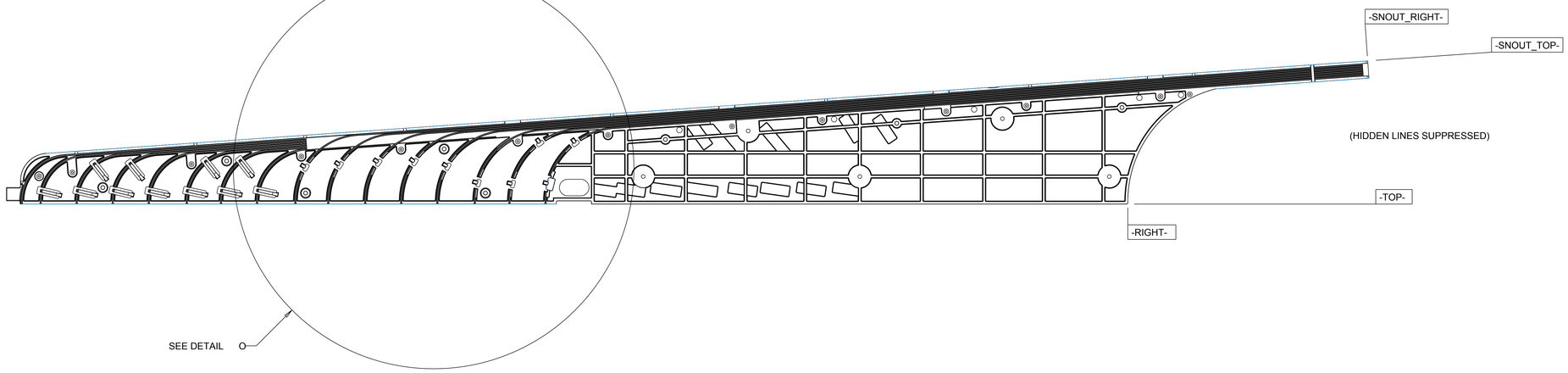
REV	DESCRIPTION	DATE



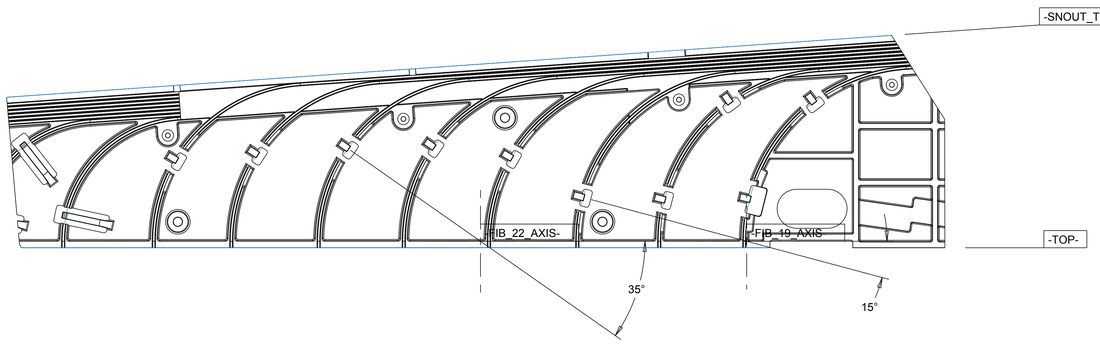
(HIDDEN LINES SUPPRESSED)



DETAIL N
SCALE 1.000



(HIDDEN LINES SUPPRESSED)



DETAIL O
SCALE 1.000

NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	16-Jun-11
.X	±0.1	DRAWN BY	T. Chase & J. Legatt	16-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES	±0.5	USED ON: NOvA manifolds		

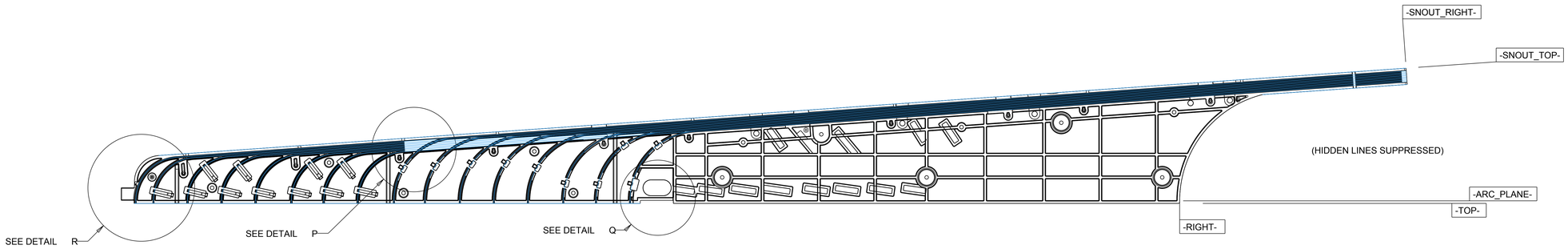
NOvA Experiment (Fermilab E929)

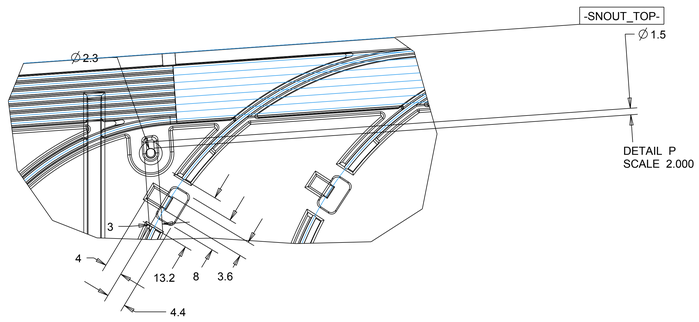
UNIVERSITY OF MINNESOTA

Far Detector Top Raceway

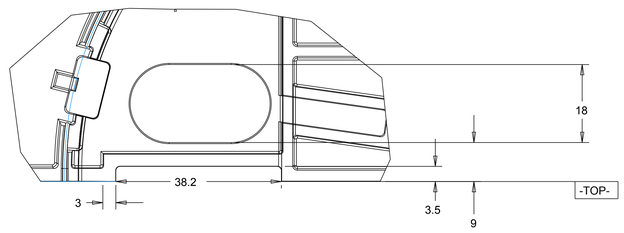
	Model Type:	Model File Name:	Drawing File Name
	PART	FD_4_RACEWAY_TOP	FD_4_RACEWAY_TOP
	Scale	Drawing Number	Revision / Sheet
	0.500:1		9 of 12
Finish	All dimensions are in mm unless specified otherwise		

REV	DESCRIPTION	DATE

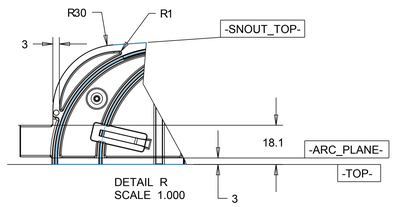




DETAIL P
SCALE 2.000



DETAIL Q
SCALE 2.000



DETAIL R
SCALE 1.000

NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	02-Jun-11
.X	±0.1	DRAWN BY	T. Chase & J. Legatt	02-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES ±0.5		USED ON: NOvA manifolds		

NOvA Experiment (Fermilab E929)

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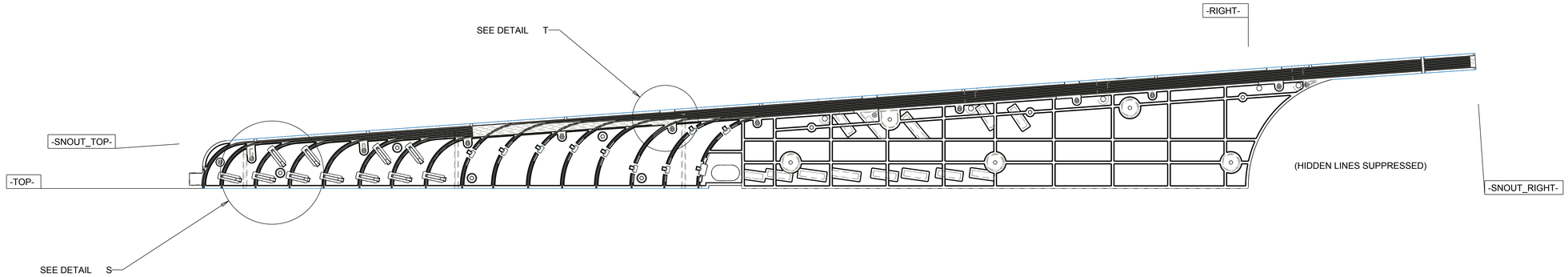
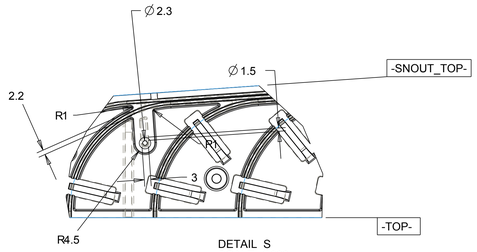
Far Detector Top Raceway

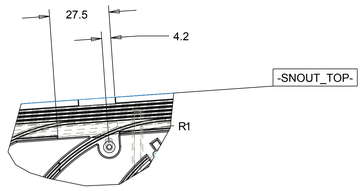
	Model Type:	Model File Name:	Drawing File Name:	
	PART	FD_4_RACEWAY_TOP	FD_4_RACEWAY_TOP	
	Scale:	Drawing Number:	Revision:	Sheet:
	0.500:1			10 of 12
Finish	All dimensions are in mm unless specified otherwise			

REV	DESCRIPTION	DATE

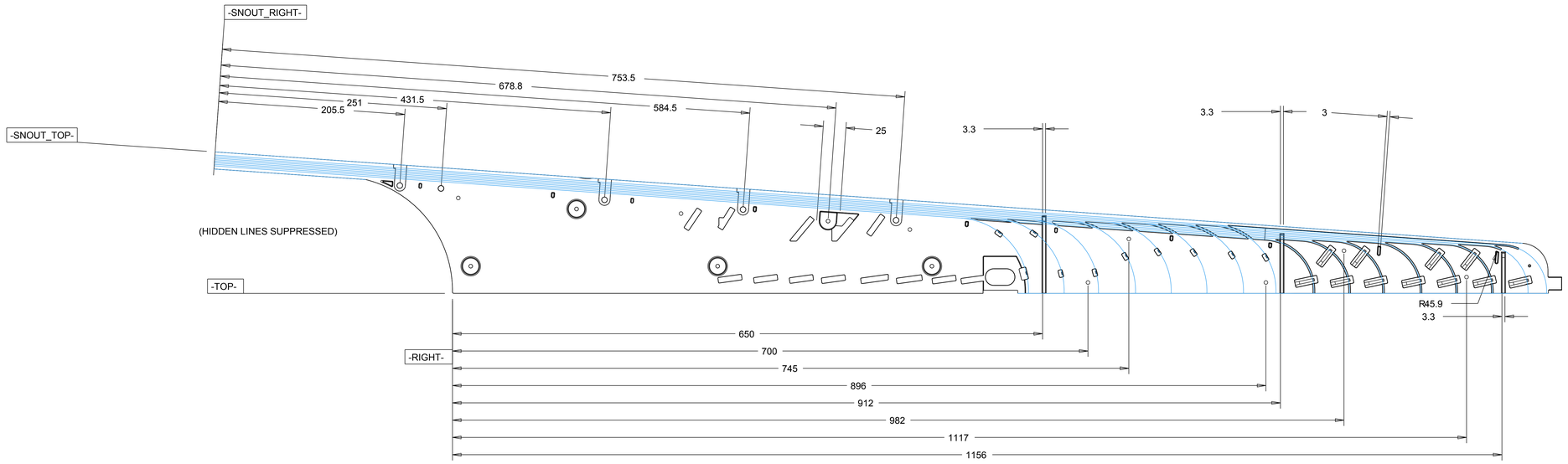




DETAIL S
SCALE 1.000



DETAIL T
SCALE 1.000



NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	03-Jun-11
.X	±0.1	DRAWN BY	T. Chase & J. Legatt	03-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES ±0.5		USED ON: NOvA manifolds		

NOvA Experiment (Fermilab E929)

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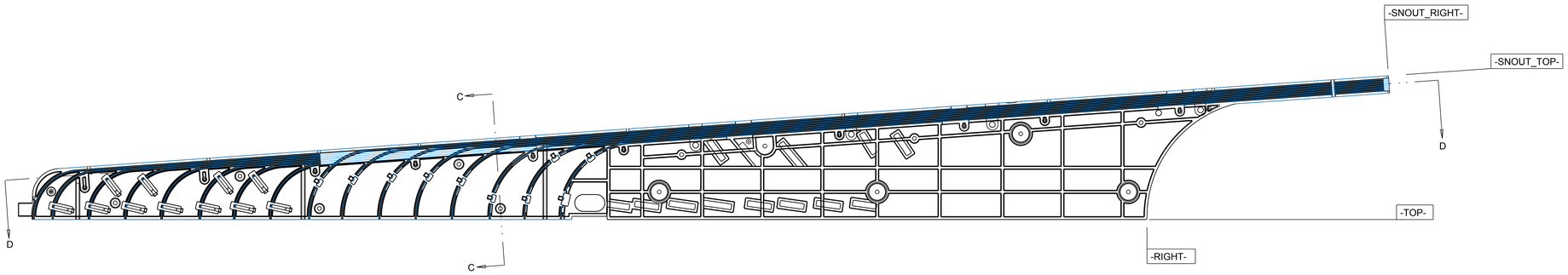
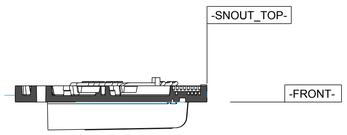
Far Detector Top Raceway

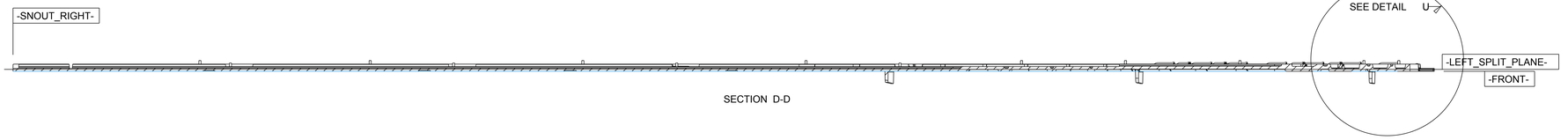
Finish	Model Type: PART	Model File Name: FD_4_RACEWAY_TOP	Drawing File Name: FD_4_RACEWAY_TOP
	Scale: 0.500:1	Drawing Number	Revision / Sheet: 11 of 12
	All dimensions are in mm unless specified otherwise		

REV	DESCRIPTION	DATE

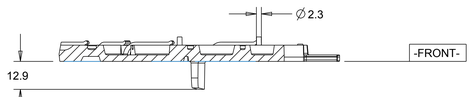




SECTION C-C
SCALE 1.000



SECTION D-D



DETAIL U
SCALE 1.000

NOTES	
1	MATERIAL: BLACK PVC
2	BREAK ALL EDGES

TOLERANCES		ORIGINATOR	T. Chase	06-Jun-11
.X	±0.1	DRAWN BY	T. Chase & J. Legatt	06-Jun-11
.XX	±0.01	CHECKED		
.XXX	±0.001	APPROVED		
ANGLES ±0.5		USED ON: NOvA manifolds		

NOvA Experiment (Fermilab E929)

UNIVERSITY OF MINNESOTA

Far Detector Top Raceway

	Model Type:	Model File Name:	Drawing File Name:	
	PART	FD_4_RACEWAY_TOP	FD_4_RACEWAY_TOP	
	Scale	Drawing Number	Revision	Sheet
	0.500:1			12 of 12
Finish	All dimensions are in mm unless specified otherwise			