

STANDARD BIDDING DOCUMENT

PROCUREMENT OF

CIVIL WORKS

COMPLETE BIDDING DOCUMENT

VOLUME-III

NAME OF WORK :

Construction of Revenue Staff quarters (C type-4 Unit, B type-4 Unit) at Jetpur Dist.Rajkot



GOVERNMENT OF GUJARAT
ROAD AND BUILDING DEPARTMENT

This is a generic SBD to be used for Civil works. Each user/concern department needs to examine and put up their particular bidding requirement like; qualification criteria, contract Data etc., marked at [#] while finalizing their own bidding process.

SECTION - 6
FORM OF BID

FORM OF BID

Description of the Works:

BID

To :

Address :

1. We offer to execute the Works described above and remedy any defects therein in conformity with the conditions of Contract, specification, drawings, Bill of Quantities and Addenda for the sum (s) of

(-----)

2. We undertake, if our Bid is accepted, to commence the Works as soon as is reasonably possible after the receipt of the Engineer's notice to commence, and to complete the whole of the Works in the Contract within the time stated in the document.
3. We agree to abide by this Bid for the period of 120 Days from the date fixed for receiving the same, and it shall remain binding upon it and may be accepted at any time before the expiration of that period.
4. Unless and until a formal Agreement is prepared and executed this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.
5. We understand that you are not bound to accept the lowest or any tender you may receive.

Dated this ----- day of ----- 20

Signature ----- in the capacity of -----

----- duly authorized to sign bids for and on behalf of -----

(in block capitals or typed)

Address

Witness

Address

Occupation

SECTION - 7
BILL OF QUANTITIES

BILL OF QUANTITIES

Preamble

1. The bill of Quantities shall be read in conjunction with the Instructions to Bidder, Conditions of Contract, Technical Specifications and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices tendered in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Engineer may fix within the terms of the Contract.
3. The rates and prices tendered in the priced Bill of Quantities shall, except in so far as it is otherwise provided under the Contract, include all constructional plant, layout, supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the Contract.
4. The rates and prices shall be quoted entirely in Indian Currency.
5. A rate or prices shall be entered against each item in the Bill Quantities, whether quantities are stated or not. The cost of Items against which Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities (in case of Item rate contract).
6. The whole cost of complying with the provisions of the Contract shall be included in the items provided in the priced Bill of Quantities, and where no Items are provided the cost shall be deemed to be distributed among the rates and prices entered for the related items of Work.
7. General direction and descriptions of work and materials are not necessarily repeated or summarized in the Bill of Quantities. References to the relevant sections of the contract documentation shall be made before entering rates or prices against each item in the Bill of Quantities.
8. The method of completed work of payment shall be in accordance with the specification for Road and Bridge works. For building works specifications for building are to be followed.
9. Errors will be corrected by the Employer for any arithmetic errors pursuant to **Clause 29** of the Instructions to Bidder.
10. Rock is defined as all materials which, in the opinion of the Engineer, required blasting, or the use of metal wedges and sledgehammers, or the use of compressed air drilling for its removal, and which cannot be extracted by ripping with a tractor of at least 150 kw with a single rear mounted heavy duty ripper.

BILL OF QUANTITIES

(A) Percentage Rate Tender (Up to INR 50 Cr.)

Item No	Description of Item (with brief specification and reference to book of specifications)	Quantity	Unit	Rate In figures	Amount
----- AS PER ATTACHED SEPERATELY-----					

I/We am/are willing to carry out the work at.....% above/below percent (Should be written in figures and words) of the estimated rate mentioned above. Amount of my /our tender works out as under.

Estimated amount put to tender

Estimated amount put to tender

Deduct.....% below

Add.....% Above

Net

Net

In words

In words

(B) For Item Rate Tender (For above INR50Cr.):

Item No	Description of Item (with brief specification and reference to book of specifications)	Quantity	Unit	Rate		Amount
				In figures	In Words	
----- AS PER ATTACHED SEPERATELY-----						

(A) Total Tendered Amount

(B) Rebate on above tendered amount (if any) % (in figure)
(in words).....

(C) Net Tendered Amount (A-B) (in figure)
(in words).....

#

1	The Contractor shall exhibit a board with detailed specification and details of work as directed by the Engineer-In-Charge for which no extra payment shall be made.
2	The labourcess will be deducted as per prevailing rules i.e. 1% of the work done.
3	GST and Income tax TDS will be deducted at a source while making payments of bills
4	In all R.C.C. Items in Rate Analysis Standard Cement Consumption has been taken as per Govt. G.R.: PRC-10/2017 Cement Consumption/16/C Date:11/05/2017 as stated in S.O.R. therefore in R.C.C. items where there is a change as per actual mix design the cost of difference of cement consumption have been deducted from the rate of original item at the rate of input rate mentioned in all the tender.

Name of work :- Construction of Revenue Staff Quarters (C type - 4 unit, B type - 4 unit, D type - 1 unit) at Jetpur , Dist Rajkot.

SCHEDULE - "B"

Sr. No.	Description of Item	Quantity	Unit	Rate	Amount
1	3	2	4	5	6
1	Excavation for foundation upto all depth including sorting out and stacking of useful materials and disposing off the excavated stuff upto all Meter lead.(A) Loose or soft soil	783.00	Cumt	128.69	100764.27
2	Excavation for foundation upto all depth including sorting out and stacking of useful materials and disposing off the excavated stuff upto all Meter lead.(B) Dense or Hard soil	315.00	Cumt	164.82	51918.30
3	Excavation for foundation upto all depth including sorting out and stacking of useful materials and disposing off the excavated stuff upto all Meter lead.(C) Hard Murrum	881.00	Cumt	289.24	254820.44
4	Excavation for foundation for depth all including sorting out and stacking of useful materials and disposing off the excavated stuff upto all Meter lead. (D) Soft rock not requiring Blasting	198.00	Cumt	316.22	62611.56
5	Providing and laying cement concrete 1:2:4 (1- Cement : 2- Coarse sand : 4- graded stone aggregates 20 mm nominal size) and curing complete including cost of formwork in (A) Foundation and Plinth	145.44	Cumt	4049.41	588946.19
6	Providing and laying cement concrete 1:2:4 and curing etc complete, including the cost of formwork and the cost of reinforcement, for R.C.C. work in Floor Grade Slab	76.00	Cumt	3834.97	291457.72
7	Providing and laying controlled c.c.M.250 & curing complete including the cost of form work but excluding the cost of reinforcement for reinforced concrete work in foundation, footing bases of columns and the like and mass concrete.	269.00	Cumt	4770.23	1283191.87

8	Providing and laying Controlled cement concrete M 250 and curing complete including the cost of formwork and excluding cost of reinforcement for reinforced concrete work in Column up to Plinth Level	45.00	Cumt	8452.69	380371.05
9	Providing and laying Controlled cement concrete M 250 and curing complete including the cost of formwork and excluding cost of reinforcement for reinforced concrete work in Plinth Beam .	99.00	Cumt	6078.18	601739.82
10	Providing and laying controlled Cement Concrete M.200 & curing complete including the cost of form work but excluding the cost of reinforcement for reinforced concrete work in Lintel for all Floor	16.00	Cumt	7907.83	126525.28
11	Providing and laying controlled cement concrete M.200 & curing complete including the cost of form work but excluding the cost of reinforcement for reinforced concrete work in Column for all Floor	124.00	Cumt	7816.92	969298.08
12	Providing and laying controlled cement concrete M - 200 with curing etc complete, including the cost of formwork but excluding the cost of reinforcement, for R.C.C. work in Beams For all Floor	92.00	Cumt	6427.26	591307.92
13	Providing and laying controlled cement concrete M - 200 with curing etc complete, including the cost of formwork but excluding the cost of reinforcement, for R.C.C. work in Slab for all Floor.	150.00	Cumt	6993.74	1049061.00
14	Providing and laying controlled cement concrete M.200 & curing complete including the cost of form work but excluding the cost of reinforcement for reinforced concrete work in Chajja for all Floor.	5.40	Cumt	8254.50	44574.30
15	Providing and laying controlled cement concrete M.200 & curing complete including the cost of form work but excluding the cost of reinforcement for reinforced concrete work in Stair case for all Floor.	18.00	Cumt	7268.82	130838.76
16	Providing and laying controlled cement concrete M200 and curing etc. complete including the cost of form work and excluding the cost of reinforcement etc. complete in RCC Vertical and Horizontal wall for All floor	36.00	Cumt	10782.37	388165.32

17	Providing and laying controlled cement concrete M-200 for RCC work and curing complete including the cost of form work but excluding the cost of reinforced concrete work in coping on Ground Floor	19.00	Cumt	5823.66	110649.54
18	Providing TMT Bar FE 500D reinforcement for R.C.C. work including bending, binding and placing in position complete upto floor two level	116067.76	Kg.	77.29	8970877.17
19	Filling available excavated earth (excluding rock) in trenches. plinth, sides of foundations etc. in layers not exceeding 20 cm. in depth consolidating each disposed layer by ramming and watering.	912.00	Cumt	137.47	125372.64
20	Filling in foundation and plinth with murrum or selected soil in layers of 20cm. thickness including watering, ramming and consolidating etc. complete.	1765.00	Cumt	299.66	528899.90
21	Filling in foundation and plinth with sand in layers of 20 cm. Thickness including watering ramming and consolidating etc. comp.	58.00	Cumt	477.31	27683.98
22	Filling in foundation and plinth with brick Bats in layers of 20cm. thickness including watering, remming and consolidating etc. complete	64.00	Cumt	629.48	40286.72
23	Providing and filling with good quality sinder (steam coal) as directed by engineer in charge in sunks in layers of 15 cm thk, including watering, placing, ramming well etc. as directed for all floor	13.00	Cumt	835.27	10858.51
24	Carring out plinth treatment to post construction / existing structure by spraying chemical solution for termite control treatment including labour and material consistment with I.S.I specification. Using Chlordene and Chiorpurfiles 20 EC. As Per 6131_paret-II Consentration Weight one percent is recommended i.e one litre 20 EC chemical emulsion with 19 liter give 1 % concenteration inclusive of one litre chemical emulsion appication at the rate of 5 Litre chemical / Sqm of surface is recommended as per I.S	531.00	Sqmt	124.35	66029.85
25	Brick work using common burnt clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in foundation and plinth in Cement Mortar 1:5. (1-Cement : 5 -fine sand) (B) Conventional	196.00	Cumt	4376.38	857770.48

26	Brickwork using common burnt Clay building bricks having crushing strength not less than 35 kg./Sq.Cm. in superstructure above plinth level upto floor two level (B) Conventional 1:5. (1- Cement : 5 -fine sand) For All floor	374.00	Cumt	4703.10	1758959.40
27	Half brick masonry in common brunt clay building bricks having crushing strength not less than 35 Kg/Sq.Cm. in Cement mortar 1:5 (1- Cement : 5 - coarse sand) in superstructure above floor two level.(B) Conventional For All floor	226.00	Sqmt	701.57	158554.82
28	Steel work, welded in built up sections framed work including cutting, hoisting, fixing in position and applying a priming coat of red lead paint. In beams and joists, channels angles Tees, flats, with connecting plates or angle cleats as in main and cross beams. Hip and jack rafters, purlins conneted to common rafters and the like	14.00	Quintel	9108.48	127518.72
29	Providing and fixing of Ridge flashing for roof panel shall be made out of 0.5 mm thick pre coated GI sheet . The Precoated sheet shall be of minimum 240 mpa steel grade confirming to IS 14246:1995 and shall have zinc coating of minimum 120 gsm as per IS:277:1992 , 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 micron. The PPGI Sheet shall have plastic protective guard film of minimum 25 microns to avoid scratches during transportation. The ridge shall be fixed to the steel members by pop rivet or self drilling/self stitching fastners @ maximum 450 mm c/c along length of capping/flashing etc complete .	28.00	Sqmt	867.39	24286.92
30	Providing and fixing 38mm Single/double shutter flush door solid core (MD, ,D,D1)laminated both side of 1 mm thickness pattern and design is to be approved by the Architect, with Stainless Steel handle size 30 Cm Long, Tower Bolt size 15cm, & Heavy Stainless steel Aldrop as per attached detail architectural drawing	137.00	Sqmt	4000.11	548015.07

31	Providing and fixing FRP frame size 125x65 mm and 35mm thick FRP shutter having extra reinforcement on sides & edges in polish finish. The core of the shutter & frame is to be filed up with injected polyurethane foam done in situ alongwith embedded wooden pieces for stiffening & also taking hinges & fintures. The whole FRP frame & shutter is to be water proof weather proof, termite proof & resistance to mild acid/alkali. Rates are to be inclusive of S.S hinges with necessary screws & alluminium S.S fixtures & fastenings & fastener sleeve.	3.00	Sqmt	2615.04	7845.12
32	Providing and fixing FOUR track sliding window (3 Glass shutters & 1 Mosquito net shutter) using standard extruded color anodized aluminum section equivalent to Jindal series E (30mm) section numbers: frame bottom with weep holes - 21198, frame top & sides 21204, shutter top & Bottom - 20993, Shutter interlock - 20550, Shutter side (Handle) - 20553 with 5mm thick transparent tinted float glass, with EPDM rubber gasket, air lock strip and finishing joints with transparent silicon sealant, with alluminium powder coated fittings and fixtures.	50.00	Sqmt	4784.37	239218.50
33	Providing and fixing THREE track sliding window (2 Glass shutters & 1 Mosquito net shutter) using standard extruded color anodized aluminum section equivalent to Jindal series E (30mm) section numbers: frame bottom with weep holes - 20928, frame top & sides 20837, shutter top & Bottom - 20993, Shutter interlock - 20550, Shutter side (Handle) - 20549 with 5mm thick transparent tinted float glass, with EPDM rubber gasket, air lock strip and finishing joints with transparent silicon sealant, with alluminium powder coated fittings and fixtures.	15.00	Sqmt	4457.13	66856.95
34	Providing and fixing standared extruded of alluminium section of size 63mm x 38.10mm x1.2mm (of Jindal section No. 2434, @ Wt. 0.643 Kg per mt) with colour anodized alluminium frame for ventilation with 5 mm thick frosted glass as details etc.complete.	7.00	Sqmt	1175.56	8228.92

35	Providing and fixing window having extruded aluminum Colour anodized section frame main outer size 63.50 x 38.10 x 1.95 mm,@ Wt 1.094 Kg / Rmt, horizontal two track member size 61.85 mm x 31.75 mm x 1.20mm @ wt.of 0.695 Kg/mt, vertical member of size 61.85 mm x 31.75mm x 1.30 mm @ wt.of 0.659 Kg/mt with sliding shutters of horizontal member size 40mm x 18mm x 1.29mm @ wt.of 0.456Kg/mt, vertical member of size 40mm x 18mm x 1.29mm @ wt.of 0.456Kg/mt, @ Wt. 0.457 Kg/mt with 5 mm thick transparent bronze colour tinted float glass with powder coated aluminum fittings and fixtures and transparent silicon sealant glass fixing to frame as per details etc complete for window.	5.00	Sqmt	1713.70	8568.50
36	Providing and fixing in position collapsible steel shutters with vertical channels 20 x 10 x 2mm braced with flat iron diagonals 20x5mm size with top and bottom rails of T-Iron 40 x 40 x 6mm with 38 mm dia steel pullets complete with bolts, nuts, locking arrangement, stoppers handles including applying a priming coat of red lead paint	5.59	Quintel	6367.62	35595.00
37	Providing and fixing M.S.Grills of required pattern with M.S.Flats at required spacings and frame around,square or round bar,with round headed bolts and nuts or by screws plain grill including approval quality of primer and two coat of oil painting etc.	2607.00	Kg.	121.20	315968.40
38	Providing and laying 24" X 24" Vetrified 8 mm thick tile flooring over 20 mm {average} base of cement mortar 1:6 { 1 cement : 6 coarse sand} on new surface or fixing on existing flooring by adhesive materials including dismantling of existing flooring and jointed with colour cement slurry including finished with flush pointing & cleaning the surface etc. complete for LIGHT shade	404.00	Sqmt	1546.85	624927.40
39	Providing and laying Vitrified tiles 8 to 10 mm thick , in skirting risers of steps and dedo on 10mm thick cement plaster 1:3 (1-cement : 3-coarse sand) and jointed with white cement slurry	47.00	Sqmt	1592.40	74842.80
40	Providing and laying Kota stone slab flooring over 20 mm. (average thick base of cement mortar 1:6 (1 cement : 6 coarse sand) of L.M. 1:1.5 and laid over and jointed with grey cement slurry including rubbing and polishing complete.(A) 25 mm thick	46.00	Sqmt	1019.39	46891.94

41	Providing and laying Ceramic tiles 6mm thick in flooring treads of steps and landing laid on a bed of 12mm thick cement mortar 1:3 (1-cement : 3-coarse sand) finishing with flush pointing in white cement.	45.00	Sqmt	1017.30	45778.50
42	Providing and laying coloured glazed tiles of the size 300 mm x 200 mm x 8 mm / 300 mm x 450 mm x 8 mm in skirting, risers of steps and dedo on 10 mm. thick cement plaster 1:3 (1 cement : 3 coarse sand) & jointed with white cement slurry.	422.00	Sqmt	1559.10	657940.20
43	Providing and fixing 18mm thick Granite in Stair steps threds and risers over 10mm (Average) thick base of cement mortar 1:3 (1-cement : 3-coarse sand) laid over and jointed with grey cement slurry including rubbing and polishing etc. complete selected as per attached detail architectural drawing	118.00	Sqmt	2610.45	308033.10
44	Providing and Fixing Sandwich type standing plateform in kitchen using 18mm thick Black GRANITE in top and sides and 25 to 30 mm thick one side polished Kota Stone in base including 0.60 mt. wide vertical support of both side polished polished Kota Stone and one horizontal shelf 60 cm wide below plateform as required and including 50mm wide facia patti in front incl. moulding the exposed edges in half round with all material, tools and labour etc. complete as directed by Engineer-In-Charge.	29.00	Sqmt	5374.81	155869.49
45	Providing & laying 20mm thick Kotah stone Shelf Doble side polishing with making the grooves in the walls and fixing the kotah stone Shelf finishing the same with cement mortar 1:2 etc. complete as directed by Engineer-In-Charge.	63.00	Sqmt	1326.13	83546.19
46	Providing and laying polished Granite stone slab 18 mm (Average) thick for For Doors / WIndows cill & Jams Clading as per design incl. half round edge in laid on 10 mm thick cement mortar 1:3 (1 -cement : 3 coarse sand) jointed with grey cement slurry including rubbing and polishing etc. complete as directed by Engineer-In-Charge.	258.00	Sqmt	3479.45	897698.10
47	Providing and fixing pre-cast Rubber Dye inter locking concrete block 60mm thick with grade of concrete M200 pnumatic compressed by mechanically pressed and as per approved design including 75mm sand layer for levelling and filling the joint with sand in proper line and level	430.00	Sqmt	705.12	303201.60

48	Providing and fixing pre-cast concrete kerb stone of gray cement based concrete block 30cm length,30cm height and 15cm thick of M250 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 as directed by Engineer-In-Charge.	49.00	Rmt.	419.96	20578.04
49	Providing and laying broken china mosaic flooring for terrace using 12 mm to 20 mm broken pieces of glazed tiles to be laid over cement mortar 1:3 to plain or slope and to be tempered to bring mortar crème out upto surface using white cement including rounding of junctions and extending them upto 15 cm along the wall, clearing with water and oxalic acid etc. as directed on 50 mm thick CC 1:2:4 concrete flooring.	415.00	Sqmt	1081.89	448984.35
50	Providing and cement vata (10cm x 10cm size) quarter round in cement mortar 1:1 including neat cement finishing watering etc. complete.	126.00	Rmt.	24.28	3059.28
51	Providing and fixing chicken mesh jali with square of 12.50 x 12.50 mm of 25 gauge at junction the Brick.masonry and reinforcement cement concrete member, work done before plastering work including scaffolding etc complete.	342.00	Sqmt	226.71	77534.82
52	Providing and making 10 mm Groove in plaster in perfect line and level & plumb including the cost of scaffolding etc complete as directed by Engineer-In-Charge.	2350.00	Rmt	12.12	28482.00
53	Providing 15mm thick cement plaster on Rough (Similar) side of single or half brick walls for interior plastering upto floor two level and finished even and smooth in (i) Cement mortar 1:3 (1-cement:3-sand) For All Floor	2664.00	Sqmt	270.19	719786.16
54	Providing 10mm thick cement plaster on brick/concrete walls for interior plastering upto floor two level and finished even and smooth in (i) Cement mortar 1:3 (1-cement:3-sand) For All Floor	866.00	Sqmt	259.73	224926.18
55	20mm thick sand faced cement plaster on walls upto height 10 metres above ground level consisting of 12mm thick backing coat of C.M. 1:3 (1-cement : 3-sand) and 8mm thick finishing coat of C.M. 1:1 (1-cement : 1-sand) etc. complete.	3392.00	Sqmt	330.72	1121802.24

56	Applying priming coat over new steel and other metal surface after and including preparing the surface by thoroughly cleaning, oil, grease, dirt and other foreign matter and scoured with brushes fine steel wood, scrapers and sand paper with ready mixed priming paint brushing red lead.	19.00	Sqmt	38.15	724.85
57	Painting two coats (excluding priming coat) on new steel and other metal surface with enamel paint, brushing, interior to give an even shade including cleaning the surface an even shade including clean the surface of all dirt, dust and other foreign matter.	19.00	Sqmt	96.59	1835.21
58	Applying two coats of putty & one 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	3207.00	Sqmt	40.59	130172.13
59	Wall painting three coats with plastic emulsion paint of approved brand and manufacture on wall surfaces to give an even shade including thoroughly brushing the surface free from mortar droppings and other foreign matter and sand papered smooth	3207.00	Sqmt	132.00	423324.00
60	Distempering (Two coats) with oil bound distemper of approved brand and manufacture and of required shade on wall surfaces to give an even shade, over and including a priming coat with distemper primer of approved brand and manufacture after thoroughly brushing the surface free from mortar dropping and other foreign matter and also including preparing the surface even and sand papered smooth.	65.00	Sqmt	80.33	5221.45
61	Finishing wall with weather proof exterior emulsion paint on wall surface (two coats) to give an required shade even shade after thoroughly brushing the surface to remove all dirt, and remains of loose powdered materials.etc complete	3392.00	Sqmt	122.14	414298.88
62	Providing and fixing frame work in trusses, purlin incl. cutting hoisting and fixing in position on column / strut made of hollow M.S. pipe or I.S. section steel and applying a priming coat of red lead paint incl. oil painting etc. comp.	7.76	Quintel	5889.50	45717.24

63	Providing laying and jointing in true line and level 160 diameter U.P.V.C. SWR Type B pipe conforming to IS 13592-1992 with one end plain and other end socketed with rubbering, & fitting conforming to ISI 14735-1999 of approved make for drainage system pipe line, pipe shall be jointed with each other with rubber lubricant, pipe shall be fixed on wall using of PVC clamp of the size 160 mm diameter x 210 mm length x 196 mm high at every 2000 mm center to center or shall be concealed in walls as directed including necessary fittings such as bends, shoes etc. including testing of pipes and joints and jointed with adhesive solvent cement including cost of all materials.	520.00	Rmt.	834.38	433877.60
64	Providing, laying and jointing in true line and level 110 diameter U.P.V.C (Type B) conforming to IS 13592-1992 with one end plain and other end socketed with rubber ring, & fittings conforming to ISI 14735-1999 of approved make for drainage system pipe line, pipe shall be jointed with each other with rubber lubricant, pipe shall be fixed on wall using of PVC clamp of the size 110 mm diameter x 149 mm length x 145 mm height at every 2000 mm center to center or shall be concealed in walls as directed including necessary fittings such as bends, shoes etc. including testing of pipes and joints and jointed with adhesive solvent cement including cost of all materials.	347.00	Rmt.	918.66	318775.02
65	Providing laying and jointing in true line and level 50mm dia. U.P.V.C. Pipe (SCH- 40) for cold water including fittings as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concealed as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.	300.00	Rmt.	195.67	58701.00
66	Providing laying and jointing in true line and level 40mm dia. U.P.V.C. Pipe (SCH- 40) for cold water including fittings as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concealed as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.	310.00	Rmt.	148.12	45917.20

67	Providing laying and jointing in true line and level 25mm dia. U.P.V.C. Pipe (SCH- 40) for cold water including fittings as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concealed as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.	616.00	Rmt.	91.84	56573.44
68	Providing laying and jointing in true line and level 15mm dia. U.P.V.C. Pipe (SCH- 40) for cold water including fittings as approved by Engineer In Charge. Pipe shall be fixed on the wall with the help of clamp at every two metre C/C or shall be concealed as directed including necessary fittings etc. including testing of pipe and joints and fixing the same with adhesive solvent, including cost of all materials.	130.00	Rmt.	72.65	9444.50
69	Providing and fixing to wall ceiling and floor 10.0 Kg. F/Cm2 working pressure poluthene pipes of the following outside Dia. Low density, complete with special falnge compression type fittings, wall clipsetc. including making good the wall ceiling and floor.(G)110 mm	231.00	Rmt.	340.06	78553.86
70	Providing and fixing to wall ceiling and floor 10.0 Kg. F/Cm2 working pressure polythene pipes of the following outside Dia. Low density, complete with special falnge compression type fittings, wall clipsetc. including making good the wall ceiling and floor.(F) 75mm	180.00	Rmt.	280.23	50441.40
71	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.[A] 15 mm.	49.00	Rmt	170.36	8347.64
72	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.	25.00	Rmt	253.82	6345.50
73	Providing and fixing screw down bib tap of brass chromium plated screw downbib tap 15 mm dia.	22.00	No	186.83	4110.26
74	Providing and fixing brass screw down stop tap.15 mm dia.	52.00	No	205.83	10703.16

75	Providing and fixing chromium plated brass half turn flush cock of approved quality including fixing in pipe line etc complete.(ii) 25 mm dia.	10.00	No	263.77	2637.70
76	Providing and fixing gun metal check or non return full way wheel valve. 40 mm dia.	5.00	No	663.43	3317.15
77	Providing and fixing gun metal check or non return full way wheel valve. 25 mm dia.	21.00	No	420.63	8833.23
78	Providing and fixing wash basin with single hole for pillar tap with C.I. or M.S. brackets painted white including cutting holes and making good the same but excluding fittings.(A)Vitreous Chine (ii) Flat back wash basin 550 mm x 400 mm size (in White colour) Including fixing C.P. brass waste for sink. And fixing M.I. fisher union for sink. (A) 32mm dia.	12.00	No	1803.75	21645.00
79	Providing and fixing 600 mm x 450 mm bevelled edge mirror of superior glass mounted on 6 mm thick A.C.sheet or plywood sheet and fixing to wooden plugs with C.P.screws and washers.	11.00	No	859.41	9453.51
80	Providing and fixing C.P.Brass towel rail complete with C.P.Brass brackets fixed to woodenplugs with c.p.brass screws.(B) 600 mm x 20 mm size.	10.00	No	616.42	6164.20
81	Providing and fixing water closet Squatting pan (Indian type W.C. pan) size 580 mm (earthwork, bed concrete, foot rests and 100 mm P or S trap & including G.I inlet connection etc comp. (A) Vitreous china - (i) Long pattern-white colour.	9.00	No	1197.17	10774.53
82	Providing and fixing wsh 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	1.00	No	1356.81	1356.81
83	Providing and fixing PVC SWR Nahni TrapIS 14735 for drain - 100 mm diameter with jali of the following nomonal diameter oself cleansing design with C.I. scread down or hinged grating including the cost of cutting and making good the walls.	21.00	No	614.19	12897.99

84	Providing and fixing PVC SWR Nahni trap IS 14735 for drain - 75 mm diameter with jali of the following nominal diameter of self cleansing design with C.I scread down or hinged grating including the cost of cutting and making good the walls.q	19.00	No	601.81	11434.39
85	Providing and fixing S.W.gully trap with C.I.grating brick masonry chamber and water tight C.I.cover with frame of 300mm x 300 mm size (inside) with standard weight (i) square mouth traps (A) 100 mm x 100 mm size P type.	15.00	No	1310.37	19655.55
86	Constructing brick masonry chamber for under ground C.I.inspection chamber and bends with bricks having crushing strength not less than 35 kg/sq.cm in C.M. 1:5 C.I.cover with frame (light duty) 455 mm x 610 mm internal dimension total weight of cover with frame to be not less than 38 kgs.(weight of cover 23 kg and wt.of frame 15 kg)R.C.C.top slab with 1:2:4 mix (1 cement:2 coarse sand:4 graded stone aggregates 20 mm size) foundation concrete 1:5:10 inside plaster 15 mm thick cement mortar 1:3 finished smooth with a floating coat of neat cement on wall and bed concrete etc complete.(l) Inside dimensions 455 mm x 610 mm and 450 mm deep for single pipe line.	22.00	No	2932.93	64524.46
87	Providing erecting and fixing double coated Syntex or equivalent PVC. (ISI) mark water tank of reqd capacity each with all necessary fittings & connection etc. comp on terrace.	22000.00	Litre	3.95	86900.00
88	Providing and fixing ball cock of approved quality as directed.(A) Copper metal(i) 25 mm dia.	5.00	No	132.89	664.45
89	Providing & fixing acrylic name plate of required size on Room with Lettering etc. complete including all labour and material etc complete.	8.00	No	454.50	3636.00
90	Providing 100 cms high and 10 cms thick CC M-20 Hand rail with 50 mm dia round hollow S S pipe with 30 mm SS pipe of height 20 cm supports embedded in concrete etc. complete.	101.00	Rmt	2752.25	277977.25
91	Providing 30 cms high and 10 cms thick CC M-20 & Hand rail with 50 mm dia round hollow & S S pipe with 30 mm SS pipe supports of Height 90 cm embedded in concrete etc. complete.	35.00	Rmt	6659.94	233097.90
92	Providing and Fixing Stainless Steel letters 15 inch high as directed by Engineer in charge.	31.00	No	505.00	15655.00

93	Providing and fixing Kitchen sink with C.I. or M.S. brackets, painted white including cutting holes in walls and making good the same Including fittings. (C) Vitreous China Sink.(i) 600mm x 450mm x 150mm size Including fixing C.P. brass waste for sink. And fixing M.I. fisher union for sink. (B) 40mm dia.	9.00	No	2505.13	22546.17
94	Providing and fixing in position cowel went to pipes.(B) 75mm dia.	30.00	No	393.04	11791.20
95	Providing and fixing in position cowel went to pipes.(C) 100mm dia	30.00	No	505.17	15155.10
96	Providing and Fixing Stainless Steel(Grade-316) accessories, Sheet Cutlery Basket of size:520X485X100 mm .fixing on telescopic channel of length 500mm having hardware like handles, dead lock etc. for Kitchen of Approved Brand as directed by Engineer in charge.	24.00	No	2272.50	54540.00
97	Providing and Fixing Stainless Steel (Grade-316)accessories, Thali Basket of size:520X485X350 mm .fixing on telescopic channel of length 500mm having hardware like handles, dead lock etc. for Kitchen of Approved Brand as directed by Engineer in charge.	24.00	No	3535.00	84840.00
98	Providing and Fixing Stainless Steel(Grade-316) accessories, Plain Basket of size:520X485X150 mm .fixing on telescopic channel of length 500mm having hardware like handles, dead lock etc. for Kitchen of Approved Brand as directed by Engineer in charge.	24.00	No	2020.00	48480.00
99	Providing and Fixing Stainless Steel(Grade-316) accessories, Cup Saucer Basket of size:520X485X100 mm .fixing on telescopic channel of length 500mm having hardware like handles, dead lock etc. for Kitchen of Approved Brand as directed by Engineer in charge.	24.00	No	2121.00	50904.00
100	Providing and fixing Wardrobe/Kitchen Paltform type cup-board using frame of country wood @ 7 x2.5 cm thick arround and comercial 19 mm ply Used For Drawer Shutter with Out side lamination of sunmica 1 mm & Inner Portion 0.8 mm with ISI make 300 mm (Ht) handle , Hinges & Magnetic ball catch Europa make Dead Lock for door , 6" ht tower bolt to another shutter and other fixture as fitting directed etc. complete.	164.00	Sqmt	4028.89	660737.96

101	Box cutting the road surface to proper slope and camber for making a base for road work including removing the excavated stuff and depositing on the road side slope as directed upto all lead.	377.00	Cumt	114.44	43143.88
102	Providing and laying compacted W.B.M. 150mm thick of grade-II in two layers each of 75mm thick of machine crushed BT metal of size 40mm to 63mm with using 13% stone screenings of 13.2mm size and 7% stone dust as filler including spreading watering and consolidation by vibratory roller etc. comp. in single layers	187.00	Cumt	1261.49	235898.63
103	Providing and laying compacted WBM 100 mm thick of grading I , B.T.M.C.metal of size of size 45 to 90 mm in required layers including using 20% stone screening 13.20 mm size and 7% stone dust as filler including spreading watering and consolidation by vibratory roller etc complete.	125.00	Cumt	1238.26	154782.50
104	Providing and laying cement concrete 1:3:6 (1 Cement : 3 course sand : 6 Crushed stone agg.of 20 mm nominal size) and curing complete excluding cost of form work in (a) Foundation and plinth.	187.00	Cumt	3390.57	634036.59
105	Providing and laying Controlled Cement Concrete M - 250 for average 200mm thick wearing coat laid as directed including Trimix finishing ,curing complete	246.00	Cumt	6682.16	1643811.36
106	Road marking with hot applied thermoplastic paints with reflectorising glass beads on bitumin surface providing and laying a hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250gms per sqm area, thickness of 2.5mm is excluding of surface applied glass beds as per IRC:35-2015. The finished surface to be level, uniform and free from streaks and holes. zebra patta /bump patta lane/center line/ edge line/cut patta. The white color marking should provide liminance coefficinet on cemend road shall be min 130 mcd/m2/lux and Asphalt road shall be min 100 mcd/m2/lux during the service life during the day time. The marking should meet the performance criteria for night time reflectivity, wet reflectivity and skid resistance as mentioned in the section-15 of IRC 35-2015. Warranty for the Retro reflectivity should be two years.	57.00	Sqmt	367.72	20960.04

107	Constructing brick masonry chamber for underground C.I. Inspection chamber and bends with bricks having crushing strength not less than 35Kg. Cm ² in C.M. 1:5 precast RCC cover 455mm x 610mm internal dimensions with frame (R.C.C. top slab with 1:2:4 mix (1-cement :2- coarse sand :4-graded stone aggregate 20mm size) foundation concrete 1:5:10 inside plaster 15mm thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete (i) Inside dimensions 455mm x 610mm and 450mm deep for single pipe line.	6.00	No	3223.92	19343.52
108	Constructing brick masonry chamber for underground C.I. Inspection C.I. Inspection chamber and bends with bricks having crushing strength not less than 35Kg. Cm ² in C.M. 1:5 precast RCC cover 500mm x 700mm internal dimensions with frame (R.C.C. top slab with 1:2:4 mix (1-cement :2- coarse sand :4-graded stone aggregate 20mm size) foundation concrete 1:5:10 inside plaster 15mm thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete (i) Inside dimensions 500mm x 700mm and 450mm deep for single pipe line.	4.00	No	3933.95	15735.80
109	Constructing brick masonry chamber for underground C.I. Inspection chamber and bends with bricks having crushing strength not less than 35Kg. Cm ² in C.M. 1:5 C.I. cover with frame (Light duty) 455mm x 610mm internal dimensions, total weight of cover with frame to be not less than 38Kg. (Wt. of cover 23 Kg.) and Wt. of frame 15Kg.) (R.C.C. top slab with 1:2:4 mix (1-cement :2- coarse sand :4-graded stone aggregate 20mm size) foundation concrete 1:5:10 inside plaster 15mm thick with cement mortar 1:3 finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete.(iii) Inside dimensions 600mm x 850 mm and 450mm deep for pipe lines with three or more inlets.	4.00	No	7180.44	28721.76
110	Providing and fixing C.I. Manhole cover 0.60 M. x 0.45M. Size having weight not less than 35Kg.	14.00	No	958.17	13414.38
111	Providing and fixing cast iron steps of size 500mm x 150mm x 22.5mm and painting with two coats of Anti-corrosive paint etc. complete.	6.00	No	207.66	1245.96

112	Providing and fixing decorative entrance gate made out of cast iron and various mild steel tabular section combination , the Ornamental entrance gate should be fixed at compound wall including pattern and die making , cutting , welding , grinding, fabrication , fixing in position at compound wall with necessary pedestal, bearing block and other locking arrangement. The entrance gate should be painted with two coats of priming coat of paint, and two coat of oil paint etc complete. As per detail design and instruction of architect.	900.00	Kg.	189.38	170442.00
113	Providing and Constructing JUNCTION CHAMBER of size 0.35 x 0.35 x 0.60 m. including connecting rainwater pipes, Half brick work with 15mm thick plaster in C;M 1:4, 50mm thick C.C. 1:2:4 in bed flooring & covered with FRP Framewith cover incl. all labour, material , excavation etc. complete.	20.00	No	2421.14	48422.80
114	Providing & Constructing FILTER CHAMBER of size 2.06 x 1.21 x 1.20 m. including connecting rainwater pipes, half brick work with 15mm thick plaster in C;M 1:4, 50mm thick C.C. 1:2:4 in bed flooring & covered with Precast RCC slab cover 100mm thick incl. all labour, material , excavation etc. complete.	3.00	No	12234.72	36704.16
115	Providing & Constructing PERCOLATION SOCKWELL of 2.54 m internal clear diameter and 5.00 mt. depth incl. honey comb brick masonry in C:M 1:C, 15mm thick plaster in C;M 1:4, 50mm thick C.C. 1:2:4 in bed flooring & covered with RCC top slab 100mm thick incl. filling with greval etc. complete incl. all labour, material , excavation etc. complete.	3.00	No	54490.46	163471.38
116	Drilling of 200 mm dia bore hole by DTH rig in rocky formation in All takuka of Zone III (o to 350 Mtr)	470.00	Rmt	489.85	230229.50
117	Supply of "U" PVC Casing pipe CM type (B) 200 mm dia	105.00	Rmt	1458.44	153136.20
118	Drilling of 200 / 215 mm dia bore in over burden rocky or loose collapsible / boulder strata and lowering of UPVC / PVC / ERW casing pipe above 12 mt and upto 40 mt depth by DTH rig etc complete	50.00	Rmt	418.14	20907.00
119	Providing and fixing bail plug {Bottom Cap } Suitable for 200mm dia. Pipe	1.00	LS	830.27	830.27

120	Heavy duty clamp made from 4" x 1.5" iron strip suitable for column pipe 1.5" to 2" length. (C) 65mm(2.1/2") dia. Pipe	1.00	No	206.04	206.04
121	Supplying & erecting G.I. bend for pipe connections suitable for .(E) 65 mm(2.5")	1.00	No	200.99	200.99
122	Supplying, & erecting C.I. swing, check type non-return (Reflux) Valve -ISI marked suitable for following size (B) 65 mm dia.	1.00	No	1558.43	1558.43
123	Providing & Supplying of ISI marked HDPE Pip suitable for potable water as per IS specifications no 4984/1995 including all taxes, transportation, freight charges, inspection charges, loading, unloading along with lowering and laying the pipe including the cost of all labour & material for 63mm dia 10.00 kg/cm ² pipe.	410.00	Rmt	131.30	53833.00
124	Geohydrological ground water investigation including vehicle charges (b) For three phase DTH bore / DR tube well including water sample testing charges.	1.00	No	14428.56	14428.56
125	Trenching in ordinary / Hard soil up to a depth of 60 cm including removal and stacking of serviceable materials and then disposing of surplus soil, by spreading and neatly levelling within a lead of 50 m 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 (including cost of imported earth, sludge or manure).	80.00	No	273.26	21860.80

126	Providing and fixing M. S. tree guard 50 cm square in plan, height 1.40 metre above ground level and 0.50 metre below ground level. The vertical members shall consist of four nos of angle iron of size 20x20x4 mm 1.9 long, one at each corner and 8 nos flat iron of size 25x4 mm 1.4 long. The vertical members shall be welded to 4 nos 25x4 mm M. S. flats placed horizontally around the vertical member of the cage. One name plate of 1 mm thick M.S. sheet of size 250x100 mm shall be welded to the tree guard near the middle height and lettered CPWD / PWD/ any other approved name. The tree guard shall be fixed to the ground by making suitable holes and by embedding four corners leg in the ground, including refilling the earth , compaction etc. complete. The tree guard shall be painted with two coats of paint of approved brand and manufacture over a coat of primer, complete in all respect.	80.00	No	6139.43	491154.40
127	Supplying, Providing & Fixing of Precast benches of Cement concrete, top covered with a layer of Latest Mosaic chippings/ tiling shade as directed by Engineer -in- Charge with specified " Name plate" casted with, at the time of the manufacture of benches, as directed, cured, rubbed and polished properly, Transporting at site and fixing the bench on two leg padastal of Precast C.C. with necessary, excavation, PCC, Fixing padastals & Fixing precast benches in line and levels with jointing material etc. complete	25.00	No	4614.77	115369.25
128	Clearing and grubbing road land including uprooting rank vegetation grass bushes, shrubs, sapling and trees girth up to 300 mm removal of stumps of trees cut earlier and disposal of unserviceable materials (C) By mechanical means in area of light jungle	0.50	Hect.	28455.09	14227.55
129	Rolling & Watering of earthwork in layers with power roller including filling in depressions which occur during the process. As directed	1220.00	Cumt	23.41	28560.20

130	Point wiring for Light / Bell 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 up to 10 mtr length , in below type of pipe erected with 6A Modular type switch / bell push & accessories and earth continuity of following type, erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured/metallic/white front plate modules erected on / in wall / ceiling as per pipe erected, with necessary Lamp holder/ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Cat-III	127.00	Pt.	485.81	61697.87
130A	Light Point (Bathroom , Toilet , Washarea)	47.00	Pt.	242.91	11416.54
131	Point wiring for FAN 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 up to 10 mtr length, in below type of pipe erected with 6A Modular type switch and hum free EME step type electronic fan regulator mounted and accessories with earth continuity of following type erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured/metallic/white front plate modules erected on / in wall / ceiling as per pipe erected. with necessary ceiling rose / H.D.Connector as directed. (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete cat-III	33.00	Pt.	674.68	22264.44
132	Point wiring for Individual Plug with & earth wire of 1.5 sq.mm (Green) both are of ISI marked 1.1 KV grade FRLS PVC insulated multi strand copper wires up to 10 mtr length, in below type of pipe erected complete with Modular type switch & 5 pin Plug erected on PVC / Metallic/Wooden box covered with appropriate front plate modules erected on / in wall / ceiling as per pipe erected with following type of accessories. [I] For 6A Plug and 6 a switch with 2-1.5 sq.mm Cu. Wire from nearby switchboard/mcb db board (f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete cat-III	24.00	Pt.	510.05	12241.20
132A	[III] For 16A Plug and 16 amp switch with 2-4 sq.mm Cu. Wire with 2.5 sq.mm (green) earthing wire from mcb d b board.(f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete cat-III	51.00	Pt.	871.63	44453.13

133	Point wiring for on board Looped Plug with 6A Modular type switch & 5 pin socket erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate modules erected on / in wall / ceiling with following type accessories Cat. III	80.00	Pt.	257.55	20604.00
134	Point wiring for Two Way Controlled Light 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 erected in below type of pipe with 6A Modular type switches and following type of accessories erected on PVC / Metallic/Wooden box, single mounting base frame covered with textured / metallic/white front plate modules erected on / in wall / ceiling as per pipe erected. with necessary batten/angle holder or ceiling rose or H.D.Connector as directed.(f) with medium class Rigid PVC pipe and accessories erected concealed in wall/ceiling complete Cat. III	14.00	Pt.	603.98	8455.72
135	Providing & erecting PVC Corrugated Flexible Conduit with required nos. of coupling, PVC bushes, Check-nuts etc. complete of following sizes.(2) 25 mm	300.00	Mtr.	21.21	6363.00
136	Providing and 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 (A) With medium class Rigid PVC pipe and accessories (b) 2 wire 2.5 sq. mm	1165.00	Mtr.	82.82	96485.30
137	providing and erecting Mains with 1.1 KV grade FRLS PVC insulated ISI marked stranded Copper conductor wire in following type of pipe to be erected in / on wall / ceiling with 2.5 sq. mm copper conductor FRLS PVC insulated stranded wire of green colour for earth continuity of following size (A) with medium class Rigid PVC pipe and accessories (c) 2 wire 10 sq. mm (use earth wire of 4 sq.mm)	150.00	Mtr.	236.34	35451.00

138	providing and erecting Mains with ISI marked, 1.5KV grade electrolyte multi stranded, annealed copper conductor with heat resistant PVC insulated conforms to IS 694, IEC - 227 erected in existing pipe of following size (Specifically for control panel, relays, power switchgears, motor starters & control wiring) with required size of copper lugs, nuts and bolts if required.(e) One wire 6.00 sq. mm	14.00	Mtr.	56.56	791.84
138A	(g) One wire 16.00 sq. mm	20.00	Mtr.	142.41	2848.20
138B	(f) One wire 10.00 sq. mm	52.00	Mtr.	91.91	4779.32
138C	(i) One wire 35.00 sq. mm	4.00	Mtr.	300.98	1203.92
139	Supplying and erecting Flexible PVC insulated multi strand multi core 1.1 kv grade ISI marked copper wires of following size to be erected as directed.(e) 1.50 Sq.mm 3 core round PVC sheathed	94.00	Mtr.	46.46	4367.24
140	Providing & erecting Switch board for Computer or electric apparatus consisting of following modular type accessories mounted with PVC / Metallic concealed/open box with single mounting base frame covered with textured/metallic /white front plate,modules erected with necessary connections as directed 1 no. 6A/16A universal plug-switch combined. 3 nos. 6A Switch 3 nos. 6A 5 pin Plug For Modular Type Accessories Cat. III	9.00	Ea	1133.22	10198.98

141	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/ aluminium die cast powder coated and high U.V. & corrosion resistance with diffuser with company mark/name 160V to 270V, Power Factor more than 0.95, THD < 15%, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt ,LED LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Tube Light with integral driver (v) 36-40 Watts, Surge-2 KV, IP-20, conventional 4 feet Cat-III	128.00	Ea.	535.30	68518.40
141A	(A) Tube Light with integral driver (i) 5-10 Watts, Surge-2 KV, IP-20, conventional 1 to 2 feet Cat-III	32.00	Ea.	165.64	5300.48
142	Supplying and erecting LED indoor fittings with LEDs of wattage 0.2 Watt to 0.5 Watt assembled on single MCPCB, with housing used as a heat sink shall be made of thick sheet Steel conforming to IS: 513/CRCA/aluminium pressure die cast powder coated and high U.V. & corrosion resistance with diffuser housed in aluminium casted body with company mark/name 160V to 270V,Power Factor more than 0.95, THD < 15 %, CCT 3000 K to 6500K, Luminaire efficacy> 85 lumens/watt , LED driver efficiency > 85 % (fitting required LM-79 & LM-80 Certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (H) Mirror Light 9 Watts, wall mounted minimum 1 feet long	10.00	Ea.	312.09	3120.90

143	Supplying and erecting LED street light / Flood light fittings with High power White LEDs wattage of 3 Watt and above assembled on single MCPCB, efficiency more than 130 lm/w and corrosion free High pressure die cast aluminum housing with smooth finish powder coated and heat sink extruded aluminium with diffuser and Polycarbonate optics/ lenses, with toughened glass with company mark/name engraved or embossed 160 to 270 V,Power Factor more than 0.95, THD < 10 %, CCT 3000 K to 5700K,Uniformity ratio >0.45, Luminaire efficacy> 100 lumens/watt . LED driver efficiency > 85 %.(fittings required LM-79 & LM-80 certificates)(NOTE: Below description have shown ranges of Wattage capacity of LED fittings.The Engineer incharge may select any wattage capacity between the ranges shown.) (A) Street Light (IP-65), Surge protection -4KV integral and ,Light must have 440VAC line supply with over-voltage (ii) above 48 to 60 Watts Cat-III	18.00	Ea	4997.48	89954.64
143A	(A) Street Light (IP-65), Surge protection -4KV integral and ,Light must have 440VAC line supply with over-voltage protection. (iii) Above 60 to 90 watts Cat-III	16.00	Ea	5976.17	95618.72
144	(b) LED Bollard fittings of minimum height 600 mm & dia.100mm having polycarbonate clear/milky diffuser mounted on 3mm thick aluminium finished powder coated pipe with base plate 160x160mm with erection by M8x75mm fastner with required RCC foundation.IP65 for 9 to 20 watt ,surge-4kv- cat-III	16.00	Ea	3161.30	50580.80
145	Providing and erecting Approved make Four pole moulded case circuit breaker having breaking capacity ICU of 25 KA. at 415 V,having normal current rating up to 25 A to 100A. with Fixed thermal & magnetic release suitable to work on A.C. supply 50 c/s. with all internal connections, spreader tinned copper & complete erected in existing 16 G.M.S. housing. ICS=100% of ICU only Cat III	1.00	Ea	6173.12	6173.12

146	Supplying and erecting triple pole & neutral 440V / 500V panel mounting Copper Busbars with four equal Nos. of electrolyte bus having current density not more than 1.6 Amp. / sq.mm (Rated current / cross section area) duly wrapped with colour insulating tape for phase sequence of following current carrying capacity, erected with necessary bus bar supports /insulators, main cable socket to each bar, erected in existing cubical panel with necessary connections.(A) Suitable for 100 Amp. Capacity	2.50	Rn. Mtr	1961.42	4903.55
147	providing and erecting Miniature circuit breaker single pole 0.5A to 2A system and having breaking capacity 10 KA to be erected in existing box. confirming to IS 8828/1996 with ISI Mark Cat.III	34.00	Ea	270.68	9203.12
148	providing and erecting Miniature circuit breaker single pole 6A to 25A suitable to operate on 240 V A.C. system and having breaking capacity 10 KA to be erected in existing box. confirming to IS 8828/1996 with ISI Mark Cat.III	100.00	Ea	112.11	11211.00
149	Providing & erecting 240 V MCB double pole switch for lighting Load (B Curve) having 10 KA breaking capacity & confirms to IS : 8828 in existing box having following capacity (B) 40 Amp.Cat.III	30.00	Ea	295.93	8877.90
150	Providing & erecting 415 V MCB Four Pole for Motor & Inductive Load (C Curve) having 10KA breaking capacity & confirms to IS :8828 in existing box having following capacity (b)40 Amp.cat-III	5.00	Ea	668.62	3343.10
151	Providing and erecting Sheet Steel powder coated MCB distribution board - flush / surface mounted fitted with busbar, neutral link, earth bar and DIN rail, Conforms to IS 8623-1 & 3, IEC 61439-1 & 3 without MCB to house appropriate nos. of MCBs.(The DBs should be used of same company of MCB to be used) suitable for (A) single phase incoming and horizontal single phase outgoingy (b) sheet steel double door (IP-43) (v) 16 way	5.00	Ea	1680.64	8403.20
151A	(A) single phase incoming and horizontal single phase outgoingy (b) sheet steel double door (IP-43) (iv)12 way	4.00	Ea	1492.78	5971.12
151B	(A) single phase incoming and horizontal single phase outgoingy (b) sheet steel double door (IP-43) (iii)8 way	2.00	Ea	1152.41	2304.82

152	providing and erecting Approved make RCCBs conforming to IS: 12640 and having sensitivity of 30 mA and Short Circuit withstand capacity of 10 KA and suitable for operation on single phase 240 V,50Hz. having characteristic of quick action & tripping with all advance feature & do not incorporate any electronic component. for following Max. rating erected as directed (ii) 40Amps. DP Cat. III	11.00	Ea	2235.13	24586.43
153	Providing and erecting required size Copper strip for earthing of H.T. OCB / ACB/ Transformer, LT panel board, Motors etc. using copper clamp.	5.00	Kg	794.87	3974.35
154	For using salt and charcoal / coke as required for pipe type earthing.	12.00	Ea	171.70	2060.40
155	Providing and erecting Pipe type earthing having 150 cms.long and 2.5 cms. dia. galvanised iron pipe with coupling and buch buried in specially prepared earth pit complete with necessary 8 SWG earth wire.	12.00	Ea	368.65	4423.80
156	Supplying & erecting earth pit of minimum bore dia.150mm size approved make Earthing Electrode consisting Pipe-in-Pipe Technology as per IS 3043-1987 made of corrosion free hot dipped G.I.Pipes having Outer pipe dia of 50mm having 80-200 Micron galvanising, Inner pipe dia of 25 mm having 200-250 Micron galvanising, connection terminal dia of 12mm with constant ohmic value surrounded by highly conductive compound with high charge dissipation suitable for following type of applications with chamber and heavy duty cover. (A)(approved make OEM has to submit test certificate including value of earth resistance of installation duly stamped and signed by agency and officer Incharge has to ensure the value of earthing resistane mentioned in test Certificate) & having back filling compound of (B) Inner chemical (CCM Compound)- Resistivity:- 0.2 ohm / meter testing as per IEC 62561-2017, Voltage drop:- < 1 volt at no load & dry form, Sulphar content:- <2%(C) Back fill Compound :- Earthing compound should be capable to retain moisture for long time Necessary test report must be submitted by Agency. (a) For Electrical Installation up to 440V in normal soil Length of pipe - 1 Mtr Back filling compound - 1 Nos Bag of 15 Kg.	1.00	Ea	4591.46	4591.46

157	Providing & erecting weather proof, dust & vermin proof, floor mounted front operated indoor type cubical panel board necessary IP-42 and above protection as per approval from engineer incharge made from 14 SWG thick CRC M.S. sheet for outer body & doors, 16 SWG thick CRC M.S. sheet for internal partitions with necessary accessories, supporting angles/ flats channel including cutting, bending, drilling, welding, riveting with internal partitions & cable alley as per requirements & instruction of engineer-in-charge with erection of supplied switch gears, BUSBARS, suitable size of inter connecting PVC copper wire / copper-aluminium strips, rubber grommets, rib, bakelite control fuses/MCB for measuring instruments, earth bus & earth bolts, foundation flange - bolts-base Plates, sufficient nos. of hinged doors, handles with locking arrangement and rubber gasket, heavy duty end terminal connection, danger notice board, necessary ventilation, earthing strip complete. The Panel shall be painted with epoxy powder coating. (The rates excludes the cost of switchgears, bus bars, inter connecting mains & Copper Aluminium strips, meters, Fuses etc. The dimension shall be measured excluding base beams) The panel shall be supplied with following approved manufacturers with following size(B) The standard companies switch gear shall be used and only manufacturers at CPRI approved factory (i) with 350mm depth	1.10	Sq. Mtr	14902.55	16430.06
158	Providing , erecting , fabricating the M.S. structure as per requirement on site incorporating proper size of M.S. angles, square, round, flats, bars, channels, sections complete with cutting, welding, grinding & finishing duly painted with one coat of red oxide with erection on site as per direction of engineer in charge with necessary grouting, cementing, plastering & finishing complete. (40 Kg Per Panel = 1 * 40)	40.00	Kg	77.77	3110.80
159	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable multistrand Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (C) 3 1/2 core 50 Sq. mm (25 Sq. 1/2 mm core)	5.00	Mtr.	284.82	1424.10

160	Providing and erecting XLPE (IS:7098)(I)-88 ISI armoured cable multistrand / Solid Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables (B) 4 core 6 Sq. mm	300.00	Mtr.	126.25	37875.00
161	Providing and erecting XLPE(IS:7098)(I)-88 ISI armoured cable Aluminium conductor for 1.1 KV. to be laid on wall with necessary clamps or in existing trench / pipe of following size of cables. (B) 2 core 6 Sq. mm	750.00	Mtr.	92.92	69690.00
162	Making trench in soft soil of suitable width of 90 cm deep for laying cable or locating the fault all over the run and back filling the same and making the surface as normal ground.	345.00	Mtr.	55.55	19164.75
163	Making trench in Hard Murrum / Tar Road of suitable width of 90 cm or required depth for laying any size of cable or locating the fault all over the run and back filling the same and making the surface as normal ground.(B) If additional machinery like hammer driller or JCB use [Add]	185.00	Mtr.	432.28	79971.80
164	Providing & laying approved make Double walled corrugated pipes (DWC) of polyethylene(conforming to IS 14930 II)with necessary connecting accessories of same material at required depth in existing trench for laying of cable. below ground / road surface for enclosing cable (A)50 mm outer dia	760.00	Mtr.	62.62	47591.20
165	Providing and, fixing heavy duty flange type brass cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables.(B) 2 to 4 core 6 Sq. mm	62.00	Ea	38.38	2379.56
166	Providing and, fixing heavy duty flange type brass double compression type cable gland with rubber ring for PVC insulated armoured cable complete with out going tails, insulating tape etc for following size of cables.(B) 3 & 1/2 core 35/50 Sq. mm	2.00	Ea	75.75	151.50
167	Solder less crimping type Aluminium lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (A) 1.5/ 2.5/4/6 Sq.mm	124.00	Ea	6.06	751.44
167A	(D) 35/50 Sq.mm. .	8.00	Ea	20.20	161.60

168	Solder less crimping type Copper lugs conforming to IS suitable for cable of following size evenly crimped with high pressure tool & connected to switchgear terminals with brass/cadmium plated nut bolts in an approved manner. (C) 16 Sq.mm.	16.00	Ea	12.12	193.92
169	Providing & erecting Approved make Power Saving 50 Watt Ceiling Fan with double ball bearing ISI mark with Condenser 230 volt A.C. 50 Hz 1200 mm sweep complete having 3 blades with aluminium blades with , canopy & 30 cm. down rod erected with earthing.(Make shall be approved by Engineer in charge))	25.00	Ea	1948.29	48707.25
170	Providing & erecting Approved make Ceiling Fan with double ball bearing with Condenser 230 volt A.C.50 Hz. 900 mm sweep complete having 3 Aluminium blades, canopy erected complete. [Make shall be approved by Engineer in Charge]	8.00	Ea	1982.63	15861.04
171	Supplying and erecting 19 / 20 mm. nominal bore Medium Class M.S. Pipe down rod erected duly painted for fan complete with proper insulation without leakage and earthing.	20.00	Mtr.	108.07	2161.40
172	Supplying & erecting fan hook box of 10 mm M.S. round bar bounded to the RCC bars up to 50mm length each side and pierced through a 16 Gauge M.S. box / Heavy Duty PVC box complete erected concealed in Ceiling with necessary finishing.	33.00	Ea	108.07	3566.31
173	Providing 2.5mm.thick laminated acrylic sheet to cover the fan hook or Fan box.	33.00	Ea	18.18	599.94
174	Supplying & erecting approved make low noise decorative exhaust fan having square frame ABS body with inbuilt lowers & square frame. 200mm with 1350RPM Cat.II	18.00	Ea	1703.87	30669.66

175	Supplying and erecting approved make Octagonal pole made from HR sheet steel. The pole should be made as per IS. and shall be coated with hot dip galvanizing as per IS 2629/2633/4759, suitable suspend local wind speed with integral Junction box consist of terminal plate of min 6mm Hylam sheet, standard profile 35mmX7.5mm Din-Rail for MCB Mounting, stud type terminal and arrangement for cable termination to be erected With Suitable foundation (Included) as per details given by manufacturer considering site requirement. (D) 6 Mtr. Long 70 mm Top X 135 mm bottom dia, 3 mm thickness with 200mmX200mmX12mm base plate, 4-M20 Bolts and 600mm long with necessary G.I. J Bolts .Approx Pole weight 59 kg	12.00	Ea	8192.11	98305.32
176	Supplying & erecting approved make SMC press moulded composite FRP. loop-in, loop-out approx. 2mm thick box complete with Bakelite connector strip 5way(3P+N+E),DIN rail for mounting mob & hinged doors as per requirement having locking arrangements with mounting clamp with nuts, bolts & washers suitable for erection on pole with cable clamps& earth bolt of following size of box.(D) 140mm x 140mm x 100mm [deep]	22.00	Ea	297.95	6554.90
177	Providing and erecting street light pole bracket comprising main B Class GI pipe of 4.2 cm/require outside dia. complete with suitable B Class G.I sleeve tubing of approx. 45cms.length and suitable for 76.5 mm / 80mm. / require size pole top having sufficient fasteners for fixing the brackets and having spread of 1 mtr. length with suitable rise as per site condition & suitable welded stiffener reducer and nipple with check nut complete painted with one coat of Red oxide / PU base primer and two coats of Aluminium / PU paint. paint with following nos of arms. [A] Single Arm bracket 1 Mtr	12.00	Ea	614.08	7368.96
178	Supplying and erecting B class Galvanized iron pipe having smooth finished bore of the pipe on both ends erected nuts and bolts along the pole / wall shaping the pipe as per site requirement. Pipe dia as following.(B) 32 mm dia	22.00	Mtr.	215.13	4732.86

179	Supplying & erecting approved make Digital time switch having lithium cell 6 years operative and operate battery backup 1 channel day clock with 14 memory programme, suitable to operate on 240V + 5%, 16A with, floating contacts Minimum switching setup time 1 minimum & LCD display. Also comprised permanent ON/OFF switching. Programming switches & housed in fire proof thermoplastic enclosure & transparent cover erected as required with necessary connection erected as directed.	4.00	Ea	3168.37	12673.48
180	Supplying & erecting power contactor ,AC3 duty for time switch complete erected as per direction Cat III (D) 4 pole 440V 40 Amp.	4.00	Ea	2782.55	11130.20
181	Supplying and erecting approved make panel mounting type Digital Voltmeter having 3 digits LED display, 0 to 750 AC Volts range erected on existing panel board with all connection, wiring etc .with manufacturers calibration certificate.	1.00	Ea	1275.63	1275.63
182	Supplying and erecting approved make panel mounting type Digital Ammeter having 3 digits LED display, external CT operated, calibrated for 0 to 1000 Amps suitable to operate on 500 Volt AC , erected on existing panel board with all connection, wiring etc .with manufacturers calibration certificate.	1.00	Ea	1558.43	1558.43
183	Supplying and erecting Ammeter / Voltmeter selector switch for 3 phase AC Supply 500 V on existing panel board with necessary connections.	2.00	Ea	317.14	634.28
184	Providing & erecting L.T. Current Transformer with bar primary 50/5 to 1000/5 ratio 15 VA burden erected in existing CRCA box duly secured with insulating materials connected to the meter	3.00	Ea	274.72	824.16
185	Supplying and erecting approved make suitable panel indicator LED type lamp, lens cover, complete erected with necessary connections.	3.00	Ea	43.43	130.29
186	Providing & erecting open well horizontal mono block pump set with cast iron body, complete for three phase submersible motor having [E] For 7.5 HP 3 phase open well horizontal mono block pump set suitable for 1550 LPM to 370 LPM @ 13.5 Mtr to 42 Mtr head suitable for 65/75 mm dia delivery pipe Cat.II	2.00	Ea	25987.30	51974.60

187	Supplying & erecting approved make motor control cubical panel (Direct - on - line) made from 16 G. CRCA sheet duly epoxy powder painted inside and outside with hinged doors and locking, arrangement consisting of suitable size of ON- OFF isolator (AC - 3/23duty) main fuses, single phasing preventer, indicating lamps for R- Y - B phases, overload relay, Automatic water level controller, Ammeter, Voltmeter each with two way selector switch incoming, wires duly socket crimped, main contactor & overload relay, start - stop push buttons, to be erected on angle iron frame grouted on wall as directed. The isolator, overload relay & contactors will be of L & T, Siemens or BCH make only. (B) DOL for 7.5 H.P.	3.00	Ea	8710.24	26130.72
188	S.I.T.C. submersible pump set suitable for bore of 150 mm. dia. or more having three phase motor capacity not more than 7.5 H.P. with following capacity . Lifting and Lowering taken extra.(A) (12 stage) 280 to 240 LPM discharge at 90 to 104 mtrs. head respectively suitable for 50mm dia. delivery pipe Cat.III	1.00	Ea	35590.38	35590.38
189	Lowering of submersible motor pump set at the depth of following ,complete with required. Nos. and size of casing pipes erected by means of proper chain pulley block & pipe wrenches after checking of threads of each pipe with coupling to take the load of the pump set and pipe assembly filled up with water (B)Above 60 mtrs. and Up to 120 mtrs.	1.00	Per Job	2568.43	2568.43
189A	(D)For Open well Horizontal submersible pump set for sump well (ii) 7.5HP to 15 HP	2.00	Per Job	1284.72	2569.44
190	Providing and erecting ISI marked PVC insulated PVC Sheathed Flat flexible Submersible copper cable approved make of following Size. (C) 3 Core x 4 Sq. mm	130.00	Mtr.	146.45	19038.50
191	Providing Water proof straight Joint in PVC insulated flat flexible copper cable by using insulating material, water proofing material, & making the joint complete.(A) Up to 10Sq. mm	6.00	Ea	189.88	1139.28
192	Supplying of following size of STANDARD UPVC column pipe with coupler and wire lock [E] 65 mm dia	30.00	Rn. Mtr	390.87	11726.10

193	Supply of following size of TOP & BOTTOM accessories i.e. Adaptor set (CI) long, pump guard set, starter pipe Rubber ring for submersible pump & UPVC column pipe as directed by Engineer - in - charge with necessary plumbing as desired. [D] 50 mm dia	1.00	Per Set	1489.75	1489.75
194	Providing & laying approved make ISI marked HDPE 6Kg / cm ² (Class-3) as per IS:4984:1995 PE-80 to be erected at road crossing on or floor as directed for laying of cable. The pipes as following size of dia & weight per 6 mtr.(B) 50 mm inner Dia.	100.00	Mtr.	163.62	16362.00
		TOTAL CIVIL ITEMS			35016860.22
		TOTAL ELECTRICAL ITEMS			1450982.05
		GRAND TOTAL CIVIL+ELECT.			36467842.26

I/We am/are willing to carry out the work at.....% above/below percent (Should be written in figures and words) of the estimated rate mentioned above. Amount of my /our tender works out as under.

Estimated amount put to tender

Estimated amount put to tender

Deduct.....% below

Deduct.....% above

Net

Net

In words

In words

NOTES ::-

- (1).The Contractor shall exhibit a board with detailed specification and details of work as directed by the Engineer-In-Charge for which no extra payment shall be made.
- (2). The labourcess will be deducted as per prevailing rules i.e. 1% of the work done.
- (3).GST and Income tax TDS will be deducted at a source while making payments of bills
- (4).Testing of materials shall be as per statement attached with the specification. The materials shall be tested in GERI bill for the testing charge shall be paid by the deparment and 1% (one percent) of the test shall be paid of amount put to tender after deduction the cost of the materials as per Schedule "A" rate form the materials running bill (As per GR (R&B) No. TNC / 1085 / 4 C Dt. 10-5-85
- (5). In all R.C.C. Items in Rate Analysis Standard Cement Consumption has been taken as per Govt. G.R.: PRC-10/2017 Cement Consumption/16/C Date:11/05/2017 as stated in S.O.R. therefore in R.C.C. items where there is a change as per actual mix design the cost of difference of cement consumption have been deducted from the rate of original item at the rate of input rate mentioned in all the tender.

Deputy Executive Engineer
Dist. R & B Sub-Division
Jetpur

Executive Engineer
Dist R & B Division
Rajkot

Name of work :- Construction of Revenue Staff Quarters (C type - 4 unit, B type - 4 unit, D type - 1 unit) at Jetpur , Dist Rajkot.

Material test schedule

Sr. No.	Materials to be tested	Name of laboratory test	Frequency of testing	Remarks
1	2	3	4	5
1	Cement	Consistency	Upto 50 M.T. = 1 Sample 50 to 100 M.T. = 2 Sample 100 to 200 M.T. = 3 Sample 200 to 300 M.T. = 4 Sample 300 to 500 M.T. = 5 Sample 500 to 800 M.T. = 6 Sample 800 to 1300 M.T. = 7 Sample and 8 Sample for large consignment	As per receipt of cement, one sample of 15 Kg. from 20 bags in consignment of 50 M.T. shall be taken for testing. Minimum one sample for each consignment less than 50 M.T. of cement received.
		Initial & Final setting time		
		Compressive strength		
		Fineness		
		Soundness		
		Specific gravity		
		Chemical analysis		
2	Water	Potability	1 test per each source of supply per every working season.	Or as required while execution or change of source.
		Salinity		
		Chemical analysis		
3	Sand	Fineness modules	1 test per each source of supply per every working season.	Or as required while execution or change of quarry.
		Specific gravity		
		Water absorption		
		Clay & Fine silt content		
		Gradation test		
		Pentography exclusiation		
4	Crushed Stone	Specific gravity	1 Test / 150 Cu.m/2 test per each	Or as required while execution or

	aggregate	Soundness	source of supply per every working after season.	change of quarry.
		Water Absorption		
		Impact Value		
		Gradation Test		
		Crushing Test		
		Abrasion Value		
		Flakiness		
5	TMT Bar FE 500D	Elongation	One test per 20 M.T. for each categories & every lots supplied.	Or as required while execution
		Tensile Strength		
		Bend and rebend test		
		Yield Strength		
		Dimension Test		
6	C.C. Cubes (Ordinary & Controlled C.C.)	Compressive Strength for 7 & 28 days	1 to 5 Cum. = 1 Test	Or as required while execution
			6 to 15 Cum = 2 Test	
			16 to 30 Cum = 3 Test	
			31 to 50 Cum = 4 Test	
			51 & above 4 + 1 test each 50 Cum.	
7	Bricks	Compressive strength	1 Test per 50000 No	Or as required while execution
		Water absorption		
		Efflorence, Size		
8	Tiles	Dimension Test	1 Test per manufacturer.	Or as required while execution
		Transverse Strength		
		Water Absorption		
		Abrasion Test		

9	Crushed Metal (W.B.M.)	Aggregate Impact Value Flakiness Index Water absorption Gradation Stripping Value Soundness Crushing Strength	Up to 100 Cum. = 1 Test 101 to 500 Cum. = 3 Test 501 to 1500 Cum. = 5 Test 1501 to 5000 Cum. = 7 Test 5001 & above = 1 Additional Test	Or as required while execution
10	Paver Block	Compressive strength Water absorption Transverse Strength Efflorence, Size	1 Test per 50000 No	Or as required while execution
11	Murum	Liquid Limit Plasticity Index Free Swell Index Sieve Analysis	1 Test per 200 Cum One test from each source	Or as required while execution
12	Teak wood	Anatomy test Density Test Moisture content	1 Test per lot supplied on site	Or as required while execution

1 Testing of materials should be as per statement attached with the specification. The materials shall be tested in GERI Bill for testing shall be paid by the Deptt. and 1% (One percent) of amount put to tender from the running account bills of the work (As per G.R.(R&B) Deptt.No. TNC 1085/4/C Dt. 10-5-85.

2 Samples to be sent by contractor to GERI.
(Signature of Contractor
)

Deputy Executive Engineer
Dist. R & B Sub-Division
Jetpur

Executive Engineer
Dist R & B Division
Rajkot