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MUMBAI - 400 085

GOVERNMENT OF INDIA  
BHABHA ATOMIC RESEARCH CENTRE  
REACTOR DESIGN AND DEVELOPMENT GROUP (RD&DG)  
DIVISION OF REMOTE HANDLING & ROBOTICS (DRHR)

Ref: DRHR /KS/ENQ/2017/

Date:

**Sub : Minor Fabrication - Invitation of Quotation.  
Fabrication and supply of subassemblies for sweeping mechanism**

Dear Sir,

Quotations are invited for the minor fabrication job: Fabrication and supply of subassemblies for sweeping mechanism as per specifications in Annexure-1.

Bidder shall quote for fabrication of these components as per the enclosed specifications with suitable manpower of his own.

1. Taxes, other charges, if any, shall be quoted separately.
2. The quotation must reach Head, DRHR, BARC by **18<sup>th</sup> September, 2017** and must be sent in a sealed envelope superscribed with the **reference number & the due date given above**.
3. The address on the envelope should read:

**Director, Reactor Design and Development Group  
and Head, DRHR,  
BARC, Trombay, Mumbai - 400 085.  
(Attn. : Kamal Sharma, SO/D)**

4. Head, DRHR, BARC reserves the right to accept / reject any or all quotations without assigning any reason.
5. Incomplete offer / offer received after the due date shall not be considered.
6. Quotations should be preferably neatly typed and corrections are not acceptable.
7. Quotation received in computer-generated form shall not be acceptable. Quotation must be submitted in printed letterhead, mentioning clearly GST registration No. , PAN No. & Service Tax Registration No. Submission of challan and Invoice shall also comply the same, in case, work order is placed.

Director, Reactor Design and Development Group,  
& Head, DRHR

**Encl.:**

1. Annexure -1 as mentioned above
2. Drawing A0-DRHR/SWR/100

## Annexure-1

### Technical Specifications for Manufacture, Assembly and Supply of Mild Steel Structure Sub-Assembly (Qty: 1 Unit), Aluminium Extruded Square Section Sub-Assembly (Qty : 1 Unit), Aluminium Cover Sub-Assembly (Qty : 1 Unit), Brush Mounting Sub-Assembly (Qty : 1 Unit) and Trash Collecting Bin Sub-Assembly (Qty : 1 Unit)

The following components are to be manufactured and standard components have to be supplied by the supplier, and assembled as per the drawing:

#### A) Mild Steel Structure Sub-Assembly

(As per Drawing: A0-DRHR/SWR/100- M S STRUCTURE SUB ASSY. #1)

Sr. No.	Part Name	Material	Qty
1.	Black color powder coated Angle-25x25x3 THK-12 m. LG.	Mild Steel	15 Kg.
2.	Black color powder coated Flat-30x3 THK-4.5 m. LG	Mild Steel	5 Kg.

#### B) Aluminium Extruded Square Section Sub-Assembly

(As per Drawing: A0-DRHR/SWR/100- AL. EXTRUDED SECTION SUB ASSY. #2)

Sr. No.	Part Name	Material	Qty
1.	Extruded Sq. Section 30x30-20 m. LG.	Al. 6063	20 m.
2.	L-Type Connectors for Al. Extruded Section	Standard	110 Nos.

#### C) Aluminium Cover Sub-Assembly

(As per Drawing: A0-DRHR/SWR/100- AL. COVER SUB ASSY. #3)

Sr. No.	Part Name	Material	Qty
1.	Blue color powder coated Sheet-2 THK-4.5 sq.m. Area	Al. 6064	25 Kg.
2.	Mil. Std. Connectors (8 Pin & 2 Pin)	Standard	3 Nos.

#### D) Brush Mounting Sub-Assembly

(As per Drawing: A0-DRHR/SWR/100- BRUSH MOUNTING SUB ASSY. # 4)

Sr. No.	Part Name	Material	Qty
1.	Plate 10 THK-550Lx500Wx10Thk.-2 Nos.	Al. 6064	15 Kg.
2.	Sweeping Brushes 360Lx180W	Standard	7

## E) Trash Collecting Bin Sub-Assembly

(As per Drawing: A0-DRHR/SWR/100- TRASH COLLECTING BIN SUB ASSY. # 5)

Sr. No.	Part Name	Material	Qty
1.	Blue color powder coated Sheet-2 THK-1.0 sq.m. Area	Al. 6064	5.6 Kg.

### Note:

**1. Raw Material for all the components and the required hardware will be provided by the supplier .**

**2. Quality surveillance, inspection and inspection report:**

2.1 All work covered by the specification shall be subjected to quality surveillance by the purchaser or his authorized representative for which purpose the manufacturer shall allow access at all reasonable times during manufacture to:

- a) The premises in which work is being carried out.
- b) The drawings and / or tooling involved.
- c) Gauge, instruments etc required for inspecting the work.

2.2 Inspection and tests shall be carried out by the fabricator as per the requirements detailed in the drawings and these specifications.

2.3 Components found unsatisfactory as to workmanship or material shall be removed by the fabricator and replaced by components, which are satisfactory.

2.4 The manufacturer shall use materials as specified by the purchaser and submit to the purchaser the material test certificate for his approval.

2.5 The finished components shall not be dispatched prior to approval by our engineer at bidder's works.

**3. Delivery:**

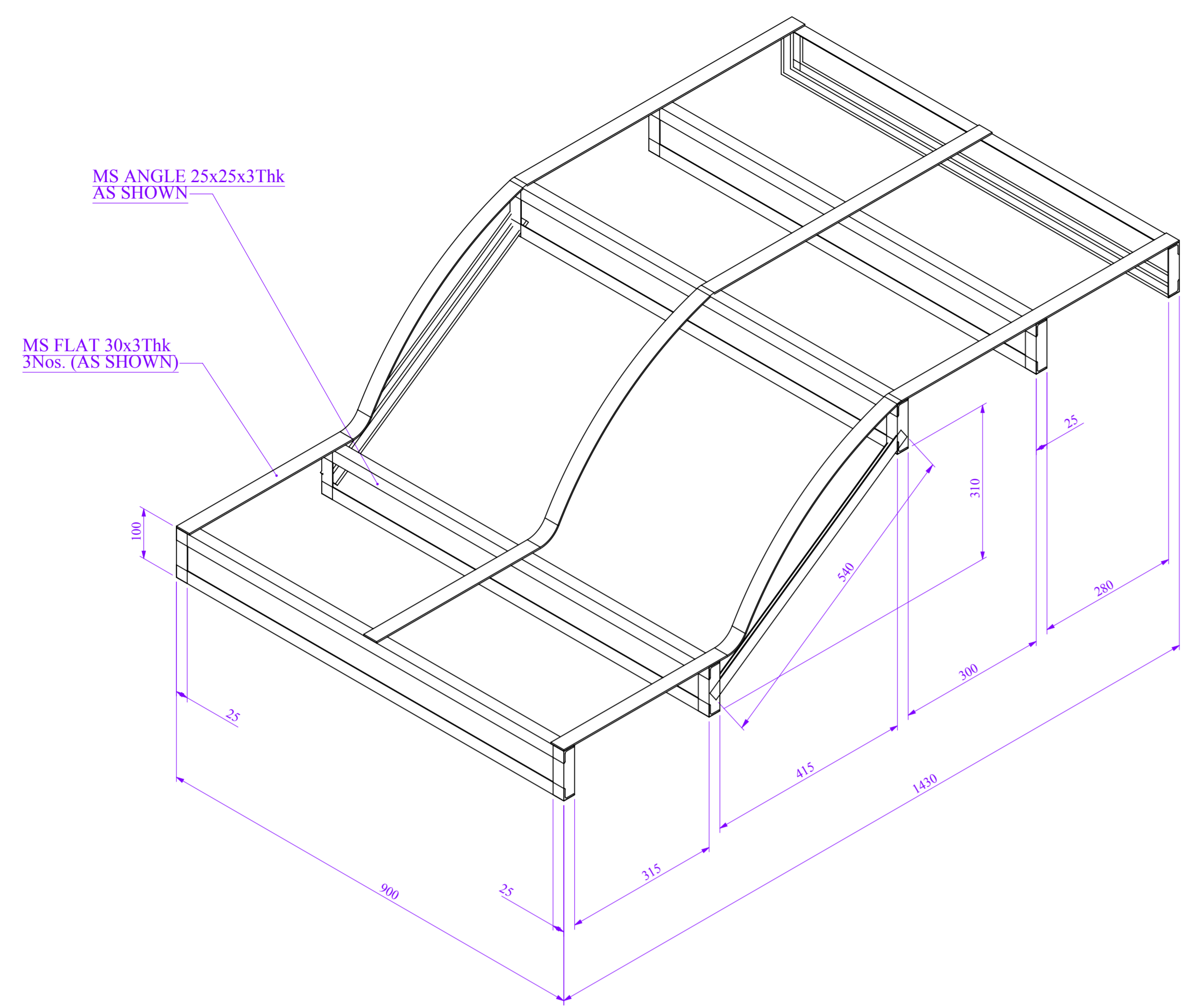
The bidder shall deliver the finished components, after approval by our engineer, within **6 weeks** from the date the firm work order is issued to the bidder.

- a) **Any delay , which is attributable to the contractor is liable for a penalty @ ½ % per week (max. 5%) to be imposed on the contractor.**
- b) In case any extension in delivery is to be granted to the contractor, party's request for extension may be called for before expiry of the work order. The same may be justified by the Division, whether extension granted is with or without the levy of liquidated damages.

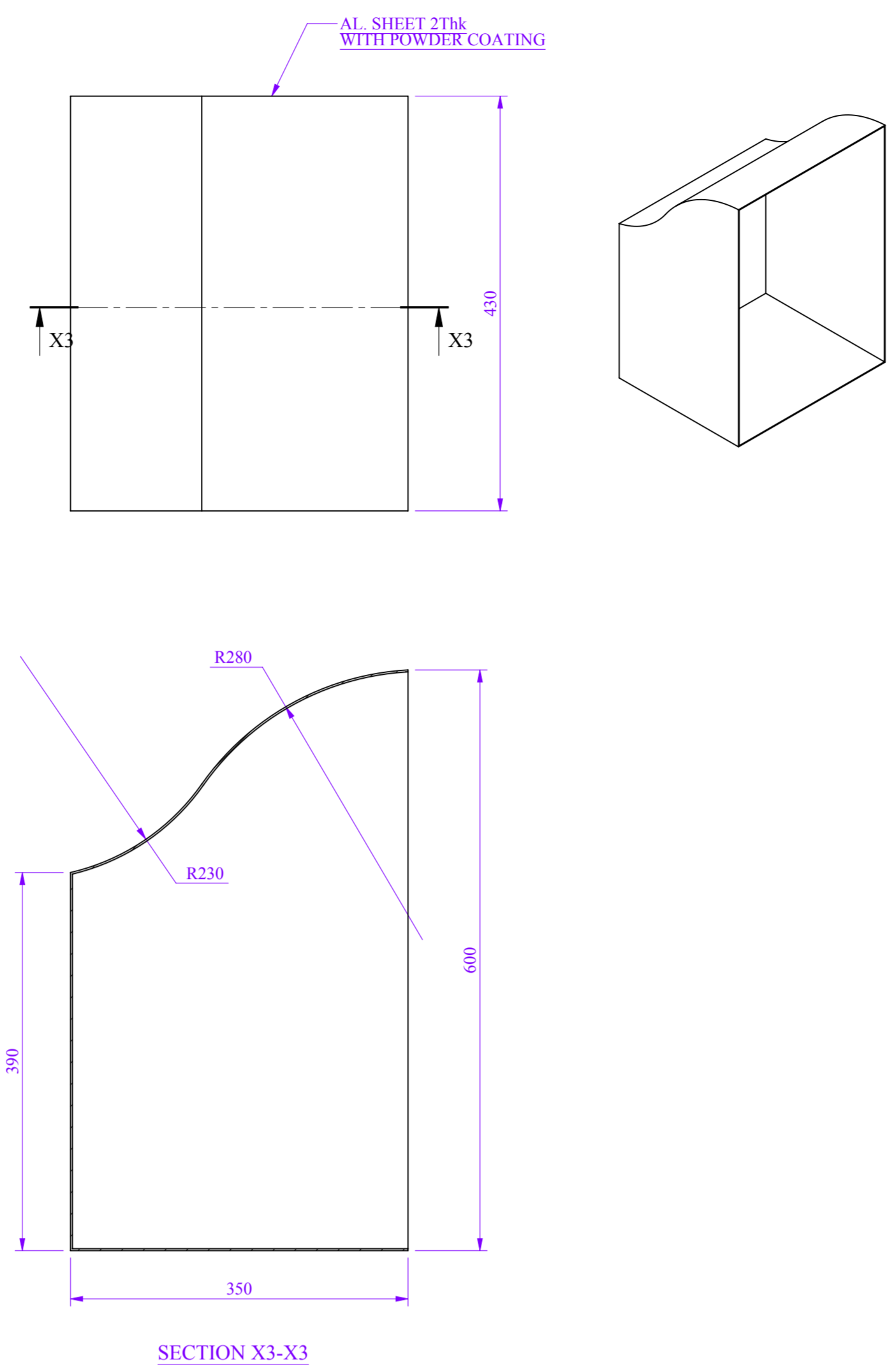
**4. Sub-contract:**

The manufacturer shall not sub-contract any or all the work without written consent from the purchaser. The fabricator shall be responsible to the purchaser for all work the sub-contractor of the fabricator, if allowed by the purchaser.

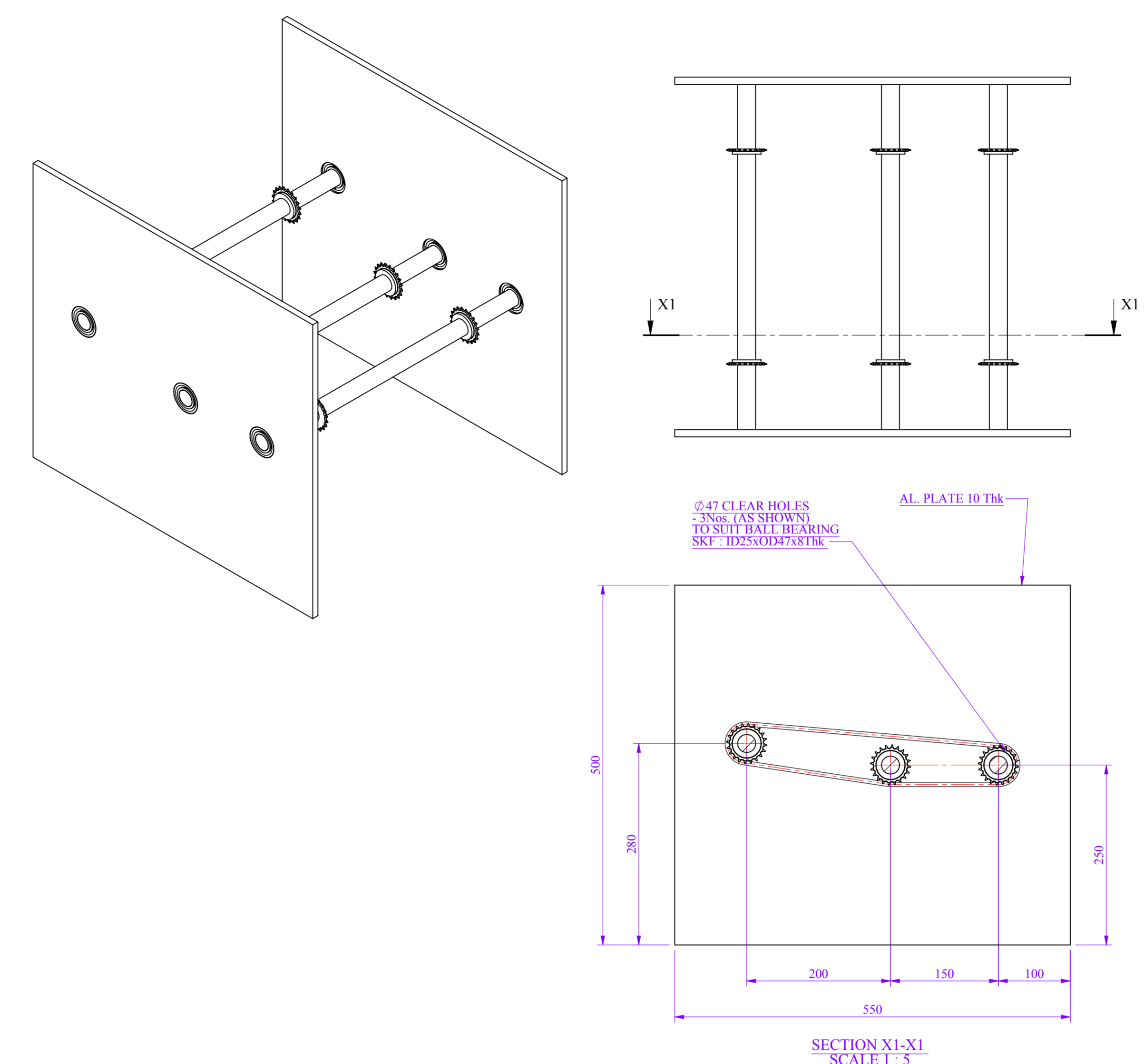
Director, RD&DG and Head, DRHR,  
BARC, Trombay.



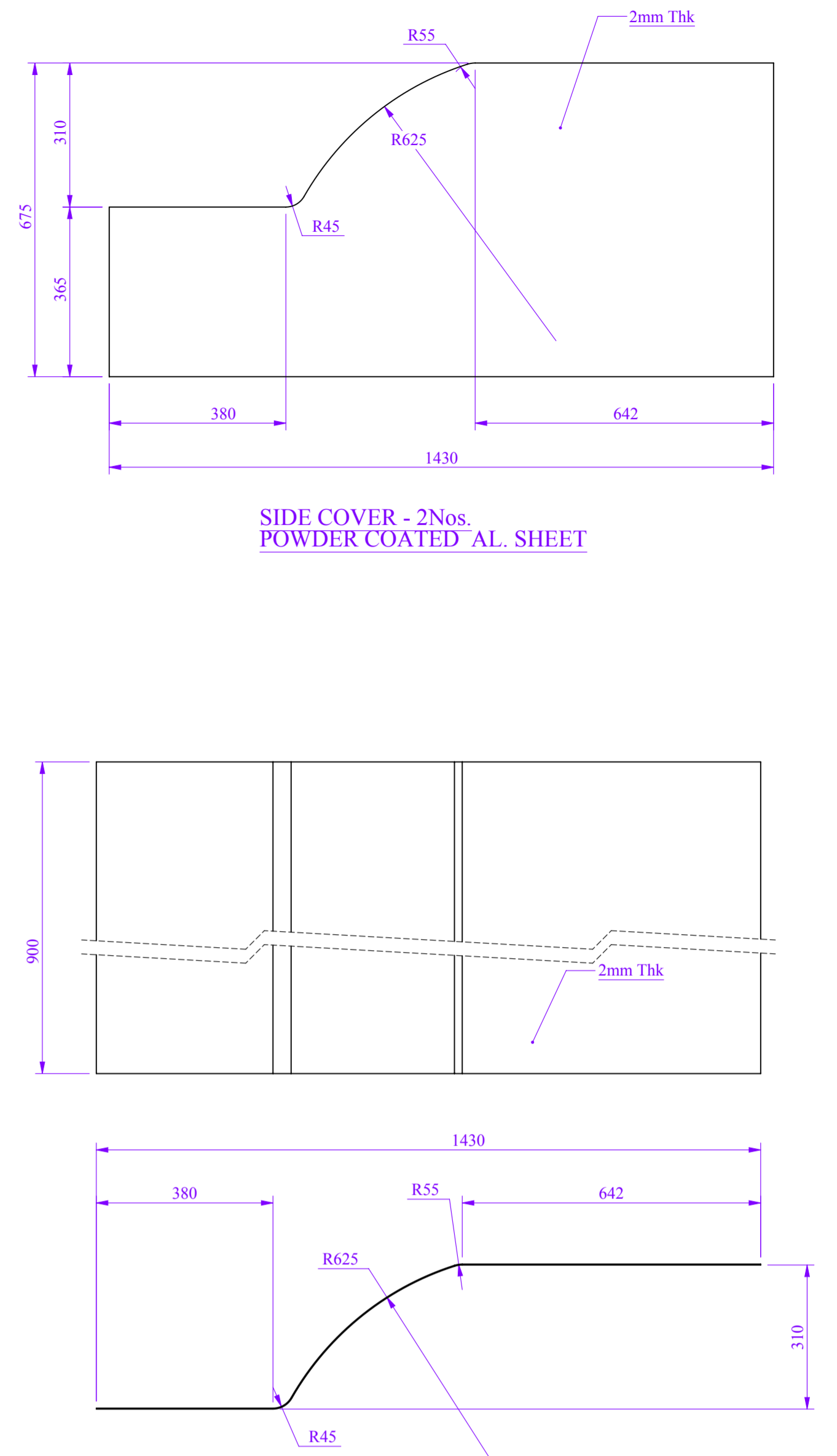
M S STRUCTURE SUB ASSY. #1



TRASH COLLECTING BIN SUB ASSY. # 5



BRUSH MOUNTING SUB ASSY. # 4



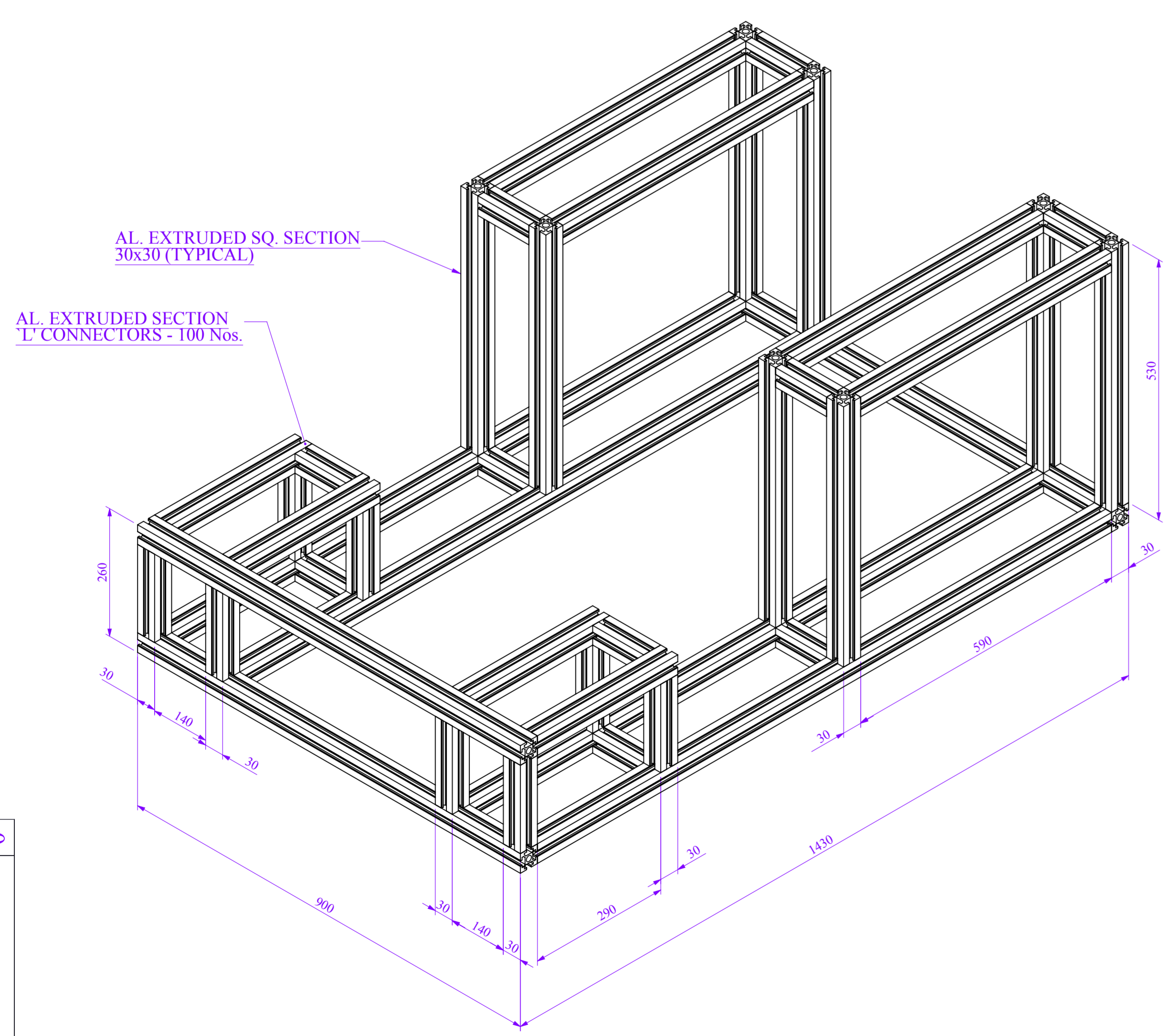
TOP COVER - 1No. POWDER COATED AL. SHEET

FRONT COVER - 1No. POWDER COATED AL. SHEET

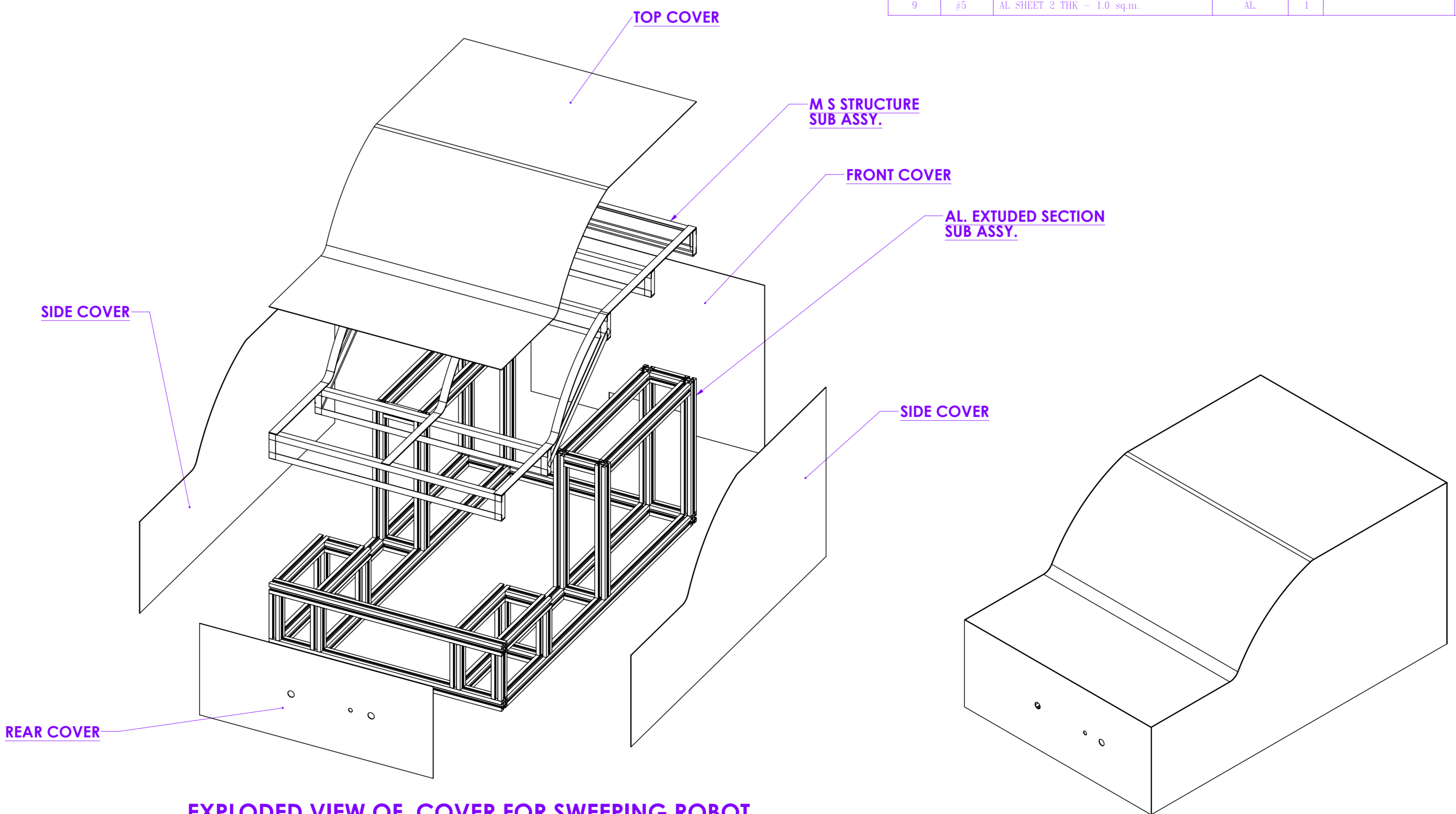
REAR COVER - 1No. POWDER COATED AL. SHEET

AL COVER SUB ASSY. #3

BILL OF MATERIAL						
SRL No.	ASSY NO. ITEM NO.	DESCRIPTION	MATERIAL	QTY.	DRAWING NO.	REMARKS
		SWEeping ROBOT SUB ASSYS	-	1	A0-DRHR/SWR/100	
1	#1	M.S. ANGLE 25x25x3 THK-12 m.LG.	M.S.	1		
2	#1	M.S. FLAT-30x3 THK-4.5 m.LG.	M.S.	1		
3	#2	AL. EXTRUDED SECTION 30x30-20 m.LG.	AL.	1		
4	#2	AL. SECTION 'L' CONNECTORS	AL.	100	STD. ITEM	
5	#3	AL. SHEET 2 THK-4.5 sq.m.	AL.	1		
6	#3	MIL. STD. CONNECTOR	-	3	STD. ITEM	
7	#4	AL. PLATE 10 THK-550x500x10Thk.	AL.	2		
8	#4	SWEeping BRUSHES 360Lx180W	PLASTIC	7	STD. ITEM	
9	#5	AL. SHEET 2 THK - 1.0 sq.m.	AL.	1		



AL. EXTRUDED SECTION SUB ASSY. #2



EXPLODED VIEW OF COVER FOR SWEEPING ROBOT

THIS DESIGN AND DRAWING IS THE PROPERTY OF BHABHA ATOMIC RESEARCH CENTRE AND SHALL BE RETURNED WITH ALL INFORMATION AND EQUIPMENT AND MUST NOT BE USED EXCEPT BY PERMISSION OF THE OWNER.  
 A0-DRHR/SWR/100  
 REV: 0

SERIAL NO.	REFERENCE DRAWING	DRAWINGS NO.	NO.	LOC.	DESCRIPTION	REV.	DATE	DATE

NOTES - UNLESS OTHERWISE SPECIFIED		
1)	ALL DIMENSIONS ARE IN mm.	
2)	DO NOT SCALE THE DRAWING.	
3)	SURFACE FINISH IN MICRON 3.2 CLA OR BETTER.	
4)	ROUND ALL INTERNAL SHARP CORNERS BY 0.4R.	
5)	REMOVE ALL EXTERNAL SHARP CORNERS BY CHAMFER 0.5x45°.	

PROJECT	SWEeping ROBOT	TITLE	SWEeping ROBOT SUB ASSYS. & DETAILS
DRAWN BY	SOMESHWAR	DATE	16.06.2017
DRG. CHKD.		DATE	
DESIGNED BY		DES. CHKD.	
GOVERNMENT OF INDIA		FILE NAME	SCALE
BHABHA ATOMIC RESEARCH CENTRE		DRAWING NO.	NTS
DIVISION OF REMOTE HANDLING & ROBOTICS		A0-DRHR/SWR/100	REV.
			0