

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

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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

TECHNICAL SPECIFICATIONS FOR COLLAPSIBLE PORTABLE CABIN

Dimensions 20x10x9 Feet

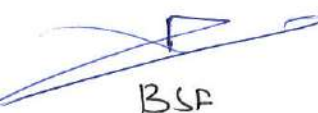
1. The work consists of design, supply, transportation and commissioning of the Lift and Shift Portable Cabins of dimensions (20 x 10 x 9 feet) with all electrical items and fittings. Should be fully knock down to carry.

2. Design Parameter: -

- (a) Seismic Zone - Zone V (Seismic Load as per IS 1893- Part 1: 2016)
- (b) Snow load - 1.5 KN on roof
- (c) Wind speed - 55 m/s (As per IS-875 Part 3 - 2015)
- (d) Temperature Range - (-) 10 to (+) 55 degree C
- (e) Roof slope - 1:4 approx as per drg
- (f) Fire Rating : - Fire Retardant
- (g) The product should be fully transportable in knocked down form.



Sl.	Components	Components Technical Description
01	Steel Structure & connections	Structure shall be fabricated of Rectangular Hollow Sections or built up section or specially designed for Columns and Trusses, Cold Form Folded Sections for purlins and runners. The steel structure shall be designed as per IS- 800:2007 and as per wind load conditions applicable for the area mentioned in IS-875 Part 3- 2015. All steel member surfaces will be prepared through wire brush with two coat primer and two coat enamel paint. The Structural framework shall design to withstand wind condition of 55m/s - in Seismic zone V and ambient temperature range (-) 10 degree C to (+) 55 degree C .The structural design shall be vetted by IIT/NIT/GEC and the cost shall be borne by the seller before supply



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02	Wall & Ceiling Cladding	The wall panels shall be made up of 50mm thick composite PUF sandwich between 0.5mm Pre-Painted Galvalume (PPGL) Sheet. The panels shall be made of micro ribbing Pre-Painted Galvalume Iron Sheet on both sides with 50mm thick layer of CFC/HCFC Free PU foam of density of $40 \pm 2 \text{ kg/m}^3$ as insulation. The insulated panels will have tongue groove arrangements with Camlock for panel to panel joining. The Pre-Painted Galvalume Iron Sheet shall have minimum 150 gsm of Alu and Zinc coating. The effective cover width of the panel shall be of standard dimensions and length of the panels shall be to suit as per site or as per transportable length. Metal sheet make- TATA/JSW/AMNS
03	Roofing	The secondary roofing sheets shall be constructed of 0.5 mm Pre-Painted Galvalume Steel (PPGL) Sheet in trapezoidal shape. The color of the top side sheet will preferably be (Off white or Olive Green) of 25 microns Regular Modified Polyester (RMP) coating over 5-7 microns Primer on the top side and 7-8 microns of backer coat over the primer on the bottom side of the sheet. Metal sheet make- TATA/JSW/AMNS
04	Flooring	The flooring shall be done using 18 mm HD cement fibre board over the bottom MS framework. And further 2mm Anti-static PVC vinyl sheet shall be provided over the cement board.
05	Insulated Door	Single leaf PUF insulated door of size 1000 x 2100 mm will be provided with specially designed 1.2mm of MS/PPGI frame with swing/overlap leaf of 50mm thickness. The insulated door shall be provided with all necessary fittings will be of SS 304 like, Al-drop, hinges, door handle etc. whichever is applicable as per layout. Canopy should be provided with door (As per directions of buyer.)
06	Windows	The Sliding Window shall be provided with of UPVC framed clear glass sliding window size (1175x900) mm will be provided with aluminium grill. The Canopy (Sunshade), mosquito mesh net will be provided on the outer side of wall. (As per directions of buyer.)

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07	Flashings & Hardware	The lift-able container shall be provided with 0.5mm thick Base U channel, Inner and outer L flashing, Ridge flashing, cover flashings etc. and silicon sealant, pop rivets, screw, nut and bolts etc. for proper connections. (As per directions of buyer.)			
08	Legs & Hooks	The legs (6mm thickness) shall be properly designed in order to the relevant geographical sites and as per the relevant IS codes. (As per directions of buyer.)			
09	Electrical Items		Electrical item	Qty.	Make & Modal
			Tube Light 22 W (Single)	04	As per relevant IS Standards
			16 Amp. Switch Socket	01	As per relevant IS Standards
			5 Amp. Switch Socket	04	As per relevant IS Standards
			32 Amp(only AC Point)	01	As per relevant IS Standards
			Wall Mounted Fan	04	As per relevant IS Standards
			MCB	01	As per relevant IS Standards
Wiring & cables used shall be of Finolex /Polycab /havells.					


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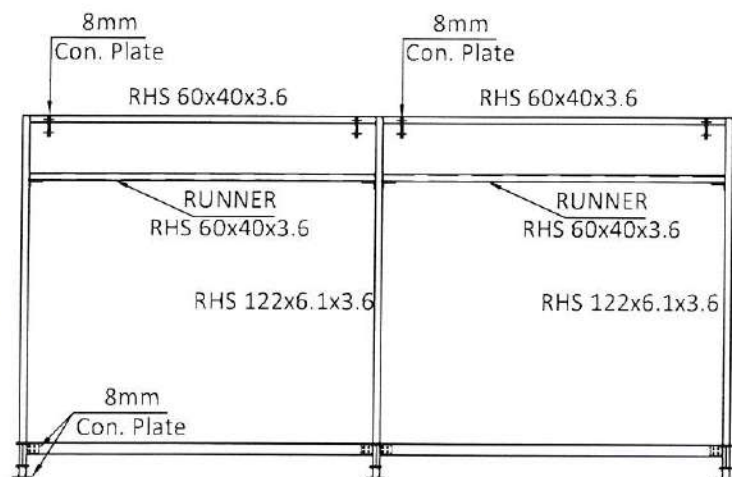

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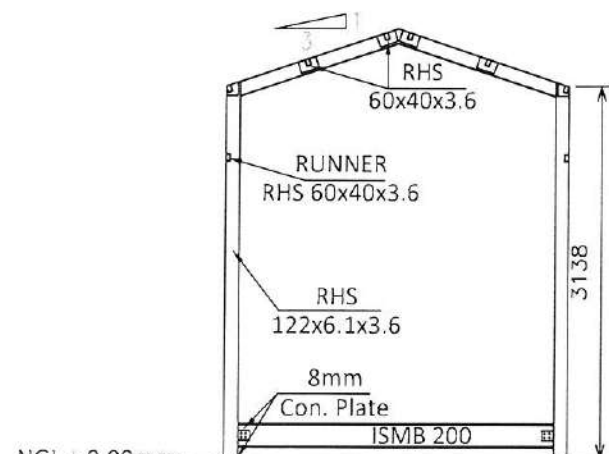
Approved / ~~Not Approved~~


Anish Dyal Singh, IPS
Director General, CRPF

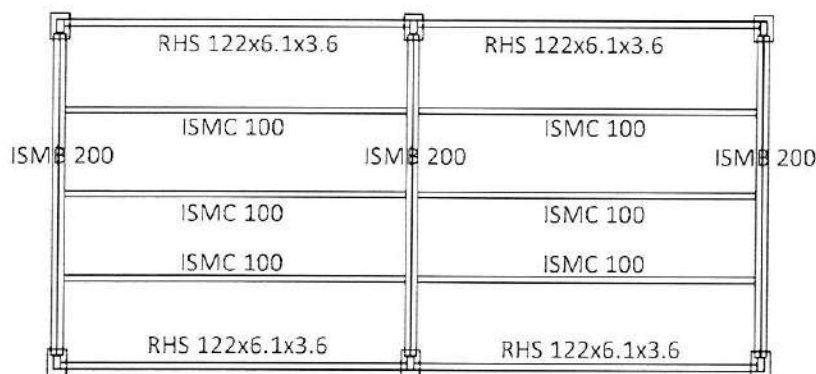
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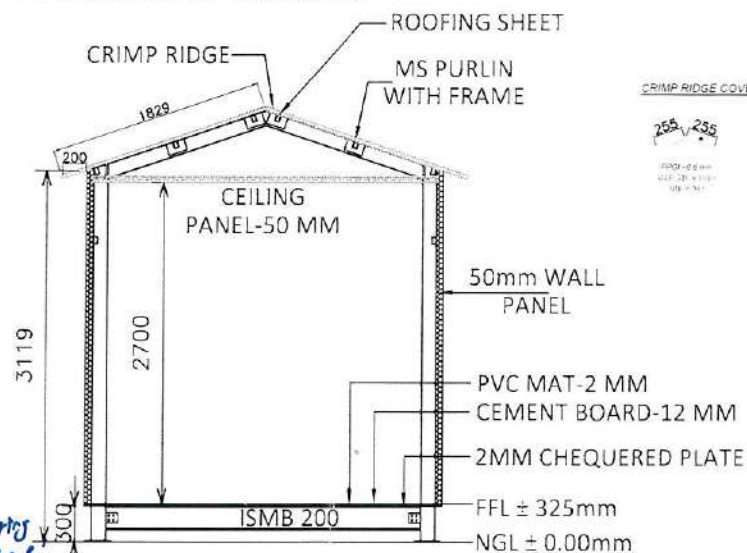
ELEVATION ALONG GRID 1 & 2



ELEVATION ALONG GRID A, B & C



FLOOR PLAN



CROSS SECTION VIEW OF PORTA

CONTRACTOR

DRAWING NO.

SHEET TITLE

REVISION

DATE

CPPL/24-25/GA 02

SUPER
STRUCTURE
DETAILS

SHELTER SIZE 20'x10'x9'
Portable (Lift & Shift Cabins)

NOTE - ALL DIMENSIONS ARE IN MM

11/08/2024

GOOD FOR FABRICATION
DISCUSSION

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)

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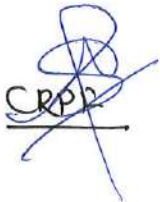
		with IPS Technology
x)	Battery Charging Current	Constant Charging approx. 10% of the rated Battery Current in AH
xi)	UPS Overload / UPS Short-circuit	110% / 300%

(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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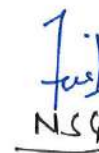

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Moving Excel – 36 Nos.
Right side 15 nos
Left side 15 nos
Front side 3 nos
Back side 3 nos

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. (standards)
- (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.

 3.

Design Data

- (a) Length – 5.80M















(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:-

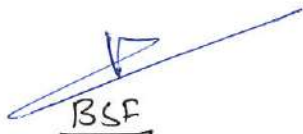
(a) **Collapsible Corner Columns (vertical).** Two Nos in each wall (total 4 in shelter) which are split into two parts of size 122mmx 61mmx2mm thick rectangular hollow section per IS code : 4923 & filling with rock wool for insulation. Fixing of 4 Nos clamp on top of shelter with holes for attachment 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 PER BUYER SPECIFICATION. Roof Panel to be filled with mineral/rock wool 50mm thick. 80Kg/Cum $\pm 5\%$ 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 $\pm$ 2 mm, 80 $\pm$ 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 $\pm$ 5% Kg/ Cum made from rock wool. The total thickness of the finished composite panel should be 50 $\pm$ 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 $\pm$ 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 $\pm$ 2kg per Cum of foam relevant IS Code.


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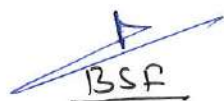

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16 Flooring.

Flooring will consist of following:-

a. Lower Outer Frame. Main frame 122mm x 61mm x 2 mm thick hollow 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 hollow 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 confirming 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.

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

TOP COLLAPSABLE BEAM

2355mm

2385mm

977mm

800mm

1200mm

2000mm

Door

Window

MOVING
HINGE

LEGS

SHS 40X40X1.6mm
MIDDLE COLLAPSABLE COLUMN

COLLAPSABLE WALL COLUMN

Subject to verify
as per plan & spec.

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FRONT WALL VIEW

BACK WALL VIEW

TOP BEAM SHS
60x60x2mm



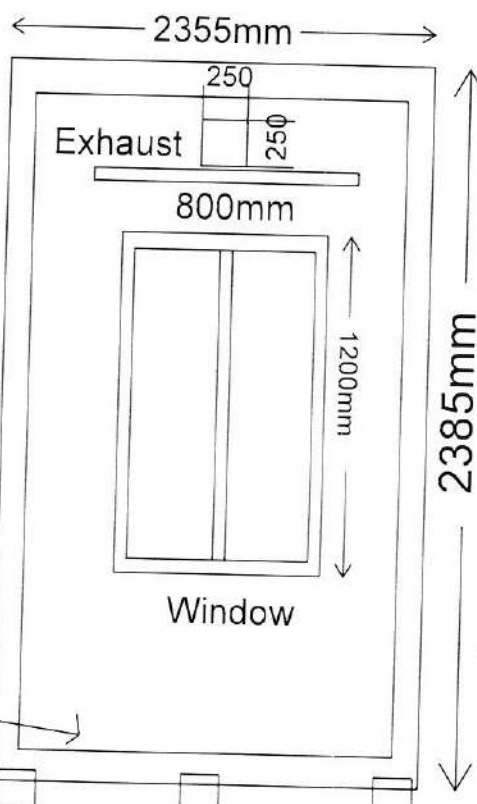
VERTICAL COLUMN
SHS
60x60x2mm

BOTTOM BEAM
SHS
60x60x2mm

Door

Window

Joining Excel 200mm



Exhaust

Window

Joining Excel 200mm

GABLE WALL

Subject to verify
on Para 22 of Rf

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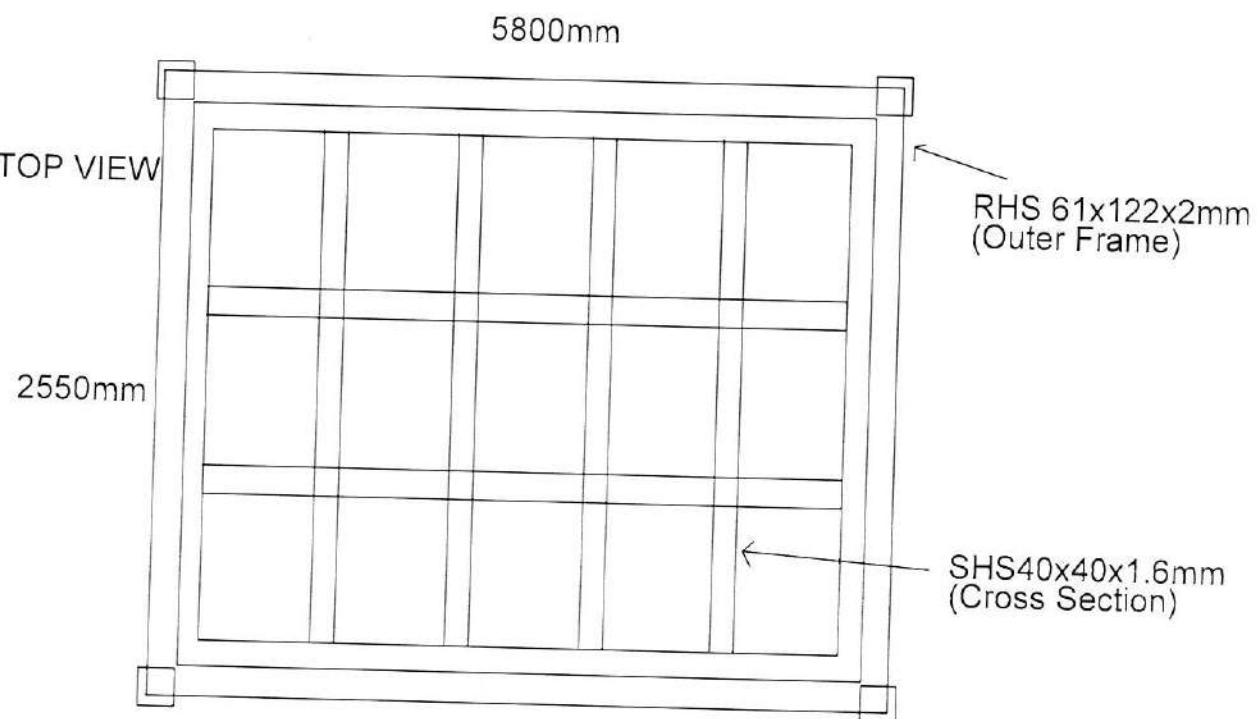
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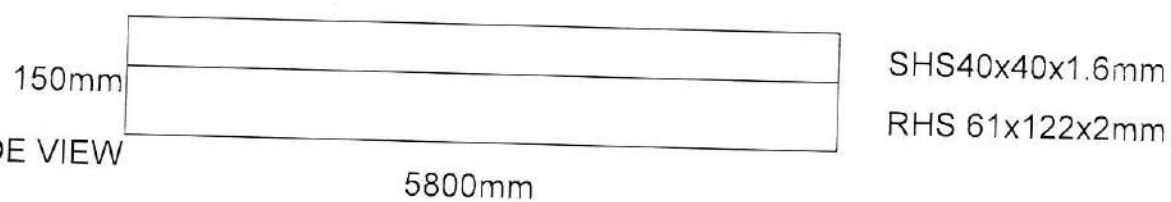
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FLOOR TOP VIEW



FLOOR SIDE VIEW



subject to voting
as per para 22 of a.r.
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SIDE WALL VIEW

TOP COLLAPSABLE BEAM RHS 61x122x2mm

CORNER COLLAPSABLE COLUMN
RHS 61x122x2mm

1155 mm

SHS 40x40x1.6mm

MOVING HINGE

Joining Excel 200mm

1155 mm

MIDDLE TIE BEAM
SHS 40x40x1.6mm

BOTTOM COLLAPSABLE BEAM

RHS 61x122x2mm

SHS 40X40X1.6mm
MIDDLE COLLAPSABLE COLUMN

subject to voting
on 1st Jan 22 8am
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ROOF TOP VIEW

HORIZONTAL TIE BEAM
SHS 40X40X1.6mm

5800 mm

2355mm VERTICAL TIE BEAM
SHS 40X40X1.6mm

2550 mm
OUTER FRAME

RHS
61x122x2 mm

BSP

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mm.
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SSB

*Subject to vetting of
in parallel of at
CRPE*

CRPE

ROOF SIDE VIEW

280 mm

100 mm

5800mm

Side Clamp

SHS 40X40x1.6 mm
RHS 60x122x2 mm

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

TECHNICAL SPECIFICATIONS Living accommodation G+1: 21.97M (72 feet)
X 5.486M (18 feet) X 5.79M (19 feet)

1. DESCRIPTION OF WORK

Construction of Prefabricated shelter using PUF Panels, Steel Structure, false ceiling, door & aluminum windows at various locations in all respects as per the concept drawings attached including design, supply, installation, and electrical wiring works, as per the general specifications as detailed below. The entire structure should be fully transportable in knocked down form. At the time of shifting, the vendor shall invariably supply all the consumables such as- hardware, flashing and other necessary items for reinstallation of hut.

2. DESIGN PARAMETER

The prefabricated structures shall be designed for a minimum life span of 20 years with 1:4 slope covering wind velocity of up to 50m/s, Seismic Zone V, and ambient temperature ranging from -10 to 55 degrees 'C'. The manufacturer/supplier shall get the structural drawing/layout vetted by IIT/NIT/GEC at their own cost before the supply.

3. DIMENSIONS

All the dimensions as indicated in the drawings.

G+1 Structure 21.97M (72 feet) X 5.486M (18 feet) X 5.79M (19 feet).

Prefabricated shelter clear height below false ceiling shall be 2.85m for ground floor and 2.67m for the first floor. The shelter center ridge height shall be 5.79 Mtr.

4. WALL PANELS (MAKE – JSW/TATA BHUSHAN)

4.1 The Wall Panel Shall be made up of 0.5mm thick(TMT) PPGL ribbed sheet on both side with a layer of rigid CFC free polyurethane foam of density 40 Kg $\pm$ 2Kg/cum as insulation in between. The Polyurethane foam shall be of latest IS. The thickness of PU foam layer shall be 49mm for having 50mm thick PUF panel . Outside colour of wall panel may be Olive Green/Off White or as per buyer requirement. The panels will be provided with tongue and groove joint and will be interlocked using cam lock systems. Gable ends will also be covered with same panels as in the main walls.

4.2 The wall panels exposed edges at bottom & top side shall be covered using bottom & top U track of size 53mm X 35mm X 0.5mm made out of PPGL Sheet & shall be secured to the wall panels using pop rivets. The U track at bottom shall be fixed onto the concrete plinth using anchor fasteners of 8mm diameter & 80mm in length provided at a spacing of 450mm c/c.

4.3 The PUF Panels shall be vertically joined together by tongue & groove arrangement all along the length. The wall panels shall be fixed to the steel frame structure on top & bottom using Nuts/Bolts/Screw tightened through the steel frame cleats for wall strength & sturdiness. Wall Panels at Gable ends will also be covered.


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4.4 The joints all around the wall panels shall be joined & covered by means of PPGL flashing of size 50 x 50 x 0.50mm fixed using pop rivets at a minimum distance of 200mm on all exposed faces. All the wall joints shall be sealed with transparent/white color silicon sealant.

4.5 The PPGL Sheets shall be of minimum 350MPA Steel Grade & Shall has Aluminum and Zinc coating of minimum 150 GSM as per IS 277/1992. The PPGL Sheets/ PUF Panels shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation.

5. FALSE CEILING(MAKE – JSW/TATA BHUSHAN)

5.1 False ceiling shall be provided in the living area only (Excluding Verandah) using 40mm thick PUF panels made up of 0.5mm thick PPGL sheet with guard film having ribbing pattern for aesthetic appearance on both sides with a uniform layer of 39 mm thick rigid CFC free PUF .

5.2 The False Ceiling Panels shall be fixed & supported onto the steel framework consisting of MS Painted L / T Sections. The False Ceiling shall be fixed to the structural steel framework of shelters using cleats & Nuts/ Bolts. The size of L angle will be 40 x 40 x 5mm & the size of T will be 65 x 65 x 6mm. The Joints all around the wall panels & false ceiling shall be joined & covered by means of PPGL flashing of size 50 x 50 x 0.50mm fixed using pop rivets at a minimum distance of 200mm. All the false ceiling joints shall be sealed with transparent/white color silicon sealant. The false ceiling panels will have a tongue and groove arrangement.

6. PUF SPECIFICATIONS

6.1 All material required for the manufacturer of shelter shall be new and shall comply with relevant Bureau of Indian Standard Specification.

- All panels should have tongue and groove profile on all joining edges.
- All panels will be manufactured in single batch as per approved panel layout drawings using the above materials.
- Original Purchase voucher and test certificate will be submitted and the purchase can carry out inspection of any one panel from the lot at manufacturer premises to ensure the chemical and physical properties.
- The color inside and external wall panel will be as per buyer requirement of approved shade.

6.2 PUF panels shall be manufactured by Continuous/Discontinuous Line process using high-quality chemicals using blowing agents which have properties conforming to global & environmental guidelines, approved by UNDP

- a) ZERO Ozone Depleting Potential
- b) ZERO Global Warming Potential
- c) EXEMPT from Volatility Organic Compounds (VOC) Category
- d) Kyoto & Montreal Protocol Compliant


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6.3 The material shall be fire-resistant and shall have excellent self-extinguishing characteristics.

6.4 Panels manufactured shall conform to latest IS Standards.

6.5 All panels should have tongue and groove profile on all joining edges with a projection of 10mm and 25mm wide for airtight sealing of the joints/ (optional item)-5mm open-sealed EPDM (Ethylene Propylene Diene Monomer) tape shall be provided during the production process for enhancing air tightness.

7. ROOFING (MAKE – JSW/TATA BHUSHAN/AMNS)

The Roof shall be provided in a two way slope of 1:4 ratio with PPGL Trapezoidal color coated conforming IS-14246 Sheet of 0.5mm thick. The Roof shall have minimum projection of 300 mm from the eaves wall & will be flushed at Gable Wall. The Roof Sheets shall be fixed on to the structural steel framework using 5x95mm self-tapping self-drilling screws with suitable EPDM seal Fasteners with suitable washers complete up to the pitch of the Sheet. The Roof Sheeting Junction at center will be covered with 0.50 mm thick PPGL Ridge cover of Size 300 x 300 mm fixed over the Roof Sheeting & on the Structural Steel Frame Work using 95mm self-Tapping self-drilling Screws with suitable Rubber Fasteners. The roof will have a minimum projection of 300mm all around the Eaves & Gable Walls. The PPGL sheet shall be of minimum 350 MPA Steel grade & shall have Aluminum Zinc Coating of minimum 150 GSM as per IS 277/1992. The PPGL Sheets shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation. Provision for outlets of Pipes of Bukhari in wall area with suitable installation in cold region as per requirement of the buyer.

8. FLASHING (MAKE – JSW/TATA BHUSHAN)

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It will be the responsibility of the contractor to fix & cover all joints using proper & suitable Size PPGL Flashing of 0.50mm Thickness. The PPGL Sheets shall be of minimum 240 Mpa Steel grade & shall have Aluminum and Zinc coating of minimum 120 GSM as per IS 277/1992. The PPGL Sheets / PUF Panels shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation.

9. DOORS (AS PER DRAWINGS) 4 nos

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Door shutter shall be made from 50 MM PUF Insulated having 0.5mm PPGL sheet with 1.20 mm PCGI frame of size 2100 x 1000 mm outer dimension. The Door Frame will be made up of suitable designed pressed Steel Profile section in approved Colour in 1.20 mm thickness GI. The door Shutter will be made up of Panel covered with Aluminum/PCGI Lipping all around. Each Door shall be provided with ISI marked Aluminum fitting such as 1 no. 300mm L drop Bolt, 2 Nos D Shaped Handles of 150mm, 1 Nos Tower Bolt of Size 200mm and 1 Nos Tower Bolt of Size 100mm. The Door shutter shall be fixed to the frame using 4 Nos MS BUTT Hinges (100 mm each).

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10. WINDOWS & SUNSHADES (AS PER DRAWINGS) 12 nos

Aluminum 2-way sliding windows with fixed mesh from the outside & Aluminum Grills with all fittings shall be provided as per the drawings. The window frame of size 1000 x 1000 mm will be manufactured using suitable standard Aluminum hollow section/ profile. The window shall be provided with 3 mm thick clear Polycarbonate sheet fixed using EPDM rubber beading. The window shall also be provided with stainless steel mesh of 1.5 mm aperture & Aluminum grills fixed from outside of the window using suitable size Aluminum flats & rivets. 12 nos windows are to be provided as per drawing. (1.20 mm thickness PCGI)

11. SUNSHADE

Suitable Sunshades made out of 0.50mm PPGL Sheets will be provided to all external Windows and doors. The Minimum projection for the sunshades will be 450 mm and 300 mm wider than the width of the opening. It should be suitably fastened with the main structure.

12. CURTAIN ROD ARRANGEMENT

25 mm diameter SS 304/MS powder coated fancy type drapery rod with fixing arrangements will be provided for all openings (Door and Windows). The drapery rod should be minimum 450 mm longer than the width of the opening.

13. PEG SET

40 Nos Aluminum twin peg Set / Coat Hook of 100 mm in size to be provided inside the shelter at a height of 1.8M fitted with Galvanized Screw.

14. STRUCTURAL STEEL FRAMEWORK (AS PER DRAWING)

14.1 The structural steel framework shall consist of RHS sections conforming to IS 4923/1997. The framework shall consist of Trusses, Purlins, columns, etc. The steel frame should be shot blasted to SA 2.5 standard with 2 coats of Zinc chromate/zinc rich primer. The steelwork shall be painted with 2 coats of synthetic Enamel paint of approved shade (smoke grey) & make. The main shelter column of NPB 250 (30.11kg/m)/ IS 808 provided at a distance as per drawing. The column bottom end plate size (as per drawing) shall be fixed to the concrete floor using 6 nos foundation bolts of 24 mm Dia & 600 mm long with suitable washers & nuts & bolts. The column shall also have a top plate of size (as per drawing) for connection with the truss plate.

14.2 The Roof trusses shall be made up using RHS section of 96 x 48 x 4 mm at the top & bottom cord of the truss and minimum 48 x 48 x 2.9mm thick internal members. The trusses shall be fixed on to the columns with connection plates 12 mm thick & tightened with the help of nuts & bolts. Trusses are to be provided at a distance of 3000mm c/c and shall be supported on truss columns.

14.3 Purlins made up of RHS of size 96 X 48 X 4mm & shall be fixed between the trusses with suitable Cleats & Nuts & Bolts as per the drawing attached.

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14.4 For Mezzanine Floor, Main beam NPB 250 (30.11kg/m)/IS 808 and Cold Formed Joist will be provided as mentioned in drawing.

14.5 The Steel Structure sections mentioned above are of minimum Sizes to be used & indicative. Higher section sizes & thickness can be adopted. The Shelters will be designed for the Design Parameters & Drawings as indicated in the Specifications mentioned above. (APL/JSPL/SURYA/TATA/AMNS/SAIL)

15. WORKMANSHIP

- (a) **Connection:** Nut-Bolt connection will be provided unless otherwise specified in the Drawings. The welded connections will be conformed to IS 806-1968.
- (b) **Fabrication:** The General Provisions in section 11 of IS 800 of 1984 will apply to all types of steel being used for fabrication.
- (c) **Various Fasteners and Fittings:** Fasteners and fittings of 8.8 Grade (HT) shall be supplied unless otherwise specified in and shall be fixed where required. Fastening means will be provided for the items to be fitted at the time of erection. The Fasteners supplied shall conform to the relevant latest BIS Specification.
- (d) **Finishes:** All Steel work will be shot blasted to SA 2.5 STD and given two coats of Zinc chromate/zinc rich Primer by the manufacturer in the factory. All the Steel items shall be painted using 2 coats of synthetic Enamel Paint of approved shade. All Paint Materials will be of Jenson & Nicholson/Berger/ Asian/JSW make, color -Smoke Grey or as per buyer. Over all DFT should be minimum 120 Micron

16. CIVIL WORKS

Foundation, Flooring & finishing Works - to be provided by Indenter/ Consignee as per the drawings.

17. ELECTRICAL WIRING AND POINTS

17.1 The electrical wiring points shall be provided within the structure only. Provision for connecting to the main line shall be done by the client. All the wiring and fittings used shall conform to ISI Mark and shall be of good brands (V Guard/ Havells/ Finolex/ Poly cab/or similar).

17.2 All wiring used shall be conforming to IS 694. All conduits shall be round PVC 25mm diameter medium grade conforming to IS 9537 Part 3. All sockets/switchboards shall be of modular design. MCB, Distribution boxes shall be ISI marked of reputed make. Earthing shall conform to IS 3043. 2 Lightning arresters per building shall be provided as per Standard Specification (Anchor/ Havells/ L&T/or similar).

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- 1) Light Point Copper Wiring using 1.5 Sq. mm PVC insulated Cables over the surface using PVC 25 mm diameter medium grade conduits with PVC Modular Design Switch Boxes, Modular Switches, Sockets, PVC lamp holders/Ceiling rose etc complete.
- 2) Power Point Copper Wiring using 4.0 Sq. mm PVC insulated cables over the surface using PVC 25 mm diameter medium grade conduits with PVC Modular Design Switch Boxes, Modular Switches, Sockets etc complete.
- 3) Sub main wiring Three phase cable (4 core) 4mm sq wire (distance from main line to be confirmed)
- 4) Supply and fixing of approved make powder coated Steel Sheet Distribution Box including Bus Bar, Neutral Bar and Earth Bar complete in all respects as per IS 13032. The DB shall also have required MCB and isolator of ISI Marked as per approved make.

18. MEZZENINE FLOORING

18.1 The inside flooring shall be done using **18 mm Heavy duty cement fiber board** over the bottom MS framework. And further **2mm Anti-static PVC vinyl sheet** shall be provided over the cement board. Make- Everest/ Visaka/ Equivalent

18.2 The verandah flooring shall be of 3mm MS chequered sheet over the base framework.

19. STAIRCASE WITH RAILING

For Staircase, Main beam ISMC 100 shall be used as per the drawing. The flooring shall be of 3mm MS chequered plated. The railing shall be made up of 38x38x2.6mm RHS pipe with paint and primer same as primary steel structure.


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20. VERANDAH WITH RAILING

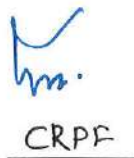
For verandah flooring, 3mm MS chequered plate will be used as per the drawing. The railing shall be made up of 38x38x2.6mm RHS pipe with paint and primer same as primary steel structure.


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Requirement of electrical fittings

Sl. No.	Description	Quantity
1.	Fan Points With Hook & Fan Regulators with switch	16
2.	Light Points With 1.5 Sq Mm Wire with switch	24
3.	Power Points with 4.0 Sq Mm Wire with switch	8
4.	5 Amp Socket with 3 point charging socket with switch	40
5.	15 Amp Socket with switch	10
6.	25 Mm PVC Round Conduits Complete with Bends	As per qty
7.	32 Mm PVC Flat Conduits Complete with Cover	As per qty
8.	1.5 Sq Mm Copper Wire, 90 Mtr Bundles In 3 Colors	As per qty
9.	4.0 Sq Mm Copper Wire, 90 Mtr Bundles In 3 Colors	As per qty
10.	Main Modular Board-4 Way	8
11.	Main Modular Board-6 Way	4
12.	Main Modular Board-8 Way	4
13.	Single Pole MCB-16 Amp	12
14.	Single Pole MCB-32 Amp	8
15.	Single Pole + Neutral MCB-32 Amp	4
16.	Three Pole + Neutral MCB-40 Amp	1
17.	Suitable Size Distribution Box	2
18.	Bulk LED head lamp of 25W	12

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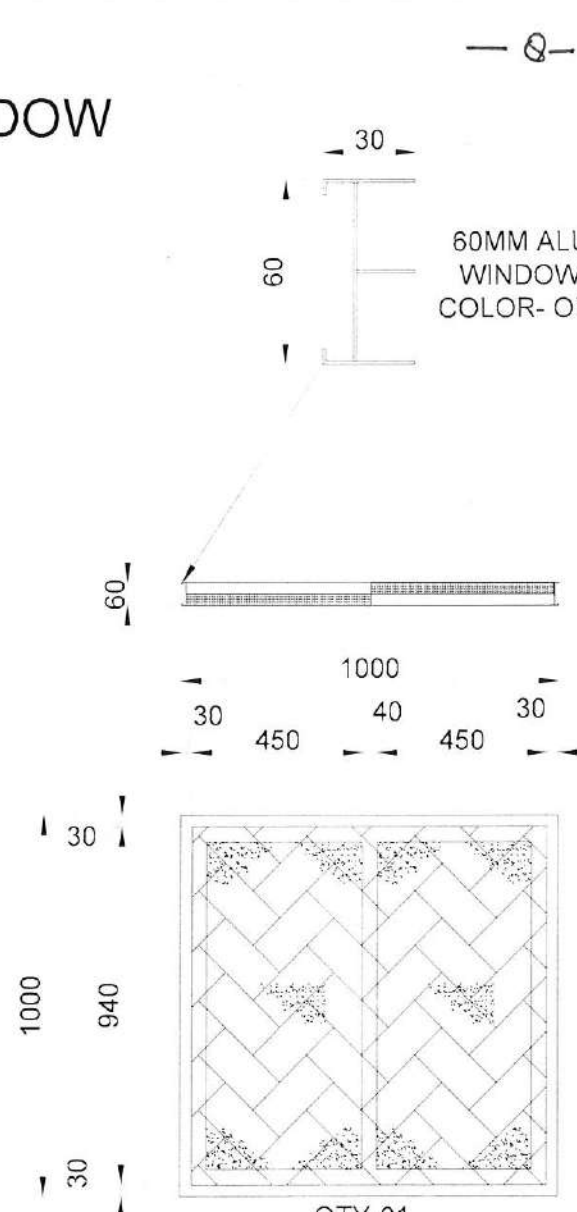
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Approved / ~~Not Approved~~

Anish Dajal Singh, IPS
Director General, CRPF

2 TRACK SLIDING WINDOW
WITH MOSQUITO NET



60MM ALUMINIUM
WINDOW FRAME
COLOR- OFF WHITE

QTY-01
2 TRACK ALUMINIUM
SLIDING WINDOW
WITH MOSQUITO NET
(SIZE-1000X1000 MM)

Subject to vetting as
Per Para 2 of Q.F.
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CLIENT:

SITE:

Date 09-07-2024

PAGE

SCALE:

Drawn by

Checked by

Approved by

Rev No.

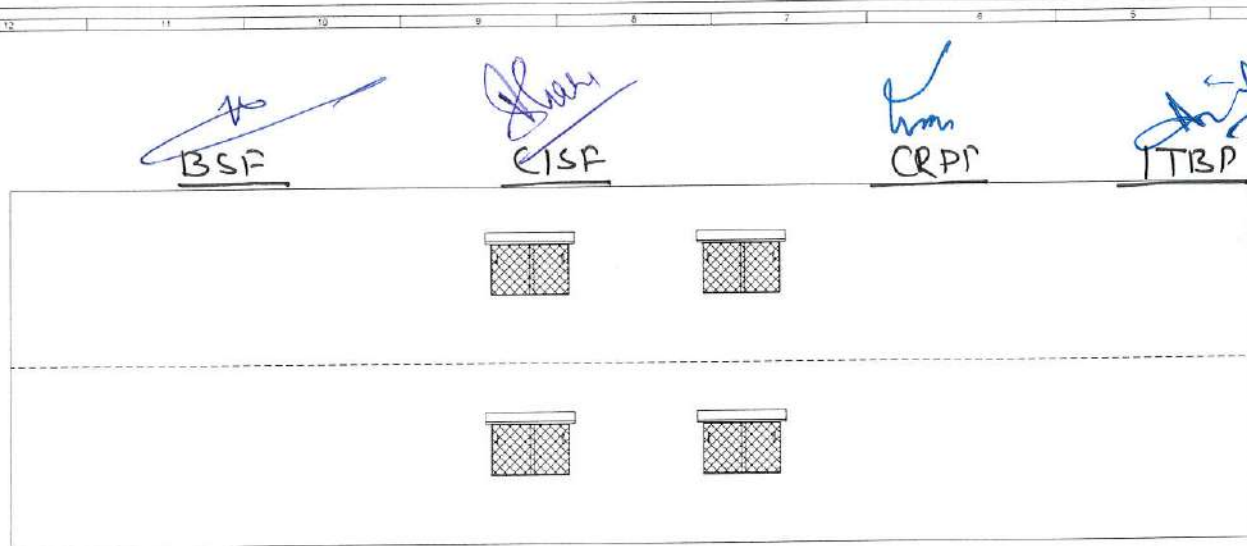
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Dwg. No.

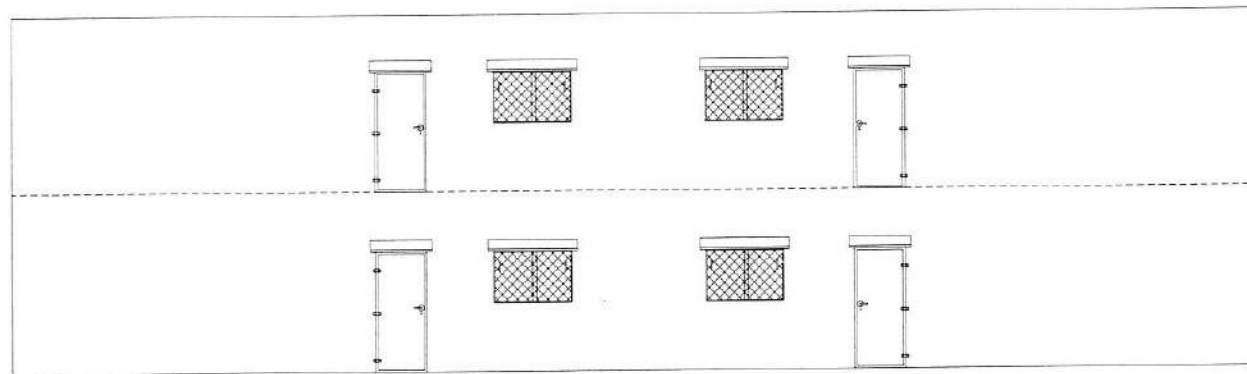
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Schedule No.

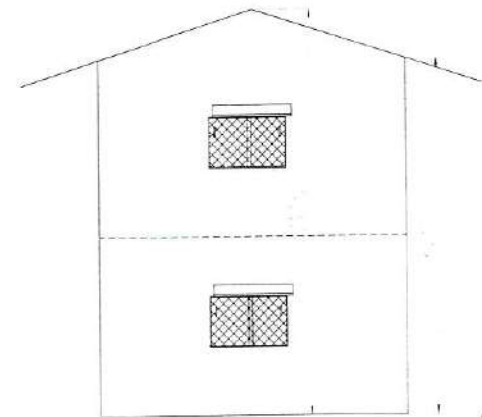
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BACK



FRONT



LEFT

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'subject to existing
plan panel of 2.2'

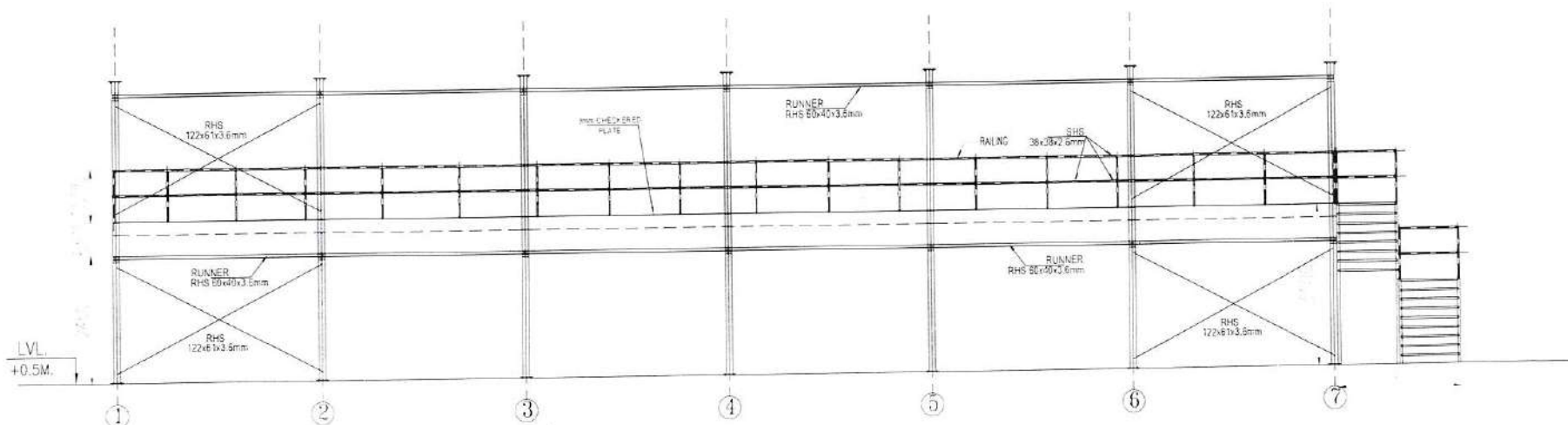
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CONTRACTOR	DRAWING NO.	SHEET TITLE	REVISION	DATE
			NOTE - ALL DIMENSIONS ARE IN MM	10/06/2024
			GOOD FOR FABRICATION	
			DISCUSSION	

ELEVATION

Shelter Size 72'x18'x19'
Living accommodation G+1

-11-



ELEVATION GRID B

BSB

CISP

CRPF

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CONTRACTOR

DRAWING NO.

ELEVATION DETAIL
ALONG GRID B

SHEET TITLE

Shelter Size 72'x18'x19'
Living accommodation G+1

REVISION

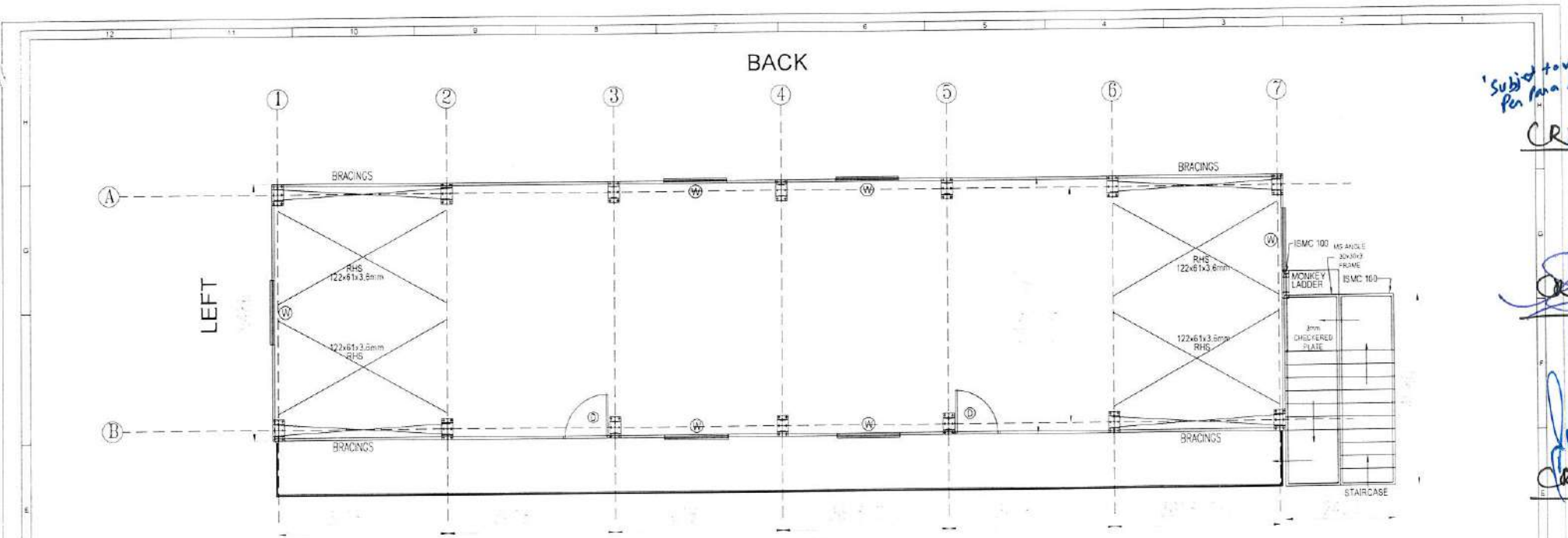
DATE

NOTE:- ALL DIMENSIONS ARE IN MM

10/06/2024

GOOD FOR FABRICATION
DISCUSSION

-12-



Subj to visiting
Per Para 2 of ad
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FRONT

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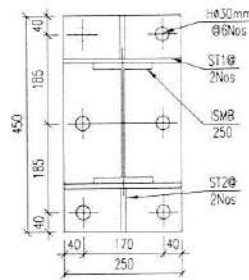
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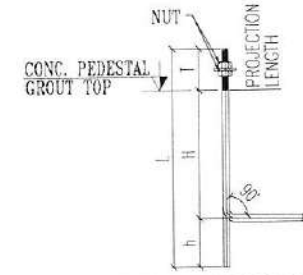
SSB

SCHEDULE OF DOOR & WINDOW :

Sr. N.	MARK	ITEMS	SIZE(WxH)mm	Qty (No)	Remark
D		DOOR	1200x2100	08	
W		WINDOW	1200x1200	12	



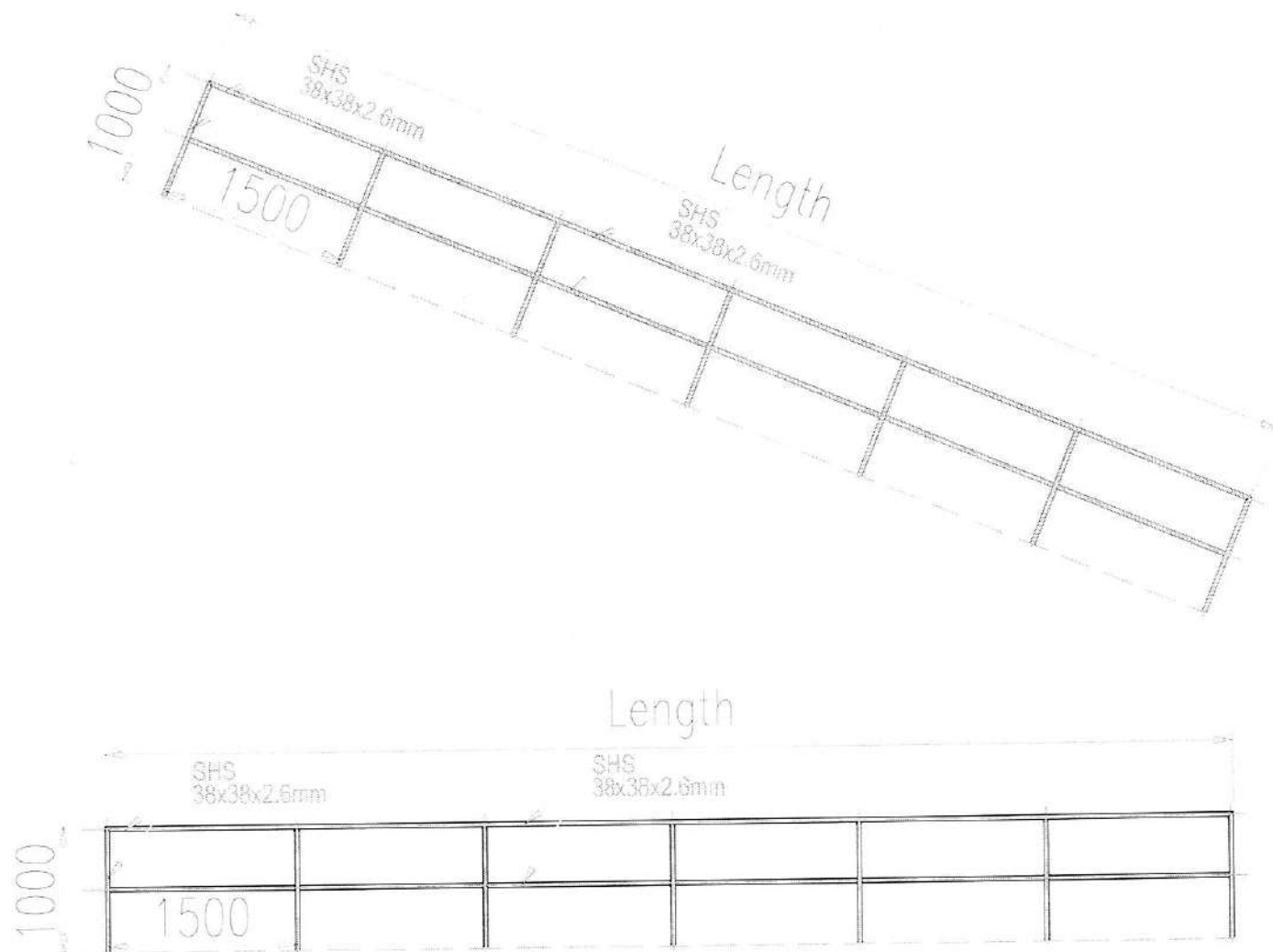
BASE PLATE
250x450x20mm



TYPICAL ANCHOR BOLT DETAIL

Sr. N.	T(mm)	H(mm)	h(mm)	L(mm)	Qty (No)
1.	100	600	100	800	84

CONTRACTOR	DRAWING NO.	SHEET TITLE	REVISION	DATE
		Shelter Size 72'x18'x19' Living accommodation G+1	NOTE - ALL DIMENSIONS ARE IN MM	10/06/2024
		LAYOUT PLAN	GOOD FOR FABRICATION	
			DISCUSSION	



Subject to vetting
on 1st Feb 2024

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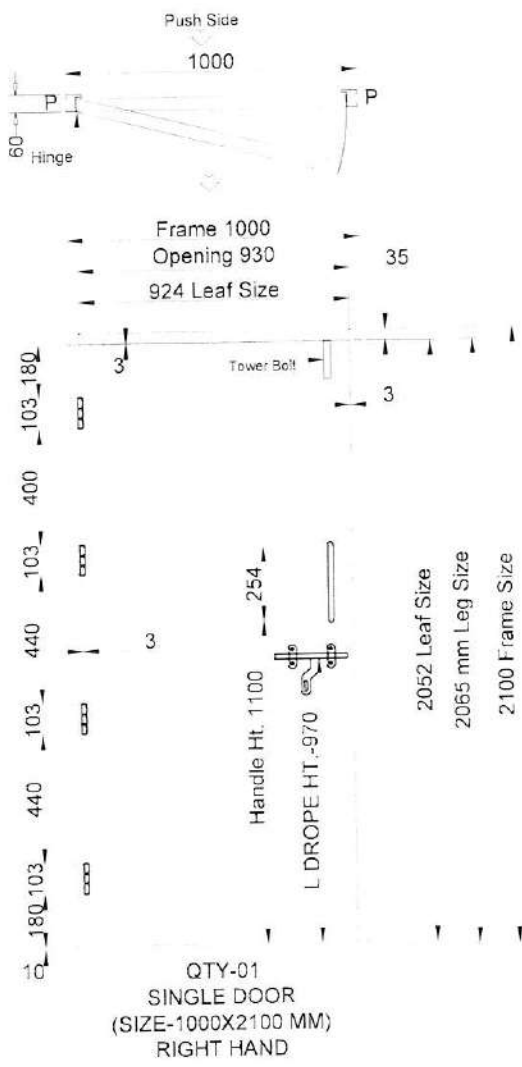
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SHELTER PUF DOOR

subject to vetting
as per para 2 of CRP
CRPA



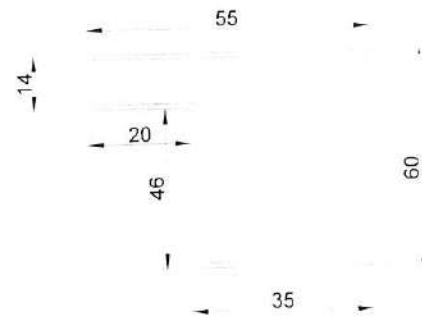
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CRPA

1 TRP

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NSG

SSB



60MM DOOR FRAME
FOR PUF PANEL

Door frame made of 1.2mm thk. GI Sheet & leaf
of 40mm thickness made of 0.8mm thk. PPGI Sheet
Infill - (PUF)

- SS 'D' Handle
- SS 304 Ball bearing hinges.
- Door Seal
- L DROP (kundi)
- Tower Bolt
- Color:- Ral-9002 off white

CLIENT:

SITE:

Date :- 09-07-2024

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Drawn by :-
Checked by :-
Approved by :-

Rev No. :-
Rev Date :-
Dwg. No. :-
Job Order No. :-
Schedule No. :-
Eng No. :-

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

TECHNICAL SPECIFICATIONS LIVING ACCOMMODATION G+1:
10.98 M (36 feet) X 5.486M (18 feet) X 5.79M (19 feet).

1. DESCRIPTION OF WORK

Construction of Prefabricated shelter using PUF Panels, Steel Structure, false ceiling, door & aluminum windows at various locations in all respects as per the concept drawings attached including design, supply, installation, and electrical wiring works, as per the general specifications as detailed below. The entire structure should be fully transportable in knocked down form. At the time of shifting, the vendor shall invariably supply all the consumables such as- hardware, flashing and other necessary items for reinstallation of hut.

2. DESIGN PARAMETER

The prefabricated structures shall be designed for a minimum life span of 20 years with 1:4 slope covering wind velocity of up to 50m/s, Seismic Zone V, and ambient temperature ranging from -10 to 55 degrees 'C'. The manufacturer/supplier shall get the structural drawing/layout vetted by IIT/NIT/GEC at their own cost before the supply.

3. DIMENSIONS

All the dimensions as indicated in the drawings.

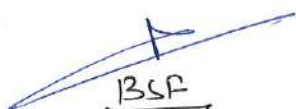
G+1 Barrack 10.98 M (36 feet) X 5.486M (18 feet) X 5.79M (19 feet)

 Prefabricated shelter clear height below false ceiling shall be 2.85m for ground floor and 2.67m for the first floor. The shelter center ridge height shall be 5.79 Mtr.

4. WALL PANELS (Make – JSW/TATA BHUSHAN)


 4.1 The Wall Panel Shall be made up of 0.5mm thick(TMT) PPGL ribbed sheet on both side with a layer of rigid CFC free polyurethane foam of density 40 Kg $\pm$ 2Kg/cum as insulation in between. The Polyurethane foam shall be of latest IS. The thickness of PU foam layer shall be 49mm for having 50mm thick PUF panel. Outside colour of wall panel may be Olive Green/Off White or as per buyer requirement. The panels will be provided with tongue and groove joint and will be interlocked using cam lock systems. Gable ends will also be covered with same panels as in the main walls.

4.2 The wall panels exposed edges at bottom & top side shall be covered using bottom & top U track of size 53mm X 35mm X 0.5mm made out of PPGL Sheet & shall be secured to the wall panels using pop rivets. The U track at bottom shall be fixed onto the concrete plinth using anchor fasteners of 8mm diameter & 80mm in length provided at a spacing of 450mm c/c.


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4.3 The PUF Panels shall be vertically joined together by tongue & groove arrangement all along the length. The wall panels shall be fixed to the steel frame structure on top & bottom using Nuts/Bolts/Screw tightened through the steel frame cleats for wall strength & sturdiness. Wall Panels at Gable ends will also be covered.

4.4 The joints all around the wall panels shall be joined & covered by means of PPGL flashing of size 50 x 50 x 0.50mm fixed using pop rivets at a minimum distance of 200mm on all exposed faces. All the wall joints shall be sealed with transparent/white color silicon sealant.

4.5 The PPGL Sheets shall be of minimum 350MPA Steel Grade & Shall have Aluminum and Zinc coating of minimum 150 GSM as per IS 277/1992. The PPGL Sheets/ PUF Panels shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation.

5. FALSE CEILING (Make – JSW/TATA BHUSHAN)

5.1 False ceiling shall be provided in the living area only (Excluding Verandah) using 40mm thick PUF panels made up of 0.5mm thick PPGL sheet with guard film having ribbing pattern for aesthetic appearance on both sides with a uniform layer of 39 mm thick rigid CFC free PUF .

5.2 The False Ceiling Panels shall be fixed & supported onto the steel framework consisting of MS Painted L / T Sections. The False Ceiling shall be fixed to the structural steel framework of shelters using cleats & Nuts/ Bolts. The size of L angle will be 40 x 40 x 5mm & the size of T will be 65 x 65 x 6mm. The Joints all around the wall panels & false ceiling shall be joined & covered by means of PPGL flashing of size 50 x 50 x 0.50mm fixed using pop rivets at a minimum distance of 200mm. All the false ceiling joints shall be sealed with transparent/white color silicon sealant. The false ceiling panels will have a tongue and groove arrangement.

6. PUF SPECIFICATIONS

6.1 All material required for the manufacturer of shelter shall be new and shall comply with latest relevant Bureau of Indian Standard Specification.

- All panels should have tongue and groove profile on all joining edges.
- All panels will be manufactured in single batch as per approved panel layout drawings using the above materials.
- Original Purchase voucher and test certificate will be submitted and the purchase can carry out inspection of any one panel from the lot at manufacturer premises to ensure the chemical and physical properties.

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- The color inside and external wall panel will be as per buyer requirement of approved shade.

6.2 PUF panels shall be manufactured by Continuous/Discontinuous Line process using high-quality chemicals using blowing agents which have properties conforming to global & environmental guidelines, approved by UNDP

- a) ZERO Ozone Depleting Potential
- b) ZERO Global Warming Potential
- c) EXEMPT from Volatility Organic Compounds (VOC) Category
- d) Kyoto & Montreal Protocol Compliant

6.3 The material shall be fire-resistant and shall have excellent self-extinguishing characteristics.

6.4 Panels manufactured shall conform to latest IS Standards.

6.5 All panels should have tongue and groove profile on all joining edges with a projection of 10mm and 25mm wide for airtight sealing of the joints/ optional item - 5mm open-sealed EPDM (Ethylene Propylene Diene Monomer) tape shall be provided during the production process for enhancing air tightness.

7. ROOFING (Make – JSW/TATA BHUSHAN/AMNS)

The Roof shall be provided in a two way slope of 1:4 ratio with PPGL Trapezoidal color coated conforming IS-14246 Sheet of 0.5mm thick. The Roof shall have minimum projection of 300 mm from the eaves wall & will be flushed at Gable Wall. The Roof Sheets shall be fixed on to the structural steel framework using 5 x 95mm self-tapping self-drilling screws with suitable EPDM seal Fasteners with suitable washers complete up to the pitch of the Sheet. The Roof Sheeting Junction at center will be covered with 0.50 mm thick PPGL Ridge cover of Size 300 x 300 mm fixed over the Roof Sheeting & on the Structural Steel Frame Work using 95mm self-Tapping self-drilling Screws with suitable Rubber Fasteners. The roof will have a minimum projection of 300mm all around the Eaves & Gable Walls. The PPGL sheet shall be of minimum 350 MPA Steel grade & shall have Aluminum Zinc Coating of minimum 150 GSM as per IS 277/1992. The PPGL Sheets shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation. Provision for outlets of Pipes of Bukhari, in wall area with suitable installation, in cold region as per requirement of the buyer.

8. FLASHING (Make – JSW/TATA BHUSHAN/AMNS)

It will be the responsibility of the contractor to fix & cover all joints using proper & suitable size PPGL Flashing of 0.50mm Thickness. The PPGL Sheets shall be of minimum 350 Mpa Steel grade & shall have Aluminum and Zinc coating of minimum 150 GSM as per IS 277/1992. The PPGL Sheets / PUF Panels shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation.


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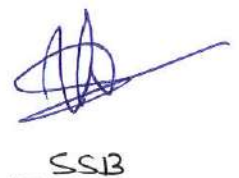

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9. DOORS (AS PER DRAWINGS) 4 nos

Door shutter shall be made from 50 MM PUF Insulated having 0.5mm PPGL sheet with 1.20 mm PCGI frame of size 2100 x 1000 mm outer dimension. The Door Frame will be made up of suitable designed pressed Steel Profile section in buyer approved Colour in 1.20 mm thickness GI. The door Shutter will be made up of Panel covered with Aluminum/PCGI Lipping all around. Each Door shall be provided with ISI marked Aluminum fitting such as 1 no. 300mm L drop Bolt, 2 Nos D Shaped Handles of 150mm, 1 Nos Tower Bolt of Size 200mm and 1 Nos Tower Bolt of Size 100mm. The Door shutter shall be fixed to the frame using 4 Nos MS BUTT Hinges (100 mm each)

10. WINDOWS & SUNSHADES (AS PER DRAWINGS) 8 nos

Aluminum 2-way sliding windows with fixed mesh from the outside & Aluminum Grills with all fittings shall be provided as per the drawings. The window frame of size 1000 x 1000 mm will be manufactured using suitable standard Aluminum hollow section/ profile. The window shall be provided with 3 mm thick clear Polycarbonate sheet fixed using EPDM rubber beading. The window shall also be provided with stainless steel mesh of 1.5 mm aperture & Aluminum grills fixed from outside of the window using suitable size Aluminum flats & rivets. 12 nos windows are to be provided as per drawing. (1.20 mm thick PCGI)

11. SUNSHADE

Suitable Sunshades made out of 0.50mm PPGL Sheets will be provided to all external Windows and doors. The Minimum projection for the sunshades will be 450 mm and 300 mm wider than the width of the opening. It should be suitably fastened with the main structure.

12. CURTAIN ROD ARRANGEMENT

25 mm diameter SS 304/MS powder coated fancy type drapery rod with fixing arrangements will be provided for all openings (Door and Windows). The drapery rod should be minimum 450 mm longer than the width of the opening.

13. PEG SET

20 Nos Aluminum twin peg Set / Coat Hook of 100 mm in size to be provided inside the shelter at a height of 1.8M fitted with Galvanized Screw.

14. STRUCTURAL STEEL FRAMEWORK (AS PER DRAWING)

14.1 The structural steel framework shall consist of RHS sections conforming to IS 4923/1997. The framework shall consist of Trusses, Purlins, columns, etc. The steel frame should be shot blasted to SA 2.5 standard with 2 coats of Zinc chromate/zinc rich primer.


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The steelwork shall be painted with 2 coats of synthetic Enamel paint of approved shade (smoke grey) & make. The main shelter column of NPB 250 (30.11kg/m)/ IS 808 provided at a distance as per drawing. The column bottom end plate size (as per drawing) shall be fixed to the concrete floor using 6 nos foundation bolts of 24 mm Dia & 600 mm long with suitable washers & nuts & bolts. The column shall also have a top plate of size (as per drawing) for connection with the truss plate.

14.2 The Roof trusses shall be made up using RHS section of 96 x 48 x 4 mm at the top & bottom cord of the truss and minimum 48 x 48 x 2.9mm thick internal members. The trusses shall be fixed on to the columns with connection plates 12 mm thick & tightened with the help of nuts & bolts. Trusses are to be provided at a distance of 3000mm c/c and shall be supported on truss columns.

14.3 Purlins made up of RHS of size 96 X 48 X 4mm & shall be fixed between the trusses with suitable Cleats & Nuts & Bolts as per the drawing attached.

14.4 For Mezzanine Floor, Main beam NPB 250 (30.11kg/m)/IS 808 and Cold Formed Joist will be provided as mentioned in drawing.

14.5 The Steel Structure sections mentioned above are of minimum Sizes to be used & indicative. Higher section sizes & thickness can be adopted. The Shelters will be designed for the Design Parameters & Drawings as indicated in the Specifications mentioned above. (APL/JSPL/SURYA/TATA/AMNS/SAIL)

15. WORKMANSHIP

- (a) **Connection:** Nut-Bolt connection will be provided unless otherwise specified in the Drawings. The welded connections will be conformed to IS 806-1968.
- (b) **Fabrication:** The General Provisions in section 11 of IS 800 of 1984 will apply to all types of steel being used for fabrication.
- (c) **Various Fasteners and Fittings:** Fasteners and fittings of 8.8 Grade(HT) shall be supplied unless otherwise specified in and shall be fixed where required. Fastening means will be provided for the items to be fitted at the time of erection. The Fasteners supplied shall conform to the relevant latest BIS Specification.
- (d) **Finishes:** All Steel work will be shot blasted to SA 2.5 STD and given two coats of Zinc chromate/zinc rich Primer by the manufacturer in the factory. All the Steel items shall be painted using 2 coats of synthetic Enamel Paint of approved shade. All Paint Materials will be of Jenson & Nicholson/Berger/ Asian/JSW make, color -Smoke Grey or as per buyer. Over all DFT should be minimum 120 Micron

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16. CIVIL WORKS

Foundation, Flooring & finishing Works - to be provided by Indenter/ Consignee as per the drawings.

17. ELECTRICAL WIRING AND POINTS

17.1 The electrical wiring points shall be provided within the structure only. Provision for connecting to the main line shall be done by the client. All the wiring and fittings used shall conform to ISI Mark and shall be good brands (V Guard/ Havells/ Finolex/ Poly cab/or similar)

17.2 All wiring used shall be conforming to IS 694. All conduits shall be round PVC 25mm diameter medium grade conforming to IS 9537 Part 3. All sockets/switchboards shall be a modular design. MCB, Distribution boxes shall be ISI marked of reputed make. The earthing shall conform to IS 3043. 2 Lightning arresters per building shall be provided as per Standard Specification (Anchor/ Havells/ L&T/or similar)

- 1) Light Point Copper Wiring using 1.5 Sq. mm PVC insulated Cables over the surface using PVC 25 mm Diameter medium grade conduits with PVC Modular Design Switch Boxes, Modular Switches, Sockets, PVC lamp holders/Ceiling rose Etc. complete.
- 2) PowerPoint Copper Wiring using 4.0 Sq. mm PVC insulated Cables over the surface using PVC 25 mm diameter medium grade conduits with PVC Modular Design Switch Boxes, Modular Switches, Sockets, etc. complete.
- 3) Sub main wiring Three phase cable (4 core) 4mm sq wire (distance from main line to be confirmed)
- 4) Supply and fixing of approved make powder coated Steel Sheet Distribution Box including Bus Bar, Neutral Bar, and Earth Bar complete in all respects as per IS 13032. The DB shall also have required MCB and isolator of 151 Marked as per approved make.


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18. MEZZENINE FLOORING

The inside flooring shall be done using 18 mm Heavy duty cement fiber board over the bottom MS framework. And further 2mm Anti-static PVC vinyl sheet shall be provided over the cement board. Make- Everest/ Visaka/ Equivalent

The verandah flooring shall be of 3mm MS chequered sheet over the base framework.


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19. STAIRCASE WITH RAILING

For Staircase, Main beam ISMC 100 shall be used as per the drawing. The flooring shall be of 3mm MS chequered plated. The railing shall be made up of 38x38x2.6mm RHS pipe with paint and primer same as primary steel structure.

20. VERANDAH WITH RAILING

For verandah flooring, 3mm MS chequered plate will be used as per the drawing. The railing shall be made up of 38 x 38 x 2.6mm RHS pipe with paint and primer same as primary steel structure.

Requirement of electrical fittings

Sl.No.	Description	Quantity
1	Fan Points With Hook & Fan Regulators with switch	10
2	Light Points With 1.5 Sq Mm Wire with switch	12
3	Power Points with 4.0 Sq Mm Wire with switch	4
4	5 Amp Socket with 3 point charging socket with switch	20
5	15 Amp Socket with switch	6
6	25 Mm PVC Round Conduits Complete with Bends	As per qty
7	32 Mm PVC Flat Conduits Complete with Cover	As per qty
8	1.5 Sq Mm Copper Wire, 90 Mtr Bundles In 3 Colors	As per qty
9	4.0 Sq Mm Copper Wire, 90 Mtr Bundles In 3 Colors	As per qty
10	Main Modular Board-4 Way	4
11	Main Modular Board-6 Way	2
12	Main Modular Board-8 Way	2
13	Single Pole MCB-16 Amp	6
14	Single Pole MCB-32 Amp	4
15	Single Pole + Neutral MCB-32 Amp	2
16	Three Pole + Neutral MCB-40 Amp	1
17	Suitable Size Distribution Box	2
18	Bulk LED Head lamp of 25W	06

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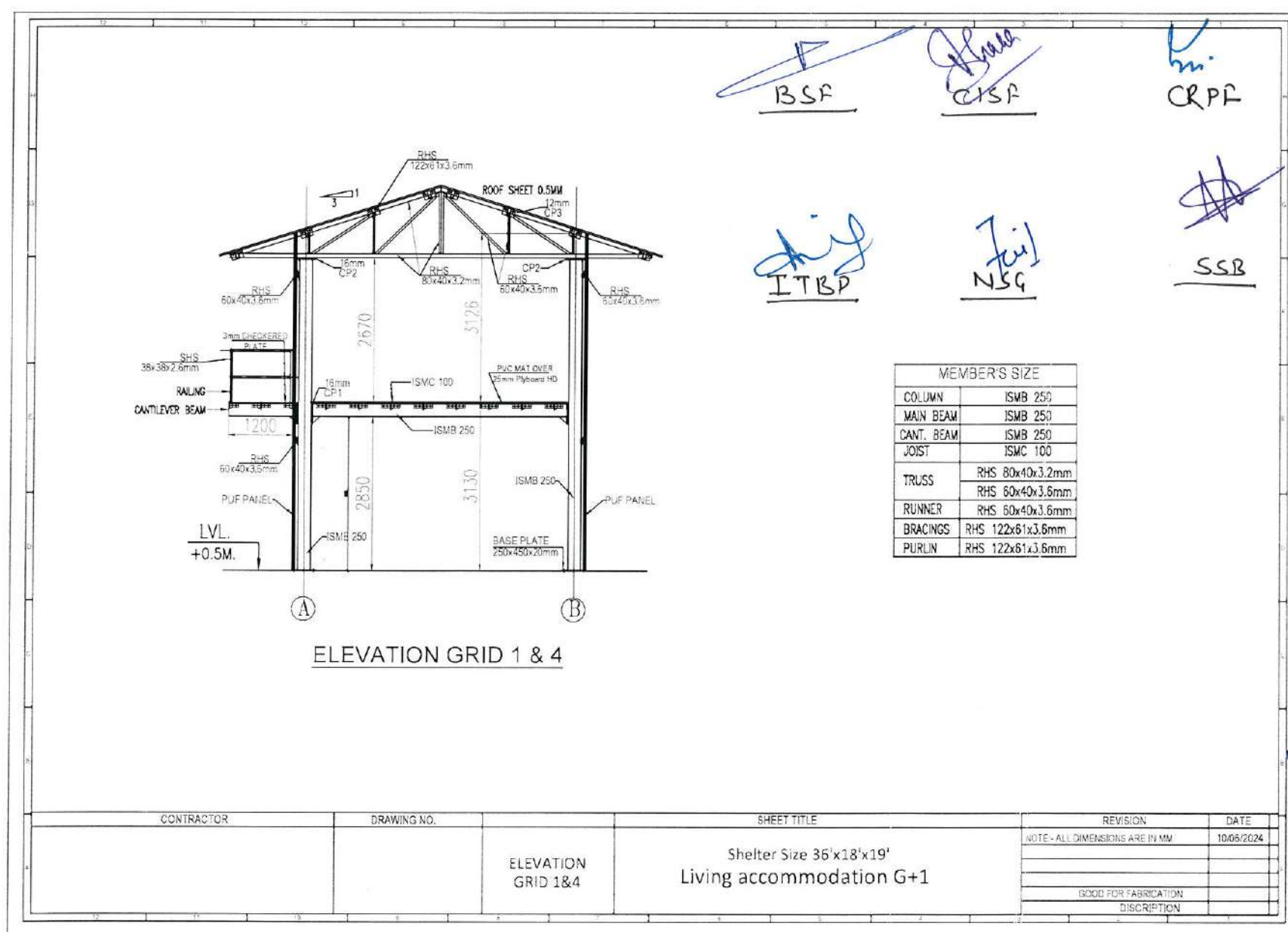
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Approved / Not Approved

Anish Dayal Singh, IPS
Director General, CRPF

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subject to vetting
after Para 2 of A.F.
CRPF

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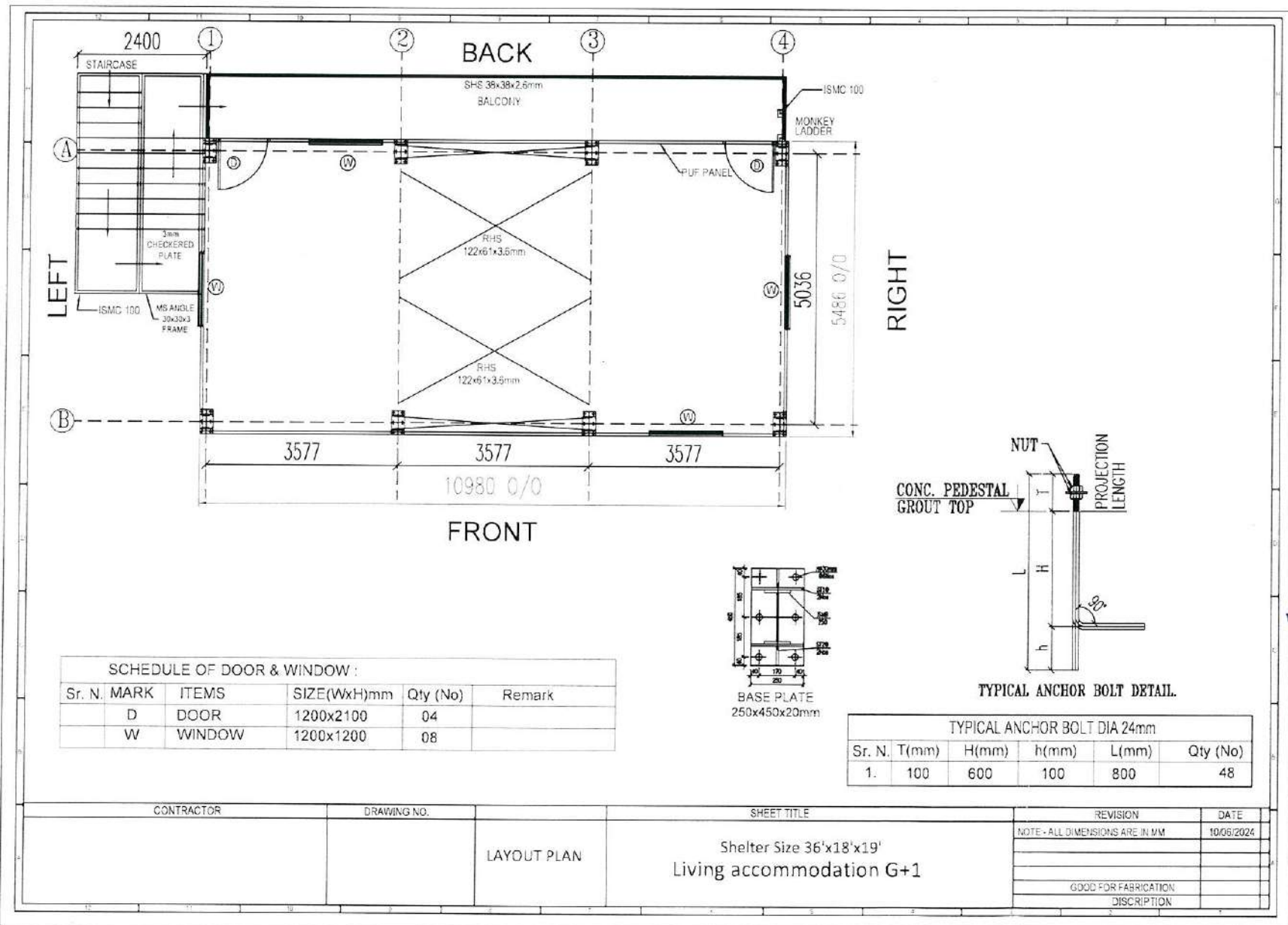
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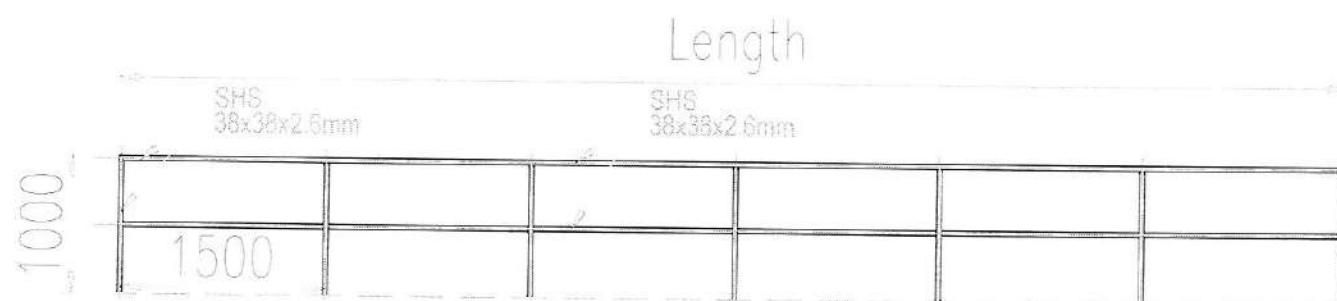
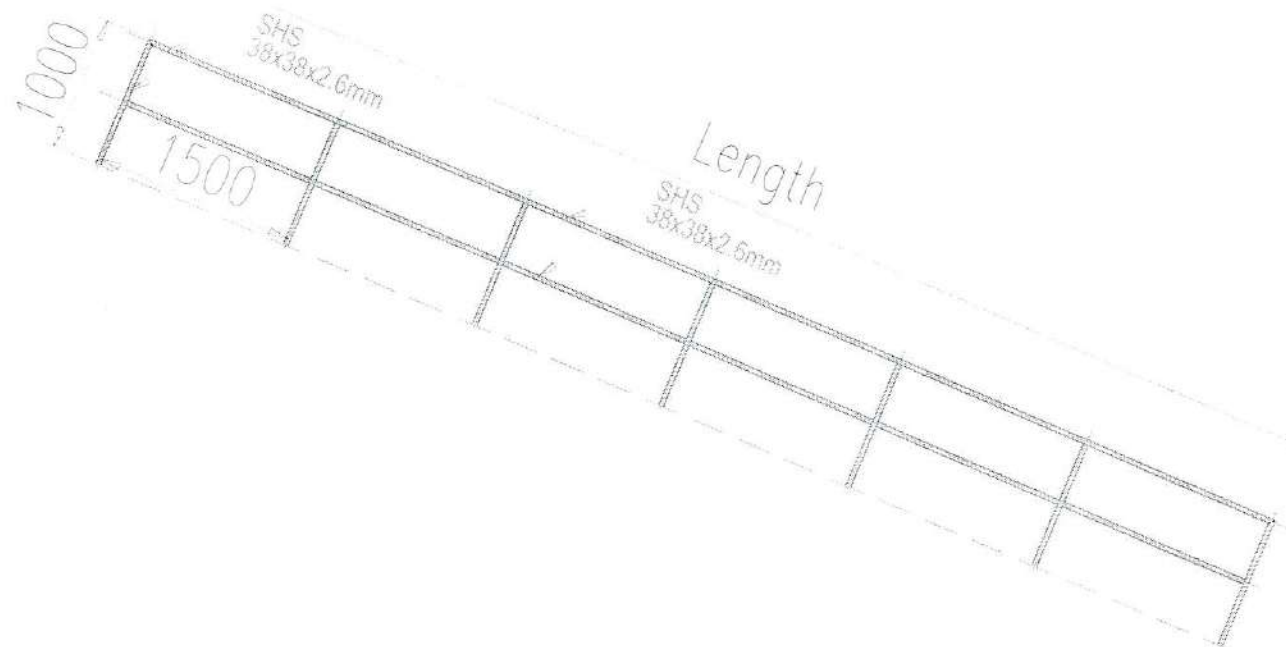
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Subject to vesting
of Para 2 of A.P.
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Subject to vetting.
as per para 2 of a.c.
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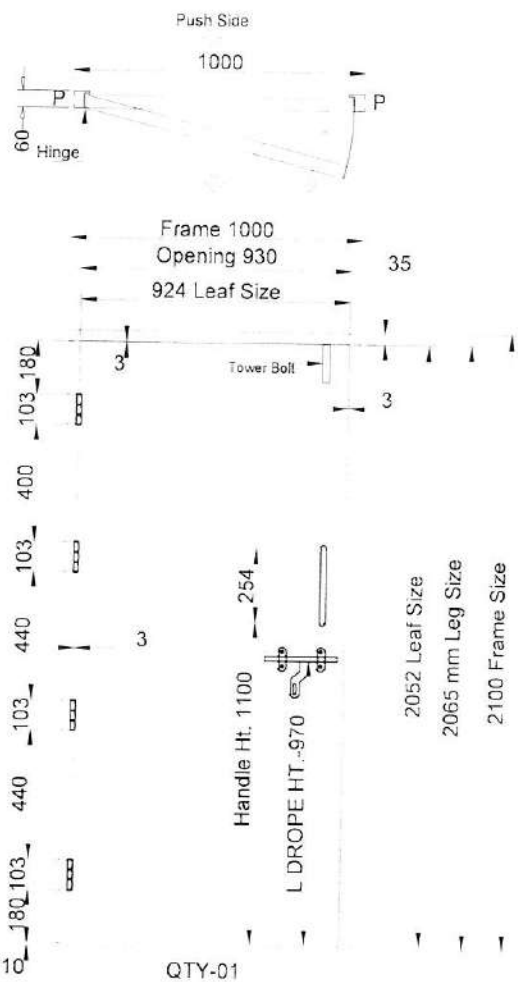
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SHELTER PUF DOOR

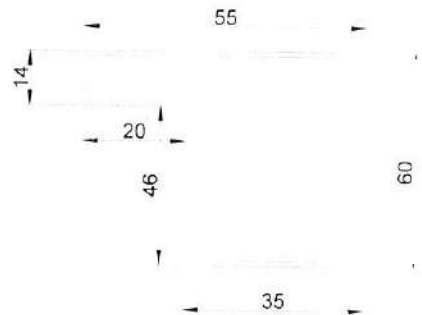


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CRPP

CRPP

Subject to vetting of
for Para 2 of AR
CRPP



60MM DOOR FRAME FOR PUF PANEL

Door frame made of 1.2mm thk. GI Sheet & leaf of 40mm thickness made of 0.8mm thk. PPGI Sheet Infill - (PUF)

- SS 'D' Handle
- SS 304 Ball bearing hinges.
- Door Seal
- L DROP (kundi)
- Tower Bolt
- Color:- Ral-9002 off white

Fail
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ITBP

CLIENT:

SITE:

Date - 09-07-2024

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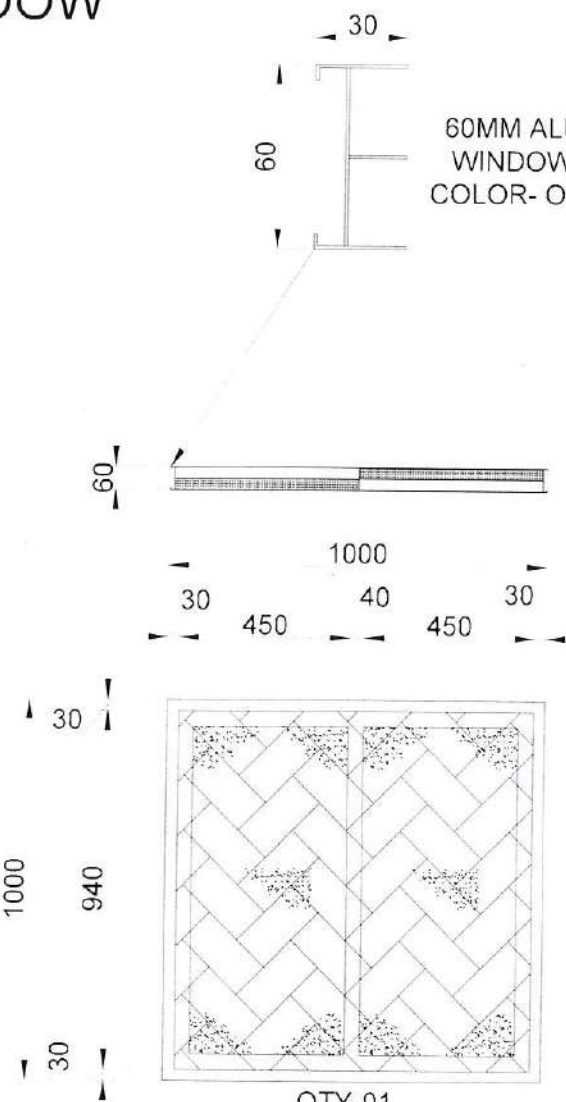
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Rev Date -
Dwg. No. -
Job Order No. -
Schedule No. -
Enq No. -

2 TRACK SLIDING WINDOW
WITH MOSQUITO NET

-12-



QTY-01
2 TRACK ALUMINIUM
SLIDING WINDOW
WITH MOSQUITO NET
(SIZE-1000X1000 MM)

CLIENT:

SITE:

Date :- 03-07-2024

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Rev Date :-

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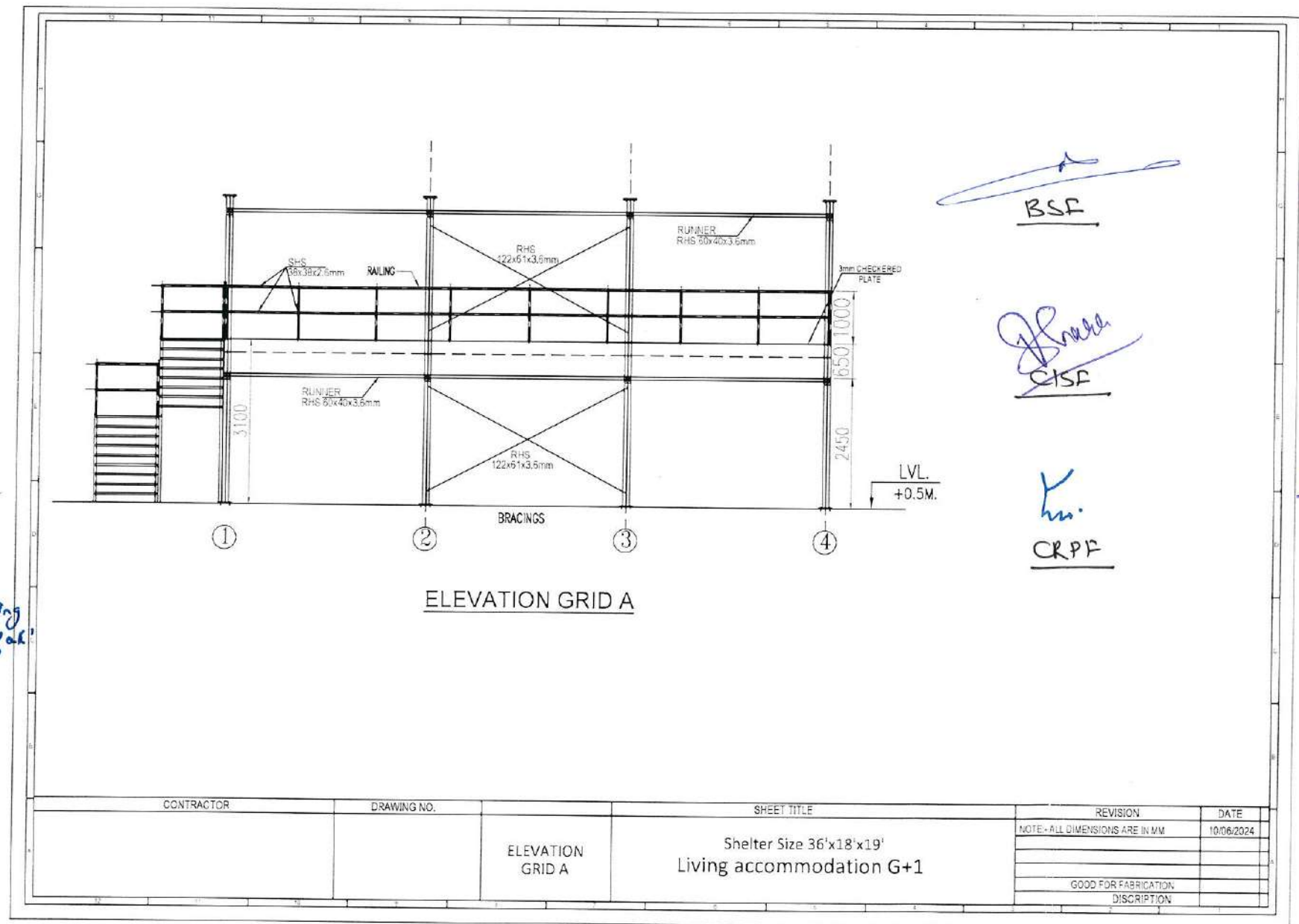
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'Subject to vetting,
as per Para 2 of A.P.'
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subject to vetting
as per para 2 of ok

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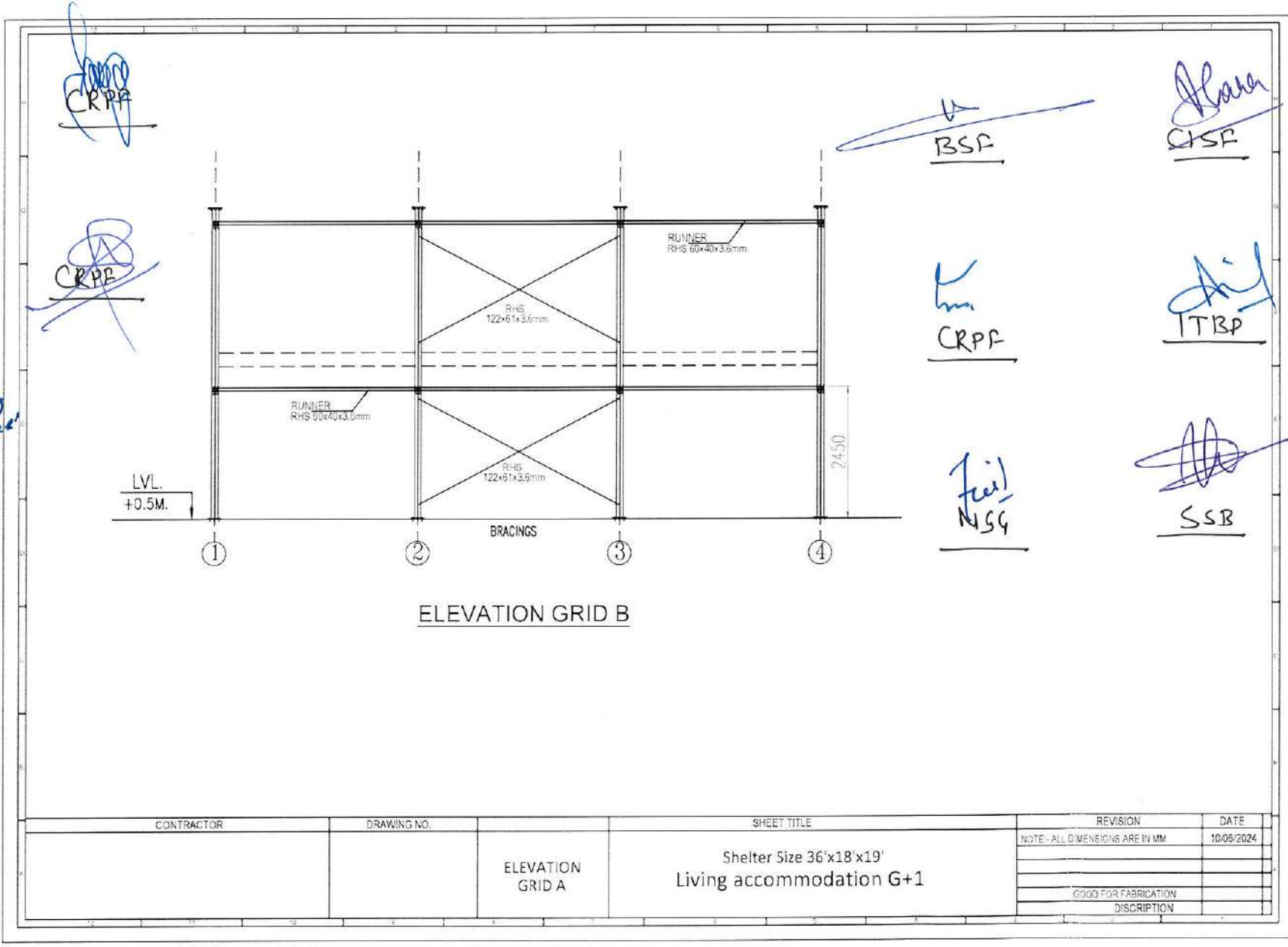
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Directorate General CRPF
Block No. 1 CGO Complex, New Delhi-110003
(Govt. of India/Ministry of Home Affairs)
(Phone / Fax- 011-24360155)
(E-Mail- digprov@crpf.gov.in)

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".

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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)
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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:-

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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

TECHNICAL SPECIFICATIONS LIVING ACCOMMODATION G+1:12M(40FEET)
X 6M(20FEET) X 6 M(19'.8"FEET).

1. DESCRIPTION OF WORK

Construction of Prefabricated shelter using PUF Panels, Steel Structure, false ceiling, door & aluminum windows at various locations in all respects as per the concept drawings attached including design, supply, installation and electrical wiring works as per the general specifications as detailed below.

2. DESIGN PARAMETER

The prefabricated structures shall be designed for a minimum life span of 20 years with 1:4 slope covering wind velocity of up to 50m/s, Seismic Zone V and ambient temperature ranging from -10 to 55 degrees 'C'. The manufacturer/supplier shall get the structural drawing/layout vetted by IIT/NIT/GEC at their own cost before the supply.

3. BUILDING SIZES

Barrack 12M(40feet) X 6M(20feet) X 6M(19'.8" feet)

Prefabricated shelter clear height below false ceiling shall be 2.90 Mtr. The shelter at the eaves shall be 3.00 Mtr & center height shall be 6.75M.

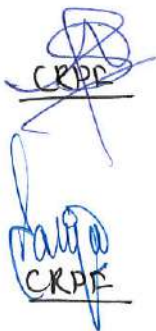
4. SHELTER WALLING (Make – JSW/TATA BHUSHAN)

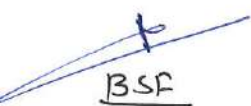
4.1 The Wall Panel Shall be made up of 0.5mm thick(TMT) PPGL ribbed sheet on both side with a layer of rigid CFC free polyurethane foam of density 40 Kg $\pm$ 2Kg/cum as insulation in between. The Polyurethane foam shall be of latest IS. The thickness of PU foam layer shall be 49mm for having 50mm thick PUF panel. Outside colour of wall panel may be Olive Green/Off White or as per buyer requirement. The panels will be provided with tongue and groove joint and will be interlocked using cam lock systems. Gable ends will also be covered with same panels as in the main walls.

4.2 The wall panels exposed edges at bottom & top side shall be covered using bottom & top u track of size 53mm X 35mm X 0.5mm made out of PPGL Sheet & shall be secured to the wall panels using pop rivets. The U track at bottom shall be fixed onto the concrete plinth using anchor fasteners of 8mm diameter & 80mm in length provided at a spacing of 450mm c/c.

4.3 The PUF Panels shall be vertically joined together by tongue & groove arrangement all along the length. The wall panels shall be fixed to the steel frame structure on top & bottom using Nuts/Bolts/Screw tightened through the steel frame cleats for wall strength & sturdiness. Wall Panels at Gable ends will also be covered.


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4.4 The joints all around the wall panels shall be joined & covered by means of PPGL flashing of size 50x50x0.50mm fixed using pop rivets at a minimum distance of 200mm on all exposed faces. All the wall joints shall be sealed with transparent/white color silicon sealant.

4.5 The PPGL Sheets shall be of minimum 350MPA Steel Grade & Shall have Aluminum and Zinc coating of minimum 150 GSM as per IS 277/1992. The PPGL Sheets/ PUF Panels shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation.

5. FALSE CEILING (Make – JSW/TATA BHUSHAN)

5.1 False ceiling shall be provided in the living area only (Excluding Verandah) using 40mm thick PUF panels made up of 0.5mm thick PPGL sheet with guard film having ribbed pattern for aesthetic appearance on both sides with a uniform layer of 39 mm thick rigid CFC free PUF.

5.2 The False Ceiling Panels shall be fixed & supported onto the steel framework consisting of MS Painted L/T Sections. The False Ceiling shall be fixed to the structural steel framework of shelters using cleats & Nuts/ Bolts. The size of L angle will be 40 x 40 x 5mm & the size of T will be 65 x 65 x 6mm. The Joints all around the wall panels & false ceiling shall be joined & covered by means of PPGL flashing of size 50 x 50 x 0.50mm fixed using pop rivets at a minimum distance of 200mm. All the false ceiling joints shall be sealed with transparent/white color silicon sealant. The false ceiling panels will have a tongue and groove arrangement.


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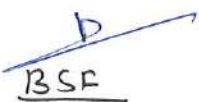
6. PUF SPECIFICATIONS

6.1 All material required for the manufacturer of shelter shall be new and comply with relevant bureau of Indian Standard Specification.

- All panels should have tongue and groove profile on all joining edges.
- All panels will be manufactured in single batch as per approved panel layout drawings using the above materials.
- Original Purchase voucher and test certificate will be submitted and the purchase can carry out inspection of any one panel from the lot at manufacturer premises to ensure the chemical and physical properties.
- The color inside and external wall panel will be as per buyer requirement of approved shade.


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6.2 PUF panels shall be manufactured by Continuous/Discontinuous Line process using high-quality chemicals using blowing agents which have properties conforming to global & environmental guidelines, approved by UNDP

- a) ZERO Ozone Depleting Potential
- b) ZERO Global Warming Potential
- c) EXEMPT from Volatility Organic Compounds (VOC) Category
- d) Kyoto & Montreal Protocol Compliant

6.3 The material shall be fire-resistant and shall have excellent self-extinguishing characteristics.

6.4 Panels manufactured shall conform to latest IS Standards.

6.5 All panels should have tongue and groove profile on all joining edges with a projection of 10mm and 25mm wide for airtight sealing of the joints/ (optional item)-5mm open-sealed EPDM (Ethylene Propylene Diene Monomer) tape shall be provided during the production process for enhancing airtightness.

7. ROOFING (Make – JSW/TATA BHUSHAN)

7.1 The Roof shall be provided in a two way slope of 1:4 ratio with PPGL Trapezoidal colour coated conforming IS-14246 Sheet of 0.5mm thickness. The Roof shall have minimum projection of 300 mm from the eaves wall & will be flushed at Gable Wall. The Roof Sheets shall be fixed on to the structural steel framework using 5 x 95mm self-tapping self-drilling screws with suitable EPDM seal Fasteners with bitumen & GI Limpet Washers complete up to the pitch of the Sheet. The Roof Sheeting Junction at center will be covered with 0.50 mm thick PPGL Ridge cover of Size 300 x 300mm fixed over the Roof Sheeting & on to the Structural Steel Frame Work using 95mm self-Tapping self-drilling Screws with suitable Rubber Fasteners. The Roof will have a minimum projection of 300mm all around the Eaves & Gable Walls. The PPGL sheet shall be of minimum 350 MPA Steel grade & shall have Aluminum Zinc Coating of minimum 150 GSM as per IS 277/1992. The PPGL Sheets/PUF Panels shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation. Provision for outlets of Pipes of Bukhari in wall area with suitable installation in cold region, as per requirement of the buyer (on site).

7.2 MS Wind Tie should be provided in the last purlin of size 50 x 6mm in plain areas (not in snow bound areas)


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8. FLASHING

It will be the responsibility of the contractor to fix & cover all joints using proper & suitable Size PPGL Flashing of 0.50mm Thickness. The PPGL Sheets shall be of minimum 350 Mpa Steel grade & shall have Aluminum and Zinc coating of minimum 150 GSM as per IS 277/1992. The PPGL Sheets / PUF Panels shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation.

9. DOORS (AS PER DRAWINGS)

Doors shutters shall be made from 50 mm PUF insulated having 0.5mm PPGL sheet with 1.20 PPGI frame of size 2100 x 1000mm outer dimension. The Door Frame will be made up of suitable designed pressed steel Profile section in approved Colour in 1.20 mm thickness GI. The door shutter will be made up of panel covered with Aluminum/PCGI Lapping all around. Each door shall be provided with ISI marked Aluminum fitting such as 1 no. 300mm L drop Bolt, 2 Nos D Shaped Handles of 150mm, 1 No Tower Bolt of Size 200mm and 1 No Tower Bolt of Size 100mm. The Door Shutter shall be fixed to the frame using 4 Nos MS BUTT Hinges (100 mm each).

10. WINDOWS & SUNSHADES (AS PER DRAWINGS)

Aluminum 2-way sliding windows with fixed mesh from the outside & Aluminum Grills with all fittings shall be provided as per the drawings. The window frame of size 1000 x 1000mm will be manufactured using suitable standard Aluminum hollow section/ profile. The window shall be provided with 3 mm thick clear Transparent Polycarbonate/FRP sheet fixed using EPDM rubber beading. The window shall also be provided with stainless steel mesh of 1.5 mm aperture & Aluminum grills fixed from outside of the window using suitable size Aluminum flats & rivets. 4 nos windows are to be provided as per drawing with 1.2 mm thick PCGI.


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11. SUNSHADE

Suitable Sunshades made out of 0.50mm PPGL Sheets will be provided to all external windows and doors. The minimum projection for the sunshades will be 450 mm and 300 mm wider than the width of the opening. It should be suitably fastened with the main structure.


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12. CURTAIN ROD ARRANGEMENT

25mm diameter SS 304/MS powder coated fancy type drapery rod with fixing arrangements will be provided for all openings(Door and Windows). The drapery rod should be minimum 450 mm longer than the width of the opening.


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13. PEG SET

20 Nos Aluminum twin peg Set/Coat Hook of 100mm in size to be provided inside the shelter at a height of 1.8M fitted with Galvanized Screw.

14. STRUCTURAL STEEL FRAME WORK (AS PER DRAWING)

14.1 The structural steel framework shall consist of RHS sections conforming to IS 4923/1997. The framework shall consist of Trusses, Purlins, columns etc. The steel frame should be cleaned with wire brush with 2 coats of Zinc Chromate/Zinc rich primer. The steel work shall be painted with 2 coats of synthetic Enamel paint of approved shade (smoke grey) & make. The main shelter column of NPB 250 (30.11kg/m)/IS 808 provided at a distance as per drawing. The column bottom end plate size (as per drawing) shall be fixed to the concrete floor using 6 nos foundation bolts of 24 mm Dia & 600mm long with suitable washers & nuts & bolts. The column shall also have a top plate of size (as per drawing) for connection with the truss plate.

14.2 The Roof trusses shall be made up using RHS section of 96 x 48 x 4 mm at the top & bottom cord of the truss and 48 x 48 x 2.9mm thick internal members. The trusses shall be fixed on to the columns with connection plates 12 mm thick & tightened with the help of nuts & bolts. Trusses are to be provided at a distance of 3000 c/c and shall be supported on truss columns.

14.3 Purlins are made up of RHS of size 96 X 48 X 4 & shall be fixed between the trusses with suitable Cleats & Nuts & Bolts as per the drawing attached.

14.4 For Mezzanine Floor Main beam NPB (Narrow Parallel Flange Beam) 250 (30.11kg/m)/IS 808 and Cold Formed Joist will be provided as mentioned in drawing.

14.5 The Steel Structure sections mentioned above are of minimum Sizes to be used & indicative. Higher section sizes & thickness can be adopted. The Shelters will be designed for the Design Parameters & Drawings as indicated in the specifications mentioned above. Make of steel (APL/JSPL/SURYA/TATA/AMNS/SAIL)

15. WORKMANSHIP

(a) **Connection:** Nut-Bolt connection will be provided unless otherwise specified in the drawings. The welded connections will be conformed to IS 806-1968.

(b) **Fabrication:** The General Provisions in section 11 of IS 800 of 1984 will apply to all types of steel being used for fabrication.

(c) **Various Fasteners and Fittings:** Fasteners and fittings of mild Steel shall be supplied unless otherwise specified in and shall be fixed where required. Fastening means will be provided for the items to be fitted at the time of erection. The Fasteners supplied shall conform to the relevant BIS Specification.

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- (d) **Finishes:** All Steel work will be cleaned with wire brush and given two coats of Zinc Chromate/Zinc rich Primer by the manufacturer in the factory. All the Steel item shall be painted using 2 coats of synthetic Enamel Paint of approved shade. All Paint Materials will be of Jenson & Nicholson/Berger/Asian/JSW make color Smoke Grey or as per buyer. Over all DFT should be minimum 120 micron.

16. CIVIL WORKS

Foundation, flooring & finishing Works – to be provided by Indenter/ Consignee as per the drawings. Vendors will provide anchor bolts of 8.8 grade.

17. ELECTRICAL WIRING AND POINTS (EXCLUDING FITTINGS)

17.1 The electrical wiring points shall be provided within the structure only. Provision for connecting to the main line shall be done by the client. All the wiring and fittings used shall conform to latest ISI Mark and shall be of good brands (V Guard/ Havells/ Finolex/ Poly cab)

17.2 All wiring used shall be conforming to IS 694. All conduits shall be round PVC 25mm diameter medium grade conforming to IS 9537 Part 3. All sockets/switch boards shall be of modular design. MCB, Distribution boxes shall be ISI marked of reputed make. Earthing shall conform to IS 3043. 02 nos Lightning arrester as per building shall be provided as per Standard Specification (Anchor/ Havells/ L&T).

- a) Light Point Copper Wiring using 1.5 Sq.mm PVC insulated Cables over the surface using PVC 25mm Diameter medium grade conduits with PVC Modular Design Switch boxes, Modular Switches, Sockets, PVC lamp holders/Ceiling rose Etc complete.
- b) Power Point Copper Wiring using 4.0 Sq.mm PVC insulated Cables over the surface using PVC 25mm diameter medium grade conduits with PVC Modular Design Switch Boxes, Modular Switches, Sockets etc complete.
- c) Sub main wiring - Three phase cable (4 core) 4 sq mm wire (distance from main line to be confirm)
- d) Supply and fixing of approved make powder coated Steel Sheet Distribution Box including Bus Bar, Neutral Bar and Earth Bar complete in all respects as per IS 13032. The DB shall also have required MCB and isolator of ISI Marked as per approved make.


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18. Mezzanine flooring - For Room Area- 2mm antistatic PVC mat flooring over 18 mm high density(HD) cement board (ISI marked). For Balcony Area- 5 mm thick MS Checkered plate (ISI marked).

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19. Stair case with lighting and railing - Stair Stringer made of ISMC150.

Stair step (250 mm x 1000mm) made of 5 mm Thick Checkered plate with 40 x 40 x 4 mm angle supported.

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MS railing made of SHS 32 x 32 x 2.2mm vertical post & Top Handrail and 2 nos SHS 25 x 32 x 2.0mm horizontal Rail.

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20. Balcony with lighting and railing - MS railing made of SHS 32 x 32 x 2.2mm vertical post & Top Handrail and 2 Nos. of SHS 25 X 25 x 2.0 mm horizontal Rail. Balcony must have 4 nos of bulk LED head lamp of 25W.

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Requirement of electrical fittings

Sl. No.	Description	Quantity
		20x40
1.	Fan Points With Hook & Fan Regulators with switch	12
2.	Light Points With 1.5 Sq Mm Wire with switch	16
3.	Power Points with 4.0 Sq Mm Wire with switch	4
4.	5 Amp Socket with switch	2
5.	15 Amp Socket with switch	4
6.	25 Mm PVC Round Conduits Complete with Bends	40
7.	32 Mm PVC Flat Conduits Complete with Cover	20
8.	1.5 Sq Mm Copper Wire, 90 Mtr Bundles In 3 Colors	5
9.	4.0 Sq Mm Copper Wire, 90 Mtr Bundles In 3 Colors	2
10.	Main Modular Board-4 Way	4
11.	Main Modular Board-6 Way	2
12.	Main Modular Board-8 Way	2
13.	Single Pole MCB-16 Amp	6
14.	Single Pole MCB-32 Amp	4
15.	Single Pole + Neutral MCB-32 Amp	2
16.	Three Pole + Neutral MCB-32 Amp	1
17.	Suitable Size Distribution Box	1
18.	Bulk LED head lamp of 25W	4

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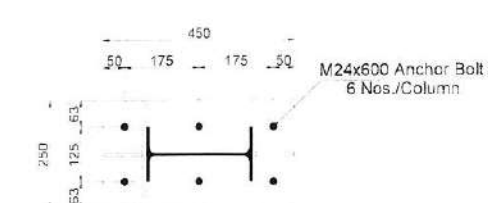
Approved / ~~Not~~ Approved

Anish Dayal Singh, IPS
Director General, CRPF

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COLUMN & ANCHOR BOLT PLAN

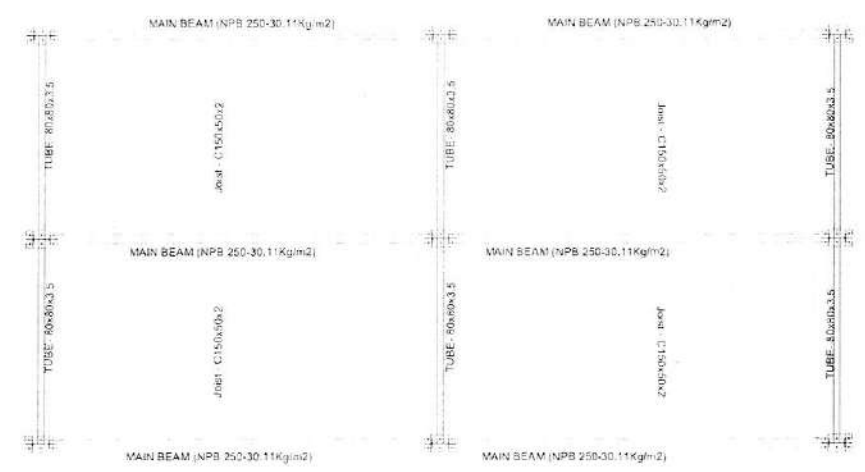


COLUMN BASE PLATE
20 mm Thick (Hole Dia-26 mm)

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FLOOR STRUCTURE PLAN - 1st FLOOR

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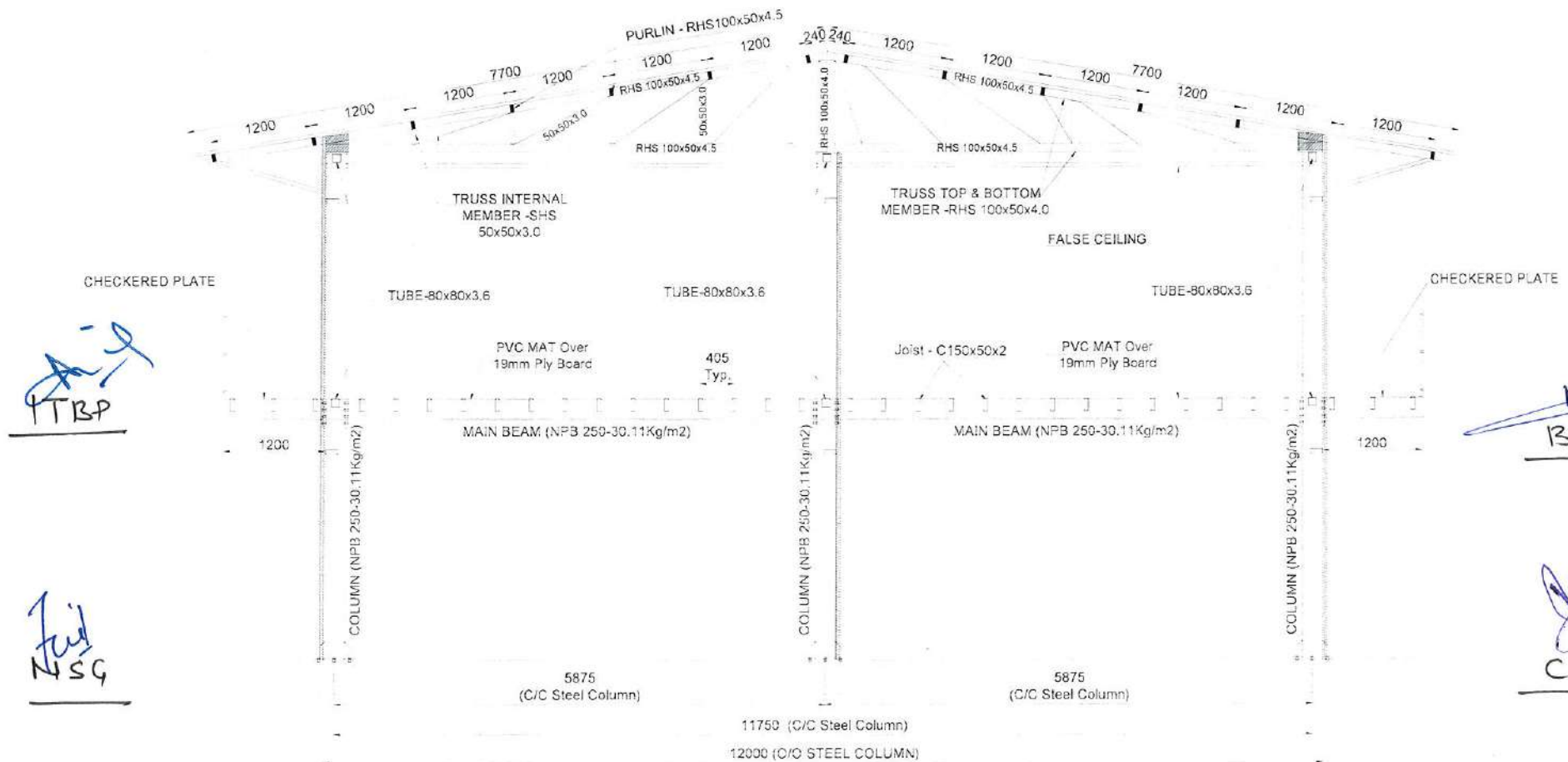
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G+1 BUILDING
40'x20'

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	Approved by:	DATE:	REVISION No. 00
TITLE: COLUMN LAYOUT & FLOOR STRUCTURAL PLAN			

1 subject to vetting on
para 2 of CRPF

Handwritten signature: *[Signature]*



SECTION AT MID

SSB

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IV	DV
2/2/2022 2:17	

SECRET No. - 02 of

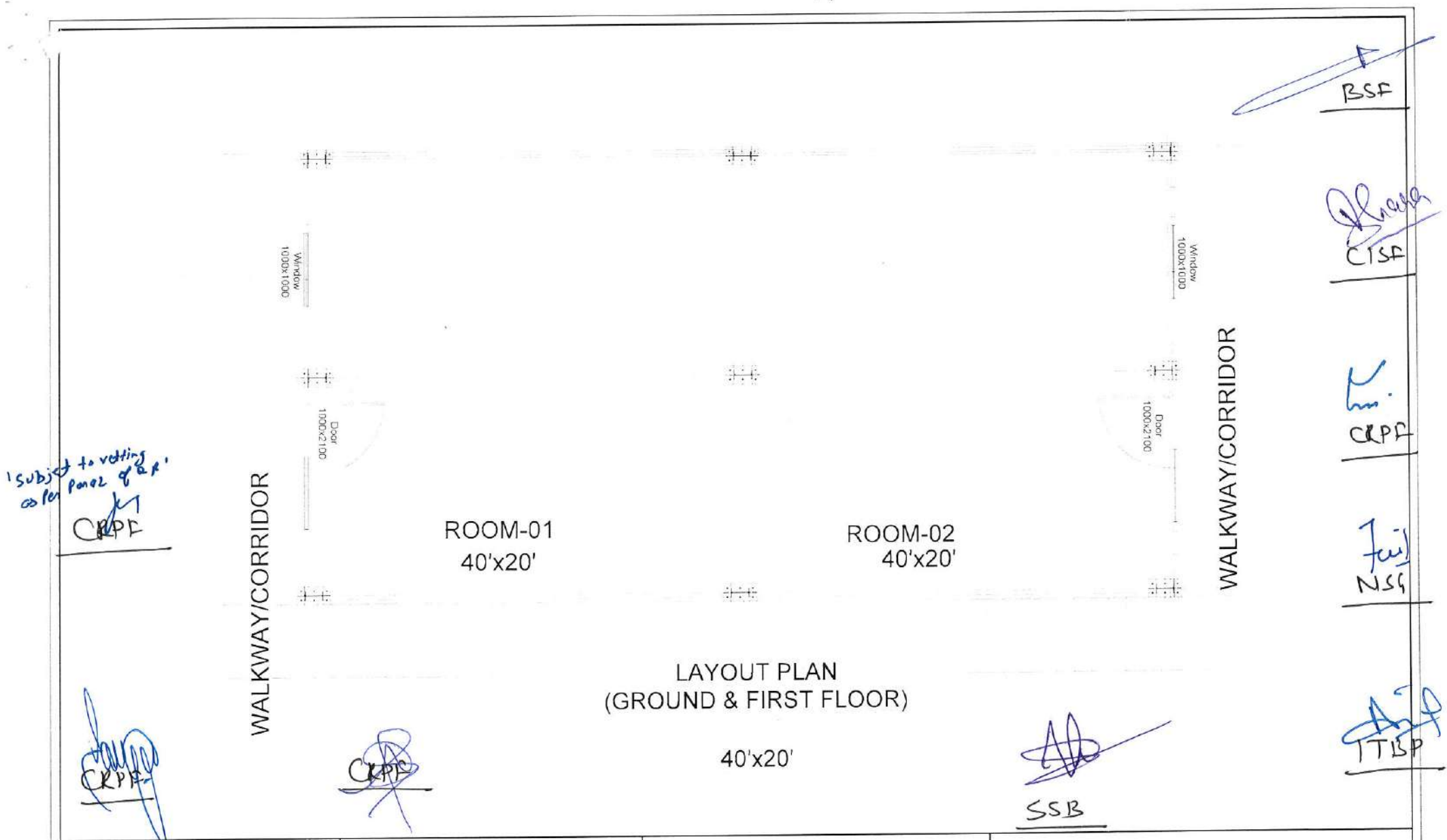
PRO-100 G+1 BUILDING

Approved by:

DMS

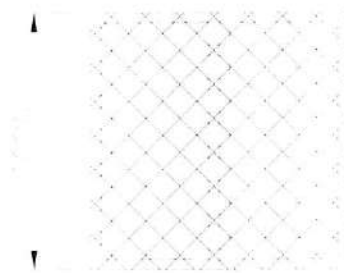
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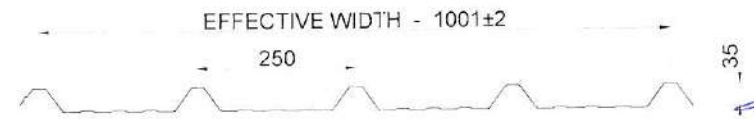


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	Approved by:	DATE:	REV. No. 00	TITLE: FLOOR STRUCTURAL PLAN

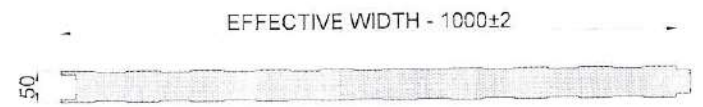
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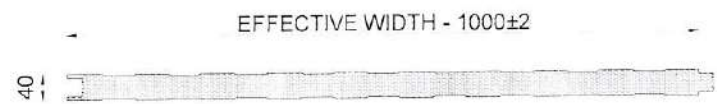
ALUMINUM
EXTRUDED SECTION
FRAME SLIDING
WINDOW with ALU.
GRILL



ROOF SHEET SECTION DETAIL



WALL PANEL SECTION DETAIL



CEILING PANEL SECTION DETAIL

35mm PUF
PANEL DOOR
with ALU.
EXTRUDED
JAMB
PROFILE

SHUN SHED WITH
SUPPORT FRAME

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Drawn by: DV

SHEET No.: 04 of

PROJECT: G+1 BUILDING

Approved by:

DATE:

REV.No. 00

TITLE: DETAIL DRAWING OF ITEMS

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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

TECHNICAL SPECIFICATIONS LIVING ACCOMMODATION G+1:12M
(40FEET) X 12M (40FEET) X 12 M (19'.8"FEET).

1. DESCRIPTION OF WORK

Construction of Prefabricated shelter using PUF Panels, Steel Structure, false ceiling, door & aluminum windows at various locations in all respects as per the concept drawings attached including design, supply, installation, and electrical wiring works, as per the general specifications as detailed below. The entire structure should be fully transportable in knocked down form.

2. DESIGN PARAMETER

The prefabricated structures shall be designed for a minimum life span of 20 years. The design will be with 1:4 slope covering wind velocity of up to 50m/s, Seismic Zone V, and ambient temperature ranging from -10 to 55 degrees 'C'. The manufacturer/supplier shall get the structural drawing/layout vetted by IIT/NIT/GEC at their own cost before the supply.

3. BUILDING SIZES

Barrack 12M (40 feet) X 12M (40 feet) X 6M (19'.8" feet).

Prefabricated shelter's clear height below false ceiling shall be 2.90 Mtr. The shelter at the eaves shall be 3.00 Mtr & center height shall be 7.5 Mtr.

4. SHELTER WALLING (Make -JSW/TATA BHUSHAN)

4.1 The Wall Panel Shall be made up of 0.5mm thick(TMT) PPGL ribbed sheet on both side with a layer of rigid CFC free polyurethane foam of density 40 Kg $\pm$ 2Kg/cum as insulation in between. The Polyurethane foam shall be of latest IS. The thickness of PU foam layer shall be 49mm for having 50mm thick PUF panel. Outside colour of wall panel may be Olive Green/Off White or as per buyer requirement. The panels will be provided with tongue and groove joint and will be interlocked using cam lock systems. Gable ends will also be covered with same panels as in the main walls.

4.2 The wall panel's exposed edges at bottom & top side shall be covered using bottom & top U track of size 53mm X 35mm X 0.5mm made out of PPGL Sheet & shall be secured to the wall panels using pop rivets. The U track at bottom shall be fixed onto the concrete plinth using anchor fasteners of 8mm diameter & 80mm in length provided at a spacing of 450mm c/c.

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4.3 The PUF Panels shall be vertically joined together by tongue & groove arrangement all along the length. The wall panels shall be fixed to the steel frame structure on top & bottom using Nuts/Bolts/Screw tightened through the steel frame cleats for wall strength & sturdiness. Wall Panels at Gable ends will also be covered.

4.4 The joints all around the wall panels shall be joined & covered by means of PPGL flashing of size 50 x 50 x 0.50mm fixed using pop rivets at a minimum distance of 200mm on all exposed faces. All the wall joints shall be sealed with transparent/white color silicon sealant.

4.5 The PPGL Sheets shall be of minimum 350MPA Steel Grade & Shall has Aluminum and Zinc coating of minimum 150 GSM as per IS 277/1992. The PPGL Sheets/ PUF Panels shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation.

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5.1 False ceiling shall be provided in the living area only (Excluding Verandah) using 40mm thick PUF panels made up of 0.5mm thick PPGL sheet with guard film having ribbed pattern for aesthetic appearance on both sides with a uniform layer of 39 mm thick rigid CFC free PUF .

5.2 The False Ceiling Panels shall be fixed & supported onto the steel framework consisting of MS Painted L / T Sections. The False Ceiling shall be fixed to the structural steel framework of shelters using cleats & Nuts/ Bolts. The size of L angle will be 40 x 40 x 5mm & the size of T will be 65 x 65 x 6mm. The Joints all around the wall panels & false ceiling shall be joined & covered by means of PPGL flashing of size 50 x 50 x 0.50mm fixed using pop rivets at a minimum distance of 200mm. All the false ceiling joints shall be sealed with transparent/white color silicon sealant. The false ceiling panels will have a tongue and groove arrangement.

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- All panels will be manufactured in single batch as per approved panel layout drawings using the above materials.
- Original Purchase voucher and test certificate will be submitted and the purchase


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can carry out inspection of any one panel from the lot at manufacturer premises to ensure the chemical and physical properties.

- The color inside and external wall panel will be as per buyer requirement of approved shade.

6.2 PUF panels shall be manufactured by Continuous/Discontinuous Line process using high-quality chemicals using blowing agents which have properties conforming to global & environmental guidelines, approved by UNDP

- a) ZERO Ozone Depleting Potential
- b) ZERO Global Warming Potential
- c) EXEMPT from Volatility Organic Compounds (VOC) Category
- d) Kyoto & Montreal Protocol Compliant

6.3 The material shall be fire-resistant and shall have excellent self-extinguishing characteristics.

6.4 Panels manufactured shall conform to latest IS Standards.

6.5 All panels should have tongue and groove profile on all joining edges with a projection of 10mm and 25mm wide for airtight sealing of the joints/ (optional item)-5mm open-sealed EPDM (Ethylene Propylene Diene Monomer) tape shall be provided during the production process for enhancing air tightness.

7. ROOFING (Make -JSW/TATA BHUSHAN/AMNS)

7.1 The Roof shall be provided in a two way slope of 1:4 ratio with PPGL Trapezoidal colour coated conforming IS-14246 Sheet of 0.5mm thickness. The Roof shall have minimum projection of 300 mm from the eaves wall & will be flushed at Gable Wall. The Roof Sheets shall be fixed on to the structural steel framework using 5x95mm self-tapping self-drilling screws with suitable EPDM seal Fasteners with bitumen & GI Limpet Washers complete up to the pitch of the Sheet. The Roof Sheeting Junction at center will be covered with 0.50 mm thick PPGL Ridge cover of Size 300 x 300 mm fixed over the Roof Sheeting & on to the Structural Steel Frame Work using 95mm self-Tapping self-drilling Screws with suitable Rubber Fasteners. The Roof will have a minimum projection of 300mm all around the Eaves & Gable Walls. The PPGL sheet shall be of minimum 350 MPA Steel grade & shall have Aluminum and Zinc Coating of minimum 150 GSM as per IS 277/1992. The PPGL Sheets/PUF Panels shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation. Provision for outlets of Pipes of Bukhari in wall area with suitable installation in cold region as per requirement of the buyer (on site).


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7.2 MS Wind tie should be provided in the last purlin of size 50 mmx 6mm in plain areas (not in snow bound areas)

8. FLASHING (Make -JSW/TATA BHUSHAN/AMNS)

It will be the responsibility of the contractor to fix & cover all joints using proper & suitable Size PPGL Flashing of 0.50mm Thickness. The PPGL Sheets shall be of minimum 350 Mpa Steel grade & shall have Aluminum and Zinc coating of minimum 150 GSM as per IS 277/1992. The PPGL Sheets / PUF Panels shall have a protective guard film of minimum 25 microns to avoid scratches to finished panel during transportation.

9. DOORS (AS PER DRAWINGS)

Door shutter shall be made from 50 MM PUF Insulated having 0.5mm PPGL sheet with 1.20 mm PCGI frame of size 2100 x 1000 mm outer dimension. The Door Frame will be made up of suitable designed pressed Steel Profile section in approved Colour in 1.20 mm thickness GI. The door Shutter will be made up of Panel covered with Aluminum/PCGI Lipping all around. Each Door shall be provided with ISI marked Aluminum fitting such as 1 no. 300mm L drop Bolt, 2 Nos D Shaped Handles of 150mm, 1 Nos Tower Bolt of Size 200mm and 1 Nos Tower Bolt of Size 100mm. The Door shutter shall be fixed to the frame using 4 Nos MS BUTT Hinges (100 mm each).

10. WINDOWS & SUNSHADES (AS PER DRAWINGS)

Aluminum 2-way sliding windows with fixed mesh from the outside & Aluminum Grills with all fittings shall be provided as per the drawings. The window frame of size 1000 x 1000 mm will be manufactured using suitable standard Aluminum hollow section/ profile. The window shall be provided with 3 mm thick clear Transparent Polycarbonate/FRP sheet fixed using EPDM (Ethylene Propylene Diene Monomer) rubber beading. The window shall also be provided with stainless steel mesh of 1.5 mm aperture & Aluminum grills fixed from outside of the window using suitable size Aluminum flats & rivets. 08 nos windows for 40x40 are to be provided as per drawing. (1.20 mm thickness PCGI)

11. SUNSHADE

Suitable Sunshades made out of 0.50mm PPGL sheets will be provided to all external windows and doors. The minimum projection for the sunshades will be 450 mm and 300 mm wider than the width of the opening. It should be suitably fastened with the main structure.


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12. CURTAIN ROD ARRANGEMENT

25 mm diameter SS 304/MS powder coated fancy type drapery rod with fixing arrangements will be provided for all openings (Door and Windows). The drapery rod should be minimum 450 mm longer than the width of the opening.

13. PEG SET

40 Nos Aluminum twin peg Set / Coat Hook of 100 mm in size to be provided inside the shelter at a height of 1.8M fitted with Galvanized Screw.

14. STRUCTURAL STEEL FRAMEWORK (AS PER DRAWING)

14.1 The structural steel framework shall consist of RHS sections conforming to IS 4923/1997. The framework shall consist of Trusses, Purlins, columns, etc. The steel frame should be cleaned with wire brush with 2 coats of Zinc chromate/zinc rich primer. The steelwork shall be painted with 2 coats of synthetic Enamel paint of approved shade (smoke grey) & make. The main shelter column of NPB 250 (30.11kg/m)/ IS 808 provided at a distance as per drawing. The column bottom end plate size (as per drawing) shall be fixed to the concrete floor using 6 nos foundation bolts of 24 mm Dia & 600 mm long with suitable washers & nuts & bolts. The column shall also have a top plate of size (as per drawing) for connection with the truss plate.

14.2 The Roof trusses shall be made up using RHS section of 96 x 48 x 4 mm at the top & bottom cord of the truss and minimum 48 x 48 x 2.9mm thick internal members. The trusses shall be fixed on to the columns with connection plates 12 mm thick & tightened with the help of nuts & bolts. Trusses are to be provided at a distance of 3000mm c/c and shall be supported on truss columns.

14.3 Purlins are made up of RHS of size 96 X 48 X 4mm & shall be fixed between the trusses with suitable Cleats & Nuts & Bolts as per the drawing attached.

14.4 For Mezzanine Floor, Main beam NPB 250 (30.11kg/m)/IS 808 and Cold Formed Joist will be provided as mentioned in drawing.

14.5 The Steel Structure sections mentioned above are of minimum Sizes to be used & indicative. Higher section sizes & thickness can be adopted. The Shelters will be designed for the Design Parameters & Drawings as indicated in the Specifications mentioned above. Make for steel (APL/JSPL/SURYA/TATA/AMNS/SAIL)


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15. WORKMANSHIP

- (a) **Connection:** Nut-Bolt connection will be provided unless otherwise specified in the drawings. The welded connections will be conformed to IS 806-1968.
- (b) **Fabrication:** The General Provisions in section 11 of IS 800 of 1984 will apply to all types of steel being used for fabrication.
- (c) **Various Fasteners and Fittings:** Fasteners and fittings of 8.8 Grade(HT) shall be supplied unless otherwise specified in and shall be fixed where required. Fastening means will be provided for the items to be fitted at the time of erection. The Fasteners supplied shall conform to the relevant latest BIS Specification.
- (d) **Finishes:** All Steel work will be cleaned with wire brush and given two coats of Zinc chromate/zinc rich Primer by the manufacturer in the factory. All the Steel items shall be painted using 2 coats of synthetic Enamel Paint of approved shade. All Paint Materials will be of Jenson & Nicholson/Berger/ Asian/JSW make, color -Smoke Grey or as per buyer. Overall DFT should be minimum 120 Micron

16. CIVIL WORKS

Foundation, Flooring & finishing Works - to be provided by Indenter/ Consignee as per the drawings. Vendors will provide anchor bolts of 8.8 grade.

17. ELECTRICAL WIRING AND POINTS (EXCLUDING FITTINGS)

17.1 The electrical wiring points shall be provided within the structure only. Provision for connecting to the main line shall be done by the client. All the wiring and fittings used shall conform to ISI Mark and shall be of good brands (V Guard/ Havells/ Finolex/ Poly cab)

17.2 All wiring used shall be conforming to IS 694. All conduits shall be round PVC minimum 25mm diameter medium grade conforming to IS 9537 Part 3. All sockets/switchboards shall be of modular design. MCB, Distribution boxes shall be ISI marked of reputed make. Earthing shall conform to IS 3043. 2 Nos. Lightning arresters per building shall be provided as per Standard Specification (Anchor/ Havells/ L&T).

- 1) Light Point Copper Wiring using 1.5 Sq. mm PVC insulated Cables over the surface using PVC 25 mm Diameter minimum medium grade conduits with PVC Modular Design Switch Boxes, Modular Switches, Sockets, PVC lamp holders/Ceiling rose etc. complete.


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- 2) Power Point Copper Wiring using 4.0 Sq. mm PVC insulated Cables over the surface using PVC 25 mm diameter minimum medium grade conduits with PVC Modular Design Switch Boxes, Modular Switches, Sockets, etc. complete.
- 3) Sub main wiring Three phase cable (4 core) 4 sq mm wire (distance from main line to be confirmed)
- 4) Supply and fixing of approved make powder coated Steel Sheet Distribution Box including Bus Bar, Neutral Bar and Earth Bar complete in all respects as per IS 13032. The DB shall also have required MCB and isolator of ISI Marked as per approved make.

18. **Mezzanine flooring** — For Room Area- 2mm anti static PVC mat flooring over 18 mm High Density Cement Board (ISI marked). For Balcony Area- 5 mm thick MS Checkered plate (ISI marked).

19. **Stair case with lighting and railing** - Stair Stringer made of ISMC150.

Stair step (250mmx1000mm) made of 5 mm Thick MS Checkered plate (ISI marked), with 40x40x4 mm angle supported.

MS railing made of SHS 32 x 2.2mm vertical post & Top Handrail and 2 Nos. of SHS 25x2.0 mm horizontal Rail.

20. **Balcony with lighting and railing** - MS railing made of SHS 32 x 2.2mm vertical post & Top Handrail and 2 Nos. of SHS 25 x 2.0 mm horizontal Rail. Balcony must have 10 nos of bulk LED head lamp of 25W.


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Requirement of electrical fittings

Sl. No.	Description	Quantity
1	Fan Points With Hook & Fan Regulators with switch	24
2	Light Points With 1.5 Sq Mm Wire with switch	32
3	Power Points with 4.0 Sq Mm Wire with switch	8
4	5 Amp Socket with switch	40
5	15 Amp Socket with switch	8
6	25 Mm PVC Round Conduits Complete with Bends	80
7	32 Mm PVC Flat Conduits Complete with Cover	40
8	1.5 Sq Mm Copper Wire, 90 Mtr Bundles In 3 Colors	9
9	4.0 Sq Mm Copper Wire, 90 Mtr Bundles In 3 Colors	4
10	Main Modular Board-4 Way	8
11	Main Modular Board-6 Way	4
12	Main Modular Board-8 Way	4
13	Single Pole MCB-16 Amp	12
14	Single Pole MCB-32 Amp	8
15	Single Pole + Neutral MCB-32 Amp	4
16	Three Pole + Neutral MCB-40 Amp	1
17	Suitable Size Distribution Box	2
18	Bulk LED head lamp of 25W.	10

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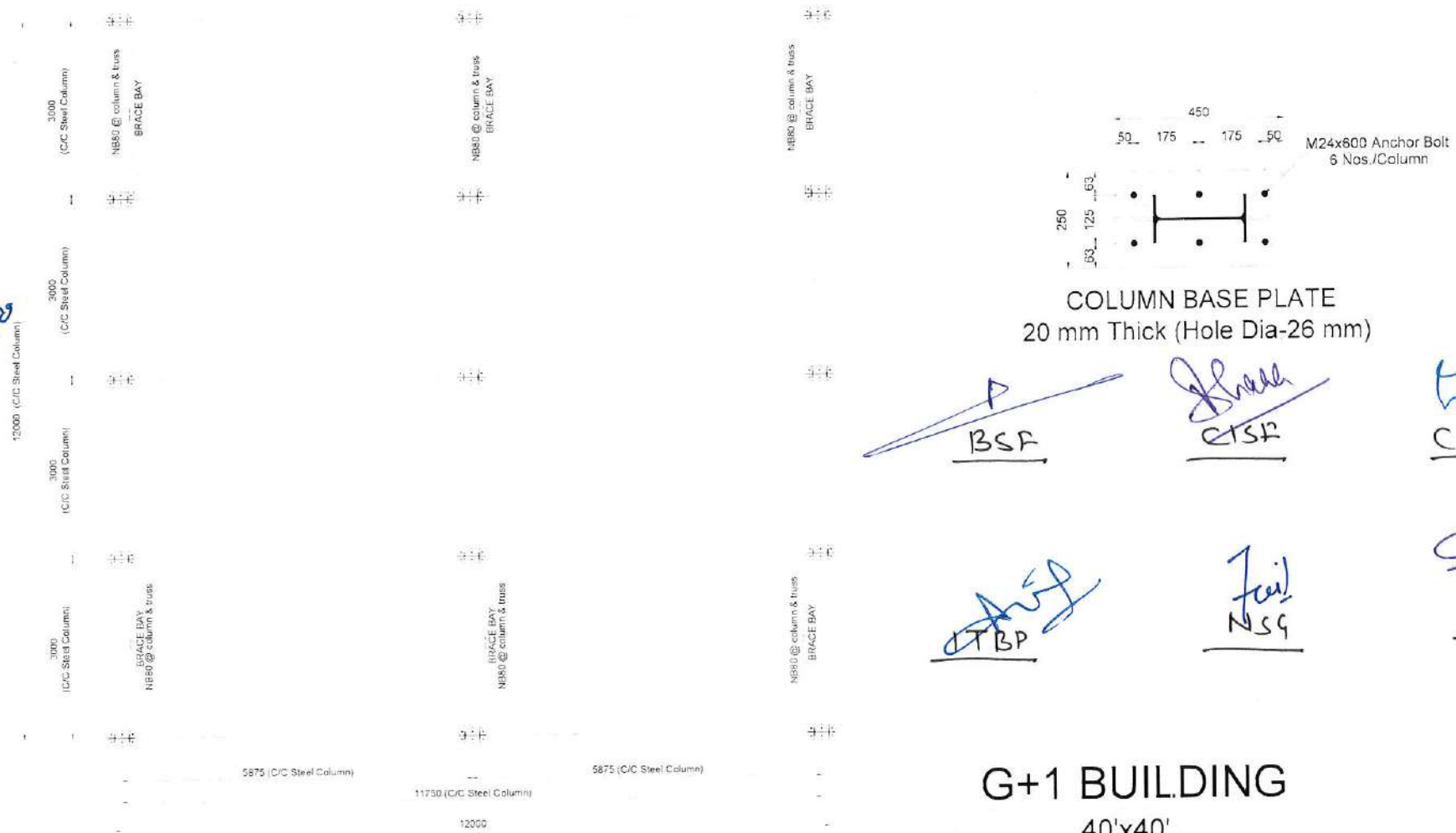
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Approved / ~~Not Approved~~

Anish Dayal Singh, IPS
Director General, CRPF



COLUMN & ANCHOR BOLT PLAN

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2.2.3 DV

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337. No. 00

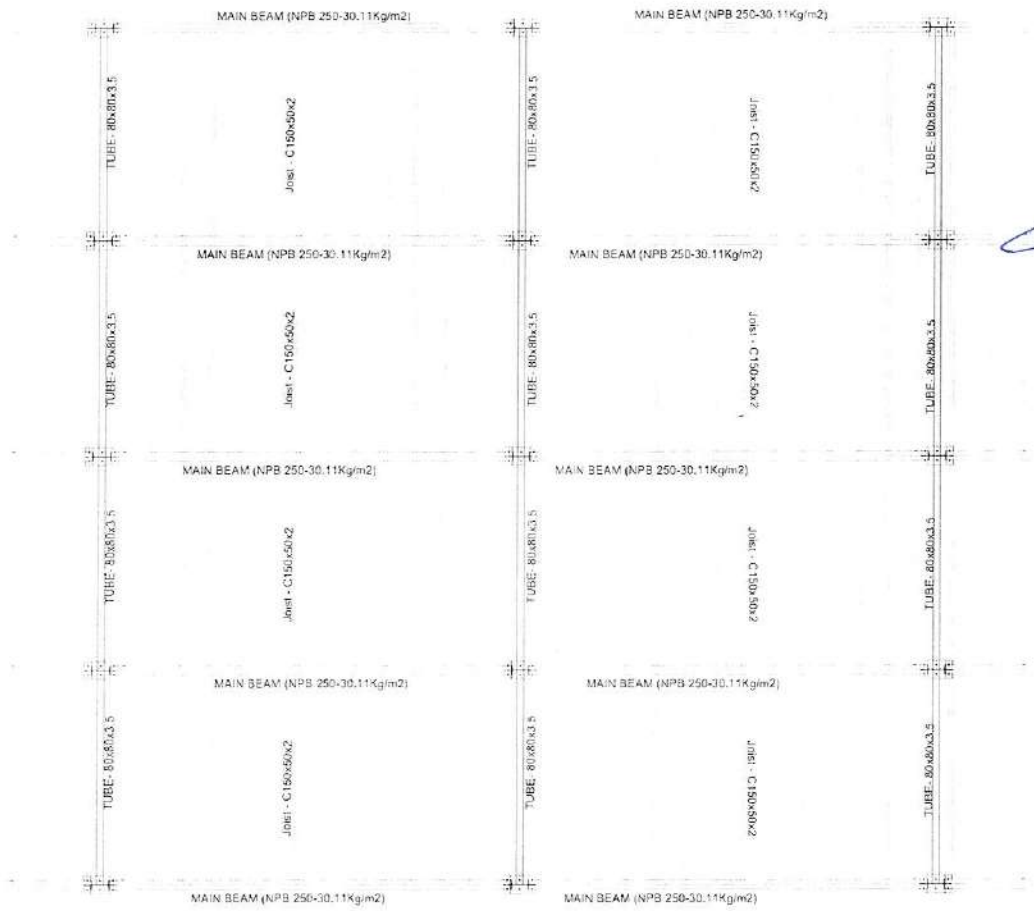
PRO-3000 G+1 BUILDING

COLUMN LAYOUT PLAN

Subject to vetting
as per Para 2 of at.
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FLOOR STRUCTURE PLAN -1st FLOOR

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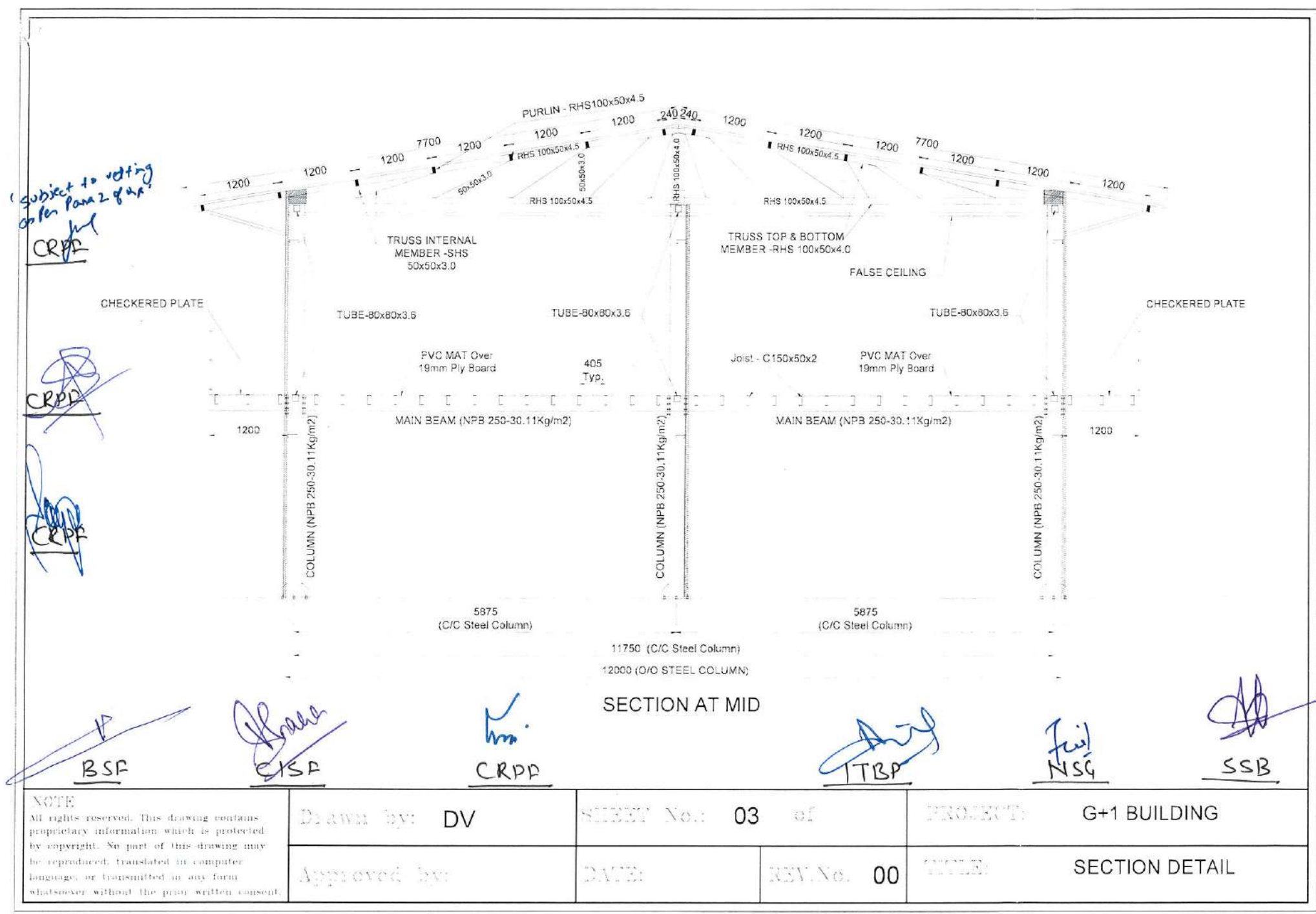
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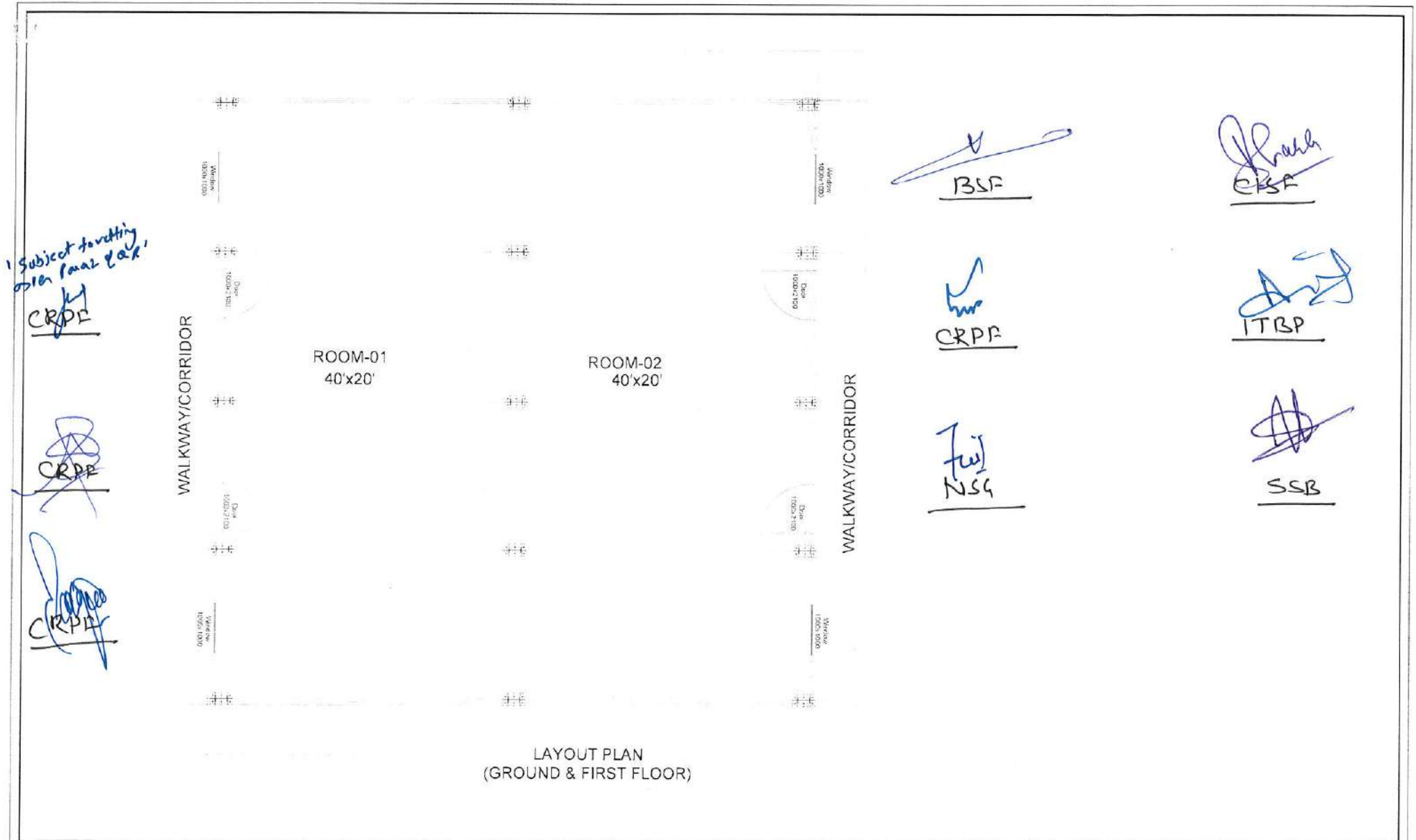
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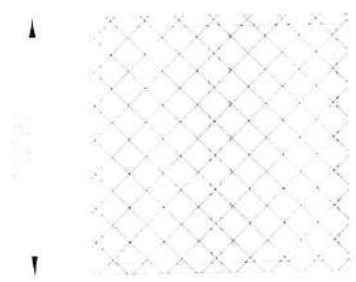
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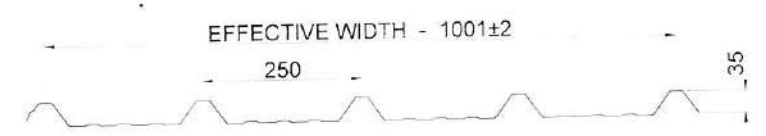


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	Approved by:		DATE:	REV.No. 00	TITLE: LAYOUT PLAN



ALUMINUM
EXTRUDED SECTION
FRAME SLIDING
WINDOW with ALU.
GRILL

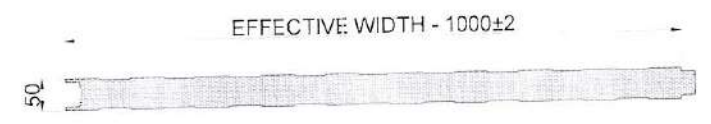
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ROOF SHEET SECTION DETAIL

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Tail NS4



WALL PANEL SECTION DETAIL

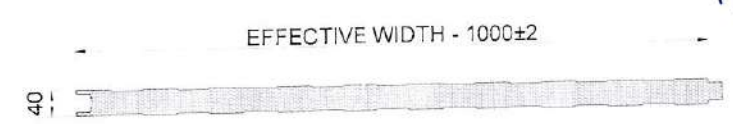
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35mm PUF
PANEL DOOR
with ALU.
EXTRUDED
JAMB
PROFILE



SHUN SHED WITH
SUPPORT FRAME

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CEILING PANEL SECTION DETAIL

*Subject to vetting
on 1st No. 2 of
CRPF*

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		DETAIL DRAWING OF ITEMS