

**BRIHANMUMBAI MUNICIPAL CORPORATION**

**C-305: Strengthening & Improvement of Narayan Dabholkar Marg and J Mehta Marg in Cement Concrete in 'D' ward in Zone-I, City Division.**

**Combined BOQ**

| Sr. No. | Item Code No. | Description  | Unit   | Rate     | Qty      | Amount         |
|---------|---------------|--|--------|----------|----------|----------------|
| 1       | R2-CS-EW-1    | Excavation for foundations, substructures, basements, tanks, sumps, walls, chambers, manholes, trenches, poles, pits & general building works in all types of soils, vegetable earth, soft murum, running sand, shingle, turf clay, loam, peat, ash, shale, slag, chalk, garbage, muddy/ marshy/ slushy soil, marine clay, reclaimed land etc. for depths/lifts upto 1.5M measured from the ground level, including dressing/ trimming the sides, leveling and ramming of bottoms, manual dewatering, removing rank vegetation, backfilling in layers not more than 200mm thickness, watering, consolidating, compacting to achieve not less than 97% Modified Proctor density conforming to relevant IS, stacking the selected material in measurable heaps for future use within owners space or | Cu.Mt. | 307.00   | 8,999.00 | 27,62,693.00   |
|         |               | 1) The rate includes the handling/supporting the existing utilities such as cables, drains, pipes, water mains etc.  |        |          |          |                |
|         |               | 2) It also includes the royalty and other taxes applicable if any. For more details refer General Notes.   |        |          |          |                |
| 2       | R2-CS-EW-2-a  | Extra over above item CS-EW-1 for lift from 1.5m to 3.0m.  | Cu.Mt. | 71.00    | 3,976.00 | 2,82,296.00    |
| 3       | R2-CS-EW-2-b  | Extra over above item CS-EW-1 for lift from 3.0m to 4.50m.   | Cu.Mt. | 106.00   | 103.00   | 10,918.00      |
| 4       | R2-CS-EW-2-c  | Extra over above item CS-EW-1 for lift from 4.5m to 6.0m   | Cu.Mt. | 171.00   | 63.00    | 10,773.00      |
| 5       | R2-CS-EW-18   | Excavation by using splitters over areas for basements, roads, land/plot developement etc. in hard rock, reinforced concrete, Bituminous macadam for all depths/lifts, including manual dewatering, filling the selected excavated earth at the locations as directed, in layers not more than 200mm thickness, watering, consolidating, compacting to achieve not less than 97% Modified Proctor density conforming to relevant IS, stacking the selected material in measurable heaps for future use within owners space or disposing within an initial lead of 150m as directed, loading, unloading, leveling excluding shoring.  | Cu.Mt. | 3,007.00 | 3,888.00 | 1,16,91,216.00 |
| 6       | R2-CS-EW-13   | Providing and removing open or closed shoring and strutting in the trenches/ pits for all depths as per specifications/ drawings and or as directed by Engineer-in-charge by including walling, struts, open poling boards, horizontal sheeting, runners, dog spikes by using timber etc. complete.  | Sq.Mt. | 715.00   | 2,397.00 | 17,13,855.00   |
| 7       | R2-CS-EW-16   | Excavation over areas for basements, roads, land/plot developement in soft/ disintegrated rock, sand stone, stiff clay, gravel, cobblestone, hard laterite, water bound macadam, wet mix macadam, pitching, soling, paths and hardcore, lime concrete, plain cement concrete, stone masonry and all types of brick/ block masonry below ground level, rock boulders, etc. for all depths/lifts including manual dewatering, filling the selected excavated earth at  | Cu.Mt. | 343.00   | 7,112.00 | 24,39,416.00   |
|         |               | 1) The rate includes the handling/supporting the existing utilities such as  |        |          |          |                |
|         |               | 2) It also includes the royalty and other taxes if any.  |        |          |          |                |
| 8       | R2-RW-10-55   | Excavation in Reinforced OR pavement grade concrete M-20 & above by using modern machinery (poclain with rock breaker, etc.) including with stacking of excavated material within 150 m radius etc complete upto any depth as specified & as directed, by the Engineer.  | Cu.Mt. | 1,525.00 | 16.00    | 24,400.00      |
| 9       | R2-RW-1-13    | Levelling, watering & rolling by vibratory roller weighing not less than 10 tonnes & preparing the ground to the required grade & camber etc. complete as specified as directed by the Engineer as per prevailing MCGM specification for Roadworks.  | Sq.Mt. | 9.83     | 10.00    | 98.25          |

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|---------|---------------|--|--------|----------|----------|----------------|
| 10      | R2-RW-1-06    | Levelling, watering and rolling to 95% Standard Proctor Density with a power roller weighing not less than 10 tonnes and preparing the ground to the required grade and camber for rolling in trenches as specified as directed by the Engineer ..   | Sq.Mt. | 18.00    | 0.00     | 0.00           |
| 11      | R2-RW-2-20    | Providing & laying, spreading & compacting graded crushed stone aggregate to wet mix macadam satisfaction including premixing the material with water to OMC in mechanical mix (pug mill) carriage of mix material by tipper to site laying in uniform layer of 75mm to 100mm (compacted thickness each) with sensor paver finisher on prepared subbase & compacting with vibratory roller (10 tonne) to achieve desired density including lighting, guarding barricading & maintenance of diversion etc. as directed by the Engineer, ( Rebate for not using sensor paver should be taken, (metal gradation from 53mm to 75mm micron as per prevailing MCGM specification for Roadworks   | Cu.Mt. | 2,937.00 | 2,603.00 | 76,45,011.00   |
| 12      | R2-RW-2-21    | Providing & laying, spreading & compacting specified crushed stone in granular subbase course including premixing the material in mechanical mixer (pug mill or approved type), spreading of mixed material in uniform layer of 100mm to 75mm (compacted thickness each) with motor grader or paver on prepared surface & compacting with 10 tonne vibratory roller to achieve desired density including all material, labour, machinery, lighting barricading to all lifts & lead maintenance of diversion etc. complete (metal gradation from 75mm to 75 micron as per prevailing MCGM specification for   | Cum    | 2,547.00 | 4,056.00 | 1,03,30,632.00 |
| 13      | R2-RW-10-32   | Providing and laying Dry Lean Concrete base including providing coarse and fine aggregate to the specified gradation using minimum cement content 150 kg/cum of concrete with OPC 43 grade cement, mixing of concrete as per approved design mix using mechanised batch mix plant of appropriate capacity, transporting and laying and compacting with vibratory roller of minimum 80- 100 KN static weight to give desired compacted density and average compressive strength of 10 MPa at 7 days and curing with liquid curing compound and sprinkling water and covering with moist hessian cloth or ponding of water for 7 days including providing construction joints, including all material, labour, machinery with all leads and lifts etc. complete as specified and as directed by the Engineer. A) Laying by manually. | Cu.Mt. | 4,481.00 | 1,741.00 | 78,01,421.00   |
| 14      | R2-RW-10-33   | Providing & laying M-40 C.C. avg. compressive strength 45 MPa and avg. flexural strength of 5.0 MPa (As per IRC 15-2002.N.1.6) procured from M.C.G.M. approved R.M.C. plant including use of approved make plasticizer / retarder & Contractors water with ice flakes and transported by RW-10-33 transit mixer and placing at work site. Compacting finishing, initial curing by approved curing compound & Contractors water and tarring the sides of slab with hot bitumen as specified and directed (w/c ratio 0.4 maximum) (vata for curing will be paid separately.) (MINIMUM CEMENT CONTENT 350 kg/m <sup>3</sup> )   | Cu.Mt. | 7968.00  | 3,794.00 | 3,02,30,592.00 |
| 15      | R2-RW-10-11   | Cutting of construction & dummy/joints of M-35 C.C. & above slab by mechanical means within 10 to 16 hrs. of casting of bay/slab as directed. A) transverse dummy joints 100mm deep/ 1/3 thickness of concrete pavement & 6mm wide.  | Rmt.   | 59.00    | 4,119.00 | 2,43,021.00    |
| 16      | R2-RW-10-12   | Cutting of construction & dummy/joints of M-35 C.C. & above slab by mechanical means within 10 to 16 hrs. of casting of bay/slab as directed. B) Longitudinal construction joints 100mm deep/ 1/3rd thickness of slab & 6mm wide   | Rmt.   | 59.00    | 9,072.00 | 5,35,248.00    |
| 17      | R2-RW-10-13   | Providing & fixing in position premoulded asphalt filler 12mm thick conforming to I.S. 1838 of 1983 for placing of the expansion joint, around manholes & water entrances, etc put to the required depth & 25mm below the camber, etc. complete as directed.   | Sq.Mt. | 352.00   | 840.00   | 2,95,680.00    |
| 18      | R2-RW-10-14   | Providing & placing 5mm thick thermocole in dummy & construction joints immediately after cutting of joints & removing the same before dressing of dummy & construction joints etc. complete, as directed.   | Sq.Mt. | 76.00    | 1,543.00 | 1,17,268.00    |
| 19      | R2-RW-10-15   | Providing & fixing high density polythene pipe of approved quality to fit around the dowel bars of 32mm dia at the end of expansion joints, fully greased inside, cotton waste the pipe around the dowel bars & the pipe duly capped at the end as directed. (H.D.P. pipe shall be 30cm in length) As shown in the drawing.  | EACH   | 31.00    | 2,312.00 | 71,672.00      |
| 20      | R2-RW-10-16   | Providing & fixing in position mild steel in tie bars of 12mm dia 55cm long & 45cm C/C whenever directed including handling, wrapping with paper for half length, fixing straightening, wastage etc. complete in all respect as directed.  | MT     | 63226.00 | 5.73     | 3,62,247.86    |
| 21      | R2-RW-10-17   | Providing & fixing in position M.S. dowel bars of 32mm dia 55cm long & 30cm C/C whenever directed including handling, fixing, etc. complete (no extra payment will be made for applying bitumen & grease to dowel bars)  | M.T.   | 62904.00 | 8.70     | 5,47,264.80    |

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|---------|---------------|--|--------|--------|-----------|--------------|
| 22      | R2-RW-10-18   | Providing & laying waterproof paper of 40 GSM including overlap ( to be not less than 10cm)etc. complete as specified as directed.   | m2     | 11     | 13,322.00 | 1,46,542.00  |
| 23      | R2-RW-10-19   | Providing & constructing cement vatas in cm 1:10 at 0.6m * 0.6m c / c admeasuring 0.09m at bottom, 0.04m at top & 0.075m deep & maintaining the same throughout 14 days curing & removing the same thereafter as directed.   | m2     | 78     | 13,321.00 | 10,39,038.00 |
| 24      | R2-RW-10-23   | Dressing of M-35 & above new C.C.pavement,dummy,transverse, longitudinal & expansion joints with hot rubberised sealing compound conforming to IS 1834-1984 after proper cleaning with compressed air,applying required primer & providing a layer of lime powder over hot sealing compound etc. complete as directed. A) Sealing 6mm wide dummy/transverse joints with a depth of 100mm/1/3rd thickness of concrete pavement.   | RM.    | 92     | 4,119.00  | 3,78,948.00  |
| 25      | R2-RW-10-24   | Dressing of M-35 & above new C.C.pavement,dummy,transverse, longitudinal & expansion joints with hot rubberised sealing compound conforming to IS 1834-1984 after proper cleaning with compressed air,applying required primer & providing a layer of lime powder over hot sealing compound etc. complete as directed. B) Sealing of 6mm wide longitudinal joint with depth of 100mm./1/3rd thickness of concrete pavement.  | RM.    | 92     | 9,072.00  | 8,34,624.00  |
| 26      | R2-RW-10-25   | Dressing of M-35 & above new C.C.pavement,dummy,transverse, longitudinal & expansion joints with hot rubberised sealing compound conforming to IS 1834-1984 after proper cleaning with compressed air,applying required primer & providing a layer of lime powder over hot sealing compound etc. complete as directed. C) Sealing of 25mm wide expansion joints with avg. depth of 12mm.   | RM.    | 60     | 840.00    | 50,400.00    |
| 27      | R2-RW-3-11    | Providing & fixing 80 mm thick interlocking unishape concrete pavers ( monolithic- single layer precast concrete blocks) in grey cement in the carriageway havingaverage crushing strength of not less than 50N/mm2 as per technical specification and IS Code 15658:2006, placed on average compacted thickness of 25 mm, well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with the proper level, grade and camber etc. complete as specified and as directed by the Engineer.   | Sq.Mt. | 871.00 | 0.00      | 0.00         |
| 28      | R2-RW-3-13    | Removing& refixing interlockingconcrete pavers of 80 mm thick, of any size, shape and colour considering 10% breakage area of paver block while removing the same from position and replacing the same by new paver blocks having average crushingstrength not less than 50 N/mm <sup>2</sup> as per technical specification and IS Code 15658:2006, placed on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical compactor with required level, grade and camber etc. complete as specified and as   | Sq.Mt. | 225.00 | 0.00      | 0.00         |
| 29      | R2-RW-3-14    | Removing& refixing interlocking concrete pavers of 60 mm thick, of any size, shape and colour considering 10% breakage area of paver block while removing same from position and replacing the same by new paver blockshaving average crushingstrength of not less than 40 N/mm <sup>2</sup> as per technical specifications and IS Code 15658:2006, placed on average compacted thickness 25 mm well graded sand cushioning uniformly compacted with proper capacity mechanical   | Sq.Mt. | 215.00 | 200.00    | 43,000.00    |
| 30      | R2-RW-3-17    | Providing & fixing in the footpath, 60 mm thick Lacquer coated (Reflective) interlocking gray cement concrete pavers in red ( Terra Cotta) Black, Brown, Lemon Yellow or any colour with vermeticular or any antiskid texture on top surface of approved pattern/ shape and colour having average crusting strength 40 N/mm <sup>2</sup> manufactured in double layer precast concrete blocks. The top layer of paver block should be 12 to 15 mm thick and consist cubical shape  | Sq.Mt. | 858.00 | 0.00      | 0.00         |
| 31      | R2-RW-3-22    | Removing the paver blocks of any thickness, size & colour from carriage way or footpath & transporting the same to ward depot or any where in MCGM limit. The paver blocks shall be stacked neatly at specified location etc. complete as specified and as directed by the Engineer.   | Sq.Mt. | 157.00 | 4,440.00  | 6,97,080.00  |
| 32      | R2-RW-10-60   | Providing and fixing of the precast kerb stone of height 325mm., base width 165mm., top width 115mm.in M20grade RMCsupplied through MCGM approved plant or concrete mixed with use of weigh batch mixers as detailed in drawingu/No.Dy.Ch.E./Rds/93/E.S. of17 /8 / 2005, excavation in any soil except rock, laying a leveling course of M 15 grade RMC 100mm. thick, to required slope (inclusive of form work) jointing in C.M.1:2 proportion flush to concrete surface, painting exposed surface with one coat of primer and two coats of 1st grade road marking paint in the yellow/white/black or any shade as directed.(Kerbstones shall be procured from MCGM registered agencies). | Rmt .  | 605.00 | 1,144.00  | 6,92,120.00  |

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|---------|---------------|--|-------|----------|----------|-------------|
| 33      | R2-RW-4-02    | Removing & resetting kerb stones in 1:2 C.M. on new R.M.C.M-20C.C. bed 15 cm, thick including filling the joints with 1:2 C.M. pointing, curing etc. complete.   | Rmt . | 351.00   | 157.00   | 55,107.00   |
| 34      | R2-RW-7-17    | Providing and applying Yellow & Black road marking paint Grade- I in 3 coats, including single coat of approved brand primer after cleaning of old surface of kerb stone with brushing by wire brush as per relevant I. S. codes to the satisfaction of Engineer in charge etc. complete   | R.Mt. | 50.00    | 157.00   | 7,850.00    |
| 35      | R2-RW-10-61   | Providing and fixing of the precast tapered water table of thickness varying from 105 to 125 mm., 300mm. Width in M 20 grade RMC (Supplied through MCGM approved plant) or concrete mixed with use of weigh batch mixers as detailed in drawing No. DyChE/Rds/94/E.S. dated 17.8.2005 inclusive of excavation in any soil except rock, laying of leveling course of M 15 grade RMC 100mm. thick to required slope,   | Rmt . | 471.00   | 126.00   | 59,346.00   |
| 36      | R2-RW-4-07    | Removing & resetting water tables 30 cm. wide on a new M-20 cement concrete bed 15 cm, thick including filling in the joints with C.M. 1:2 and cement pointing, curing including removing the old cement bed, curing etc. complete.  | Rmt . | 398.00   | 20.00    | 7,960.00    |
| 37      | R2-RW-4-13    | Removing & resetting double row of sett stones on R.M.C. M-20 C.C. bed, 15 cm. thick and 25 cm. wide including filling the joints with C.M. 1:2 and cement pointing and removing old concrete bed, curing etc. complete.   | Rmt . | 372.00   | 0.00     | 0.00        |
| 38      | R2-RT-15-05   | Providing, casting, fixing (anywhere in city or suburban limit) precast type 1 (both side taper) dividers in C.C.M 25 as per drg. No. EET&C/Gen/013/03/ty dt. 11.12.03 (Revised on 15.06.06) including fixing the dividers on site in C.M 1:2 for cushioning and jointing, curing, painting the exposed surface with road marking paint grade I (Conforming to IS-164) in two coats of approved colour, including excavation in road portion and removing excavated material as per  | R.Mt. | 3,149.00 | 100.00   | 3,14,900.00 |
| 39      | R2-RT-15-07   | Providing, casting, fixing (anywhere in city or suburban limit) precast type 2 (single side taper) dividers in C.C. M-25 as per drg. No. EET&C/Gen/013/03/ty dt. 11.12.03 (Revised on 15.06.06) including fixing the dividers on site in C.M 1:2 for cushioning and jointing, curing, painting the exposed surface with road marking paint grade I (Conforming to IS-164) in two coats of approved colour, including excavation in road portion and removing excavated material as per   | R.Mt. | 1,220.00 | 40.00    | 48,800.00   |
| 40      | RT-15-04      | Providing, casting and fixing (any where in city or suburban limit) precast reinforced parabolic dividers in C.C.M 25, Type-5 as per drg. No. EET &C/Gen/013/03/Ty dt. 11.12.03 (Revised on 15/06/06) including providing, bending, fixing of reinforcement as per drawing, fixing the dividers on site in C.M. 1:2 for cushioning and jointing, filling the gap between dividers with C.C.M 15, curing, painting the exposed surface with road marking paint grade I (confirming to IS- 164) in two coats of approved colour including excavation in road portion and removing excavated material as per direction any where in city or     | R.Mt. | 6403.00  | 0.00     | 0.00        |
| 41      | R2-RW-5-20    | Providing and applying PRIME COAT with CATIONIC BITUMEN EMULSION (SS) @ 7 to 12 Kg. of 10 Sq.mt. over prepared surface to receive bituminous mix by applying PRIMER with mechanical spray bitumen, including cleaning of road surface etc. completed, as directed For Low Porosity surface & the primed surface shall be allowed to cure for at least 24 hours or any other higher period, as is found to be necessary to allow all the moisture or volatiles to evaporate before any subsequent bituminous surface treatment or mix is laid (As per prevailing MCGM specification for Roadworks Clause No. 313, curing as per 313.5) 313.5) | Sqm   | 57.00    | 400.00   | 22,800.00   |
| 42      | R2-RW-5-23    | Providing and applying TACK COAT with CATIONIC BITUMEN EMULSION (RS) @ 0.2 to 0.25 Kg. of Sq.mt. over prepared surface to receive bituminous mix by applying TACK COAT with mechanical spray bitumen, including cleaning of road surface etc. completed, as directed For NORMAL BITUMINOUS SURFACES & the tack coat shall be left to cure until all the volatiles have evaporated before any subsequent construction is started, which is indicated by change in colour from brown to black (As per prevailing MCGM specification for Roadworks Clause No. 314, curing as per 314.3.4)   | Sqm   | 33.00    | 1,030.00 | 33,990.00   |
| 43      | R2-RW-5-24    | Providing and applying TACK COAT with CATIONIC BITUMEN EMULSION (RS) @ 0.25 to 0.30 Kg. of Sq.mt. over prepared surface to receive bituminous mix by applying TACK COAT with mechanical spray bitumen, including cleaning of road surface etc. completed, as directed For DRY & HUNGRY BITUMINOUS SURFACES (As per prevailing MCGM specification for Roadworks Clause No. 314)   | Sqm   | 35.00    | 630.00   | 22,050.00   |

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|---------|---------------|---|------|-----------|----------|--------------|
| 44      | R2-RW-5-25    | Providing and applying TACK COAT with CATIONIC BITUMEN EMULSION (RS) @ 0.25 to 0.30 Kg. of Sq.mt. over prepared surface to receive bituminous mix by applying TACK COAT with mechanical spray bitumen, including cleaning of road surface etc.complected, as directedForGRANULAR SURFACES Treated with PRIMER (As per prevailing MCGM specification for Roadworks Clause No. 314)   | Sqm  | 35.00     | 1,030.00 | 36,050.00    |
| 45      | R2-RW-7-10    | Milling upto 75 mm depth asphaltic surface by using milling machine including transportation anywhere as directed. (This item should be operated only when milling in a single pass is required to be done for more than 60 mm depth.)  | Sqm  | 82.00     | 693.00   | 56,826.00    |
| 46      | R2-RW-1-01    | Scarifying the existing bituminous road surface to a depth of 150 mm removing, including transportation any where & bringing the existing road to proper grade, level & camber &/ as per super elevation, rolling with 10/12 Tonnes power roller & binding the scarified layer with stone dust/grit/ sand,watering,brushing, rolling,etc. complete as specified as directed by the Engineer.  | Sqm  | 180.00    | 35.00    | 6,300.00     |
| 47      | R2-RW-5-63    | P/L, mastic asphalt 40mm thick with 10/20 grade bitumen including producing the same at computerised batch mix plant, transporting the same to site by means of mastic cookers, laying the same with mastic paver and including all necessary tools, labours & barricading, spreading of aggregates as antiskid measures by means over newly laid mastic asphalt as per MCGM specification clause no. 365 of 'Roadworks' as directed by Engineer in charge (Note: The material  | Sqm  | 1,660.00  | 1,173.00 | 19,47,180.00 |
| 48      | R2-RW-5-50    | P/L hot PremixDense bituminous macadam with 4.50%bitumen content of grade VG-30 to the required line,level,and camber rolling with 10/12 M.T.power ,vibratory roller & sensor paveretc. complete as specified and as directed with antistripping agent at 1%by weight of bitumen using grading II of "MORTH"(As per prevailing MCGM specification for Roadworksclause no.354)   | Cu.m | 8,797.00  | 58.00    | 5,10,226.00  |
| 49      | R2-RW-5-48    | P/L hot PremixDense bituminous macadam with 4.50%bitumen content of grade VG-30 to the required line,level,and camber rolling with 10/12 M.T.power ,vibratory roller & sensor paveretc. complete as specified and as directed to thickness of 50 mm. with antistripping agent at 1% by weight of bitumen using grading II of "MORTH"(per prevailing MCGM specification for Roadworks clause no.354)   | Sqm  | 440.00    | 400.00   | 1,76,000.00  |
| 50      | R2-RW-5-41    | P/L MINIMUM 30 mmcompactedthick hot Premix Bituminous concrete with6.00% of VG-40 grade bitumen using new material any where as directed including Rolling with 10/12 MTpower ,vibratory roller & sensor paver to the required line, level, camber with line filler of 2% by weight & antistripping agent @ 1% of bitumen content by weight etc. complete.(per prevailing MCGM specification for Roadworks clause no.364)   | Sqm  | 338.00    | 400.00   | 1,35,200.00  |
| 51      | R2-RW-6-03    | Raising or lowering circular manholes to the required level upto 20 cm including all material, form work etc. with 16 cm thick cement concrete, M 15 (1:2:4) coping under frame and cover of manhole, including curing etc. complete as specified and as directed.  | Each | 1,151.00  | 44.00    | 50,644.00    |
| 52      | R2-RW-6-04    | Raising or lowering water entrances, hydrant key box/ sluice box/gully trap chambers to the required level, upto 20 cm including all materials, curing etc. complete as specified and as directed.  | Each | 801.00    | 36.00    | 28,836.00    |
| 53      | R2-RW-6-05    | Raising or lowering rectangular manholes to the required level upto 30 cm including all materials, form work, brick work and with 16 cm thick M 15 cc coping under frame & cover of manhole including curing etc. complete as specified and as directed.  | Each | 2,297.00  | 48.00    | 1,10,256.00  |
| 54      | R2-HE-8-24    | Removing and refixing of existing S.P. fire hydrants for replacing of mouth piece, duck foot bend, Sluice valve, as required as per specifications & drawing but including painting the hydrant, fixing the saddle piece, supplying and jointing the same with spun yarn, molten lead, including caulking etc. complete as directed & as specified by Engineer In Charge. (as per IS : 908) Note : 1) The new material required, will be paid separately on the basis of weight per kg of material. 2) The cost of constructing valve chamber will be paid separately. 3) Rebate for salvation cost of existing material replaced will be taken at the rate of Rs 25/Kg Basic rate for new material a) CI Rs.55 /kg | Each | 1,452.00  | 12.00    | 17,424.00    |
| 55      | R2-HE-8-25    | Removing of existing S.P. fire hydrants and replacing them with new SP fire hydrants with its complete assembly including supplying and jointing the same with spun yarn, molten lead, including caulking etc. complete as directed & as specified by Engineer In Charge. (as per IS : 908). Note : The salvage value for old fire hydrant has been considered on per Kg basis.   | Each | 15,104.00 | 4.00     | 60,416.00    |

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|---------|---------------|---|--------|-----------|----------|-------------|
| 56      | R2-RW-7-01    | Removing & refixing traffic regulatory boards/ busstop boards/ street name boards etc. in M 10 cement concrete, complete as directed.   | Each   | 881.00    | 40.00    | 35,240.00   |
| 57      | R2-RW-7-02    | Removing traffic regulatory boards/ busstop boards with brackets etc., to ward chowky complete as directed.   | Each   | 197.00    | 0.00     | 0.00        |
| 58      | R2-RW-7-05    | Cutting down existing stone/ brick masonry compound walls, abutments, piers, wing-walls etc. including stacking the rubble, khandkies etc. in stack, as directed. (Actual volume of structure will be paid.)  | Cu.Mt. | 211.00    | 86.00    | 18,146.00   |
| 59      | R2-RT-16-04   | Providing and fabrication and fixing Stainless Steel railing of 10 gauge of 304 grade stainless steel having minimum nickel content of 10% (laboratory testing certificate shall be provided for used material), 40mmX40mm square pipe railing with 18mmX18mm square intermediate support,65mmX65mm square main supports with   | Rmt.   | 18,530.00 | 0.00     | 0.00        |
| 60      | R2-RT-16-14   | Circular Steel Bollards : Providing, fabricating and fixing circular Steel Bollards of 100mm dia circular Steel Pipe (of type 3F-A-1) as per the design incorporated in the Catalogue of Street Furniture (Vol-II). Published by MCGM, made of 10 Gauge, 304 quality material with minimum nickel content not less than 10% (laboratory testing certificate shall be provided for used material) with steel pedestal and  | each   | 16,062.00 | 8.00     | 1,28,496.00 |
| 61      | R2-RT-16-07   | Arrow marking for Route direction straight or right or left or straight & right or straight or left & lettering as per design in white or traffic yellow  | Each   | 1,241.00  | 36.00    | 44,676.00   |
| 62      | R2-RT-16-32   | Providing and applying hot applied thermoplastic road marking material with glass beads extremely high skid resistance 2.5mm thick with primer coat (tack coat) for binding on cement concrete road/paver blocks surface. All labour materials with special aggregates etc, as specified in B.S. part-I & II 1989 and carrying out the marking on any road on center line and other lane marking continuous for intermittent 10cm or 15cm width and also pedestrian crossings stripes as well as spraying further quality of glass beads of type II uniformly into a mono layer on to the hot paint line in quick succession of the paint spraying  | Sq.Mt. | 727.00    | 1,296.00 | 9,42,192.00 |
| 63      | R2-RT-16-33   | Providing and applying hot applied thermoplastic road marking material with glass beads extremely high skid resistance 2.5mm thick without primer coat (tack coat) on asphalt road surface. All labour materials with special aggregates etc, as specified in B.S. part-I & II 1989 and carrying out the marking on any road on center line and other lane marking continuous for intermittent 10cm or 15cm width and also pedestrian crossings stripes as well as spraying further quality of glass beads of type II uniformly into a mono layer on to the hot paint line in quick succession of the paint spraying operation @ 250gms per sq.mt. area as directed and as per B.S./M.O.S.T.  | Sq.Mt. | 662.00    | 120.00   | 79,440.00   |
| 64      | R2-RT-16-08   | Providing, fabricating & erecting Street Name Board (type 2S-A-1) as per the design incorporated in the catalogue of street Furniture (Volume-II) Published by M.C.G.M. Vertical pole shall Hot dip galvanised M.S. Square pipe of size 75x75x3.5mm thk. Signage plaque (box) shall be Hot dip galvanised M.S. angle frame covered with 4mm thk aluminum composite panel. The signage plaque shall be fixed to the vertical pole with 40x10mm thk size MS support plate. Both the boxes shall be pasted with MICRO PRISMATIC GRADE retro reflective base sheets on both sides conforming to Type XI standards of I.R.C. 67 2012 CODE. Letters or borders to be pasted using transparent electro cuttable film. The reflectivity of sheet shall have guarantee of 10 years, the reflectivity must not be less than 90% | Nos.   | 22,712.00 | 8.00     | 1,81,696.00 |
| 65      | R2-RT-16-15   | Providing, fixing & erecting on site Junction Name Board / Chowk (type 2S-D), as per the design incorporated in the catalogue of street Furniture published by M.C.G.M., Vertical pole shall be Hot dip galvanised M.S. Square pipe of size 100mm x 100mm x 3.5mm thick. Signage plaque (box) shall be of size 900mm x 900mm made of M.S.L angle frame of size 50mm x 50mm x 6mm thick covered with 4mm thick aluminum composite panel on both sides, The box shall be pasted with MICRO PRISMATIC GRADE retro reflective base sheets on both sides conforming to Type XI standards of R.C. 67 2012 CODE. Letters or borders to be pasted using transparent electro cuttable film. The reflective of sheet shall have guarantee of 10 years.  | Each   | 35,459.00 | 4.00     | 1,41,836.00 |
| 66      | R2-RT-16-25   | Mandatory Board (600mm dia) hanging on pole – Providing, Fabricating, Erecting on site Mandatory & Cautionary Boards (of type 1S-A-3). As per the design incorporated in Street Furniture catalogue volume-II published by M.C.G.M., Signage plaque (box) shall be of size 600mm dia. Mounted on existing electrical pole with GL clamp. The box shall be made of 4mm thick fibre reinforced plastic box covering both sides of pole. The circumferential edge shall be closed with 3 mm thick FRP. The box shall be pasted with MICRO PRISMATIC GRADE retro reflective base sheets on both sides conforming to Type XI standards of I.R.C. 67 2012 CODE. Letters or borders to be pasted on this box using transparent electro cuttable  | Each   | 6,469.00  | 6.00     | 38,814.00   |
| 67      | R2-RW-10-37   | Providing and fixing of the precast TREE GUARD KERB of M-20 C.C. of height 230mm., width 100mm., Length 400mm., finished neatly, compacting, curing, formwork etc. including bedding of M-10 C.C. procured from M.C.G.M. approved R.M.C. plant, 10cm. thick, filling of jointing in C.M. 1:2 and painting the exposed surface with 3 coats of road marking paint, Grade I of approved colours and quality including single coat of approved brand primer including excavation in C.C. asphalt etc. as specified and as directed   | R.Mt.  | 471.07    | 100.00   | 47,106.70   |

| Sr. No. | Item Code No. | Description   | Unit   | Rate      | Qty      | Amount       |
|---------|---------------|---|--------|-----------|----------|--------------|
| 68      | R2-SWD-45     | Supplying and providing blue trap stones of approved quality and laying hand set dry rubble packing 25 cm. thick to required level and grade, camber including filling in the interstices with 60 mm. metal and small stone chips, etc. and thoroughly rammed, consolidated, etc.as specified & as directed by Engineer in Charge   | Cu.Mt. | 846.00    | 1,616.00 | 13,67,136.00 |
| 69      | R2-SWD-35     | Cutting down existing cement / lime concrete works by any means in pavement, bedding below foundation, coping, walls arches, stone, brick pavement coping etc. of any thickness of any height / depth above or below ground level etc.complete, as specified & as directed by Engineer in Charge  | Cu.Mt. | 1,314.00  | 284.00   | 3,73,176.00  |
| 70      | R2-CS-MW-1-a  | Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 3.5 and above in foundation and plinth in:Cement mortar 1:3 (1 cement : 3 coarse sand)   | Cu.Mt. | 6,031.00  | 65.00    | 3,92,015.00  |
| 71      | R2-SWD-57     | Providing 12 mm thick cement plaster in cement mortar 1:2 including neat cement rendering with approved water proofing compound (with a proportion as specified by the manufacturer per bag of cement) as specified & as directed by Engineer in Charge.  | Sq.Mt. | 271.00    | 55.00    | 14,905.00    |
| 72      | R2-SWD-58     | Providing 20 mm thick cement plaster in cement mortar 1:2 including neat cement rendering (without water proofing compound) as specified & as directed by Engineer in Charge.   | Sq.Mt. | 376.00    | 55.00    | 20,680.00    |
| 73      | R2-SWD-87     | Providing and constructing stormwater drain brick masonry conical manhole as per standard drawings (Dwg No. MCGM/SWD/2013-01), with 1.20 m internal dia at bottom , 0.56m internal dia at top as per IS 4111: Part 1:1986 Cl.4.9 for a depth 1.50 m built in brick masonry in cement mortar 1:2, 20 mm thick plastering both internal and external faces of walls in cement mortar 1:1 (without waterproofing compound) and neat cement rendering so as to give a smooth surface, including 300 mm thick M-15 grade cement concrete in foundation and in haunches   | Nos.   | 29,730.00 | 4.00     | 1,18,920.00  |
| 74      | R2-SWD-88     | Extra over item no R2-SWD-87 per meter depth above 1.50m and upto 2.30m, etc complete as specified and as directed by Engineer in Charge.   | M.D.   | 20,043.00 | 2.00     | 40,086.00    |
| 75      | R2-SWD-89     | Providing and constructing stormwater drain brick masonry conical manhole as per standard drawings (Dwg No. MCGM/SWD/2013-02), with 1.50 m internal dia at bottom , 0.56 m internal dia at top as per IS 4111: Part 1:1986 Cl.4.9 for a depth 2.30 m built in brick masonry in cement mortar 1:2, 20 mm thick plastering both external and internal faces of walls in cement mortar 1:1 (without waterproofing compound) and neat cement rendering so as to give a smooth surface, including 300 mm thick M-15 grade cement concrete in foundation and in haunches and channels finished smooth with 20 mm thick cement   | Nos.   | 48,262.00 | 42.00    | 20,27,004.00 |
| 76      | R2-SWD-90     | Extra over item no R2-SWD-89 per meter depth above 2.30m and upto 5.0m including safety chain and extra Co-polymer polypropylene steel reinforced steps on either side of benching, etc complete as specified & as directed by Engineer in Charge.  | M.D.   | 37,398.00 | 72.00    | 26,92,656.00 |
| 77      | R2-SWD-92     | Providing and constructing stormwater drain brick masonry conical manhole as per standard drawings (Dwg No. MCGM/SWD/2013-02), with 1.80 m internal dia at bottom , 0.56 m internal dia at top as per IS 4111: Part 1:1986 Cl.4.9 for a depth 2.90 m built in brick masonry in cement mortar 1:2, 20 mm thick plastering both internal and external faces of walls in cement mortar 1:1 (without waterproofing compound) and neat cement rendering so as to give a smooth surface, including 300 mm thick M-15 grade cement concrete in foundation and in haunches and channels finished smooth with 20 mm thick cement plaster in cement mortar 1:1 and providing & installing approved Co-polymer polypropylene steel reinforced manhole safe steps (weighing between 0.8 to 0.9 Kg) at | Each   | 90,911.00 | 4.00     | 3,63,644.00  |
| 78      | R2-SWD-93     | Extra over item no R2-SWD-92 per meter depth above 2.90m and upto 5.0m including safety chain and extra Co-polymer polypropylene steel reinforced steps on either side of benching, etc complete as specified & as directed by Engineer in Charge.  | MD     | 40,410.00 | 2.00     | 80,820.00    |
| 79      | R2-SWD-97     | Providing and constructing stormwater drain brick masonry trapezoidal manhole , with internal sizes 1.50 m x 1.20m at bottom and 0.90m x 0.60m at top for a depth 1.20 m built in brick masonry in cement mortar 1:2. 20 mm thick plastering both internal and external faces of walls in cement mortar 1:1 (without waterproofing compound) and neat cement rendering so as to give a smooth surface, including 300 mm thick M-15 grade cement concrete in foundation and in haunches and channels finished smooth with 20 mm thick cement   | Nos.   | 34,561.00 | 8.00     | 2,76,488.00  |
| 80      | R2-SWD-98     | Extra over item no R2-SWD-97 per meter depth above 1.20m and upto 2.30m, etc complete as specified and as   | M.D.   | 24,259.00 | 4.00     | 97,036.00    |

| Sr. No. | Item Code No. | Description   | Unit | Rate        | Qty    | Amount       |
|---------|---------------|---|------|-------------|--------|--------------|
| 81      | R2-SWD-105    | Providing and constructing stormwater drain brick masonry trapezoidal manhole as per standard drawings (Dwg No. MCGM/SWD/2013-04), with internal sizes 2.40 m x 1.50m at bottom and 0.90m x 0.60m at top for a depth 4.60 m built in brick masonry in cement mortar 1:2, 20 mm thick plastering both internal and external faces of walls in cement mortar 1:1 (without waterproofing compound) and neat cement rendering so as to give a smooth surface, including 300 mm thick M-   | Each | 1,79,755.00 | 11.00  | 19,77,305.00 |
| 82      | R2-SWD-106    | Extra over item no R2-SWD-105 per meter depth above 4.60m and upto 9.0m , etc complete as specified & as directed by Engineer in Charge.  | MD   | 67,187.00   | 11.00  | 7,39,057.00  |
| 83      | R2-SWD-115    | Providing and constructing storm water drain brick masonry rectangular manhole with internal sizes 1.80 m x 1.80m for a depth 2.0 m built in brick masonry in cement mortar 1:2, 20 mm thick plastering both internal and external faces of walls in cement mortar 1:1 (without waterproofing compound) and neat cement rendering so as to give a smooth surface, including 300 mm thick M-15 grade cement concrete in foundation and in haunches and channels finished smooth with 20 mm thick cement                                  | Each | 99,918.00   | 0.00   | 0.00         |
| 84      | R2-SWD-116    | Extra over item no R2-SWD-115 per meter depth above 2.0m , etc complete as specified & as directed by Engineer in Charge. (Rebate at the same rate will be taken if the depth of manhole is less than 2.0 m.)   | M.D. | 45,114.00   | 0.00   | 0.00         |
| 85      | R2-SWD-117    | Providing and Constructing brick masonry inspection chamber rectangular 0.9M x 0.45M and 0.6M deep on sewer with 230mm brick walls in cement mortar 1:3 plastered both inside & outside with 20 mm thick cement mortar 1:2 and neat cement rendering so as to give a smooth surface including 230mm cement concrete bedding (M 15) and cement concrete (M 15) in haunches   | Each | 40,697.00   | 0.00   | 0.00         |
| 86      | R2-SWD-118    | Extra over item no R2-SWD-117 per meter depth above 0.60 m and upto 2.5m , etc all complete as specified & as directed by Engineer in Charge.   | MD   | 13,530.90   | 0.00   | 0.00         |
| 87      | R2-SWD-119    | Providing and Constructing brick masonry inspection chamber rectangular 0.9M x 0.60M and 0.6M deep on sewer with 230mm brick walls in cement mortar 1:3 plastered both inside & outside with 20 mm thick cement mortar 1:2 and neat cement rendering so as to give a smooth surface including 230mm cement concrete bedding (M 15) and cement concrete (M 15) in haunches and channels finished smooth with 20 mm thick cement mortar( 1:1) and fixing C.I. heavy duty airtight rectangular frame & cover of size 0.9M x 0.45M weighing | Each | 49,457.43   | 128.00 | 63,30,551.04 |
| 88      | R2-SWD-120    | Extra over item no R2-SWD-119 per meter depth above 0.60m and upto 2.5m , etc all complete as specified & as directed by Engineer in Charge.  | M.D. | 15,442.39   | 202.24 | 31,23,068.95 |
| 89      | R2-SWD-152    | Removing C.I. frame and cover (any size) and transporting to ward office as directed.   | Each | 359.00      | 32.00  | 11,488.00    |
| 90      | R2-SWD-130    | Demolishing existing single or double water entrances, including cutting down of old brick masonry and concrete, removing of all serviceable material such as grating, runner beams, pardis etc.and handing over the  | Each | 841.00      | 160.00 | 1,34,560.00  |
| 91      | R2-SWD-142    | Constructing single water entrance of internal size 0.50m x 0.60m with cast-in-situ coping in M-20 grade, fixing of grating in M -20 as per standard drawings (Dwg No. MCGM/SWD/2013-14), etc complete as specified and as directed by Engineer in Charge. (excluding excavation,   | Each | 11,641.00   | 160.00 | 18,62,560.00 |
| 92      | R2-SWD-145    | Supplying and fixing 0.56m internal dia circular C.I. airtight cover and frame weighing Between weighing minimum 208kg of material grade of min. FG 150 conforming to IS 210:2009 and specification no SP-SWD- 3 with the grade designation of HD 20 conforming to IS 1726:1991.including testing as per CL 10 and inspection as per CL.11 of IS 1726:1991,as per specification as per Standard Specification no SP-SWD-3 etc. complete, as specified and as directed .   | Each | 23,096.00   | 57.00  | 13,16,472.00 |
| 93      | R2-SWD-146    | Supplying and fixing 1.20m x 0.90m internal size of rectangular C.I. air tight cover and frame weighing minimum 910 kg of material grade of min. FG 150 conforming to IS 210:2009 and specification no SP-SWD- 3 with the grade designation of HD 20 conforming to IS 1726:1991.including testing as per CL 10 and inspection as per CL.11 of IS 1726:1991, as per specification as per Standard Specification no SP-SWD-3, etc. complete, as specified and as directed by Engineer in Charge.  | Each | 94,200.00   | 6.00   | 5,65,200.00  |
| 94      | R2-SWD-147    | Supplying and fixing 0.90m x 0.45m internal size of rectangular C.I. air tight cover and frame weighing minimum 225 of material grade of min. FG 150 conforming to IS 210:2009 and specification no -3 with the grade designation of HD 20 conforming to IS 1726:1991including testing as per CL 10 and inspection as per CL.11 of IS 1726:1991, as per specification as per Standard Specification no SP-SWD-3, etc. complete, as specified and as directed by Engineer in Charge.   | Each | 28,889.00   | 11.00  | 3,17,779.00  |



| Sr. No. | Item Code No. | Description  | Unit  | Rate      | Qty      | Amount       |
|---------|---------------|--|-------|-----------|----------|--------------|
| 95      | R2-SWD-148    | Supplying and fixing 0.90m x 0.60m internal size of rectangular C.I. airtight cover and frame weighing minimum 270 of material grade of min. FG 150 conforming to IS 210:2009 and specification no SP-SWD-3 with the grade designation of HD 20 conforming to IS 1726:1991 including testing as per CL 10 and inspection as per CL.11 of IS 1726:1991, as per specification as per Standard Specification no SP-SWD-3, etc. complete, as specified and as directed by Engineer in Charge.  | Each  | 31,371.00 | 160.00   | 50,19,360.00 |
| 96      | R2-SWD-169    | Providing & Fixing 0.60m X 0.50m clear internal size of M.S. Galvanised hinged type grating and frame (weighing minimum 71 kg) with minimum 75 microns zinc coating by hot dipped galvanising the MS grating and frame as per IS 2629. (The contractor shall furnish the certificate of galvanising from the Galvaniser.) including testing ,inspection of material sample and finished product in presence of M.C.G.M. Engineers (3 nos.) at Manufacturers works, as per Standard Specification no SP-SWD-3 and as per drawing (Dwg No. MCGM/SWD/2013-03), etc complete as specified & as directed by Engineer in Charge. | Each  | 9,441.00  | 168.00   | 15,86,088.00 |
| 97      | R2-RW-8-01    | P/L 150mm dia. R.C.C. hume pipes, NP2 class, jointing, filling in 1:1 C.M., including plugging of both the ends with gunny bags, brick masonry in C.M. 1:4 with plaster in C.M. 1:4 & curing etc. complete, as specified as directed   | R.Mt. | 454.00    | 182.00   | 82,628.00    |
| 98      | R2-RW-8-02    | P/L 250mm dia. R.C.C. hume pipes, NP2 class, jointing, filling in 1:1 C.M., including plugging of both the ends with gunny bags, brick masonry in C.M. 1:4 with plaster in C.M. 1:4 & curing etc. complete, as specified as directed.  | R.Mt. | 640.00    | 200.00   | 1,28,000.00  |
| 99      | R2-RW-8-03    | P/L 300mm dia. R.C.C. hume pipes, NP2 class, jointing, filling in 1:1 C.M., including plugging of both the ends with gunny bags, brick masonry in C.M. 1:4 with plaster in C.M. 1:4 & curing etc. complete, as specified as directed.  | R.Mt. | 796.00    | 1,422.00 | 11,31,912.00 |
| 100     | R2-RW-8-04    | Providing & fixing in position M-20 cement concrete precast slab, 50cm x 50cm. & 8cm. Thick with the word "DUCT" inscribed over it including making good, the damaged surrounding surface etc. complete.   | Nos   | 326       | 0.00     | 0.00         |
| 101     | R2-SE-5-8-a   | Providing and laying R.C.C. Pipes (NP3 Class) with rubber rings jointing etc. complete as specified and directed - 300. dia PIPE   | R.Mt. | 1,823.00  | 0.00     | 0.00         |
| 102     | R2-SWD-76-A   | Providing and laying 450mm dia NP3 Class R.C.C. Hume (spigot & socket ended) pipes with rubber ring roll on joints conforming to IS 458:2003 and laid on approved bedding as per IS 783:1985 (reaff. 2010) including jointing the pipes and filletting with stiff mix of cement mortar 1:2, including testing of pipes (in presence of municipal staff) as per IS 3597 etc. complete as specified  | R.Mt. | 2,985.00  | 0.00     | 0.00         |
| 103     | R2-SWD-78-A   | Description same as item no. SWD-76-A, for Pipe Dia 600 mm (NP3 class)   | R.Mt. | 4,132.00  | 40.00    | 1,65,280.00  |
| 104     | R2-SWD-79-A   | Description same as item no. SWD-76-A, for Pipe Dia 700 mm (NP3 class)   | R.Mt. | 5,052.00  | 0.00     | 0.00         |
| 105     | R2-SWD-80-A   | Description same as item no. SWD-76-A, for Pipe Dia 800 mm (NP3 class)   | R.Mt. | 6,410.00  | 140.00   | 8,97,400.00  |
| 106     | R2-SWD-81-A   | Description same as item no. SWD-76-A, for Pipe Dia 900 mm (NP3 class)   | R.Mt. | 7,366.00  | 10.00    | 73,660.00    |
| 107     | R2-SWD-82-A   | Description same as item no. SWD-76-A, for Pipe Dia 1000 mm (NP3 class)  | R.Mt. | 8,974.00  | 200.00   | 17,94,800.00 |
| 108     | R2-SWD-83-A   | Description same as item no. SWD-76-A, for Pipe Dia 1200 mm (NP3 class)  | R.Mt. | 11,134.00 | 80.00    | 8,90,720.00  |
| 109     | R2-SWD-84-A   | Description same as item no. SWD-76-A, for Pipe Dia 1400 mm (NP3 class)  | R.Mt. | 11,825.00 | 0.00     | 0.00         |
| 110     | R2-SWD-85-A   | Description same as item no. SWD-76-A, for Pipe Dia 1600 mm (NP3 class)  | R.Mt. | 14,138.00 | 40.00    | 5,65,520.00  |
| 111     | R2-SWD-86-A   | Description same as item no. SWD-76-A, for Pipe Dia 1800 mm (NP3 class)  | R.Mt. | 18,436.00 | 0.00     | 0.00         |
| 112     | R2-SWD-86-B   | Description same as item no. SWD-76-A, for Pipe Dia 2000 mm (NP3 class)  | R.Mt. | 28,238.00 | 0.00     | 0.00         |
| 113     | R2-SWD-86-C   | Description same as item no. SWD-76-A, for Pipe Dia 2200 mm (NP3 class)  | R.Mt. | 36,150.00 | 0.00     | 0.00         |
| 114     | R2-SE-5-8-r   | Providing and laying R.C.C. Pipes (NP3 Class) with rubber rings jointing etc. complete as specified and directed.-2400mm dia pipe  | R.Mt. | 42,825.00 | 0.00     | 0.00         |
| 115     | R2-CS-DD-59   | Removing and Refixing G.I.pipes of any size with all fittings if necessary complete including cleaning and painting.   | R.Mt. | 192.00    | 1,320.00 | 2,53,440.00  |

| Sr. No. | Item Code No.    | Description  | Unit   | Rate     | Qty      | Amount         |
|---------|------------------|--|--------|----------|----------|----------------|
|         | R2-HE-7-2        | Supplying, providing laying and jointing GI pipes in trenches of following class and diameter by wrapping them by hessian cloth with tar coating and including any nominal pipe length required  |        |          |          |                |
| 116     | R2-HE-7-2-a      | 15 mm  | R.Mt.  | 168.00   | 400.00   | 67,200.00      |
| 117     | R2-HE-7-2-b      | 20 mm  | R.Mt.  | 174.00   | 240.00   | 41,760.00      |
| 118     | R2-HE-7-2-c      | 25 mm  | R.Mt.  | 265.00   | 320.00   | 84,800.00      |
| 119     | R2-HE-7-2-d      | 32 mm  | R.Mt.  | 316.00   | 160.00   | 50,560.00      |
| 120     | R2-HE-7-2-e      | 40 mm  | R.Mt.  | 388.00   | 160.00   | 62,080.00      |
| 121     | R2-HE-7-2-f      | 50 mm  | R.Mt.  | 481.00   | 160.00   | 76,960.00      |
| 122     | R2-CS-CW-58      | Extra for spreading broken glass pieces under pavement 0.12 cu.m. of broken glass pieces per 10 sq.m. of area.   | Sq.Mt. | 45.00    | 2,080.00 | 93,600.00      |
| 123     | R2-RW-10-28      | Supply & filling sand, metal GRAVELLY SAND Corresponded to CLASSII/ CLASS III GRADING of TABLE 100.1of MCGM road specificationsfor Roadworks in trenches upto required depth & watering, ramming etc. complete as directed   | Cu.Mt. | 1,905.00 | 3,351.60 | 63,84,798.00   |
| 124     | R2-RW-10-26      | P/L ready mix cement concrete M-15cc having avg compressive strength 18.5 Mpa for foundation/ encasement/ pavement/ cradle including formwork,mixing in batching plant, compacting by internal & surface vibrator,curing,finishing etc. complete as specified & as directed by the Engineer. Contractor has to make his own arrangement  | Cu.Mt. | 6,893.00 | 2,803.00 | 1,93,21,079.00 |
| 125     | R2-RW-10-27      | P/L R.M.C. M-10 C.C. having avg. compressive strength 13.5 Mpa grade in foundation/encasement/pavement with or without chequered design including formwork, mixing in batching plant,placing vibrating with plate or needle curing etc. complete as directed by  | Cu.Mt. | 6,452.00 | 95.00    | 6,12,940.00    |
| 126     | R2-RW-10-29      | P/L R.M.C. M -20 C.C. Having having avg.compressive strength 24 Mpa procured from M.C.G.M. approved RMC plant including used of approved make plasticizer /retarder & transported by transit mixer & placing at work site ,compacting ,finishing curing etc.by contractors water &tarring the sides from work with hot bitumen as specified & directed by the Engineer (MINIMUM CEMENT CONTENT 260Kg/m <sup>3</sup> )  | Cu.Mt. | 7,055.00 | 529.00   | 37,32,095.00   |
| 127     | R2-RW-10-30      | Providing & fixing pre-cast Beam in M 40 CC of size 23 cm x 23 cm x 35 cmin length set in 15 cm M15 C.C. filling of joints in 1:2, including escavation, form work, mixing compacting , curing etc. complete as specified and as directed.   | Nos.   | 445.00   | 0.00     | 0.00           |
| 128     | R2-SE-5-9        | Providing,LayingandJointingHDPEpipesofPE-80gradeandPN-6class with butt joints etc.complete as specified and directed 160 mm dia (OD)   | Mts.   | 983.00   | 920.00   | 9,04,360.00    |
| 129     | R2-CS-PS-169-a-2 | Constructing brick masonry inspection chamber in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design : Inside size 90x80 cm and 45 cm | Each   | 9782.00  | 48.00    | 4,69,536.00    |
| 130     | CS-PS-169-c-2    | Constructing brick masonry inspection chamber in cement mortar 1:4 ( 1 cement : 4 coarse sand ) with R.C.C. top slab with 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (heavy duty) 560 mm internal diameter, total weight of cover and frame to be not less than 208 kg (weight of cover 108 kg and weight of frame 100 kg) :<br>With Sewer bricks conforming to IS : 4885   | Each   | 26142.00 | 56.00    | 14,63,952.00   |
| 131     | R2-SE-5-1-a      | Providing & laying stoneware pipes of SP2 class including jointing with CM(1:1), filleting etc. complete as specified & directed. -150mm dia   | Rmt.   | 657.00   | 165.00   | 1,08,405.00    |
| 132     | SE-5-1-b         | Providing & laying stoneware pipes of SP2 class including jointing with CM(1:1), filleting etc. complete as specified & directed. -230mm dia   | Rmt.   | 1113.00  | 220.00   | 2,44,860.00    |
| 133     | R2-RT-15-02      | Removing any type of C.C. tapered kerbs from the existing island etc. & transporting the same any where in the city or suburbs & stacking the same nearby as directed  | Rmt.   | 100.00   | 20.00    | 2,000.00       |
| 134     | R2-RT-16-34      | Supplying/ fixing of Two Way Raised Pavement Markers made of polycarbonate moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall support a load of 13635 kg tested in accordance to ASTM D 4280 Type H and complying to Specifications of Category A of MORTH Circular No RW/NH/33023/10-97 – DO III Dt 11.06. 1997 . The minimum reflective area of 13 SqCm on NOS side   | Each   | 427.00   | 2,376.80 | 10,14,893.60   |

| Sr. No. | Item Code No. | Description  | Unit   | Rate     | Qty      | Amount       |
|---------|---------------|--|--------|----------|----------|--------------|
| 135     | R2-RT-16-35   | Supplying/ fixing of One Way Raised Pavement Markers made of polycarbonate moulded body and reflective panels with micro prismatic lens capable of providing total internal reflection of the light entering the lens face and shall   | Each   | 420.00   | 2,588.00 | 10,86,960.00 |
| 136     | R2-SWD-4      | Desilting the nalla upto 3.0 m depth by mechanical means as directed and specified and spreading around/stacking the desilted material for transportation purpose within a distance of 30 m including spreading of disinfectant, etc. complete as directed by Engineer in Charge.  | Cu.Mt. | 198.00   | 0.00     | 0.00         |
| 137     | R2-RW-10-34   | P/L R.M.C.M-25C.C.having avg. compressive strength 29 Mpa procured from M.C.G.M. approved R.M.C. plant including use of approved makes plasticizer/retarder & transported by transit mixer & placing at worksite, compacting, finishing curing etc. by contractor's water & taring the sides of from work with hot bitumen as specified &  | Cu.M   | 7291.00  | 0.00     | 0.00         |
| 138     | R2-CS-CW-35-b | Providing and fixing in position steel bars reinforcement of various diameters for R.C.C. pile, pile caps, footings,raft,retaining wall,shear wall, lift wall,foundations, slabs, beams, columns, canopies, staircases, newels, chajjas, lintels, pardies, coping, fins, arches, etc. as per detailed designs,drawings and bar bending schedules,including straightening, cutting, bending, hooking the bars, binding with wires or tack welding, supporting as required etc. all complete at all levels. HYSD steel bars - Fe 415   | MT     | 73279.00 | 32.00    | 23,44,928.00 |
| 139     | R2-RT-16-02   | Providing, fabricating and fixing M.S. railing of 10 Gauge, Dia. 40mm circular railing with Dia. 18mm circular intermediate support, Dia. 65mm circular main supports with M.S. pedestal (base-I-type) and M.S. cap-(type-I) including cutting, welding, riveting oil painting with navy blue colour or any other approved colour shades as directed and   | R.Mt.  | 7121.00  | 0.00     | 0.00         |
| 140     | R2-RT-16-02-C | Add for application for Rusticide for removal of rust and providing rust preventing treatment of electrometric Alkaline Polymerie, rust preventing solution as per Manufacturer's specification. Coating with rusticide and polyurethane primer and paint  | R.Mt.  | 1210.00  | 0.00     | 0.00         |
| 141     | R2-RW-10-63   | Providing and applying and finishing the top surface of M-20 concrete with stamp/stencil.....  | Sq.Mt. | 436.00   | 2,142.00 | 9,33,912.00  |
| 142     | R2-RW-10-39   | Extra & over for providing and using special admixtures/ plasticizers to achieve required crushing & average flexural strength 5.0Mpa of M40 grade concrete in 7 days. NOTE: THIS ITEM SHOULD BE OPERATED ONLY AFTER SPECIFIC SANCTION OF DIR(E.S.&P.). NOTE:FOR SPECIAL ADMIXTURE SITE MS SUCH AS ELKEM MICRO SILICA,POLYPROPELYNE FIBER, BSFGLANIUM SKY,EARLY STRENGTH SUPER PLASTYCIZER, STEEL FIBER REINFORCEMENT ETC. ORIGINAL CHALLAN SHOULD BE  | Cu.M   | 1067.00  | 3,991.00 | 42,58,397.00 |
| 143     | R2-RW-10-47   | Providing and fixing pre-cast Central Median divider Type C TREE PLANTER(in pair as per drawing) of R.M.C.M-25 C.C. on Road as per drawing, finished neatly, compacting, curing, form work, etc. including Reinforcement as per drawing, bedding R.M.C.M-10 C.C. 15 cm thick,  | Rmt.   | 4231.00  | 0.00     | 0.00         |
| 144     | R2-SWD-141    | Constructing double water entrance of internal size 0.60m x 1.20m with cast-in-situ coping in M-20 grade, fixing gratings in M -20 as per standard drawings (Dwg No. MCGM/SWD/2013-13), etc complete as specified and as directed by Engineer in Charge. (excluding excavation, providing and fixing of gratings and frame)  | Each   | 17168.00 | 80.00    | 13,73,440.00 |
| 145     | R2-SWD-176-A  | Providing & Fixing 1.20m X 0.60m clear internal size of M.S. Galvanised hinged type grating and frame (weighing minimum 130 kg) of grade HD20, with minimum 75 microns zinc coating by hot dipped galvanising the MS grating and frame as per IS 2629. (The contractor shall furnish the certificate of galvanising from the Galvaniser.) including testing ,inspection of material sample and finished product as per IS standards and as per Standard Specification no SP-SWD-3 and as per standard drawing , etc complete as specified & as directed by Engineer in Charge. | Each   | 17084.00 | 80.00    | 13,66,720.00 |
| 146     | R2-GW-7-9     | Supply/ stacking/spreading of red hill earth   | Cu.M   | 1058.00  | 20.00    | 21,160.00    |
| 147     | R2-HE-2-16    | Providing and fixing MS frame and cover with its complete assembly as per item   | Kg     | 78.00    | 3,306.98 | 2,57,944.44  |
| 148     | R2-CS-EW-5    | Excavation by using splitters for foundations, substructures, basements, tanks, sumps, walls, chambers, manholes, trenches, poles, pits & general building works in hard rock, reinforced concrete, for depths/lifts upto 1.5M, including drilling, breaking in small pieces, mucking, dressing/trimming the sides,  | Cu.M   | 3104.00  | 55.00    | 1,70,720.00  |
| 149     | R2-CS-CW-7-a  | Foundations, footings, bases of columns, rafts, pilecap  | Cu.M   | 7515.00  | 0.00     | 0.00         |

| Sr. No. | Item Code No.     | Description   | Unit   | Rate     | Qty      | Amount       |
|---------|-------------------|---|--------|----------|----------|--------------|
| 150     | R2-CS-CW-7-b      | Walls (any thickness) including attached buttresses, retaining wall, shear wall, diaphragm wall, trench, pit walls, etc   | Cu.M   | 10518.00 | 0.00     | 0.00         |
| 151     | R2-CS-CW-7-c      | Slabs, Suspended floors, roofs, landings, balconies, canopy and access platform   | Cu.M   | 11790.00 | 0.00     | 0.00         |
| 152     | R2-CS-CW-35-c     | Providing and fixing in position steel bars reinforcement of various  | MT     | 76770.00 | 65.50    | 50,28,435.00 |
| 153     | R2-BW-5-3-f       | Providing and applying protective paint consisting of two coats of coal   | Sq.Mt. | 281.00   | 1,834.00 | 5,15,354.00  |
| 154     | R2-SWD-76         | Providing and laying 450mm dia NP2 Class R.C.C. Hume pipes with   | R.Mt.  | 2041.00  | 0.00     | 0.00         |
| 155     | R2-SWD-178        | <b>Providing &amp; placing in position controlled Ready Mix Concrete of grade M- 40 in raft slab</b> by using Ordinary Portland Cement including transportation to site anywhere in Mumbai including curing by any means etc. complete as directed by Engineer in Charge. (Reinforcement & Formwork shall be paid separately).  | Cu.M   | 7777.00  | 197.00   | 15,32,069.00 |
| 156     | R2-SWD-179        | <b>Providing &amp; placing in position controlled Ready Mix Concrete of grade M- 40 in walls and deck slab</b> above or below ground level at any height / depth by using Ordinary Portland Cement including Transportation anywhere in Mumbai including curing by any means etc complete as directed by Engineer in Charge. (Reinforcement & Formwork shall be paid separately).   | Cu.M   | 9569.00  | 516.00   | 49,37,604.00 |
| 157     | R2-CS-RF-7-B-FAIR | <b>Providing, fabricating &amp; fixing the leak-proof shuttering</b> made with marine plywood /M.S.Sheets with proper supports at all locations for all shapes etc., for encasement & deshuttering the same after specified period or next day of placing the microconcrete / concrete. Providing & applying approved oil on all surfaces of formwork coming in contact with concrete as per specification. <b>Walls (any thickness) including attached buttresses, retaining wall, shear wall, diaphragm wall etc.</b>   | Sq.Mt. | 558.00   | 3,144.00 | 17,54,352.00 |
| 158     | R2-CS-RF-7-F-FAIR | <b>Providing, fabricating &amp; fixing the leak-proof shuttering</b> made with marine plywood /M.S.Sheets with proper supports at all locations for all shapes etc., for encasement & deshuttering the same after specified period or next day of placing the microconcrete / concrete. Providing & applying approved oil on all surfaces of formwork coming in contact with concrete as per specification. Stairs(waist slab), folded etc. <b>slab, inclined slab</b>  | Sq.Mt. | 483.00   | 629.00   | 3,03,807.00  |
| 159     | RW-13-5           | Providing, Supplying, Loading, Unloading on site Factory made steam cured R.C.C Precast U shaped drain (Inside Dimensions- W x H= 1500mm x 1200mm) as approved in MCGM drawing DMC Infra 190 dated 08.05.2020. The drain shall be of M40 grade concrete including reinforcement Fe500 Grade or HD Wire of IS432 Part II, OPC 53 Grade Cement. The surface finish shall be smooth finish. The drain shall have grooves for jointing at the edge, curing arrangements, special in built insert, sleeves at appropriate location as specified in drawing for fixing, lifting including | Rmt    | 25600.00 | 240.00   | 61,44,000.00 |
| 160     | RW-13-12          | Providing, Supplying, Loading, Unloading on site Factory made steam cured R.C.C Precast drain cover slab, for drain width of 1500mm wide (Inside Dimensions-L x B X H = 500mm x 1650mm x 150mm) as approved in MCGM drawing DMC Infra 196 dated 08.05.2020. The drain shall be of M40 grade concrete including reinforcement Fe500 Grade or HD Wire of IS:432 Part II, OPC 53 Grade Cement. The surface finish shall be smooth finish, with special in built insert, sleeves at appropriate location as 7150 NOS  | Nos    | 7150.00  | 35.00    | 2,50,250.00  |
| 161     | RW-13-3           | Providing, Supplying, Loading, Unloading on site Factory made steam cured R.C.C Precast U shaped drain (Inside Dimensions- W x H= 900mm x 900mm) as approved in MCGM drawing DMC Infra 188 dated 08.05.2020. The drain shall be of M40 grade concrete including reinforcement Fe500 Grade or HD Wire of IS432 Part II, OPC 53 Grade Cement. The surface finish shall be smooth finish. The drain shall have grooves for jointing at the edge, curing arrangements, special in built insert, sleeves at appropriate location as specified in drawing for fixing, lifting including   | Rmt    | 12800.00 | 64.00    | 8,19,200.00  |
| 162     | RW-13-4           | Providing, Supplying, Loading, Unloading on site Factory made steam cured R.C.C Precast U shaped drain (Inside Dimensions- W x H= 1200mm x 1200mm) as approved in MCGM drawing DMC Infra 188 dated 08.05.2020. The drain shall be of M40 grade concrete including reinforcement Fe500 Grade or HD Wire of IS432 Part II, OPC 53 Grade Cement. The surface finish shall be smooth finish. The drain shall have grooves for jointing at the edge, curing arrangements, special in built insert, sleeves at appropriate location as specified in drawing for fixing, lifting including | Rmt    | 22572.00 | 120.00   | 27,08,640.00 |

| Sr. No.             | Item Code No.    | Description   | Unit | Rate     | Qty    | Amount                 |
|---------------------|------------------|---|------|----------|--------|------------------------|
| 163                 | RW-13-6          | Providing, Supplying, Loading, Unloading on site Factory made steam cured R.C.C Precast U shaped drain (Inside Dimensions- W x H= 1500mm x 1500mm) as approved in MCGM drawing DMC Infra 188 dated 08.05.2020. The drain shall be of M40 grade concrete including reinforcement Fe500 Grade or HD Wire of IS432 Part II, OPC 53 Grade Cement. The surface finish shall be smooth finish. The drain shall have grooves for jointing at the edge, curing arrangements, special in built insert, sleeves at appropriate location as specified in drawing for fixing, lifting including     | Rmt  | 30300.00 | 30.00  | 9,09,000.00            |
| 164                 | RW-13-10         | Providing, Supplying, Loading, Unloading on site Factory made steam cured R.C.C Precast drain cover slab, for drain width of 900mm wide (Inside Dimensions-L x B X H = 500mm x 1052mm x 150mm) as approved in MCGM drawing DMC Infra 194 dated 08.05.2020. The drain shall be of M40 grade concrete   | Nos  | 3300.00  | 15.00  | 49,500.00              |
| 165                 | RW-13-11         | Providing, Supplying, Loading, Unloading on site Factory made steam cured R.C.C Precast drain cover slab, for drain width of 1200mm wide (Inside Dimensions-L x B X H = 500mm x 1350mm x 150mm) as approved in MCGM drawing DMC Infra 195 dated 08.05.2020. The drain shall be of M40 grade concrete including reinforcement Fe500 Grade or HD Wire of IS:432 Part II, OPC 53 Grade Cement. The surface finish shall be smooth finish, with special in built insert, sleeves at appropriate location as specified in drawing for fixing, lifting including mechanical means,            | Nos  | 6467.00  | 18.00  | 1,16,406.00            |
| 166                 | R2-RT-16-08-A    | Extra over item no.R2-RT-16-08 for Street Name Board  | Each | 4666.00  | 8.00   | 37,328.00              |
| 167                 | R2-FA2-SWD-PR-20 | Providing and placing in position controlled cement concrete M-45 grade using minimum cement content as 400kg/cum and max water cement ratio of 0.40 for MATCH CASTING of SEGMENTS IN CASTING YARD drawings and designs including projections, moulding, champhers etc. of required shape and size including levelling, compactin by vibrators, curing, finishing the exposed surfaces including formwork, shuttering and centering as necessary and required etc. complete as specified and directed, staging properly at yard and unloading at site, placing etc complete. (excluding | CuM  | 41473.00 | 677.00 | 2,80,77,221.00         |
| <b>Total Amount</b> |                  |   |      |          |        | <b>22,29,27,919.64</b> |
| <b>Say</b>          |                  |   |      |          |        | <b>22,29,27,920.00</b> |