Directorate General CRPF
Block No. 1 CGO Complex, New Delhi-110003
(Govt. of India/Ministry of Home Affairs)
(Phone / Fax- 011-24360155)
(E-Mail- digprov@crpf.gov.in)

No.T.III-8/2023-DA-1 (Tent) Dated, the 5th Sep' 2024

To,

The DsG: AR, BSF, CISF, ITBP, NSG, SSB and BPR&D

Subject: **QRs/Specification of "Temporary Accommodation Options".**

It is to convey that the following 6 Nos. QRs/Specifications in respect of "**Temporary Accommodation Options**" have been approved by the competent authority:-

i) Multi Storey Modern Portable Temporary Accommodation Size 40x20x 19 in feet (G+1)
ii) Multi Storey Modern Portable Temporary Accommodation Size 36x18x19 in feet (G+1)
iii) Multi Storey Modern Portable Temporary Accommodation Size 40x40x 19 in feet (G+1)
iv) Multi Storey Modern Portable Temporary Accommodation Size 72x18x19 in feet (G+1)
v) Collapsible Container Accommodation (Size 20x10x9) in feet
vi) Collapsible Rapid Deployable Shelter (5.80x2.50x2.60M)

2. This has the approval of DG, CRPF on 03/09/2024 (empowered vide MHA letter F. No. 11012/02/2009-Fin-I-17 dated 02/01/2018).

Encl: Scanned Copy of above QRs/Spec.

DIG (Prov) Dte, CRPF

No.T.III-8/2023-DA-1 (Tent) Dated, the 5th Sep' 2024

Copy forwarded to:-

1. SO (IT), North Block-with request to upload the approved QRs/Specification of **"Temporary Accommodation Options"** on MHA Website (e-mail ID : soit@nic.in).

2. **Sh. Paritosh Singhal, ACEO(GeM), and Sh. Abhishek Kakkar, Director - Category Management,** Government of India, Ministry of Commerce & Industry, Government e-Marketplace, Jeevan Tara Building, 5-Parliament Street, New Delhi-110001 with request to upload the approved QRs/Specifications of **"Temporary Accommodation Options"** on GeM Portal.

3. DIG (IT), Dte Genl., CRPF-with request to upload this approved QRs/Specification of "**Temporary Accommodation Options**" on CRPF Portal and Selo Module.

DIG (Prov) Dte, CRPF

QRs/TDs Collapsible Rapid Deployable Shelter

1. **Scope of work.** The work consists of Design, manufacture and supply/transportation/installation of prefabricated and living shelter(CRDS) of size after folding(5.80 x 2.50 x 0.63)M (Height) and size of after installation(5.80 x 2.50 x 2.60)M (Height):-

(a) Shelter Size (**5.80 x 2.50 x 2.60) mt.**

(b) Two Men Winch op for unloading and erection

(c) Solar Controller system alongwith charge controller & lithium battery

(i) **1xSolar panels.** Size (1200x650 mm) with module for mounting the structure on roof with rating 100 W & 12 V.

(ii) **Wire**. To connect solar panel to charge controller Length – 8Mtr Size 1.5 Sqmm, 2 Core (Copper Wire) **Make : Havells/Polycab/Finolex**

(iii) **Charge Controller.** Rating 12 V, 10 Amp .

(iv) **Battery** – Li Battery 10aH 12 V (Microtek/Exide/Amaron or similar quality)

(v) **Inverter**:- AC & DC compatible (automatic), Li Powder based pure sine wave Input voltage – 100 v to 300v Output Voltage – 180 v to 200 v (Luminos/Microtek)

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S.NO.	Item	Specification
I	SPV MODULE	
i)	Type of SPV Module	Poly Crystalline
ii)	Make	MNRE (Govt. of India) Approved
iii)	Open Circuit Voltage	22V
iv)	Short Circuit Current	6.06A
v)	Maximum Power Voltage	18V

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vi)	Maximum Power Current	5.56A
vii)	Operating Voltage	12V
viii)	Maximum Power	100W
ix)	Module Efficiency	15%
x)	Maximum System Voltage	1000V
2	SOLAR CHARGE CONTROLLER	
i)	Rating	12V 10A
ii)	Type of Solar Charge Controller	PWM
iii)	Load Current	<10A
iv)	Low Battery Cut off	11.0V±0.2V
v)	Charging Cut off	14.4V±0.2V
vi)	Trickle Charging	13.2V±0.2V
vii)	Load Reconnect	12.5V±0.2V
vii)	Indications	
	Low Battery	RED LED
	Boost Charging	GREEN LED- Blink Fast
	Trickle Charging	GREEN LED - Blink Slow
3	**INVERTER**	
i)	Input Voltage (Standard range)	100 V ~ 300 V
ii)	Input Voltage (Narrow range)	180V ~ 260 V
iii)	Output Voltage (Mains Mode)	Same as Input
iv)	Output Voltage (UPS Mode	200V~ 230V ± 10%
v)	Output Waveform (Mains Mode)	Same as Input
vi)	Output Waveform (UPS Mode)	Pure Sinewave
vii)	Switchover from Mains to UPS and UPS to Mains	Automatic
viii)	UPS Transfer Time	≤ 15 msec.
ix)	Design	Micro Controller Based Design

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		with IPS Technology
x)	Battery Charging Current	Constant Charging approx. 10% of the rated Battery Current in AH
xi)	UPS Overload / UPS Short-circuit	110% / 300%

(d) **Gantry Structure**. One set gantry for 10 Shelters. One number sling set for five shelters. Sample set of Gantry structure will be produced to inspection team and approved during pre construction stage. Each set of Gantry structure will have items as per details given below ISI marked and conforming to IS code :2062.

(i) Truss ISMB 200x100x5 mm of length 6 mtr – 01 No.

(ii) Winch system 3 Ton capacity including 04 roller with sliding plate and lifting winch Worm type (both side) – 01 Set.

(iii) Chain pulley block 3 Ton capacity – 01 No.

(iv) Scaffolding 6mtr - 02 Set.

(v) Vertical standard post size 48mm od x3mm thk x3000mm (8 Nos per column) within built cup lock system in which 4 Nos post will be fixed with base plate of size 200x200x5mm – 02 Column for one set.

(vi) Horizontal ledger pole of size 48 x 3 x 1500mm with inbuilt cup locks system (20 Nos Per column) – 02 Column for one set.

(vii) Centre Jack with complete assembly (As per sample) 01 No

(viii) D Spanner 04 Nos

(ix) Hammer 1 kg 01 No

(e) Moving Excel – 200 X 50 X 5 mm as per IS1079 : 2009(EXACT POSITION IN DESIGN)

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Moving Excel – 36 Nos.
Right side 15 nos
Left side 15 nos
Front side 3 nos
Back side 3 nos

2. **Design criteria.**

(a) Seismic Co-efficient – As per Seismic Zone V.

(b) Snow load - 100 kg\sqm standing on roof.

(c) Wind load - Equivalent to wind speed of 55 M/Sec as per IS875.

(d) Roof slope -1:4 (Collapsible type)

(e) External temperature – (-) 10 degree Celsius to +55 degree Celsius.

(f) Water absorption/Penetration –Nil

(g) Complete termite proofing

(h) Fire resistant – Insulation material used should be grade A 60 Fire retardant & should not emit toxic fumes.(standardrs)

(j) Ease of construction – Shelter should be foldable easy to erect by two men only, easy to transport and modular in design. Structure to be foldable as one entity with all beams, Columns, all wall, doors & windows included inside. No structural member of the shelter to be separate & entire shelter to be transported as one entity.

(k) Design load – As per IS875.

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3. **Design Data**

(a) Length - 5.80M

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(b) Width - 2.50M

(c) Height- 2.60M

(d) The floor area will be 5.70M x2.40M

(e) Structure to be foldable as one entity with all beams, columns, roof, all wall, door& windows included inside. No structural member of the shelter to be separate & entire shelter to be transported as one entity.

4. **Material**:- All material used for the manufacturing of shelters will be new and will comply with relevant latest IS code as applicable as given in succeeding para. Steel used shall be conforming to IS: 2062 for general structural purposes. The material (Mineral/Rock Wool) should provide insulation against extreme cold weather condition. Mineral/rock wool to be of Grade A as per IS code : 8183:1993 & fire retardant & should not emit toxic fumes harmful and hazardous to health

5. **Structural Members**. Structural Members shall be as per the schedule of structure:-

(a) **Collapsible Corner Columns (vertical)**. Two Nos in each wall (total 4 in shelter) which are split into two parts of size 122mmx 61mmx2mm thick rectangular hollow section per IS code : 4923 & filling with rock wool for insulation. Fixing of 4 Nos clamp on top of shelter with holes for attachment with the D-SHACKLE of 2 ton capacity for lifting of shelter. Bottom of shelter provided with four Nos legs in of shelter.

(b) **Middle Collapsible Columns (Side wall)**. One Nos in each wall (total 2 in shelter) which split into 2 part of size 60mmx 60mmx2mm thick square hollow section as per IS code : 4923 & filled with rock wool for insulation.

(c) **Beams Front and Rear wall**. Two Nos of beams in each wall (total 4 in shelter) of size 122mmX61mmx2mm rectangular hollow section as per IS code : 4923 & filled with rock wool for insulation and suitably welded with roof frame and floor frame. Two Nos in each wall (total 4 in shelter) **intermediate beams** of size 122mmX61mmx2mm thick rectangular hollow section filled with rock wool for insulation and fitted with 5 Nos 200mm long MOVING EXCEL in each wall total 15 of shelter on front and back wall welded both side.

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(d) **Tie beam.** Two Nos of tie beam in four part 40mm x 40mm x 1.6mm, as per IS code : 4923 &SHS with proper locking arrangement to be locked with welded two side one end with corner columns and other end with middle columns on front and back wall of shelter.

(e) **Gable wall columns and beams.** Two columns in each wall (total 4 in shelter) of SHS 60mm x 60mm x 2mm, as per IS code : 4923 and two Nos (total 4 in shelter) horizontal beams of size 60mmx60mmx2mm on top and bottom of gable wall SHS as frame with the help of suitable fastener proper locking arrangement to be locked with welded both sides columns of gable walls of shelter. One additional same size vertical column on door side Gable for door frame and one section above door 977mm ±10 mm long same size. Fitted with 200mm MOVING EXCEL 3 Nos(inside) on both gable walls welded both side.

6. **Lower Roof**. The roof shall be straight. Roof shall be provided with 0.60mm pre coated steel PPGL Sheet COLOR AS P[ER BUYER SPECIFICATION. Roof Panel to be filled with mineral/rock wool 50mm thick. 80Kg/Cum +- 5% to provide insulation against extreme cold weather condition in roof panels.

(a) **Lower Outer Frame.** Main frame 122mm x 61mm x 2 mm thick hallow rectangular section, 2 NOS welded suitably with columns ON THE SIDES. Two SHS of size 60x60x2mm thick as per IS code:4923 FRONT AND BACK & inner side welded with main frame to rest the floor panel at 22mm depth from top of main frame RHS and four Nos of SHS of 1.6mm thick of size 40mmx40mm, parallel to gable wall at the centre to centre to rest the of floor panels. Top side on main frame to be fixed with SHS of 2mm thick of size 60mmx60mm for hold of wall panels.

(b) **Lower Cross tie Beam.** Two Nos tie beam of size 40mm x 40mm x 1.6 mm thick, square hallow section as per IS code :4923 & perpendicular to gable wall has to be welded with lower outer frame with the help of moving excels, with SHS of 2mm thick of size 60mm x 60mm for hold of wall panels.4 NOS CROSS TIE BEAM OF 40X40X1.6 MM OF SHS TO BE WELDED WITH MAIN FRAME

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7. **Upper Collapsible Roof.** Two-part corrugated collapsible Roof should be attached with shelter with the help of excel and locked with the shelter during transportation. lower side of the roof should be fitted with PPGL sheet 0.6mm as per buyer sepcs to be fitted on the inside

8. **Wall Panels (Internal/External).** All wall panels shall be made of Anti corrosive powder coated PPGL SHEETS 0.6 mm thick PGL sheet on both sides. The thickness of Insulation shall be 50 mm ±2 mm, 80 +- 5% Kg/Cum. The insulation material (mineral/rock wool) in the panel shall have fire retarding and self-extinguishing properties as per international standard (Grade A) as per IS code : 8183:1993. There should not be any gap between wall panels and wall and roof by provision of suitable joining arrangement. Other details of wall panels are as follows:-

(a) All material required for the manufacture of shelter shall comply with relevant Bureau of Indian Standard Specification latest

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9. The bulk density of insulation should be 80 Kg/Cum ± 5% Kg/ Cum made from rock wool. The total thickness of the finished composite panel should be 50± 2mm. The tolerance in the panel can only be on the plus side conforming IS code :8183:1993.

(a) The outer PPGL(COLOR AS PER BUYER SPECIFICATION) skin made from hot dipped galvalume steel of the panels should be 0.6 mm thick TCT (Total coated thickness).

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(b) The insulated core of these composite panels should have the following properties:-

(i) Density – 80 Kg/Cum ± 5% Kg/ Cum.

(ii) External colour of panel as per buyer specification

(c) All panels will be manufactured in single piece as per approved panel layout drawing using the above materials and manufacturing process

(d) The purchaser can get quality testing of any panel from the lot supplied to ensure quality control as per given specifications. Cost of quality testing will be borne by the supplier.

10. **Fire Proof Door.** One door of size 977mm x 2000mm with 40mm thick thermal insulated pre painted polymer Coating color as per buyer specs) on Galvalume (PPGL) sheet with 3 Pcs of hinges and tower bolt with suitable door frame and mortice lock arrangement conforming to IS 4020: in fill material will be rock wool only

11. **Window**. 02 Nos Windows of size 800mm x 1200mm with pre- coated Polymer coating, color as per buyer aluminum sliding shutters with toughened glass 5 mm thick. All Aluminum framework material should confirm to IS 5047 (Part I & II), All sections of aluminum frame/track shall be 2 mm thick and shall be of ISI mark

13 **Exhaust Fan**. Exhaust fan size min 225mm X 225mm made of sturdy Engineering plastic complete with louvers with hinged flaps shutter, voltage 230V,50 Hz, RPM 1200,Copper winding of sweep 300mm.location as per drawing

14 **Bunk Beds**. As per IS 17636;2021 and buyer approved specs.

15 Mattress. Tech specification are as under :-

(a) Size of cushioned platform with plywood(confirming to IS.710.) of thickness 12 mm and size as per bunk bed.

(b) Cushion provided to be thickness 100 mm with density 25 Kg ± 2kg per Cum of foam relevant IS Code.

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16 **Flooring.** Flooring will consisting of following:-

a. **Lower Outer Frame.** Main frame 122mm x 61mm x 2 mm thick hallow rectangular section, welded suitable with columns. One frame of size 60x60x2mm thick SHS as per IS code :4923 & inner side welded with main frame to rest the floor panel at 22mm depth from top of main frame RHS and four Nos of RHS of 1.6mm thick of size 80mmx40mm, parallel to gable wall at the centre to centre to rest the floor panels. Top side on main frame to be fixed with SHS of size 60mmx60mmX 2mm for hold of wall panels.

b. **Lower Cross tie Beam**. Two Nos tie beam of size 40mm x 40mm x 1.6 mm thick, square hallow section as per IS code :4923 & perpendicular to gable wall has to be welded with lower outer frame at bottom of inner floor frame for support to floor and in the centre proper locking arrangement with suitably welded.

c. **Floor Panel**. 16mm thick 1200mm x 2400mm HD cement fibre board ISI confirminmg to IS standard marked quality board lower side coated with rubberized paint of 60 micron thick. 2mm epoxy coated will be over the top surface of floor.

17 **Fasteners (ss 304 confirming)** Each shelter shall be supplied with 10% extra fasteners, nuts, bolts, screws, washers etc than actually required.

18 **Joints.** All the joints will be air tight and self insulation sealing tape of **50mm wide and 100Mtr long will be provided with living shelters (Relocatable).**

19 Details missing, if any, will be assumed as per good engineering practice and will be provided by the supplier after being approved by inspection team of consignee and the rates will be inclusive of this fact. Whenever there is variation between technical specifications and drawings, technical specifications are to be followed.

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20 Quality of steel. Steel will be of YST- 240 MPA grade. RHS members will conform to IS 4923 :1997 and for other steel members conform to 250 MPA. Test certificate of steel from manufacturer will be submitted.

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21 **Colour Panels**. Colour of panels will be **as per buyer spec**

22 **Quality Control**. Accepting officer is free to get all parts/any part checked for quality conformation as given in the technical specifications from testing agencies. The structural Design/Layout/functional drawing will be tested by IIT/NIT/GEC by the manufacturer before the supply of the products and cost of testing will be borne by the supplier. The functional drawing shall be vetted by buyer before supply.

23 Stencil marking must be done with Paint on all major components and following must be written:-

a. Firm's name.

b. Supply order No and year.

c. Name of the component.

d. Job No

e. Month and year of manufacture

24. **Workmanship and Finishing**. Workmanship and Finishing will be of high standard. Joints will be air tight and leak proof. All the parts will be of good finish with good aesthetic value. All metallic and hardware items will be properly painted with paint and primer.

25 **Electric items**. Internal electrification of the shelter shall be carried out all as per the approved make for the respective items in **Appx 'A'** and shall be ISI mark

Note :-

a. Details and pictures of the shelter proto type to be uploaded by all participating vendors in bid documents.

b. Details missing, if any, will be assumed to be provided by the supplier as per good engineering practice, and will be approved by inspection team of consignee.

c. All material required shall comply with relevant Bureau of Indian Standard Specification.

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STORE LIST OF ELECTRIC ITEMS OF Collapsible Rapid Deployable Shelter

Ser No	Nomenclature	A/U	Qty
01	LED Light 5 Watt suitable for concealed lamp holder Philips/Bajaj/Goldwyn/Havells/Syska/Surya	No	03
02	PVC Copper cable 1 Sqmm 5 Core with multi stranded conductor for earth wire in green colour. Make : Havells/Polycab/Finolex	RM	10
03	Concealed metal box suitable for module switches and socket with module surface plate of 6 module Make : Havells/Bajaj/Anchor	Nos	03
04	Switch modular type 5 Amp one way Havells/ABB/Anchor/Legrand/Schneider	Nos	07
05	Switch modular type 15 Amp one way Havells/ABB/Anchor/Legrand/Schneider	Nos	01
06	Socket 3 pin 5 Amps modular type Havells/ABB/Anchor/Legrand/Schneider	Nos	04
07	Socket 3 pin 15 Amps modular type Havells/ABB/Anchor/Legrand/Schneider	No	01
08	Cable PVC insulated Aluminum conductor served with inner sheathing of PVC tape armoured with galvanized steel wire or tape and overall PVC sheathed cross sectional are 10 Sqmm 2 Core as per IS 694 Havells/Polycab/Finolex	RM	20
09	Exhaust fan made of sturdy Engineering plastic complete with louvers with hinged flang shutter, Voltage 230V,50 Hz,RPM 1200,Copper winding of sweep 300m.	Nos	01
10	Electric Cage Fan	Nos	02
11	Foam tape of width 50 mm and length 40 mts to be provided with the shelter /product to seal the joints	Mtr	40

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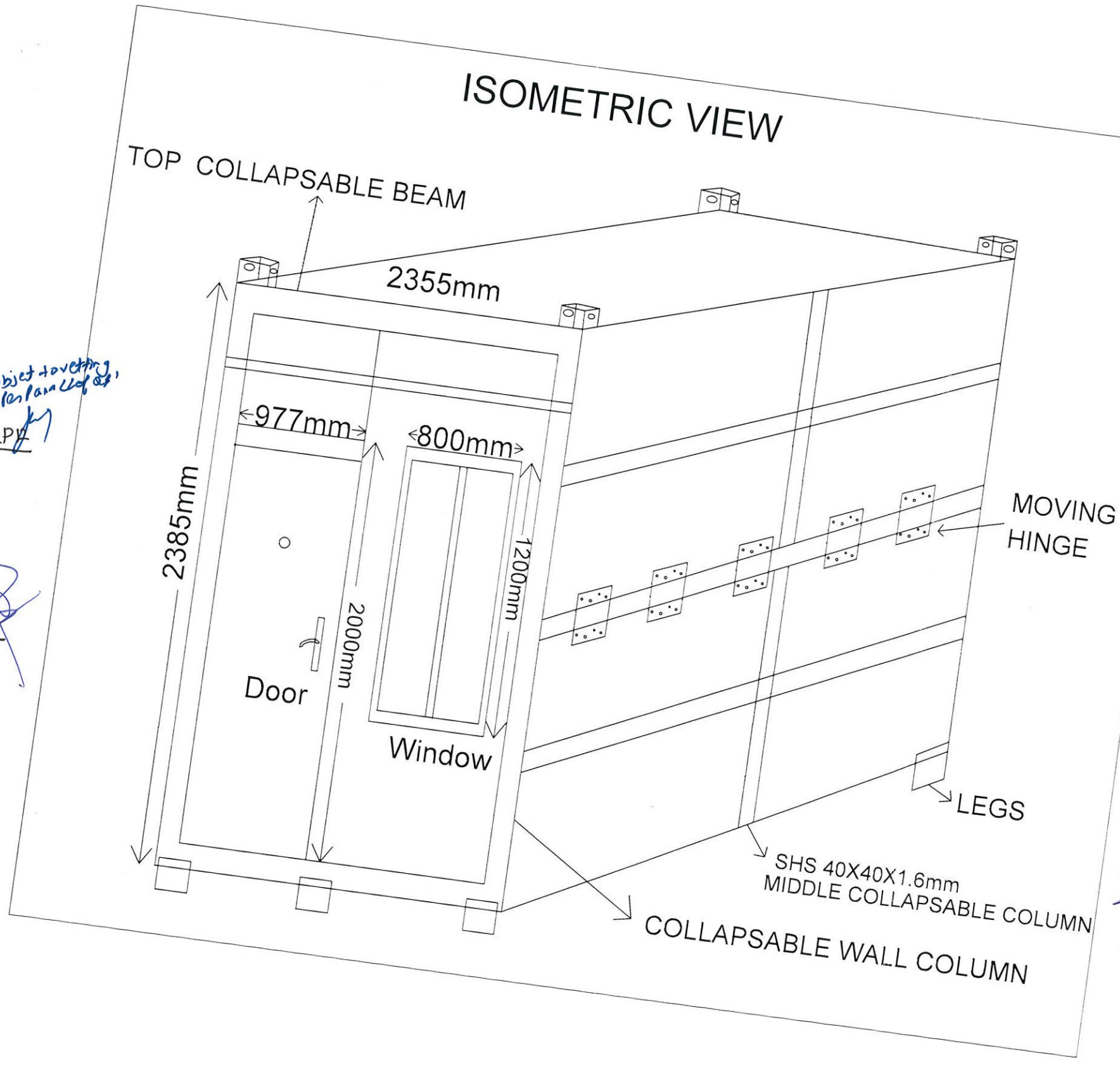
Approved / ~~Not Approved~~

Anish Dayal Singh, IPS
Director General, CRPF

ISOMETRIC VIEW



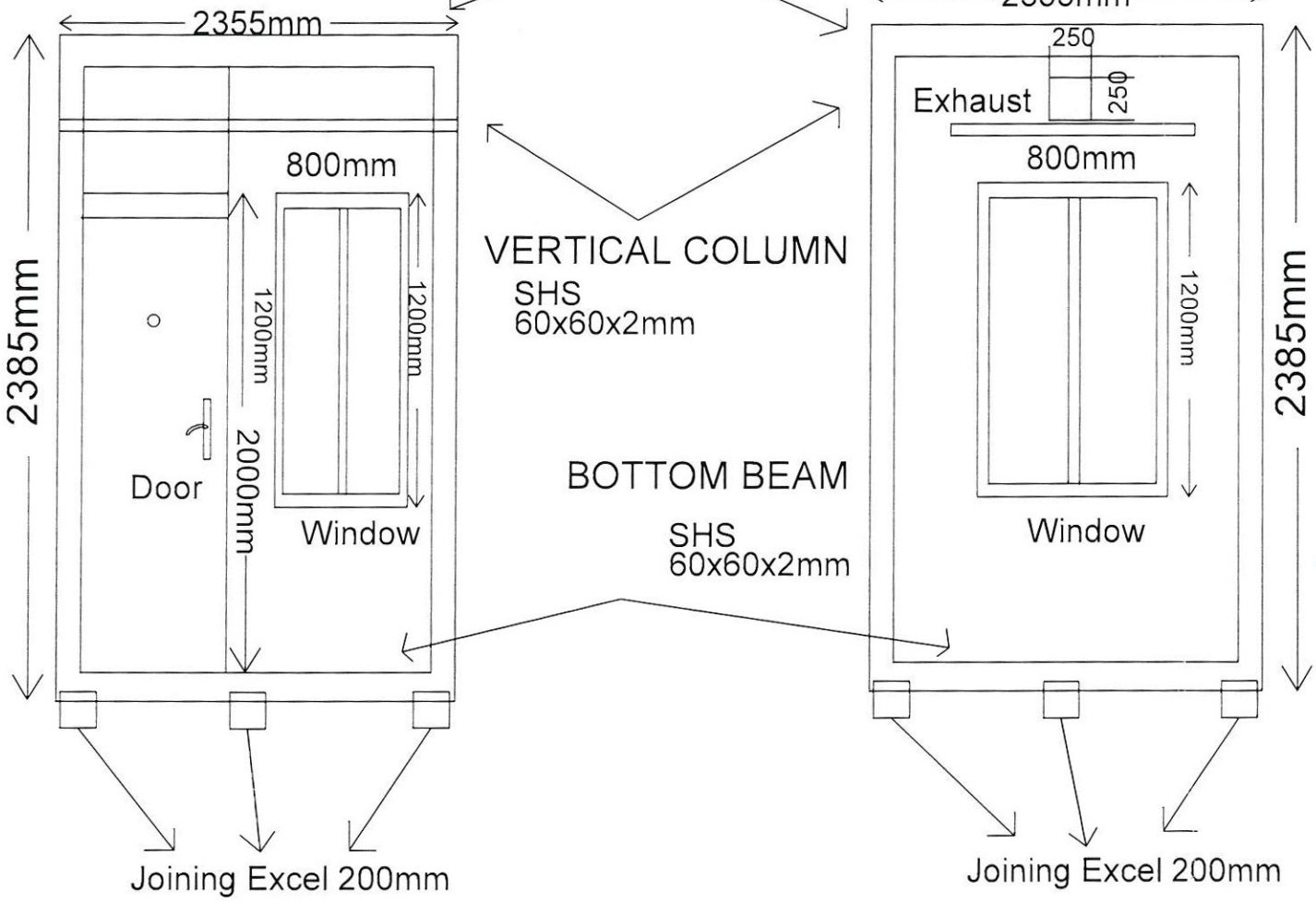
FRONT WALL VIEW

BACK WALL VIEW

TOP BEAM SHS 60x60x2mm

VERTICAL COLUMN SHS 60x60x2mm

BOTTOM BEAM SHS 60x60x2mm



GABLE WALL

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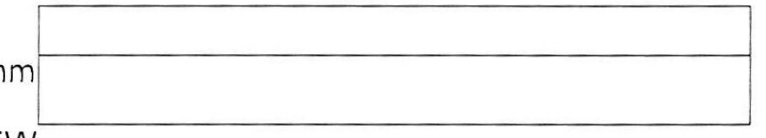
5800mm

FLOOR TOP VIEW

RHS 61x122x2mm
(Outer Frame)

2550mm

SHS40x40x1.6mm
(Cross Section)



150mm

SHS40x40x1.6mm

RHS 61x122x2mm

FLOOR SIDE VIEW

5800mm

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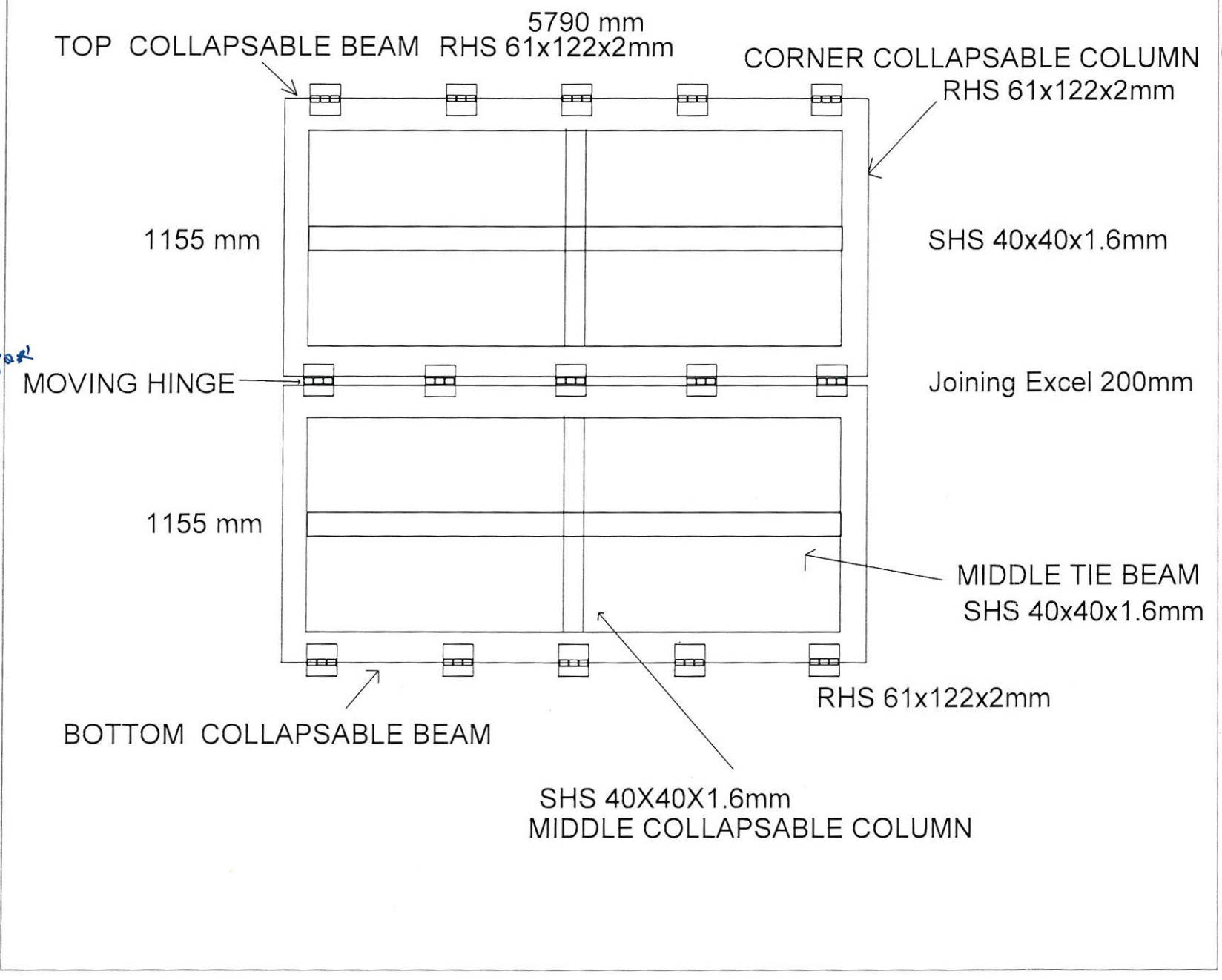
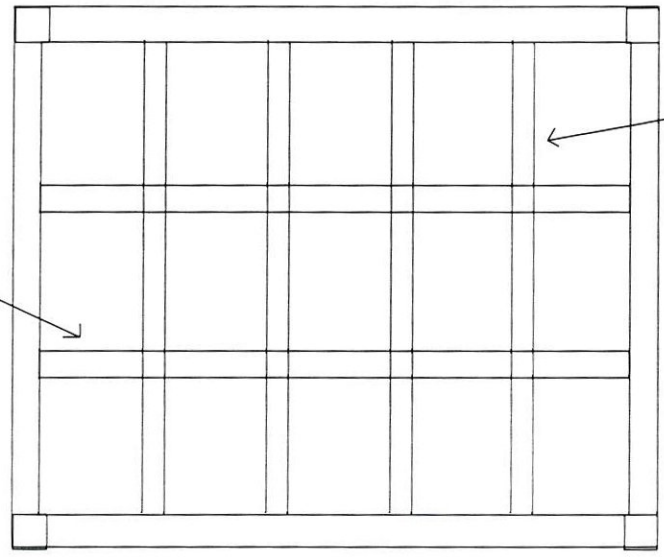
SIDE WALL VIEW





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