

TECHNICAL SPECIFICATIONS

This specification are for the work to be executed items to be supplied and materials to be used in the works as shown and deafened on the drawings and described here in all under the supervision and to the satisfaction of the Architect / BANK AUTHORITY

The workmanship is to be the best available and of a high standard. Use must be made of specialist tradesmen in all aspects of the works, and allowance must be made in the rates for doing so.

The materials and items to be provided by the contractor shall be the best of their respective kinds, approved by the architect in accordance with any samples which may be submitted for approval and generally in accordance with the specifications. Where materials or products are specified in this specification and or / bill of quantities by the name of the manufacture or the brand trade name or catalogue reference the contractor will be required to obtained the approval of the architect / CANARA BANK/ GIFT AUTHORITY before using a material or product other than the specified. The contractor shall produce all invoices, vouchers or receipted accounts for any materials if called upon to do so by the Architect.

Sample of all material are to be submitted to the architect for his approval before the contractor orders or delivers in bulk to the site. Also, the contractor will be required to submit specimen finishers of colors, fabrics etc, for the approval of the architect before proceeding with the works. Should it be necessary to prepare shop drawings, then four copies of such drawings shall be submitted for the approval of the architect who will retain two copes all at the contractor's expenses.

- A. **Pricing:** The rate for each item of work shall, unless expressly stated otherwise, include the following (but not limited to the list given below) for the completion of works in all respects as per conditions of Contract, technical specifications, drawings:
1. All taxes such as Octroi, Sales tax, VAT, Service tax, Royalties, Transportation, Freights, Packing and forwarding charges Insurance, local taxes and all the prevailing taxes etc.
 2. All requirements and expenses for completion of work/item as per Rules and Regulations of Local Bodies, State Government and Central Government of India.
 3. All materials, equipments, accessories, consumable, controls and instruments, tools, tackles, plants, scaffolding/double scaffolding labour, maintenance, fixing, cleaning, making good hauling, hoisting etc., for carrying out the item/work.
 4. Waste on material and labour.
 5. Loading, Unloading, handling/double handling, setting out protection from weather, temporary supports, platforms, construction of temporary godwon/store for keeping of store etc., and the maintenance, of the same,

dismantling of temporary works, disposal of debris and all other labour necessary for the execution of works.

6. Testing the materials as required at contractors cost. Contractors to arrange for all special instruments and tools required for such testing or getting it tested at approved labs.
7. Painting of all equipment, pipes, and supports etc., as per color codes to be decided for various systems.
8. Fees for testing the materials, equipment or overall installation by appropriate authorities as approved by Canara Bank as per the latest version of IS. The testing lab will be decided by Canara Bank/Consultant. Cost of the testing of materials shall be borne by the contractor.
9. Necessary coordination with all concerned agencies/persons involved in the completion of work.
10. All requirements of specifications and drawings. Description of work given in the schedule of quantities is a brief description and shall be read in conjunction with specifications and drawings whether specifically mentioned or otherwise.
11. Removal of wrappings/ covering and carting away all unwanted materials, debris including POP.

The rates quoted by the tenderer will be deemed to be for the finished work complete in all respects with accessories, fitting, mounting arrangements normally provided with such equipment and/or needed for execution, completion, safe operation of equipment as required though they may not have been specifically mentioned in technical specifications, drawings and/or schedule of equipment.

All minor Masonry, Carpentry and Civil works such as cutting opening in Masonry Walls, Internal Partitions, Chasing on walls, etc. and making good the same to match existing works shall be provided by the contractor, whenever, asked for by the Bank/ Architect.

B. **SCHEDULE OF QUANTITIES:** All items of work in Bill of quantities (BOQ) shall be executed strictly in accordance with the description of the item in the Schedule of Quantities, relevant drawings and specifications read in conjunction with the appropriate Indian Standard specifications and conditions of the contract and established Engineering practices.

1. The rate for each item of work included in the schedule of quantities shall unless expressly stated otherwise include cost of:
 - All materials, fixing materials, accessories sequence of operations, appliances, tools, plant equipment, transport, labour and incidentals required and completion of the work called for in the item and as per specifications and drawings completely
 - Wastage on materials and labour
 - Loading transporting, unloading, handling as necessary, hoisting to all levels, and setting, fitting and fixing in position, protecting, disposal of debris as directed and all other labour necessary and to fully complete the job in accordance with contract documents, good practice and recognized principles of trade laid down in codes of practice.
 - Liabilities, obligations and risks arising out of conditions of contract.
 - All requirements of specifications, whether such requirements are mentioned in the item or not shall be provided for the specifications and

drawings where available are to be read as complimentary to any part of the schedule of quantities and any work called for in one shall be taken as required for all similar items.

2. The Contractor shall be paid for the actual quantity of work executed by him, jointly measured, at the accepted rates.
3. This schedule shall be fully priced and the extensions and totals duly checked. The rates for all items shall be filled in INK (both in figures& words).
4. No alterations whatsoever is to be made either to the description of items in the Schedule of quantities or specifications, which may lead to disqualification of the bidder. Alterations, notes or additions if any, shall be clarified in writing in their covering letter to this tender document. Any observation on BOQ should be made in the letter accompanying technical bid for proper consideration and any disfiguring or overwriting in the documents is not permitted.
5. Unless otherwise stated, all measurements shall be taken in accordance with Indian standard for Measurements IS 1200 latest revision effective on the date of measurement for interior items as applicable.
6. Any errors in quantity of items from the contract schedule shall not vitiate this contract but shall be corrected and deemed to be a variation by the Consultant/Employer.
7. Plumbing and sanitary work shall be carried out through licensed plumber only.

C. **DOCUMENTS MUTUALLY COMPLEMENTARY:** The several documents forming the contract are to be read as mutually complementary to each other and in case of ambiguities/ discrepancies, if any, the same shall be explained and clarified by the Consultant/Employer to the Contractor in what manner the work is expected to be carried out to meet the end requirements.

D. **INSTRUCTIONS DURING EXECUTION:** On the advice of the Employer, the Consultant may issue further drawings and written instructions, details, directions and explanations collectively referred to as "Site instruction" in regard to:

1. Variations or modification of the design, quality or quantity of works as addition or omission or substitution of any works therein.
2. Any discrepancies in the drawings or between the schedule of quantities and/or specifications and/or drawings.
3. Removal from the site any material brought by the contractor and substitution of any other materials therefore.
4. The dismissal or removal from work of any person employed thereupon.
5. Removal/re-examination of any works executed in case of doubt of any nature.
6. Opening up for inspection of any work covered up without proper tests by the Consultant.
7. Oversight on the part of the Consultant/his assistant to disapprove any defective work or material shall not prejudice the Owner/Consultant, thereafter to disapprove such work or materials and to order pulling down, replacement, removal breaking up or reconstruction.

The Contractor shall make his own arrangement for the engagement of all labour and shall be responsible for regulating their service conditions, work conditions in conformity with all Acts, Regulations, Rules or order of competent authority under

relevant laws in force during the pendency of the contract. No labour will be allowed to stay in Canara Bank premises. Contractor shall indemnify the Bank/Architect from all claims relating to the workers/ staff/ sub-contractors, Salaries, Wages, Overtime, Leave, Provident Fund, Medical facilities, gratuity, Bonus or any other claim as applicable and stipulated in any statutory provisions, rules or order of competent authority.

All materials so far as procurable shall be of the reputed/approved make in the category of manufacture and bear the stamp of quality of the Bureau of Indian Standards wherever applicable. The contractor shall furnish documentary proof, test certificates and guarantees as relevant to such materials from manufacturers, which shall match with the date of procurement. After completion of the work the guarantee cards, if any are to be handed over to Canara Bank

E. *PAINTING AND POLISHING:* The rates shall include for provision of:

1. Works at all heights and use of all scaffolding quantities, ladders, cradles etc. necessary for execution of work and for inspection.
2. Preparing surfaces to receive finishing coats, such as brushing to remove all extraneous materials and fungus growth, if any, preparing, scraping, washing and rubbing etc.
3. Puttying, sand papering and dusting of surfaces in between coats wherever applicable.
4. Work on cornices, narrow bands and widths, recesses grooves etc.
5. Finishing to approved texture and/or stipple finish etc. complete as directed for required number of coats to give an even shade / desired finishes.
6. Spreading and removing, covering to doors window. Floors, fittings, ducts, pipes etc. to protect them from splashes
7. Washing floors, cleaning glass, joinery, electrical fittings, ducts. Pipes etc. of drops and splashes and leaving premises clean and tidy.

F. *FLOORING, DADO, SKIRTING AND WALL FINISHES:* The rates shall include for provision of:

1. Use and waste of all temporary fillets, side-forms, templates, moulds, straight edges etc.
2. Washing of coarse and fine aggregates, wherever required by the consultants.
3. Final preparation of the base, sub-grade or sub-floor including minor trimming of the base to remove slight undulations if necessary.
4. Cleaning and watering the surfaces immediately before laying the floor.
5. Providing bedding layer of mortar as specified/required, in case of slabs, tiles etc. to correct levels of slopes as called for.
6. Cutting, rubbing and polishing surfaces and edges where applicable.
7. Rounding off corners, edges and junctions of floors with skirting or dado and also cutting recesses where required to accommodate recessed skirting.
8. Forming rounded recess in floor where called for.
9. Providing grooves where shown on drawings.
10. Work in narrow widths, bands, cornices, strips and to profiles shown at all heights, levels, locations and in small quantities, unless otherwise mentioned.

11. Curing, protecting and cleaning all finished surfaces as specified.
12. Work on any surface such as bricks, concrete, stone etc.
13. Providing grooves at the junction of plaster with other finishes as called for
14. Scoring surfaces of old plaster for key and wherever required.
15. All samples of finishing materials shall be got approved prior to use.
16. Keeping the work well wet for at least 7 days.
17. Cutting tiles/slabs to require size/shapes providing holes etc. before laying.
18. Machine polishing, hand polishing wherever machine polishing is not feasible due to site conditions, cleaning tiles with acid.
19. All marble work e.g. flooring, cladding, skirting, dado etc. shall have white cement based mortar for grouts.
20. Backside of marble to be treated with wax, before lay in flooring.
21. All ceramic/vitrified tiles shall be of 1st quality and as approved.
22. All Italian marble, Indian marble, Granite stone flooring & vitrified tiles floorings shall be protected by POP covering with plastic base, soon after the curing till the completion of all other tendered works. At the time of handing over the POP to be cleaned, cleared. With necessary cleaning materials the floors to be washed to get glossy / original finish
23. Laminated/pre-engineered wooden flooring shall be laid as per manufacturer's requirements.
24. All joints shall be filled with white cement with matching pigment, wherever necessary.
25. In case of fixing of tiles (Ceramic or vitrified) over the existing marble mosaic tile shall include:
 - a. Cleaning the surface with soap water, removing the oily stain
 - b. Fixing the tile in line and level on flooring and floor trunking lines with the tile adhesive - BAL Silver Star of M/s Bal Building Adhesive (I) Pvt. Ltd or approved equivalent. The thickness of the adhesive shall be minimum and shall be maintained in such a way a uniform level shall be achieved in finished floor. All the work shall be done as per manufacturers' recommendations. All joints shall be filled with white cement with matching pigment, wherever necessary.
 - c. No extra shall be allowed for more consumption of adhesive, if any, to keep the desired level.
 - d. The necessary cuttings/ cutouts for the junction boxes etc in the flooring

G. **CARPENTRY AND JOINERY:** Rate shall include for provision of:

1. Unless otherwise specified, the quoted rates shall be for all joinery work with approved Old Burma Teakwood. All wood shall be free from all defects and kiln seasoned and preservative treated and shall be got tested in laboratory as per IS and approved before placing or applying primer coat. The rate shall also include for applying two coats of Solignum paint to the face of frames in contact with masonry or concrete and the like.
2. The rate quoted shall include for fixing on masonry/RCC members MS holdfasts embedded in PCC (1:2:4) blocks of 230 x 150 mm size and of width to suit the thickness of masonry wall or for anchor fasteners, coach screws etc. of adequate size for fixing to RCC members.
3. Care shall be taken to thoroughly clean the hardware, fittings, glass panes, doors, etc. of the waste cement marks, left over paint marks etc.

4. The rate shall include for providing temporary supports etc., for fixing of frames and shutters at all levels.
5. The rate quoted shall be inclusive of any chiselling work, raking of sides, sills, soffits, if required and making good the surface.
6. The rate shall include wastage of material and labours.
7. The sizes mentioned are for finished items and shall be within the permissible limits of BIS.
8. Also the rate quoted shall include for:
 - Planing and finishing smooth all faces of various faces as required.
 - All screws, nails, pins, key and such other fixing accessories.
 - Cutting rebates, Grooves in woodwork as required or as directed.
 - Approved glue or adhesive for all joinery work.
 - Providing Old Burma T.W./ beech wood best quality beading, trimmings, beads, weather bars etc. as called for. Providing rough grounds as per drawings.
 - Providing as per schedule/drawings all hardware, fittings and fixture like, latches, hinges, tower bolts etc., and locks and other items as indicated for fixing such items supplied by the Architect at no extra cost.
 - Solignum treatment to all hidden wooden members and all block board or plywood faces coming in contact with masonry or concrete faces where retarding treatment is not called for.
 - Providing and applying primer to all wooden surfaces till the same are painted/polished.
 - Filling and finishing neat gaps around frames, doors, windows etc. with approved mastic.
 - Work at all heights and locations.
 - Wherever painting is specified it includes painting the surfaces with two or more coats of first quality synthetic enamel paint of approved shade and make over a coat of wood primer, putty, preparation of surface, sand papering, etc. to give an even shade. The contractor shall give any additional coats, if necessary to achieve desired finish etc. as directed by Canara Bank/ Consultant at no extra cost to Canara Bank.
 - Wherever polishing is specified it include polishing the surfaces with two or more layers of French spirit polish, with approved additives, stainers to get even/ approved shade over a coat of primer of approved chemicals to give an even shade.
 - All plywood and block board edges where exposed shall be finished with teakwood lipping.
 - Unless otherwise specified, all door shutters specified are to be solid core flush door shutters, with topping bonded with phenol formaldehyde and conforming to relevant Bureau of Indian Standards codal provisions.

H. ***FALSE CEILING:*** The rates shall include for:

1. All necessary labour, materials and use of tools and equipments for the satisfactory completion of the job.
2. Work at all heights.
3. Work in narrow widths and at all locations as called for and working to specified patterns and profiles.

4. Carrying out work to correct line and level.
5. Providing necessary cutouts and framework for lights, fittings, AC grills, trap doors, sprinkler heads, smoke detectors and similar including additional supports from ceiling where directed for these.
6. No deductions for openings less than 0.1 sq.mts in area.
7. Necessary precautions to prevent damage to flooring and other works.
8. Getting certificate from the manufacturer regarding genuineness of the material and work is carried out as per the specifications.
9. testing the suspension system as directed.

2. SPECIFICATIONS GENERAL

These specifications are for work to be done, items to be supplied and materials to be used in the works as shown and defined on the drawings and described herein all under supervision and to the entire satisfaction of the consultant & Employer.

The workmanship is to be the best available and of a very high standard, use must be made of specialist tradesmen in all types of work and necessary allowance must be made for the same in the rates quoted.

The materials and items to be provided by the contractor shall be the best of their respective kinds as specified in the tender and in accordance with the samples approved, where materials or products are specified in these specifications and/or Bill of Quantities by the name of the manufacturer of the brand name, trade name or catalogue reference, the contractor will require to obtain prior approval of the consultant and owner for using substitute material or product. The contractor shall produce all invoices, vouchers or receipted accounts for any materials if called upon to do so by the consultant and owner.

Samples of all materials are to be submitted to the consultant/owner for his approval before the contractor orders or delivers in bulk in the site. Samples together with their packings are to be provided by the Contractor free of charge and approved samples will be retained till the completion of work, by the owner and consultant for comparison with the materials which will be delivered to the site.

Should any materials be rejected by the consultant/Employer, they will be removed from the site at the Contractor's expense. Also the contractor will be required to submit specimen finishes of colours, fabrics, etc. for approval of consultant/ Employer before proceeding with the works. Should it be necessary to prepare shop drawings, then copies of such drawings shall be submitted for approval of the Bank/Architect, all at the Contractor's expenses.

2.1 Timber generally is to be the best of its kind, well and properly seasoned, of natural growth, free from work holes, large loose or dead knots or other defects and sawn die square and not to suffer from warpings, splitting or other defects even through handling.

2.2 The hardwood is to be Hollock or red maranti with moisture contents not more than 20%, unless otherwise specified.

2.3 Teak unless otherwise specified is to be the best quality free from soft heart, worm and bee holes, with maximum moisture contents of 12%. Teak veneers and flitches shall match each other throughout and, where possible, shall match existing flitches in the building.

2.4 The particle board shall be of high density, equal or superior quality to that laid in the I.S. 3478 and as approved by the Consultant/ Bank.

2.5 The blockboard shall be of approved brands conforming to I.S. Specification or such approved adhesives shall be used :-

I.S. 851 - 1957 : Synthetic Resin adhesive for construction work in wood.

I.S. 849 - 1957 : Cold setting case in glue for wood. where glued joinery and carpentry work is likely to come into contact with moisture, the glue shall be waterproof. The use of animal glues will not be permitted.

2.6 Flush doors unless otherwise specified of hollow framed core insulated construction shall be constructed with 100mm wide stiles, top and bottom rail, one 100mm wide horizontal intermediate rail and two 100mm wide diagonal braces, filled in solid with approved rigid type wooden battens. Polyurethane doors shall be constructed with one 75mm wide and one 125mm wide stile, 100mm wide top and bottom rail, one 100mm wide horizontal intermediate rail and 50mm wide diagonal braces; filled in as described before.

2.7 Flush doors of hollow framed, unless otherwise specified, core construction shall be constructed with 75mm wide stiles and top rails, 125mm wide bottom rail, two 150mm wide horizontal intermediate rails with beehive core of 25mm wide filling pieces at 100mm centres both ways and blocked out as necessary for lock and hinges. All horizontal members shall have 6mm dia. borings.

All doors shall consist of selected hardwood properly jointed together and they shall be covered on both sides with 4mm teak veneered plywood or as specified. Each door is to be lipped all around with 12.5mm teak twice rebated edging tongued to the stiles and rails and mitred. The doors are to be the full thickness as specified. The lippings on the meeting stiles of folding doors shall be increased to take the rebate as specified.

2.8 Frames to doors, windows, etc. shall be of hardwood or teak as specified and to the required sizes with all necessary mouldings with mortice and tenoned joint, lead and teak pins and secured in position as specified.

2.9 Shelves generally shall be constructed of plywood with edgings of 25mm teak tongued on.

Timber is to be cut to the required sizes and length as soon as practicable after the works are begun and stored under cover so that the air will circulate freely around it. Joinery is to be prepared immediately after the finalisation of the contract, framed up (but not boned) and stored until required for fixing in position, when it is to be bonded and wedged up. Any portion that warps or develop shakes or other defects are to be replaced before wedging up. The whole work is to be framed and finished in a proper workman like manner, in accordance with the detailed drawings, and fitted with all necessary metal ties, straps, bolts, screws, etc.

Turning bonded joints are to be cross tongued with teak tongues and where over 12.5mm thick, to be double cross tongued. Joiner's work generally is to be finished with fine sand papered surfaces unless otherwise specified.

Templates, boxes and moulds shall be accurately set out and rigidly constructed so as to remain accurate during the time they are in use.

Grounds are to be clean sawn, free from large knots, splayed as required and plugged and fixed to walls, etc. at 450mm centres unless otherwise specified.

Wood plugs are to be cut on the twist. Patent wall plugs or plastic fillings may be used in lieu of wood plugs with the prior approval of the Consultant.

All unexposed surfaces of timber, e.g. false ceilings, backing fillets, backs of door frames, cupboard framing, grounds, etc. are to be treated with two coats of Atlas 'A' or other equal and approved timber preservative before fixing or bedding

The service stations, counters, shelving, etc. shall be generally constructed of plywood as described and specified properly housed, grooved tongued, glued, blocked and screwed together and entirely to the satisfaction of the consultant.

The chairs, tables, etc. shall be generally constructed of teak, foam rubber and fabric as described and specified, properly housed, grooved, tenoned, tongued, glued, blocked

and screwed together in the manner of good quality furniture and entirely to the satisfaction of the Consultant & owner. A prototype sample of all custom made pieces must be prepared and submitted to the Consultant for his owner's approval before proceeding with the work in quantity.

2.10 HARDWARE & METAL:

The hardware throughout shall be of approved manufacture and supply, well made and equal in every respect to the approved samples to be deposited with the owner and Consultant. For the purpose of approval of samples, the contractor may be required to produce and provide to the Consultant, samples from many different sources and should allow in his rates for the same.

Fittings generally shall have satin chrome or anodized finish unless otherwise stated and shall be suitable for their intended purpose of use.

Screws are to match the finish of the article to be fixed and to be round or flat headed or counter sunk as required.

The bronze and brass surfaces shall be covered with thick grease or other suitable protective material renew as necessary and subsequently clean off and clear away on completion.

Aluminum and stainless steel shall be of approved manufacture and suitable for its particular application generally, the surfaces of all aluminum shall have an anodized finish and the quality and finish both shall comply with the samples approved by the Consultant & owner.

All steel, brass, bronze, aluminum and stainless steel articles shall be submitted for test for strength, if so, required by the Consultant & owner, at the contractor's expenses.

All brazing and welds are to be executed in a clean and smooth manner, rubbed down and left in the flattest and tidiest way, particularly where exposed.

Chromium plating shall be in accordance with B.S. 1224 or as per approved specifications for "normal outdoor conditions", and shall be on a base material of copper or brass.

2.11 FIBRE GLASS

The fiberglass decorative panels shall be constructed of 30% glass fiber chopped strand mat reinforced with 70% polyester resin; the fiberglass and resin to be either pigmented or sprayed with and fired with tarred paint. The panels shall be made in moulds to the approved design as per drawings and to the thickness required by the Consultant. The fiberglass panels are also obtainable from the approved suppliers.

2.12 GLAZIER

All glass to be approved manufacture complying with IS:3548-1966, or as per approved quality and sample, to be of the quality specified and free from bubbles, smoke wanes, air holes and other defects.

The compound for glazing to metal is to be a special non-hardening compound manufactured for the purpose and of a brand and quality approved by the Consultant & owner.

In cutting glass, proper allowance shall be made for expansion each square of glazing to be in whole sheet. On completion, clean all glass inside and out, replace all cracked, scratched or broken panes and leave in good condition to the satisfaction of the Consultant & Employer

2.13 PAINT & POLISHING

All materials required for the works shall be of specified and approved manufacture, delivered to the site in the manufacturer's containers with the seals, etc. unbroken and clearly marked with manufacturer's name or trade-mark with description of the contents and colour as well as expiry date etc. All materials are to be stored on the site of the works.

Spray painting with approved machines will be permitted only if prior written approval has been obtained from the Consultant. No spraying will be permitted in the case of priming coats or where the soiling of adjacent surface is likely to occur. The nozzle and pressure to be so operated as to give an even coating throughout to the satisfaction of the Consultant. The paint used for spraying is to comply generally with the specification concerned which is to be specifically prepared by the manufacturer for spraying. Thinning of paint made for brushing will not be allowed.

Wood preservation shall be solignum, Black Japan or other equal and approved impregnating wood preservative, and all concealed woodwork shall be so treated.

All brushes, tools, pots, kettles, etc. used in carrying out the work shall be clean and free from foreign matter, and are to be thoroughly cleaned out before being used with a different type of class of material.

All iron or steel surfaces shall be thoroughly scrapped and rubbed down with wire brushes and shall be entirely free from rust, mill scale, etc. before applying the priming coat.

Surfaces of new woodwork which are to be painted are to be rubbed down, knotted and stopped to the approval of the Consultant & owner.

Surfaces of previously painted woodwork which are to be repainted shall be cleaned with soap and water, detergent solution or approved solvent to remove dirt, grease, etc. whilst wet the surfaces shall be flatted down with a suitable abrasive and then rinsed down and allowed to dry. Minor areas of defective paint shall be removed by scrapping back to a firm edge and the exposed surface touched in with primer as described and stopped with putty. Where woodwork has been previously painted or polished and is to be newly polished, the same shall be prepared with scrapping, burning off or rubbing down.

Surfaces of previously painted metal which are to be repainted shall be cleaned down and flatted down as described in surfaces of previously painted woodwork. Minor areas of defective paint and any rust and loose scale shall be removed completely by chipping, scrapping and wire brushing back to the bare metal and touched in with primer as described.

3. GENERAL SPECIFICATIONS FOR "UPHOLSTERED" FURNITURE

3.1 TIMBER : All timbers shall be as specified in drawings otherwise Old Burma Teakwood, free from knots, shakes, and worm holes, and with a moisture content of not more than stipulation of IS depending on the climatic conditions prevailing at the site. Timbers which are completely hidden, i.e. when covered by upholstery material, shall be of specified wood, except where this interfaces with the strength of the product, as in the case of a leg or arm which is part covered and part finished.

3.2 JOINTS: All joints shall be standard, mortise and tenon, dowel, dovetail, and cross halved. Nailed or glued butt joints will not be permitted¹. Screws, nails, etc. will be of standard iron or wire unless stated otherwise on drawing. Nails on finished surface shall be neatly punched and the hole filled with wood filler to match the colour.

3.3 UPHOLSTERY: This will be of first class standard workmanship with webbing, no sag springs, coiled springs, padding and filling as specified on drawing. Covering fabrics will be sewn, tufted, and corded as shown on the drawing.

3.4 CUSHION VENTS: Brass or Aluminum "cushion vents" should be installed at the back or under side of seat cushions (especially those covered in leather, vinyl plastic or very tightly woven fabric) to allow air to escape easily and to prevent torn seams.

3.5 MATERIALS: Finished timber shall be of the type specified, furnishing fabrics, colour, pattern, substance to be as specified. No variation of this will be permitted without prior approval of the Consultant & owner.

3.6 FINISH: This will be as specified on the drawing and colour scheme chart where timber is finished in natural colour, care must be taken to "match" each separate piece of colour, before assembly. Where timber is stained, the stain or colour on each member must match.

Only first class workmanship will be accepted. All legs to furniture will be fitted with nylon glides or castors as specified on the drawing. Full size drawings or prototype samples are to be submitted to the Consultant for prior approval if requested.

3.7 FABRIC AND WALL COVERINGS:

The fabrics or wall coverings shall be in conformity with the details shown on colour scheme charts. The wall paper or fabric shall be applied with an approved method or adhesive after necessary preparation of surfaces and in accordance with the manufacturer's recommendations and to the approval of the Consultant. The lengths of wall covering are to be hung with an overlap of at least 1" and cut flush as recommended by the manufacturer. A sample of the colour and style shall be produced for the Consultant's / owner approval.

4. GENERAL SPECIFICATION FOR FACTORY MADE OR CARPENTRY MADE STORAGE UNITS

- 4.1 **TIMBER:** All timbers used are to be of top quality as specified free from knots, shakes, wormholes, and with moisture content of not more than as per stipulation of IS depending on the climatic conditions prevailing at the site.
- 4.2 **JOINTS:** All joints will be standard, mortise and tennon, dovetail, duel, cross halved, mitred, tongued and grooved and rebated. Nailed and glued butt joints will not be accepted.²
- 4.3 **FASTENINGS:** Screws, nails, blots, will generally be iron or wire, except in the following examples. "Outdoor Furniture" fastenings will be of brass or other non-corrosive metal. In hardware, they will match the finish of the hardware item. Nails, in a finished surface shall be neatly punched and the hold filled with wood filler matching the finish. Screws in a finished surface will be round head, raised or sunk beneath the surface, and the hole plugged with a wood plug with matching colour and grain of the wood surface, unless specially detailed.

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- 4.4 **PLYWOOD:** Used mainly for the body-work of this furniture, shall be as per the item specification of BOQ. Exposed edges shall be finished with a piece of solid wood, tongued, grooved and glued, or as detailed.
- 4.5 **HARDWARE:** Hinges, locks, latches, door tracks, etc. shall be as specified, and of specified make. In any variation of this the quality of the substitute shall be equal to or better than the originally specified, and the sample should be submitted to the consultant\owner for prior approval.
- 4.6 **METAL:** Where metal legs, frames, sheets, etc. are used, these shall be welded, brazed, bolted or rivetted as required and on finished surfaces welding, brazing and rivetting shall be neatly smoothened so that no evidence of this is apparent on the final finish of the metal which will be as specified on drawing. On all legs wood or metal, nylon glides or heavy duty castors as indicated, are to be installed.
- 4.7 **FINISH:** This will be as indicated on the drawing and colour scheme charts, and materials (timber, plastic, laminates, lacquer, paints, etc.) must be as specified. No variation will be accepted unless with the prior approval of the Consultant & owner. "Backs" of cabinets, etc., where wall hung shall be treated with an approved brand of wood preservative. Full size drawings or prototypes are to be submitted for approval if requested.

NOTE: This specification is of a general type only and must be used in conjunction with the drawings of the particular item being made. Anything showing on the drawing, but not in the specification must be complied with and vice versa.

5. SPECIFICATION OF WORK – CIVIL & INTERIOR WORK

- 5.1 The scope of work covers execution and completion of the civil & interior works in accordance with drawings and specifications to the satisfaction of the Consultant/Bank. The following specifications shall form part of the contract and these shall be deemed to be supplemental to the specifications in the schedule of quantities and not in derogation thereof except to the extent specifically provided herein.
- 5.2 Materials shall be of the best approved quality obtainable and they shall comply with the respective IS specifications. Samples of all materials shall be got approved before placing an order and the approved sample shall be deposited in Canara Bank.
- 5.3 The contractor shall arrange to test all the materials viz., tiles, etc. in the work as and when advised by the employer, at his cost through approved laboratory to confirm that they comply with the latest IS code. The materials which are not conforming to the relevant IS provisions after testing shall be removed by the contractor and replaced with appropriate materials.
- 5.4 The tiles shall conform to the relevant IS codes. The colour and the design shall be as approved by Canara Bank. The sub grade shall be thoroughly cleaned of all dirt, grease, oil stains, filling up of pits etc., before commencement of the work and the same shall be got approved by Canara Bank. The tiles shall be fixed using cement mortar/tile adhesive in a perfect workmanship manner strictly as per manufacturer's specifications. The tiles shall be gently tapped till it is properly bedded and in level with adjoining tiles. The junction of four tiles shall be exactly matching and no skew joint shall be accepted. The joints of the tiles shall be fine and as impermeable as possible. The edges shall be uniform and not serrated.

- The jointing of the tile shall be properly finished with white cement and matching pigment if required and sealed in a manner to make it impervious.
- 5.5 The surfaces to be painted shall be thoroughly brushed free from mortar droppings, foreign material. All steel work shall be cleaned of loose rust, mill scales etc., so as to expose the original surface. All broken edges, cracks, loose plaster and wavy surface shall be brought up either by patch plasterwork or POP. All materials viz., oil bound distemper, acrylic emulsion paint, synthetic enamel paint shall conform to the respective BIS specifications. All the paints shall be brought to site in sealed condition.

6. SPECIFICATION OF WORK - PARTITIONS

- 6.1 The scope of work covers design, fabrication, supply and fixing of partitions/doors in accordance with drawings and specifications prepared to the satisfaction of Canara Bank /consultant. The following specifications shall form part of the contract and these shall be deemed to be supplemental to the specifications in the schedule of quantities and not in derogation thereof except to the extent specifically provided herein.
- 6.2 Materials shall be of the best-approved quality obtainable and they shall comply with the respective BIS specifications. Samples of all materials shall be got approved before placing an order and the approved sample shall be deposited in Canara Bank.
- 6.3 All the materials used in the work shall conform to the relevant BIS codes. The colour, design and pattern shall be as approved by Canara Bank. The Aluminium frame work, MDF board, plywood, block board shall be thoroughly cleaned of all dirt, dust, grease, oil stains etc., before commencement of the work and the same shall be got approved by Canara Bank Engineer/Consultant. The Aluminium framework shall be firmly fixed to the floor and the RCC ceiling, partition work viz., Aluminium framework, MDF board, plywood, pasting of Veneer/laminate/wall paper to the MDF board/plywood (no air bubbles in the laminated partition, etc., would be accepted under any circumstances) and the fixing of glass to the partition shall be done in a perfect workmanship manner strictly as per manufacturers specifications. The junction of glass shall be crystallized to high precision and shall be fine and no skew joint shall be accepted. The edges shall be uniform and not serrated.
- 6.4 The surfaces to be painted shall be thoroughly brushed free from droppings, foreign material. All steel work shall be cleaned of loose rust, mill scales etc., so as to expose the original surface. All broken edges, cracks, loose plaster and wavy surface shall be made even. All materials viz., oil bound distemper, acrylic emulsion paint, synthetic enamel paint shall conform to the respective IS specifications. All the paints shall be brought to site in sealed condition.

1. CEMENT³

- i) Cement shall be ordinary Portland cement conforming to IS 269 for all purpose.
-

It shall be received in bags of 50 kg and each batch shall be accompanied with a test certificate of the factory. Also it shall be tested before use to ascertain its strength, setting time, etc. In no case cement has been stored over 4 weeks and shall not be used unless tested as per the direction of the ARCHITECT prior to use in the works.

- ii) Cement shall be stored in such locations so as to prevent deterioration due to moisture dampness. A dry and water proof shed shall be best suited for this. Bags shall be stacked on rigid water-proof platforms about 15 to 20 cm clear above the floors and 25 to 35 cm clear or away from the surrounding walls. A maximum high stack of 12 bags is permitted. Stacks shall be so arranged that

the first batches are used first, and (FIFO) that they permit easy access for inspection and handling.

- iii) The following other types of cement may be used in works if specified or with prior approval of the ARCHITECT in writing. Specialist literature shall be consulted for guidance regarding use of these types of cement.

Rapid hardening Portland cements conforming to IS 8041.

Portland pozzolana cement conforming to IS 1489.

High strength ordinary Portland cement conforming to IS 8112.

High alumina cements conforming to IS 6452.

Super sulphated cement conforming to IS 6909.

2. COARSE AGGREGATE

- i) Coarse aggregate shall be obtained from natural sources such as stone, gravel etc. crushed or uncrushed or a combination thereof from approved quarried. Aggregate shall be hard, strong, dense, durable, clean and free from veins and adherent coating. It shall be free from soft, feeble, thin, elongated or laminated pieces and shall be roughly cubical in shape. It shall consist of coarse material most of which is retained on 4.75 mm IS sieve.
- ii) Coarse aggregate shall not contain any harmful material such as iron, pyrites, coal, mica shale or similar laminated material neither shall it contain clay, alkali, soft fragments, sea shells, organic impurities etc. in such quantities that adversely affects the strength and durability of the concrete. In addition to the above, in reinforced concrete the aggregate shall not contain any material, which might attack the reinforcement. The maximum quantities of deleterious materials in the coarse aggregate when determined in accordance with IS 2386 Part I and Part II "Method of test for aggregates for concrete" shall not exceed the limits laid down in table 1 of Annexure.

- iii) Aggregate crushing value, impact value, abrasion value and soundness of aggregate shall respectively be in accordance with BIS codal provisions.
- iv) Grading of coarse aggregate shall be in conformity with the requirements laid down in IS 383.
- v) Source of aggregate shall be from an Government approved location. It shall be tested prior to the approval of the ARCHITECT from an approved testing laboratory. In case available aggregates do not meet certain requirements of IS 383 or any other specification, the contractor at his cost shall carry out required processing. No extra cost towards these processes, treatment or combination of both shall be paid. It shall be the duty of the contractor to make sure that aggregate material received by him is from Government approve quarries and with fully paid royalties, taxes, duties etc. as may be in force from time to time for respective locations.
- vi) Aggregates shall be stored in such a way that it does not get mixed with mud, grass vegetables and other foreign matter. The best way is to have a hard surface platform made out of concrete, bricks or planks. It should be to the approval of the ARCHITECT.
- vii) Coarse aggregate shall have a minimum specific gravity of 2.6 (Saturated surface dry basis). Aggregate below this specific gravity shall not be used without the special permission of the ARCHITECT.
- viii) One a specific source of supply of coarse aggregate is approved; the source shall not be changed without the prior approval of the ARCHITECT.

3. FINE AGGREGATE

- i) Natural sand deposited by stream or glacial agencies as a result of disintegration of rock is the best form of fine aggregate. The fine aggregate shall confirm to following standards.
 - i. For plain and reinforced concrete: IS 383 Specification for coarse and fine aggregates from natural sources for concrete.
 - ii. Mortar and grout : Is 2116 Specification for sand for masonry mortars.
 - iii. For plastering : IS 1542 Specification for sand for plaster (Class A grading)
- i) Some times it is obtained from crushed stone screening but often contains a high percentage of dust and clay. It tends to be flaky and angular. This type produces harsh concrete and should be avoided.
- ii) Sea sand should not be used unless approved by the ARCHITECT. If approved, the required treatment shall be done at the contractor's cost.

Sand shall be hard, durable, clean and free from adherent coatings and organic matter and shall not contain any appreciable amount of clay. Sand shall not contain harmful impurities such as iron, pyrites, coal particles, lignite, mica shale or similar laminated material, alkali, and organic impurities in such form or quantities as to affect the strength or durability of concrete or mortar. Also it should not contain any material liable to attack the steel reinforcement.

- i) When tested as per IS 2386 Part I and Part II, fine aggregate shall not exceed permissible quantities of deleterious materials as given in table 1 of Annexure.
- ii) Fine aggregate shall be thoroughly washed at site with clean fresh water such that the percentage of all deleterious materials is within the permissible limits laid down.

Grading of fine aggregate shall conform to IS and shall fall within limits of one of the four zones given in table 4 of IS 383 and of Annexure.

Damp and moist sand increases the volume and is called bulking. Due allowance is to be made while preparing the mixes based on volume measurements. It shall be determined as per IS 2386 Part III Appendix A. For rough guidance table 5 of Annexure gives the relation between moisture content and percentage of bulking.

Storing of aggregate shall be as given in clause 2.2.6.

4. WATER

- i) Water used for mixing and curing shall be clean, reasonably clear and free from objectionable quantities of silt, oils, alkalies, acids, salts so as not to weaken mortar, or concrete or cause efflorescence or attack the steel in RCC while curing. It shall be free of elements, which significantly affects the hydration reaction or otherwise interferes with hardening of concrete during curing or those elements, which produced objectionable stains or deposits. Potable water is generally satisfactory but it shall be tested prior to use in the works.
- ii) Water tested shall be in accordance with IS 3025. Maximum permissible limits of deleterious materials in water as given in IS 456 are reproduced for ready reference in table 6 of Annexure.
- iii) The PH value of water shall not be less than 6 and more than 9.
- iv) Water storage tanks shall be such as to prevent any deleterious materials getting mixed with it.
- v) Sea water shall not be used for any work.

5. MORTARS

Mortars shall be prepared by mixing fine graded aggregate with cement, in the proportion specified for respective items of work as detailed in the BOQ. Mixing of mortars shall be done by hand mixing for smaller jobs and for larger jobs mechanical mixers to be used. Hand mixing may be permitted in specified cases on the written permission of the ARCHITECT.

Mortars shall be specified by proportion only and not by strength, volumetric mixing shall be based on dry volumes of each ingredient. For convenience, measurement shall correspond to volume of one cement bag i.e. 0.035 Cu.mt. Boxes shall be of size of 40 x 35 x 25 cm. These shall be marked as mortar mixing boxes by red paint and shall be used throughout the contract. Hand mixing or mechanical mixing proportions shall be done with the use of these boxes.

6. REINFORCED CONCRETE AND ALLIED WORKS:

Cement Concrete (Plain and Reinforced):

The quality of materials and method and control of manufacture and transportation of all concrete work in respect of mix, whether reinforced or otherwise, shall conform to the applicable portions of IS 456.

The Architect shall have the right to inspect the sources of materials, the layout and operation of procurement and storage of materials, the concrete batching and mixing equipments and the quality control system. Such an inspection shall be arranged by the contractor and the Architect's approval shall be obtained prior to starting the concrete work.

Materials for Standard Concrete:

The ingredients to be used in the manufacture of standard concrete shall consist solely of a standard type portland / portland puzzolana cement, clean sand, natural coarse aggregate, clean water, ice and admixtures if specially called for on drawings or schedule of quantities.

7. BRICK WORK:

Scope of work:

The work covered under this specification pertains to procurement of best quality materials.

Materials:

Brick shall be best quality locally available bricks and shall be got approved by the Architect before incorporation in the work.

The nominal size of bricks (F.P.S) shall be 22.9 x 11.4 x 7 cm. (9" x 4 1/2" x 2 3/4"). Permissible tolerance on dimensions shall be ± 3 mm. in length and ± 1.5 mm in width / thickness. The contractor shall get approved the sample and source of bricks from Architect before procurement on large scale and shall maintain the same for the entire work.

Extra cement consumed, if any due to more number of joints and due to additional thickness of plaster than the specified in the tender to match with adjoining columns and beams, shall be to Contractor's account.

If the plastering to be done is more than the specified thickness to bring the plaster surface to perfect line, level and plumb with adjoining columns, beams, walls etc., the contractor shall be responsible to provide and fix chicken wire mesh to receive more thickness of plaster at his own cost and nothing extra will be paid on this account.

In case the size of bricks used in the work, found more than the permissible, the contractor shall chip out the exposed edges of bricks upto the required level of wall to receive specified thickness of plaster.

Bricks shall generally conform to IS 1077-1970. In any case minimum crushing strength shall not be less than 35 kg / sq.cm. and water absorption shall not be more than 25% by weight. The Architect shall have the right to reject bricks obtained from any field where the soil have an appreciable quantity of sulphates and chlorides. The specifications for cement, sand and water shall be as per IS specifications. Bricks shall be thoroughly soaked in water before using till the bubbles ceases to come up. No half or quarter brick shall be used except as closer. The closers shall be cut to required size and used near the end of the walls. The walls shall be raised truly to plumb. The type of bond to be adopted shall be decided by the Architect, but vertical joints shall be laid staggered.

Workmanship:

Four courses of brickwork with four joints should not exceed by more than 40 mm. The same bricks piled one over the other without mortar.

Brickwork shall not be raised more than 10 courses a day unless otherwise approved by the Architect. The brickwork shall be kept wet for atleast 7 days. Brickwork shall be uniformly raised around and no part shall be raised more than 1.0 metre above another at any time.

All joints shall be thoroughly flushed with mortar of mix as specified in the schedule of quantities, at every course. Care shall be taken to see that the bricks are bedded effectively and all joints completely filled to the full depth.

The joints of brick work to be plastered shall be raked out to a depth not less than 10mm as the work proceeds. The surface of brick work shall be cleaned down and watered properly before the mortar sets.

The adhesion between the brick masonry surface and the concrete surface of columns, beams, chajjas, lintels etc. should be proper by ensuring that the concrete surface coming in contact with brick masonry is hacked / chipped / keyed, cleaned and cement slurry is applied so that a proper bond is achieved between the two dissimilar materials. It is the responsibility of the contractors to ensure that there will not be any cracks / fissures anywhere in the brick masonry.

In case the cracks appear subsequently in those areas, they should be made good by cement grouting or epoxy putty grouting / poly sulphide compound grouting or as per standard modern specifications / methods with the prior approval of the Architect, at the cost of the contractor.

All the courses shall be laid truly horizontal and all vertical joints shall be truly vertical. Specified mortar of good and approved quality shall be used. Lime shall not be used where reinforcement is provided in brick work. The mortar should completely cover the bed and sides of the bricks. Proper care should be taken to obtain uniform mortar joint throughout the construction. The walls should be raised uniformly in proper, approved bond. In construction of the wall, first of all two end corners are carefully laid to line and level and then it between portion is built, with a cord stretching along the headers or stretchers held in position at the ends. This helps in keeping the alignment of the courses and maintaining them in level. Similarly all other courses are built. Care shall be taken to keep the perpends properly aligned within following maximum permissible tolerances:

Deviation from vertical within a storey shall not exceed 6mm per 3 m height Deviation in verticality in total height of any wall of building more than one storey in height shall not exceed 12.5 mm

Deviation from position shown on plan of any brick work shall not exceed 12.5 mm.

Relative displacement between load bearing wall in adjacent storeys intended to be vertical alignments shall not exceed 6 mm.

A set of tools comprising of wooden straight edge, masonic spirit levels, square, 1 meter rule line and plumb shall be kept on the site of work for every 3 masons for proper check during the progress of work.

No brick work shall be carried on during frosty weather except with the written permission of the Architect who will give special directions as to the manner in which the

work is to be performed. All brick work laid during the day shall, in seasons liable to frost, be properly covered up at night as directed by the Architect. Should any brick work be damaged by frost, the brick work shall, at the discretion of the Architect, be pulled down and made good at the cost of the contractor.

Concrete surfaces of columns, beams, lintels; chajjas etc. coming in contact with masonry work shall be properly chipped, washed and given a thick coat of cement slurry before start of work. The rate quoted shall include wire brushing and cleaning brick work covered with fungus or deleterious materials.

Brick work shall be well watered / cured throughout the day for atleast a week from the date of building and the work shall be protected from sun and rain.

Materials and workmanship for a half brick or brick on edge partition wall shall be as specified above. The wall shall be stiffened by R.C.C. stiffeners of size 115mm. wide x 80-mm. thickness to the full length of wall and shall be provided with 2 nos. 6 mm. diameter M.S. bars or as specified in the schedule as bottom reinforcement. The rates for brick work shall include the cost of the following:

- Providing and fixing of two nos of 6mm dia M S bars as bottom reinf. At every 900mm height throughout its length for half brick masonry.
- Providing and fixing necessary single or double scaffolding and removing the same after the work is completed.
- Watering, curing, lifting of materials to any height.
- Raking out of joints to receive plaster
- Forming slab sittings, cutting or leaving holes for lugs of windows, doors, sills, switch boxes etc.
- Making good all holes, chases etc. to any depth due to conduit pipes, holdfasts, bolts, switch and plug boxes etc.
- Bedding and pointing precast lintels, sills etc. in or on walls.

Mode of measurement:

For Brick Work measured in Cubic Metres :

The contract rate shall be for a unit of one cubic metre of brick masonry as actually done.

For measurement purpose, thickness of single brick wall shall be taken as 230 mm. irrespective of thickness used. Brick walls of more than one brick thickness shall be measured as per actual thickness constructed.

All openings in brick work for doors, windows and ventilators shall be deducted to get the net quantity of actual brick work done.

Openings or chases required for P.H. or electrical inserts less than 0.1 sqm. and bearing of precast concrete members shall not be deducted.

No extra payment shall be made for any extra work involved in making the above openings or placements.

For brick work measured in square metre :

Half brick thick masonry walls shall be measured in sqm. All openings in brick work for doors and windows and ventilators shall be deducted to get the net quantity of actual work done. Openings of chases required for P.H. or Electric inserts less than 0.1 sqm. and bearing of precast concrete members shall not be deducted. No extra payment shall be made for extra work involved in making the above openings or placements.

Cement Concrete Flooring (Indian Patent Stone) :

Materials:

The specifications for materials, grading, mixing and the quantity of water to be added shall generally conform to their relevant I S codes. The maximum size of coarse aggregate shall be 10 mm. The fine aggregate shall consist of properly graded sand. Concrete shall be mixed preferably by machine, and hand mixing shall be avoided as far as practicable.

Preparation of Base:

The base concrete surface shall be thoroughly chipped to remove laitance, caked mortar, loose sand, dirt etc. cleaned with wire brush and washed clean and watered until no more water is absorbed. Where the base concrete has hardened so much that roughening the surface by wire brushes is not possible, the same shall be roughened by chipping or hacking at close intervals. The surface shall be soaked with water for atleast 12 hours and surface water removed and dried before laying the topping. Before laying the concrete, cement slurry at 2.75 kg / sq.m. of surface shall be applied for better bond. Concrete flooring shall then be laid in alternate bays in pattern and joints, wide / flush as per drawing. The edge of each panel into which the floor is divided shall be supported by wooden or metal strips duly oiled to prevent sticking. The panels shall be of uniform size and, unless otherwise specified, no dimension of panel shall exceed 2 m. and the area of a panel shall not be more than 2 sq.m. However, the exact size of panel shall be decided by the Architect to suit the size of the room. The joints in the floor finish shall extend through the borders and skirting / dado. The border shall have mitred joints at the corners of the room. Where aluminium dividing strips are proposed to be provided, the same shall be fixed in cement mortar 1:2 @ 1200 mm. centres or as specified in the schedule for full depth of the finished floor.

The depth of dividing strips shall be the thickness as proposed for the finished floor in the item. In the case of flush joints, alternate panels only may be cast on same day. Atleast 48 hours shall elapse before the concreting of adjacent bay is commenced.

Mixing:

The topping concrete shall be of mix of one part of cement, two parts of sand and 4 parts of well graded stone chips of 10 mm. maximum size. The ingredients shall be

thoroughly mixed with just sufficient water to the required plasticity, having water cement ratio not more than 0.5

Laying:

The free water on the surface of the base shall be removed and a coat of cement slurry to the consistency of thick cream shall be brushed on the surface. On this fresh grouted base, the prepared cement concrete shall be laid immediately after mixing. The concrete shall be spread evenly and laid immediately after mixing. The concrete shall be spread and levelled carefully. The concrete shall be completed and brought to the specified levels by means of a heavy straight edge resting on the side forms and down ahead with a sawing motion in combination with a series of lifts and drops alternatively with small lateral shifts, either mechanically or manually as directed by the Architect.

While concreting the adjacent bays, care shall be taken to ensure that the edges of the previously laid bays are not broken by carelessness or hand tamping. Immediately after laying the concrete, the surface shall be inspected for high or low spots and may needed correction made up by adding or removing the concrete and whole surface is again levelled. When the layer is made even, the surface shall be completed by ramming or beating and then screed to a uniform line and level. Before the initial set commences, the surface shall be trowelled to smooth and even surface free from defects and blemishes and tested with straight edges. No dry cement or mixture of dry cement and sand shall be sprinkled directly or empty gunny bags spread over the surface of the concrete to absorb excess water coming on top due to floating.

Finishing the Surface:

After the concrete has been fully compacted, it shall be finished by trowelling or floating. Finishing operations shall start shortly after the compaction of concrete and shall be spread over a period of one to six hours depending upon the temperature and atmospheric conditions. The surface shall be trowelled intermittently at intervals for several times so as to produce a uniform and hard surface. The satisfactory resistance of floor to wear depends largely upon the care with which trowelling is carried out. The object of trowelling is to produce as hard and close knit a surface as possible. The time interval allowed between successive trowelling is very important. Immediately after laying only just sufficient trowelling shall be done to give a level surface. Excessive trowelling in the earlier stages shall be avoided as this tends to work a layer rich in cement to the surface, some time. After the first trowelling, the duration depending upon the temperature, atmospheric conditions and the rate of setting of cement used, the surface shall be re-trowelled many times at intervals to close any pores in the surface, and to bring to surface and scrap off any excess water in concrete or laitance (it shall not be trowelled back into the topping). The final trowelling shall be done well before the concrete has become too hard but at such a time that considerable pressure is required to make any impression on the surface. Trowelling of rich mix of dry cement and fine aggregate on to the surface shall not be permitted. Trowel marks should not be seen on the finished surface.

Where broom finish is specified, after the concrete has been thoroughly compacted, and when most of the surface water has disappeared, the surface shall be given broom finish with an approved type of brass or M.S.Fiber. The broom shall be pulled gently over the surface from edge to edge in such a manner that corrugation shall be uniform

in width and depth, the depth shall be not more than 1.5mm. Brooming shall be done when the concrete is in such a condition that the surface will not be torn or unduly roughened by the operation. Coarse or long bristles which cause irregularities or deep corrugation shall be trimmed out. Brooms which are worn or otherwise unsatisfactory shall be discarded.

After the concrete in the bays has set, the joints of the panels should be filled with cement cream and neatly floated smooth or jointed. Care should be taken that just the minimum quantity of cream for joint is used and excess spilling over the already finished surface shall be removed when the cream is still green.

In case of wide joints the same shall be filled with pigmented cement concrete (1:2:4) using approved pigment and the joint shall be finished in perfectly straight line.

Steel Trowel Finish:

Areas where marbles tiles are proposed to be used are required to have base concrete finished smooth by steel trowel.

Curing :

The completed flooring shall be protected from sun, wind and rain for the first two days and movement of persons over the floor is prohibited during this period. The finished surface shall be covered and cured continuously from the next day after finishing, atleast for a period of 7 days. Bunding with murrum for curing is prohibited as it will leave permanent stain on the finished floor.

Cure shall be done by spreading sand and kept damp throughout the curing period of seven days minimum. The surface shall be protected from any damage to it whatsoever. The surface shall then be allowed to dry slowly. All corners, junctions of floor with plastered wall surface shall be rounded off when required at no extra cost

Mode of measurement:

The rate for flooring and skirting shall be in square metre of the area covered.

The length and width of the flooring shall be measured between the faces of skirting or dado. All openings in flooring exceeding 0.1sq.m. in areas where flooring is not done shall be deducted and net areas only shall be measured and paid for. Flooring under dado, skirting or plaster shall not be measured for payment.

Nothing extra shall be paid for laying the floor at different levels in the same room.

The dimensions shall be measured upto two places of decimals of a metre and area worked out upto two places of decimal of a square meter.

VITRIFIED FLOORING WORK:

- **MATERIALS**

Vitrified Tiles: The tiles shall be full body 100% homogeneous material of approved make. They shall be flat and true to shape, free from cracks, crazing spots, chipped edges and corners. Unless otherwise specified, the nominal sizes of tiles shall be as under:

The tiles shall be square or rectangular of nominal sizes such as per tender schedule / drawings or as directed by the Architect.

The tiles are required to meet the following properties / strength parameters.

PROPERTY EXPECTED STANDARDS⁴

Deviation in length (+/-) 0.6%
Straightness of sides (+/-) 0.5%
Rectangularity (+/-) 0.6%
Surface flatness (+/-) 0.5%
Water absorption < 0.50%
Mohs. hardness > 6
Flexural strength > 27 N / mm
Abrasion resistance < 204 mm
Skid resistance (friction coefficient) > 0.4
Glossiness Min. 85% reflection

The tiles shall conform to the relevant standards in all respects. Samples of tiles shall be got approved from the Architects and Employer before bulk procurement for incorporation in the work

Providing & laying Vitrified tiles 12 to 15 mm thick in flooring laid on a bed of 12 mm thick C.M. 1:4 (1 Cement : 4 Coarse sand) (in this race way will be provided by electrical contractor but thickness and coordination has to be done by civil contractor & thickness and level has to be maintained according to consultant requirement so thickness of bedding can be more than 75 mm to 90 mm and no extra cost will be provide for the same) and providing 3mm spacer at joint and filled with epoxy filler material in selected colour. (Size - 1 Mt. X 1 Mt.) (A) Light Shade. Basic rate of tiles is 75.00 Rs/ Sqft

Workmanship

1.0 PREPARATION OF SURFACE FOR FLOORING : Following procedure shall be followed.

Sub grade concrete or RCC slab or side brick wall / or plastered surfaces on which tiles are to be laid shall be cleaned, wetted and mopped as specified for terrazzo tile

Mortar and bedding: Cement mortar for bedding shall be prepared of mix 1:4 or as specified in the schedule of items, to a consistent paste and shall conform to the specification for materials; preparations etc. as specified under cement mortar. The amount of water added while preparing mortar shall be the minimum necessary to give sufficient plasticity for laying. Care shall be taken in preparation of the mortar to ensure that there are no hard lumps that would interfere with even bedding of the tiles. Before spreading the mortar bed the base shall be cleaned off all dirt, scum or laitance and loose materials and well wetted without forming any pools of water on the surface. The mortar of specified proportion and thickness shall then be evenly and smoothly spread over the base by use of screed battens to proper level or slope. Once the mix is prepared, no further water be added and the same shall be used within one hour of adding water. Apply on an average 20 mm thick bedding of mortar over an area of 1 sq.m. at a time over surface of the area for laying tiles, in proper level and allowed to harden sufficiently to offer a fairly good cushion for the tiles to set.

2.0 LAYING OF TILES FOR FLOORING:

The tiling work shall be done as per the pattern shown in the drawing or as directed by the Architects. The tiles before laying shall be soaked in water for at least two hours. Neat gray cement grout at 33 kg/Cement/Sq. mt. of honey like consistency shall be spread over the mortar bedding as directed. As a general practice laying of tiles shall be commenced from the centre of the area and advanced towards the walls. Cut tiles, if any, shall be laid along wall with necessary border pattern as shown / directed by the Architect. Tiling work shall be completed by pressing tiles firmly into place along the wall / floor. The tiles shall be laid on the bedding mortar when it is still plastic but has become sufficiently stiff to offer a fairly firm cushion for the tiles, which are fixed on the flooring adjoining the wall, shall be so arranged that the surface on the round edge tiles shall correspond to the skirting or dado. Press gently the tile with wooden mallet for even adherence at the back of the tile. Do not use an iron hammer or some heavy material to press the tile. The edges of the tiles shall be smeared with neat white cement slurry and fixed in this grout one after the other, each tile being well pressed and gently tapped with a wooden mallet till it is properly bedded and in level with the adjoining tiles. There shall be no hollows in bed or joints. The joints shall be kept as close as possible and in straight line. Unless otherwise specified, joint-less tiling shall be done butting the tiles with each other. If joint is specified, the same shall not exceed 1.00 mm. in width. After fixing the tiles, finally in an even plane or slope, the flooring shall be water cured for at least 7 days and then shall be covered with POP protective cover.

3.0 FIXING TILES FOR DADO & SKIRTING / FACIA:

The fixing of tiles on wall surfaces shall be done only after completing fixing of the tiles on the floor. Following procedure shall be followed:

The back of tiles shall be cleaned off and covered with layer of approved adhesive with proper toweling as per manufacturer's recommendations

The edges of the tiles shall be smeared with the adhesive and fixed on the wall one after the other, each tile being well pressed and gently tapped with a wooden mallet till it is properly fixed in level with the adjoining tiles. There shall be no hollows on the back or in joints. Unless otherwise specified, joint-less tiling shall be done butting the tiles with each other. If joint is specified, the same shall not exceed 1.00 mm. in width. The joint shall be grouted with approved adhesive. The joints shall be kept in straight line or as per the approved pattern. While fixing tiles in dado / skirting work, care shall be taken to break the joints vertically. The top line shall be touched up neatly with the rest of the plaster above. If doors, windows or other openings are located within the dado area, the corners sills, jambs etc. shall be provided with true right angles without any specials. The contractor will not be entitled to any extra claims on this account for cutting of tiles if required.

The fixing shall be done from bottom of wall to upward without any hollows in the bed of joints. Each tile shall be as close as possible to one adjoining. All tiles faces shall be in one vertical plane.

4.0 GROUTING OF JOINTS IN FLOOR / SKIRTING / DADO:

The tile joints, if specified, shall be cleaned off and all dust and loose particles removed. Joints shall then be filled with approved adhesive like BAL-ENDURA or equivalent grouts, unless otherwise specified. After finishing the grouting process, after 15 minute, wipe off excess grout with a damp sponge and polish the tiles with a soft & dry cloth for a clean surface. The Finished work shall not sound hollow when tapped with a wooden mallet.

5.0 CLEANING:

As directed by the Architects, the tiles shall be cleaned by mild acid (However, Hydrofluoric acid and its derivatives should not be used). After the tiles have been laid in a room or the days fixing work is completed, the surplus cement grout / adhesive that may have come out of the joints shall be cleaned off before it sets. The dado / skirting shall be thoroughly cleaned. In the case of flooring, once the floor has set, the floor shall be carefully washed clean and dried. While drying the floor shall be covered with oil free sawdust. It shall be removed only after completion of the construction work and just before the floor is used.

6.0 MODE OF MEASUREMENT AND RATE:

Dado / flooring / skirting shall be measured in sq.m correct to two places of decimal. Length and breadth shall be measured correct to 1 cm. between the exposed surfaces of skirting or dado. No deductions shall be made nor extra

paid for any opening of area upto 0.1 sq.m. The rate shall include all the cost of labour and materials involved. Nothing extra shall be paid for laying the floors at different levels in the same rooms.

8. Floor Protection & Cleaning: The vitrified tiles flooring shall be covered with a protective layer of plaster of Paris (POP) paste soon after curing of the tiles floor. The same shall be allowed till the completion of all other works of the project. At the end of the project, before handing over or as & when directed by bank/ Architect the POP cover to be removed, debris cleared and the floor washed with mild acid to get the original glossy, shining finished surface free from all dirt, waste, stains etc. Any defective flooring will be rejected and contractor to rectify the defects.

Contractor has to covered with the flooring with 4/5 mm p.v.c sheet and it should joint with taping and pasting on flooring . He has to protect flooring and wall form the damage of any fabricated work of partition table or any fixing work and for the any damage contractor is fully responsible for the same and for the above protection of pvc sheet on flooring no any extra charge/payment provided to contractor. The same shall be allowed till the completion of all other works of the project The Contractor Should the work be suspended by reason of rain, strike, lockouts or other cause the Contractor shall take all precautions necessary for the protection of the work and at his own expense shall make good any damages arising from any of these causes. Any defective flooring will be rejected and contractor to rectify the defects.

SPECIFICATIONS FOR MARBLE STONE FLOORING & CLADDING

1.0 MARBLE STONE SLAB:

1.1 The colour and quality of the marble slabs shall be of the kind of marble specified in items/drawings/as directed by the architects. The marble, from which the slab is made, shall be of selected quality, hard, sound, dense and homogenous in texture, free from cracks, decay, weathering and flaws. Before starting the work, the contractor shall get the samples of marble slabs approved by the architects, ARCHITECT and Employer. All slabs which goes into work shall strictly conform to the samples, failing to which the entire materials are likely to be rejected.

1.2 The slabs shall be machine polished and machine cut to the dimensions specified in items of the schedules of quantities/drawings and as directed by the architects.

2.0 DRESSING OF SLAB:

2.1 Every stone shall be cut to the required size and shape, fine dressed on all sides to the full depth so that a straight edge laid along the side of the stone is full in contact with it. The top surface shall also be fine dressed to remove all waviness. The top surface of the slabs shall be machine polished and exposed edges machine cut, or as specified in the item and as directed by

the architects. All visible angles and edges of the slabs shall be true, square or as required, and free from chippings and the surface shall be true and plane.

2.2 The thickness of the slabs shall be as specified in the description of item of BOQ. The minimum size of the stone to be used for various items shall be as approved by the architect. Marble stones of approved smaller sizes other than mentioned in the schedule of quantities, if required for bands, borders, flooring etc. shall be laid as directed by the architects.

2.3 Any opening of required size and shape at any desired place in flooring, bands, borders etc. shall be made as per the directions of Architect. No broken or defaced stone ` permitted in the work.

3.0 BEDDING/BACKING MORTAR:

3.1 The bedding/backing shall be of of mix and thickness as specified in the description of the item.

3.1.1 Mixing: The mixing of mortar shall be done in mechanical mixer or hand mixing as specified/as directed by the architects.

3.1.1.1 Mixing in Mechanical Mixer: Cement and sand in the specified proportion shall be mixed dry thoroughly in a mixer. Water shall then be added gradually and wet mixing continued for at least one minute. Care shall be taken not to add more water than that which shall bring the mortar to the consistency of stiff paste.

3.1.1.2 Only the quantity of mortar, which can be used within 30 minutes of its mixing, shall be prepared at a time.

3.1.1.3 Mixer shall be cleaned with water each time, before suspending the work.

3.1.2 Hand mixing: If approved by architects, hand mixing shall be allowed. The measured quantity of sand shall be leveled on clean masonry platform and cement bags emptied on top. In hand mixing, the quantity of cement shall be increased by 5% over the approved contrast, with no extra cost to the department. The cement and sand shall be thoroughly mixed dry by being turned over and over, backwards and forwards, several times till the mixture gives an uniform colour. The quantity or dry mix which can be used within 30 minutes shall then be mixed on masonry through with just sufficient quantity of water to bring the mortar to the consistency of stiff paste.

3.1.3 General: Mortar shall be used as soon as possible after mixing and before it has begun to set, and in case within 30 minutes after the water is added to the dry mixture. Mortar unused for more than 30 minutes shall be rejected and removed from the site of work immediately.

4.0 LAYING-FLOORING:

- 4.1 Before laying the cement mortar bedding/backing, the concrete/brick, floor/wall surfaces shall be thoroughly hacked, cleaned of all mortar scales, concrete lumps etc., brushed, washed with water to remove mud, dirt etc. from the surface and shall be thoroughly wetted. Until and unless the surface is approved by the architects, the flooring shall be laid evenly and to the required slopes as directed/specified. The marble slabs shall be thoroughly washed and cleaned and then laid on the bedding/ backing with cement floating at the rate of 4.39 Kg. / sq.m. All slabs shall be truly and evenly set in a thick cement slurry or paste like consistency applied to the sides and bottom and over the prepared base. The slabs shall then be tamped down with a wooden mallet until they are exactly in true plane and line with adjacent slabs. All slabs shall be extended upto the unplastered surface of masonry walls/RCC columns/RCC walls. The slabs shall be close jointed in matching as shown in drawing or as directed by the architects. All slabs shall be so laid as to have continuous lines from various rooms to the corridors. No change of lines shall be permitted at junction between rooms and corridor, if the same flooring is specified in both the places.

5.0 MARBLE SILLS, TREADS ETC.:

- 5.1 Marble stone for sills shall be of approved quality. Dressing of stone slab, mortar mix. For bedding/backing, laying etc. shall be similar to as described above as far as applicable. Marble slabs of specified thickness and width shall only be provided. The length of the each slab required for the sill shall be of the pattern which shall coincide with the lines of the mullions of windows where it is laid or as directed by the architects.

6.0 MARBLE STONE CLADDING

Only machine cut and machine polished marble stone will be used. If indicated in the item specification, Brass cramps and brass pins of approved quality, size and make shall be provided. The brass pins shall be provided at the meeting of two marble slabs both ways horizontally and vertically. The brass cramps shall be provided at the places approved by the architects. Marble to be used shall be of approved size, colour, type of veins and laid as specified in schedule of quantities or to the pattern shown in drawings or as directed by the Architects. Laying of marble stone shall be similar as stated above as far as applicable

7.0 MEASUREMENT

Marble stone flooring, sills, treads, risers, dado cladding etc. shall be measured in square meter correct to two places of decimal. The length and breadth shall be measured between the finished faces correct to two places of decimal of meter. No deduction shall be made nor extra paid for any opening of area upto 0.05 sq.m. Nothing extra shall be paid for working at different levels.

NOTE : Wastage in marble slab cutting to get the required dimensions, as specified in drawing or as directed by the Architects shall be deemed to be considered by the contractor while quoting the rate for work. The work shall be measured as above and no extra claim will be entertained on

this account

8.0 RATE:

The rate shall include the cost of all materials, wastages, transport tools, plants, scaffolding and labour involved in all operations described above.

9.0 GRANITE

9.1 General: All granite shall be of standard architectural grade, free of cracks, seams, starts, or other traits, which may impair its structural integrity or function. Inherent color variations characteristic of the quarry from which it is obtained will be acceptable. Texture and finish shall be within the range of samples approved by the Specifying Authority.

9.2 Schedule: Granite shall be provided as follows:

1) For (state location on building) (state name and color) granite with a (type) finish, supplied by (name company or list several approved suppliers).

2) Provide information as in (1) for each different granite/finish combination in the project.

Finishes: Finishes listed in the schedule shall conform with definitions by IS 3316:1974

9.3 SCOPE OF INCLUDED WORK

The work to be completed under this contract includes all labor and materials required for the furnishing and installation of all granite work shown or called for on the contract drawings, specifications, and addenda.

9.4 Sealants and Backup Material (if applicable): Where specified, (state type or name of sealant) shall be used for the pointing of joints. The backup material used with the sealant shall be (identify material).

9.5 Anchors, Cramps, and Dowels: All anchorage components shall be of 300 Series stainless steel (refer to ASTM A666) or aluminum (refer to ASTM B221) with strength and durability properties meeting or exceeding those of 6063-T6. Anchor types and assemblies shall comply with ASTM C1242-02a. Reliance on adhesives alone for material attachment will not be permitted. The contractor shall be responsible for all anchorage attached to the stone and directly related to stone installation. The contractor shall not be responsible for any additional support elements required for proper attachment of stone anchorage to the structure of the building.⁵

9.6 Flatness Tolerances: A 4' dimension in any direction on the surface shall determine variation from true plane, or flat surfaces. Such variations on polished, honed, and fine rubbed surfaces shall not exceed 1/3 of the specified joint width. On surfaces having other finishes, the maximum variation from true plane shall not exceed 1/2 of the specified joint width.

9.7 General Granite Installation

Installation shall be accomplished with competent, experienced Stone

Setters, in accordance with the approved shop drawings. All granite pieces shall be identified with a unique piece number corresponding with the number on the shop drawings. Interchanging of numbered pieces is not permitted as the pieces are generally blended for color and characteristic markings by the granite fabricator. Granite shall be free of any ice or frost at time of installation. Salt shall not be used for the purpose of melting ice, frost, or snow on the granite pieces. Adequate protection measures shall be taken to ensure that exposed surfaces of the stone shall be kept free of mortar at all times as elements in mortar may etch the polished surfaces of some stones.

Mortar Setting of Granite:

Clean base materials to remove dirt or other foreign matter. Saturate concrete substrate several hours prior to setting granite. Prepare and place mortar in accordance with ASTM C270-03. Thoroughly wet stones prior to setting in mortar bed. Apply neat cement parge of approximate 1/16" thickness to granite units prior to placing on mortar bed. Tamp stones into place using a rubber or plastic mallet to obtain full contact with the setting bed and proper stone unit alignment.

Mortar Joints: Mortar joints shall be raked out to a depth of 1/2" to 3/4". Apply pointing mortar in layers not exceeding 3/8" and allow each layer to get hard to the touch before the next layer is applied. Tool finished joints with a concave tool having a diameter approximately 1/8" greater than the joint width. Care shall be taken to keep expansion joints free of mortar, which would compromise their function.

- 9.8** Anchorage: All granite shall be anchored in accordance with the approved shop drawings. The contractor in consultation with his fabricator shall determine specific anchorage design and details. To the furthest extent possible, all anchor preparations in granite units shall be shop applied. All anchorage devices and anchor hole/slot fillers shall be in accordance with ASTM C1242-02. Care must be taken to ensure that any holes capable of retaining water are filled after use to prevent water collection and freezing.

9.9 MEASUREMENT

Granite stone flooring, sills, treads, risers, dado cladding etc. shall be measured in square meter correct to two places of decimal. The length and breadth shall be measured between the finished faces correct to two places of decimal of meter. No deduction shall be made nor extra paid for any opening of area upto 0.05 sq.m. Nothing extra shall be paid for working at different levels.

NOTE : Wastage in Granite slab cutting to get the required dimensions, as specified in drawing or as directed by the Architects shall be deemed to be considered by the contractor while quoting the rate for work. The work shall be measured as above and no extra claim will be entertained on this account

RATE:

The rate shall include the cost of all materials, transport tools, plants,

scaffolding and labour involved in all operations described above.

The specifications mentioned for Marble stone flooring shall be generally applicable for this item. In case of granite stones available in different shades, the samples shall be submitted for approval of Architects and Employer.

- **Colour Work**

- Royale Emulsion paint**

Wall painting (two coats) with Emulsion paint of approved brand and manufacture on undecorated wall surface to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth with Applying two coats of Birla Or Asian acrylic lapi (putty) & two coats of primer approved brand and manufacture on new wall surface to give an even shade including thoroughly brushing the surface free from mortar dropping and other foreign matter and sand papered smooth

- Material**

100% water-proof Royale Emulsion paint of Asian Paints or equivalent brand approved by Architect.

In case of areas having excessive dampness using Asian Paints Damp Block to limit further dampness. When the underlying surface exhibits chalkiness, in spite of thorough surface cleaning, use Asian Paints Exterior Sealer.

- Workmanship**

Three finish coats of 100% water-proof Royale Emulsion paint of Asian Paints or equivalent brand approved by Architect of require shade including two coats of acrylic wall Putty making surfaces even on walls and ceilings,

Applied evenly to give uniform finish in color patterns and even shade, including curing, preparation of surface and a Coat of matching priming coat of white cement to give an even shade after thoroughly brushing the surface to Remover all dirt and dust and remains of loose powdered, complete

- Mode of measurement**

Item will be measure in sqm. Dimensions is computed in square meter,rounded to two places of decimal. No extra will be payable towards wastage due to material pattern.

- **Texture Work**

Texure Paint : Texture paint (Insider and outside) :Wall/ Ceiling painting two coats (1 base plus 1 texture) with low VOC as per approved brand in any shades and colour as directed on wall surface to give an even shade including applying coat of putty, Penetrating primer or equivalent and two coats of paint, scaffolding to at any height with all labour and material thoroughly brushing the surface free from mortar droppings and other foreign matter and sand prepared smooth etc. complete. The substrate must be sound, clean, dry, free from dust, oil, grease and laitance etc. All traces of release agents must be removed. On chalky and dusty surfaces, all loose material must be removed by stiff bristle brushing. The primer/ paint application is to

be done with the rollers. Rate shall be including crack filling and levelling as per manufacturers specification. Top coat should have. 1) Low VOC content. 2) Crack Bridging ability upto 2.6 mm. 3) 100% pure acrylic emulsion. 4) Anti-Carbonation concrete protection. 5) Very Low Flame spread. 6) Superior Washability.

Material

Interior Texture of Asian Paints - Roayl Play Archi+ Concrete including cost of emulsion paint in approved shade

Workmanship

(Two coats) laid on 2 mm. thk texture material pattern, quality and manufacturer by architect incl. priming coat (One coats) of white cement to give an even shade after thoroughly brushing the surface to remove all dirt and dust and remains of loose powdered materials etc. compete & as per detail & directed by Architect& Engineer in-charge

Mode of measurement

Item will be measure in sqm. Dimensions is computed in square meter, rounded to two places of decimal. No extra will be payable towards wastage due to material pattern

• **Basic Rates Of Civil Material:-**

- **Basic rate of Vitrified Flooring is 75.00 Rs/ Sqft**
- Basic rate of Italian is 350.00 Rs/ Sqft
- Basic rate of Granite is 150.00 Rs/Sqft
- Basic rate of ceramic tiles is 60.00 Rs./Sqft

SPECIFICATION FOR WOOD WORK IN FRAMES, SHUTTERS AND PANELLING:

Wood work :

All timber mentioned in the item in schedule of quantities shall be from the heart of a sound tree of nature growth entirely free from sap wood. It shall be uniform in texture, straight in **fibre** and shall be well and properly seasoned. It will be free from large, loose, dead or cluster knots, wedges, injuries, open shakes, borer holes, rot, decay date, discoloration, soft or spongy spot, hollow pockets, pith or centre bore and all other defects of **f** any other damages or harmful nature which will affect the strength, durability, appearance and its usefulness for the purpose for which it is required. Only properly seasoned timber shall be used.

The seasoning of timber shall conform to IS 1141-1993. Scantling of all type of timber shall be straight. Warped scantling shall not be used. Before use in works, the scantling shall be kept in covered and well ventilated place and shall be got approved.

The workmanship shall be of best quality. All wrought timber is to be sawn, planed, drilled or otherwise machine worked to the correct sizes and shall be as indicated in drawing or as specified. All joinery work shall fit truly and without wedging or filing. All frame joints shall be put pinned with hard wood pins securing with corrosion resistant star shaped metal pins as approved by the Architect. If after fixing in position, any shrinking or substandard materials or bad workmanship is detected, the contractor shall,

forthwith remove them and replace the same at his own cost, all as directed by the Architect.

Individual members shall be of continuous length. The finished size and sections shall be as per drawing or as specified. The heads end posts of frames shall be through tenoned into the mortises to the full widths as shown in the drawing. All necessary mortising, tenoning, grooving, matching, tonguing, housing rebate and other necessary works for correct jointing shall be carried out, in the best workmanship like manner. Joints not specifically indicated shall be recognised form of approved joints for each position. All parts of wood work resting on or set in masonry or concrete shall be well painted with two coats of bituminous paint of solignum⁶ as directed by the Architect, prior to installations. All nails, screws, hold fasts, plates, plugs, pins required for wood work joinery and fixing work, shall be provided by the contractor, at his own cost. Architect/ Consultant shall approve all materials before using in works. Painting if any shall be carried out as per specifications for painting for wood work.

All the embedded timber shall be given two coats of hot tar or solignum before erection. This is incidental to the item and shall not be measured for payment.

Teak Wood Glazed Shutters:

The sash and beading required for glazing shall be of the best teak wood and shall be fixed as per the design shown in relevant drawing. Any mouldings, carvings shown shall be worked out from the teak wood member of bigger size.

Glazing :

Glazing shall be generally with plain sheet glass / bajra glass with thickness as mentioned in the schedule of quantities. The detailed specifications for glazing given hereafter shall be followed generally.

Flush Door Shutters:

Solid core flush door shutters shall be of 5 ply construction unless otherwise specified and approved make generally conforming to the I.S. specification 2202-1991 (specification for wooden flush door shutter – solid core type). The finished thickness of the shutter shall be as mentioned in the schedule of items.

Face Veneers /Laminate:

Commercial face veneers/laminate used in flush door shutter shall conform to the requirements laid down in IS 303-1989 specifications for plywood for general purposes (revised) interior grade.

Decorative face veneers/laminate used in flush door shutters shall be of grade-I and shall conform to the requirements of decorative veneer specified for grade-I decorative

ply wood in IS specifications for veneered decorative ply wood interior grade. Thickness of veneers shall be min 3.5 mm and laminate min 1.00 mm thick.

Adhesives :

Phenol formaldehyde synthetic resin (liquid type adhesives) conforming to IS 848-1974 specifications for synthetic resins shall be used for bonding, unless otherwise specified.

Lipping :

The lipping shall be of best quality C.P wood variety unless otherwise mentioned. In case teak wood lipping is mentioned in the schedule of quantities, it shall conform the specification for best quality teak wood. The internal lipping around the shutter sides shall be one piece of size specified and depth equal to the thickness of core.

Workmanship and Finish :

All the faces of the door shutter shall be at right angles. The shutter shall be free from twist and warp in its plane. Both faces of the door shutters shall be sanded to a smooth even texture. The workmanship and finish of the face panels shall be in conformity with those specified in I.S 303-1989 specification for plywood for (revised) for Marine type and IS. 1659-1990 specification for block boards for decorative type.

Consultant/Employer shall be at liberty to inspect the manufacture of shutters in the factory for its quality of materials and workmanship and all facilities shall be extended for such inspection. Cost of visits will be borne by the contractor.

Tolerance : Tolerance on nominal width and height shall be (\pm) 3 mm. Tolerance on nominal thickness shall be (\pm) 1.5 mm. The thickness of the individual shutter shall be uniform throughout.

Miscellaneous: Wherever mentioned in the Schedule of quantities, vision panels, venetians, plastic laminates, push slats etc. shall be provided in the flush doors.

The vision panels shall be of size mentioned in the drawing and shall be provided with teak wood lipping around the glass. The glass shall be 4 mm thick or as specified of best quality free from defects.

Teak wood venetians or louvers shall generally conform to relevant specifications of timber. Necessary grooves and rebate in frames shall be provided as per drawing.

Approved brand/make plastic laminate of required design, required shade and colour shall be provided and fixed on flush door to the required size on any side of the shutter as shown in drawing. It shall be fixed with Fevicol SH or any other approved adhesive. Fixing shall be done in such a way that there shall not be any air gap, warpage or undulations on the surface. Finished surface of laminate shall be cleaned with approved cleaning liquid.

The shutters shall be painted on commercial facing side with two coats of synthetic / flat oil paint of approved shade and make over an approved coat of primer. The decorative

veneer side of the shutter shall be melamine polished with two or more coats as specified in Schedule of Quantities so as to render a satisfactory surface.

The flush doors shall be single leaf or double leaf type as mentioned in the schedule of quantities. In case of double leaf shutters, the meeting of the stiles shall be rebated 20 mm. and shall be either splayed or square type and the T.W. lipping of specified or as directed by Architect all-round the edges shall be provided. The meeting stiles shall be in single piece.

Sufficient care shall be taken to prevent any damage and loss of shape during handling, transporting, stacking, fixing etc. The door shutters shall be handled with utmost care to prevent any surface damage, warping etc.

Mode of measurement: The work covered under the respective items in schedule and the above specifications shall be measured as per the item specification & in absence of any such description in item, respective BIS codal provisions to be followed.

In case of flush doors, the rate for individual item mentioned in the schedule of quantities shall include cost of shutters, labour and material for provision of glass for vision panel, plastic laminate sheet push plate, teak wood louvers etc. transporting charges and labour for fixing of fixtures and fastenings, including providing & fixing of door closers and painting and polishing as specified.

SPECIFICATION FOR FITTINGS AND FIXTURES

Scope of work :

The work covered under these specifications consist of supplying different type of fittings and fixtures required in various door shutters etc. complete in strict accordance with these specifications and drawings / samples approved

General :

All fittings and fixtures shall be of heavy quality brass, anodised aluminium, iron oxidised (MS) or as specified. These shall be made, reasonably smooth and sharp edges, corners, flaws and other defects. Screw holes shall be counter sunk to suit the heads of the specified screws. All hinges pins shall be of steel for brass hinges and aluminium alloy NR-6 or steel pins for aluminium hinges with nylon washers or as specified. All riveted heads obtaining to hinge pins shall be well formed. Screws supplied for fittings shall be of the same metal and finish as fittings. However brass cadmium plated / chromium plated screws shall be supplied with the aluminium fittings. Samples of fixture / fitting shall be furnished by the contractor for the approval of the Architect and got approved before placing bulk order for purchase. The fittings and fixtures to be incorporated in the work shall be strictly adhering to the approved sample. Fittings shall be fixed in proper position as shown in the drawing and as directed by Architect. These shall be truly vertical or horizontal as the case may be. Screws shall be driven using home screw driver and not hammered in. Recess shall be cut to the exact size and

depth of fittings and fixtures and be done in a workman like manner and any damages done either to fittings and fixtures or the shutter frames etc. should be rectified by the contractor at his own cost.

Butt Hinges :

S S. Butt hinges shall be cranked and manufactured from SS sheets. All butt hinges shall conform to IS specifications. The size of butt hinges shall be taken as the length of the hinge. Width of the hinge shall be measured from the centre line of hinge pin to end of flange.

Parliamentary Hinges :

These shall be manufactured from extruded section for brass and aluminium, from M.S. sheets for iron oxidised and be free from cracks and other defects. The size of the parliamentary hinges shall be taken as the width between flanges, while the depth shall be as specified.

Piano Hinges :

These shall be conformed to IS specifications for piano hinges and shall be either brass oxidised, aluminium anodised, oxidised (MS) or as specified. Piano Hinges shall be fixed in the entire length of the cupboard shutters in a single piece.

Tower Bolts :

The tower bolts shall be Anodised aluminium tower bolt with barrel and bolt of extruded sections of aluminium alloy.

Knobs shall be properly screwed to the bolt and riveted at the back. The size of the tower bolt shall be taken as length of barrel without top socket.

Door handles – Bow / plate handles:

These shall be of anodized aluminum or stainless steel of specified size, shape and pattern as per schedule of quantities. The size of the handle is taken as the inside grip of the handle.

Mortise Lock: unless otherwise specified, approved makes like Yale/Godrej or as specified in item specification / drawing, Mortise lock with latches and a pair of detachable handles shall be 6 levers, with zinc alloy pressure die cast / brass or as specified body of approved quality, and shall be right or left handed as specified. The pair of handles shall be brass chromium plated of approved shape and pattern or as specified. It shall be of Godrej make of approved quality, unless otherwise specified. The size of the lock shall be determined by width of door. The lock for single leaf door

shall have plain face and that for double leaf door a rebated face. Detachable handles with springs shall be mounted on plates and shall be of approved quality, anodised aluminium or as specified.

SPECIFICATION FOR GLASS AND GLAZING;

Scope of work:

The work covered by this specification include furnishing and fixing the glass panes to doors and windows, strictly in accordance with these specifications and drawings.

Materials :

Glass :

The glass shall be special selected of specified brands like Saint Gobain/I.A.G / ASAHI make as specified and it shall be free from bubbles, flaws specks, waves, air holes, distortion, scratches or other defects. The glasses in bulk quantities shall be brought to site in Makers original packing. The glass shall be of required thickness as mentioned in the items of schedule of quantities and / or drawing or as directed by the Architect. The contractor shall submit the sample of the glass, which he proposes to use on the work and only such approved quality of glass shall be used in the works. The glass brought to site shall be protected against damages. Wherever frosted (obscure) glass is mentioned the item of schedule of quantities and / or shown in drawings, the glass shall be of sand blown pattern and shall also be got approved by the Architect.

Beading / Lipping

The beading / Lipping shall be of teak wood of superior quality timber in case of flush doors and / or required sizes mentioned in the items of schedule of quantities and / or shown in drawing. In case of aluminium windows, the beading shall be anodised aluminium beading of channel section as per sizes mentioned in the item and / or shown in the drawing. The junction of the beadings shall be mitre jointed.

Workmanship:

The glass shall be cut to the required sizes of panels where it is to be fitted and it shall be so cut that it fits properly in the frames without rattling. Pre-measurement of each panel prior to the cutting of glass is essential.

The beading shall then be fixed to glass panes and screwed at close intervals not more than 10 cm. from each corner and the intermediate not more than 20 cm apart. When glass panes are fixed with wooden beadings having mitred joints or aluminium beading

thin layer of glazier putty shall be applied covering the area in contact between the glass and sashbars and beadings. In case of louvers, all the exposed edges of the glass shall be ground properly.

General :

After the inspection is over and permitted by the Architect, glass panes shall be cleaned off any labels, paints smears and spots and shall be washed from both the sides and all glazing left clear, perfect and free from rattling. The contractor shall provide all the scaffolding, tools and plants for fixing the glass panes at his own cost. In case of steel windows, any hardware if fixed in position, shall be removed temporarily before fixing the glass panes and which shall be refixed back in position, all at the contractors cost.

Glazing with patch fitting:

SS 316 brush finished patch fittings of approved make

6 + 6 mm thick sandwiched PVB glued, laminated glass or toughened glass as per design and details

Glass partition shall be complete with all stainless steel cappings and clamping or fixing devices, resilient pads and separators, as well as closures, gaskets and sealants as required for a complete installation in strict accordance with the manufacturers' specifications.

All exposed metal fittings shall be manufactured from type 316 stainless steel, finish to match approved samples.

All openings/ doors shall be provided with operating hardware, floor spring, patch fittings, locks and as per details and requirements.

Mode of measurement: The rate for items like wood door / window shutters and / or steel door / patch fittings shall normally cover the cost of glass and glazing also, unless otherwise mentioned and area calculated to two places of decimal of a square meter.

The rate shall include the cost of supplying and fixing the glass panes, all materials, labour, transport, scaffolding , hardware etc.

CEMENT PLASTERING FOR WALLS AND CEILINGS & SAND FACE PLASTERS.

Scope of Work :

The work covered under these specifications consists of supplying all materials and rendering all types of plaster / pointing finishes strictly in accordance with these specifications, applicable drawings etc.

General :

Cement, sand and water required for the work shall conform to relevant IS code. the sand for finishing coat shall be fine sand conforming to IS 1542-1960. The plastering works shall generally conform to IS 1661-1987 (Pt.III) (Code of Practice for cement plaster finish on walls and ceilings). All general precautions as specified in I.S.1661-1987 (pt.III) clause 8, shall be taken and preparation of the background shall be done as laid down in IS 1661 clause 12 and IS 2402-1963 shall be generally followed for sand faced plaster work. Scaffolding required for facility of working shall be provided by

the contractor at his own cost. This may be double or single according to the requirement and shall be approved by the Consultants / Canara Bank Engineer. Stage scaffolding shall be erected when ceiling plastering is done. The contractor shall be responsible for accidents if any, take place. The contractor shall co-operate with the other agencies also. Whenever electrical contractor / agency has to fix up switch boxes in walls, necessary Thiyyas, Tapanish or Dhadas shall be arranged to be given in advance of actual plastering process at these locations so that the boxes are fixed properly in line with finished plaster surface. All finishing in and around these boxes as also around the conduit boxes in ceiling shall be done by plastering contractor without any extra cost to the Employer. The decision of the Architect in this regard shall be final and binding on the contractor.

Preparation of Surface :

The surface to be plastered shall first be thoroughly cleaned of all muck and cleaned down. All joints shall be racked out in case of brick work / stone masonry and closely hacked in case of concrete as the work proceeds. The surface to be plastered shall be well wetted for a minimum period of 6 hours before commencing the work. The mortar for all plaster work shall be cement mortar of mix as specified in the schedule of quantities.

After erection of scaffolding and before commencement of plastering work, top most junctions / joints / sides with beam / column shall be thoroughly packed with cement mortar to prevent cracks.

Before commencement of plastering operation, the contractor shall ensure that all the service pipes, electrical conduits, boxes, switch boxes etc. have been installed in position by other agencies and the plastering surface is duly approved by the Architect. In order to enable other service contractors to fix the electrical conduits, conduit boxes, EDBs, pipes, outlets etc. in proper level and line with reference to the finished surface of the plaster. Thiyyas and Tapanis i.e. finished plaster patches shall be given by the contractor on walls, ceiling at regular intervals well in advance of his plaster work at no extra cost to the Employer. The entire work of preparation of surface before plastering shall thus be co-ordinated by the contractor with all other agencies working at site.

Just before actual plastering work is taken up in hand, all the ceilings and walls etc. shall be marked with Tapanis or Thiyyas indicating the thickness of plaster required and which shall be in true line, level and plumb. The contractor shall get these marks approved by the Architect before starting the plastering work. The contractor shall also be responsible to render the final surface true to line, level and plumb etc.

All building operations like construction of walls, concreting etc. shall have been completed before plastering is taken up. The plastering operation should be taken up only after the service pipes etc. that are to be embedded in the wall or ceiling are completed and suitably protected against erosion by other agencies and okayed by the Architect. Damage if caused to any of the existing fittings, fixtures, including doors and windows etc. during the plastering operation shall be made good by the contractor at his own cost.

If the surface which is to be plastered either internally or externally is out of plumb and not in line and level and if the plastering to be done is more than specified thickness to bring the plastered surface to perfect line and levels in such specific cases, chicken wire mesh is to be provided by the contractor at his own cost and the plaster should be done to required line and level with no extra cost whatsoever.

The finished plastered surface shall be free from cracks, fissures, crevices, hair cracks, blisterings, local swellings and flakings. The finished surface shall be true to line, level, plumb and plain and durable. The adhesion of the mortar with the background surface is of prime importance as this affects durability of plaster.

In order to avoid the formation of deep and side cracks and for dispersion of cracks at the junctions between concrete surfaces and brick masonry work as also between junction of windows / door frames and brick masonry works, cautionary measures such as fastening and lapping of chicken mesh over the junction areas should be carried out over which the plastering work has to be taken up as required by the Architect.

The minute gap between window / doorframes with cills and jambs should be filled up / caulked by plaster of paris / epoxy putty / silicon sealants, Rubber based sealants (brand name TECHMAT / TECHCOAT) by caulking guns or by approved methods as instructed / approved by Architect.

Grooves : The grooves shall be of required dimensions. The same shall be made to turn wherever necessary. The finish, inside, shall be of the same finish as that of the plaster. The lines of the grooves shall be well defined and rounded. The grooves are to be provided in plastering in internal and external surfaces shall be included in the rates wherever mentioned in the schedule of quantities.

Mix Proportion : The mortar for plastering shall be of proportion as specified in the item schedule. The mixes specified in the schedule are volumetric.

Mixing : Cement and fine aggregates shall be mixed dry in the required proportions to obtain a uniform colour. Water shall then be added to get the required consistency for the plaster. Mixing shall be done mechanically. However, manual mixing will be allowed only in exceptional circumstances at the discretion of the Architect. Manual mixing, where adopted, shall be carried out on a clean water tight platform. After water is added during mixing, the mix shall be held back and forth for 10 to 15 minutes.

In machine mixing, the mixer shall run atleast five minutes after placing all the ingredients in the drum. Only so much quantity of mortar which can be used within half an hour after the addition of water shall be prepared at a time. Any mortar for plaster which is set or partially set shall be rejected and shall be removed forthwith from the site.

10 mm Plaster :

The plaster shall be laid with somewhat more than 10 mm. thickness and pressed and levelled with wooden ruler to a finished thickness of 10mm. Straight edges shall be freely used to ensure a perfectly even surface. All exposed angles and junctions of

walls, doors, windows, beams, slabs etc. shall be carefully finished so as to furnish a neat and even surface.

15 mm Plaster :

The proportions of sand and cement shall be as specified and shall cover all irregularities, undulations, depressions due to chasing etc. in the surface to be plastered. The mortar shall be applied slightly more than 15mm thick and pressed and levelled with wooden ruler or straight edge to finished thickness of 15mm. Straight edges shall be freely used to ensure a perfectly even surface. The finished surface shall be true and even and present uniform texture throughout and all joining marks shall be eliminated. All corners, edges and angles shall be made perfectly to line, plane and plumb. All exposed angles and junctions of walls, doors, windows, beams, slabs etc. shall be carefully finished so as to furnish a neat and even surface.

Plastering items amongst all other things as described in various items also include :

- i. Preparation of surfaces to receive the plaster, providing cement plaster of the specified average thickness and proportions with specified number of coats.
- ii. All labour, materials, scaffolding, use of tools and equipment to complete the plastering work as per specifications.
- iii. Curing for 10 days.
- iv. Cleaning the surface of doors, windows, floors or any other surfaces where plastering might have splashed.
- v. Finishing the portion of plaster left above the terrazzo, plain cement tiles, ironite or any type of skirting work to be finished rounded or as directed by the Architect, in a separate operation after laying of floor tiles skirting.

General : Materials and preparation of surfaces and scaffolding etc. for sand faced plaster wherever applicable shall conform to specification laid down herein before under section cement plastering and the following specifications are also to be complied with.

Preparation of Surface : The surface to be plastered shall first be thoroughly cleaned down. All joints shall have been raked out in case of brick work / stone masonry as the work proceeds. Concrete surface shall also be clearly hacked and wire brushed if not already done before plastering is taken up. The surface to be plastered shall be well wetted for a minimum period of 6 hours before commencing the work. The mortar for all plaster work shall be cement sand mortar of mix as specified in the schedule of quantities.

Double scaffoldings required for facility of construction shall be provided by the contractor at his own expenses wherever directed by the Architect. Scaffolding shall be erected with pipes or ballies or bamboos of adequate strength so as to be safe for all the dead, live and impact loads likely to sustain by it during construction operations. The contractor shall take all measures to ensure the safety of the work and workmen. Any instruction of the Architect in this respect shall also be complied with. The contractor shall be entirely responsible for any damage to employer's property or injury to persons, resulting from faulty scaffolding, defective ladders and materials or otherwise arising out of his default in this respect. Proper scaffolding shall be provided to allow easy approach for workmen and supervisory staff to every part of the work. Ballies, Bamboos etc. for scaffolding shall not be tied to the windows, doors, mullions,

ventilators etc. Any damage done to the windows, doors, etc. shall be made good by the contractor to the original conditions at his own cost. For better safety, steel pipe scaffolding is preferred.

Workmanship : The surface to be plastered shall first be dubbed out with cement mortar to cover all irregularities and faces upto proud part. The dubbing coat which shall be of proportion as specified in schedule and a 12 mm thick (1/2") layer shall then be applied / scored and keys shall be formed on the surface by thoroughly combing it with heavy horizontal lines about 12mm (1/2") apart and about 3 mm (1/8") deep when mortar has just set.

The cement mortar for sand faced plaster shall have washed and approved sand with slightly larger proportions of coarse materials, but not exceeding 3 mm. The proportion of cement to sand shall be as specified in the schedule. The water is gradually added to make the mixture homogenous. The thickness of finishing coat excluding key shall be 8 mm (about 5/16"). After application the surface should be finished with a wooden float lined with cork closely pricked on with a wet sponge tapped gently to bring sand particles into prominence.

The chajjas and any other horizontal portions shall be cleaned and set mortar that might have been fallen at the time of plastering at higher elevation, before plastering the same is taken up. Vatas shall be done simultaneously with chajja plaster.

Mode of Measurement : Area of plastering will be measured net and shall be paid for. The measurement of length of wall plastering shall be taken between walls or partitions (dimensions before plastering shall be taken) for the length and from top of the floor or skirting or dado as the case may be to the underside of ceiling for the height. All openings more than 0.1 sqm. shall be deducted and all jambs, soffits, sills of these openings if done, will be measured to arrive to the net area for payment. No opening less than 0.1 sqm. shall be deducted and no jambs etc. for such openings shall be measured for payment. The rate shall include the cost of finishing all the edges, corners, cost of all materials, labours, scaffolding, transport, curing etc.

The rate shall include the cost of finishing all the edges, corners, cost of all materials, labour, transport, scaffolding, curing etc. and grooves if so specified in the item of schedule of quantities.

The rate for plastering should include the cost of work towards the following items for co-ordination with electrical item. :

- Neatly plastering around DBs, junction boxes, M.S boxes etc. should be done and made matching with the wall finish after installation of electrical equipments..
- All DBs, service boxes, covers etc. should be covered by a plastic cloth or other suitable covering materials such that water or materials should not splash the same during brick work and plastering work. This is to be done in such a way that electrical equipments as well as painted surfaces are not spoiled.

- For fixing M.S boxes, DBs etc. Thiyya should be given such that the required face of the M.S box, DB covers etc. in line with final finished plastered surface.
- The rate for the item shall also include rounding up of corner and angles making sharp corners and angles finishing around ceiling rose and electrical fittings etc. fixed by other agencies, finishing of top of dado and skirting (zad finishing), junctions of roof and wall or beam with the finish as specified in the item. Plastering of brick and concrete cornice and copings and plastering in restricted areas if any shall not be measured separately. Architectural bands and narrow widths of plaster over structural as well as non-structural and the line when prepared in the same thickness of plaster shall not be measured separately and shall be covered by respective plaster items.

PAINTING

Scope of work : The work covered under these specifications consist of furnishing the various types of paints and also the workmanship for these items, in strict compliance with these specifications, which are given in detail hereinafter with the item of schedule of quantities.

Materials : Paints, oils varnishes etc. of approved brand and manufacture shall be used. Ready mixed paints as received from the manufacturer without any admixture shall be used.

If for any reason, thinning is necessary in case of ready mixed paint, the brand of thinner recommended by the manufacturer or as instructed by the Architect shall be used. Approved paints, oils or varnishes shall be brought to the site of work by the contractor in their original containers in sealed condition. The materials shall be brought in at a time in adequate quantities to suffice for the whole work or atleast a fortnights work. The materials shall be kept in the joint custody of the contractor and the Architect. The empties shall not be removed from the site of work, till the relevant item of work has been completed and permission obtained from the Architect.

Commencing Work:

Scaffolding: Wherever scaffolding is necessary, it shall be erected on double supports tied together by horizontal pieces, over which scaffolding planks shall be fixed. No ballies, bamboos or planks shall rest on or touch the surface, which is being painted.

Where ladders are used, pieces of old gunny bags shall be tied on their tops to avoid damage or scratches to walls.

For painting of the ceiling, proper stage scaffolding shall be erected.

Painting shall not be started until and unless the Architect has inspected the items of work to be painted, satisfied himself about their proper quality and given his approval to commence the painting work.

Painting, except the priming coat, shall generally be taken in hand after all other builders work, practically finished.

The rooms should be thoroughly swept out and the entire building cleaned up atleast one day in advance of the paint work being started.

Preparation of Surface:

The surface shall be thoroughly cleaned. All dirt, rust, scales, smoke and grease shall be thoroughly removed before painting is started. Minor patches if any in plastered / form finished surfaces shall be repaired and finished in line and level in C.M. 1:1 and cracks and crevices shall be filled with approved filler, by the contractor at no extra cost to the Department. The prepared surface shall have received the approval of the Architect after inspection, before painting is commenced.

Application:

Before pouring into smaller containers for use, the paint shall be stirred thoroughly in its containers. When applying also, the paint shall be continuously stirred in the smaller containers so that consistency is kept uniform.

The external surfaces of the buildings under reference including the R.C.C. Jalli, fins and the panels above and below the window etc. shall be finished in different colours of approved shade. The contractor will make suitable samples at site for Architect/ Bank for approval before taking up the work in hand and they will be allowed to proceed with the work only after getting Architect/ Bank approval for the same.

The painting shall be laid on evenly and smoothly by means of crossing and laying off, the later in the direction of the grain in case of wood. The crossing and laying off consists of covering the area with paint, brushing the surface hard for the first time and then brushing alternately in opposite directions two or three time and then finally brushing lightly in direction at right angles to the same. In this process, no brush marks shall be left after the laying off is finished. The full process of crossing and laying will constitute one coat.

Where so stipulated, the painting shall be done with spraying. Spray machine used may be (a) a high pressure (small air aperture) type or (b) a low pressure (large air gap) type, depending on the nature and location of work to be carried out. Skilled and experienced workmen shall be employed for this class of work. Paints used shall be brought to the requisite consistency by adding a suitable thinner. Spraying should be done only when dry condition prevails.

Each coat shall be allowed to dry cut thoroughly and rubbed smooth before the next coat is applied. This should be facilitated by thorough ventilation.

Each coat except the last coat shall be tightly rubbed down with sand paper or fine pumice stone and cleaned of dust before the next coat is laid.

No left over paint shall be put back into the stock tins. When not in use, containers shall be kept properly closed.

The final painted surface shall present a uniform appearance and no streaks, blisters, hair marks from the brush or clogging of paint puddles in the corners of panels, angles of mouldings etc. shall be left on the work.

In case of cement based paints / primers, the absorbent surfaces shall be evenly damped so as to give even suction. In any weather, freshly painted surfaces shall be kept damp for atleast two days.

In painting doors and windows, the putty around the glass panes must also be painted, but care must be taken to see that no paint stains etc. are left on the glass. Tops of shutters and surfaces in similar hidden locations shall not be left out while painting. Covers of electrical switch boxes have to be painted from inside by removing them. Care shall be taken while removing them in position after painting with respective approved paints. In painting steel work, special care shall be taken while painting over bolts, nuts, rivets, overlaps etc.

The additional specifications for primer and other coats of paints shall be as in accordance to the detailed specifications under the respective headings.

Any damage caused during painting work to the existing works / surfaces shall be made good by the contractor at his own cost.

Brushes and Containers : After work, the brushes shall be completely cleaned off paint and linseed oil by rinsing with turpentine. A brush in which paint has dried up is ruined shall be kept at a place free from dust. When the paint has been used, the containers shall be washed with turpentine and wiped dry with soft clean cloth, so that they are clean and can be used again

Measurement : Painting, unless otherwise stated shall be measured by area in square metre. Length and breadth shall be measured correct upto two places of decimal of a metre.

No deduction shall be made for opening not exceeding 0.05 sqm and no addition shall be made for painting to the beading, moulding edges, jambs, soffits, sills, architraves etc. of such openings.

In measuring painting, varnishing, oiling etc. of joinery and steel work etc., the co-efficients as in the following table shall be used to obtain the areas payable. The co-efficients shall be applied to the areas measured flat and not girthed in all cases.

In case of painting of door shutter with push plates in plastic laminate, deduction will be made for area of such laminations.

Precautions : All furniture, lightings, fixtures, sanitary fittings, glazing, floors etc. shall be protected by covering and stains, smears, splashing, if any shall be removed and any damage done shall be made good by the contractor at his cost.

Rates : Rates shall include cost of all labour and materials involved on all the operations described above and in the particular specifications given under the several items.

Painting Priming coat on Wood, Iron or Plastered Surfaces :

Primer : The primer for wood work, iron work or plastered surface shall be as specified in the description of the item.

Primer for wood work / Iron & Steel / Plastered / Aluminium surfaces shall be as specified below :

	Surfaces	Primer to be used
a.	Wood work (hard and soft wood)	Pink conforming to IS 3536 – 1966
b.	Resinous wood and ply wood	Aluminium Primer
c.	Iron & Steel, aluminium and galvanized steel work :	Zinc chromate primer conforming to IS 104-1962
d.	Plastered surfaces, cement brick work, Asbestos surfaces for oil bound distemper and paint	Cement primer

The primer shall be ready mixed primer of approved brand and manufacture.

Preparation of Surface:

Wood work: The wood work to be painted shall be dry and free from moisture. The surface shall be thoroughly cleaned. All unevenness shall be rubbed down smooth with sand paper and shall be well dusted. Knots, if any, shall be covered with preparation of red lead made by grinding red lead in water and mixing with strong glue sized and used hot. Appropriate filler material with same shade as paint shall be used where so desired by the Architect.

The surface treated for knotting shall be dry before painting is applied. After the priming coat is applied, the holes and indentation on the surface shall be stopped with glaziers putty or wood putty (for specifications for glaziers putty and wood putty – refer as mentioned herein before). Stopping shall not be done before the priming coat is applied as the wood will absorb the oil in the stopping and the latter is therefore liable to crack.

Iron and Steel Work: All rust and scales shall be removed by scrapping or by brushing with steel wire brushes. Hard skin of oxide formed on the surface of wrought iron during

rolling which becomes loose by rusting, shall be removed. All dust and dirt shall be thoroughly wiped away from the surface. If the surface is wet, it shall be dried before priming coat is undertaken.

Plastered Surface : The surface shall ordinarily not be painted until it has dried completely. Trial patches of primer shall be laid at intervals and where drying is satisfactory, painting shall be taken in hand. Before primer is applied, holes and undulations, shall be filled up with plaster of paris / putty and rubbed smooth.

Application : The primer shall be applied with brushes, worked well into the surface and spread even and smooth. The painting shall be done by crossing and laying off as described herein before.

Painting with superior quality and Flat Oil ready mixed paints on new Surface.

Paint: Ready mixed paints shall be of approved brand and manufacture and of the required shades. They shall conform in all respects to the relevant IS specifications.

Preparation of Surface :

Wood work : The surface shall be cleaned and all unevenness removed. Knots if visible shall be covered with a preparation of red lead. Holes and indentations on the surface shall be filled in with glaziers putty or wood putty and rubbed smooth before painting is done. The surface should be thoroughly dry before painting.

Iron and Steel Work : The primer coat shall have dried up completely before painting is started. Rust and scaling shall be carefully removed by scraping or by brushing with steel wire brushes. All dust and dirt shall be carefully and thoroughly wiped away.

Plastered Surfaces : The priming coat shall have dried up completely before painting is started. All dust or dirt that has settled on the priming coat shall be thoroughly wiped before painting is started.

Application : The specifications mentioned herein before shall hold good as far as applicable. The number of coats to be applied will be as stipulated in the item. The painted surface shall present a uniform appearance and glossy / semi-glossy finish, free from streaks, blisters etc.

Painting with synthetic enamel / Semi glossy Paint on new work :

Paint : Synthetic enamel / semi glossy paint of approved brand and manufacture and required shade shall be used for the top coat and an under coat of shade to match the top coat as recommended by the manufacturer shall be used. The paint shall be conforming to IS : 1932-1964.

Preparation of Surface : This shall be as per painting with superior quality ready mixed paint as mentioned herein before.

Application : The number of coats including the under coat shall be as stipulated in the item.

Under Coat : The coat of the specified paint of shade suited to the shade of the top coat shall be applied and allowed to dry over night. It shall be rubbed next day with the finest grade of wet abrasive paper to ensure a smooth and even surface free from brush marks and all loose particles shall be dusted off. All the cracks, crevices, roughness etc. will be filled with approved putty as per manufacturers recommendations.

Top Coat : Finishing coats of specified paint of the desired colour and shade shall be applied after the under coat is thoroughly dried. Additional finishing coats shall be applied if found necessary to ensure a proper and uniform semi glossy surface.

Other Details : The specifications for "Painting (General)" mentioned herein before shall hold good as far as they are applicable.

Painting with Acrylic Emulsion / Plastic Emulsion Paint:

This shall be polyvinyl based Acrylic / plastic emulsion paint of approved manufacture of the required shade conforming to IS 5411-1969.

Primer : The primer to be used for the painting with acrylic emulsion on cement concrete surfaces, plastered surfaces, A.C. sheets, timber and metal surfaces, if necessary, shall be of approved base and as per recommendations of the manufacturers.

Putty : Plaster filler to be used for filling up (putting) uneven surfaces, small cracks and holes etc. shall be of approved compound and as per recommendations of the manufacturers. No oil based putty shall be used. Unless otherwise specified, the putty should be made from a mixture of whiting and plastic emulsion paint or as per manufacturers recommendations.

Finishing coats: All the finishing coats shall be of matt finish or any other finish as required by the Architect. The number of finishing coats shall be as specified in the item.

Mode of measurement: All the measurements for payment shall be taken on net surface area actually painted, unless otherwise specified. Deduction will be made from the areas for fixtures, grills, ventilation, outlets, electrical boxes and such obstructions not painted, if they are individually more than 0.05 sqm.

- i. Acrylic emulsion paint is required to be provided on plastered and concrete surfaces in portions of the building. The Department shall reserve the option to delete or increase quantities in full or part from the scope of contract during progress of work.
- ii. All wood surfaces are to be painted with semi glossy synthetic enamel paint with an approved primer.
- iii. All shades and colours of paints shall be subjected to review and prior approval of Architect shall be taken before the application.

White Washing with lime :

Preparation of surface : Before new work is white washed, the surface shall be thoroughly brushed free from mortar droppings and foreign matter. In the case of old work, all loose pieces and scales shall be scrapped off and holes in plaster as well as patches of less than 0.5 sqm. area each shall be filled up with mortar of the same mix. Where so specifically ordered by the Architect, the entire surface of old white wash shall be thoroughly removed by scrapping and this shall be paid for separately.

Preparation of lime wash : The wash shall be prepared from fresh stone white lime "Katani" .. The lime shall be thoroughly slaked on the spot, mixed and stirred with sufficient water to make a thin cream. This shall be allowed to stand for a period of 24 hours and then shall be screened through a clean coarse cloth. 40 gm. of gum dissolved in hot water, shall be added to each 10 cubic decimetre of the cream. The approximate quantity of water to be added in making the cream will be 5 litres of water to one kg. of lime.

Indigo (neel) upto 3 gm per kg. of lime dissolved in water, shall then be added and wash stirred well. Water shall then be added at the rate of about 5 litres per kg. of lime to produce a milky solution.

The lime shall be tested in a chemical laboratory and test certificate submitted, to conform the quality of lime with regard to its physical and chemical properties. The cost of testing lime shall be borne by the contractor.

Oil Emulsion (oil bound) Distempering / Acrylic Distemper

- a. **Oil bound distemper** : (IS 428-1969) of approved brand and manufacture, colour and required shade shall be used. The primer where used as on new work shall be cement primer or distemper primer as specified in the item. These shall be of the same manufacture as distemper. The distemper shall be diluted with water or any other prescribed thinner in a manner recommended by manufacturer. Only sufficient quantity of distemper required for days work shall be prepared.
- b. **Preparation of surfaces** : The surface shall be prepared as described herein before for painting work in so far as it is applicable and approved putty / filler shall be applied to the entire area to get uniform and smooth surface before application of primer

Application : The cement primer or distemper primer shall be applied by brushing and not by spraying. Hurried priming work shall be avoided, particularly on absorbent surfaces. New plaster patches in old work before applying oil bound distemper shall be treated with cement primer / distemper primer. The surface shall be finished as uniformly as possible leaving no brush marks, priming coat shall be allowed to dry for at least 48 hours before oil bound distemper is applied. Before applying distemper, the surface shall be lightly sand prepared to make it smooth for receiving the oil bound distemper, taking care not to rub out the priming coat. A time interval of at least 24 hours shall be allowed between consecutive coats to permit the proper drying of the preceding coat. Two or more coats of distemper as are found necessary shall be applied over the priming coat to obtain an even shade.

French Spirit Polishing (On new work with a coat of wood filler) :

Polish: Pure shellac varying from pale orange to lemon yellow colour, free from resin or dirt shall be dissolved in methylated spirit at the rate of 140 gm. of shellac to 1 litre of spirit. Suitable pigment shall be added to get the required shade.

Preparation of surface : The surface shall be cleaned. All unevenness shall be rubbed down smooth with sand paper and well dusted off. Knots if visible shall be covered with a preparation of red lead and glue size laid on while hot. Holes and indentations on the surface shall be stopped with glaziers putty. The surface shall then be given a coat of wood filler made by mixing whiting (ground chalk) in methylated spirit at the rate of 1.5 kg of whiting per litre of spirit. The surface shall again be rubbed down perfectly smooth with glass paper and wiped clean.

Application: The number of coats of polish to be applied shall be as described in the item. A pad of woven cloth covered by fine cloth shall be used to apply the polish. The pad shall be moistened with the polish and rubbed hard on the wood, in a series of overlapping circles applying the mixture sparingly but uniformly over the entire area to give an even level surface. A trace of linseed oil on the face of the pad facilitates this operation. The surface shall be allowed to dry and the remaining coats applied in the same way. To finish off, the pad shall be covered with a fresh piece of clean fine cotton cloth, slightly dampened with methylated spirit and rubbed lightly and quickly with circular motions. The finished surface shall have a uniform texture and high gloss.

Measurement, Rate and other details : These shall be as for painting (general) mentioned herein before as far as they are applicable.

Resin based Thermo Plastic Paint (Decorative and Protective Finish) :

Materials : Resin based thermo plastic paint such as Sandtex Matt or other equivalent approved manufacture, colour and shade shall only be used.

Preparation of Surface and General : The specifications for painting (General) described herein before shall hold good as far as they are applicable.

Protective Coatings : On surfaces such as ferrous metals, brass, copper and phosphor bronze, a protective coating of suitable bituminous compound or chromated redoxide should be given. New wood should be treated with a leafing grade aluminium primer or a water based acrylic emulsion primer.

The surfaces with algae growth shall be thoroughly cleaned down to remove as much growth as possible and effective solution of stabilized house hold bleach (calcium hypo chloride) of approved quality with approximate 35% chlorine content @ 2 kgs. per 50 litres (or as per manufacturers recommendations) should be used to treat the surfaces.

On chalky or friable surfaces after removing the loose materials by stiff brushing or scraping the surface should be treated with one coat of advanced solvent based material such as snowsol stabilizing solution or other approved equivalent with white spirit.

Application : The ready mix Sandtex Matt or other equivalent approved resin based thermo plastic paint shall be applied on clean and wetted surfaces by means of brushes or roller. The solution shall be kept well stirred during the period of application. To avoid direct heat of the sun, the paint shall be applied on the side in shade.

On rough and textured surfaces, one under coat of cement based paint such as Snowcem or other equivalent shall be applied before application of undiluted sandtex Matt finish coat. In case of application of two coats of sandtex matt at normal temperatures, the first one shall be diluted by addition of 25% water and the second coat direct. In extremely hot environs, the second coat shall be diluted @ 2.5 litres of water to 20litres of paint or as directed.

Painting with resin based thermo plastic paint shall be carried out generally as per manufacturers specifications.

Snowsol stabilized solution shall not be applied over bitumen. Snowsol stabilized solution treated surfaces shall be left unpainted for more than 2 (two) days. Gypsum based materials shall not be used for filling of exterior cracks while preparation of surfaces.

Mode of measurement : The painting unless otherwise mentioned shall be measured by area in sqm. upto two places of decimal. Length and breadth shall be measured correct upto two places of decimal of a meter. Deduction will be made from the areas of fixtures, grills, ventilation, outlets individually more than 0.05 sqm.

The item shall include removing nails, making good holes, cracks, patches etc. not exceeding 0.1 sqm each with materials similar in composition to the surface to be prepared.

Rate : The rate shall include the cost of all materials and labour involved in all the operations described above.

GENERAL MATERIAL SPECIFICATIONS

Preamble :

1. The detailed specifications given hereafter are for items of works described in the Schedule of quantities attached herein and shall be guidance for proper execution Of work to the required standards.
2. It may also be noted that the specification are of generalized nature and these shall Be read in conjunction with the description of item in schedule of quantities and Drawings.
3. The work also includes all minor details of construction which are obviously and fairly Intended and which may not have been referred to in these documents but are Essential for the entire completion in accordance with standard engineering practice.
4. The architects and the Employer shall be the sole deciding authority as to the Meaning interpret and implication for various provisions of the specifications and his Decision in writing shall be final and binding on all concerned.
5. In case any difference or discrepancy between the tender specifications and the Description in the bill of quantities, the bill of quantities shall take precedence.
6. In case any difference or discrepancy between the tender specifications and the Tender drawing, the tender specification shall take precedence
7. Unless specifically otherwise mentioned, all the applicable latest codes and standard Published by the bureau of Indian standards and all other standards ,shall govern in All respects of design, workmanship, quality, properties of materials ,method of Testing and method of measurements.
8. MATERIALS TO BE APPROVED /BEST QUALITY: The whole of the materials. deployed in connection with the permanent work, shall be new and the best of Its kind. All materials shall be in accordance with these specifications and shall Be in approved by the architect /BANK AUTHORITY
9. STANDARDS: Except where otherwise specified and permitted by the architect, All materials shall conform to the latest edition of Indian standard specification.
10. The payment shall be made as per actual execution of works.
11. All or any extra work involved shall be got approved in writing from GIFT AUTHORITY / architect -consultant / BANK AUTHORITY before executing the same.
12. The rate for individual item shall include the cost of materials, labour, finishing etc.to Complete the whole work satisfactorily as par instructions of GIFT AUTHORITY/ ARCHITECT/BANK AUTHORITY.
13. For any of the BOQ individual items, no extra payment will be given for any of the Reasons.
14. Item rate to be inclusive of all material, wastage ,groove, adhesives, hardware , necessary tools tackets ,erection ,execution ,polishing, painting ,finishing ,cleaning ,etc with contractor profit and taxes all. And Works at all heights and for all floors.
15. Contractor shall arrange for all type of sample mockup and shop drawings as par ZOQ item without any extra cost, for approvals.
16. The measurement shall be as per mode of measurements are given in tender specifications.



TECHNICAL SPECIFICATIONS FOR FURNITURE WORK

This specification are for the work to be executed items to be supplied and materials to be used in the works as shown and DEFINED on the drawings and described here in all under the supervision and to the satisfaction of the Architect / BANK AUTHORITY

The workmanship is to be the best available and of a high standard. Use must be made of specialist tradesmen in all aspects of the works, and allowance must be made in the rates for doing so.

The materials and items to be provided by the contractor shall be the best of their respective kinds, approved by the architect in accordance with any samples which may be submitted for approval and generally in accordance with the specifications. Where materials or products are specified in this specification and or / bill of quantities by the name of the manufacture or the brand trade name or catalogue reference the contractor will be required to obtained the approval of the architect / AUTHORITY before using a material or product other than the specified. The contractor shall produce all invoices, vouchers or receipted accounts for any materials if called upon to do so by the Architect.

Sample of all material are to be submitted to the architect for his approval before the contractor orders or delivers in bulk to the site. Also, the contractor will be required to submit specimen finishers of colors, fabrics etc, for the approval of the architect before proceeding with the works. Should it be necessary to prepare shop drawings, then four copies of such drawings shall be submitted for the approval of the architect who will retain two copes all at the contractor's expenses.

1. Specifications

1.1 Except for the items, for which Particular Specifications are given or where it is specifically mentioned otherwise in the description of the items in the schedule of quantities, the work shall generally be carried out in accordance with the "CPWD Specifications" additional / Particular Specifications, Architectural / structural drawings and as per instructions of Engineer-in-Charge.

1.2 All Technical Specifications in respect of all material to be used, method of execution, workmanship and quality for each item of the work shall be as per CPWD specifications and latest Indian Standard unless otherwise specified.

1.3 Any reference made to any Indian Standard Specifications, shall imply to the latest version of that standard, including such revisions / amendments as issued by the Bureau of Indian Standards up to last date of receipt of tenders.

1.4 The Contractor shall keep at his own cost all such publications including relevant Indian Standard Codes applicable to the work at site.

2. Materials :

Aluminum – the material shall conform to IS 1285.

Anti-termite treatment - the materials shall conform to IS 6313 part II

Makes of Materials: The makes of materials shall be as per the details furnished in the list of preferred makes.

TIMBER :

Timber generally is to be best of its kind, well and properly seasoned, of mature growth, free from worm holes large loose or dead notes or other defects and sawn die square and will not suffer warping, splitting or other defects through improper handling. The Species of timbers to be used for the manufacture of face veneers, cores and cross brands of marine plywood. No alternative species of timber shall be used without the prior approval of purchaser. In selecting the species for the manufacture of plywood, it is recommended that as far as possible a single species of timber shall be used and where combinations of different species are used, care shall be taken to prevent incompatibility of the two species. For ECO-Mark, only wood from sources other than natural forests such as wood from industrial and social forestry plantations and shade trees from tea and coffee estates shall be used for the manufacture of veneers.

The hardwood is to be C.P. teak weighing not less than 45 lbs cubic foot with a moisture content tax.

Timber is to be cut to the required sizes and length as soon as practicable after the works are begun and stored under cover so that the air will circulate freely around it. Journey is to be prepared, immediately after the placing of contract, framed up (but not bonded) and stored until required for fixing in position, when it is to be bonded and waged up. Any portions that warp or develop shakes or other defects are to be replaced before wedging up, the whole of the work is to be framed and finished in a proper and workman like manner in accordance with the detailed drawings and fitted with all necessary motaties straps, belts screws etc. running bonded joints are to be cross tongued with teak on guess and where over 1 – 1/28 thick double tongued. Joiner's work generally unless otherwise specified.

Templates boxes and molds shall be accurately set out and rigidly constructed so as to remain accurate during the time they are in use.

Grounds are to be clean shown, free large knots, splayed as required, plugged and fixed to walls etc. at 1'6" centers.

Wood plugs are to be cut on the twist, patent wall plugs or plastic filling may be used in lieu of wood plugs with the approval of the Architect.

All unexposed surfaces of timber e.g. false ceilings, backings fillets backs of doors frames, cupboard framing, grounds etc. are to be treated with two coats of approved timber preservative like solignum, kirticite, term seal or cast oral or vacuum pressure impregnated with and approved water soluble timber preservative before fixing or bedding.

Adhesive

The adhesives used for bonding the veneers shall be based on any suitable synthetic resin conforming to BWP Type of IS 848. Extender shall not be added to the adhesive by the plywood manufacturer. Fillers, if used, shall not exceed 10 percent by mass of solid content of the glue.

JOINTS

All joints will be standard, mortised and tenon, dovetail, dowel, cross halved, metered tongued and grooved and rebated, nailed or glued but joints, will not be permitted except in exceptional cases, ailed but joints will not be accepted. All joints shall be smeared with white lead.

Whenever solid wood is specified it shall be as per I.S.I. and of good quality. The type of wood shall be got approved before collecting the same on site. Fabrication of wooden members shall be started only after approval. It shall be free from large, loose, dead or cluster knots, flows, shakes, warps, bends or any other defect. It shall be uniform in substance and of straight fibers as far as possible. It shall be free from rats, decay, harmful fungi and other defects of its usefulness for the purpose for which it is required. The colour of wood shall be uniform as far as possible. The scantlings planks etc. shall be seen in straight lines and planes in the direction of grain and of uniform thickness.

FIRST CLASS TEAK WOOD :

First class teak wood shall have no individual hard and sound knots, more than 6 sq.cm. in size and the aggregate area of such knots shall not more than 1% area of piece. The timber shall be closed grained.

SECOND CLASS TEAK WOOD :

No individual hard and knot's shall be more than 15 sq.cm. in size and aggregate area of such knot's shall not exceed 2% of the area of piece.

GLASS :

All glass shall be of the best quality, free from specks, bubbles, smokes, veins, air holes, blisters and other defects. The kind of glass to be used shall be as mentioned in the item or specification or in the special provisions or as shown in detailed drawings. Thickness of glass panel shall be uniform. All glass to be approved manufacture complying with IS:3548-196 or as per approved quality and sample.

The compound for glazing to metal is to be special non hardening compound manufacture for the purpose and of 9 brand and quality approved the interior Designer.

In cutting glass, proper allowance shall be made for expansion. Each square of glazing to be in one whole sheet and after cutting the edges to be properly filled.

On completion, clean all glass inside and out, replace all cracked scratched or broken panes and leave in good condition to the satisfaction of the Architect.

3.0 POLISH :

The wooden article to be polished shall be first prepared to smooth surface with 400 fit black water proof sand paper. All dents shall be filled with epoxy putty and to be finally finished spray with DUCO, N.C. clear lacquer to a silk smooth finish.

PLYWOOD :

Plywood for general purpose shall confirm I.S : 303 MR GRADE with characteristics of moisture resistant makes Prior to finalization make and procurement of the material required warranty, guaranty certification also company's green certifications.

FASTENINGS AND HARDWARE:

THE fixtures and fastenings, that is, but hinges, teemed strap hinges, sliding door stoppers, casement window fasteners, casement stays and ventilators catch shall be made of the metal as specified in the item or its specifications.

They shall be of iron, brass, aluminum, chromium plated iron, chromium plated brass copper oxidized iron copper oxidized brass or anodized aluminum as specified.

The fixtures shall be heavy type. The fixtures and fastenings shall be smooth finished and shall be such as will ensure ease of operation.

The samples of fixtures and fastenings shall be got approved as regards quality and shape before providing them in position.

Brass and anodized aluminum fixtures and fastenings shall be bright finished.

Screws, nails, bolts, will be of brass or other non corrosive metal. In hardware, they will match the finish of the hardware item.

Nails, in a finished surface shall be neatly punched and the hole filled with wood filler matching the finish. Screws, in a finished surface will be round head, raised head or sunk beneath the surfaces and the hole plugged with a wood plug with matching color and grain of the wood surface, unless especially detailed.

HARDWARE:

Hinges, locks, latches, door tracks etc. shall be as specified by the manufacture specified. In an variation of this quality of the substitute shall be equal to or better than the original specified, and samples should be submitted to the Architect for prior approval.

HARDWARE AND METALS:

The hardware throughout shall be of approved manufacture and supply well made and equal in every respect to the samples to be deposited with the Architect. The contractor any be required to produce and provided samples from many different sources before the Architect is able to make a decision and he should allow in his rates for so doing.

Fittings generally shall have a satin chrome or anodized finish unless otherwise specified, and shall be suitable for their intended purposes.

Screws are to match the finish of the article to be fixed and to be rounded or flat headed or counter sunk as required.

Cover up and protect at the brass and bronze surfaces with a thick grease or other suitable protective material, renew as necessary and subsequently clean off and clear away on completion.

Aluminum and stainless steel shall be of approved manufacture and suitable for its particular application. Generally the surfaces of aluminum shall have an anodized finish and both shall comply with the samples approved by the Architect.

All steel, brass, bronze, aluminum and stainless steel articles shall be submitted to a reasonable test for strength; if so required by the Architect at the

Contractor's expenses.

All brazing and welds are to be executed in a clean and smooth manner rubbed down and left in the neatest and tidiest way, particularly where exposed.

Chromium plated shall be in accordance with B.S. 1224 or as per approved specification and shall be on a base material of copper or brass or as specified by Architect.

ENAMEL PAINTS:

Oil paints shall be of 1st quality and the specified colour and shade, and as approved. The ready mixed paints shall only be used. However, if ready mixed paint of specified shade or tint is not available while ready mixed paint with approved stainer will be allowed. In such a case, the contractor shall ensure that the shade of the paint so allowed shall be uniform.

All the paints shall meet with the following general requirements:

Paint shall not show excessive setting in a freshly opened full can and shall easily be redispersed with a paddle to a smooth homogeneous stage. The paint shall show no curdling, leveling, caking or color separation and shall be free from lumps and skins

Paint as received shall brush easily, possess good leveling properties and show no running or slugging tendencies.

The paint shall not skin within 48 hours in a three quarters filled closed container.

The paint shall dry to a smooth uniform finish from the manufacturers and generally according to their instructions and without any admixtures whatsoever.

Ready mixed paint shall be used exactly as received from the manufacturers and generally according to their instructions and without any admixtures whatsoever.

PLASTIC EMULSION PAINT:

Pigmented priming coat (emulsion thinned with water) followed by three or more finishing coats of plastic emulsion paint. Pasted filler to be applied every coat exempting the final finishing coat and sanded.

8.0 LAMINATES:

All the laminate to be used shall be of 1.0 mm. thickness in approved the color and shade as proved and specified by the Architect. It shall be matt finish specified in approved make Or its equivalent as per the sample shown by the Consulting unless otherwise specified. It shall satisfy all the I.S.I. standards for melamine coated laminated fiber boards contractor shall have to take approval of the Department for each sheet of the laminates Basic rate of sheet is 1450 rs/sheet.

VENEERS :

The best quality natural wood veneers of the specified wood and of the specified thickness shall be used. It shall be in matching group and of uniform shade and as per the selection and approval. The contractor shall have to obtained the approval of the prior to pressing of veneers. The contractor shall have to use the brand of veneers as approved by the Architect. The veneers shall be either rotary cut or sliced. The veneers shall be reasonably smooth to permit an even spread of glue. The veneers shall be conditioned to a moisture content not exceeding 10 percent before bonding. Basic rate of vineer is 100/per SQ FT

Defects In Veneers:

The veneers to be used for the faces shall be free from sapwood. Core veneers may contain sound knots, whose maximum dimension in any one direction do not exceed 50 mm, and open defects (split and check) provided such defects do not impair the smooth finish of the surface required for painting or staining. Dead knots shall not be permissible. Overlaps or pleats shall not be allowed.

Acrylic Sheets

Acrylic sheets shall be of thickness as specified in the item and of an specified shape and size as the case may be panels may be flat or curved It should be light in weight it shall be colourless or coloured or opaque as specified in the item. Colourless sheet shall be as transparent as the finest optical glass. Its light transmission rate shall be about 95% Transparency shall not be affected for the sheets of larger thickens, it shall be extremely resistant to sunlight weather and low temperatures. It shall not sow any significant yellowing or change in physical properties or loss of light transmission over a longer period of use. The sheet shall be impact resistant also Sheets should be of such quality that they can be cut, bent jointed as desired Solution for the joints shall be used as per the requirement of manufacturer.

1. I. S. No. 7630 – 1975. Methods of sampling of plywood.
2. I. S. No. 303 – 1975. Specification for plywood for general purposes.
3. I. S. No. 3129 – 1965. Specification for article board for insulation purposes.
4. I. S. No. 3513 – 1966. (part III & part IV). High and medium density wood based laminates part III general purposes. Part IV sampling test.
5. I. S. No. 1659 – 1979 block boards.
20. I. S. No. 7316 – 1974. Decorative plywood using plurality of veneers for decorative faces.
21. I. S. No. 3478 – 1966. High density wood particle boards.
22. I. S. No. 1734 (part I to XX). Plywood method of test for
Part I : General
Part II : Plywood
Part III : Battens
23. I. S. No. 1328 – 1970. Veneer decorative plywood.
24. I. S. No. 710 – Marine ply.
25. I. S. No. 3087 – 1965. Wood particle boards (Medium density)
26. I. S. No. 848 – 1974. Specification for synthetic resinadhesives for plywood. (Phenolic & Aminoplastic)
27. I. S. No. 2046 – 1969. Specification for decorative laminate.
28. I. S. No. 8273 – 1976. Fibrous gypsum plaster boards.
29. I. S. No. 2095 – 1964. Gypsum plaster boards.
30. I. S. No. 2542 (part I) – 1978. Gypsum plaster concrete and products, methods of test for part I – plaster and concrete.
31. I. S. No. 8272 – 1976. Gypsum plaster for use in the manufacture of fibors plaster boards.
32. I. S. No. 2441 – 1963. Fixing coiling coverings code of practise for.
33. I. S. No. 2835 – 1977. Specification for flat transparent sheet glass.

34. I. S. No. 2395 (part I) – 1966 & 2395 (part II) – 1967
Painting to concrete, masonry, plaster surfaces code of practice for part – I operation and workmanship part II – schedule.
35. I. S. No. 3548 – 1966. Glazing in building code of practice for.
36. I. S. No. 6278 – 1971. White washing and colour washing code of practice for.
37. I. S. No. 137 – 1965. Specification for ready mixed paint brushing, matt or egg – shall flat finishing, interior to Indian standards colours as required.
38. I. S. No. 133 – 1975. Specification for ready mixed paint brushing. Wooden coating, interior to Indian standard colours.
39. I. S. No. 5391 – 1969. Adjustable metal chairs for use of typist and operators in telephone exchanges.
40. I. S. No. 8756 – 1978. Ball catches for use in wooden almirahs.
41. I. S. No. 3499 – 1976 (part II) chairs for office purposes metal revolving and tiltin.
42. I. S. No. 5416 – 1969. General purpose wooden chairs methods of test for.
43. I. S. No. 6185 – 1971. High chairs specification and safety requirements for.
44. I. S. No. 4116 – 1976. Joints used in wooden furniture code of practice for.
45. I. S. No. 3845 – 1966. Joints used in wooden furniture code of practice for.
46. I. S. No. 7070 – 1973. Shelving racks wooden (adjustable and non – adjustable type).
47. I. S. No. 4414 – 1977. Table tops (wooden)
48. I. S. No. 5967 – 1969., Tables, wooden, methods of test for.
49. I. S. No. 3564 – 1975. Door closers (hydraulically regulated).
50. I. S. No. 799 – 1979. Drawer locks, cupboards and box locks.
51. **IS 6313:** Code of practice for anti termite measures in building
52. **Part 1** Constructional measures.
53. **Part 2** Code of practice for antitermite measures in buildings:
Pre constructional chemical treatment measures

CONCRETE

54. **IS 456** Code of practice for plain and reinforced concrete.

MASONRY WORK -BRICK WORK

55. **IS 1077** Specification for common burnt clay building bricks.
56. **IS 2212** Code of practice for brick work
57. **IS 2250** Code of practice for preparation and use of masonry mortars.

PLASTERING AND POINTING

58. **IS 412** Specification for expanded metal steel sheets for general purposes
59. **IS 1635** Code of practice for application of cement and cement-lime plaster finishes
60. **IS 2402** Code of practice for external rendered finishes.
61. **IS 1542** Specification for sand for plaster (Class A grading)

62. FLOORING

63. **IS 1443** Code of practice for laying and finishing of cement concrete flooring tiles.
64. **IS 4457** Specification for ceramic unglazed vitreous acid resisting tiles.

65. DOORS AND WINDOWS

66. **IS 287** Recommendation for maximum permissible moisture content for timber used for different purposes in different zones
67. **IS 848** Specification for synthetic resin adhesive for plywood (Phonetic and aminoplastic)
68. **IS 1141** Code of Practice for seasoning of timber
69. **IS 2202** Specification for wooden flush door shutters (solid core type)
70. **Part I** Plywood face panels
71. **Part II** Particle board panels and hard board faced panels

72. GLAZING

73. **IS 1081** Code of practice for fixing and glazing of metal, (steel and aluminium) doors, windows and ventilators.

- 74. **IS 2553** Specification for safety glass
- 75. **IS 2835** Specification for flat transparent sheet glass
- 76. **IS 3548** Code of practice for glazing in building
- 77. **PAINTING AND POLISHING**
- 78. **IS 1477** Code of Practice for painting of ferrous metals in building
- 79. **Part I** Pre-treatment
- 80. **Part II** Painting
- 81. **IS 2338** Code of Practice for finishing of wood and wood based materials
- 82. **Part I** Operation and workmanship
- 83. **Part II** Schedule
- 84. **IS 2395** Code of Practice for painting, concrete, masonry and plaster surfaces
- 85. **IS 3537** Specification for ready mixed paint, finishing interior, for general purposes to IS colours
- 86. **IS 5410** Specification for cement paints colour, as required
- 87. **IS 6278** Code of Practice for white washing and colour washing
- 88. **(Wherever IS codes are mentioned they are to be latest edition)**

TECHNICAL SPECIFICATIONS

Preamble :

1. The detailed specifications given hereafter are for items of works described in the Schedule of quantities attached herein and shall be guidance for proper execution Of work to the required standards.
2. It may also be noted that the specification are of generalized nature and these shall Be read in conjunction with the description of item in schedule of quantities and Drawings.
3. The work also includes all minor details of construction which are obviously and fairly Intended and which may not have been referred to in these documents but are Essential for the entire completion in accordance with standard engineering practice.
4. The architects and the Employer shall be the sole deciding authority as to the Meaning interpret and implication for various provisions of the specifications and his Decision in writing shall be final and binding on all concerned.
5. In case any difference or discrepancy between the tender specifications and the Description in the bill of quantities, the bill of quantities shall take precedence.
6. In case any difference or discrepancy between the tender specifications and the Tender drawing, the tender specification shall take precedence
7. Unless specifically otherwise mentioned, all the applicable latest codes and standard Published by the bureau of Indian standards and all other standards ,shall govern in All respects of design, workmanship, quality, properties of materials ,method of Testing and method of measurements.
8. MATERIALS TO BE APPROVED /BEST QUALITY: The whole of the materials. deployed in connection with the permanent work, shall be new and the best of Its kind. All materials shall be in accordance with these specifications and shall Be in approved by the architect /BANK AUTHORITY
9. STANDARDS: Except where otherwise specified and permitted by the architect, All materials shall conform to the latest edition of Indian standard specification.
10. The payment shall be made as per actual execution of works.
11. All or any extra work involved shall be got approved in writing from CANARA BANK / architect - consultant / BANK AUTHORITY before executing the same.
12. The rate for individual item shall include the cost of materials, labour, finishing etc.to Complete the whole work satisfactorily as par instructions of CANARA BANK/ ARCHITECT /BANK AUTHORITY.
13. For any of the BOQ individual items, no extra payment will be given for any of the Reasons.
14. Item rate to be inclusive of all material, wastage ,groove, adhesives, hardware , necessary tools tackets ,erection ,execution ,polishing, painting ,finishing ,cleaning ,etc with contractor profit and taxes all. And Works at all heights and for all floors.
15. Contractor shall arrange for all type of sample mockup and shop drawings as par BOQ item without any extra cost, for approvals.
16. The measurement shall be as per mode of measurements are given in tender specifications.

1

FULL HEIGHT PARTLY GLAZED PARTITION UP TO FALSE CEILING (ONE SIDE LAMINATE FINISH ONE SIDE VENEER FINISH):-

Providing & Fixing One side laminated & one side veneer partly glazed partition up to false ceiling ht (thickness of partition is 79 mm) having 12 mm thick MR grade plywood both side on aluminum framing . Aluminum framing size for vertical & horizontal support is 50 mm x 25 mm having guage of 16.. Grid of aluminum framing is 600 mm x 600 mm. Exposed framing made with peripheral 3" ply patta .and centrally having 12 mm thk toughen glass provision with suggested frosted film (plane/colorful) All exposed surfaces of one side finished with 1 mm thick laminate & at another side finished with 4 mm veneer complete with PU mat polish spray polish of approved shade. Make necessary grooves as per shown in drawing. Necessary framing to be erected above false ceiling (up to beam and slab height.) No extra cost to be paid for the same. Before installation, make hole/face plate for conduit pipes of electrical / networking cables with open able stud from partition Including all materials and labor etc.

For glazing using of 12 mm thick toughen clear glass with proper crystal edges & with suggested frosted films on glass. All joints are covered with burma border bidding Patti finished with laminate/veneer as per actual site finish. Complete with all necessary hardware & adhesives as per details given in drawing and as per instructions of Architect/Engineer In charge. Contractor has to provide all necessary cut outs (race ways.) for Electrical works & no extra payment shall be made for it.

Material:

- 12 mm thick MR grade plywood IS 303 shall be used for partition work as per approved make and sample by BANK/ARCHITECT /BANK AUTHORITY.
- Aluminum section shall be used as per approved make list and confirming to relevant IS codes and approvals.
- 1 mm thick Laminate on suggested side as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- 4 mm thk veneer on suggested side as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- Veneer finished with suggested PU polish.
- 12 mm thk toughen glass with crystal edges.
- All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- Frame structure –Aluminum pipes of 16 guage having size of 50 mm x 25 mm.

Workmanship:

- Work complete as per above specification.

- All the partition should be fitted to ensure accurate positioning & line level of ceiling, flooring, and wall system as per the site / EIC requirements.
- Work including wherever necessary core cutting ,drilling ,anchoring etc complete.
- The junction of the partition with masonry & all penetration through the partition has to be treated with acoustic sealant.

Mode Of Measurements:

- The size of the partition will be measured from flooring to false ceiling. There will be not extra payment for inside supports of partition. Contractor have to submit necessary test reports & certificates of toughen glass, plywood etc. Measurement consider length x height for billing.
- The work done shall be measured in square meter for area of work done. The rate shall be for a unit of one square meter.
- All joints of laminate & grooves are as per suggested by Architect/EOI.

2

FULL HEIGHT PARTLY GLAZED PARTITION UP TO FALSE CEILLING (LAMINATE FINISH)L:-

FULL HEIGHT PARTLY GLAZED PARTITION UP TO FALSE CEILLING (BOTH SIDE LAMINATE FINISH):- Providing & Fixing both side laminated partly glazed partition up to false ceiling ht (thickness of partition is 79 mm) having 12 mm thick MR grade plywood both side on aluminum framing . Aluminum framing size for vertical & horizontal support is 50 mm x 25 mm having guage of 16.. Grid of aluminum framing is 600 mm x 600 mm. Exposed framing made with peripheral 3" ply patta .and centrally having 12 mm thk toughen glass provision with suggested frosted film (plane/colorful) All exposed surfaces of one side finished with 1 mm thick laminate of approved shade. Make necessary grooves as per shown in drawing. Necessary framing to be erected above false ceiling (up to beam and slab height.) No extra cost to be paid for the same. Before installation, make hole/face plate for conduit pipes of electrical / networking cables with open able stud from partition Including all materials and labor etc. For glazing using of 12 mm thick toughen clear glass with proper crystal edges & with suggested frosted films on glass. All joints are covered with burma border bidding Patti finished with laminate/veneer as per actual site finish. Complete with all necessary hardware & adhesives as per details given in drawing and as per instructions of Architect/Engineer In charge. Contractor has to provide all necessary cut outs (race ways.) for Electrical works & no extra payment shall be made for it.

Material:

- 12 mm thick MR grade plywood IS 303 shall be used for partition work as per approved make and sample by BANK/ARCHITECT /BANK AUTHORITY.
- Aluminum section shall be used as per approved make list and confirming to relevant IS codes and approvals.
- 1 mm thick Laminate on both sides as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .

- 12 mm thk toughen glass with crystal edges.
- All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- Frame structure –Aluminum pipes of 16 guage having size of 50 mm x 25 mm.

Workmanship:

- Work complete as per above specification.
- All the partition should be fitted to ensure accurate positioning & line level of ceiling, flooring, and wall system as per the site / EIC requirements.
- Work including wherever necessary core cutting ,drilling ,anchoring etc complete.
- The junction of the partition with masonry & all penetration through the partition has to be treated with acoustic sealant.

Mode Of Measurements:

- The size of the partition will be measured from flooring to false ceiling. There will be not extra payment for inside supports of partition. Contractor have to submit necessary test reports & certificates of toughen glass, plywood etc. Measurement consider length x height for billing.
- The work done shall be measured in square meter for area of work done. The rate shall be for a unit of one square meter.
- All joints of laminate & grooves are as per suggested by Architect/EOI.

3

FULL HT FLUSH PARTITONS UP TO FALSE CEILLING (ONE SIDE LAMINATE ONE SIDE VENEER FINISH)):-

Providing & Fixing One side laminated & one side veneer flush partition up to false ceiling ht (thickness of partition is 79 mm) having 12 mm thick MR grade plywood both side on aluminum framing . Aluminum framing size for vertical & horizontal support is 50 mm x 25 mm having guage of 16.. Grid of aluminum framing is 600 mm x 600 mm. All exposed surfaces of one side finished with 1 mm thick laminate & at another side finished with 4 mm veneer complete with PU mat polish spray polish of approved shade. Make necessary grooves as per shown in drawing. Necessary framing to be erected above false ceiling (up to beam and slab height.) No extra cost to be paid for the same. Before installation, make hole/face plate for conduit pipes of electrical / networking cables with open able stud from partition Including all materials and labor etc. All joints are covered with burma border bidding Patti finished with laminate/veneer as per actual site finish. Complete with all necessary hardware & adhesives as per details given in drawing and as per instructions of Architect/Engineer In charge. Contractor has to provide all necessary cut outs (race ways.) for Electrical works & no extra payment shall be made for it.

Material:

- 12 mm thick MR grade plywood IS 303 shall be used for partition work as per approved make and sample by BANK/ARCHITECT /BANK AUTHORITY.

- Aluminum section shall be used as per approved make list and confirming to relevant IS codes and approvals.
- 1 mm thick Laminate on suggested side as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- 4 mm thk veneer on suggested side as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- Veneer finished with suggested PU polish.
- All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- Frame structure –Aluminum pipes of 16 guage having size of 50 mm x 25 mm.

Workmanship:

- Work complete as per above specification.
- All the partition should be fitted to ensure accurate positioning & line level of ceiling, flooring, and wall system as per the site / EIC requirements.
- Work including wherever necessary core cutting ,drilling ,anchoring etc complete.
- The junction of the partition with masonry & all penetration through the partition has to be treated with acoustic sealant.

Mode Of Measurements:

- The size of the partition will be measured from flooring to false ceiling. There will be not extra payment for inside supports of partition. Contractor have to submit necessary test reports & certificates of plywood etc. Measurement consider length x height for billing.
- The work done shall be measured in square meter for area of work done. The rate shall be for a unit of one square meter.
- All joints of laminate & grooves are as per suggested by Architect/EOI.

4

FULL HEIGHT FLUSH PARTITION UP TO FALSE CEILING (VENEER FINISH):-
 FULL HEIGHT FLUSH PARTITION UP TO FALSE CEILING (VENEER FINISH):- Providing & Fixing veneer finish flush partition up to false ceiling ht (thickness of partition is 82 mm) having 12 mm thick mr grade plywood both side on aluminum framing . Aluminum framing size for vertical & horizontal support is 50 mm x 25 mm. Grid of aluminum framing is 600 mm x 600 mm having guage of 16. All exposed surfaces of finished with 4 mm veneer complete with PU mat polish spray polish of approved shade. All complete with pu polish. Make necessary grooves as per shown in drawing. Necessary

framing to be erected above false ceiling (up to beam and slab height.) No extra cost to be paid for the same. Before installation, make hole/face plate for conduit pipes of electrical / networking cables with open able stud from partition Including all materials and labor etc. All joints are covered with burma border bidding Patti finished with pu polish /veneer as per actual site finish. Complete with all necessary hardware & adhesives as per details given in drawing and as per instructions of Architect/Engineer In charge. Contractor has to provide all necessary cut outs (race ways.) for Electrical works & no extra payment shall be made for it.

Material:

- 12 mm thick MR grade plywood IS 303 shall be used for partition work as per approved make and sample by BANK/ARCHITECT /BANK AUTHORITY.
- Aluminum section shall be used as per approved make list and confirming to relevant IS codes and approvals.
- 4 mm thk veneer on both side as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- Veneer finished with suggested PU polish.
- All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- Frame structure –Aluminum pipes of 16 guage having size of 50 mm x 25 mm.

Workmanship:

- Work complete as per above specification.
- All the partition should be fitted to ensure accurate positioning & line level of ceiling, flooring, and wall system as per the site / EIC requirements.
- Work including wherever necessary core cutting ,drilling ,anchoring etc complete.
- The junction of the partition with masonry & all penetration through the partition has to be treated with acoustic sealant.

Mode Of Measurements:

- The size of the partition will be measured from flooring to false ceiling. There will be not extra payment for inside supports of partition. Contractor have to submit necessary test reports & certificates of plywood etc. Measurement consider length x height for billing.
- The work done shall be measured in square meter for area of work done. The rate shall be for a unit of one square meter.
- All joints of laminate & grooves are as per suggested by Architect/EOI.

5

FULL HEIGHT ACAUSTIC FLUSH PARTITION UP TO FALSE CEILLING :- Providing & Fixing acaustic finish flush partition up to false ceiling ht having 12 mm thk acaustic sheet on 6 mm ply (acaustic sheet (plane or colorful)) suggested sides (single or both side) on aluminum framing . Aluminum framing size for vertical & horizontal support is 50 mm x 25 mm. Grid of aluminum framing is 600 mm x 600 mm. To fill absorb wool in all alu framing . All exposed surfaces of ply finished with suggested shed acoustic sheet/panels as per given pattern in design. acaustic sheet is fitted with 10 mm thk foam with gripper acaustic sheet with help of stapplers on uniformly distances . Create necessary colorful patterns with using acaustic panels/suggested fabric as per shown in drawing.Other side of partition is finished with suggested laminate or same suggested acoustic panel as suggested by in charge. Necessary framing to be erected above false ceiling (up to beam and slab height.) No extra cost to be paid for the same. Before installation, make hole/face plate for conduit pipes of electrical / networking cables with open able stud from partition Including all materials and labor etc. All joints are covered with bidding Patti finished with polish /color/fabric as per actual site finish. Complete with all necessary hardware & adhesives as per details given in drawing and as per instructions of Architect/Engineer In charge. Contractor has to provide all necessary cut outs (race ways.) for Electrical works & no extra payment shall be made for it. gripper fabric acaustic sheet basic cost is 140 rs sq ft .

Material:

- 6 mm thick MR grade plywood IS 303 shall be used for partition work as per approved make and sample by BANK/ARCHITECT /BANK AUTHORITY.
- 12 mm thk acoustic sheet /colorful acoustic panels
- Absorb Wool/Glass Wool
- fitted with 10 mm thk foam with gripper acoustic sheet with help of staplers
- Aluminum section shall be used as per approved make list and confirming to relevant IS codes and approvals.
- 1 mm thk laminate/veneer on other side as per suggested in design and approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- Frame structure –Aluminum pipes of 16 guage having size of 50 mm x 25 mm.

Workmanship:

- Work complete as per above specification.
- All the partition should be fitted to ensure accurate positioning & line level of ceiling, flooring, and wall system as per the site / EIC requirements.
- Work including wherever necessary core cutting ,drilling ,anchoring etc complete.

- The junction of the partition with masonry & all penetration through the partition has to be treated with acoustic sealant.
- Contractor have to submit ease report for acoustic work of said area.

Mode Of Measurements:

- The size of the partition will be measured from flooring to false ceiling. There will be not extra payment for inside supports of partition. Contractor have to submit necessary test reports & certificates of plywood, ease report for acoustic work etc. Measurement consider length x height for billing.
 - The work done shall be measured in square meter for area of work done. The rate shall be for a unit of one square meter.
 - All joints of laminate & grooves are as per suggested by Architect/EOI.
-

6

LOW HT PARTLY GLAZED PARTITION UPTO 1.21 MT HT:

Providing & Fixing partly laminated & partly glazed partition up to 1.21 m ht (thickness of partition is 68 mm) having 8 mm thick MR grade plywood is 303 grade both side of aluminum framing of gauge 16 Aluminum framing size for each support is 50 mm x 25 mm. having grid of 600 mm x 600 mm. Finished with 1 mm thick laminate at all exposed surfaces of approved shade. Make necessary grooves as per shown in drawing. Using of 12 mm thick frosted glass with proper crystal edges. Using of 12 mm thick toughen clear glass with proper crystal edges & with suggested frosted films/color films on glass. Glass starts from 1.00 mt lvl . All joints are covered with Burma border bidding Patti finished with Laminate/polish. Complete with all necessary hardware & adhesives as per details given in drawing and as per instructions of Architect/consultant/Engineer In charge. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it.

Material:

- 8 mm thick MR grade plywood shall be used for partition work as per approved make and sample by BANK /ARCHITECT /BANK AUTHORITY.
- Aluminum section of 16 guage shall be used as per approved make list and confirming to relevant IS codes and approvals.
- 12 mm thk toughen glass
- 1 mm thick Laminate on both side as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY. **Workmanship:**
- Work complete as per above specification.

- All the partition should be fitted to ensure accurate positioning & level of ceiling ,flooring, wall system as per the site / EIC requirements.
- Work including wherever necessary core cutting ,drilling ,anchoring etc complete.
- The junction of the partition with masonry & all penetration through the partition has to be treated with acoustic sealant.
- All joints of laminate & grooves are as per suggested by Architect/EOI.

Mode Of Measurements:

- **The Mode of Measurement:** The size of the partition will be measured from flooring up to height. . Contractor has to submit test certificates of glass, & plywood. **Measurement consider length x height for billing)**
- The work done shall be measured in square meter for area of work done. The rate shall be for a unit of one square meter.

7

FLUSH	PARTITION	(laminate	finish)	:
FLUSH	PARTITION	(laminate	finish)	:

Providing & fixing flush partition up to false ceiling ht (thickness of partition is 75 mm) having 12 mm thick mr grade plywood IS 303 both side on aluminum framing. Aluminum framing having 16 guage and size for vertical & horizontal support is 50 mm x 25 mm. All exposed surfaces finished with 1 mm thick laminate of approved shade without any air gap and grooving as per design. Necessary framing to be erected above false ceiling. No extra cost to be paid for the same. Before installation, make hole/face plate for conduit pipes of electrical / networking cables with open able stud from partition Including all materials and labor etc. Make necessary grooves as per shown in drawing. All bottom ends are covered with burma border bidding Patti finished with laminate Complete with all necessary hardware & adhesives as per details given in drawing and as per instructions of Architect/consultant/Engineer In charge. Contractor has to provide all necessary cut outs (race ways.) for Electrical works & no extra payment shall be made for it.

1. Material:

- 12 mm thick mr grade plywood shall be used for partition work as per approved make and sample by BANK /ARCHITECT /BANK AUTHORITY.
- Aluminum section shall be used as per approved make list and confirming to relevant IS codes and approvals.
- Laminate on both side as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY.

2. Workmanship:

- Work complete as per above specification.
- All the partition should be fitted to ensure accurate positioning & level of ceiling ,flooring,wall system as per the site / EIC requirements.
- Work including wherever necessary core cutting ,drilling ,anchoring etc complete.
- The junction of the partition with masonry & all penetration through the partition has to be treated with Hilti / pyroplex fire and acoustic sealant.

3. Measurements:

- Only the clear elevation area of finished plywood wall partition with laminate shall be measure and paid.
 - The work done shall be measured in square meter for area of work done. The rate shall be for a unit of one square meter.
-

8

Veneer Finish Trophy Storage :- Providing & fixing Veneer Finish trophy cupboard having depth of 375 mm , FOR SHUTTER:- framing of 18 mm Thick. MR grade Ply Wood with all necessary proper adhesive and hardwares,having 12 mm extra clear toughen glass with crystal edges & frosted effects for shutter fixed in ply framing . All complete with hole ,cut work etc. Pheripheral frame make with 18 mm MR grade ply finished with 4 mm thk veneer and suggested PU spray polish . FOR STORAGE BODY :- Having pheripheral vertical sandwich supports & horizontal single selves as per given in detail drawings made out of 18 mm Thick. MR grade Ply Wood. Backside of storage is covered with 12 mm thick MR grade plywood. All exposed and internal Joints complete with burma border bidding patti finished with laminate/ polish . All exposed surfaces covered with 4 mm veneer and finished with PU Polish with mat finish and internal surfaces covered with 1 mm thick approved shade laminates as instructed by Architect/consultant/Engineer In charge. Complete with all necessary hardwares like handles, glass to glass locks/Conceal Mortise Locks,with all hardware like MS nails, SS-304 screws, magnet, Stoppers, L - hinges, table chain, etc. as per details given in drawing and as per instructions of Architect/Engineer In charge .

Material:

- 18 mm thick MR grade plywood IS 303 shall be used for storage as per approved make and sample by BANK/ARCHITECT /BANK AUTHORITY.
- 12 mm thick MR grade plywood IS 303 shall be used for storage as per approved make and sample by BANK/ARCHITECT /BANK AUTHORITY.
- 12 mm extra clear toughen glass with crystal edges.

- 4 mm thk veneer on exposed surfaces of storage as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .
- 1 mm thk laminate internal surfaces.
- Veneer finished with suggested PU polish.
- All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by BANK /ARCHITECT /BANK AUTHORITY .

Workmanship:

- Work complete as per above specification.
- All the selves of storage should be fitted to ensure accurate positioning & line level of supports as per the storage pattern/ EIC requirements.
- Work including wherever necessary core cutting ,drilling ,anchoring etc complete.
- The junction of the partition with masonry & all penetration through the partition has to be treated with acoustic sealant.

Mode Of Measurements:

- The size of the storage will be measured from flooring to false ceiling. Contractor have to submit necessary test reports & certificates of plywood & glass etc. Measurement consider length x height for billing.
- The work done shall be measured in square meter for area of work done. The rate shall be for a unit of one square meter.
- All joints of laminate/veneer & grooves are as per suggested by Architect/EOI.

9

PARTLY GLAZED DOUBLE LEAF DOOR (ONE SIDE LAMINATE ONE SIDE VENEER FINISH):-Providing & fixing flush Double leaf Door/Single leaf , (finished size of door is 56 mm) of size 900 mm x 2400 mm (for each door.) considering blockboard flush door sheet of 35 mm thickness covered both side by 9 mm mr grade ply & finished with 1 mm thick laminate of suggested shed at single side and 4 mm veneer another side complete with pu spray polish on sides of shutters fixed with appropriate burma border patti , rest on floor spring of 100 kg & Top-Bottom wooden fitting for door-pivot. All exposed framing made by Burma border wood complete with laminate/veneer. Finishing with all necessary hardware like conceal handles, conceal locks, stopers, tower bolt, MS nails, SS-304 screws etc.

Materials:

- 12mm thick toughened glass shall be used as per sample approved.
- Waterproof Flush door of 35 mm thickness.
- 8/9 mm MR grade ply.
- 1 mm laminate.
- 4 mm veneer finished with PU polish.
- Burma border bidding Patti.

Hardware shall be used as per approved sample.

Workmanship:

12 mm thick clear toughened glass, crystal edge /laminated as suggested.

One side finish with laminate. other side finish with veneer.

Item includes all necessary fitting/fixing fixtures –as per approved Hardware system with double action floor spring, handle with lock, door stop complete as per drawing.

All doors should be completed as per design; including necessary support of plywood in ceiling etc. to be provided without any extra cost. Sample material & any other Requirement shall be as per instruction of CANARA BANK /CONSULTANT/ BANK AUTHORITY.

Sample mock shall be approved from CANARA BANK /CONSULTANT. /BANK AUTHORITY.

Mode of Measurements:

Mode of Measurement: Measurement consider length x height for billing. Contractor has to submit certificates for each material quality & test reports wherever it required.)(flush door, Ply etc.)

Clear Opening area shall be measured & paid in Square meter.

10

FULLY GLAZED DOOR WITH PERIPHERIAL VINEER PLY FRAMING :- Providing material & labour charge for making Fully Glazed Door with peripheral ply framing based on aluminium framing of size 900 mm x 2225 mm having 12 mm extra clear toughen glass with crystal edges & frosted effects . All complete with hole ,cut work etc. Glazed Door supported on floor spring of 100 kg & pivots with fitting on top/bottom/corner patch fittings . Peripheral frame make with 12 mm MR grade ply finished with 4 mm thk veneer and suggested PU spray polish based on 50mm x25 mm aluminium section (16 gauge) Complete with all necessary hardwares like 450 mm high handles, glass to glass locks/Conceal Mortise Locks etc as per details given in drawing and as per instructions of Architect/Engineer In charge.

Materials:

- 12mm thick extra clear toughened glass shall be used as per sample approved.
- 12 mm ply for framing
- Floor Spring
- 50x25 mm Alu sections
- 4 mm veneer finished with PU polish.
- Burma border bidding Patti.
- Hardware shall be used as per approved sample.

Workmanship:

Item includes all necessary fitting/fixing fixtures –as per approved Hardware system with double action floor spring, handle with conceal lock, door stop complete as per drawing. All doors should be completed as per design; including necessary support of plywood in ceiling etc. to be provided without any extra cost. Sample material & any other Requirement shall be as per instruction of CANARA BANK /CONSULTANT/ BANK AUTHORITY.

Sample mock shall be approved from CANARA BANK /CONSULTANT. /BANK AUTHORITY.

Mode of Measurements:

Mode of Measurement: Measurement consider length x height for billing. Contractor has to submit certificates for each material quality & test reports wherever it required.)(flush door, Ply etc.)

Clear Opening area shall be measured & paid in Square meter.

11

FULLY GLAZED DOOR WITH PHERIPHERIAL LAMINATE PLY FRAMING Specification:- Providing material & labour charge for making Fully Glazed Door with pheripheral ply framing based on aluminium framing of size 900 mm x 2225 mm having 12 mm extra clear toughen glass with crystle edges & frosted effects . All complete with hole ,cut work etc. Glazed Door supported on floor spring of 100 kg & pivots with fitting on top/bottom/corner patch fittings . Pheripheral frame make with 12 mm MR grade ply finished with 1 mm thk suggested shed laminate based on 50mm x25 mm aluminium section (16 guage) Complete with all necessary hardwares like 450 mm high handles, glass to glass locks/Conceal Mortise Locks etc as per details given in drawing and as per instructions of Architect/Engineer In charge.

Materials:

- Alu section having sizes of 50mmx25 mm (16 gage)
- 12 mm mr grade ply
- 12 mm Hole & cutwork of top bottom ,patch cutting
- 32 mm dia SS-304 mat finish 54" handle with lock
- SS Mat finish Pivot
- Floor spring- 100 kg
- 12mm thick extra clear toughened glass shall be used as per sample approved.
- 1 mm thk laminate.
- Burma border bidding Patti.
- Hardware shall be used as per approved sample.

Workmanship:

Item includes all necessary fitting/fixing fixtures –as per approved Hardware system with double action floor spring, handle with conceal lock, door stop complete as per drawing.

All doors should be completed as per design; including necessary support of plywood in ceiling etc. to be provided without any extra cost. Sample material & any other Requirement shall be as per instruction of CANARA BANK /CONSULTANT/ BANK AUTHORITY.

Sample mock shall be approved from CANARA BANK /CONSULTANT. /BANK AUTHORITY.

Mode of Measurements:

Mode of Measurement: Measurement consider length x height for billing. Contractor has to submit certificates for each material quality & test reports wherever it required.)(Glass , Hardware etc.)

Clear Opening area shall be measured & paid in Square meter.

12

SINGLE LEAF FLUSH DOOR (VENEER FINISH):-

Specification:- Providing Material & Labour charge for making Flush Door (finished size of door is 61 mm) of size 900 mm x 2250 mm considering blockboard flush door sheet of 35mm thickness covered both side by 9 mm commercial ply & finished with 4 mm thick veneer on both sides of shutter supported by SS -304 finish ryel hinges . All exposed framing of 50 mm x12 mm made by Burma border wood patti complete with pu polish. Finishing with all necessary hardwares like wood handles or SS handles as suggested ,conceal mortise locks, cylinders with 6 nos of keys , stopers,tower bolt,MS nails, SS-304 screws etc. Basic rate of veneer is Rs 100/Sq ft.) as per details given in drawing and as per instructions of Architect/Engineer In charge. Please see the Attached Make List for Apporoved Makes.

Materials:

- Waterproof Flush door of 35 mm thickness.
- 9 mm MR grade ply.
- 4 mm veneer finished with PU spray polish.
- Burma border bidding Patti.
- Hardware shall be used as per approved sample.

Workmanship:

☐ Item includes all necessary fitting/fixing fixtures –as per approved Hardware system with double action floor spring, handle with lock, door stop complete as per drawing.

☐ All doors should be completed as per design; including necessary support of plywood in ceiling etc. to be provided without any extra cost. Sample material & any other Requirement shall be as per instruction of BANK /CONSULTANT/ BANK AUTHORITY.

☐ Sample mock shall be approved from BANK /CONSULTANT. /BANK AUTHORITY.

Mode of Measurements:

☐ Mode of Measurement: Measurement consider length x height for billing. Contractor has to submit certificates for each material quality & test reports wherever it required.)

☐ Clear Opening area shall be measured & paid in Square meter.

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13

SINGLE LEAF FLUSH DOOR (lamine finish) :

Specification:- Providing Material & Labour charge for making Flush Door (finished size of door is 55 mm) of size 900 mm x 2250 mm considering blockboard flush door sheet of 35mm thickness covered both side by 9 mm commercial ply & finished with 1 mm thick laminate of suggested shed on both sides of shutter supported by SS -304 finish ryel hinges . All exposed framing of 50 mm x12 mm made by Burma border wood patti complete with suggested polish or laminate . Finishing with all necessary hardwares like wood handles or SS handles as suggested ,conceal mortise locks, cylinders with 6 nos of keys , stopers,tower bolt,MS nails, SS-304 screws etc. as per details given in drawing and as per instructions of Architect/Engineer In charge. Please see the Attached Make List for Apporoved Makes.

Materials:

- Waterproof Flush door of 35 mm thickness.
- 9 mm MR grade ply.
- 1 mm laminate as per suggested shed and deesign
- Burma border bidding Patti.
- Hardware shall be used as per approved sample.

Workmanship:

- Item includes all necessary fitting/fixing fixtures –as per approved Hardware system with double action floor spring, handle with lock, door stop complete as per drawing.
- All doors should be completed as per design; including necessary support of plywood etc. to be provided without any extra cost. Sample material & any other Requirement shall be as per instruction of BANK /CONSULTANT/ BANK AUTHORITY.
- Sample mock shall be approved from BANK /CONSULTANT. /BANK AUTHORITY.

Mode of Measurements:

- Mode of Measurement: Measurement consider length x height for billing. Contractor has to submit certificates for each material quality & test reports wherever it required.)
 - Clear Opening area shall be measured & paid in Square meter.
-

14

GLASS VINEER FINISH CENTRAL TIPOI

Providing & making centre tipoi having 12 mm glass top and as self of 600 mm x 450 mm based on 18 mm ply frame at top and bottom as per view, with all necessary proper solutions, hardware etc as suggested in detail drawing. Base frame size is 450 mm x 440 mm. Glass top is fitted with pheripheral frame support . and self is rest on both vertical leg support. Base box covered with tie frame . .All exposed surfaces finish with 4 mm thick veneer finish with PU spray Polish mat finish. Tipoi have rolled on conceal caster wheels. Basic rate of veneer is Rs 100/Sq ft.) All Details as per shown in detail drawings & as per instructions of architect/consultant / incharge engineer.

Materials:

- ☐ 12mm thick Extra clear glass with crystel edges.
- ☐ 18 mm MR grade ply frame of IS 303 for glass base support and for base box.
- ☐ 4 mm veneer complete with PU spray polish at all exposed surfaces as finished material.
- ☐ Hardware shall be used as per approved sample.

Workmanship:

- ☐ 12mm thick Extra clear glass with crystel edges
- ☐ Item includes all necessary fitting/fixing fixtures –as per approved Hardware.
- ☐ Provision of scratch proof caster wheels.
- ☐ Sample mock shall be approved from BANK /CONSULTANT. /BANK AUTHORITY.
- ☐ The work should be done with precision to the satisfaction of the

engineer-in-charge.

☐ The work should be strictly carried out as per the specifications & drawing given by the Architect/consultant.

Measurements:

☐ Measurement consider on no of tipoi

☐ The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries etc. & labor to complete the work satisfactorily as per instructions & necessary certificate to be produced to Engineer-in-charge by agency.

☐ The necessary vouchers bill of purchase of materials shall be produced if demanded by the engineer in charge.

☐ No Extra payment will be given for any reasons. The rate shall be for a unit of One Nos. basis of work done for completed Item.

15

CORIAN TOP VINEER FINISH BACK CREDENZA:-

Providing & fixing Corian Top Veneer Finish back credenza having depth of 375 mm , with corian top (top width is 450 mm (which covers sides, edges & 50 mm bottom of ply, front edge 1.5")) based on 19mm Thick. MR grade Ply Wood with all necessary proper solution, finished with rubbing and buffing. Having vertical sandwich supports for shutters & horizontal single self as per given in detail drawings drawers made out of 18 mm Thick. MR grade Ply Wood. Backside of credenza is covered with 12 mm thick MR grade plywood. All exposed and internal Joints complete with burma border bidding patti finished with laminate/melamine polish . All exposed surfaces covered with 4 mm veneer and finished with PU Polish with mat finish and internal surfaces covered with 1 mm thick approved shade laminates as instructed by Architect/consultant/Engineer In charge. Complete as per detail Drawings, with all hardware like MS nails, SS-304 screws, magnet, Stoppers, L - hinges, table chain, 4" mat finish SS handles etc.

Material

- 6 mm thick corian white with buffing.
- 18 mm MR grade ply of IS 303 for corian base support and for base box.
- Bidding Patti:- Burma border
- 4 mm veneer complete with PU spray polish at all exposed surfaces as finished material.
- 1 mm laminate for internal surfaces as finished material

Workmanship: Storage body is made of 18 mm MR grade ply IS-303 with 6 mm thick corian on top rest on 18 mm thick MR grade ply finished with 4mm thick veneer finish at expose surfaces and internal side all open edges should be covered with veneer matching patti / PU polish. Below top finished with balancing laminate. 1 mm thick laminate finish including require nos of drawer and shutter all type of fittings , fixtures, hardware etc complete .SS 304 grade conceal handle shall be provide as per approved selection & detailed drawing and instruction of Architect/consultant/BANK/BANK AUTHORITY . . Rate is inclusive of

telescopic channel of suggested make.

Wire management: provision of special flexible component that allows easy and safe passage of wires

The mode of Measurement: The size of the credenza will be measured from length x height for billing Basic rate of veneer is Rs 100/Sq ft.) The rate shall be for one square meter.

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16

ITALIAN TOP VINEER FINISH BACK CREDENZA UP TO 0.76 MT HT Providing & fixing Italian Top Veneer Finish back credenza having depth of 375 mm , with italian top (top width is 450 mm (which covers sides, edges & 50 mm bottom of ply, front edge 1.5")) based on 18 mm Thick. MR grade Ply Wood with all necessary proper solution, finished with rubbing and buffing. Having vertical sandwich supports for shutters & horizontal single self as per given in detail drawings drawers made out of 18 mm Thick. MR grade Ply Wood. Backside of credenza is covered with 12 mm thick MR grade plywood. All exposed and internal Joints complete with burma border bidding patti finished with laminate/melamine polish . All exposed surfaces covered with 4 mm veneer and finished with PU Polish with mat finish and internal surfaces covered with 1 mm thick approved shade laminates as instructed by Architect/consultant/Engineer In charge. Complete as per detail Drawings, with all hardware like MS nails, SS-304 screws, magnet, Stoppers, L - hinges, table chain, 4" mat finish SS handles etc.

Material

- 12 mm thick Italian stone.(Basic Rate 400 rs sq ft.)
- 18 mm MR grade ply of IS 303 for base support and for base box.
- Bidding Patti:- Burma border
- 4 mm veneer complete with PU spray polish at all exposed surfaces as
- finished material.
- 1 mm laminate for internal surfaces as finished material

Workmanship: Storage body is made of 18 mm MR grade ply IS-303 with 12 mm thick italian on top rest on 18 mm thick MR grade ply finished with 4mm thick veneer finish at expose surfaces and internal side all open edges should be covered with veneer matching patti / PU polish. All internal surfaces cover with 1 mm thk laminate. Below top finished with balancing laminate. 1 mm thick laminate. finish including require nos of drawer and shutter all type of fittings , fixtures, hardware etc complete .SS 304 grade conceal handle shall be provide as per approved selection & detailed drawing and instruction of Architect/consultant/BANK/BANK AUTHORITY . . Rate is inclusive of telescopic channel of suggested make.

Wire management: provision of special flexible component that allows easy and safe passage of wires

The mode of Measurement: The size of the credenza will be measured from length x height for billing Basic rate of veneer is Rs 100/Sq ft.) The rate shall be for one square meter.

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17

LAMINATE FINISH BACK CREDENZA UP TO 0.76 MT HT:-

Providing & fixing Laminate Finish Low ht back credenza having depth of 375 mm , with 18 mm mr grade ply top, based on sandwidth vertical supports made by 18 mm Thick. mr grade Ply Wood with all shutters & horizontal single self (made by 18 mm thick MR grade ply) as per given in detail drawings. Backside of low ht storage is covered with 12 mm thick plywood. Shutters made with 18 mm + 6 mm ply with conceal handles. All exposed and internal Joints complete with burma border bidding patti finished with melamine polish. All exposed and internal surfaces covered with 1 mm thick approved shade laminates as instructed by Architect/consultant/Engineer in charge. Complete with all hardware like MS nails, ss-304 screws, magnet, Stoppers, L - hinges, 19 mm multilocks, table chain, conceal handles etc.

Material

- 18 mm MR grade ply of IS 303.
- 6 mm MR grade ply of IS 303.
- Bidding Patti:- Burma border
- 1 mm laminate for exposed & internal surfaces as finished material
- Hardware : 5m , ozone, etc

Workmanship: Storage body is made of 18 mm MR grade ply IS-303 with sandwich top finished with 1mm thick laminate finish at all expose surfaces and internal surface . all open edges should be covered with bidding Patti finish with laminate Finish including require nos of drawer and shutter all type of fittings , fixtures, hardware etc complete .SS 304 grade conceal handle shall be provide as per approved selection &detailed drawing and instruction of Architect/consultant/BANK/BANK AUTHORITY . . Rate is inclusive of telescopic channel of suggested make.

Wire management: provision of special flexible component that allows easy and safe passage of wires

The mode of Measurement: The size of the credenza will be measured from length x height for billing Basic rate of Basic rate of laminate is Rs 1450/ sheet.) The rate shall be for one square meter.

18

CORIAN TOP VINEER FINISH SIDE CREDENZA: Providing & fixing Corian Top Veneer Finish back credenza having depth of 375 mm , with corian top (top width is 450 mm (which covers sides, edges & 50 mm bottom of ply,front edge1.5")) based on 18mm Thick. MR grade Ply Wood with all necessary proper solution, finished with rubbing and buffing. Having vertical sandwich supports for shutters & horizontal single self as per given in detail drawings drawers made out of 18 mm Thick. MR grade Ply Wood. Backside of credenza is covered with 12 mm thick MR grade plywood. All exposed and internal Joints complete with burma border bidding patti finished with laminate/melamine polish . All exposed

surfaces covered with 4 mm veneer and finished with PU Polish with mat finish and internal surfaces covered with 1 mm thick approved shade laminates as instructed by Architect/consultant/Engineer In charge. Complete as per detail Drawings, with all hardware like MS nails, SS-304 screws, magnet, Stoppers, L - hinges, table chain, 4" mat finish SS handles etc.

Material

- 6 mm thick corian white with buffing.
- 18 mm MR grade ply of IS 303 for corian base support and for base box.
- 12 mm MR grade ply of IS 303 for corian base support and for base box.
- Bidding Patti:- Burma border
- 4 mm veneer complete with PU sprey polish at all exposed surfaces as finished material.
- 1 mm laminate for internal surfaces as finished material

Workmanship: Storage body is made of 18 mm MR grade ply IS-303 with 6 mm thick corian on top rest on 18 mm thick MR grade ply finished with 4mm thick veneer finish at expose surfaces and internal side all open edges should be covered with veneer matching patti / PU polish. Below top finished with balancing laminate. All internal surfaces finish with 1 mm thk laminate. 1 mm thick laminate finish including require nos of drawer and shutter all type of fittings , fixtures, hardware etc complete .SS 304 grade conceal handle shall be provide as per approved selection & detailed drawing and instruction of Architect/consultant/BANK/BANK AUTHORITY . . Rate is inclusive of telescopic channel of suggested make.

Wire management: provision of special flexible component that allows easy and safe passage of wires

The mode of Measurement: The size of the credenza will be measured from length x height for billing Basic rate of veneer is Rs 100/Sq ft.) The rate shall be for one square meter.

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19

LAMINATE FINISH SIDE CREDENZA UP TO 0.60 MT HT.

Providing Material & Labour charge for making Laminate Finish Low ht side credenza having depth of 375 mm , with 18 mm mr grade ply top, based on sandwidth vertical supports made by 18 mm Thk. mr grade Ply Wood with all shutters & horizontal single self (made by 18 mm thk mr grade ply) as per given in detail drawings. Backside of low ht storage is covered with 12 mm thk plywood. Shutters made with 18 mm +6 mm ply with conceal handles. All exposed and internal Joints complete with burma border bidding patti (25 mm x 12 mm) finished with melamine polish. All exposed and internal surfaces covered with 1 mm thk approved shade laminates as instructed by Architect/Engineer In charge. Complete with all hardwares like MS nails, ss-304 screws, magnet, Stoppers, L - hinges, 19 mm multilocks, table chain, conceal handles etc

Material

- 18 mm MR grade ply of IS 303 for base support and for base box.
- 12 mm MR grade ply of IS 303 for backside of storage.

- Bidding Patti:- Burma border
- 1 mm laminate for exposed & internal surfaces as finished material

Workmanship: Storage body is made of 18 mm MR grade ply IS-303 with sandwich top finished with 1mm thick laminate finish at all expose surfaces and internal surface . all open edges should be covered with bidding Patti finish with laminate Finish including require no of drawer and shutter all type of fittings , fixtures, hardware, cable manager etc complete .SS 304 grade conceal handle shall be provide as per approved selection &detailed drawing and instruction of Architect/consultant/BANK/BANK AUTHORITY . . Rate is inclusive of telescopic channel of suggested make.

Wire management: provision of special flexible component that allows easy and safe passage of wires

The mode of Measurement: The size of the credenza will be measured from length x height for billing Basic rate of laminate is 1450/sheet.) The rate shall be for one square meter.

20

LAMINATE FINISH STORAGE UPTO 1.52 MT HEIGHT:-Providing & fixing low ht storage having suggested length & 2400 mm height and having depth of 600 mm, having skirting of 75 mm, with proper locks. 5 nos of vertical supports & 3 no of horizontal shelves made by 18 mm thick MR grade ply, having shutters of 8 mm thick double sandwich ply with using 12 mm thick MR ply for framing. All complete with proper Burma border biding. Back ply is 12 mm MR grade ply. All exposed & internal surfaces are covered with 1 mm thick laminate. External & internal joints covered with bidding Patti complete with laminate finish. All complete with proper hardware like locks, S.S. Screws, MS Nails, Magnets, table chains, cable manager SS 304 Handles of 250 mm and 100 mm dia etc. All Details as per shown in detail drawings & as per instructions of architect/consultant / in charge engineer

Material

- 18 mm MR grade ply of IS 303 for base support and for base box.
- 12 mm MR grade ply of IS 303 for backside of storage.
- Bidding Patti:- Burma border
- 1 mm laminate for exposed & internal surfaces as finished material

Workmanship: Storage body is made of 18 mm MR grade ply IS-303 with sandwich top finished with 1mm thick laminate finish at all expose surfaces and internal surface . all open edges should be covered with bidding Patti finish with laminate Finish including require no of drawer and shutter all type of fittings , fixtures, hardware, cable manager etc complete .SS 304 grade conceal handle shall be provide as per approved selection &detailed drawing and instruction of Architect/consultant/BANK/BANK AUTHORITY . . Rate is inclusive of telescopic channel of suggested make.

Wire management: provision of special flexible component that allows easy and safe passage of wires

The mode of Measurement: The size of the credenza will be measured from

length x height for billing Basic rate of laminate is 1450/sheet.) The rate shall be for one square meter.

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21

LAMINATE

FINISH

TABLE:-

Providing & fixing laminate finish table having given size with height of 750 mm (as per attached detail drawing) Table having 36 mm Thick .at top made by 18 mm thick sandwich ply . Top is cantilever then its base supports. Base supports made by 18 mm thick sandwich ply. A Table having drawers and a shutter in a pedestal and a key board tray at single end. Drawers & Keyboard tray rest on telescopic channels. Shutters & drawers having thickness of 24 mm which are made by 18mm + 6 mm ply to create conceal grooves as handle. Drawers & keyboard, sides, Bottom is covered with 18 mm MR grade ply & Back of pedestal are made up of 12 mm thick MR grade Ply Wood. Having 3" high Footrest of 18 mm ply. At Front facade (covered with grooves as per given patterns. All internal and external surfaces covered by 1mm thick laminate. all complete with given nos of key board tray, drawers on telescopic channels, locks, stoppers, SS Screws,MS nails, Auto hinges, Cable Manager etc as per shown in detail drawings & as per instructions of architect/consultant / in charge engineer. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it.

1.0 Materials:-

18 mm MR Grade ply of IS 303.

12 mm MR Grade ply of IS 303.

Bidding Patti:- Burma border.

1 mm laminates for exposed & internal surfaces as finished material

2.0 Workmanship:-

2.1 The item covers the requirement of frames, plywood, and laminate for table edges.

2.2.1 All members of frames shall be exactly at right angles. The right angles shall be Checked from inside surface of the respective members

Joints: - Frame shall have standard , , cross halved, but joints will not be permitted.

2.3 Plywood with required size shall be fixing to frame with use of synthetic resin adhesive as

Well as screws, nails as directed by engineer in charge and as per drawing.

2.4 Laminated All exposed & internal member of plywood should be laminated with 1.0 mm thick laminate of standard make of approved shade & as per relevant **Specification**

3.0 Mode of Measurement & Payment:

3.1 The rate shall be consolidated for all above items. The rate shall include cost of all materials,

Fixtures, joineries etc. & labor to complete the work satisfactorily as per instructions &

Necessary certificate to be produced to Engineer-in-charge by agency.

3.2 The necessary vouchers bill of purchase of materials shall be produced if demanded by the engineer in charge.

3.3 No Extra payment will be given for any reasons. The rate shall be for a unit per sq mt. basis

Of work done for completed Item.

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22

CORIAN TOP VINEER FINISH TABLE:-

Providing & fixing corian top veneer finish table having given size with height of 750 mm (as per attached detail drawing) Table having 40 mm Thick. at top made by corian finish with buffing polishing etc rest on 18 mm MR grade ply . Top is cantilever then its base supports. Base supports made by 18 mm thick sandwich ply . A Table having two nos of drawers and a shutter for both sides in a pedestal and a key board tray at mid of table. Drawers & Keyboard tray rest on telescopic channels. Shutters & drawers having thickness of 24 mm which are made by 18 mm + 6 mm ply to create conceal grooves as handle. Drawers & keyboard side, Bottom & Back of pedestal are made up of 12 mm thick mr grade Ply Wood. Having 3" high Footrest of 18 mm ply.(
(1) In elevation of GM table have a provision of 30mmx30mm veneer finish patties finished with PU polish. and top is rest on that patties on one end and at another side top is rest on 50 to 100 mm SS stud. (2)In elevation of DGM table top is partly covered with corian top and sides have trapezoid vertical support as shown in detail drawing of 18 mm sandwich ply.)
All Exposed surfaces covered with 4 mm thick veneer complete with PU polish. And internal surfaces covered by 1mm thick laminate. all complete with given no of key board tray, drawers on telescopic channels, locks, stoppers, SS Screws,MS nails, Auto hinges, Cable Manager etc as per shown in detail drawings & as per instructions of architect/consultant / in charge engineer. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it.

2.0 Materials:-

6 mm corian white with buffing.

18 mm MR Grade ply of IS 303.

Bidding Patti:- Burma border

4 mm thick veneer

1 mm laminates for internal surfaces as finished material

3.0 Workmanship:-

☐ The item covers the requirement of corian with buffing, plywood, veneer, PU polish; laminate for table edges and for inside surfaces. corian is also covered at bottom of the top.

☐ All members of frames shall be exactly at right angles. The right angles shall be Checked from inside surface of the respective members

Joints: - Frame shall have standard, cross halved, but joints will not be permitted.

☐ Plywood with required size shall be fixing to frame with use of synthetic resin adhesive as well as screws, nails as directed by engineer in charge and as per drawing.

Polishing/ Laminated.

All exposed member of plywood should be laminated with 4.0 mm thick veneer of standard Make with PU polished with requisite coats approved shade & internal surfaces covered with 1 mm thk laminates and melamine polish as per relevant Specification.

3.0 Mode of Measurement & Payment:

The rate shall be consolidated for all above items. The rate shall include cost of all materials, fixtures, joineries etc. & labour to complete the work satisfactorily as

per instructions & necessary certificate to be produced to Engineer-in-charge by agency.

The necessary vouchers bill of purchase of materials shall be produced if demanded by the engineer in charge.

No Extra payment will be given for any reasons. The rate shall be for a unit of sq mt. basis Of work done for completed Item.

23

GLASS TOP VINEER FINISH MEETING TABLE:- Providing & fixing glass top vineer finish meeting table having 12 MM thk toughen glass on top with all bewale and crystle edges fitted with pvc buffers . base support made with 12 mm thk sandwich ply of square box base size of 450mm x 450 mm with 12 mm deep suggested grooves /patties as suggested in pattern finish with 4 mm thk veneer complete with suggested pu polish. veneer finish meeting table 750 mm height , 900 mm diametre table have base of 12 mm + 12 mm (top,bottom & all sides) thick sandwich plywood for supporting vertical supports. Ply for grooving as indicated in drawing. (as per details given in sectional drawing) Edges of the table covered by burmaborder bidding Patti finished with veneer/polish. All external surfaces covered by 4mm thick veneer, complete with PU spray polish.All internal surfaces covered with All complete as per shown in detail drawings & as per instructions of architect / in charge engineer. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it.

1) Material :

12 mm thk extra clear toughen glass with bewail/crystel edges .

12 mm MR Grade ply of IS 303.

Bidding Patti:- Burma border

4 mm thick veneer finish with PU polish.

1 mm laminates for internal surfaces as finished material

2) Workmanship:

The work should be done with precision to the satisfaction of the engineer-in-charge. The work include all embossing patti work on uniformly distances . All concealed work including making key board, wire manager should be done properly. No damage should be done to existing furniture / wall surface. The work should be strictly carried out as per the drawing given by the Architect.

3) Mode of Measurement & Payment:

The rate shall be for a unit of sqmt. basis (length x height)

24

ABSORB WOOL FOR ACAUSTIC PARTITION/ PANELING Providing and Fixing in position 50mm thick absorb wool in slab form of density 48 Kg/cum or any other approved make behind wall/ceiling/between partition paneling as shown in the drawings and manufacture's specification.The

Installation shall be as per following steps:
1. Fix framework / Batten out backside of wall paneling to suit width of insulation slabs
2.. Insulation slabs shall be fixed snugly between frames without gaps.
3. Fixing shall be done on vertical batten with staples or flat head nails or adhesive solution. Ply/paneling item shall be paid as per tender item.
Item shall be operated, measured and paid if and only not mentioned in relevant tender item.

Material: Absorb Wool, Stapler pins, PVC Grippers.

Workmanship:- As per given specifications. Absorb wool for create acoustic effect.

Mode of Measurement & Payment: used sheet quantity for partition, false ceiling and paneling . The rate shall be for a unit of Square mtr. basis Of work done for completed Item. Glass wool payment is paid extra in sq mt basis as per uses on site. Complete with all hardwares like nails, ss screws, adhesives etc. shown in detail drawings.

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25

CORIAN TOP VINEER FINISH CONFERENCE TABLE :- Providing & fixing corian top veneer finish conference table 750 mm height , 600 mm wide & 17259 running mm longitudinal meeting table having 12mm Thick. Corean Top based on 18 mm thick MR grade plywood finished by rubbing ,buffing & pasting (Core an top covers 300 mm bottom of table at longitudinal side & 300 mm bottom of table at shorter side including edges) table have base of 18 mm thick MR grade plywood for footrest & supporting vertical supports made by of 12mm+8 mm thick sandwiched Ply for grooving as indicated in drawing. At internal sides use of 0.30 mt ht 5 mm smoke mirror which are pasting on ply with use of appropriate silikon. (as per details given in sectional drawing) Base of the table covered by burmateak bidding Patti finished with veneer. All external & internal surfaces covered by 4 mm thick veneer, complete with PU spray polish All complete as per shown in detail drawings & as per instructions of architect / in charge engineer. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it.

1.0 Materials:-

- 12 mm thick Corian white.
- 18 mm MR Grade Plywood.
- 12 mm MR Grade Plywood.
- 8 mm MR Grade Plywood.
- 5 mm Smoke Mirror
- 4 mm veneer
- PU spreay Polish
- Burma border as bidding.

☐ Misc. Fixtures and fastening shall be conforming to relevant IS/as approved by office.

2.0 Workmanship:-

Providing & fixing Conference Table having corian top rest on 18 mm thick MR grade

plywood as per given size finish with 4 mm thick veneer finish with PU mat polish
.Complete with all necessary accessories & other fixture and fastening incl. using approved brand quality material & work shall be done as per drawing or directed by the Engineer in Charge.

2.2 The item covers the requirement of corian buffing, frames, plywood, and polishing for conference Table and its fixing.

2.3.1 All members of frames shall be exactly at right angles. The right angles shall be Checked from inside surface of the respective members

Joints: - Frame shall have standard,. Nailed or glued but joints will not be permitted.

2.4 Corian/Plywood with required size shall be fixing to frame with use of synthetic resin adhesive as

well as screws, nails as directed by engineer in change and as per drawing.

2.5 Finishing

All exposed member of table should be covered with 4 mm thick veneer finish complete with PU mat polish and internal surfaces covered with laminates.

2.6 All fixtures and fastening shall be fixed as per detailed drawing/ as directed by engineer in charge.

3.0 Mode of Measurement & Payment :

3.1 The rate shall be consolidated for all above items. The rate shall include cost of all materials, Fixtures, joineries etc. & labor to complete the work satisfactorily as per instructions & Necessary certificate to be produced to Engineer-in-charge by agency.

3.2 The necessary vouchers bill of purchase of materials shall be produced if demanded by the Engineer in charge.

3.3 No Extra payment will be given for any reasons. The rate shall be for a unit of running mtr. basis Of work done for completed Item.

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26

GYPSUM

FALSE

CEILLING:-

The works include supply and installation & fixing of Gypsum Board Ceiling which Incorporates a fully concealed GI fixing grid of ultra channel 18 guage. Complete with all necessary hardware, fittings and accessories. Board joints are not visible and all gaps are filled with gypsum jointing compound like gypsum powder . The job also includes providing access panels, cutting of spot lights, luminaries, speaker, etc. Sheets in size 4' x 8' in thickness ½" (or 3/8") screwed on steel stud system. The steel stud frame consisting of main furring GI channel at every 600 mm and cross channel at every 600 mm . Both main and cross channels are attached though jaw clip. Screws will be corrosion proof either Chromites or Cynated. Screw fixing is done mechanically with drilling machine & suitable attachment. Finally the boards

are to be jointed & finished so as to have a flush look which includes filling & finishing with jointing compound, paper tape and two coats of top coats of gyp board, etc completed.

The gaps will be initially filled with joining gypsum plaster compound and then taped by self adhesive covered with proper jointing compound like gypsum powder. Contractor has to provided all necessary cut outs for Electrical works & no extra payment shall be made for it.

Material :

gyp board :

Absorb wool wherever it suggested.

G I Framing – grid of ultra channel 18 guage , screws, soffit clamp, wall angle, wall plug

Workmanship:

The work should be done with precision to the satisfaction of the engineer-in-charge. No damage should be done to existing furniture / wall surface. The work should be strictly carried out as per the drawing given by the Architect/consultant.

Mode of Measurement & Payment:

A. Item is to be measured for its length and width.

B. The rate shall include cost of all materials, all labors, transportation, Installation/fixing as per instructions of engineer-in charge. No Extra payment will be Given for any reasons.

C. The item will be measured actually and paid on square meter for any length and Width / breadth.

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27

PLY

VINEER

CEILLING:

The works include providing & fixing of Ply Board Ceiling which Incorporates a fully concealed Aluminum grid. Complete with all necessary hardware, fittings and accessories. Finish with suggested laminates. The job also includes providing access panels, cutting of spot lights, luminaries, speaker, etc. Sheets in size 8' x 4' VINEER 4 mm in thickness. finish with pu mat polish . ½" (or 3/8") screwed on steel stud system. The steel stud frame consisting of main furring Alum channel at every 600 mm and cross channel at every 600 mm. Both main and cross channels are attached though jaw clip. Screws will be corrosion proof either Chromised or Cynated. Screw fixing is done mechanically with drilling machine & suitable attachment. The gaps will be initially filled with jointing compound and then taped by self adhesive covered with proper jointing compound..Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it.

Material :

MR Grade Plywood :

Absorb wool wherever it requires.

1 mm thk laminate

Aluminum Framing –

Workmanship:

The work should be done with precision to the satisfaction of the engineer-in-charge. No damage should be done to existing furniture / wall surface. The work should be strictly carried out as per the drawing given by the Architect/consultant.

Mode of Measurement & Payment:

A. Item is to be measured for its length and width.

B. The rate shall include cost of all materials, all labors, transportation, Installation/fixing as per instructions of engineer-in charge. No Extra payment will be Given for any reasons.

C. The item will be measured actually and paid on square meter for any length and Width / breadth.

ARMSTRONG "WOODWORKS GRILLE WITH BACKER MADE OF NATURAL BAMBOO WITH ARMSTRONG 24MM PRELUDE 43 BLACK" SYSTEM:-

PROVIDING & FIXING OF ARMSTRONG WOODWORKS GRILLE WITH BACKER MADE OF NATURAL BAMBOO WITH ARMSTRONG 24MM PRELUDE 43 BLACK EXPOSED GRID. The Woodworks (WW) Grille panel of nominal size 35x300x2400mm comprising 8 blades of 35x16x2376mm with on center spacing of 37.5mm fixed thru Backer of size 12x22x300mm with on center spacing of 300mm and additional end backers at 150mm from both the edges. Ledger of 6.5x24x2400mm to be used for covering face of wall angle. WW Grille should comply with ASTM-E84: Class A and have Relative Humidity of RH70. The panels are UV coated to Natural or Carbonized shades Optional : Open edges may be covered using "Edge Caps" of 44x19x2400mm and "Blade Junction" of 66x38x2400mm to be used along the connection of two WW Grille Panels. The grid should be of "Armstrong" make Prelude 43 with 24mm wide T - section flanges Black powder coating having rotary stitching on all T sections i.e. the Main Runner, 1200 mm & 600 mm Cross Tees with a web height of 43mm for the main runner & the Cross Tees and with a load carrying capacity of 20 Kgs/M2. Black backer clips of spring steel to be used for fixing panel to suspension system. INSTALLATION: To comprise main runner spaced at 1200mm centers securely fixed to the structural soffit using Armstrong suspension system (specifications below) at 1200mm maximum center. The First/Last Armstrong suspension system at the end of each main runner should not be greater than 450mm from the adjacent wall. Flush fitting 1200mm long cross tees to be interlocked between main runners at 600mm center to form 1200 x 600 mm module. Cut cross tees longer than 600mm require independent support. 600 x 600mm module to be formed by fitting 600mm long flush fitting cross tees centrally between the 1200 mm cross tees.

Perimeter trim to be Armstrong wall angles of size 19x19x3000mm, secured to walls at 450 mm maximum centers.

Backer clips are used to fix the panel to suspension with a grid formation of 600mm along the slat and 2 pieces along each dowel for every individual panel

ARMSTRONG SUSPENSION SYSTEM: accessories supplied by Armstrong World Industries consisting of M6 Anchor Fasteners with hanger hole, pre Straightened Hanger wire of dia – 2.5 mm of 1.80 m length having a tensile strength of 344-413 MPa, along with Adjustable hook clips of 0.8mm thick, galvanized spring steel for 2.5 mm wire with a minimum pull strength of 110 kg. The adjustable clip also consists of a 4 mm aquiline wire to be used with the main runner.

Material :

ARMSTRONG WOODWORK GRILL

G I Framing –

Workmanship: Installation method already mention in specification. The work should be done with precision to the satisfaction of the engineer-in-charge. No damage should be done to existing furniture / wall surface. The work should be strictly carried out as per the drawing given by the Architect/consultant.

Mode of Measurement & Payment:

- A. Item is to be measured for its length and width .
 - B. The rate shall include cost of all materials, all labors, transportation, Installation/fixing as per instructions of engineer-in charge. No Extra payment will be Given for any reasons.
 - C. The item will be measured actually and paid on square meter for any length and width / breadth.
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29

MDF ACRYLIC CEILING: The works include providing & fixing of MDF Ply Board Ceiling which Incorporates a fully concealed Aluminum grid. Complete with all necessary hardware, fittings and accessories. Finish with suggested laminates. The job also includes providing access MDF 3D panels/regular sheet , back side cover with suggested 6 mm acrylic sheet ,MDF sheet finish with PU spreya polish. cutting of spot lights, luminaries, speaker, etc. MDF sheet finished with suggested PU mat polish.. ½" (or 3/8") screwed on steel stud system. The steel stud frame consisting of main furring Alum channel at every 600 mm and cross channel at every 600 mm. Both main and cross channels are attached though jaw clip. Screws will be corrosion proof either Chromised or Cynated. Screw fixing is done mechanically with drilling machine & suitable attachment. The gaps will be initially filled with jointing compound and then taped by self adhesive covered with proper jointing compound..Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it.

Material :

12 mm MDF Ply (3D panel) sheet
6 mm acrylic sheet
Aluminium Framing
PU mate polish

Workmanship: The works include providing & fixing of MDF Ply Board Ceiling which Incorporates a fully concealed Aluminum grid. Complete with all necessary hardware, fittings and accessories. Finish with suggested laminates. **The job also includes providing access MDF 3D panels/regular sheet** The work should be done with precision to the satisfaction of the engineer-in-charge. No damage should be done to existing furniture / wall surface. The work should be strictly carried out as per the drawing given by the Architect/consultant.

Mode of Measurement & Payment:

- A. Item is to be measured for its length and width .
 - B. The rate shall include cost of all materials, all labors, transportation, Installation/fixing as per instructions of engineer-in charge. No Extra payment will be Given for any reasons.
 - C. The item will be measured actually and paid on square meter for any length and width / breadth.
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30

LIGHT WEIGHT CALCIUM SILICATE CEILING: Providing and fixing eco-friendly light weight calcium silicate false ceiling tiles having Tegular edge & 15 mm Thick edges on the Tile Periphery for Extra Strength The Light weight calcium silicate ceiling tiles shall have , light reflection 85% non-combustible as per B.S. 476 part IV, 100% humidity resistance and also having thermal conductivity 0.043° w/m KC. for the best thermal Insulation . The Light weight calcium Silicate tile shall be of approved texture Fine fissured/ Spintone/Cosmos having NRC value of 0.5 & Globe having NRC value of 0.75 NRC or equivalent of size 595 X 595 mm to be laid on true horizontal level suspended inter locking metal grid of hot dipped galvanized steel sections (galvanizing @120 grams per sqm including both side) consisting of main 'T' runner suitably spaced at joints to get required length and size of 24X38mm made from 0.30 mm thick (minimum) sheet, 1200mm centre to centre, and cross 'T' of size 24X28mm made out of 0.33mm (Minimum) sheet spaced 1200mm along spaced between main 'T' at 600mm centre to centre to form a grid of 1200X600mm and secondary cross 'T' of length 600mm and size 24x28mm made of 0.30 mm thick (Minimum) sheet to be interlocked at middle of the 1200X600mm panel to form grid of size 600X600mm resting on periphery walls/partitions on a perimeter wall angle pre-coated steel of size (24X24X3000mm made of 0.40mm thick (minimum) sheet with the help of rawl plugs at 450mm centre to centre with 25mm long dry wall screws @ 230mm interval and laying 15mm thick Densified edges light weight calcium silicate ceiling tiles of approved texture (Fine Fissured/Cosmos/Spintone) in the grid including, cutting /making opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc., wherever required, Main 'T' runners to be suspended from ceiling using G.I. slotted cleats of size 25X35X1.6mm fixed to ceiling with 12.5mm dia and 50mm long dash fasteners, 4mm G.I. adjustable rods with galvanized steel level clips of size 85X30X0.8mm, spaced at 1200mm centre to centre long main 'T' bottom exposed with 24mm of all T-sections shall be pre-painted with polyester baked paint, for all heights, as per specifications, drawings and as directed by engineer-in-charge.

Material :

Light Weight Calcium Silicate sheet

G I Framing –

Workmanship:

The work should be done with precision to the satisfaction of the engineer-in-charge. No damage should be done to existing furniture / wall surface. The work should be strictly carried out as per the drawing given by the Architect/consultant.

Mode of Measurement & Payment:

A. Item is to be measured for its length and width .

B. The rate shall include cost of all materials, all labors, transportation, Installation/fixing as per instructions of engineer-in charge. No Extra payment will be Given for any reasons.

C. The item will be measured actually and paid on square meter for any length and width / breadth.

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31

CEMENT SHEET CEILING The works include supply installation and fixing of Cement Sheet Ceiling which Incorporates a fully concealed GI fixing grid. Complete with all necessary hardware, fittings, Luster paint , and accessories. The job also includes providing access panels, cutting of spot lights, , etc. . The

steel stud frame consisting of main furring GI channel at every 600 mm and cross channel at every 600 mm. Both main and cross channels are attached through jaw clip. Screws will be corrosion proof either Chromised or Galvanized. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it.

Material :

12 mm thk Cement Sheet :

Absorb wool wherever it suggested.

GI Framing – grid of ultra channel 18 gauge , screws, soffit clamp, wall angle, wall plug

Workmanship:

The work should be done with precision to the satisfaction of the engineer-in-charge. No damage should be done to existing furniture / wall surface. The work should be strictly carried out as per the drawing given by the Architect/consultant.

Mode of Measurement & Payment:

A. Item is to be measured for its length and width.

B. The rate shall include cost of all materials, all labors, transportation, Installation/fixing as per instructions of engineer-in charge. No Extra payment will be Given for any reasons.

C. The item will be measured actually and paid on square meter for any length and Width / breadth.

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32 ITALIAN TOP VINEER FINISH RECEPTION TABLE Providing Labour & Material for making half circular (where running length is 5850 mm)reception table having 12mm Thk. Italian Top based on 18 mm thk MR grade plywood with all necessary proper solution , finished by rubbing and buffing (Italian top covers 100 mm bottom of ply at front of table & 50 mm bottom of ply of inner side including edges of reception table, having three nos of base boxes of size 450x525x500 mm with providing drawers with telescopic channels & shutters made up of 18mm thk MR grade Ply, Having 3" high Footrest between each box support & bottom of the table covered by 25 mm x 25 mm thk bidding patti,centre suggested part of reception have 150 mm high & bottom patta with 75 mm high patta of 5 mm thk smoke mirror pasting on ply with proper silicon. All exposed surfaces covered by 4 mm thk vineer finished with suggested PU polish. internal area of table is covered with 1 mm thk laminate of suggested shed . all complete with two nos of key board tray, drawers on telescopic channels, locks, stoppers, SS Screws,MS nails, Auto hinges as per shown in detail drawings & as per instructions of architect / incharge engineer. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it. Please see the Attached Make List for Approved Makes.

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33 REST ROOM WALL HUNG UNIT: Providing & fixing wall hung tv unit as per given design & sizes having single shelf as shown in detail drawing made by 18 mm thick mr grade ply . All exposed and internal surfaces covered with 4 mm thick vineer finished with pu mat polish. All complete with proper hardware like ,S.S. Screws, MS Nails etc. Providing all necessary cutouts for electrical fittings.

All Details as per shown in detail drawings & as per instructions of architect/consultant / in charge engineer. Complete as per detail drawings and instructions given by architect/consultant/ Engineer In charge. Contractor has to provided all necessary cut outs for Electrical works & no extra payment shall be made for it.

Materials :

- ☐ 18 mm MR grade ply of IS 303.
- ☐ Bidding Patti:- Burma border.
- ☐ 1 mm laminates for all exposed & internal surfaces as finished material.
- ☐ 450 mm SS 304 struds.
- ☐ Hardware: 5m, ozone, inox , ketch etc.
- ☐ Adhesive – fevicol ,Bluecoat

Workmanship:-

- ☐ Unit top & bottom shall be made from sandwich 18 mm MR grade ply covered with 1 mm thick laminate at exposed and internal surfaces.
- ☐ Between two shelves having support of 450 mm SS -304 studs.
- ☐ All edges (other two sides) are covered by Burma border finished with laminate.
- ☐ The rate shall be consolidated for all above items. The rate shall include cost of all Materials, fixtures, joineries etc & labor to complete the work satisfactorily as per instructions Of engineer in charge.

MODE OF MEASUREMENT:-

No extra payment will be given for any of the reasons. The rate shall be for a unit of per sq mt which is including length x width of top shelf.

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34

ITALIAN WALL CLADDING Providing & cladding machinecut, mirror polished,18 mm thick(+/-1mm) Italian Marble stone(oliver beige,crema beige and similar type as approved by architect)selected & sorted free from cracks, fissures & flakes,wall plain Cladding as per drawing laid in any pattern and laid on over a bed of 12 mm thick cement sheet base on aluminium framing with use of modified adhesive like cheracol (conforming to ISO13007)with pigment to match/contrast the shade of Stone making sure that the bond between the marble and the surface of the sub-base is firm and the laid sample to be approved for workmanship and quality acceptance. Cost to include for laying with any gap which will be filled with Epoxy stain free (SP-100) grout / c necessary pigmentation to match with the colour of stone, cutting, metering, curing, cleaning with complete grinding and Mirror Polishing with diamond pad etc .including all other necessary related works as per specifications and schedule and reference drawing or directed by Engineer In-charge. Rate has to include the change in go stones which gets damaged due to site-working, until the site- handover. Rate shall also include preparation of base surface and covering of finishing material with the help of polythene/jute where ever required and removing the same before handing over, work at all levels as directed by engineer-in-charge

Material:

- Adhesive-Cheracol Superflex
- Hilti screws

- joint fillers
- 18 mm Italian Stone
- 12 mm cement sheet
- Epoxy
- All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by Architect/EOI.

Workmanship:

- Providing & fixing Italian stone cladding having suggested surfaces as peasting by using chemical of cheracol in proper manner as suggested by architect incharge on base on cement sheet. (with using kerakol superflex adhesive) Complete with all hardwares like s nails, ss screws, adhesives etc. shown in detail drawings. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it. Amount shall be paid only for the Paneling between the False Ceiling & Flooring. Contractor has to provide suggested openings in paneling,
- SURFACE PREPARATION
Once We get structurally sound wall surface in place, you can begin the surface preparation. Apply two layers of water resistant barriers from the bottom up smoothly, ensuring upper layer laps lower at least four inches. The usual water resistant barriers are usually number 15 felt or grade d building paper. . The surface should feel rough when you rub your hand upwards, allowing the chemical to catch when applying the chemical scratch coat.
- INSTALLATION/APPLICATION The quantity of mortar required will be one bag per square metre of flat stone. Multiply the linear meterage of corners by 0.3 to give you additional bags required for corner stones. Install each panel in proper line.
- FINISHING THE PROCESS AND CLEANING : Clean the wall with detergent and water using a bristle brush, then clean with fresh water.

Mode Of Measurements:

- The work done shall be measured in square meter for area of work done. The rate shall be for a unit of one square meter.

35

• **SOFT BOARD PANELING:** Providing and fixing on wall/partition 12mm thick approved quality soft board with cotton cloth/fabric of approved make and shade on 6 mm thick mr grade ply with Teak wood beading all around including semi glossy PU polish, as approved sample and as directed by Architect/consultant. The work shall be measured & paid in Sqm. for all floors, all level and at all heights including all costs (basic rate of cotton cloth /fabric for 54" wide shall be Rs. 400/ meter The rate shall

be inclusive of polish to all the exposed wooden members. Only the clear elevation area of the cloth/fabric shall be measured and paid. sample mock of 5 Sqm minimum of the frame work and partition) shall be approved from ENGINEER IN CHARGE and Architect/consultant

Material;

12 mm thick soft board shall be used as per approved make and sample by CANARA BANK/ CONSULTANT/ BANK AUTHORITY.

6 mm thick IS 303 MR grade ply shall be used as per approved make and sample by CANARA BANK/ CONSULTANT /BANK AUTHORITY.

Teacwood beading shall be used as per approved make and sample by CANARA BANK/CONSULTANT/ BANK AUTHORITY.

Adhesive shall be used as per approved make and sample CANARA BANK/ CONSULTANT /BANK AUTHORITY.

All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by CANARA BANK / CONSULTANT/ BANK AUTHORITY

Workmanship;

Installation; 12mm thick soft board of 400/mt shall be used as per selection.

Frame; Teac Wood beading all around shall be used as per drawing.

Covering; Fabric Only

Exposed wooden surface; frame shall be finished with water based spray polish.

Work should be in complete level without any deviation. There shall be no tolerance in regard to wall finish.

Measurements;

Only the clear elevation area shall be measured and paid.

The work done shall be measured in square meter for area of work done. the rate shall be for a unit of one square meter.

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36

LAMINATE

COLUMN

PANELING:

Providing & fixing column paneling having suggested aluminum grid of 37mm x 37mm or 50mmx 25 mm framing (whichever requires.)Having 16 guage) of size 600 mm x600 mm by aluminium sections of given size. Grid frame is covered with 12mm thick mr grade plywood. To create suggested groove & neices. All grooves are finished with laminate. All exposed surfaces covered with 1 mm thick laminates of approved shade as instructed by Architect/consultant/Engineer In charge. Complete with all hardwares like s nails, ss screws, adhesives etc. shown in detail drawings. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it. Amount shall be paid only for the Paneling between the False Ceiling & Flooring.(12 mm thick ply shall be used IS 710 as per approved make and sample by CANARA BANK /CONSULTANT/BANK AUTHORITY.

Laminates shall be used as per approved make list and confirming to relevant IS codes and approved by CANARA BANK /CONSULTANT/BANK AUTHORITY.

Hardware shall used of as per approved by CANARA BANK /CONSULTANT/BANK AUTHORITY.

All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by CANARA BANK /CONSULTANT/BANK AUTHORITY.

Frame work shall be used as per approved make list and confirming to relevant IS codes and approvals.

Use of Absorb wool sheet where it suggested.

Workmanship:

Frame shall be made by aluminum sections as per sample approved by CANARA BANK /CONSULTANT/BANK AUTHORITY.

Laminate shall be used for finishes of exposed/internal surfaces as per sample approved by CANARA BANK /CONSULTANT/BANK AUTHORITY.

All Frames should be properly leveled without any sagging and with smooth finishing and closing. There should be no variation or deviation of any kinds.

The whole work is to be completed as per design ; sample material & any other requirement shall be as per instruction of CANARA BANK /CONSULTANT/BANK AUTHORITY.

Installation: Fixing False column as per required shape and size made from 710 marine grade ply with necessary wooden frame work required all necessary fittings & hardware complete.

Measurements:

Only laminate finish elevation surface area measured and paid.

The whole work done shall be measured in square meter for area of work done. The rate shall be for a unit of one Square Meter.

Clear opening area shall be measured & paid in Square meter.

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37

• VINEER COLUMN PANELING:

Providing & Fixing column paneling having aluminum grid framing (50x25 or 37x37mm having 16 gauge) of size 600 mm x 600 mm by aluminum sections of said size. Grid frame is covered with 6 mm thick MR grade plywood and top surface covering by 12 mm thick MR grade plywood paneling to create suggested pieces & suggested grooves. Use of SS patties of suggested sizes on column as per given pattern. All grooves are finished with 4 mm thick veneer finish with PU mat polish. All exposed surfaces covered with 4 mm thick veneer of approved shade complete with PU polish as instructed by Architect/consultant/Engineer In charge. Complete with all hardwares like s nails, ss screws, adhesives etc. shown in detail drawings. Contractor has to provide all necessary cut outs for Electrical works & no extra payment shall be made for it. Amount shall be paid only for the Partition between the False Ceiling & Flooring.

Material:

12 mm + 6 mm thick MR grade ply IS 303 shall be used as per approved make and sample by BANK /CONSULTANT/BANK AUTHORITY.

Veneer shall be used as per approved make list and confirming to relevant IS codes and approved by BANK /CONSULTANT/BANK AUTHORITY.

Hardware shall be used as per approved by BANK /CONSULTANT/BANK AUTHORITY.

All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by BANK /CONSULTANT/BANK AUTHORITY.

Frame work shall be used as per approved make list and confirming to relevant IS codes and approvals.

Use of Absorb wool sheet where ever it suggested.

Workmanship:

- Frame shall be made by aluminum sections as per sample approved by BANK /CONSULTANT/BANK AUTHORITY.
 - Veneer shall be used for finishes of exposed/internal surfaces as per sample approved by BANK /CONSULTANT/BANK AUTHORITY.
 - All Frames should be properly leveled without any sagging and with smooth finishing and closing. There should be no variation or deviation of any kinds.
 - The whole work is to be completed as per design; sample material & any other requirement shall be as per instruction of BANK /CONSULTANT/BANK AUTHORITY.
- Installation : Fixing paneling as per required shape and size made from 710 marine grade ply with necessary frame work required all necessary fittings & hardware complete.

Measurements:

- Only Veneer finish elevation surface area measured and paid.
 - The whole work done shall be measured in square meter for area of work done. The rate shall be for a unit of one Square Meter.
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38

WOODBLENDS:-

Providing and fixing wood blinds as per approved make spring drive system with steel ball chain/one touch with speed control action wood blind with palmet , end brackets with head rail, components, bottom bar. Solar protection Fabric of Color with manual operation and warranty etc as per manufacturer's specifications. material to be as per approved sample. All the work complete as per the detailed drawing and instruction of Architect/consultant/ENGINEER IN CHARGE.(Contractor shall provide treated wooden palmet complete in all respects on which all blinds shall be fixed and should also take load of all the manual blinds).

1. Material :

- ☐ Wood blinds shall be used as per approved make and sample by BANK /CONSULTANT/BANK AUTHORITY.
- ☐ All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by BANK /CONSULTANT/BANK AUTHORITY.
- ☐ Rate including palmet, brackets, fabric along with all hardwares.

2. Workmanship:

- ☐ Fixing of blinds as per approved sample by BANK /CONSULTANT/BANK AUTHORITY.
- ☐ Work is to be completed as per design; sample material & any other requirement shall be as per instruction of BANK /CONSULTANT/BANK AUTHORITY.

3. Measurements:

- ☐ The size of the blind will be measured from end to end bracket (left to right bracket) height will be measured from top of the palmet to sill bottom LVL and clear opening size only there will be not extra payment towered overlapping.
- ☐ Area shall be measured in Square meter.

39

Frosted

sparkling

glass

film:-

Frosted sparkling glass film: Providing and fixing frosted glass film of approved make Translucent, cast PVC, self-adhesive vinyl, special CRYSTAL-effect film to reproduce Sand-blasting effect on glass with customised designs. MCS warranty of 3 (if exposed to direct sunlight) to 10yrs (indoors) must be endorsed by manufacturer. Rate shall be inclusive plotter cutting design as per Architect/consultant/BANK suggestion. .work complete including all type of tools, tackles, scaffolding etc complete as per suggestion of Architect/consultant/BANK. If in case any application finishing will not as per satisfaction contractor shall remove all film at their cost. Contractor shall do a sample mock of 5 Sqm minimum of glass film) ,shall be approved from Architect/consultant/BANK.(static cling window film)

1. Material:

☐ Frosted sparkling glass film be used as per approved make and sample by BANK/CONSULTANT/BANK AUTHORITY.

☐ All type of material shall be used as per approved make list and confirming to relevant IS Codes and approved by BANK/CONSULTANT/BANK AUTHORITY.

2. Workmanship:

☐ Fixing of approved Translucent, cast PVC, Self- adhesive vinly, special CRYSTAL – effect film to reproduced Sand –blasting effect on glass with customized designs, patterns etc complete

☐ Work is to be completed as per design; sample material & any other requirement shall be as per instruction of BANK/CONSULTANT/BANK AUTHORITY.

3. Measurements:

☐ The work done shall be measured in square meter for area of work done. The rate shall be for a unit of one Square meter.

40

PREFUNCTIONAL

SERVICE

COUNTERTS:-

Providing & fixing prefunctional service counter under granite platform having 12 mm +9 mm thick MR grade plywood as shutters both side 1 mm laminate finish including hinges, magnet, table chains , complete with bidding patties and all hardwares. All exposed and internal surfaces finished with 1 mm thick laminate of approved shade . All joints are covered with Ghana teac bidding patti finished with laminate. complete including require nos of drawer and shutter all type of fittings , fixtures, hardware approved make etc complete .SS 304 grade conceal handle shall be provide as per approved selection &detailed drawing and instruction of Architect/consultant/ BANK AUTHORITY Contractor has to provided all necessary cut outs (race ways.) for Electrical works & no extra payment shall be made for it.

Materials:

- 12 mm + 9 mm thick IS 303 ply shall be used for shutters as per approved make and sample by BANK/CONSULTANT/BANK AUTHORITY.
- Laminate shall be used as per approved make and sample by BANK/CONSULTANT/BANK AUTHORITY.
- Hardware's shall be used as per approved make list and confirming to relevant

IS codes and approved by BANK/CONSULTANT/BANK AUTHORITY.

- All type of material shall be used as per approved make list and confirming to relevant IS codes and approved by BANK/CONSULTANT/BANK AUTHORITY.

Workmanship:

- Understructure shall be made from 12mm +9 mm thick IS 303 ply with laminate finish at exposed and internal surfaces.
- Work includes required nos of drawer and shutter type with all type fitting, fixtures, hardware as per approved sample by BANK/CONSULTANT/BANK AUTHORITY.
- The whole work is to be completed as per design; sample material & any other requirement shall be as per instruction of BANK/CONSULTANT/BANK AUTHORITY.

Measurements:

- The work done shall be measured in running meter for area of work done. The rate shall be for a unit of one Square Meter.

41

GLASS TOP ON TABLE FINISH TOP:-

Providing & fixing 12 mm thick clear annealed glass on top on laminate finish table rest on vaccumes as requires . Glass have bewel edges. Fitting as per details given in drawing and as per instructions of Architect/consultant/Engineer In charge. Contractor has to provided all necessary cut outs (race ways.) for Electrical works & no extra payment shall be made for it.

Material :

- 12 mm clear annealed glass
- Vaccumes

Workmanship:

- The glass top rest on finish table surface with providing vacuum. . The work should be strictly

Carried out as per the drawing given by the Architect/consultant.

Mode of Measurement & Payment:

- Item is to be measured for its length and width.
- The rate shall include cost of all materials, all labors, transportation, Installation/fixing as per instructions of engineer-in charge. No Extra payment will be Given for any reasons.

- The item will be measured actually and paid on square meter for any length and Width.

42

SS 304 MAT FINISH DIRECTION SIGN Providing & Fixing signage on 1 mm SS 304 mat finish 0.8mm- 1 mm with 5 mm black acrylic direct pasting with silicon tape on any surface expect un finished wall (18"x4"=72 sq inch for each) (as per the approved size & shade) including fixing by using necessary

hardwares (Fixing/bonding on wall /ply wherever it requires with its proper silicon pasting /studs ,screws,nails etc). completely with printing in suggested colors for each cabin/Utilities area above each door/wood surfaces/wall surfaces Before making the letters the font & size will be got approved from authority .

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43 10MM+3MM ACRYLIC AS PER LOGO COLOR:- Fixing with bolt or silicon tape as per the background and suggested logo in glossy finish size .cost including all laser cutting.

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44 5 MM ACRYLIC BOX HANGING BOX:- provide all with vinyl and hanging SS wire studs/ss chain/ms chain approx size 24"x6".

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45 ALUMINIUM EMBOSS LETTERS:- Providing and fixing Aluminium emboss letter aluminium channel letters, front side acrylic,side wall pu color, inside high glow led modules,power supply for led, all installation as suggested by architect/incharge. (approx size 12'x4')

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46 AC TRAP DOOR Providing & fixing cassette AC trap door boxes to fix in false ceiling.with using 18 mm mr grade ply .box size is 600 mm x 600mm x 1200 mm (= - 10% variation in size)as per approved samples of ceiling panels. panels comprise of a powder- coated beaded steel frame with door. Each panel features a push –latch closing mechanism with door retaining safety cable & hook. Complete with hangers and all necessary hardware. Exposed surfaces finished with 1 mm thick laminate/paint of approved shade. Complete with all necessary hardware & adhesives as per details given in drawing and as per instructions of Architect/consultant/Engineer In charge. Contractor has to provided all necessary cut outs (race ways.) for Electrical works & no extra payment shall be made for it.

Material;

All type of material shall be used as per approved make list and confirming to IS Codes and approved by CANARA BANK / CONSULTANT/BANK AUTHORITY
Trap door shall be used as per approved make list and approved by CANARA BANK/ CONSULTANT / BANK AUTHORITY

Workmanship;

Work complete as per above specification.
Work complete including all type of tools, tackles, scaffolding etc complete at any level and height
The whole work is to be completed as per design; sample material & any other Requirement shall be as per instruction of CANARA BANK/ CONSULTANT /BANK AUTHORITY.

Mode of Measurement;

The work done shall be measured in any false ceiling per Number of unit , no extra payment will be considered for this item.

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No.	Item	Name of Make / Specification	Selection Suggested by
	<u>Civil Items Makes</u>		
1	Cement	Ambuja, Ultratach, ACC, JK Cement (Grade 53)	Architect/Authority
2	White Cement	Birla White, J.K.	Architect/Authority
3	Vitrified flooring	Asian, Somany, Kajaria,	Architect/Authority
4	Paint	Asian, Nerolac, Dulux, berger or equivalent	Architect/Authority

LIST OF APPROVED MAKE (FURNISHING):

NO	ITEM	APPROVED MAKE
1	ALUMINIUM SECTION	JINDAL, HINDALCO, BALCO
2	ADHESIVE	FEVICOL BLUE COAT
3	CARPET FLOORING	DIVINE, HERITAG, UNITEX, ECOSOFT,
4	GLASSDOOR HARDWARE & FITTINGS	OZONE, DORMA, HETTICH, ENOX, EBCO
5	GLASS	ASHAI, SAINTGOBAIN
6	FLUSH DOOR	GREENPLY-DOOR, CENTURY-DOOR, ARCHIDPLY-DOOR,
7	PLY	CENTUARY-SAINEEK, ANCHOR ,GREEN PLY
8	LAMINATE (1MM)	AICA LAMINATES, BLOOM MICA, CENTURY MICA, TIMEX MICA, GREEN LAMINATES
9	Melamine polish	Asian paint / ICI/ NEROLAC/
10	polish	Light house, Sheenlac
11	VINEER	CENTURY,TIMEX,GREEN
12	CEMENT SHEET	EVEREST, SHERA,ECO PRO
13	ALLUMINIUM HEAVY DUTY SECTION	HINDALCO, JINDAL, BALCO
14	GYPSUM BOARD FALSE CEILING	SAINT GOBAIN-GYPROC, USG BORAL
15	GRID CEILING-LIGHT WEIGHT CALCIUM SILICATE BOARD	AEROLITE, RAMCO, ARMSTRONG,SAINT GOBIN
16	PAINT/PU	ASIAN, BERGER, ICI, NEROLAC
17	ANCHOR FASTNER AND BOLTS	HILTI, FISCHER
18	FABRIC	D DÉCOR, RESPONSE, VEROSOLO, OPERA,
19	WOOD BLINDS	VISTA, HUNTERDUGLUS, FARRARI,
20	GLASS FILM	3M, LG,
21	HARDWARE & FITTING FOR FURNITURE	OZONE, KITCH, DORMA,ENOX, HETTICH, EBCO,
22	GLASS WOOL/SYNTHWOOL	ABSORB WOOL, ROCKWOOL,
23	PROFILE HANDLES	ENOX, HETTICH, EBCO, DORMA
24	DOOR HARDWARE & ACCESSORIES	OZONE, KITCH, DORMA, ENOX, HETTICH,
25	ACRYLIC POLYMER PLUS ALUMINA TRIHYDRATE (CORIAN)	SAMSUNG LOTTE, DU PONT, MARINO,LG

Notes:

- A) The contractor shall produce samples of the material for approval of the EIC. The material of the makes out of the above approved by the EIC shall be used on the work
- B) In the respect of the materials for which approved makes are not specified above, these will be of makes top be decided by the EIC.

Note:

Regarding selecting the make against each item among the preferred makes as specified above, decision of Employer shall be final. If the makes as mentioned above are not available at the time of execution, the contractor shall get the make approved from the engineer-in-charge and employer before using the same in the work.