

**FOR DEVELOPMENT OF INTEGRATED GROUP
HOUSING FACILITY ON PPP/TURN KEY BASIS**

ISSUED BY

AMDAVAD MUNICIPAL CORPORATION

Volume III: Specifications

Address:
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Volume - III
SPECIFICATIONS

Minimum Technical Specifications (Conventional Technology):

1. RCC framed structure

- a. The detailed dimensions & mix of RCC to be adopted shall be as per approved structural design.
- b. Reinforcement of Fe415 TMT steel – IS 1786:1985 (reaffirmed 2004).

2. Brick masonry wall

- a. 230 mm thick brick masonry walls in periphery & 115 mm thick internal walls constructed in cement mortar of proportion 1:4.

3. Internal finishes:

- a. For internal walls, single coat 15 mm thick lime finish plaster in cement mortar proportion of 1:4, with whitewash.
- b. For internal ceilings, single coat of minimum 6 mm thick lime finish plaster in cement mortar proportion of 1:4, with whitewash.
- c. Finishing with a floating coat of cement slurry mixed with admixture of lime or neeru in required proportion in cement mortar 1:3 (1 cement : 3 sand) including cost of scaffolding, curing etc. comp as directed by engr. in charge.

4. External Finishes:

- a. External double coat sand faced plaster
- b. Cement mortar proportion of 1:4 in the 15 mm thick for the first coat and 1:2 in 6 mm thick for the second coat
- c. Exterior colour with cement paint

5. Internal Flooring:

- a. 12"x12" ceramic flooring in all rooms, toilets, wash and common passages laid on bed of 25 to 50mm thick cement mortar 1:6 (1cement : 6coarse sand) finished with flush pointing in white cement.
- b. Glazed tile dado in toilets and wash up to 4 ft.

6. Staircase:

- a. Polished kota stone without skirting
- b. Finish plaster in riser
- c. Railing up to 1.15 m height – MS railing or parapet wall

7. Doors & windows:

- a. 35mm thick finished flush doors at all floor level including RCC frame including medium quality C.P. Finished fixture and fastening including one coat of primer and two coat of oil/ enamel paint as directed.
- b. Anodized aluminum fittings e.g. Tower bolts, handles, door stoppers, aldrops etc. will be provided.
- c. Anodized aluminum sliding bolts will be provided only at the entrance door with nickel plated MS pull lock bolts.
- d. Toilet doors are with PVC frames and shutters - sintex or equivalent
- e. Windows frame and shutter made of MS section frame with glazing and safety bar (4 mm thick).
- f. Ventilators made of MS section frame with glass louvers.

8. Kitchen:

- a. Kitchen platform in Kota stone with SS sink - with glazed tiles, dado in 600 mm height.

9. Waterproofing:

- a. Brick bat concrete as per specifications with china mosaic for waterproofing with min 10 years guarantee.

10. Plumbing:

- a. Water Closet squatting pan (Orissa type W.C. pan) at all floor levels size 580 mm x 440 mm.
- b. Wash, bath and kitchen with CP fitting tap.
- c. U-PVC pipe (SWR) confirming to IS no. 13592 (Type "B") of Prince/ Supreme/ Jain make for soil and waste discharge system at all floor levels including all fixtures like bends, tees, shoe etc. jointed with resin of approved brand & manufacture.
- d. Wrapping jute string (Kathi) around the vertical PVC Pipes for concealing with cement plaster 20mm avg. thickness (CM 1 cement : 3 coarse sand) finishing.
- e. P.V.C. pipe (SCH-80) of prince/suprme/jain/astrol make for water supply line at all floor level incl. fixture like bends, tees, shoe etc. jointed with resin of approved brand & manufacture.

- f. C.P brass screws down bib tap at all floor level polished bright.
- g. Gun metal check or non-return full way wheel valve at all floor level.
- h. U-PVC pipes of confirming to IS 13592 (Type A) of prince/supreme/jain make for rain water at all floor levels, including all fixtures like bends, tees, shoe etc. joined with resin of approved brand and manufacture.
- i. P.V.C. tank - Rotationally molded HDPE storage tank ISI mark of Sintex or equivalent company incl. locking arrangement, outlet, inlet, overflow and wash out pipe arrangement

11. Electrical:

- a. Point wiring for Light, Fan, Bell and Primary point with 2-1.5 sq. mm & earth wire of 1.5 sq. mm. (green) both are of ISI marked 1.1 kv grade FRLS PVC insulated multi strand copper wires, in following type of pipe to be erected concealed in / flushed on wall / ceiling, completed with 6A Tissino Type ISI marked flush type switch / bell push and accessories erected on Metal /PVC Box covered with 3 mm thick PC (Polycarbonate) / Acrylic sheet with necessary Lamp holder / ceiling rose /H.D. Connector as directed.
- b. Point wiring for Looped PLUG with tissino type single pole ISI marked Switch and Socket erected with necessary connections erected on wooden / Metal / PVC Box covered with 3 mm thick PC (Polycarbonate) / Acrylic sheet for open / concealed wiring for following size.
- c. One fan point two light point and one plug point in each room.
- d. Supplying, fixing & Erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected concealed in / flushed on wall/ ceiling, with 1.5 sq.mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size- with medium class rigid PVC pipe and accessories 2 wire 1.5 sq.mm.
- e. Providing and Fixing approved make Double Pole Plastic Switch and fuse 250V., 30A confirming to IS erected on Polished wooden block as directed

- f. Approved make (Crompton or Kirloskar make) self-priming domestic inbuilt Mono block Submersible Water Pump with 1 HP motor, suitable for operation on 230 volts, 50 cys, AC supply with metallic flange & M.S, impeller delivery & suction of discharge 150 LPM at 20 mt head suitable for 25mm/40mm dia delivery with panel board and motor starter etc. complete as directed.

12. Power Supply & Street Lighting:

- a. Electrical Substations.
- b. HT & LT cables and conductors as per IS codes.
- c. Distribution network, Poles, Feeder Pillar Boxes, Switchgears, circuit breakers, Service Lines, service connections, Meters, etc. as per IS codes.
- d. Street lighting network comprising poles, fixtures, lamps, switches, fuses, etc. as per IS codes.

13. Boundary Wall with Gate:

- a. 1.5m high boundary wall constructed with BB Masonry or CC block with required no of MS gates of approved design.

14. Internal Roads, Parking & Paths:

- a. **Sub Grade:** Sub grade to be prepared by excavating earth to an average depth of 22.5 cm. dressing to complete and consolidating with road roller 8-10 tonne as per specification.
- b. **Road:** Concrete road as per IRC Standard
- c. **Surfacing:** Concrete surface, For external service like water supply or cabling. Concrete paver block may be provided.
- d. **Kerb Stone:** CC 1:2:4 Precast Kerb stone 0.3m long and 0.3m x 0.15 m section complete as per CPWD specifications a per direction of Engineer-in-charge.
- e. **Path:** 75mm thick CC paver block over 75mm thick CC 1:5:10 bed.

15. Others:

- a. Rain water harvesting is mandatory is each project.

GUARANTEE BOND TO BE EXECUTED BY CONTRACTOR FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS.

The Agreement made thisday of.....Two thousand andbetween.....son of(hereinafter called the Guarantor of the one part) and the ULB/DA, WHEREAS THIS Agreement is supplementary to a Contract (Hereinafter called the Contract) dated..... And made between the GUARANTOR OF THE ONE part and the ULB/DA of the other part, whereby the Contractor, inter-alia, undertook to render the buildings and structures in the said Contract recited completely water and leak- proof.

AND WHEREAS THE GUARANTOR agreed to give a Guarantee to the effect that the said structures will remain water and leak- proof for Ten years to be reckoned from the date after the Maintenance Period prescribed in the Contract.

NOW THE GUARANTOR hereby guarantees that water proofing treatment given by him will render the structures completely leak- proof and the minimum life of such water proofing treatment shall be Ten years to be reckoned from the date after the maintenance period prescribed in the Contract.

Provided that the Guarantor will not be responsible for leakage caused by earthquake or structural defects or misuse of roof or alteration and for such purpose:

Misuse of roof shall mean any operation which will damage water proofing treatment, like chopping of firewood and things of the same nature, which might cause damage to the roof;

Alteration shall mean construction of an additional storey or a part of the roof or construction adjoining to existing roof whereby water proofing treatment is removed in parts;

The decision of the Engineer-in-charge with regard to cause of leakage shall be final. During this period of guarantee, the Guarantor shall make good all defects and in case ~~of any defects being found, render the building water proof to the satisfaction of the~~

Engineer-in-Charge at his cost and shall commence the work for such rectification within seven days from the date of issue of the notice from Engineer-in-Charge calling upon him to rectify the defects failing which the work shall be got done by the Department by some other Contractor at the GUARANTOR'S risk and cost. The decision of the Engineer-in-Charge as to the cost, payable by the Guarantor shall be final and binding.

That if, Guarantor fails to execute the water proofing or commits breach there under then the Guarantor will indemnify the Principal and his successors against all loss, damage, cost, expense or otherwise which may be incurred by his by reason of any default on the part of the GUARANTOR in performance and observance of this Supplementary Agreement. As to the amount of loss and/or damage and/or cost incurred by the ULB/DA, the decision of the Engineer-in-Charge will be final and binding on the parties.

IN WITNESS WHEREOF these presents have been executed by the Obligor _____ and by _____ and for an on behalf of the ULB/DA, on the day, month and year first above written. SIGNED, SEALED AND DELIVERED BY OBLIGATOR IN THE PRESENCE OF -

C) _____

D) _____

SIGNED FOR AN ON BEHALF OF ULB/DA BY _____ in the presence of -

1. _____

2. _____

Site of work shall have a Laboratory equipped with the following equipments:

- Balances:
 - 7 kg. to 10 Kg. capacity, semi-self-indicating type, accurate to 10gm.
 - 500 gm. Capacity, semi-self-indicating type, accurate to 10gm.
 - Pan Balance Type -5 Kg., accurate to 10gm.
- Ovens:- Electrically operated, thermostatically controlled upto 110C - sensitivity 1C
- Sieves: as per IS: 460
 - IS Sieve - 450mm internal dia. of sizes - 100mm, 80mm, 63mm, 50mm, 40mm, 25mm, 20mm, 10mm, 6.3mm, 4.75mm completed with lid and pan.
 - IS Sieves - 200mm internal dia. (brass frame) consisting of 2.36mm, 1.18mm, 504 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns, with lid and pan.
- Sieve shaker capable of 200mm and 300mm dia. Sieves, manual operation with timing switch assembly.
- Equipment for slump test - slump cone, steel plate, tamping rod, steel scale, scoop.
- Dial gauges - 25mm travel - 0.01mm / division least count - 2 Nos.
- 100 tonnes compression testing machine, electrical-cum-manually operated.
- Graduated measuring cylinders, 200ml capacity - 3 Nos. broken one, if any to be replaced by the contractor at his own cost.
- Enamel Trays (For efflorescence test) of bricks:-
 - 300mm x 250mm x 40mm - 2Nos.
 - Circular plate of 250mm dia. -4 Nos.
- 15cm moulds for concrete cubes - adequate numbers.
- Other instruments like steel tapes - 3m & 30m, Vernier Caliper's, a good quality plumb bob, spirit level minimum 30cm long with 3 bubbles for horizontal,

vertical, wire gauge (circular type) disc, foot rule, long nylon thread, magnifying glass, screw driver 30 cms long, ball pin hammer 100 gms, plastic bags for taking samples etc.

- Micrometer screw 25mm gauge.
- Rebound hammer for testing concrete dynamic penetrometer.
- Moisture meter for timber.
- Any other testing equipment/ machine required for testing of various other materials shall also be provided installed at the site lab with the technical staff well trained to operate such equipment/ machine.

SPECIFICATION FOR HORTICULTURE WORKS

- The work will be carried out as per CPWD specification 2009 Vol.I &II with up to date correction slips.
- The all liabilities of the labour is the responsibilities of the contractor and that of not of ULB/DA.
- 250 Nos. of trees, 1000 Nos. of shrubs, 2500 nos. of hedge plants, creeper etc. will be planted / hectare. List enclosed.
- At least 225mm good earth will be provided by the contractor for lawn area and 25mm cow dung manure.
- At least one tube well required with pump houses with irrigation system for lawn area and planters etc. the maximum distance of the hydrant of 20mm size will be 25mtr.
- Green area will be bounded by 60cm. high boundary wall from adjoining path/Road and 1 mtr. Height railing over this wall.
- The contractor shall arrange his own T&P required for development as well as maintenance.
- Tree plants will be protected by the tree guard.
- Tree/shrub/creeper/hedge plant will be approved by the Engineer-in-charge from the enclosed list.
- The quantity can be increased or decreased by 20% as per sole discretion of Engineer-in-charge.
- Trenching in ordinary soil up to a depth of 30cm. including removal and stacking of serviceable materials and then disposing of spreading an neatly leveling with an a lead of 50m and making up the trenched area to proper levels by filling with earth or earth mixed with sludge or/and manure before and after flooding trench with water.
- Supplying and stacking of good earth at site including royalty and carriage up to all leads and lifts.
- Supplying and stacking cow dung at site including royalty and carriage up to all leads and lifts.
- Fine dressing the ground to levels specified.
- Spreading of cow dung manure or/and good earth in require thickness.
- Grassing with 'doob' grass including watering and maintenance of the lawn for till the grass forms a thick lawn free from weeds and fit for moving including supplying good earth if needed. Grass to be planted in rows 5cm. apart in either direction.
- Preparation of beds for heading and shrubbery by excavating 60cm. deep and trenching the excavated based to a further depth of 30cm, refilling the excavated

earth after breaking clods and mixing with cow dung manure in the ratio of 8:1(8part of stacked volume of earth after reduction by 20%:1 part of stacked volume of cow dung manure after reduction by 8%) flooding with water, filling with earth if necessary, watering and finally dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed within lead of 50m, lift upto 1.5m complete.

- Digging holes in ordinary soil and refilling the same with the excavated earth mixed with manure of sludge in the ratio 2:1 by volume (2 part of stacked volume of earth after reduction by 20%:1 part of stacked volume of cow dung manure after reduction by 8%) flooding with water dressing including removal of rubbish and surplus earth, if any with all leads and lift (cost of manure sludge or extra good earth, if needed is to be provided without any extra cost).
 - Holes 0.90m dia and 0.90m deep.
 - Holes 60cm. dia and 60cm. deep.
- Supplying best quality grown healthy trees in pot of 90-120cm height, species as specified. All trees to be approved before planting.
- Supplying best quality, pots grown healthy climber plants with minimum 90cm Stem length of species specified, inclusive of preparation and cultivation. All plants to be approved before planting by Dir. (Hort).
- Supplying best quality pot grown healthy climber plants with minimum 60cm. tail of species specified inclusive of preparation and cultivation of shrub beds as specified. All plants to be approved before planting by Dir. (Hort).
- Supplying and applying chemical emulsion of approved quality in sealed container for terminators 50ml. per sq. m. Including delivery as specified.
- Providing and fixing of M.S. circular tree guard 40cm. internal dia. With over all height of 1.82m. Frames at 3 nos. of vertical angle iron size 25x25x3mm with 75mm slatted bottom ends, welded full in length at meeting point with 3 nos. MS flat rings made of 25mmx3mm including welding and fixing steel wire mesh fabric of 1.30m high and 10 SW gauge of 5.0x7.5cm size wire mesh including painting with ready mixed paint of approved brand and manufacture and require shade over a priming coat of ready mixed zinc chromate yellow primer complete in all respects, as per drawing and direction of Engineer-in-Charge.

GENERAL SCOPE

All plant materials shall be healthy sound vigorous free from plant diseases insect, pests, or their eggs and shall have healthy, well-developed root system. All plants shall be hard under climatic conditions, similar to those in the locality of the project. Plants supplied shall conform to the names listed on both the plants and the plant list. No plant material will be accepted if branches are damaged or broken. All material must be protected from the sun and weather until planted.

All necessary stock shall be inspected and approved by the Director, landscape Architect/Engineering-in-charge/Director. All plants shall conform to the requirements specified in the plant list, except that plants larger than specified may be used, if approved but use of such plant shall not increase the contract price.

If the use of such the large plant is approved, the spread of roots or ball of earth shall be increased in proportion to the size of the plant. Plants to be delivered with legible identification labels.

Topsoil: (Good earth PH. Range from 6.5 to 7.5).

Top soil or good earth shall be a friable loam typical. It shall be free of subsoil stones earth clods, sticks roots or other objectionable extraneous matter of debris. It shall contain no toxic material. No topsoil shall be delivered in a muddy condition. The PH value of the soil in between 6.5 to 7.5.

Fertilizer:

Dry farm yard manure shall be used. Measurement shall be in stacks with 8% reduction for payment. It shall be free from extraneous material harmful bacteria insects or chemicals.

Root system:

The root system shall be conducive to successful transplantation. Where necessary the root ball shall be preserved by support with hessian or other suitable material. On soils where retention of a good ball is not possible the roots should be suitable/protected in some other way which should not cause any damages to roots.

Marking:

Each specimen of tree and shrub, or each bundle, shall be legibly labeled with the essential particulars.

Tree planting:

Trees should be supplied with adequate protection as approved. After delivery, if ~~planting is not to be carried out immediately, balled plants should be placed check to~~

check and the ball covered with sand to prevent dying out. Bare rooted plants can be heeled in, by placing the roots in a prepared trench and covering them with the earth which should be watered in, to avoid air pockets around the roots.

Planting:

No tree pits shall be dug until final tree positions have been pegged out for approval. Care shall be taken that the plant sapling when planted is not buried deeper than in the nursery, or in the pot/ polythene bag. Planting should not be carried out in water logged soil.

Plants/ trees at the original soil depth, the soil marks on the stem is an indication of this, and it should be maintained on the finished level allowing for setting on the soil after planting. All plastic and other imperishable containers should be removed before planting. Any broken or damaged roots should be cut back to sound growth.

Fertilizing:

Fertilizing shall be carried out by application of chemical (NPK) fertilizers @ 1 quintal per acre per year in the end of winter.

Organic well-rooted dry farmyard manure 0.05 cum. or 1 (one) 'tassla' Urea 25 gm Or Potassium Sulphate 25gm.

All shrubs which are supplied pot grown shall be well soaked prior to planting.

Watering in and subsequent frequent watering of summer planted container grown plants is essential.

In the absence of rain, in the Monsoon, the lawn shall be watered with sprinklers every three days, soaking the soil through to a depth of at least 20cm.

Damage failure or dying back of grass due to heat etc. Shall be the responsibility of the contractor.

The contractor is to exercise care in the use of rotary cultivator and mowing machines to reduce to a minimum, hazards of flying stones and brickbats. All rotary mowing machines are to be fitted with safety guards.

Nursery stock:

Planting should be carried out as soon as possible after the plant material has arrived at the site. Where planting is delayed, care should be taken to protect the plants from pilfering or damage from people or animals. Plants with bare roots should be heeled-in, as soon as received or otherwise protected from drying out, and others set closely together and protected from the wind and frost. If planting is to be delayed for more than a week packaged plants should be unpacked, the bundles opened up and each

group of plants separately and clearly labeled. If for any reason, the surface of the roots becomes dry, the roots should be thoroughly soaked before planting.

A "NO Claim Certificate" in the prescribed form or a list of claims not included in the final bill with full details.

The Engineer-in-charge shall examine and certify the final bill for payment after satisfying that the works have been satisfactorily completed and that all properties, works and things removed or disturbed or damaged in consequences of the works, have been properly replaced and made good, and all expenses and demands incurred or made by one company or in respect of any damage or loss by/ from or consequences of the works have been satisfied, all materials have been returned and the site cleared.

Completion Certificate:

The works shall be deemed to have been completed in all respects, on the day the Engineer-in-charge certifies that the work have been so completed in accordance with this contract, take over the completed works and issues a certificate to that effect. The defect liability period will start from the said date of completion/handling over of the work.

Penalty:

If, at any time during the tenure of the contract, it is found that any material like manure, sweet earth etc. has not been brought/less quantities utilized in the work-than specified, the cost of the difference of materials less brought/utilize will be deducted as under:

- The cost of the material will be worked out at current market rate as assessed by the Engineer-in-charge adding 30% (thirty percent) extra of above cost as departmental overhead charges.
- Once this cost deduction is made as above from the bill. in no case the same will be refunded.

Contractor's Co-ordination:

If during the course of the contractor's work, other works of the department or of the other contractors are also in progress within the same site, the contractor is to use his best efforts to work in harmony with all the others and in the best overall interest of the Project/Work.

The payment of all the horticulture works/items as mentioned above will be made of actual work done and will deemed to have been including in the quoted tendered amount.

LIST OF TREES:

- Saptparni
- Neem
- Sisam
- Jambu
- Gulmohar
- Garmalo
- Sevan
- Kadam
- Desi Asopalav
- Pipal
- Badam
- Any other (suitable to the local climate)

LIST OF SHRUB:

- Bougainvillea (Varieties)
- Hibiscus rosasinensis
- Indian oleander
- Any other (suitable to the local climate)

LIST OF CREEPERS:

- Indian Vernonia
- Any other (suitable to the local climate)

LIST OF GROUND COVER:

- Altermanthera (Red)
 - Alternanthera (Green)
 - Asparagus sprengeri
 - Lantana depreessa.
 - Any other (suitable to the local climate)
-

Maintenance for Work of Lawns

The grass in lawns shall regularly cut with garden swords and moved with lawn mowers. The thickness of the grass shall not be allowed to increase beyond 60mm. The minimum thickness of grass shall be maintained as 50mm. The thickness shall be measured from top of the soil surface. The grass shall also be kept free from all kinds of weeds.

The grass lawns shall be kept constantly rolled to give cushioning effect to the grass. Manuring of the grass lawns shall also be done regularly so as to keep the grass green. The manuring of the lawn shall be spread in the months of December and January or as directed by the Engineer-in-charge.

For maintenance of curbing for the fire control measure:

- The grass in area shall regularly be cut with garden swords and mowed with lawn mowers. The thickness of the grass shall not be allowed to increase beyond 60mm. The minimum thickness of grass shall be maintained as 50mm. Thickness shall be measured from top of the soil surface. The grass shall also kept free from all kind of the wild grass/bushes.
- The existing grass shall be scrapped, if required or as directed by the Engineer-in-charge. The scrapped materials shall be disposed of at convenient point to be decided by the Engineer-in-charge. Thereafter, the area will be suitably flooded with water and left for a fortnight for new grass to come up.
- Manuring of the grass area shall also be spread in the month of December/January or as directed by the Engineer-in-charge.

For work of Tree Plants and Trees:

- The area around the tree plants up to a minimum of two feet around, from trunk of the tree plants shall be kept free from grass and all kinds of weeds. Hoeing of this area around the trees shall be done regularly. The plants shall also be watered regularly as required and as directed by the Engineer-in-charge. Hoeing shall also be done after every watering as per the direction of Engineer-in-charge. For proper upkeeps of the tree, unwanted branches of the trees/tree plants shall be removed at regular intervals as required and as directed by the Engineer-in-charge. The tree plants/trees shall also be kept free of any diseases, insects or pest by regularly spraying insecticides as required and as directed by the Engineer-in-charge.
- The complete area where the tree plants/trees are planted in open field shall be kept free from grass and all kinds of weeds throughout the year.

For work of Hedges:

- The area around hedges plants shall be kept free from all kinds of grass and weeds. Hoeing of the area around hedge plants shall be done regularly as required and as directed by the Engineer-in-charge. The hedge plants shall be watered regularly as required and as directed by the Engineer-in-Charge.
- Pruning and trimming are the most important items for proper shaping of hedges, therefore, special care and attention shall be paid to prune and cut the hedge as required and as directed by the Engineer-in-charge.

For work of flower beds:

The contractor will maintain seasonal flower beds and rose beds including preparation of bed, supply of seeds and seeding chemicals, cow dung manure, watering, inter-culturing etc. as per direction of the Engineer-in-charge so that maximum healthy flowers/plants are available throughout the year for flowerbeds as per the requirement. In case any casualty flower due to negligence or poor maintenance by the contractor occurs the same will be replaced by a healthy and acceptable plant, as per the direction of Engineer-in-charge.

OTHER SPECIFICATIONS

The following yardstick should be followed to maintenance of horticulture works.

- Minimum one Mali for one acre on lawn.
- Minimum one Mali for 250 nos. of road side trees/plants.
- Minimum one Mali for 3000 running meters of hedges.

List of Makes:

1.	Ordinary Portland Cement	Ambuja, Ultratech, Sanghi, ACC, Kamal, Hathi, JK, Vikram, Birla Cement, Binani or equivalent
2.	White Cement	J.K. White, Birla White, Nihon White or equivalent
3.	Reinforcement Bar	TATA, SAIL, Thermax, Vizag, Sanghi, Jindal or equivalent
4.	Structural Steel	SAIL, TISCO, ISCO, Vizag or equivalent
5.	Teak Wood	Bulsar/ C.P Teak (Second Class specified)
6.	Sal Wood	Sal wood [Indian or Imported] First class
7.	Kota Stone / Marble / Granite / Jaisalmer Stone	As per approved sample
8.	Ceramic Tiles (White, Colored, Anti-Skid)	Bell Ceramics, Somani, Kajaria, Nitco, Cera, Johnson, Asian, Euro, Restiles or equivalent
9.	Vitrified Tiles (White, Colored, Anti-Skid)	Bell Ceramics, Somani, Kajaria, Nitco, Cera, Johnson, Asian, Euro, Restiles, Granamite or equivalent
10.	Chequered Cement Tiles / Decorative Tiles	Nitco, NTC, Kajaria, Vyara or equivalent
11.	White Glazed Tiles	'H & R Johnson', 'Somani Pilkington', Nitco, Cera, Bell, Kajaria, Asian, Euro or equivalent
12.	Interlocking paver blocks	Regency, Gurjari, Vyara, PEEDEE, Jagruti - Surat or as approved by EIC/consultant
13.	Plywood Products Commercial Block Board Commercial Ply Teak Ply	Greenply, Novopan, /Sitapur Plywood/ Kitply /Century, Anchor, Duro, National wood craft, Alpro, Neolux Laminated, Formica, Decoboard, Sunmica Board/Bhutan, Green Ply, Western India plywood (WIP). M.P., Mysore marine. or equivalent
14.	Laminates / Decorative laminates	Decolam, Greenlam Merinolam Formica, National laminate, Neoluxe, Decolite, Delta. or equivalent
15.	Pre laminated board	Bhutan, Novapan, Eco board, Bakelite Hylem Nepal board, Green board. or equivalent
16.	Impregnated Fibre Board	Shalitex by Shalimar Tar Product.
17.	Teak Veneer	Anchor, Kitply or equivalent
18.	Flush Doors	'Sitapur plywood', 'Mysoboard', Sudarshan W & P Industries, Bajwa, Baroda, Goyal, industrial corp, Wood craft, Jain wood industries, Alpro, Genda- Northen Doors, Greenply, Kitply, Bhutan. or equivalent
19.	Aluminium Section	Indal, Hindal, Jindal, Ajit, Banco, Gujarat Extrusion, Hindalco, Mon, Domal or equivalent
20.	All Aluminium Hardware, Fittings	Everite, Garnish, Arches, Kausal, Nulite Alif, Shalimar (Bombay) Singla, Opel, Bolt, Arhish or equivalent
21.	Aluminium Doors, Windows, Partitions Fabricators	As approved by EIC/Consultant
22.	Stainless Steel	Kitch, Dorma or equivalent

	Hardware Fittings	
23.	Glass/Float/Sheet	Saint Gobain, Modi, Hindustan Pilkington , Hindustan , Tata , Asahi, Triveni, Shree Vallabh or equivalent
24.	Door Closer / Floor Spring	Godrej / Everite, Opel, Doorking/ Hardwin, Nulite, Hyper, Ezeq, or equivalent
25.	Locks	Godrej, Harrison, Plaza, Golden, Doorset or equivalent
26.	Friction Hinges	Imax, EBCO or equivalent
27.	Rolling Shutters	'Standard', 'Swastik', 'Diana', 'Hercules', As per approved fabricator. or equivalent
28.	Polysulphide Sealant For Expansion Joints All Windows	Chokesy Chemical, Structure Proofing Co Pidilite, GESilicon, Tuffseal or equivalent
29.	Synthetic Enamel Paints / Oil bound distemper	Shalimar', ICI', 'Goodlass Nerolac', , Berger, Johnson & Nicholson, Asian Paint, Dulux or equivalent
30.	Water Proof Acrylic Paints / Weather proof Acrylic Paints	'Super Snowcem', Supercem, Asian, Nerolac, Berger, Dulux or equivalent
31.	Plastic Emulsion paint	J & N, ICI, Asian, Berger, Dulux or equivalent
32.	Dry Distemper / Oil Bound Distemper	Shalimar', ICI', 'Goodlass Nerolac', , Berger, Johnson & Nicholson, Asian Paint, Dulux or equivalent
33.	Duco Spray Paint	ICI or equivalent
34.	Polyurethane Paint	MRF or equivalent
35.	Water Proofing Compound	' CICO' , Fosroc, GE silicon Pidilite, MC-Bauchmie, Sika or equivalent
36.	Weather Sealent / Silicon sealent / Poly isobutylene sealent	Fosroc, Pidilite, MC-Bauchmie, Wecker 789, Dow corning 789 or equivalent or equivalent
37.	Hardeners	'Ironite', 'Ferrok', 'Hardonate'. or equivalent
38.	Wire Mesh	Sterling Enterprises, Trimurti, Welded Mesh. or equivalent or equivalent
39.	Anti-Termite Treatment	Thyodin by Hoechst, Lyntric by Bayer India, Durmet by Cynamid India, Nocil Pyramid or equivalent
40.	Polycarbonate Sheets	Lexan, GE or equivalent
41.	M.S. Tubes	TATA, SAIL, Vizag, Jindal or equivalent
42.	Aluminium Composite Panel	Flexibond-Umiya Flexifoam Pvt. Ltd., Aludecor Lamination Pvt. Ltd., Indobond-ACP Marketing Pvt. Ltd., Eurobond, Ultrabond, Durabuild, Ultra panel or equivalent
43.	Pre coated Sheets	Tata Blue scope, Multicolor steels, Interarch, Kirby, Tiger steel or equivalent
44.	Lift	Otis, Kones or equivalent
45.	Polyester Fibre	Recron 3S or equivalent
46.	Welding Rod	Advani, Philips, Sunarc, Eshab or equivalent
47.	Fly ash Bricks	As approved by EIC / Consultant
48.	Construction Chemicals	Fosroc, MC-Bauchmie, Sika, Pidilite or equivalent

1	Cast Iron Pipes and Fittings (LA Class)	TISCO / ISCO/ KESHO SPUN Co. - Calcutta E.L.C. Standard approved manufacturers of any other brand of fittings having ISI marking.)
2	R.C.C. Pipes	Indian Hume Pipe Co., Alcock Cement Products,Patel Spun (Surat)
3	G.I. Pipes	Jindal, Prakash, Surya, Gujarat Steel Tube, Tata, Bharat Steel Tube, Bombay, Zenith, G.S.T.Unik. or equivalent
4	G.I. Fittings	" R " Mark, Unik. or equivalent
5	Gun Metal Valves	Leader Engineering Works, Jalandhar, Crown / prince - Surat Bombay Metal Co Annapurna Metal Work, Calcutta'Sant' brand, Jalandhar, L&K, Bombay metal & Alloy man. co. Bomaby, Premier,Aatco,Atlas,BR,BS,NN. or equivalent
6	Brass fittings	Leader Engineering Works, Calcutta L & K Mathura, Crown / Prince -Surat Annapurna Metal Works, Calcutta, Perko, Kingstone Ark, Enclss Willians, Chilly, Aquva Plus,Nova,Kingstone,Driple, Ranutrol Hansa. or equivalent
7	C.P. Fittings	Ego Metal Works, Ballabgharh,; GEM, New Delhi; Soma Calcutta; Bilmet, Bombay 'ESSCO', Delhi. Rajka Metal Works, Delhi Eng. Co. Metal Works, Calcutta Everite, NU-Lite Navbhart Shalimar Crown, Prince or equivalent
8	W.C. Pan / Wash basin / Urinals / flushing cistern	CERA, E.I.D. Parry, Hindware , Neycer, Johnson or equivalent
9	Flushing Cistern - Cast iron	Overhead - 'Nomos' 'ELCO' 'A-1'AUTOMATIC-EID Hindustan Sanitaryware, Calcutta, Nelson flush valve, SRIF(Agara), Parrys - Madras or equivalent
10	E.W.C. Seats (solid)	E.I.D. Parry, Hindware, CERA, Neycer, Hindustan or equivalent or equivalent
11	Stainless Steel Sinks	Nirali, Diamond, Nilkanth, Cobra, AMC, Jayna Navkar or equivalent
12	Mirrors	Atul Glass Works , Haryana Sheet Glass Vallabh Glass Works, Modi Float glass, Asahi, Saint Gobin or equivalent
13	Plumbing/ Sanitary Fixtures / Accessories	Jaquar continental , CERA, Hindustan Sanitaryware / Parryco India. Hindware, Lauvet, Kohlar, Rak, Jaquar or equivalent
14	C.I. Sluice valve, Check valves	Kirloskar, IVC,Burn,William Jacks, Indian Valve(IVC), Advance, Leader. or equivalent
15	HDPE pipes	Duraline , Pennwalt Agru , Nocil, Jain, Supreme or equivalent
16	Fibre reinforced R.C.C. Manhole Cover	Pratibha, CIDCO, approved brand
17	C.I. Manhole cover with frame	ISI approved make
18	P.V.C. Pipes & Fittings	Supreme, Prince, Finolex, Laxmi, Prakash, Jain or equivalent
19	P.V.C./H.D.P.E Water Tanks	Sintex, Purvee, Renu or equivalent

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20	Ball Cock	GPA Brand by Govardhan Das Jullunder, L & K Brand by L. K. Industries Mathura, Sant Brand by Sant Press Metal Works Jullundhar or equivalent
21	UPVC Pipes (Solvent Welded Joints)	Supreme, Prince, Jain or equivalent
22	C.P.V.C. Pipes & Fittings	Astral make or equivalent
23	Water meter	Kapstan Bombay, Voltas Kent, Calcutta
24	Fire Hydrant Valve & Air Valve, Scour Valve	ISI approved make
25	Lift	OTIS, Orbis, Mitsubishi, Hitachi, Schindler, Omega, Techno, Johnson, Trio, ThyssenKrupp or equivalent

IS Codes:

IS Code No.	Subject
GENERAL	
IS 4082	Stacking & storage of construction materials and components at site - Recommendations
IS 1200	Method of measurement of building and civil engineering work.(All Parts)
IS 1141	Seasoning of Timber - Code of practice
EARTH WORK	
IS 3674	Safety code for excavation work
IS 1498	Classification and identification of soils for general engineering purposes.
IS 1200 (Pt-1)	Method of measurement of earth work
IS 1200 (Pt-27)	Method of measurement of earth work (by Mechanical Appliances)
IS 4081	Safety code for Blasting and related drilling operation
IS 4988 (Part-IV)	Excavators
IS 6313 (Pt-II)	Anti-Termite measures in buildings (pre-constructional)
IS 6313 (Pt-III)	Anti-Termite measures in buildings for existing buildings
IS 6940	Methods of test for pesticides and their formulations
IS 8944	Chlorpyrifos emulsifiable concentrates
IS 8963	Chlorpyrifos - Technical specifications
IS 12138	Earth moving equipments
MORTARS	
IS 269	Specification for 33 grade ordinary Portland cement
IS 455	Specification for Portland slag cement
IS 650	Specification for standard sand for testing of cement
IS 1269	Specification for 53 grade ordinary Portland cement
IS 1542	Specification for sand for plaster
IS 2116	Specification for sand for masonry mortar
IS 2250	Code of practice for preparation and use of masonry Mortar
IS 3025	Method of sampling and test for water
IS 3406	Specification for masonry cement
IS 3812 (Part-I)	Specification for flyash for use as pozzolana in cement mortar and concrete
IS 3812 (Part-II)	Specification for flyash for use as admixture in cement mortar and concrete
IS 8041	Rapid hardening Portland cement
IS 8042	Specification for white cement
IS 8112	Specification for 43 grade ordinary Portland cement
IS 1298	Methods of test for determination of free lime in

	portland cement
IS 6452	High alumina cement for structural use
IS 1489	Portland Pazzolana Cement
CONCRETE WORK	
IS 383	Specification for coarse and fine aggregate from natural source for concrete
IS 303	Coarse and fine aggregates from natural sources for concrete
IS 2430	Methods for sampling of aggregates for concrete
IS 2386	Method of test for aggregates for concrete
(a) Part-I : Particle size and shape	
(b) Part-II : Estimation of deleterious materials and organic impurities	
(c) Part-III : Specific gravity, density, voids absorption and bulking	
(d) Part-IV : Mechanical properties	
(e) Part-V : Soundness	
IS 2505	General requirements for concrete vibrators - immersion type
IS 2506	General requirements for concrete vibrators - screed board concrete vibrators
IS 2645	Specification for integral water proofing compounds for cement mortar and concrete
IS 761 (Part-I)	Code of practice for extreme weather concreting (Part-I) recommended practice for hot weather concreting
IS 7861 (Part-II)	Code of practice for extreme weather concreting (Part-II) recommended
IS 9103	Specification for concrete admixtures
IS 460	Test sieves
IS 1607	Methods for dry sieving
IS 1834	Hot applied sealing compounds for jointing concrete
REINFORCED CEMENT CONCRETE WORK	
IS 1904	Structural safety of buildings, shallow foundation
IS 1893	Criteria for earthquake resistant design of structures
IS 432 (Part-I)	Specification for mild steel and medium tensile steel bars and hard drawn steel wire for concrete reinforcement part-I mild steel and medium tensile steel bars

IS 432 (part-II)	Specification for mild steel and medium tensile steel bars and hard drawn steel wire for concrete reinforcement part-II hard drawn steel wire
IS 456	Code of practice for plain and reinforced concrete
IS 516	Method of test for strength of concrete
IS 1199	Method of sampling and analysis of concrete
IS 1200 (Part-II)	Method of measurement of building and civil engineering work - concrete work
IS 1200 (Part-V)	Method of measurement of building and civil engineering work - concrete work (Part 5 - Form work)
IS 1566	Specification for hard drawn steel wire fabric for concrete requirement
IS 1599	Method of bend test
IS 1343	Code of practice for Prestressed Concrete
IS 1786	Specification for high strength deformed steel and wires for concrete reinforcement
IS 1791	Specification for batch type concrete mixes
IS 2502	Code of practice for bending and fixing of bars for concrete reinforcement
IS 2751	Recommended practice for welding of mild steel plain and deformed bars for reinforced construction
IS 4925	Batch plants specification for concrete batching and mixing plant
IS 4926	Ready - Mixed Concrete
IS 6523	Specification for precast reinforced concrete door, window frames
IS 10262	Recommended guidelines for concrete mix design
IS 13311 (Part-I)	Indian standard for non-destructive testing of concrete. Method of test for ultrasonic pulse velocity
IS 13311 (Part-II)	Indian standard for non-destructive testing of concrete. Method of testing by rebound hammer.
IS 3370	Concrete structures for storage of liquids
IS 1568	Wire gauge for general purposes
IS 1139	Hot rolled mild steel and medium tensile steel deformed bars for concrete reinforcements
IS 2502	Code of practice for bending and fixing of bars for concrete reinforcement
IS 2751	Code of practice for welding of mild steel bars used for reinforced concrete work
STEEL WORK	
IS 226	Structural steel
IS 2062	Steel for general structural purpose
IS 800	Code of practice for use of structural steel in general in steel construction
IS 806	Code of practice for use of steel Tubes in general

	building construction
IS 816	Code of practice for use of metal arc welding for general construction in mild steel
IS 818	Code of practice for safety and healthy requirements in electric and gas welding and cutting operations
IS 822	Code of procedure for inspection of welds
IS 1038	Steel doors, windows and ventilators
IS 1081	Code of practice for fixing and glazing of metal (Steel and aluminium) doors, windows and ventilators
IS 1161	Steel tubes for structural purposes
IS 1200 (Pt. VIII)	Method of measurements of steel work and iron works
IS 1367	Technical supply conditions for threaded steel fasteners
IS 1821	Dimensions for clearances holes for bolts and screws
IS 2074	Ready mixed paint, air drying redoxide zinc chrome priming
IS 4736	Hot - dip zinc coating on mild steel tubes
IS 4923	Hollow steel sections for structural use - specification
IS 6248	Metal rolling shutters and rolling grills
IS 7452	Specification for hot rolled steel sections for doors, windows and ventilators
BRICK WORK	
IS 712	Specification for building limes
IS 1077	Common burnt clay building bricks
IS 1200 (Part 3)	Method of measurements of brick works
IS 2212	Code of practice for brick work (1 st Revision)
IS 3495	Method of test for burnt clay building bricks
IS 5454	Methods of sampling of clay building bricks
IS 13757	Specification of burnt clay fly ash bricks
IS 2691	Burnt clay facing bricks
MARBLE WORK	
IS 1122	Method of test for determination of true specific gravity of natural building stones
IS 1124	Method of test for determination of water absorption, apparent specific gravity and porosity of natural building stones
IS 1130	Marble (blocks, slabs and tiles)
IS 4101 (Part-I)	Code of practice for external facing and veneers: Stone facing
IS 14223 (Part-I)	Polished Building Stones (Part-I) Granite
WOOD WORK AND P.V.C. WORK	
IS 204 (Part-I)	Specification for tower bolts (ferrous bolt)
IS 208	Specification for door handles
IS 287	Recommendations for maximum permissible moisture contents of timber used for different purpose
IS 303	Specification for plywood for general purposes

IS 401	Code of practice for preservation of timber
IS 453	Specification for double acting spring hinge
IS 710	Specifications for Marine Plywood
IS 1003 (Part-I)	Specification for timber paneled and glazed shutter Part-I (Door shutters)
IS 1003 (Part-II)	Specification for timber paneled and glazed shutter Part-II (Window and ventilator shutters)
IS 1200 Part-XIV	Method of measurement of building and civil engg. Work glazing
IS 1200 Part-XII	Wood work and joinery
IS 1328	Specification for veneered decorative plywood
IS 1341	Specification for steel butt hinges
IS 1659	Specification for block boards
IS 1823	Specification for floor door stopper
IS 1868	Specification for anodic coating on aluminium and its alloy
IS 2046	-do- Decorative thermosetting synthetic resin bonded laminated sheet
IS 2095	Specification for gypsum plaster board
IS 2202 (Pt I)	Specification for wooden flush door shutter, solid core type (plywood face panels)
IS 2209	Specification for mortice lock (Vertical Type)
IS 2547	Specification for gypsum plaster
IS 3097	Specification for veneered particle board
IS 3564	Specification for door closer (hydraulically regulated)
IS 3847	Specification for mortice night latch
IS 5930	Specification for mortice latch
IS 7196	Specification for hold fast
IS 8756	Specification for mortice ball catch for use in wooden almirah
IS 9308 (Part-II)	Specification for mechanically extracted coir fibres (Mattress coir fibres)
IS 12817	Specification for stainless steel butt hinges
IS 12823	Specification for wood products - Prelaminated particle Boards
IS 14900	Specifications for transparent float glass
IS 4021	Timber door, windows and ventilator frames.
IS 2191	Wooden flush door shutters (cellular and hollow core type)
FLOORING	
IS 1200 (Part-XI)	Method of measurement of Building and Civil Engineering work (Part 11) paving, floor finishes, dado and skirting
IS 1237-Edition 2.3	Specification for cement concrete flooring tiles
IS 1443	Code of practice for laying and finishing of cement

	concrete flooring tiles
IS 2114	Code of practice for laying in-situ terrazzo floor finish
IS 3622	Specification for sand stone (Slab & Tiles)
IS 4457	Acid and / or alkali Resistant tiles
IS 5318	Code of practice for laying of hard wood parquet and wood block floors
IS 5766	Code of practice for laying of burnt clay brick floor
IS 13630 (Part-1 to 15)	Methods of Testing for ceramic tiles
IS 13712	Specification for ceramic tiles, definition, classification characteristic and marking
IS 15622	Specification for pressed ceramic tile.
ROOFING	
IS 277	Galvanized steel sheets (Plain and corrugated)
IS 651	Glazed stoneware pipes and fittings
IS 1200 (Pt IX)	Method of measurements of building and civil engineering work : Part-9 Roof covering (including cladding)
IS 1200 (Pt X)	Method of measurements of building and civil engineering work : Part-10 ceiling and lining
IS 2095 (Pt-1)	Gypsum plaster boards (Pt. 1) plain Gypsum plaster boards
IS 2935	Specification for flat transparent sheet glass
IS 459	Corrugated and semi corrugated asbestos cement sheet
FINISHING WORKS	
IS 1542	Sand for plaster
IS 1661	Code of practice for cement and cement-lime plaster finishes on walls and Ceilings
IS 1625	Code of practice for preparation and use of lime mortar in buildings
IS 2250	Code of practice for preparation and use of masonry mortars
IS 712	Building limes
IS 1635	Code of practice for field slacking of lime and preparation of putty.
IS 427	Distemper, dry colour as required
IS 428	Distemper, oil emulsion, colour as required
IS 6278	Code of practice for white washing and colour washing
IS 106	Ready mixed paint, brushing, priming for enamels for use on wood.
IS 102	Ready mixed paint, brushing, red lead, non- setting, priming
IS 123	Ready mixed paint, brushing, finishing, semi-gloss, for general purposes
IS 1477	Code of practice for painting of ferrous metals in buildings

IS 2074	Ready mixed paint, red oxide-zinc chrome priming
IS 2339	Aluminium paint for general purposes in dual container
IS 2932	Enamel, synthetic, exterior, type 1
	(a) under coating,
	(b) finishing, colour as required
IS 137	Specification for ready mixed paint, brushing, matt or eggshell flat finishing interior to Indian Standard colour as required
IS 1131	Specification for enamel, interior
	(a) under coating
	(b) finishing.
IS 129	Specification for ready mixed paint, brushing, grey filler for enamel for use over primers
IS 533	Specification for gum spirit of turpentine (oil of turpentine)
IS 101	Methods of tests for ready, mixed paint, & enamels
IS 124	Specification for ready mixed paint, brushing finishing semi glossy for
(Part I) general purposes	
IS 2933	Enamel, Exterior
(a) Under Coating	
(b) Finishing	
IS 5410	Cement Paint
IS 5411	Plastic emulsion, Paint Part- I for interior use
IS 419	Specifications for putty for use in window frames
ROAD WORK	
IS 164	Ready mixed paint for road marking
IS 278	Specification for galvanized steel barbed wire for fencing
IS 1838 (Pt.1)	Specification for performed filters for expansion joint in concrete pavements and structures (non extruding and resilient type / bitumen impregnated fibre)
IS 73	Paving bitumen with bitumen felts
IS 73-1992	Specification for paving bitumen
IS 1203	Method of testing tar and bituminous material Determination of penetration
WATER SUPPLY, SANITARY INSTALLATIONS & DRAINAGE	
IS 771 (Pt.1)	Specification for glazed fire clay sanitary appliances : part 1: General requirements
IS 1703	Water fittings - copper alloy float valves (horizontal plunger type) - Specification
IS 1729	Cast iron / Ductile iron Drainage Pipes and pipe fittings for Over ground non-pressure pipe line Socket and Spigot Series
IS 1795	Specification for pillar taps for water supply purposes
IS 2326	Specification for Automatic Flushing Cisterns for Urinals

	(Other than plastic cisterns)
IS 2548 (Part-1)	Plastic seats and covers for water closets Part 1 : Thermo set seats and covers - Specifications
IS 2548 (Part-2)	Plastic seats and covers for water closets Part 2 : Thermoplastic seats and covers specification
S 2556	Vitreous sanitary appliances (vitreous chine) - Specifications
IS 2556 (Part-1)	Part-1: General requirements
IS 2556 (Part-2)	Paart-2 : Specific requirements of wash-down water closets
IS 2556 (Part-4)	Part-4 : Specific requirements of wash basins
IS 2556 (Part-6)	Part-6 : Specific requirements of Urinals & Partitions plates
IS 2556 (Part-7)	Part-7 : Specific requirements of accessories for sanitary appliances
IS 2963	Specification for copper alloy waste fittings for wash basins and sinks
IS 3076	Specification for low density polyethylene pipes for potable water supplies
IS 4827	Specification for electroplated coating of nickel and chromium on copper and copper alloys
IS 4984	Specification for high density polyethylene pipes for potable water supplies
IS 4985	Unplasticised PVC pipes for potable water supply - Specifications
IS 7231	Plastic flushing cisterns for water closets and urinals - Specifications
IS 13983	Stainless steel sinks for domestic purposes - Specifications
IS 774	Specification for flushing cistern for water closets and urinals
IS 775	Specification for cast iron brackets and supports for wash basins and sink.
IS 778	Specification for cast copper alloy gate and check valves for water works.
IS 651	Specification for salt glazed stoneware pipes and fittings.
IS 3597	Method of test for concrete pipes
IS 1239	Mild steel tubes and tubulars
IS 1711	Self closing taps
IS 1726	Cast iron manhole covers and frames intended for use in drainage works
IS 1742	Code of practice for building drainage
IS 2065	Code of practice for water supply in buildings
IS 2470	Code of practice for design and construction of septic tank

IS 2693	Non-ferrous waste fittings for wash basins and sink
IS 4127	Code of practice for laying of glazed stoneware pipes
IS 4346	Washers for water taps for cold water services
IS 778	Gun metal gate, globe and check valves for water services
IS 7634	Laying and jointing for polythene pipes and PVC pipes (Part I to III)
IS 8008 Part I	Specification for injection Moulded HDPE fittings for potable to IV) water supplies
IS 3844	Code of practice for installation of internal fire hydrants in multi storey buildings
IS 780	Specification for sluice valves for water works purposes (50 to 300 mm size)
IS 781	Specification for cast copper alloy screw down bib taps and stop valves for water services
IS 782	Specification for caulking lead
IS 909	Underground fire hydrant, sluice valve type - Specification
IS 2692	Ferrules for water services - Specification
IS 15450	PE-AL-PE Pipes for hot and cold water supplies - Specifications
IS 15778	Chlorinated Polyvinyl Chloride (CPVC) pipes for potable hot and cold water distribution supplies - Specifications
IS 1230	Cast iron rain water pipes and fittings
IS 1626	Asbestos cement building pipes, gutters and fittings (Spigot and socket type)
IS 2527	Code of practice for fixing rainwater gutters and downpipes for roof drainage
IS 458	Pre-cast concrete pipes (with and without reinforcement)
IS 783	Code of practice for laying concrete pipes
IS 1728	Specification for Cast Iron Manhole Covers and Frames
IS 4127	Code of practice for Laying of Glazed Stone Ware Pipes
IS 12592	Pre-cast Concrete Manhole Covers and Frames-Specifications
IS 5382	Specification for rubber sealing rings for gas mains, water mains and sewers
IS 13592	Unplasticised polyvinyl chloride (UPVC) pipes for soil and Waste discharge system for inside and outside building
ALUMINIUM WORK	
IS 733	Wrought Aluminium Alloys, Bars, Rods and Sections (For General Engineering Purposes) - Specification
IS 737	Wrought Aluminium and aluminium alloy sheet
IS 1285	Wrought Aluminium and Aluminum Alloy, Extruded

	Round Tube and Hollow sections (for General Engineering Purposes) - Specification
IS 1868	Anodic coating on Aluminium and its alloy - Specification
IS 1948	Specification for Aluminium Doors, Windows and Ventilators
IS 5523	Method of testing anodic coating on aluminum and its alloys
IS 6012	Measurement of coating thickness by Eddy Current Method
IS 6315	Floor springs (Hydraulic regulated) for heavy doors - Specifications
IS 6477	Dimensions of extruded hollow section and tolerances
IS 14900	Transparent Float Glass - Specifications
WATR PROOFING TREATMENT	
IS 3370 (Part 1)	Code of practice for concrete structures for the storage of liquid : Part-1 General Requirements