

NAME OF WORK: - SR TO REST HOUSE BILIMORA, DIST.:- NAVSARI (PROVIDING OUTSIDE & INSIDE PLASTER, COLOUR, PLUMBING, EARTHWORK, GARDENING & PAVERBLOCK WORK)

ITEM WISE SPECIFICATION

Item No:- 1

Removing and scraping of old deteriorated plaster of any thickness from wall / R.C.C member including stacking of serviceable material and disposal of unserviceable from site of work with all lead and lift

1. MATERIALS

- Water for softening surfaces (if required).
- Polythene sheets for protecting flooring/furniture (as required).
- Gunny bags/containers for debris collection.
- Safety gear: gloves, helmets, safety goggles, dust masks (PPE as per IS 2925 for head protection and IS 4151 for safety helmets).

2. LABOUR

2.1 Categories of Labour

- Skilled labour / Mason: For chisel work, careful removal near edges, columns, beams, RCC surfaces.
- Unskilled labour: For scraping, lifting, collecting debris, stacking, disposal.
- Supervisor: To ensure safety and correct method.

2.2 Tools / Equipment

- Hand tools: chisels, hammers, scrappers, wire brushes.
- Power tools (if approved): chipping machine with suitable chisel bits.
- Wheelbarrows / head-load pans for debris movement.

3. WORKMANSHIP

3.1 Removal of Plaster

- Old plaster, of any thickness, shall be removed from brickwork, blockwork, or RCC members.
- Removal shall be done up to the base surface, ensuring the wall is clean, firm, and free of loose material.
- Chiselling shall be done carefully along edges of beams, columns, door/window jambs, avoiding damage.

3.2 Surface Preparation

- Entire area shall be scraped with wire brush to remove remaining loose particles.

- Dust and debris shall be completely removed by brushing and washing (if required).
- Any exposed reinforcement must be reported to Engineer for instructions.

3.3 Handling & Disposal

- Serviceable materials (if any) shall be stacked neatly at location specified.
- Unserviceable debris shall be transported and disposed of within all leads and lifts to approved location.
- All debris shall be removed daily to avoid obstruction.

3.4 Protection

- Surroundings, openings, floor, furniture, electrical points must be protected during work.
- Safety precautions shall be strictly followed as per:
 - IS 3696 Part I – Scaffolding & safety for working at heights
 - IS 4130 – Safety in demolition operations

4. MODE OF MEASUREMENT & PAYMENT

4.1 Unit of Measurement

- Square Metre (Sqm)
Area of plaster removed measured in actual exposed surface.

Item No:- 2

Providing 20 mm thick double coat mala cement plaster on interior brick / concrete work for plastering comprising of base coat of 12 mm thick cement plaster in cement mortar (1 Cement : 4 coarse sand) in rough finishing and 8 mm thick top coat of cement mortar 1:2 (1 Cement : 2 Coarse sand) finished with trowel including scaffolding curing etc. complete.

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.17.95 P.No.122 with 20 mm thick double coat mala cement plaster on interior brick / concrete work with 10mm grooves at junction of structural members etc. complete. For Floor Two Level

The rate shall be for a unit of **one square meter**.

Item No:- 3

Providing 15mm thick cement plaster in single coat on Rough (Similar)side of single or half brick walls for interior plastering upto floor two level and finished even and smooth in (ii) Cement mortar 1:4 (1-cement :4-sand)

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.17.61 (II), P.No.121 except that using for 15 mm thick cement in single coat on brick /

concrete wall for interior plastering finished even and smooth (ii) Cement mortar 1:4 (1-cement :4-sand) etc complete for Ground floor
The rate shall be for a unit of **one square meter**.

Item No:- 4

Applying two coats of putty & two coats of primer of 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.

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.18.17. P.No.127 except that using for two coats of Birla (White cement based) or Asian (acrylic lapy-putty) or equivalent and two coats of primer of approved brand and manufacture on new wall surface instead of color washing of undecorative wall.

The rate shall be for a unit of **one square meter**.

Item No:- 5

Wall painting (two coats) with plastic emulsion paint of approved brand and manufacture on undecorated wall surface to give an even shade including throughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth.

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.18.57 / P.No.136

The rate shall be for a unit of **one square meter**.

Item No:- 6

Finishing wall with Rustic Regular Surface Texture Plaster. Made from quality pigments and resins, Rustic Regular Surface Texture Plaster is durable, water & weather resistant. Rustic Regular Surface Texture Plaster is free from harmful chemicals, VOC,including scaffolding for all heights and free foul smell..etc complete For all floor

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.18.57 / P.No.136 + It.No.18.60 / P.No.137 except using of Rustic Regular Surface Texture Plaster. Made from quality pigments and resins, Rustic Regular Surface Texture Plaster is durable, water & weather resistant. Rustic Regular Surface Texture Plaster is free from harmful chemicals, VOC,including scaffolding for all heights and free foul smell..etc complete For all floor

The rate shall be for a unit of **one square meter**.

Item No:- 7

Finishing wall with weather proof exterior emulsion paint on wall surface (two coats) to give an required shape even shade after thoroughly brushing the surface to remove all dirt, and remains of loose powdered materials.etc complete

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.18.51 P.No.135 and It.No.18.53 P.No.136. For weather proof exterior 100% acrylic emulsion paint.

The rate shall be for a unit of **one square meter**.

Item No:- 8

Providing and fixing wash down water closet (European type, W.C. Pan) with integral P or S trap including jointing the trap with soil pipe in Cement Mortar 1:1 (1-Cement : 1-fine sand) (Seal and cover to be measured and paid for separately)(A) vitreous China Pattern :(i) in white colour

The relevant specifications of Building Booklet It. No.23.112 (A)(I) Page No.165 shall be followed
The item shall be measured and paid on Number basis of consolidated item of work

Item No:- 9

Providing and fixing 100mm size P or S trap for water closet squatting pan including jointing the trap with the pan and soil pipe in cement Mortar 1:1 (1-Cement : 1-Fine sand)(A) Vitreous China.

The relevant specifications of Building Booklet It. No.23.111 (A)(I) Page No.164 shall be followed
The item shall be measured and paid on Number basis of consolidated item of work

Item No:- 10

Providing and fixing washbasin with single hole for pillar tap with C.I. or M.S. brackets painted white including sutting holes and making good the same but excluding fittings.(A) Vitreous China:(ii) Flat Back washbasin 550 mm x v 400mm size. (i) In white colour.

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.23.127. / P.No.167 + It.No.23.135 (A) / P.No.168+It.No 23.136.(A)/ P.No.168 +It.No 23.96.(A)/ P.No.171+It.No.23.95 (A) / P.No.170

The item shall be measured and paid on Number basis of consolidated item of work

Item No:- 11

Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [C] 25 mm.

The relevant specifications of Building Booklet It. No.23.8.(B) Page No.162 shall be followed expect use concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [C] 25 mm. and instead of 6 kgs sq.cm. working pressure polythene pipes of 25mm dia.

Item No:- 12

Providing and fixing concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [C] 40 mm.

The relevant specifications of Building Booklet It. No.23.8.(B) Page No.162 shall be followed expect use concealed center point to wall ceiling & floor CPVC (SDR 13.5) PIPE having National Sanitation Foundation (NSF) seal for potable water of following dia. nominal bore tube fittings and clamps including making good the wall, ceiling and floor etc. complete. [C] 40 mm. and instead of 6 kgs sq.cm. working pressure polythene pipes of 40mm dia.

Item No:- 13

Providing and laying 1.20 mt. wide plinth protection with excavator for foundation up to 0.25 mt depth and 0.35 mt. width and C.C. 1:5:10 brick work in C.M. 1:6 and finished wall with 10mm thicks cement plaster in C.M. 1:4 to brick masonry including chequered tiles flooring, sand filling etc. complete as directed.

General

Providing and laying 1.20 mt. wide plinth protection with excavator for foundation up to 0.25 mt depth and 0.35 mt. width and C.C. 1:5:10 brick work in C.M. 1:6 and finished wall with 10mm thicks cement plaster in C.M. 1:4 to brick masonry including chequered tiles flooring, sand filling etc. complete as directed.

Excavation

The relevant specification shall be followed as per General Technical specification for Building work booklet It.No.4.0.0. (A) P.No.29.

Cement Concrete

The relevant specification shall be followed as per General Technical specification for Building work booklet It. No. 5.3.2. (A) P.No.38 except that using for including the cost of form work for G.FLOOR instead of excluding the cost of form work.

For form work use the relevant specification shall be followed as per General Technical specification for Building work booklet It.No.9.1 (A) P.No.63

Chequered tiles flooring

The Item shall be executed as per the relevant specifications of general technical specification for building work booklet Item No.14.43 (A)/ page No. 98

The rate shall be for a unit of **one square meter**

Item No:- 14

Providing Architectural Consultancy Services for Repairing and Renovation Work of Existing building including site inspection, measurement, preparation of conceptual and detailed architectural drawings, repair/renovation proposals, detailed estimate, BOQ, tender documents, structural coordination, obtaining necessary approvals if required, periodic site visits, supervision and certification during execution of work complete as directed by Engineer-in-Charge

Scope of Work

Providing comprehensive Architectural Consultancy Services for repair, rehabilitation, alteration, refurbishment and renovation of existing building(s), including detailed site inspection, condition assessment, measurements, preparation of conceptual schemes, detailed architectural drawings, repair and renovation proposals, preparation of detailed estimates, BOQ, tender documents, coordination with structural and MEP consultants, obtaining statutory approvals wherever required, periodic site visits, technical supervision, quality monitoring, certification of bills and completion of all consultancy services as directed by the Engineer-in-Charge.

Materials

Since this is a consultancy service item, no permanent construction materials are involved. However, the consultant shall provide at his own cost:

1. Survey and measurement instruments.
2. Computers, software, printers and plotting facilities.
3. Drawing sheets, tracing sheets and presentation materials.
4. Digital cameras and inspection equipment.
5. Stationery, documentation and report preparation materials.
6. Communication facilities and transportation required for execution of consultancy services.

Labour

The consultancy team shall comprise qualified professionals and supporting staff including:

1. Registered Architect.
2. Structural Engineer (as required).
3. Quantity Surveyor/Estimator.
4. CAD Draftsman/BIM Operator.
5. Site Engineer/Inspector.
6. Survey Personnel.
7. Administrative and Documentation Staff.
8. Other specialists as required for successful completion of the assignment.

All personnel shall possess adequate qualifications and experience relevant to building repair and renovation works.

Workmanship

The consultancy services shall be carried out in accordance with the provisions of:

- Architects Act, 1972.
- Council of Architecture (COA) Guidelines.
- National Building Code (NBC) of India (Latest Edition).
- CPWD Works Manual (Latest Edition).
- CPWD Specifications (Latest Edition).
- Relevant BIS/IS Codes.
- Local Municipal and Statutory Regulations.

The scope shall include, but not be limited to, the following:

A. Site Inspection and Assessment

1. Detailed inspection of the existing building.
2. Recording of structural, architectural and service-related deficiencies.
3. Measurement and preparation of existing building records.
4. Assessment of deterioration, leakage, cracks, damages and defects.
5. Photographic documentation of existing conditions.

B. Architectural Planning and Design

1. Preparation of conceptual renovation proposals.
2. Space planning and optimization.
3. Architectural design alternatives and presentations.
4. Preparation of final approved scheme.
5. Incorporation of functional, safety and aesthetic requirements.

C. Detailed Drawings

Preparation of:

- Existing building drawings.
- Demolition drawings.
- Renovation drawings.
- Floor plans.
- Elevations.
- Sections.
- Reflected ceiling plans.
- Flooring layouts.
- Furniture layouts (where applicable).
- Door-window schedules.
- Interior details.
- Finishing details.
- Repair details.
- Working drawings required for execution.

D. Estimates and Tender Documentation

1. Detailed quantity take-off.
2. Preparation of BOQ.
3. Cost estimates based on prevailing Schedule of Rates.
4. Technical specifications.
5. Tender drawings.
6. Bid documents and supporting technical documents.
7. Assistance during tender evaluation, if required.

E. Coordination Services

1. Coordination with Structural Engineer.
2. Coordination with Electrical, HVAC, Fire Fighting and Plumbing Consultants.
3. Incorporation of structural strengthening recommendations.
4. Integration of all service requirements into the architectural design.

F. Statutory Approvals

1. Preparation of drawings and documents required for statutory submissions.
2. Liaison assistance for obtaining approvals from competent authorities wherever specifically required under the contract.

G. Construction Stage Services

1. Periodic site visits during execution.
2. Verification of work as per approved drawings.
3. Review of material samples and finishes.
4. Clarification of drawings and technical details.
5. Issue of revised drawings where necessary.
6. Monitoring of quality and workmanship.
7. Recording site observations and recommendations.

H. Certification and Completion

1. Verification of contractor's measurements.
2. Certification of running account bills where specified.
3. Verification of final bill quantities.
4. Preparation of completion drawings.
5. Submission of completion report.
6. Certification of satisfactory completion of work.

Deliverables

The consultant shall submit:

- Site inspection reports.
- Existing condition drawings.
- Conceptual proposals.
- Detailed architectural drawings.
- BOQ and cost estimates.
- Technical specifications.
- Tender documents.
- Approval drawings (if applicable).

- Site visit reports.
- Completion drawings.
- Completion report.

All drawings **shall be submitted in hard copy and editable digital format (AutoCAD/PDF or approved equivalent).**

Mode of Measurement

The consultancy services shall be measured as follows, as specified in the Schedule of Quantities:

The complete consultancy service from inception to completion shall be measured as One Job (L.S.)

Item No:- 15

Providing and laying damp proof course 25mm thick cement concrete 1:2:4 (1-Cement : 2 coarse sand : 4 stone aggregate 10 mm nominal size) and curing complete

The Item shall be executed as per the relevant specifications of general technical specification for building work booklet Item No.5.7.1/ page No. 40

The rate shall be for a unit of **one square meter**

Item No:- 16

Earthwork for embankment including breaking clods, dressing with all lead and lift (excluding watering and consolidation)(E) From Borrow area within 3.0 Km. lead

The land on which the earth work is to be done shall be cleared of all trees having a girth of 30 cm and less, loose, stones, vegetation, bushes, stumps and all other objectionable materials. All the materials cleared will be the property of Government. Useful material shall be arranged in convenient stacks along the road boundary or as directed at places within 50 meters lead, and handed over to the department in convenient section. Unsuitable material shall be burnt or otherwise disposed off by the contractor at his own cost without causing any nuisance, inconvenience or damage to the works property or people in the neighbourhood. In all cases, the materials shall be disposed off in a neat manner.

After clearing the site, the alignment of the road shall be properly set out true to line, curves, slopes grades and sections as shown on the plan or directed by the Engineer-in-charge. The contractor shall provide all labours and materials such as lime, strings, pegs, nails, bamboos, stone, mortar, concrete etc. required for setting out, establishing. Bench Marks and giving profiles. The contractor shall be responsible for maintaining the B.Ms, profiles alignments and other marks as long as they are required for the work in the opinion of the Engineer-in-charge. If the contractor defaults in this respect they may be restored by the department at the cost of the contractor.

The soil to be used for embankment shall have CBR more than 5 % and shall be free from trees, stumps, roots, rubbish or any other objectionable materials. Only material considered suitable by the Engineer-in-charge shall be used for the construction and that considered unsuitable other disposed

off as directed by him. The selection of the materials to be used in the construction of embankment shall be made after soil surveys and investigations are carried out by the Department.

Density requirement of embankment and sub-grade materials

Type of Work	Maximum laboratory dry unit weight when tested as per IS 2720 (Part-8)
Embankment up to 3 meter height, not subjected to extensive flooding.	Not less than 15.2 kN cum.
Embankment exceeding 3 meter height or embankments of any height subject to long periods of inundation.	Not less than 16.0 kN cum.
Sub-grade and earthen shoulders verges backfill.	Not less than 17.5 kN cum.

Note (1) This table is not applicable for lightweight fill material e.g. cinder, fly ash etc.

(2) The Engineer may relax these requirements at his discretion taking into account the availability of materials for construction and other relevant factors.

Field density shall be percentage of laboratory density as recommended by Gujarat Engineering Research Institute.

When permitted, the contractor shall use the soil for embankment work available from box cutting the road. The soil shall be used after approval from Engineer-in-charge. For this purpose the contractor shall make his own arrangement for loading, transporting and unloading the cutting stuff available from box cutting to required site with all lead and lift.

The embankment shall be constructed in uniform layers not exceeding 250 mm in loose thickness. The soil shall be spread uniformly over the entire width of the embankment, unless otherwise directed by the Engineer-in-charge. The operation of laying the successive layer of earth shall have to be suitably synchronized with the consolidation work. If the soil as delivered to the road bed is too wet, it shall be dried by exposure to the sun till the moisture content is acceptable for compaction. All clods of hard lumps of earth shall be broken to have maximum size of 15 cm. when being placed in the embankment and a maximum of size 5 cm when being placed in the top 45 cm of the embankment. The work of next layer shall be allowed only after the first layer below it has been thoroughly compacted to the density specified.

Where an embankment is to be placed on sloping ground, the surface of the ground shall be benched in the steps of trenches or broken up in such a manner that the new material shall have perfect bond with the existing surface.

To avoid interference with the construction work, the fill material shall not be placed against any wall unless permission has been given by the Engineer-in-charge but in any case not until the concrete or masonry has been in position for 14 days, (the embankment shall be brought up simultaneously in equal layers on each side of the structure to avoid displacement and unequal pressure. The sequence of work in this regard shall be got approved from the Engineer-in-charge. Where it may be impracticable to use power rollers or other heavy equipment, the compaction shall be carried out by mechanical tempers or other methods approved by the Engineer-in-charge. Care shall be taken to see

that the compaction plant does not hit or come too close to any structural member so as to cause any damage to them.

The embankment shall be finished in conformity with the alignment, levels, cross sections and dimension shown on the plans or as directed by Engineer-in-charge.

Measurements for Payment

The compacted earthwork measurements shall be paid on cross sectional area method and computing the volume in cubic meter. The contractor shall maintain the embankment by filling in ruts, rain cuts, depression due to shrinkage etc. to proper formation and grade till this item is finally measured and accepted by the Department. The measurements shall be taken on compacted earth work. No deduction for shrinkage shall be made from gross measured quantity of compacted earth work. However the contractor shall have to bear loss of quantity due to all settlements as well as other types of deformations etc. if any that might have taken place at the time of taking the final measurements of this item.

The rate of earthwork includes clearing jungles, dog belling, fixing profiles, excavating earth from borrow areas, breaking clods, conveying and spreading earth in layers with all lead and Lift, finishing the entire embankment and incidentals necessary to complete the work to the specifications. The cutting stuff of cutting in ordinary soil, soft murrum, soft rock, hard murrum and hard rock shall be utilized in embankment construction under this item within the lead specified in that particular item. No payment shall be made under this item for the cutting stuff used in the embankment but labour for cutting will be paid as per specifications in the particular item, and only balance quantity of earthwork brought from borrow areas will be paid in this item.

The rate shall be for a Unit of One Cubic meter.

Item No:- 17

Providing and Developing Garden in Rest House Premises including cleaning and leveling of land, supplying good earth and manure, preparation of beds, laying carpet lawn grass, planting ornamental trees, shrubs and flowering plants, watering, maintenance, disposal of surplus material and all labour, tools and tackles complete as directed by Engineer-in-Charge.

Materials

1. Good Earth

- Good agricultural soil obtained from approved sources.
- Free from stones larger than 25 mm, clods, roots, weeds, rubbish and other deleterious materials.
- Soil shall be fertile, friable and suitable for horticultural purposes.
- pH value preferably between 6.5 and 8.0.

2. Manure

- Well-decomposed farmyard manure (FYM), organic compost or approved manure.
- Free from harmful chemicals, weeds and undecomposed organic matter.
- Manure shall be thoroughly mixed with soil during bed preparation.

3. Lawn Grass

- Healthy carpet lawn grass such as Doob grass (*Cynodon dactylon*) or approved equivalent.
- Grass shall be fresh, disease-free and well rooted.
- Grass shall be supplied in sods, strips or approved form suitable for immediate establishment.

4. Ornamental Trees

- Healthy nursery-grown saplings of approved species.
- Plants shall have well-developed root systems and be free from pests and diseases.
- Minimum height and girth shall be as approved by the Engineer-in-Charge.

5. Shrubs and Flowering Plants

- Approved varieties suitable for local climatic conditions.
- Healthy, vigorous and free from disease and insect infestation.
- Plants shall conform to approved horticultural standards.

6. Water

- Clean water suitable for irrigation and plant growth.

7. Plant Protection Materials

- Fertilizers, pesticides, fungicides and insecticides, if required, approved by the Engineer-in-Charge.

8. Stakes and Tree Guards

- Bamboo stakes, supports and protective tree guards where specified.

Labour

The item shall include all skilled and unskilled labour required for:

- Cleaning and site preparation.
- Earthwork and leveling.
- Transportation and spreading of soil and manure.
- Bed preparation.
- Planting and transplantation.
- Lawn laying.
- Watering and maintenance.
- Fertilizer application.
- Weeding and pruning.
- Disposal of surplus material.
- Protection and upkeep of plants during maintenance period.

Workmanship

A. Site Preparation

1. The entire area shall be cleared of weeds, rubbish, debris, stones and unwanted vegetation.
2. Surface shall be properly dressed and leveled to required slopes for drainage.
3. Low areas shall be filled with approved good earth and compacted lightly.

B. Preparation of Beds

1. Soil shall be dug, loosened and pulverized to a depth of not less than 150 mm for lawns and 300 mm for planting beds.
2. Good earth and manure shall be uniformly mixed in approved proportions.
3. Beds shall be watered prior to planting.

C. Lawn Development

1. Lawn area shall be prepared to fine tilth.
2. Carpet grass shall be laid closely without gaps.

3. Joints between grass sods shall be filled with fine soil.
4. Lawn shall be rolled lightly and watered immediately after laying.
5. Any unevenness or depressions shall be corrected.

D. Tree Plantation

1. Pits shall be excavated to suitable dimensions depending upon plant size.
2. Pit sizes shall generally not be less than 600 mm × 600 mm × 600 mm unless otherwise specified.
3. Excavated soil shall be mixed with manure before refilling.
4. Plants shall be placed centrally and firmly supported.
5. Watering basins shall be formed around each tree.

E. Shrubs and Flowering Plants

1. Planting shall be carried out according to approved landscape layout.
2. Spacing shall be maintained as per species requirements.
3. Plants shall be watered immediately after planting.

F. Watering and Maintenance

1. Regular watering shall be carried out until proper establishment of plants and lawn.
2. Dead plants, damaged grass or unhealthy growth shall be replaced without additional cost during maintenance period.
3. Weeding, pruning and soil dressing shall be carried out periodically.
4. Plants shall be protected against pests and diseases.

G. Disposal

All excavated earth, debris, weeds and surplus materials shall be removed from the site and disposed of at approved locations.

Mode of Measurement

Lawn Area

- Carpet lawn shall be measured in Square Metres (Sq.m.) of completed and accepted lawn area.

Trees

- Ornamental trees shall be measured in Numbers (Nos.) according to approved species and size.

Shrubs and Flowering Plants

- Shrubs, hedges and flowering plants shall be measured in Numbers (Nos.).

Complete Garden Development

Where specified as a composite item, the entire garden development shall be measured as Square Metres (Sq.m.) of developed garden area or as **One Job (L.S.)**, as indicated in the Schedule of Quantities.

Item No:- 18

Providing and fixing pre-cast Rubber Dye / steel Dye inter locking concrete block 60mm thick with grade of concrete M300 pneumatic compressed / vibrated mechanically and as per approved design Confirming to IS 15658 : 2006 including 35 mm Sand layer for levelling and filling the joint with sand in proper line and level as per guidelines of IRC : SP 63-2018 etc. Complete.

Materials

1.1 Water shall not be salty brackish and shall be clean reasonably clear and free objectionable quantities of silt and traces of oil \injurious alkalis salts organic matter and other deleterious material which will either weaken the mortar of concrete or cause efflorescence or attack the steel in R C C container for transport storage and huddling of water shall be clean, Water shall confirm to the standard specified in I S 455 -1978

1.2 If required by the Engineer in charge it shall be tested by comparison with distilled water compression shall be made by means of standard cement tests for soundness time of setting and mortar strength as specified in I S 269-1976 Any indication of unsoundness charge in time of setting by 30 minutes or more or decrease of more than 10 percent strength of mortar prepared with distilled water sample when compared with the result obtained with mortar prepared with distilled water shall be sufficient cause for rejection of water under test.

1.3 Water for curing mortar concrete or masonry should not be too acidic or too alkaline

1.4 It shall be free of elements which significantly affect the hydration reaction or otherwise interface with the hardening of mortar or concrete during curing or those which produce objectionable stains or other unsightly deposits on concrete or mortar surfaces

1.5 Hard and bitter water shall not be used for curing

1.6 Potable water will generally found suitable for curing mortar or concrete

2.0 CEMENT

2.1 Cement shall be ordinary Portland slag cement as per IS 1624 -1974 or Portland slag cement as per IS 455-1976

2.2 Cement shall be stored above the ground level in perfectly dry and water tight sheds. Wherever bulk storage containers are used, their capacity should be sufficient to cater to the requirements at site and should be cleaned at least once every 3 to 4 months. The aggregate shall be stored in such a way as to prevent admixture of foreign materials. Different size of fine or coarse aggregate shall be stored in separate stock-piles sufficiently away from the each other to prevent intermixing the materials.

3.0 SAND

3.1 Sand shall be natural sand, clean well graded, hard strong durable and gritty particular free from immures amounts of dust, clay, kankar modules, soft or flaky particles shall alkali salts, organic matter, learn mica or other deleterious substance and shall be got approved from the Engineer-in-charge. The sand shall not contain more than 8 percent of slit as determined by field test. if necessary the sand.

Coarse Sand

The fineness modules of coarse sand shall not be less than 2.5 and shall not exceed 3.0. The sieve analysis of coarse sand be as under –

I. S. Sieve Designation	% by wt. passing
4.75 mm	100
2.36mm	90 to 100
1.18 mm	70 to 100
600 MC	30 to 100
300 MC	85 to 70
150 MC	00 to 50

3.2 FINE SAND

The fineness module shall not exceed 1.0 the sieve analysis of fine sand be as under

IS. Sieve Designation	% by wt. passing
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4.75 mm	100
2.3 6mm	100
1.18 mm	75 to 100
600 MC	40 to 85
300 MC	05 to 50
150 MC	00 to 10

3.3 Materials shall be stored as to prevent their deterioration of their quality and fitness for the work. Any material which has deteriorated or has been damaged or is otherwise considered defective by the Engineer-in-charge shall not be used in the work.

4.0 CEMENT CONCRETE INTERLOCKING BLOCKS

4.1 Ruber dye Interlocking cement concrete reberous reflective blocks (M-200) shall be hard even sound, and regular in shape and generally uniform in colour. The colour of the interlocking BLOCKS shall generally be uniform colour. Bracken BLOCKS or damaged blocks with cracks shall not be allowed for use. They shall be without any soft veins cracks of flaws

4.2 The size of the Interlocking cement concrete blocks to be used for flooring shall be of required size or as directed. However smaller sizes will be allowed to be used to the extent of maintaining required pattern. Thickness shall be 60 mm.

4.3 The edges of Interlocking cement concrete blocks shall in true shape of casting. All angles and edges of the Interlocking cement concrete blocks shall be true, square and free chipping and surface shall be true and plain.

4.4 The Interlocking cement concrete blocks shall have flat plain surface with rubourous reflective top finish in required pattern and colour. When brought on site, the Interlocking cement concrete blocks shall be in good condition. The Interlocking cement concrete blocks for paving shall generally be used in good condition

5.0 WORKMANSHIP

5.1 Interlocking cement concrete blocks of approved quality shall be laid evenly to level and slope as directed by Engineer in charge over a bed of a base layer consisting of 50mm to 60mm thick average sand bedding to maintain slope.

5.2 Joints shall be filled with a clean sharp sand by brooming.

5.3 The flooring work shall be finished by rubbing of flooring is set properly

5.4 The rate of flooring is inclusive of providing and laying in true line and level including filling the joints with finishing as directed by Engineer in charge

5.5 Protecting the open edges of paving with cement concrete as directed.

6.0 MODE OF MEASUREMENT and PAYMENT

6.1 The unit rate flooring shall include the cost of all materials, tools and plant required for mixing, laying of base layer in true level and slope as required applying and placing stones in position, compacting, finishing and all other incidental expenses for producing flooring work to complete the structure or its components as shown on the drawings and according to these specifications. They shall also include the cost of making, fixing and removing of all scaffolding and forms required for the work. The rate of work shall include the cost of all labour, materials tools and plant scaffolding and all incidental expenses as described herein above.

6.2 The work shall be measured for its length and width, limiting dimensions to those specified on plan or as directed. The rate shall be for a unit of one square meter.

6.3 The payment shall be made on **square Meter** basis of the finished work.

Item No:- 19

Providing and fixing pre-cast concrete kerb stone of gray cement based concrete block 30cm length,30cm height and 15cm thick of M200 grade concret as per approved design and including excavation for fixing in proper line and level,filling the joint with C:M 1:3 1cement:3fine sand) etc complete.

Precast Concrete Kerb Stone

Precast concrete kerb stone shall be hard even sound, and regular in shape. Broken kerb stone or damaged one with cracks shall not be allowed for use.

The precast kerb stone shall be of size as specified or as approved by the Engineer. It shall be 30 cm x 30 cm x 10 cm size made from cement concrete M 250 grade The precast kerb stone shall have flat plain surface. When brought on site, the precast kerb stone shall be in good condition.

WORKMANSHIP

Excavation for kerb block as required and as directed by the Engineer shall be carried out as per detailed relevant specifications of It. No. 1 of this contract. Bick bat cement concrete in proportion of 1:4:8 and 10 cm thick beding shall be carried out as per the relevant specifications of general technical specification for building work booklet Item No.5.3.3/ page No. 39.

The kerb stone shall be erected in position in true line and level. The Joints between two blocks shall be filled with cement slurry and joint shall be flushed.

MODE OF MEASUREMENT & PAYMENT:

The unit rate shall include the cost of all material, labour charges for excavation & fixing, cost of BBCC, tools and plant required, placing blocks in position and all other incidental expenses required to complete the work.

The work shall be measured in running meter

The payment will be made on **running meter** basis.

Signature of Contractor

**Deputy Executive Engineer
Navsari (R&B) Sub Division
Navsari**