# **Project Name: Mangaluru Smart City**

Sr. No.	Description	Cost In INR
1	Road and Other Works	10,48,06,661
2	Street Lighting	18,72,611
3	Landscape Work	5,68,177
	Sub Total	10,72,47,449
	Maintenance Cost	60,90,294
	Provision for Third Party Damages and Maintenance at 1 st Year(DLP)	11,23,806
	GST @ 12%	92,26,821
	Escalation and Tender Premium at 10%	107,24,745
	Add 3% Contengency	32,17,423
	Miscellaneous and Rounding off	9,462
	Grand Total	13,76,40,000

## Grand Summary for Loop Road

## EXECUTIVE ENGINEER MSCL MANGALURU

## GENERAL MANAGER TECHNICAL MSCL MANGALURU

#### MANAGING DIRECTOR MSCL Mangaluru

#### Name of the Work :- Mangalore Smart City 3.1 BOQ of Road and Other Work for Loop Road

	3.1 BOQ of Road and Other W			5.4		Demoster
Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
1.00	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)	Sqm	2573.75	68.16	1,75,427	
2.00	KSRRB M200.Dismantling of cement concrete pavement by mechanical means using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (KSRRB 18-19,Page No 140,SI No : 18.47)		443.21	988.90	4,38,290	
3.00	KSRRB M200-Dismantaling of kerb Stone and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202. (KSRRB 18-19,Page No.141,S.I.No.18.49)		1288.40	13.20	17,007	
4.00	KSRRB M200-13.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KSRRB 18-19,18.20,Page No.139)		25.81	429.00	11,072	
5.00	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by road roller attached with scarifier without disturbing the base and stacking the debris including cost of all labour charges, HOM of machineries complete as per specifications. MORTH / Section 5.(KSRRB 18-19, SI No.19.56,Pg No.146)		3340.40	42.90	1,43,303	
6.00	KSRRB 300-46. Scarifying by mechanical means stone metal crust 50mm to 100mm thick by along with 20mm premix carpet I surface dressing and stacking of old serviceable materials including cost of all labour charges, HOM complete as per specifications. MORTH I Chapter 3.(KSRRB 18-19,SI No.19.52,Pg No.146)		4930.80	42.90	2,11,531	
7.00	KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar (KSRRB 18-19,Page No 139,SI No : 18.23)	Cum	509.09	386.10	1,96,560	
8.00	KSRRB M800-Permanent type barricade in construction zone KSRRB M800-44.1. Construction of a permanent type barricade made of steel components, 1.5 m high from road level, fitted with 3 horizontal rails 200 mm wide and 4 m long on 50 x 50 x 5 mm angle iron vertical support, painted with yellow and white strips, 150 mm in width at an angle of 45°, complete as per IRC:SP:55-2014 complete as per specifications . A. With steel components(KSRRB 18-19,Page No 187,SI No : 24.45)	Nos.	108.00	4,211.90	4,54,885	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
9.00	KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 (KSRRB 18-19,Page No 143,SI No : 19.14)	Cum	11797.81	45.10	5,32,081	
10.00	KSRB 2-4 : Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KSRB 18-19,SI No.2.11,Pg. No.7)	Cum	4601.25	132.00	6,07,365	
11.00	KSRRB 300-58. Compaction of original ground by mechanical means including filling in depression occuring during rolling including cost of all labour, HOM complete as per specifications. MORTH I Chapter 3 (KSRRB 18-19,SI No.19.64,Pg. No.147)		8272.15	6.60	54,596	
12.00	KSRB 4-1.7 : Providing and laying in position plain cement concrete of Mix 1:3:6 with OPC @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.69 cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 ems. thick, well compacted, in foundation, plinth and cills, including cost of all materials, labour, HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2 (KSRB 18-19,SI No.4.7,Pg No.13		921.67	6,347.00	58,49,839	
13.00	Construction of granular sub-base Grading-Vas Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98% proctor density, complete as per specifications. Clause 401 of MORTH V Revision. (KSRRB 18-19,P.No.153, SI.No.20.4)	Cum	1830.38	2,382.60	43,61,063	
14.00	KSRB 4.2.1 : Providing and laying in position <b>reiforcement</b> <b>cement concrete of design Mix M25</b> with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications. (KSRB 18-19,Page No 14,SI No :4.10)		1242.11	6,817.80	84,68,458	
15.00	KSRB 4.6.1 Providing and removing <b>centering, shuttering,</b> <b>strutting, propping</b> etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials,labour complete as per specifications. Specification No. KSB 4.6.2 (KSRB 18-19,Page No 16,SI No : 4.28)	Sqm	9956.41	289.30	28,80,389	
16.00	KSRB 4.9.2 : <b>Providing T.M.T steel reinforcement</b> for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500 (KSRB 18-19,Page No 18,SI No : 4.46.2)		99.07	77,860.20	77,13,610	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
17.00	KSRRB M300-53. Construction of embankment with approved material Gravei/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300-2 complete as per specifications, including cost of gravel/ murrum, watering charges & compaction by vibratory roller to 95% of modified proctors density. MORTH Specification No. 305 (KSRRB 18-19,Pg No.147,SI No.19.60)	Cum	1703.46	594.22	10,12,230	
18.00	KSRRB M600-1.Providing and Constructing dry lean cement concrete mix CC 1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @0.58cum over a prepared sub-base, coarse and fine aggregate conforming to IS: 383-2016,aggregate cement ratio not to exceed 15:1, Aggregate gradation after blending to be as per Table 600-1,optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. Clause 601of MORTH V Revision and IS 456 Table-5 -do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with Slip form paver with electronic sensor. (KSRRB 18-19,Page No 174,Sl No : 22.1.1)	Cum	681.38	4,452.80	30,34,049	
19.00	KSRRB M600-2. Providing and Constructing un-reinforced, dowel jointed, plain cement Pavement Quality concrete for pavements using Grade concrete M40 having Flexural strength not less than 4.50 Mpa over a prepared base with OPC, coarse aggregate at 0.64 cum, fine aggregates at 0.36 cum,Coarse and fine aggregate conforming to IS:383- 2016 and Table 600-3 of MORTH V Revision, with Superplastizer at 3 Its conforming to IS 9103-2008. loading materials to batch mix plant by front end loader,mixed in a cement concrete batch mix plant as per approved mix design,transported to site in transit truck agitator 5 cum capacity, laid with Paver, compacted and finished in a continuous operation as per IRC-15 including cost for providing of contraction,expansion, co nstruction and longitudinal joints, joint filler, separation membrane of impermiable plastic sheet of 125 micron, groove cutting,sealant primer joint sealent, debonding strip,dowel bars at 9 kg/cum, tie rods at 1.15 kg/cum, admixtures as approved, curing compound, finishing to lines and grades, textured with texturing machine, and curing including cost of all materials, labour,hire charges of machineries, all lead & lift charges etc., complete as per specifications.		1572.58	6,341.50	,99,72,516	
20.00	Providing and placing <b>joint sealant compound</b> of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower and as shown on drawing and as per MORTH specifications clause 602. (Non SOR Item)		2,652.00	115.00	3,04,980	
21.00	KSRRB 3000 <b>Repair of Joint Grooves</b> with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (KSRRB 18-19,Page No 260,SI No : 35.8)	Rmt	2,652.00	364.10	9,65,593	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
22.00	Providing and laying at or near ground level factory made <b>kerb</b> stone of M-20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge). Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)	Nos.	1,039.00	1,986.60	20,64,077	
23.00	Providing and fixing pre cast solid cement concrete kerb stones made out of C.C. 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1 3 plastering and finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete. (Page No 27,SI No : 5.30)	Nos.	9,641.00	463.10	44,64,747	
24.00	KSRRB 800-1. <b>Painting two coats</b> after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per MORTH specifications section 8. (KSRRB 18-19,Page No 180,SI No : 24.1)	Sqm	1,180.35	88.00	103,871	
25.00	<b>P/F Square shape 600mmx450 mm precast R.C.C. manhole cover</b> with frame (Rate analysis attached)	Nos.	165.00	917.00	1,51,305	
26.00	Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron / Ductile Iron (NON SOR Item)	Nos.	130.00	3,500.00	4,55,000	
27.00	<b>Providing gully pipe lowering, laying of PVC 100 mm dia pipes</b> to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include all jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)	Rmt	176.00	302.64	53,265	
28.00	KSRB 11-18-17.1 : <b>Providing and fixing sand cast iron trap of</b> <b>100mm dia</b> , of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (KSRB SR 2018-19,P.No.88, SI.No.12.89)		176.00	913.00	1,60,688	
29.00	KSRB 12-8.2 : Constructing brick masonry inspection chamber <b>500x700mm, and 450mm depth,</b> ( clear inside dimension ) for pipeline with one or two inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1:5, C.I cover with frame (light duty) 455x610mm internal dimensions, total weight of cover with frame to be not less than 38 kg ( weight of cover 23kg and weight of frame 15 kg ) R.C.C. top slab with cement concrete M 15 with 20mm and downsize granite metal , foundation concrete M 5 with 40mm and downsize granite metal inside plastering 12mm thick with cement mortar 1:3, finished smooth with a floating coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing complete as per specifications. Specification No. KBS (P.No. 76/ I.No.11.52 of PWD SR 2018-19)	Nos.	135.00	9,125.60	12,31,956	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
30.00	KSRRB M800-29.3. <b>Cable Duct Across the road</b> KSRRB M800- 29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98- 1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case-III :Triple row for three utility services. (KSRRB 2018-19,Pg No 186,SI.No.24.36)	Rmt	648.00	5,524.20	35,79,682	
31.00	<b>Providing and laying Dia 225mm HDPE Power Duct</b> with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)	Rmt	3,858.00	2,587.36	99,82,035	
32.00	<b>Providing and HDPE Coupler for pipe Dia 225mm(O.D.)</b> and conveying to work site including loading and unloading at both destination and lowering, Jointing into trenches, Complete. (Market Rate)	Nos.	322.00	1,775.00	5,71,550	
33.00	<b>Providing and laying Dia 160mm HDPE Power Duct</b> with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)	Rmt	7,716.00	1,423.92	1,09,86,967	
34.00	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and conveying to work site including loading and unloading at both destination and rolling, lowering into trenches, laying true to line and jointing of pipe and special including encasing the pipe Complete. (Market Rate)		642.00	1,475.00	9,46,950	
35.00	Providing and Fixixng Spacers for Power Ducts of size 225 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	1,286.00	1,183.54	15,22,032	
36.00	Providing and Fixing Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	1,286.00	2,297.46	29,54,534	
37.00	Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)	Rmt	1,929.00	725.32	13,99,142	
38.00	Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Duct and conveying to work site including loading and unloading at both destination and lowering into trenches, and jointing of pipe.Complete. (Market Rate)	Nos.	23.00	175.00	4,025	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
39.00	Providing and laying heavy duty cobble stones <b>60mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 30mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (KSRB 18-19, Pg No 103,SI No : 14.6)	Sqm	7,584.76	1,161.60	88,10,457	
40.00	Providing and laying heavy duty <b>Tactile Tiles</b> (Direction and Stop tiles-300 x 300 mm) 40mm thick and Yellow in colour , using cement and course sand for manufacture of blocks of approved size, shape with a minimum compressive strength of 281 kg per sqm over 30mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Non SOR Item)	Sqm	450.40	912.00	4,10,765	
41.00	Providing and laying heavy duty <b>cobble stones 75mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 30mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7)	Sqm	1,487.48	1,225.40	18,22,758	
42.00	KSRRB M800-2. <b>Retro-Reflectorised Traffic Signs</b> - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.	Nos.	42.00	3,862.10	1,62,208	
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 900MM Equilateral Triangle-TYPE XI (KSRRB 18-19,Page No 180,SI No : 24.2.1)					

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
43.00	KSRRB M800-2. <b>Retro-Reflectorised Traffic Signs</b> - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.	Nos.	9.00	5,453.80	49,084	
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 900MM Octagon Stop Board-TYPE XI (KSRRB 18-19,Page No 180,SI No : 24.2.6)					
44.00	KSRRB M800-2. <b>Retro-Reflectorised Traffic Signs</b> - Manufacturing, Supply and Installation of retro-reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminum composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge. 10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier.		4.00	3,429.80	13,719	
45.00	600MM Circle-TYPE XI (KSRRB 18-19,Page No 180,SI No : 24.2.3) <b>Road Marking with hot applied Thermoplastic Compound with</b> <b>Reflectrising Glass Beads on Concrete Surface</b> :Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803 (KSRRB 18-19,Page No 182,SI No : 24.15)	Sqm	611.83	471.90	2,88,723	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
46.00	Providing & installing of <b>E- toilet</b> with Super structure of the electronic toilet to have asthetic ambience with inner room size 1.2 x 0.8 x 2.4 (LXWXH)meters and Size of electronic toilet overall size in meters 2.30x1.25x2.80 (LXWXH) Total area 35 Sft. with Built-acess controlled main door and side walls made of SS Grade 304,Toilet floor and closet are to be stainless steel of grade 304.E-Toilet shall have Built-in water tank with minimum 225 Lit capacity and Acess controll using coin validator for entering the unit based on automatic payment collection mechanism exit from the unit should be manual.Automatic lights inside the unit with gloves on opening the door.E-Toilet shall be Automatic flushing system which includes Automatic Pre flush cleaning before use,Automatic closet washing mechanism after use and Automatic platform cleaning mechanism programmed after specific numbers.In addition to these flush switch is to be provided for manual operation.Standard features should include heath faucet,exhaust fan and cloth bapager.	Nos	2.00	5,75,000	11,50,000	
	The E-Toilet shall have Alert to users-different indication on 'ready to use', busy are to be provided in the unit also with Voice guidence in the unit for users. Web enabled support-GPRS based Real time data to be provided from the unit through web for knowing the health status like number of users per day and coins collected.E-toilet shall have Modular and portable design enabling easy assembling and installation at site.Call ceneter and web portal facilities for registering complience and tracking usage, coin collection etc.Status display in LED, Printed instruction stickers are to be provided.For Advertisment purpose space for advertisement dispaly to be povided on the exterior of the unit for income generation and sustainability. Backup power facility like UPS is to be provided to supplement upto 30 Min Base of the unit to be placed on a suitable concrete structure with a ashthetic finish.					
47.00	Supply and Fixing of <b>Traffic signal Straight pole</b> of 6 mtr, inner dia 100 mm from resistant to peeling with base plate size of (LXWXT) 200mm X200mmX6mm painted with redoxide and double coat with synthetic enamel paint of yellow colour assembly G.I., class B, as per technical specification (NON SOR Item)	Nos.	8.00	18,691	1,49,528	
48.00	Supply and fixing of Traffic signal Cantilever pole Class B having inner diameter of 100 mm or more with a height of 6m including extension arm assembly having outer diameter of 75mm with arm span of 4 mtr length and base plate of size 300mm X 300mm with thickness of 6 mm welded at the bottom of the pole base as per technical specification & drawings. (NON SOR Item)	Nos.	8.00	52,850	4,22,800	
49.00	Supply and fixing of 300 mm dia – single source – LED retrofit - <b>Red (blow)</b> as per Specification (NON SOR Item)	Nos.	16.00	11,082	1,77,312	
50.00	Supply and fixing of 300 mm dia – single source – LED retrofit - <b>Amber (blow) as per</b> Specification (NON SOR Item)	Nos.	16.00	11,082	1,77,312	
51.00	Supply and fixing of 300 mm dia – single source – LED retrofit - Green (arrow/U- Turn) EN-12368 as per Specification (NON SOR Item)	Nos.	16.00	13,973	2,23,568	
52.00	Supply and fixing of 300 mm dia – single source – LED retrofit - <b>Red (ped. standing)</b> EN-12368 as per Specification (NON SOR Item)	Nos.	16.00	11,082	1,77,312	
53.00	Supply and fixing of 300 mm dia – single source – LED retrofit - Green (ped.walking) EN-12368 as per Specification (NON SOR Item)	Nos.	16.00	13,973	2,23,568	
54.00	Supply and fixing of 300 mm dia - <b>No Right Turn/No Left turn/No</b> Straight/No 'U' Turn aspects by using UV stabilized ink on face plate EN-12368 as per Specification (NON SOR Item)	Nos.	16.00	6,196	99,136	
55.00	Providing and fixing of <b>S.S. Bollards(SS304</b> ) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	92.00	4,500	4,14,000	

Sr. No.	Specification	Unit	Qty.	Rate	Amount	Remarks
56.00	Providing and fixing of <b>railing as detail design in MS HOLLOW</b> <b>SECTION and bars</b> ( shop drawing to be approved ),with vertical support of 0.9m @2.2mc/c , all complete to the satisfaction of the Landscape architect.(Non SOR Item)	MT	5.37	100,000	5,37,000	
57.00	Providing and Fixing SS 304 Outdoor Dustbin(Pivoted Type and Mounted on SS Poles) of 55 liters capacity all complete to the satisfaction of the Engineer in charge. (NON SOR Item)	Nos.	29.00	7,500	2,17,500	
58.00	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1-Earth	Cum	11,797.81	90.86	10,71,949	
59.00	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5km Item No 17.4 KSRRB M100-4.1-Debris	Cum	1,876.15	91.30	1,71,292	
			Total		10,48,06,661	

Executive Engineer MSCL Mangaluru General Manager Technical MSCL Mangaluru

#### Name of the Work :- Mangalore Smart City

<u> </u>	3.1.1 Measurement Sheet of Road ar			r Loop Roa			
Sr. No.	Description	Unit	No's	L	В	Н	Qty.
	Road and Junction Pavmer	it and Ot	ner wor	KS			
	Taking out existing CC interlocking paver blocks from footpath/						
	central verge, including removal of rubbish etc., disposal of						
	unserviceable material to the dumping ground, for which payment						
1	shall be made separately and stacking of serviceable material						
	within 50 metre lead as per direction of Engineer-in-Charge.(RA						
	attached)						
	,						
	Paver Block on Carriage Way					H	
	Maidan Road (AB Shetty and Hamilton Circle)						
	Right Hand Side Existing Paver Block on Carriageway						
	Ch.44.50 to Ch.84.00	Sqm	1	39.5	3.57		141.02
	Ch.84.00 to Ch.247.00	Sqm	1	154.216	3.72		573.68
	Left Hand Side Existing paver Block on Carriageway	_					
	Ch.44.50 to Ch.79.15	Sqm	1	34.48	2		68.96
	Ch.120.00 to Ch.208.79	Sqm	1	90.32	2.66		239.89
	Nellikai Road				-		
	Left Hand Side of Road			10.0			45.05
	Ch.95.00 to Ch.109.0	Sqm	1	13.9	3.3		45.87
	Right Hand Side of Road	S ~~~	4	10.04	4.00		00.57
	Ch.285.0 to Ch.296.0	Sqm	1	10.94	1.88		20.57
	4th Cross Road	Sam	1	207.05	1.99		413.62
	Ch.22.15 to Ch.230.0 Ch.175.0 to Ch.190.0(Triangular Shape)	Sqm Sqm	0.5	207.85 21	2.84		29.82
	Ch.190 to Ch.210.0	Sqm	0.5	14.32	3.33		47.69
	4th Cross Road	Sqiii	I	14.52	3.33		47.09
	Left Hand Side Footpath						
	Ch.20.0 to Ch.40.0	Sqm	1	20.00	4.86		97.20
	Ch.40.0 to Ch.350.0	Sqm	1	220.00	2.2		484.00
	Right Hand Side Footpath	Uqin	•	220.00	2.2		101.00
	Ch.15.0 to Ch.180.0	Sqm	1	165.00	2.2		363.00
	Offset at @ Ch.100.0 to Ch.110.0	Sqm	1	18.14	2.67		48.43
		Sqm	-		Total Qty.		2573.75
	KSRRB M200.Dismantling of cement concrete pavement by						
	mechanical means using pueumatic tools, breaking to pieces not						
	exceeding 0.02 cum in volume and stock pilling at designated						
	locations and disposal of dismantled material stacking serviceble						
2	and unserviceable materials separately complete as per						
-	specifications.MORTH specification No.202.(Including transporting						
	charges, loading and unloading for lead 5km-Extra)						
	(KSRRB 18-19,Page No 140,SI No : 18.47)						
	Hamilton Junction	Cum	1	71	22.4	0.3	477.12
	Ded. Round About	Cum	-1	3.14	36	0.3	-33.91
		Cum			Total Qty.		443.21
	KSRRB M200-Dismantaling of kerb Stone and Channel KSRRB						
	M200-26. Dismantling Kerb stone by Manual means and disposal						
3	of dismantled materials with all lifts and complete as per						
5	specifications.MORTH Specification No.202.						
	(KSRRB 18-19,Page No.141,S.I.No.18.49)						
	Median Kerb-Maidan Road( A B Shetty to Hamilton Circle)						
					ļ		
	Ch.40.00 to Ch.97.80	Rmt	2	57.8			115.60
	Ch.120.0 to 230.00	Rmt	2	110			220.00
	Hamilton Juction Round About, Dia=12m, Circumference=3.14	Rmt	1	37.68			37.68
	x 12=37.68m				<b>├</b> ───┤		
	Maidan Road (AB shetty to Hamilton cirle)				ļ		
	Left Hand Side of Road						<u> </u>
	Ch.40.0 to Ch.46.80	Rmt	1	7.5			7.50
	Ch.46.80 to Ch.96.30	Rmt	1	49			49.00
	Service Bus Stand Road (LHS Side)	Rmt	1	14	ļ		14.00
	Service Bus Stand Road (RHS Side)	Rmt	1	25	ļ		25.00
	Ch.120.0 to Ch.170.0	Rmt	1	51.74			51.74
	Ch.180.0 to Ch. 210.0	Rmt	1	29.32			29.32
	Ch.210.0 to Ch.240.0(Curved area-Maidan Road)	Rmt	1	27			27.00
	Right Hand Side of Road						
		-		· - ·			· ·
	Ch.40.0 to Ch.44.32 Ch.44.32 to Ch.90.0	Rmt Rmt	1	4.74 44.42			4.74

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
	Ch.90.0 to Ch.120.0	Rmt	1	32.4			32.40
	Ch.120.0 to Ch.170.0	Rmt	1	44			44.00
	Ch.185.0 To Ch.210.0	Rmt	1	45			45.00
	Ch.210.0 to Ch.240.0(Curved area-Mangala karnis Road)	Rmt	1	27			27.00
	Footpath on mangala karnis Road (Mosque Side)	Rmt	1	50			50.00
	Footpath on mangala karnis Road (Old Kent Road Side)	Rmt	1	122			122.00
	4th Cross Road						
	Right hand side Footpath						
	Ch.30.0 to Ch.200.0	Rmt	1	169			169.00
	Left hand Side Footpath						
	Ch.30.0 to Ch.200.0	Rmt	1	173			173.00
		Rmt			Total Qty.		1288.40
					+		-
	KSRRB M200-13.1. Dismantling of existing structures like						
	culverts, bridges, retaining walls and other structure comprising of						
	masonry, cement concrete, wood work, steel work, including T&P						
	and scaffolding wherever necessary, sorting the dismantled						
4	material, disposal of unserviceable material and stacking the						
	serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20.						
	MORTH Specification No. 202 (KSRRB 18-19,18.20,Page						
	No.139)						
	100.159)						
	Hamilton Junction-Fountain Outer Circle Wall	Cum	3.14	12	0.3	0.45	5.09
	Hamilton Junction-Fountain Inner Circle wall	Cum	3.14	8.88	0.3	0.45	3.76
	Base of Fountain	Cum	3.14	6	6	0.15	16.96
		Cum			Total Qty.		25.81
					-		
	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm						
	thick along with premix carpet / surface dressing by road roller						
_	attached with scarifier without disturbing the base and stacking the						
5	debris including cost of all labour charges, HOM of machineries						
	complete as per specifications. MORTH / Section 5.(KSRRB 18-						
	19, SI No.19.56,Pg No.146)						
	Nellikai Road						
	Ch.25.00 to Ch.40.0	Sqm	1	15	6		90.00
	Ch.40.0 to Ch.80.00	Sqm	1	40	6.23		249.20
	Ch.80.0 to Ch.120.0	Sqm	1	40	7.01		249.20
	Ch.120.0 to Ch.160.0	Sqm	1	40	7.55		302.00
	Ch.160.0 to Ch.200.00	Sqm	1	40	7.86		314.40
	Ch.200.0 to Ch.240.0	Sqm	1	40	7.55		302.00
	Ch.240.0 to Ch.270.0	Sqm	1	30	7.63		228.90
	Nellikai Road and Mission Road Junction	Sqm	1	22	24		528.00
	Mission Road	Sqiii	1	22	24		520.00
	Ch.20.0 to Ch.190.0	Sqm	1	170	6.15		1045.50
	Ch.20.0 to Ch. 130.0	Sqm	1	170	Total Qty.		<b>3340.40</b>
		Sqiii			Total Qty.		3340.40
	KSRRB 300-46. Scarifying by mechanical means stone metal						
	crust 50mm to 100mm thick by along with 20mm premix carpet I						
	surface dressing and stacking of old serviceable materials						
6	including cost of all labour charges, HOM complete as per						
	specifications.						
	MORTH I Chapter 3.(KSRRB 18-19,SI No.19.52,Pg No.146)						
	Nellikai Road	Carro	4	45	0		00.00
	Ch.25.00 to Ch.40.0	Sqm	1	15	6		90.00
	Ch.40.0 to Ch.80.00	Sqm	1	40	6.23		249.20
	Ch.80.0 to Ch.120.0	Sqm	1	40	7.01		280.40
	Ch.120.0 to Ch.160.0	Sqm	1	40	7.55		302.00
	Ch.160.0 to Ch.200.00	Sqm	1	40	7.86		314.40
	Ch.200.0 to Ch.240.0	Sqm	1	40	7.55		302.00
	Ch.240.0 to Ch.270.0	Sqm	1	30	7.63		228.90
		Sqm	1	22	24		528.00
	Nellikai Road and Mission Road Junction				1		40.1
	Mission Road			1=0	A 1 -		1045.50
	Mission Road Ch.20.0 to Ch.190.0	Sqm	1	170	6.15		
	Mission Road	Sqm Sqm	1	170 71	22.4		1590.40
	Mission Road Ch.20.0 to Ch.190.0	Sqm					
	Mission Road Ch.20.0 to Ch.190.0 Hamilton Circle	Sqm Sqm <b>Sqm</b>			22.4		1590.40
	Mission Road Ch.20.0 to Ch.190.0 Hamilton Circle KSRRB M200-12.1. Dismantling of existing structures like	Sqm Sqm <b>Sqm</b>			22.4		1590.40
	Mission Road Ch.20.0 to Ch.190.0 Hamilton Circle KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of	Sqm Sqm <b>Sqm</b>			22.4		1590.40
	Mission Road Ch.20.0 to Ch.190.0 Hamilton Circle KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P	Sqm Sqm <b>Sqm</b>			22.4		1590.40
	Mission Road Ch.20.0 to Ch.190.0 Hamilton Circle KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled	Sqm Sqm <b>Sqm</b>			22.4		1590.40
7	Mission Road Ch.20.0 to Ch.190.0 Hamilton Circle KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the	Sqm Sqm <b>Sqm</b>			22.4		1590.40
7	Mission Road Ch.20.0 to Ch.190.0 Hamilton Circle KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications.	Sqm Sqm <b>Sqm</b>			22.4		1590.40
7	Mission Road Ch.20.0 to Ch.190.0 Hamilton Circle KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the	Sqm Sqm <b>Sqm</b>			22.4		1590.40
7	Mission Road Ch.20.0 to Ch.190.0 Hamilton Circle KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications.	Sqm Sqm <b>Sqm</b>			22.4		1590.40
7	Mission Road Ch.20.0 to Ch.190.0 Hamilton Circle KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar	Sqm Sqm <b>Sqm</b>			22.4		1590.40

Sr. No.	Description	Unit	No's	L	В	н	Qty.
	Maidan Road(AB Shetty to Hamilton Circle)						
	Ch.0.0 to Ch.230.0-Wall	Cum	2	230.00	0.15	0.50	34.50
	Ch.0.0 to 230.0 -Base	Cum	1	230.00	1.00	0.23	52.90
	Ch.0.0 to 230.0 -Top Slab	Cum	1	230.00	1.00	0.15	34.50
	Nellikai Road -Left hand storm water drain-Laterite						
	Ch.0.0 to Ch.270.0-Wall	Cum	2	285.00	0.15	0.50	42.75
	Ch.0.0 to 270.0 -Base	Cum	1	285.00	1.00	0.23	65.55
	Ch.0.0 to 270.0 -Top Slab( Consider 50% of Length) Nellikai Road -Right hand storm water drain-Laterite	Cum	0.5	285.00	1.00	0.15	21.38
	CH.0.0 to Ch.190.0-Wall	Cum	2	143.00	0.15	0.50	21.45
	CH.0.0 to Ch.190.0-Base	Cum	1	143.00	1.00	0.23	32.89
	CH.0.0 to Ch.190.0-Top Slab (Consider 50% of Length)	Cum	0.5	143.00	1.00	0.15	10.73
	Mission Street Road-Left hand storm water drain-Laterite	00	0.0			0110	
	Ch.0.0 to Ch.190.0-Wall	Cum	2	190.00	0.15	0.50	28.50
	Ch.0.0 to Ch.190.0-Base	Cum	1	190.00	1.00	0.23	43.70
	Ch.0.0 to Ch.190.0-Top Slab	Cum	1	190.00	1.00	0.15	28.50
	Mission Street Road-Right hand storm water drain						
	Ch.0.0 to Ch.190.0-Wall	Cum	2	190.00	0.15	0.50	28.50
	Ch.0.0 to Ch.190.0-Base Ch.0.0 to Ch.190.0-Top Slab	Cum Cum	1	190.00 190.00	1.00	0.23	43.70
	Cross Drain at Mission Street Road	Cum	0.5	190.00	1.00	0.15	14.25
	Wall	Cum	2	10.00	0.15	0.50	1.50
ļ	Base	Cum	1	10.00	1.00	0.30	2.30
-	Top Slab	Cum	1	10.00	1.00	0.25	1.50
<u> </u>		Cum		. 0.00	Total Qty.	5.15	509.09
	KSRRB M800-Permanent type barricade in construction zone						
	KSRRB M800-44.1. Construction of a permanent type barricade						
	made of steel components, 1.5 m high from road level, fitted with 3						
	horizontal rails 200 mm wide and 4 m long on 50 x 50 x 5 mm						
8	angle iron vertical support, painted with yellow and white strips,						
	150 mm in width at an angle of 45°, complete as per IRC:SP:55-						
	2014 complete as per specifications . A. With steel						
	components(KSRRB 18-19,Page No 187,SI No : 24.45)						
	Length of Road						
	4th Cross Road						
	Ch.0.0 to Ch.270.0	Rm	1	270.00			270.00
						Total	270.00
	No. of Barricade = Length of Road / Length of one barricade					Length	
	(2.5m)	Nos.			Total Qty.		108.00
	(2.011)						
	KSRRB M300-14. Excavation for roadwork in all types of soil by						
	mechanical means including cutting and loading to tippers,						
	trimming bottom and side slopes, in accordance with						
	requirements of lines, grades and cross sections, and						
9	transportation with a lead of 1.00 km and complete as per						
Ŭ	specifications.						
	MORTH Specification No.301						
	MORTH Specification No.301 (KSRRB 18-19,Page No 143,SI No : 19.14)						
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road						
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0	Cum	1	245	9.3	0.58	1310.14
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road						
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48	Cum	1	163.72	9.3	0.58	875.49
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle						
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD	Cum	1	163.72	9.3	0.58	875.49
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road	Cum	1	163.72	9.3	0.58	875.49
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation	Cum Cum	1	163.72 71	9.3 22.4	0.58 0.40	875.49 636.16
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS	Cum Cum Cum	1 1 	163.72 71 254	9.3 22.4 1.7	0.58 0.40	875.49 636.16 539.75
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS LHS	Cum Cum	1	163.72 71	9.3 22.4	0.58 0.40	875.49 636.16
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS LHS Nellikai Road	Cum Cum Cum	1 1 	163.72 71 254	9.3 22.4 1.7	0.58 0.40	875.49 636.16 539.75
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS LHS Nellikai Road Foundation	Cum Cum Cum Cum	1 1 1 1 1	163.72 71 254 232	9.3 22.4 1.7 1.7	0.58 0.40 1.25 1.25	875.49 636.16 539.75 493.00
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS LHS Nellikai Road Foundation RHS	Cum Cum Cum	1 1 	163.72 71 254	9.3 22.4 1.7	0.58 0.40	875.49 636.16 539.75
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS LHS Nellikai Road Foundation	Cum Cum Cum Cum	1 1 1 1 1	163.72 71 254 232	9.3 22.4 1.7 1.7	0.58 0.40 1.25 1.25	875.49 636.16 539.75 493.00
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS LHS Nellikai Road Foundation RHS Mission Street Road	Cum Cum Cum Cum	1 1 1 1 1	163.72 71 254 232	9.3 22.4 1.7 1.7	0.58 0.40 1.25 1.25	875.49 636.16 539.75 493.00
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS LHS Nellikai Road Foundation RHS Mission Street Road Foundation	Cum Cum Cum Cum	1 1 1 1 1 1 1	163.72 71 254 232 331	9.3 22.4 1.7 1.7 1.7	0.58 0.40 1.25 1.25 1.25	875.49 636.16 539.75 493.00 703.38
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS LHS Nellikai Road Foundation RHS Mission Street Road Foundation RHS	Cum Cum Cum Cum Cum		163.72 71 254 232 331 196	9.3 22.4 1.7 1.7 1.7 1.7	0.58 0.40 1.25 1.25 1.25 1.25	875.49 636.16 539.75 493.00 703.38 416.50
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS LHS Nellikai Road Foundation RHS Mission Street Road Foundation RHS Mission Street Road Foundation RHS Mission Street Road Foundation RHS LHS	Cum Cum Cum Cum Cum		163.72 71 254 232 331 196	9.3 22.4 1.7 1.7 1.7 1.7	0.58 0.40 1.25 1.25 1.25 1.25	875.49 636.16 539.75 493.00 703.38 416.50 439.88
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS LHS Nellikai Road Foundation RHS Mission Street Road Foundation RHS Mission Street Road Foundation RHS LHS Mission Street Road Foundation RHS LHS	Cum Cum Cum Cum Cum Cum Cum		163.72 71 254 232 331 196 207 251	9.3 22.4 1.7 1.7 1.7 1.7 1.7 1.7 1.7	0.58 0.40 1.25 1.25 1.25 1.25 1.25 1.25 1.25	875.49 636.16 539.75 493.00 703.38 416.50 439.88 533.38
	(KSRRB 18-19,Page No 143,SI No : 19.14) Nellikai Road Ch. 25.00 to 270.0 Mission Road Ch. 23.78 to Ch.28.48 Hamilton Circle Excavation for SWD Maidan Road Foundation RHS LHS Nellikai Road Foundation RHS Mission Street Road Foundation RHS Mission Street Road Foundation RHS Mission Street Road Foundation RHS LHS	Cum Cum Cum Cum Cum Cum		163.72 71 254 232 331 196 207	9.3 22.4 1.7 1.7 1.7 1.7 1.7	0.58 0.40 1.25 1.25 1.25 1.25 1.25 1.25	875.49 636.16 539.75 493.00 703.38 416.50 439.88

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
0.1110.	Signal Poles	Cum	16	1.6	1.6	1.00	40.96
	Electrical HDPE Pipe laying						
	Maidan Road	Cum	1	446.2	0.9	1.80	722.84
	Nellikai Road	Cum	1	555	0.9	1.80	899.10
	Mission Road	Cum	1	378.4	0.9	1.80	613.01
	4th Cross Road	Cum	1	393.4	0.9	1.80	637.31
	Chamber Excavation Footpath Excavation	Cum	65	3.3	2.2	2.40	1132.56
	Maidan Road (AB shetty to Hamilton Circle)Footpath						
	Left Hand Side of Road						
	Ch.0.0 to Ch.100.0	Cum	1	84.49	2.2	0.15	27.88
	Service Bus Stand Road (LHS Side)	Cum	1	45.6	2.2	0.15	15.05
	Service Bus Stand Road (RHS Side)	Cum	1	35.92	2.2	0.15	11.85
	Ch.120.0 to Ch.170.0	Cum	1	52.59	2.2	0.15	17.35
	Ch.180.0 to Ch. 210.0	Cum	1	27.16	2.2	0.15	8.96
	Ch.210.0 to Ch.240.0(Curved area-Maidan Road) Right Hand Side of Road	Cum	1	19.12	3	0.15	8.60
	Ch.30.0 to Ch.170.0	Cum	1	141.27	2.2	0.15	46.62
	Ch.180.0 to Ch.240.0	Cum	1	54.4	2.2	0.15	17.95
	Mangala Devi Road-RHS	Cum	1	49	1.55	0.15	11.39
	Mangala Devi Road-LHS	Cum	1	72.69	1.64	0.15	17.88
	Hamilton Circle Juction-Footpath						
	Rosario Church Road-LHS	Cum	1	47	2.2	0.15	15.51
	Rosario Church Road-RHS	Cum	1	83.175	5.3	0.15	66.12
	Bunder Road-LHS Bunder Road-RHS	Cum Cum	1	71.63 74.21	7.43 6.41	0.15 0.15	79.83 71.35
	Nellikai Road-LHS	Cum	1	74.21	0.41	0.15	71.55
	Ch.10.0 to Ch.50.0	Cum	1	38.91	2.2	0.15	12.84
	Ch.55.0 to Ch.125.0	Cum	1	67.04	2.2	0.15	22.12
	Ch.120.0 to Ch.270.0	Cum	1	119.69	2.2	0.15	39.50
	Ch.280.0 to Ch.310.0	Cum	1	29.68	2.2	0.15	9.79
	Nellikai Road-RHS						
	Ch.10.0 to Ch.35.0	Cum	1	25.92	1.4	0.15	5.44
	Ch.45.0 to Ch.95.0	Cum	1	47 71.83	1.4 1.4	0.15 0.15	9.87
	Ch.105.0 to Ch.180.0 Ch.190.0 to Ch.270.0	Cum Cum	1	84.11	1.4	0.15	15.08 17.66
	At Junction at Nellikai and 4th cross road	Cum	1	165	1.4	0.15	24.75
	4th Cross Road	Call		100		0.10	20
	Left Hand Side Footpath						
	Ch.20.0 to Ch.40.0	Cum	1	20	4.86	0.15	14.58
	Ch.40.0 to Ch.350.0	Cum	1	220	2.2	0.15	72.60
	Right Hand Side Footpath	0	4	405	0.0	0.45	E 4 4 E
	Ch.15.0 to Ch.180.0 Offset at @ Ch.100.0 to Ch.110.0	Cum Cum	1	165 18.14	2.2 2.67	0.15 0.15	54.45 7.27
	Mission Street	Cum	1	10.14	2.07	0.15	1.21
	Right hand side Footpath						
	Ch.10.00 to Ch.25.00	Cum	1	15	3.74	0.15	8.42
	Ch.47.0 to Ch.175.0	Cum	1	148.88	2.2	0.15	49.13
	Ch.175.0 to Ch.190.0	Cum	1	28.55	5.6	0.15	23.98
	Left Hand Side Footpath	-					
	Ch.0.0 to Ch.40.0	Cum	1	70	2.2	0.15	23.10 21.84
	Ch.40.0 to Ch.110.0 Ch.120.0 to Ch.206.0	Cum Cum	1	66.174 100	2.2 2.2	0.15 0.15	33.00
	Ch.56.57 to Ch.84.36	Cum	1	27	4.86	0.15	19.68
	Compound Wall side paver Block	Cam				0.10	10.00
	Maidan Road						
	RHS-Ch.40.00 to Ch.120.0( Average Width)	Cum	1	80.23	1.6	0.15	19.26
	Rosario Church LHS	Cum	1	56.92	3.94	0.15	33.64
	Bus Service Road-RHS	Cum	1	30.94	4.2	0.15	19.49
	Bus Service Road-LHS	Cum	1	38.9	1.61	0.15	9.39
	Ch.50.0 to 100.0 Ch. 0 to 50	Cum Cum	1	48 32.22	2.16 3.7	0.15 0.15	15.55 17.88
	Nellikai Road	Cum	1	52.22	5.1	0.13	17.00
	RHS-Ch.150.0 to Ch.200.0	Cum	1	66.79	2.92	0.15	29.25
	RHS-Ch.150.0 to Ch.210.0	Cum	1	19	1.66	0.15	4.73
	LHS-Ch.10.0 to Ch.35.0	Cum	1	69.49		0.15	10.42
	Ch.45.0 to Ch.95.0	Cum	1	46.81	1.34	0.15	9.41
	Ch.110 to Ch.180.0	Cum	1	45	4.5	0.15	6.75
	Mission Street Ch.80.0 to Ch.115.0	Cum	1	82.26	1.5	0.15	18.51
		Cum	1	32 98.68	1.32 2	0.15 0.15	6.34 29.60
		Cum					29.00
	Ch.120.0 to Ch.206.0	Cum	1	30.00		0.15	
	Ch.120.0 to Ch.206.0 4th Cross Road		1	160	3	0.15	
	Ch.120.0 to Ch.206.0	Cum Cum Cum					72.00
	Ch.120.0 to Ch.206.0 <b>4th Cross Road</b> RHS-Ch.20.0 to Ch.180.0(Avg. width)	Cum	1	160	3	0.15	72.00

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
	KSRB 2-4 : Refilling available earth around pipe lines, cables in						
	layers not exceeding 20cms in depth, compacting each deposited						
	layer by ramming after watering with lead upto 50m. and lift upto						
10	1.5 m. including cost of all labour complete as per						
	specifications.(KSRB 18-19,SI No.2.11,Pg. No.7)						
	Electrical HDPE Pipe laying	_					
	Maidan Road	Cum	1	446.2	0.9	1.8	722.84
	Nellikai Road Mission Road	Cum Cum	1	555 378.4	0.9	1.8 1.8	613.01
	4th Cross Road	Cum	1	393.4	0.9	1.8	637.31
	Dia 225mm Pipe Volume	Cum	-2	1929	3.14	0.05	-605.71
	Dia 160 mm Pipe Volume	Cum	-4	1929	3.14	0.03	-726.85
	Total Excavation for Chambers	Cum	1	1132.56			1132.56
	Deduct Vol of Chamber	Cum	-65	2.40	0.90	2.10	-294.84
	Total Excavation for Electric Pole Ded. Vol of Concrete	Cum Cum	1 -1	189.54 18.25			189.54 -18.25
	Total Excavation for Signal Pole	Cum	-1	40.96			40.96
	Ded. Vol of Concrete	Cum	-1	6.00			-6.00
	Total Excavation for SWD	Cum	1	3499.88			3499.88
	Deducting the Volume of SWD						
	Maidan Road						
	Foundation	<u></u>	4	05.4	0.00	4.00	000.00
	RHS LHS	Cum Cum	-1 -1	254 232	0.90	1.00	-228.60 -208.80
	Nellikai Road	Cum	-1	232	0.90	1.00	-200.00
	Foundation						
	RHS	Cum	-1	331	0.90	1.00	-297.90
	Mission Street Road						
	Foundation						
	RHS LHS	Cum	-1	196	0.90	1.00	-176.40
	4th Cross Lane	Cum	-1	207	0.90	1.00	-186.30
	Foundation						
	RHS	Cum	-1	251	0.90	1.00	-225.90
	LHS	Cum	-1	176	0.90	1.00	-158.40
		Cum			Total Qty.		4601.25
	KSRRB 300-58. Compaction of original ground by mechanical means including filling in depression occuring during rolling						
	including cost of all labour, HOM complete as per specifications.						
11	MORTH I Chapter 3						
	(KSRRB 18-19,SI No.19.64,Pg. No.147)						
	Maidan Road (AB shetty to Hamilton Circle)Footpath						
	Left Hand Side of Road						
	Ch.0.0 to Ch.100.0	Sqm	1				
		0		84.49	2.2		185.88
	Service Bus Stand Road (LHS Side)	Sqm	1	45.6	2.2		100.32
	Service Bus Stand Road (RHS Side)	Sqm	1 1	45.6 35.92	2.2 2.2		100.32 79.02
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0	Sqm Sqm	1 1 1	45.6 35.92 52.59	2.2 2.2 2.2		100.32 79.02 115.70
	Service Bus Stand Road (RHS Side)	Sqm	1 1	45.6 35.92	2.2 2.2		100.32 79.02
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) Right Hand Side of Road	Sqm Sqm Sqm Sqm	1 1 1 1	45.6 35.92 52.59 27.16	2.2 2.2 2.2 2.2 2.2		100.32 79.02 115.70 59.75
	Service Bus Stand Road (RHS Side)           Ch.120.0 to Ch.170.0           Ch.180.0 to Ch. 210.0           Ch.210.0 to Ch.240.0(Curved area-Maidan Road)           Right Hand Side of Road           Ch.30.0 to Ch.170.0	Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27	2.2 2.2 2.2 3 2.2		100.32 79.02 115.70 59.75 57.36 310.79
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.170.0 Ch.180.0 to Ch.240.0	Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4	2.2 2.2 2.2 3 2.2 3 2.2 2.2 2.2		100.32 79.02 115.70 59.75 57.36 310.79 119.68
	Service Bus Stand Road (RHS Side)           Ch.120.0 to Ch.170.0           Ch.180.0 to Ch. 210.0           Ch.210.0 to Ch.240.0(Curved area-Maidan Road)           Right Hand Side of Road           Ch.30.0 to Ch.170.0           Ch.180.0 to Ch.240.0           Mangala Devi Road-RHS	Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49	2.2 2.2 2.2 3 2.2 3 2.2 2.2 2.2 1.55		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.170.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS Mangala Devi Road-LHS	Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4	2.2 2.2 2.2 3 2.2 3 2.2 2.2 2.2		100.32 79.02 115.70 59.75 57.36 310.79 119.68
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.170.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS Mangala Devi Road-LHS <b>Hamilton Circle Juction-Footpath</b>	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69	2.2 2.2 2.2 3 2.2 3 2.2 2.2 1.55 1.64		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.240.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS Mangala Devi Road-LHS Hamilton Circle Juction-Footpath Rosario Church Road-LHS	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47	2.2 2.2 2.2 3 2.2 3 2.2 2.2 1.55 1.64 2.2		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.170.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS Mangala Devi Road-LHS <b>Hamilton Circle Juction-Footpath</b>	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69	2.2 2.2 2.2 3 2.2 3 2.2 2.2 1.55 1.64		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.240.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS Mangala Devi Road-LHS <b>Hamilton Circle Juction-Footpath</b> Rosario Church Road-LHS Bunder Road-LHS Bunder Road-LHS	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47 83.175	2.2 2.2 2.2 3 2.2 2.2 3 2.2 1.55 1.64 2.2 5.3		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40 440.83
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.240.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS Mangala Devi Road-LHS <b>Hamilton Circle Juction-Footpath</b> Rosario Church Road-LHS Bunder Road-LHS Bunder Road-LHS Bunder Road-LHS <b>Nellikai Road-LHS</b>	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47 83.175 71.63 74.21	2.2 2.2 2.2 3 2.2 2.2 2.2 1.55 1.64 2.2 5.3 7.43 6.41		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40 440.83 532.21 475.69
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.240.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS Mangala Devi Road-LHS <b>Hamilton Circle Juction-Footpath</b> Rosario Church Road-LHS Bunder Road-LHS Bunder Road-LHS Bunder Road-LHS Bunder Road-LHS Ch.10.0 to Ch.50.0	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47 83.175 71.63 74.21 38.91	2.2 2.2 2.2 3 2.2 2.2 1.55 1.64 2.2 5.3 7.43 6.41 2.2		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40 440.83 532.21 475.69
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.240.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS Mangala Devi Road-LHS <b>Hamilton Circle Juction-Footpath</b> Rosario Church Road-LHS Bunder Road-LHS Bunder Road-LHS Bunder Road-LHS Bunder Road-LHS Ch.10.0 to Ch.50.0 Ch.55.0 to Ch.125.0	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47 83.175 71.63 74.21 38.91 67.04	2.2 2.2 2.2 3 2.2 2.2 1.55 1.64 2.2 5.3 7.43 6.41 2.2 2.2 2.2		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40 440.83 532.21 475.69 85.60 147.49
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.240.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS Mangala Devi Road-LHS <b>Hamilton Circle Juction-Footpath</b> Rosario Church Road-LHS Bunder Road-LHS Bunder Road-LHS Bunder Road-LHS Mellikai Road-LHS Ch.10.0 to Ch.50.0 Ch.55.0 to Ch.125.0 Ch.120.0 to Ch.270.0	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47 83.175 71.63 74.21 38.91 67.04 119.69	2.2 2.2 2.2 3 2.2 2.2 1.55 1.64 2.2 5.3 7.43 6.41 2.2 2.2 2.2 2.2 2.2		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40 440.83 532.21 475.69 85.60 147.49 263.32
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.240.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS Mangala Devi Road-LHS <b>Hamilton Circle Juction-Footpath</b> Rosario Church Road-LHS Bunder Road-LHS Bunder Road-LHS Bunder Road-LHS Bunder Road-LHS Ch.10.0 to Ch.50.0 Ch.55.0 to Ch.125.0 Ch.120.0 to Ch.270.0 Ch.280.0 to Ch.310.0	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47 83.175 71.63 74.21 38.91 67.04	2.2 2.2 2.2 3 2.2 2.2 1.55 1.64 2.2 5.3 7.43 6.41 2.2 2.2 2.2		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40 440.83 532.21 475.69 85.60 147.49
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) <b>Right Hand Side of Road</b> Ch.30.0 to Ch.240.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS Mangala Devi Road-LHS <b>Hamilton Circle Juction-Footpath</b> Rosario Church Road-LHS Bunder Road-LHS Bunder Road-LHS Bunder Road-LHS Bunder Road-LHS Ch.10.0 to Ch.50.0 Ch.55.0 to Ch.125.0 Ch.120.0 to Ch.270.0 Ch.280.0 to Ch.310.0 <b>Nellikai Road-RHS</b>	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47 83.175 71.63 74.21 38.91 67.04 119.69 29.68	2.2 2.2 2.2 3 2.2 2.2 1.55 1.64 2.2 5.3 7.43 6.41 2.2 2.2 2.2 2.2 2.2 2.2 2.2		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40 440.83 532.21 475.69 85.60 147.49 263.32 65.30
	Service Bus Stand Road (RHS Side)           Ch.120.0 to Ch.170.0           Ch.180.0 to Ch. 210.0           Ch.210.0 to Ch.240.0(Curved area-Maidan Road)           Right Hand Side of Road           Ch.30.0 to Ch.170.0           Ch.180.0 to Ch.240.0           Mangala Devi Road-RHS           Mangala Devi Road-LHS           Hamilton Circle Juction-Footpath           Rosario Church Road-LHS           Bunder Road-LHS           Bunder Road-LHS           Bunder Road-LHS           Ch.10.0 to Ch.50.0           Ch.10.0 to Ch.270.0           Ch.120.0 to Ch.310.0           Nellikai Road-RHS           Ch.10.0 to Ch.35.0	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47 83.175 71.63 74.21 38.91 67.04 119.69 29.68 25.92	2.2 2.2 2.2 3 2.2 2.2 1.55 1.64 2.2 5.3 7.43 6.41 2.2 2.2 2.2 2.2 2.2 2.2 1.4		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40 440.83 532.21 475.69 85.60 147.49 263.32 65.30
	Service Bus Stand Road (RHS Side)           Ch.120.0 to Ch.170.0           Ch.180.0 to Ch. 210.0           Ch.210.0 to Ch.240.0(Curved area-Maidan Road)           Right Hand Side of Road           Ch.30.0 to Ch.170.0           Ch.180.0 to Ch.240.0           Mangala Devi Road-RHS           Mangala Devi Road-LHS           Hamilton Circle Juction-Footpath           Rosario Church Road-LHS           Bunder Road-LHS           Bunder Road-LHS           Bunder Road-LHS           Ch.10.0 to Ch.50.0           Ch.10.0 to Ch.270.0           Ch.120.0 to Ch.310.0           Nellikai Road-RHS           Ch.10.0 to Ch.35.0           Ch.120.0 to Ch.35.0           Ch.10.0 to Ch.35.0	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1 1 1 1 1 1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47 83.175 71.63 74.21 38.91 67.04 119.69 29.68 25.92 47	2.2 2.2 2.2 3 2.2 2.2 1.55 1.64 2.2 5.3 7.43 6.41 2.2 2.2 2.2 2.2 2.2 2.2 2.2 1.4 1.4		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40 440.83 532.21 475.69 85.60 147.49 263.32 65.30
	Service Bus Stand Road (RHS Side)           Ch.120.0 to Ch.170.0           Ch.180.0 to Ch. 210.0           Ch.210.0 to Ch.240.0(Curved area-Maidan Road)           Right Hand Side of Road           Ch.30.0 to Ch.170.0           Ch.180.0 to Ch.240.0           Mangala Devi Road-RHS           Mangala Devi Road-LHS           Hamilton Circle Juction-Footpath           Rosario Church Road-LHS           Bunder Road-LHS           Bunder Road-LHS           Bunder Road-LHS           Ch.10.0 to Ch.50.0           Ch.10.0 to Ch.270.0           Ch.120.0 to Ch.310.0           Nellikai Road-RHS           Ch.10.0 to Ch.35.0	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1       1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47 83.175 71.63 74.21 38.91 67.04 119.69 29.68 25.92	2.2 2.2 2.2 3 2.2 2.2 1.55 1.64 2.2 5.3 7.43 6.41 2.2 2.2 2.2 2.2 2.2 2.2 1.4		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40 440.83 532.21 475.69 85.60 147.49 263.32 65.30 36.29 65.80
	Service Bus Stand Road (RHS Side)           Ch.120.0 to Ch.170.0           Ch.180.0 to Ch. 210.0           Ch.210.0 to Ch.240.0(Curved area-Maidan Road)           Right Hand Side of Road           Ch.30.0 to Ch.170.0           Ch.180.0 to Ch.240.0           Mangala Devi Road-RHS           Mangala Devi Road-LHS           Hamilton Circle Juction-Footpath           Rosario Church Road-LHS           Bunder Road-LHS           Bunder Road-LHS           Bunder Road-LHS           Ch.10.0 to Ch.50.0           Ch.10.0 to Ch.270.0           Ch.280.0 to Ch.310.0           Nellikai Road-RHS           Ch.10.0 to Ch.35.0           Ch.10.0 to Ch.35.0           Ch.10.0 to Ch.35.0           Ch.10.0 to Ch.35.0           Ch.45.0 to Ch.95.0           Ch.105.0 to Ch.180.0	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1         1	45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 72.69 47 83.175 71.63 74.21 38.91 67.04 119.69 29.68 25.92 47 71.83	2.2 2.2 2.2 3 2.2 2.2 1.55 1.64 2.2 5.3 7.43 6.41 2.2 2.2 2.2 2.2 2.2 2.2 2.2 1.4 1.4 1.4		100.32 79.02 115.70 59.75 57.36 310.79 119.68 75.95 119.21 103.40 440.83 532.21 475.69 85.60 147.49 263.32 65.30 36.29 65.80 100.56

Sr. No.	Description	Unit	No's	L	В	н	Qty.
	Left Hand Side Footpath						
	Ch.20.0 to Ch.40.0	Sqm	1	20	4.86		97.20
	Ch.40.0 to Ch.350.0	Sqm	1	220	2.2		484.00
	Right Hand Side Footpath Ch.15.0 to Ch.180.0	Sqm	1	165	2.2		363.00
	Offset at @ Ch.100.0 to Ch.110.0	Sqm	1	18.14	2.67		48.43
	Mission Street	• • •					10.10
	Right hand side Footpath						
	Ch.10.00 to Ch.25.00	Sqm	1	15	3.74		56.10
	Ch.47.0 to Ch.175.0	Sqm	1	148.88	2.2		327.54
	Ch.175.0 to Ch.190.0	Sqm	1	28.55	5.6		159.88
	Left Hand Side Footpath Ch.0.0 to Ch.40.0	Sqm	1	70	2.2		154.00
	Ch.40.0 to Ch.110.0	Sqm	1	66.174	2.2		145.58
	Ch.120.0 to Ch.206.0	Sqm	1	100	2.2		220.00
	Ch.56.57 to Ch.84.36	Sqm	1	27	4.86		131.22
	Compound Wall side paver Block						
	Maidan Road						
	RHS-Ch.40.00 to Ch.120.0( Average Width)	Sqm	1	80.23	1.6		128.37
	Rosario Church LHS	Sqm	1	56.92 30.94	3.94 4.2		224.26
	Bus Service Road-RHS Bus Service Road-LHS	Sqm Sqm	1	30.94	4.2		129.95 62.63
	Ch.50.0 to 100.0	Sqm	1	48	2.16		103.68
	Ch. 0 to 50	Sqm	1	32.22	3.7		119.21
	Nellikai Road						
	RHS-Ch.150.0 to Ch.200.0	Sqm	1	66.79	2.92		195.03
	RHS-Ch.150.0 to Ch.210.0	Sqm	1	19	1.66		31.54
	LHS-Ch.10.0 to Ch.35.0	Sqm	1	69.49			69.49
	Ch.45.0 to Ch.95.0	Sqm	1	46.81	1.34		62.73
	Ch.110 to Ch.180.0	Sqm Sqm	1	45	1.5		45.00 123.39
	Mission Street Ch.80.0 to Ch.115.0	Sqm	1	82.26 32	1.5 1.32		42.24
	Ch.120.0 to Ch.206.0	Sqm	1	98.68	2		197.36
	4th Cross Road	• • •		00.00			
	RHS-Ch.20.0 to Ch.180.0(Avg. width)	Sqm	1	160	3		480.00
	LHS-0.0 to 63.0	Sqm	1	49.78	2.62		130.42
	Ch.63 to Ch.180.0(Avg. Width)	Sqm	1	117	1		117.00
		Sqm			Total Qty.		8272.15
	KSRB 4-1.7 : Providing and laying in position plain cement						
	concrete of Mix 1:3:6 with OPC @ 220kgs, with 20mm and down						
	size graded granite metal coarse aggregates @0.69 cum and						
	fine aggregtes @ 0.56cum, machine mixed, concrete laid in						
12	layers not exceeding 15 ems. thick, well compacted, in						
	foundation, plinth and cills, including cost of all materials, labour,						
	HOM curing complete as per specifications. Specification No. KBS 4.1, 4.2						
	(KSRB 18-19,SI No.4.7,Pg No.13						
	Signal Pole RCC Pedstal at hamilton circle	Cum					
	Bighar bio Reo redetar at harmiter birble		16	1	1 00	0.10	1.60
	Electrical Pole	Cum Cum	16 104	1 1.1	1.00 1.10	0.10 0.10	1.60 12.58
	Electrical Pole Maidan Road (AB shetty to Hamilton Circle)Footpath				1.00 1.10		1.60 12.58
	Maidan Road (AB shetty to Hamilton Circle)Footpath Right Hand Side of Road	Cum		1.1	1.10	0.10	12.58
	Maidan Road (AB shetty to Hamilton Circle)Footpath Right Hand Side of Road Ch.0.0 to Ch.100.0	Cum Cum	104 1	1.1 84.49	1.10 1.3	0.10	12.58 10.98
	Maidan Road (AB shetty to Hamilton Circle)Footpath Right Hand Side of Road Ch.0.0 to Ch.100.0 Service Bus Stand Road (LHS Side)	Cum Cum Cum	104 1 1	1.1 84.49 45.6	1.10 1.3 1.3	0.10 0.10 0.10	12.58 10.98 5.93
	Maidan Road (AB shetty to Hamilton Circle)Footpath Right Hand Side of Road Ch.0.0 to Ch.100.0 Service Bus Stand Road (LHS Side) Service Bus Stand Road (RHS Side)	Cum Cum Cum Cum	104 1 1 1	1.1 84.49 45.6 35.92	1.10 1.3 1.3 1.3	0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0	Cum Cum Cum Cum Cum	104 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59	1.10 1.3 1.3 1.3 1.3 1.3	0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch. 210.0	Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59 27.16	1.10 1.3 1.3 1.3 1.3 1.3 1.3	0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53
	Maidan Road (AB shetty to Hamilton Circle)FootpathRight Hand Side of RoadCh.0.0 to Ch.100.0Service Bus Stand Road (LHS Side)Service Bus Stand Road (RHS Side)Ch.120.0 to Ch.170.0Ch.180.0 to Ch. 210.0Ch.210.0 to Ch.240.0(Curved area-Maidan Road)	Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59	1.10 1.3 1.3 1.3 1.3 1.3	0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch. 210.0	Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59 27.16	1.10 1.3 1.3 1.3 1.3 1.3 1.3	0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road	Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59 27.16 19.12 141.27 54.4	1.10 1.3 1.3 1.3 1.3 1.3 2.1	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.30.0 to Ch.240.0         Mangala Devi Road-RHS	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59 27.16 19.12 141.27	1.10 1.3 1.3 1.3 1.3 1.3 2.1 1.3	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.180.0 to Ch.240.0         Mangala Devi Road-RHS         Hamilton Circle Juction-Footpath	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59 27.16 19.12 141.27 54.4 49	1.10 1.3 1.3 1.3 1.3 1.3 2.1 1.3 1.3 0.65	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37 7.07 3.19
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.180.0 to Ch.240.0(Mangala Devi Road-RHS         Hamilton Circle Juction-Footpath         Rosario Church Road-LHS	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 47	1.10 1.3 1.3 1.3 1.3 1.3 2.1 1.3 1.3 0.65 1.3	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37 7.07 3.19 6.11
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.180.0 to Ch.240.0(Mangala Devi Road-RHS         Hamilton Circle Juction-Footpath         Rosario Church Road-LHS         Rosario Church Road-RHS	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 47 83.175	1.10 1.3 1.3 1.3 1.3 1.3 1.3 2.1 1.3 1.3 0.65 1.3 4.4	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37 7.07 3.19 6.11 36.60
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.180.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.240.0         Mangala Devi Road-RHS         Hamilton Circle Juction-Footpath         Rosario Church Road-LHS         Bunder Road-LHS	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 47 83.175 71.63	1.10 1.3 1.3 1.3 1.3 1.3 1.3 2.1 1.3 1.3 0.65 1.3 4.4 6.53	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37 7.07 3.19 6.11 36.60 46.77
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.180.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.240.0         Mangala Devi Road-RHS         Hamilton Circle Juction-Footpath         Rosario Church Road-LHS         Bunder Road-LHS         Bunder Road-RHS	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 47 83.175	1.10 1.3 1.3 1.3 1.3 1.3 1.3 2.1 1.3 1.3 0.65 1.3 4.4	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37 7.07 3.19 6.11 36.60
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.180.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.240.0         Mangala Devi Road-RHS         Hamilton Circle Juction-Footpath         Rosario Church Road-LHS         Bunder Road-LHS         Bunder Road-RHS         Handre Road-RHS         Hander Road-RHS	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 47 83.175 71.63	1.10 1.3 1.3 1.3 1.3 1.3 1.3 2.1 1.3 1.3 0.65 1.3 4.4 6.53	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37 7.07 3.19 6.11 36.60 46.77
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.180.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.240.0         Mangala Devi Road-RHS         Hamilton Circle Juction-Footpath         Rosario Church Road-LHS         Bunder Road-LHS         Bunder Road-RHS	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1 84.49 45.6 35.92 52.59 27.16 19.12 141.27 54.4 49 47 83.175 71.63	1.10 1.3 1.3 1.3 1.3 1.3 1.3 2.1 1.3 1.3 0.65 1.3 4.4 6.53	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37 7.07 3.19 6.11 36.60 46.77
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.180.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.240.0         Mangala Devi Road-RHS         Hamilton Circle Juction-Footpath         Rosario Church Road-LHS         Bunder Road-LHS         Bunder Road-RHS         Hand Side Footpath         Left Hand Side Footpath	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1         84.49         45.6         35.92         52.59         27.16         19.12         141.27         54.4         49         47         83.175         71.63         74.21	1.10 1.3 1.3 1.3 1.3 1.3 1.3 2.1 1.3 1.3 0.65 1.3 4.4 6.53 5.51	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37 7.07 3.19 6.11 36.60 46.77 40.89
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.180.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.240.0         Mangala Devi Road-RHS         Hamilton Circle Juction-Footpath         Rosario Church Road-RHS         Bunder Road-LHS         Bunder Road-RHS         Hand Side Footpath         Ch.20.0 to Ch.40.0         Ch.40.0 to Ch.350.0         Right Hand Side Footpath	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1         84.49         45.6         35.92         52.59         27.16         19.12         141.27         54.4         49         47         83.175         71.63         74.21         20         220	1.10 1.3 1.3 1.3 1.3 1.3 2.1 1.3 1.3 0.65 1.3 4.4 6.53 5.51 3.96	0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37 7.07 3.19 6.11 36.60 46.77 40.89 7.92 28.60
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.180.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.240.0         Mangala Devi Road-RHS         Hamilton Circle Juction-Footpath         Rosario Church Road-RHS         Bunder Road-LHS         Bunder Road-RHS         Hand Side Footpath         Ch.20.0 to Ch.40.0         Ch.40.0 to Ch.350.0         Right Hand Side Footpath         Ch.20.0 to Ch.180.0	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1         84.49         45.6         35.92         52.59         27.16         19.12         141.27         54.4         49         47         83.175         71.63         74.21         20         220         165	1.10 1.3 1.3 1.3 1.3 1.3 1.3 2.1 1.3 1.3 0.65 1.3 4.4 6.53 5.51 3.96 1.3 1.3 1.3	0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37 7.07 3.19 6.11 36.60 46.77 40.89 7.92 28.60 21.45
	Maidan Road (AB shetty to Hamilton Circle)Footpath         Right Hand Side of Road         Ch.0.0 to Ch.100.0         Service Bus Stand Road (LHS Side)         Service Bus Stand Road (RHS Side)         Ch.120.0 to Ch.170.0         Ch.180.0 to Ch.210.0         Ch.210.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.170.0         Ch.180.0 to Ch.240.0(Curved area-Maidan Road)         Left Hand Side of Road         Ch.30.0 to Ch.240.0         Mangala Devi Road-RHS         Hamilton Circle Juction-Footpath         Rosario Church Road-RHS         Bunder Road-LHS         Bunder Road-RHS         Hand Side Footpath         Ch.20.0 to Ch.40.0         Ch.40.0 to Ch.350.0         Right Hand Side Footpath	Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum	104 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1         84.49         45.6         35.92         52.59         27.16         19.12         141.27         54.4         49         47         83.175         71.63         74.21         20         220	1.10 1.3 1.3 1.3 1.3 1.3 1.3 2.1 1.3 1.3 0.65 1.3 4.4 6.53 5.51 3.96 1.3	0.10 0.10	12.58 10.98 5.93 4.67 6.84 3.53 4.02 18.37 7.07 3.19 6.11 36.60 46.77 40.89 7.92 28.60

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
	Right hand side Footpath						
	Ch.10.00 to Ch.25.00	Cum	1	15	2.84	0.10	4.26
	Ch.47.0 to Ch.175.0	Cum	1	148.88	1.3	0.10	19.35
	Ch.175.0 to Ch.190.0 Left Hand Side Footpath	Cum	1	28.55	4.7	0.10	13.42
	Ch.0.0 to Ch.40.0	Cum	1	70	1.3	0.10	9.10
	Ch.40.0 to Ch.110.0	Cum	1	66.174	1.3	0.10	8.60
	Ch.120.0 to Ch.206.0	Cum	1	100	1.3	0.10	13.00
	Ch.56.57 to Ch.84.36	Cum	1	27	3.96	0.10	10.69
	Compound Wall side paver Block						
	Maidan Road						
	RHS-Ch.40.00 to Ch.120.0	Cum	1	80.23	1.6	0.10	12.84
	Rosario Church LHS	Cum	1	56.92	3.94	0.10	22.43
	Bus Service Road-RHS Bus Service Road-LHS	Cum Cum	1	30.94 38.9	4.2 1.61	0.10	12.99 6.26
	Ch.50.0 to 100.0	Cum	1	48	2.16	0.10	10.37
	Ch. 0 to 50	Cum	1	32.22	3.7	0.10	11.92
	Nellikai Road	Cum		02.22	0.1	0.10	11.02
	RHS-Ch.150.0 to Ch.210.0	Cum	1	66.79	2.92	0.10	19.50
	RHS-Ch.150.0 to Ch.210.0	Cum	1	18.1	1.66	0.10	3.00
	LHS-Ch.10.0 to Ch.35.0	Cum	1	69.49		0.10	6.95
	Ch.45.0 to Ch.95.0	Cum	1	46.81	0.44	0.10	2.06
	Ch.110 to Ch.180.0	Cum	1	45		0.10	4.50
	Mission Street	Cum	1	82.26	0.6	0.10	4.94
	Ch.80.0 to Ch.115.0	Cum	1	32	0.42	0.10	1.34
	Ch.120.0 to Ch.206.0 4th Cross Road	Cum	1	98.68	1.1	0.10	10.85
	RHS-Ch.20.0 to Ch.180.0	Cum	1	160	3.00	0.10	48.00
	LHS-0.0 to 63.0	Cum	1	49.78	2.62	0.10	13.04
	Ch.63 to Ch.180.0(Avg. Width)	Cum	1	117	1.00	0.10	11.70
	SWD	••••				0110	11110
	Maidan Road						
	Foundation						
	RHS	Cum	1	254.00	1.70	0.10	43.18
	LHS	Cum	1	232.00	1.70	0.10	39.44
	Nellikai Road						
	Foundation				4.70		
	RHS	Cum	1	331.00	1.70	0.10	56.27
	Mission Street Road Foundation						
	RHS	Cum	1	196.00	1.70	0.10	33.32
	LHS	Cum	1	207.00	1.70	0.10	35.19
	4th Cross Lane	••••				0110	00110
	Foundation						
	RHS	Cum	1	251.00	1.70	0.10	42.67
	LHS	Cum	1	176.00	1.70	0.10	29.92
	Below Kerb Stone	Cum	1	2692	0.20	0.10	53.83
	Below Kerb Stone	Cum	1	416	0.20	0.10	8.31
	Electrical Chamber	-	05	0.7	1.0	0.40	00.00
	Foundation	Cum	65	2.7	1.6	0.10	28.08
		Cum			Total Qty.		921.67
	Construction of granular sub-base Grading-Vas Sub-base and						
	drainage layer by providing coarse graded crushed stone						
	aggregates of granite/ trap/basalt material, mixing in a mechanical						
	mix plant at OMC, Carriage of mixed material to work site,						
13	spreading in uniform layers with motor grader on prepared surface						
	and compacting with vibratory power roller to achieve the 98%						
	proctor density, complete as per specifications. Clause 401 of						
	MORTH V Revision.						
	(KSRRB 18-19,P.No.153, SI.No.20.4)						
е	Signal Pole RCC Pedstal at hamilton Circle	Cum	16	1	1	0.15	2.40
	Maidan Road (AB shetty to Hamilton Circle)Footpath						-
	Right Hand Side of Road Ch.0.0 to Ch.100.0	Cum	1	84.49	1.30	0.15	16.48
	Service Bus Stand Road (LHS Side)	Cum	1	45.6	1.30	0.15	8.89
		Cum	1	35.92	1.30	0.15	7.00
	Service Bus Stand Road (RHS Side)						10.26
	Service Bus Stand Road (RHS Side) Ch.120.0 to Ch.170.0		1	52.59	1.30	0.15	
	Ch.120.0 to Ch.170.0	Cum Cum	1 1	52.59 27.16	1.30 1.30	0.15 0.15	5.30
		Cum				0.15 0.15 0.15	
	Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0	Cum Cum	1	27.16	1.30	0.15	5.30
	Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road)	Cum Cum	1	27.16	1.30	0.15	5.30
	Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) Left Hand Side of Road Ch.30.0 to Ch.170.0 Ch.180.0 to Ch.240.0	Cum Cum Cum Cum Cum	1 1 1 1 1	27.16 19.12 141.27 54.4	1.30 2.10 1.30 1.30	0.15 0.15 0.15 0.15	5.30 6.02 27.55 10.61
	Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) Left Hand Side of Road Ch.30.0 to Ch.170.0 Ch.180.0 to Ch.240.0 Mangala Devi Road-RHS	Cum Cum Cum Cum	1 1 1	27.16 19.12 141.27	1.30 2.10 1.30	0.15 0.15 0.15	5.30 6.02 27.55
	Ch.120.0 to Ch.170.0 Ch.180.0 to Ch. 210.0 Ch.210.0 to Ch.240.0(Curved area-Maidan Road) Left Hand Side of Road Ch.30.0 to Ch.170.0 Ch.180.0 to Ch.240.0	Cum Cum Cum Cum Cum	1 1 1 1 1	27.16 19.12 141.27 54.4	1.30 2.10 1.30 1.30	0.15 0.15 0.15 0.15	5.30 6.02 27.55 10.61

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
31. NO.	Rosario Church Road-RHS	Cum	1	<b>∟</b> 83.175	<b>В</b> 4.40	0.15	54.90
	Bunder Road-LHS	Cum	1	71.63	6.53	0.15	70.16
	Bunder Road-RHS	Cum	1	74.21	5.51	0.15	61.33
	4th Cross Road	Cam	•		0.01	0.10	01.00
	Left Hand Side Footpath						
	Ch.20.0 to Ch.40.0	Cum	1	20	3.96	0.15	11.88
	Ch.40.0 to Ch.350.0	Cum	1	220	1.30	0.15	42.90
	Right Hand Side Footpath						0.00
	Ch.15.0 to Ch.180.0	Cum	1	165	1.30	0.15	32.18
	Offset at @ Ch.100.0 to Ch.110.0	Cum	1	18.14	1.77	0.15	4.82
	Mission Street						
	Right hand side Footpath	-		45	0.04	0.45	0.00
	Ch.10.00 to Ch.25.00	Cum	1	15	2.84 1.30	0.15	6.39
	Ch.47.0 to Ch.175.0 Ch.175.0 to Ch.190.0	Cum Cum	1	148.88 28.55	4.70	0.15 0.15	29.03 20.13
	Left Hand Side Footpath	Cum	1	20.00	4.70	0.15	20.13
	Ch.0.0 to Ch.40.0	Cum	1	70	1.30	0.15	13.65
	Ch.40.0 to Ch.110.0	Cum	1	66.174	1.30	0.15	12.90
	Ch.120.0 to Ch.206.0	Cum	1	100	1.30	0.15	19.50
-	Ch.56.57 to Ch.84.36	Cum	1	27	3.96	0.15	16.04
	Compound Wall side paver Block				1		
	Maidan Road						
	RHS-Ch.40.00 to Ch.120.0	Cum	1	80.23	1.60	0.15	19.26
	Rosario Church LHS	Cum	1	56.92	3.94	0.15	33.64
	Bus Service Road-RHS	Cum	1	30.94	4.20	0.15	19.49
	Bus Service Road-LHS	Cum	1	38.9	1.61	0.15	9.39
	Ch.50.0 to 100.0	Cum	1	48	2.16	0.15	15.55
	Ch. 0 to 50	Cum	1	32.22	3.70	0.15	17.88
	Nellikai Road	-	_	00.70	0.00	0.45	
	RHS-Ch.150.0 to Ch.210.0	Cum	1	66.79	2.92	0.15	29.25
	RHS-Ch.150.0 to Ch.210.0	Cum	1	18.10	1.66	0.15	4.51
	LHS-Ch.10.0 to Ch.35.0 Ch.45.0 to Ch.95.0	Cum Cum	1	69.49 46.81	0.44	0.15 0.15	10.42 3.09
	Ch.110 to Ch.180.0	Cum	1	46.61	0.44	0.15	6.75
	Mission Street	Cum	1	82.26	0.60	0.15	7.40
	Ch.80.0 to Ch.115.0	Cum	1	32	0.42	0.15	2.02
	Ch.120.0 to Ch.206.0	Cum	1	98.68	1.10	0.15	16.28
	4th Cross Road		-				
	RHS-Ch.20.0 to Ch.180.0	Cum	1	160	3.00	0.15	72.00
	LHS-0.0 to 63.0	Cum	1	49.78	2.62	0.15	19.56
	Ch.63 to Ch.180.0(Avg. Width)	Cum	1	117	1.00	0.15	17.55
				-	1		1
-	Pavers on Carriageway						
	Maidan Road ( AB shetty to Hamilton Circle)						
-	LHS Side						
	Ch.46.80 to Ch.90.00	Cum	1	38.67	2.5	0.15	14.50
	Ch.130.0 to Ch.170.0		1				
		Cum	1	45.72	2.5	0.15	17.15
	Ch.180.0 to Ch.210.0	Cum	1	29.7	2.5	0.15	11.14
L	Nellikai Road						-
	Right hand Side Road						
	Ch.25.0 to Ch.45.0	Cum	1	20	1.6	0.15	4.80
	Ch.65.0 to Ch.120.0	Cum	1	55	1.8	0.15	14.85
	Ch.155.0 to Ch.210.0	Cum	1	55	2.6	0.15	21.45
	Mission Street Road						
	Ch.50 to Ch.100.0	Cum	1	47.64	2.42	0.15	17.29
	Ch.115 to Ch.180	Cum	1	60.53	2.76	0.15	25.06
	Road	Can		30.00		5.10	_0.00
<u> </u>	Nellikai Road				+		
	Ch. 25.00 to 270.0	Cum	1	045	0.2	0.15	244 70
		Cum	1	245	9.3	0.15	341.78
	Junction of Mission street road and Nellikai Road	Cum	1	23	25.25	0.15	87.11
	Mission Road						<u> </u>
L	Ch. 23.78 to Ch.187.5	Cum	1	163.72	9.3	0.15	228.39
	Hamilton Circle						
	Hamilton Junction	Cum	1	71	22.4	0.15	238.56
		Cum			Total Qty.		1830.38
I							

Sr. No.	Description	Unit	No'c	L	В	н	Otv
	Description	Unit	No's	L	Б	п	Qty.
	KSRB 4.2.1 : Providing and laying in position reiforcement cement concrete of design Mix M25 with OPC cement @340Kgs,with						
	20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-						
	1999 reafirmed -2008 at machine mixed,concrete laid in layers not						
	exceeding 15cms thick, vibrated for all works in foundation for						
	footings, pedastals, retaining walls,return walls,walls (any						
14	thickness) including attached pilasters, columnspillars, posts,						
	struts, buttresses, bed blocks, anchor blocks & plinths						
	etc.,Including cost of labour,HOM of machinery,curing,complete						
	but excluding cost of reinforcement as per specifications.						
	(KSRB 18-19,Page No 14,SI No :4.10)						
	Signal Pole RCC Pedstal at Hamilton Circle						
	Base	Cum	16	1.00	1.00	0.20	3.20
	Column	Cum	16	0.50	0.50	0.70	2.80
	Electrical Pole			0.00	0.00		2.00
	Foundation	Cum	104	0.75	0.75	0.20	11.70
	Column	Cum	104	0.3	0.30	0.70	6.55
	SWD						
	Maidan Road	-					
	Foundation-SWD						
	RHS	Cum	1	254	1.10	0.15	41.91
	LHS	Cum	1	234	1.10	0.15	38.28
	Wall-SWD	Can		-52		0.10	00.20
	RHS	Cum	2	254	0.15	1.00	76.20
	LHS	Cum	2	232	0.15	1.00	69.60
	Top Slab		-		0.10		
	RHS	Cum	1	254	0.90	0.15	34.29
	LHS	Cum	1	232	0.90	0.15	31.32
	Deduction of Access Cover				0.00	0.1.0	0.102
	RHS	Cum	-25	0.60	0.45	0.15	-1.01
	LHS	Cum	-23	0.60	0.45	0.15	-0.93
	Nellikai Road						
	Foundation						
	RHS	Cum	1	331	1.10	0.15	54.62
	Wall						
	RHS	Cum	2	331	1.00	0.15	99.30
	Top Slab						
	RHS	Cum	1	331	0.90	0.15	44.69
	Deduction of Access Cover						
	RHS	Cum	-33	0.60	0.45	0.15	-1.34
	Mission Street Road						
	Foundation						
	RHS	Cum	1	196	1.10	0.15	32.34
	LHS	Cum	1	207	1.10	0.15	34.16
	Wall						
	RHS	Cum	2	196	0.15	1.00	58.80
	LHS	Cum	2	207	0.15	1.00	62.10
	Top Slab						
	RHS	Cum	1	196	0.90	0.15	26.46
	LHS	Cum	1	207	0.90	0.15	27.95
	Deduction of Access Cover						
	RHS	Cum	-20	0.60	0.45	0.15	-0.81
	LHS	Cum	-21	0.60	0.45	0.15	-0.85
	4th Cross Lane						
	Foundation						
	RHS	Cum	1	251	1.10	0.15	41.42
	LHS	Cum	1	176	1.10	0.15	29.04
	Wall						
	RHS	Cum	2	251	0.15	1.00	75.30
	LHS	Cum	2	176	0.15	1.00	52.80
	Top Slab	_					
	RHS	Cum	1	251	0.90	0.15	33.89
	LHS	Cum	1	176	0.90	0.15	23.76
	Deduction of Access Cover	_					
	RHS	Cum	-25	0.60	0.45	0.15	-1.01
1	LHS	Cum	-18	0.60	0.45	0.15	-0.73
					1		
	Electrical Chamber	~					
	Foundation	Cum	65	2.70	1.60	0.20	56.16
		Cum Cum Cum	65 130 130	2.70 2.40 0.90	1.60 0.20 0.20	0.20 2.10 2.10	56.16 131.04 49.14

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
		Cum			Total Qty.		1242.11
	KSRB 4.6.1 Providing and removing centering, shuttering,						
	strutting, propping etc., and removal of formwork for foundations,						
	footings, bases of columns for mass concrete including cost of all						
15	materials, labour complete as per specifications.						
	Specification No. KSB 4.6.2						
	(KSRB 18-19,Page No 16,SI No : 4.28)						
	Signal Pole RCC Pedstal at hamilton circle						
	Base	Sqm	64	1.00		0.20	12.80
	Column	Sqm	64	0.50		0.70	22.40
	Electrical Pole						
	Foundation Column	Sqm Sqm	416 416	0.75 0.3	_	0.20	62.40 87.36
	SWD	Sqiii	410	0.5		0.70	07.50
	Maidan Road						
	Foundation-SWD						
	RHS	Sqm	2	254		0.15	76.20
	LHS Wall-SWD	Sqm	2	232		0.15	69.60
	RHS	Sqm	4	254		1	1016.00
	LHS	Sqm	4	232		1	928.00
	Top Slab( Centering and Edges of Slab)	•					
	RHS	Sqm	1	254	0.9		228.60
	LHS Deduction of Access Cover	Sqm	1	232	0.9		208.80
	RHS	Sqm	-25	0.6	0.45		-6.75
	LHS	Sqm	-23	0.6	0.45		-6.21
	Nellikai Road						-
	Foundation RHS	Sqm	2	331		0.15	99.30
	Wall	Sqiii	2	331	-	0.15	99.30
	RHS	Sqm	2	331	1		662.00
	Top Slab						
	RHS	Sqm	1	331	0.9		297.90
	Deduction of Access Cover RHS	Sqm	-33	0.6	0.45		-8.91
		Oqin		0.0	0.40		0.01
	Mission Street Road						
	Foundation						
	RHS	Sqm	2	196 207		0.15	58.80
	LHS Wall	Sqm	2	207	+	0.15	62.10
	RHS	Sqm	4	196		1	784.00
	LHS	Sqm	4	207		1	828.00
	Top Slab						
	RHS LHS	Sqm	1	196 207	0.9		176.40
	Deduction of Access Cover	Sqm	1	207	0.9		186.30
	RHS	Sqm	-20	0.6	0.45		-5.40
	LHS	Sqm	-21	0.6	0.45		-5.67
	4th Cross Lane						
	Foundation RHS	Sqm	2	251	+ +	0.15	75.30
	LHS	Sqm	2	176	+	0.15	52.80
	Wall						
	RHS	Sqm	4	251	<u> </u>	1	1004.00
	LHS Top Slob	Sqm	4	176	<u> </u>	1	704.00
	Top Slab RHS	Sqm	1	251	0.9		225.90
	LHS	Sqm	1	176	0.9		158.40
	Deduction of Access Cover	•					
	RHS	Sqm	-25	0.6	0.45		-6.75
	LHS	Sqm	-18	0.6	0.45		-4.86
	Electrical Chamber	0	400	0.70	<b>├</b>	0.00	70.00
	Foundation-Long Side Foundation-Short Side	Sqm Sqm	130 130	2.70 1.60		0.20	70.20 41.60
	Long Wall	Sqm	260	2.40		2.10	1310.40
	Short Wall	Sqm	260	0.90	1	2.10	491.40
		Sqm	200	0.30	Total Qty.	2.10	9956.41

Sr. No.	Description	Unit	No's	L	В	н	Qty.
31. NO.	KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work		110.5	L	В		ωιγ.
	including straighting, cutting, bending, hooking, placing in						
	position, lapping and/or welding wherever required, tying with						
	binding wire and anchoring to thr adjoing members wherever						
	necessary complete as per design (laps,hooks and wastage shall						
16	not be measured and paid) cost of materials, labour, HOM of			Cum	Kg/Cum	Kg	МТ
	machinary complete as per specifications. Specification No.				-	_	
	KBS4.6.3.						
	do with TMT bars Fe500						
	(KSRB 18-19,Page No 18,SI No : 4.46.2)						
	· · · · · · · · · · · · · · · · · · ·					100.00	
	Signal Footing	MT	1	3.20	60.00	192.00	0.19
	Signal Column	MT	1	2.80	80.00	224.00	0.22
	Electrical Pole-Pestal-Footing	MT	1	11.70	60.00	702.00	0.70
	Electrical Pole-Pestal-Column	MT	1	6.55	80.00	524.16	0.52
	SWD and Electrical Chamber	MT MT	1	1217.86	80.00	97428.60 Total	97.43
				1242.11	0.00	Total	99.07
	KCDDD M200 52 Construction of emboriement with energy and						
	KSRRB M300-53. Construction of embankment with approved						
	material Gravei/Murrum with all lifts and leads, transporting to site,						
	spreading, grading to required slope and compacting to meet						
17	requirement Table 300-2 complete						
	as per specifications, including cost of gravel/ murrum, watering						
	charges & compaction by vibratory roller to 95% of modified proctors density. MORTH Specification No. 305						
	(KSRRB 18-19,Pg No.147,SI No.19.60)						
	Pavers on Carriageway						
	Maidan Road ( AB shetty to Hamilton Circle)						
	LHS Side						
	Ch.46.80 to Ch.90.00	Cum	1	38.67	2.5	0.25	24.17
	Ch.130.0 to Ch.170.0	Cum	1	45.72	2.5	0.25	28.58
	Ch.180.0 to Ch.210.0	Cum	1	29.7	2.5	0.25	18.56
	Nellikai Road						
	Right hand Side Road		1				
	Ch.25.0 to Ch.45.0	Cum	1	20	1.6	0.25	8.00
	Ch.65.0 to Ch.120.0	Cum	1	55	1.8	0.25	24.75
	Ch.155.0 to Ch.210.0	Cum	1	55	2.6	0.25	35.75
	Mission Street Road		1				
	Ch.50 to Ch.100.0	Cum	1	47.64	2.42	0.25	28.82
	Ch.115 to Ch.180	Cum	1	60.53	2.76	0.25	41.77
	Concrete Road and Junctions						
	Nellikai Road						
	Ch. 25.00 to 270.0	Cum	1	245	9.3	0.25	569.63
	Junction of Mission street road and Nellikai Road	Cum	1	23	25.25	0.25	145.19
	Mission Road						
	Ch. 23.78 to Ch.187.5	Cum	1	163.72	9.3	0.25	380.65
	Hamilton Circle						
	Hamilton Junction	Cum	1	71	22.4	0.25	397.60
		Cum				Total	1703.46
	KSRRB M600-1. Providing and Constructing dry lean cement						
	concrete mix CC 1:5:10 base with OPC 25mm and down size						
	graded granite metal coarse aggregate at 0.86cum and fine						
	aggregates @0.58cum over a prepared sub-base, coarse and						
	fine aggregate conforming to IS: 383-2016, aggregate cement						
	ratio not to exceed 15:1, Aggregate gradation after blending to						
	be as per Table 600-1,optimum moisture content to be						
	determined during trial length construction, concrete strength						
	not to be less than 10 Mpa at 7 days, mixed in a batching plant,						
18	transported to site, laid with a paver, compacting with 8-10 tonnes						
	vibratory roller, finishing and curing complete as per specifications.						
	Clause 601of MORTH V Revision and IS 456 Table-5						
	-do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine						
	aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr						
	capacity with Slip form paver with electronic sensor.						
1	(KSRRB 18-19,Page No 174,SI No : 22.1.1)						
1							
	Pavers on Carriageway						
	Maidan Road ( AB shetty to Hamilton Circle)						
	LHS Side		1				
	Ch.46.80 to Ch.90.00	Cum	1	38.67	2.5	0.10	9.67
	Ch.130.0 to Ch.170.0	Cum	1	45.72	2.5	0.10	11.43
	Ch.180.0 to Ch.210.0	Cum	1	29.7	2.5	0.10	7.43
	Nellikai Road						
-	Page 21				•		-

Sr. No.	Description	Unit	No's	L	В	н	Qty.
<u>en ne</u>	Right hand Side Road	0					۹.9.
	Ch.25.0 to Ch.45.0	Cum	1	20	1.6	0.10	3.20
	Ch.65.0 to Ch.120.0	Cum	1	55	1.8	0.10	9.90
	Ch.155.0 to Ch.210.0	Cum	1	55	2.6	0.10	14.30
	Mission Street Road						
	Ch.50 to Ch.100.0	Cum	1	47.64	2.42	0.10	11.53
	Ch.115 to Ch.180	Cum	1	60.53	2.76	0.10	16.71
	Concrete Road and Junctions Nellikai Road						
	Ch. 25.00 to 270.0	Cum	1	245	9.3	0.10	227.85
	Junction of Mission street road and Nellikai Road	Cum	1	243	25.25	0.10	58.08
	Mission Road	Cum		20	20.20	0.10	00.00
	Ch. 23.78 to Ch.187.5	Cum	1	163.72	9.3	0.10	152.26
	Hamilton Circle						
	Hamilton Junction	Cum	1	71	22.4	0.10	159.04
		Cum			Total Qty.		681.38
	KSRRB M600-2. Providing and Constructing un-reinforced,						
	dowel jointed, plain cement Pavement Quality concrete for						
	pavements using Grade concrete M40 having Flexural strength not less than 4.50 Mpa over a prepared base with OPC, coarse						
	aggregate at 0.64 cum, fine aggregates at 0.36 cum,Coarse and						
	fine aggregate conforming to IS:383-						
	2016 and Table 600-3 of MORTH V Revision, with Superplastizer						
	at 3 Its conforming to IS 9103-2008. loading materials to batch mix						
	plant by front end loader, mixed in a cement concrete batch mix						
10	plant as per approved mix design, transported to site in transit						
19	truck agitator 5 cum capacity, laid with Paver, compacted and						
	finished in a continuous operation as per IRC-15 including cost						
	for providing of contraction, expansion, co nstruction and						
	longitudinal joints, joint filler, separation membrane of						
	impermiable plastic sheet of 125 micron, groove cutting, sealant primer joint sealent, debonding strip, dowel bars at 9 kg/cum, tie						
	rods at 1.15 kg/cum, admixtures as approved, curing compound,						
	finishing to lines and grades, textured with texturing machine, and						
	curing including cost of all materials, labour, hire charges of						
	machineries, all lead & lift charges etc., complete as per						
	Nellikai Road						
	Ch. 25.00 to 270.0	Cum	1	245	9.3	0.25	569.63
	Junction of Mission street road and Nellikai Road	Cum	1	23	25.25	0.25	145.19
	Mission Road( PQC Thk Change as per Technical Comitee						
	comments-15/05/18)						
	Ch. 23.78 to Ch.187.5	Cum	1	163.72	9.3	0.25	380.65
	Hamilton Circle						
	Hamilton Junction	Cum	1	71	22.4	0.30	477.12
		Cum				Total	1572.58
	Providing and placing joint sealant compound of cold polysulphide						
	in the grooves after widening the groove to required width, sand						
	blasting the groove face if recommended by the sealant						
	manufacturer, cleaning the groove with air compressor, insertion						
	of debonding strip, priming the sides of the sealant if the sealant						
20	manufacturer recommends and pouring the sealant all complete						
	including material, manpower and as shown on drawing and as						
	per MORTH specifications clause 602.						
	(Non SOR Item)						
	Maidan Road						
	Ch.20 to Ch.230.0	Direct.		010			400.00
	Longitudinal Joint	Rmt Pmt	2	210			420.00
	Joint across the chainage 4th Cross Road	Rmt	60	16.75			1005.00
	Ch.0 to Ch.210.0						
	Longitudinal Joint	Rmt	2	210			420.00
	Joint across the chainage	Rmt	60	13.45			807.00
		Rmt			Total Qty.		2652.00
	KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar						
	KSRRB M3000-8 Repairs of spalled joints grooves of contraction						
21	joints longitudinal joints and expansion joints in concrete pavement						
	using epoxy mortar concrete complete as per specifications.Morth						
	specification No.3005.1 (KSRRB 18-19,Page No 260,SI No : 35.8)						
	Consider Same Qty of Joint Filling	Rmt			Total Otra		2652.00
	Consider Same Qry Or John Filling	KMT			Total Qty.		2652.00
L		1	I		1		

<u> </u>							
Sr. No.	Description	Unit	No's	L	В	Н	Qty.
	Providing and laying at or near ground level factory made kerb						
	stone of M-20 grade cement concrete in position to the required						
	line, level and curvature, jointed with cement mortar 1:3 (1 cement:						
	3 coarse sand), including making joints with or without grooves						
	(thickness of joints except at sharp curve shall not to more than						
	5mm), including making drainage opening wherever required						
	complete etc. as per direction of Engineer-in-charge (length of						
22	finished kerb edging shall be measured for payment).						
22	(Precast C.C. kerb stone shall be approved by Engineer-in-						
	charge).						
	Kerb Dimension=						
	Top Width=0.25m,						
	Bottom Width=0.3 m,						
	Height =0.9 m						
	(RA Attached)						
	Maidan Road ( AB Shetty to Hamilton Circle)						
		Drest	2	77.0			155.60
	Ch.20.00 to Ch.97.80	Rmt	2	77.8			155.60
	Ch.120.0 to 230.00	Rmt	2	130			260.00
		Rmt				Fotal 2	415.60
		No's			Total Qty.		1039
	Providing and fixing pre cast solid cement concrete kerb						1
	stones made out of C.C. 1:2:4 with top and bottom width 114						1
	and 165 mm respectively, 400mm high and 450mm in length						1
							1
23	finished with CM 1 3 plastering and finishing cutting, including form						1
	work, curing, including cost of all materials, labour, hire charges of						1
	machinery, loading, unloading, lead and lift, transportation etc.,						1
	complete.						1
	(Page No 27,SI No : 5.30)						
					-	-	-
	Footpath						
	Maidan Road (AB shetty to Hamilton cirle)						
	Left Hand Side of Road						
	Ch.40.0 to Ch.46.80	Rmt	1	7.5			7.50
	Ch.46.80 to Ch.96.30	Rmt	1	49			49.00
	Service Bus Stand Road (LHS Side)	Rmt	1	14			14.00
	Service Bus Stand Road (RHS Side)	Rmt	1	25			25.00
	· · · ·						
	Ch.120.0 to Ch.170.0	Rmt	1	51.74	-	-	51.74
	Ch.180.0 to Ch. 210.0	Rmt	1	29.32			29.32
	Ch.210.0 to Ch.240.0(Curved area-Maidan Road)	Rmt	1	27			27.00
	Right Hand Side of Road						
	Ch.40.0 to Ch.44.32	Rmt	1	4.74			4.74
	Ch.44.32 to Ch.90.0	Rmt	1	44.42			44.42
	Ch.90.0 to Ch.120.0	Rmt	1	32.4			32.40
	Ch.120.0 to Ch.170.0	Rmt	1	44			44.00
	Ch.185.0 To Ch.210.0	Rmt	1	45			45.00
	Ch.210.0 to Ch.240.0(Curved area-Mangala karnis Road)	Rmt	1	27			27.00
	Footpath on mangala karnis Road (Mosque Side)	Rmt	1	50			50.00
	Footpath on mangala karnis Road (Old Kent Road Side)	Rmt	1	122			122.00
	Hamilton Circle						1
	North-East Side Footpath at Fourth Cross lane Side	Rmt	1	89	1		89.00
	Island at junction of maidan Road and Rossary Church Road		<u> </u>		1		
	Isiano at junction of maluari road and rossaly church rodu	Rmt	1	30			30.00
		6		~-			05.05
	South-East Side Footpath at Rosari Church Road	Rmt	1	65		ļ	65.00
	South-West Side Footpath at Rosari Church Road	Rmt	1	126			126.00
	North West Side Footpath-1 at Bunder Road	Rmt	1	90.7			90.70
	North West Side Footpath-2 at Bunder Road	Rmt	1	85		Γ	85.00
	North West Side Footpath at Bunder Road and Nellikai Road					İ	
		Rmt	1	46.2			46.20
	North West Side Footpath at Nellikai Road	Rmt	1	22			22.00
					+		
	lolond of junction of Nolliks: Dead and 4th arrest Dead	Rmt	1	31	+	ł	31.00
	Island at junction of Nellikai Road and 4th cross Road	Ŀ		16			16.00
	Landscape side Kerb stone	Rmt	1			•	1
	Landscape side Kerb stone Nellikai Road	Rmt	1				
	Landscape side Kerb stone Nellikai Road Right Hand Side Footpath	Rmt	1				
	Landscape side Kerb stone Nellikai Road Right Hand Side Footpath	Rmt Rmt	1				27.35
	Landscape side Kerb stone Nellikai Road Right Hand Side Footpath Ch.10.0 to Ch.20.0	Rmt	1	27.35			27.35
	Landscape side Kerb stone Nellikai Road Right Hand Side Footpath Ch.10.0 to Ch.20.0 Ch.20.0 to Ch.50.0	Rmt Rmt	1 1	27.35 65			65.00
	Landscape side Kerb stone Nellikai Road Right Hand Side Footpath Ch.10.0 to Ch.20.0 Ch.20.0 to Ch.50.0 Ch.60.0 to Ch.125.0	Rmt Rmt Rmt	1 1 1 1	27.35 65 150			65.00 150.00
	Landscape side Kerb stone Nellikai Road Right Hand Side Footpath Ch.10.0 to Ch.20.0 Ch.20.0 to Ch.50.0 Ch.60.0 to Ch.125.0 Ch.130.0 to Ch.140.0	Rmt Rmt Rmt Rmt	1 1 1 1	27.35 65 150 15			65.00 150.00 15.00
	Landscape side Kerb stone Nellikai Road Right Hand Side Footpath Ch.10.0 to Ch.20.0 Ch.20.0 to Ch.50.0 Ch.60.0 to Ch.125.0 Ch.130.0 to Ch.140.0 Ch.150.0 to Ch.270.0	Rmt Rmt Rmt Rmt Rmt	1 1 1 1 1 1	27.35 65 150 15 170			65.00 150.00 15.00 170.00
	Landscape side Kerb stone Nellikai Road Right Hand Side Footpath Ch.10.0 to Ch.20.0 Ch.20.0 to Ch.50.0 Ch.60.0 to Ch.125.0 Ch.130.0 to Ch.140.0 Ch.150.0 to Ch.270.0 Ch.280.0 to Ch.310.0	Rmt Rmt Rmt Rmt	1 1 1 1	27.35 65 150 15			65.00 150.00 15.00
	Landscape side Kerb stone Nellikai Road Right Hand Side Footpath Ch.10.0 to Ch.20.0 Ch.20.0 to Ch.50.0 Ch.60.0 to Ch.125.0 Ch.130.0 to Ch.140.0 Ch.150.0 to Ch.270.0	Rmt Rmt Rmt Rmt Rmt	1 1 1 1 1 1	27.35 65 150 15 170			65.00 150.00 15.00 170.00
	Landscape side Kerb stone Nellikai Road Right Hand Side Footpath Ch.10.0 to Ch.20.0 Ch.20.0 to Ch.50.0 Ch.60.0 to Ch.125.0 Ch.130.0 to Ch.140.0 Ch.150.0 to Ch.270.0 Ch.280.0 to Ch.310.0	Rmt Rmt Rmt Rmt Rmt	1 1 1 1 1 1	27.35 65 150 15 170			65.00 150.00 15.00 170.00
	Landscape side Kerb stone           Nellikai Road           Right Hand Side Footpath           Ch.10.0 to Ch.20.0           Ch.20.0 to Ch.50.0           Ch.60.0 to Ch.125.0           Ch.130.0 to Ch.140.0           Ch.150.0 to Ch.270.0           Ch.280.0 to Ch.310.0           Left Hand Side Footpath           Ch.0.0 to Ch.290.0	Rmt Rmt Rmt Rmt Rmt Rmt	1 1 1 1 1 1 1	27.35 65 150 15 170 37			65.00 150.00 15.00 170.00 37.00
	Landscape side Kerb stone           Nellikai Road           Right Hand Side Footpath           Ch.10.0 to Ch.20.0           Ch.20.0 to Ch.50.0           Ch.60.0 to Ch.125.0           Ch.130.0 to Ch.140.0           Ch.150.0 to Ch.270.0           Ch.280.0 to Ch.310.0           Left Hand Side Footpath	Rmt Rmt Rmt Rmt Rmt Rmt	1 1 1 1 1 1 1	27.35 65 150 15 170 37			65.00 150.00 15.00 170.00 37.00

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
0111101	Left hand Side Footpath	0		_			يري.
	Ch.30.0 to Ch.200.0	Rmt	1	173			173.00
	Mission Street Road						
	LHS	<b>D</b> (		50.00			50.00
	Ch.0.00 to 40.00 Ch.45.0 to Ch.110.0	Rmt Rmt	1	52.28 80			52.28 80.00
	Ch.120.0 to 206.00	Rmt	1	105			105.00
	RHS	TXIII.		105			103.00
	Ch.10.0 to Ch.190.0	Rmt	1	184			184.00
		Rmt				Total(A)	2691.65
	Water table						
	Maidan Road (AB shetty to Hamilton cirle)	Rmt	1	486			486.00
	Nellikai Road	Rmt	1	331			331.00
	Mission Street Road	Rmt Rmt	1	403			403.00
	4th Cross Road	RIII	1	427		В	427.00 <b>1647.00</b>
	C= A+B/0.45m( length of Kerb Stone)	Nos				Total(C)	9641.00
	KSRRB 800-1. Painting two coats after filling the surface with						
	synthetic enamel paint in approved shades on new plastered						
24.00	concrete surfaces, with materials, labour complete as per MORTH specifications section 8.						
	(KSRRB 18-19,Page No 180,SI No : 24.1)						
	Footpath Maidan Road (AB shetty to Hamilton cirle)						
	Left Hand Side of Road						
	Ch.40.0 to Ch.46.80	Sqm	1	7.5		0.32	2.36
	Ch.46.80 to Ch.96.30	Sqm	1	49.0	1	0.32	15.44
	Service Bus Stand Road (LHS Side)	Sqm	1	14.0		0.32	4.41
	Service Bus Stand Road (RHS Side)	Sqm	1	25.0		0.32	7.88
	Ch.120.0 to Ch.170.0	Sqm	1	51.7		0.32	16.30
	Ch.180.0 to Ch. 210.0	Sqm	1	29.3		0.32	9.24
	Ch.210.0 to Ch.240.0(Curved area-Maidan Road)	Sqm	1	27.0		0.32	8.51
	Right Hand Side of Road Ch.40.0 to Ch.44.32	Sqm	1	4.7		0.32	1.49
	Ch.44.32 to Ch.90.0	Sqm	1	4.7		0.32	13.99
	Ch.90.0 to Ch.120.0	Sqm	1	32.4		0.32	10.21
	Ch.120.0 to Ch.170.0	Sqm	1	44.0		0.32	13.86
	Ch.185.0 To Ch.210.0	Sqm	1	45.0		0.32	14.18
	Ch.210.0 to Ch.240.0(Curved area-Mangala karnis Road)	Sqm	1	27.0		0.32	8.51
	Footpath on mangala karnis Road (Mosque Side)	Sqm	1	50.0		0.32	15.75
	Footpath on mangala karnis Road ( Old Kent Road Side)	Sqm	1	122.0		0.32	38.43
	Hamilton Circle	_				0.00	
	North-East Side Footpath at Fourth Cross lane Side	Sqm	1	89.0		0.32	28.04
	Island at junction of maidan Road and Rossary Church Road	Sqm	1	30.0		0.32	9.45
	South-East Side Footpath at Rosari Church Road	Sqm	1	65.0		0.32	20.48
	South-West Side Footpath at Rosari Church Road	Sqm	1	126.0		0.32	39.69
	North West Side Footpath-1 at Bunder Road	Sqm	1	90.7		0.32	28.57
	North West Side Footpath-2 at Bunder Road	Sqm	1	85.0		0.32	26.78
	North West Side Footpath at Bunder Road and Nellikai Road	Sqm	1	46.2		0.32	14.55
	North West Side Footpath at Nellikai Road	Sqm	1	22.0		0.32	6.93
	Island at junction of Nellikai Road and 4th cross Road Landscape side Kerb stone	Sqm	1 1	31.0 16.0		0.32	9.77 5.04
	Nellikai Road	Sqm		16.0		0.32	5.04
	Right Hand Side Footpath						
	Ch.10.0 to Ch.20.0	Sqm	1	27.4		0.32	8.62
	Ch.20.0 to Ch.50.0	Sqm	1	65.0		0.32	20.48
	Ch.60.0 to Ch.125.0	Sqm	1	150.0		0.32	47.25
	Ch.130.0 to Ch.140.0	Sqm	1	15.0		0.32	4.73
	Ch.150.0 to Ch.270.0	Sqm	1	170.0		0.32	53.55
	Ch.280.0 to Ch.310.0	Sqm	1	37.0		0.32	11.66
	Left Hand Side Footpath	Sqm	4	200.0		0.00	04.05
	Ch.0.0 to Ch.290.0 4th Cross Road	Sqm	1	290.0		0.32	91.35
	Right hand side Footpath						
	Ch.30.0 to Ch.200.0	Sqm	1	169.0		0.32	53.24
	Left hand Side Footpath	2 4.11				5.02	
	Ch.30.0 to Ch.200.0	Sqm	1	173.0		0.32	54.50
-	Mission Street Road						
	LHS						
	Ch.0.00 to 40.00	Sqm	1	52		0.32	16.47
		Sqm Sqm Sqm	1 1 1	52 80 105		0.32 0.32 0.32	16.47 25.20 33.08

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
	Ch.10.0 to Ch.190.0	Sqm	1	184		0.32	57.96
	Maidan Road ( AB Shetty to Hamilton Circle)						
	Ch.20.00 to Ch.97.80	Sqm	2	77.8		0.80	124.48
	Ch.120.0 to 230.00	Sqm	2	130		0.80	208.00
		Sqm			Total Qty.		1180.35
	P/F Square shape 600mmx450 mm precast R.C.C. manhole cover						
25	with frame						
23	(Rate analysis attached)						
	Maidan Road RHS	Nos.	25				25.00
	LHS	Nos.	23				23.00
	Nellikai Road						20.00
	RHS	Nos.	33				33.00
	Mission Street						
	RHS	Nos.	20				20.00
	LHS	Nos.	21				21.00
	4th Cross lane						
	RHS	Nos.	25				25.00
	LHS	Nos.	18		Tatal Ota		18.00
		Nos.			Total Qty.		165.00
	Providing and Fixing Recessed Inception chamber cover - size:						
	(1250 x 1250 x 80)mm Material: Cast Iron / Ductile Iron						
26	(NON SOR Item)						
	Electrical Chambers	Nos.	2	65			130.00
	Providing gully ning lowering lowing of DVC 100 mm dia ningg to						
	Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated						
	in drawings/design and hydraulically testing of the pipe line. The						
07	rate shall include all jointing materials, testing apparatus and water						
27	for testi g etc as directed by the Engineer in charge (page						
	No.41,Item No.7,KUWSDB SOR 2016-17)						
	Maidan Road				-		
	RHS-Length = 254m	Rmt	27	1.0			27.00
	LHS-Length=232m	Rmt	25	1.0			25.00
	Nellikai Road	TXIII	20	1.0			20.00
	RHS-Length = 331m	Rmt	35	1.0			35.00
	Mission Street						
	RHS-Length=196m	Rmt	21	1.0			21.00
	LHS-Length=207m	Rmt	22	1.0			22.00
	4th Cross lane						
	RHS-Length=251m	Rmt	27	1.0			27.00
	LHS-Length=176m	Rmt	19	1.0			19.00
		Rmt			Total Qty.		176.00
	KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of						
	100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good						
28	the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.						
	(KSRB SR 2018-19,P.No.88, SI.No.12.89)						
	Maidan Baad				+		
	Maidan Road RHS-Length = 254m	Nos.	27		+ +		27.00
	LHS-Length=232m	Nos.	27		+ +		27.00
	Nellikai Road	1103.	20		+ +		0.00
	RHS-Length = 331m	Nos.	35		1 1		35.00
	Mission Street				1 1		0.00
	RHS-Length=196m	Nos.	21		1 1		21.00
	LHS-Length=207m	Nos.	22		1 1		22.00
	4th Cross lane				1 1		0.00
	RHS-Length=251m	Nos.	27				27.00
	LHS-Length=176m	Nos.	19				19.00
		Nos.			Total Qty.		176.00

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
	KSRB 12-8.2 : Constructing brick masonry inspection chamber						
	500x700mm, and 450mm depth, ( clear inside dimension ) for						
	pipeline with one or two inlets, using table moulded non-modular bricks of class designation 50 in cement mortar 1:5, C.I cover with						
	frame (light duty) 455x610mm internal dimensions, total weight of						
	cover with frame to be not less than 38 kg ( weight of cover 23kg						
	and weight of frame 15 kg ) R.C.C. top slab with cement concrete						
29	M 15 with 20mm and downsize granite metal , foundation concrete						
29	M 5 with 40mm and downsize granite metal inside plastering						
	12mm thick with cement mortar 1:3, finished smooth with a floating						
	coat of cement on walls and bed concrete complete as per standard design including cost of materials, labour charges, curing						
	complete as per specifications. Specification No. KBS						
	(P.No. 76/ I.No.11.52 of PWD SR 2018-19)						
	Maidan Road	Nos.	34				34.00
	Nellikai Road	Nos.	42				42.00
	Mission Street Road	Nos.	29				29.00
	4th Cross Road	Nos.	30				30.00
							135.00
	KSRRB M800-29.3.Cable Duct Across the road KSRRB M800-						+
	29.1. Providing and laying of a reinforced cement concrete pipe						
	duct, 300 mm dia, across the road (new construction), extending						
	from drain to drain in cuts and toe of slope to toe of slope in fills,						
	constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-						
	1997, bedded on a 0.3 m thick layer of granular material free of						
	rock pieces, outer to outer distance of pipe at least half dia of pipe						
30	subject to minimum450 mm in case of double and triple row ducts,						
	joints to be made leak proof, invert level of duct to be above higher						
	than ground level to prevent entry of water and dirt, all as per IRC:						
	98 - 1997 and approved drawings complete as per specifications. Case-III :Triple row for three utility services.						
	(KSRRB 2018-19,Pg No 186,SI.No.24.36)						
	Maidan Road	Rmt	9	17			153
	Nellikai Road	Rmt	9	10			90
	Mission Street road	Rmt	9	20			180
	4th Cross Road	Rmt Rmt	9	25	Total Qty.		225 648.00
		RIII			Total Qty.		040.00
	Providing and laying Dia 225mm HDPE Power Duct with Silicore						
	Lubricant inner layer with ribs, dimensional ratio of 13.5, Deflection						
	not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other						
31	physical properties comforming to ASTMF 2160 and /or NEMA						
51	TC7.The expected service life of HDPE pipe conduits and						
	accessories shall not be less than 50 years.						
	(Market Rate)						
	Maidan Daad	Dest		40-			07.1
	Maidan Road	Rmt	2	487			974 1206
		Rmt	2	nu s			.200
	Nellikai Road Mission Road	Rmt Rmt	2	603 412			824
	Nellikai Road	Rmt Rmt					854
	Nellikai Road Mission Road 4th Cross Road	Rmt	2	412			
	Nellikai Road Mission Road 4th Cross Road Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and	Rmt Rmt	2	412			854
32	Nellikai Road Mission Road 4th Cross Road	Rmt Rmt	2	412			854
32	Nellikai Road Mission Road 4th Cross Road Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both	Rmt Rmt	2	412			854
32	Nellikai Road Mission Road 4th Cross Road Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering,Jointing into trenches,Complete.	Rmt Rmt	2	412			854
32	Nellikai Road Mission Road 4th Cross Road Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering,Jointing into trenches,Complete. (Market Rate) Maidan Road-LHS+RHS	Rmt Rmt Rmt Nos.	2 2 81	412			854 3858.00
32	Nellikai Road Mission Road 4th Cross Road Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering,Jointing into trenches,Complete. (Market Rate) Maidan Road-LHS+RHS Nellikai Road-LHS+RHS	Rmt Rmt Rmt Nos. Nos.	2 2 81 101	412			854 3858.00 81 101
32	Nellikai Road Mission Road 4th Cross Road Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering,Jointing into trenches,Complete. (Market Rate) Maidan Road-LHS+RHS Nellikai Road-LHS+RHS Mission Road-LHS+RHS	Rmt Rmt Rmt Nos. Nos. Nos.	2 2 81 101 69	412			854 3858.00 81 101 69
32	Nellikai Road Mission Road 4th Cross Road Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering,Jointing into trenches,Complete. (Market Rate) Maidan Road-LHS+RHS Nellikai Road-LHS+RHS	Rmt Rmt Rmt Nos. Nos.	2 2 81 101	412			854 3858.00 81 101

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
SI. NO.		Unit	INU S	L	Б	п	હાપ્ર.
	Providing and laying Dia 160mm HDPE Power Duct with Silicore						
	Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection						
	not greater than 5% when exposed to the normal operating						
33	temparature 90°C under the over burden soil presuure and other						
00	physical properties comforming to ASTMF 2160 and /or NEMA						
	TC7.The expected service life of HDPE pipe conduits and						
	accessories shall not be less than 50 years.(Market Rate)						
	Maidan Road-LHS+RHS	Rmt	4	487			1948
	Nellikai Road-LHS+RHS	Rmt	4	603			2412
	Mission Road-LHS+RHS	Rmt	4	412			1648
	4th Cross Road-LHS+RHS	Rmt	4	427			1708
		Rmt			Total Qty.		7716.00
	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and						
	conveying to work site including loading and unloading at both						
0.4	destination and rolling, lowering into trenches, laying true to line and						
34	jointing of pipe and special including encasing the pipe Complete.						
	(Market Rate)						
	, , , , , , , , , , , , , , , , , , ,						
	Maidan Road-LHS+RHS	Nos.	162				162
	Nellikai Road-LHS+RHS	Nos.	201				201
	Mission Road-LHS+RHS	Nos.	137				137
	4th Cross Road-LHS+RHS	Nos.	142				142
		Nos.			Total Qty.		642.00
		1103.					0.2.00
	Providing and Fixixng Spacers for Power Ducts of size 225 mm,						
	to be placed at an interval of 1.5 meter. Spacers shall be made of						
35	ABS raw material.						
	(Market rate)						
	Maidan Road-LHS+RHS	Rmt	487				487
	Nellikai Road-LHS+RHS	Rmt	603				603
	Mission Road-LHS+RHS	Rmt	412				412
	4th Cross Road-LHS+RHS	Rmt	427				427
							1929.00
	No. of Spacer=Total Length of Pipe / 1.5m	Nos.			Total Qty.		1286.00
	Providing and Fixing Spacers for Power Ducts of size 160 mm, to						
	be placed at an interval of 1.5 meter. Spacers shall be made of						
36	ABS raw material.						
	(Market rate)						
	Maidan Road-LHS+RHS	Dent	487				487
	Nellikai Road-LHS+RHS	Rmt Rmt	603				603
	Mission Road-LHS+RHS	Rmt	412				412
	4th Cross Road-LHS+RHS	Rmt	427				427
	No f. On a sear Total Law with - f. Din a. / A. Fas	Nee			<b>T</b> ( ) O(		1929.00
	No. of Spacer=Total Length of Pipe / 1.5m	Nos.			Total Qty.		1286.00
	Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore						
	Lubricant inner layer for ICT fibre cables comforming to ASTMF						
	2160 and /or equivalent indian standard and conveying to work						
37	site including loading and unloading at both destination and						
	rolling,lowering into trenches,laying true to line and jointing of pipe						
	etc.Complete.						
	(Market Rate)						
	Maidan Road-LHS+RHS	Rmt	1	487			487
	Nellikai Road-LHS+RHS	Rmt	1	603			603
	Mission Road-LHS+RHS	Rmt	1	412			412
	4th Cross Road-LHS+RHS	Rmt	1	427			427
		Rmt			Total Qty.		1929.00
	Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way		T				
	Duct and conveying to work site including loading and unloading at						
38	both destination and lowering into trenches, and jointing of						
	pipe.Complete.						
	(Market Rate)						
	Maidan Road-LHS+RHS	Nos.	6				6
	Nellikai Road-LHS+RHS	Nos.	7				7
	Mission Road-LHS+RHS	Nos.	5				5
	4th Cross Road-LHS+RHS	Nos.	5				5
			2			-	-
		Nos.			Total Qty.		23.00

Sr. No.	Description	Unit	No's	L	В	н	0.5%
31. NO.	Description Providing and laying heavy duty cobble stones 60mm thick, using	Unit	110.5	L	В		Qty.
	cement and course sand for manufacture of blocks of approved						
	size, shape and colour with a minimum compressive strength of						
	281 kg per sqm over 30mm thick sand bed (average thickness )						
	and compacting with plate vibrator having 3 tons compaction force						
39	thereby forcing part of sand underneath to come up in between						
55	joints, final compaction of paver surface joints into its final level,						
	including cost of materials, labour and HOM of machineries						
	complete as per specifications.						
	(KSRB 18-19, Pg No 103,SI No : 14.6)						
	Maidan Road (AB shetty to Hamilton Circle)Footpath						
	Left Hand Side of Road						
	Ch.0.0 to Ch.100.0	Sqm	1	84.49	2.20		185.88
	Service Bus Stand Road (LHS Side)	Sqm	1	45.60	2.20		100.32
	Service Bus Stand Road (RHS Side)	Sqm	1	35.92	2.20		79.02
	Ch.120.0 to Ch.170.0	Sqm	1	52.59	2.20		115.70
	Ch.180.0 to Ch. 210.0	Sqm	1	27.16	2.20		59.75
	Ch.210.0 to Ch.240.0(Curved area-Maidan Road)	Sqm	1	19.12	3.00		57.36
	Right Hand Side of Road	Oqin		10.12	0.00		01.00
	Ch.30.0 to Ch.170.0	Sqm	1	141.27	2.20		310.79
	Ch.180.0 to Ch.240.0	Sqm	1	54.40	2.20		119.68
	Mangala Devi Road-RHS	Sqm	1	49.00	1.55		75.95
	Mangala Devi Road-LHS	Sqm	1	72.69	1.64		119.21
	Ded. Tectile Tiles @ Maidan Road Footpath		<u> </u>				
	Left Hand Side		1				1
	Ch.40.0 to 100.0-Directional Tile	Sqm	-1	59.00	0.30		-17.70
	Ch.40.0 to 100.0-Stop Tile	Sqm	-2	0.90	0.90		-1.62
	Directional Tile at Pedstrian Crossing @ Ch.90.0	Sqm	-1	1.97	0.30		-0.59
	Directional Tile at Pedstrian Crossing @ Ch.90.0	Sqm	-1	3.00	0.30		-0.90
	Directional Tile at Pedstrian Crossing @ Service Bus Road(RHS)						
		Sqm	-1	0.75	0.30		-0.23
	Directional Tile at Pedstrian Crossing @ Service Bus Road(RHS)	-		0.05			
		Sqm	-1	2.85	0.30		-0.86
	Ch.110.0 to Ch. 170.0	Sqm	-1	74.53	0.30		-22.36
	Directional Tile at Pedstrian Crossing @ Service Bus Road(LHS)						
	,	Sqm	-1	0.75	0.30		-0.23
	Directional Tile at Pedstrian Crossing @ Service Bus Road(LHS)	•		0.00	0.00		
		Sqm	-1	3.00	0.30		-0.90
	Directional Tile at Pedstrian Crossing @ Ch.120.0	Sqm	-1	0.30	0.30		-0.09
	Directional Tile at Pedstrian Crossing @ Ch.120.0	Sqm	-1	3.00	0.30		-0.90
	Stop Tiles @ Ch.120.0 and Service Bus Road-Pedstriam		0				
	Crossing	Sqm	-2	0.90	0.90		-1.62
	Stop Tiles at Ch.170.00	Sqm	-1	0.90	0.30		-0.27
	Stop tile @ Ch.180.0	Sqm	-1	0.90	0.30		-0.27
	Ch.180.0 to Ch. 240.0 (Towards Maidan Road)						0.00
	Directional Tile at Pedstrian Crossing @ Ch.210.0	Sqm	-1	0.78	0.30		-0.23
	Directional Tile at Pedstrian Crossing @ Ch.210.0	Sqm	-1	3.30	0.30		-0.99
	Right Hand Side						0.00
	Directional Tile Ch.40.0 to Ch.170.0	Sqm	-1	127.00	0.30		-38.10
	Directional Tile at Pedstrian Crossing @ Ch.90.0	Sqm	-1	0.80	0.30		-0.24
	Directional Tile at Pedstrian Crossing @ Ch.90.0	Sqm	-1	3.00	0.30		-0.90
	Directional Tile at Pedstrian Crossing @ Ch.120.0	Sqm	-1	0.54	0.30		-0.16
	Directional Tile at Pedstrian Crossing @ Ch.120.1	Sqm	-1	3.00	0.30		-0.90
	Stop Tile @ Ch.170.0	Sqm	-1	0.90	0.30		-0.27
	Stop Tile @ Ch.90.0 and Ch.120.0	Sqm	-2	0.90	0.90		-1.62
	Directional Tile @Ch.185.0 to 210.0	Sqm	-1	30.11	0.30		-9.03
	Directional Tile at Pedstrian Crossing @ Ch.215.0	Sqm	-1	0.53	0.30		-0.16
	Directional Tile at Pedstrian Crossing @ Ch.215.0	Sqm	-1	3.00	0.30		-0.90
	Stop Tile at Ch.185.00	Sqm	-1	0.90	0.30		-0.27
	Stop Tile at Ch.215.00	Sqm	-1	0.90	0.90		-0.81
			İ	-			
	Hamilton Circle Juction-Footpath						
	Rosario Church Road-LHS	Sqm	1	47.00	2.20		103.40
	Rosario Church Road-RHS	Sqm	1	83.18	5.30		440.83
	Bunder Road-LHS	Sqm	1	71.63	7.43		532.21
	Bunder Road-RHS	Sqm	1	74.21	6.41		475.69
	North-East Side Footpath at Fourth Cross lane Side	Sqm	-1	85.57	0.30		-25.67
	Stop Tiles @ North East Side Footpath at Fourth Cross lane	Sqm	-2	0.90	0.90		-1.62
	Directional Tile Pedstrian Crossing@ North East Side Footpath at						
	Maidan Road at Ch.30.0	Sqm	-1	2.20	0.30		-0.66
	Directional Tile Pedstrian Crossing@ North East Side Footpath at	0		0.00	0.00		0.00
	Maidan Road at Ch.30.0	Sqm	-1	3.00	0.30		-0.90
	Directional Tile Pedstrian Crossing@ Footpath at 4th Cross oad	0.	4	3.83	0.30		4.45
	Directional the redstillan brobbing a rootpath at 4th brobb bad				0.30		-1.15
	at Ch.210.0	Sqm	-1	5.05	0.00		1.10

Sr. No.	Description	Unit	No's	L	В	H Qty.
	Stop Tiles	Sqm	-1	0.90	0.90	-0.81
	Directional Tile Pedstrian Crossing@ Footpath at Rossary Road	Sqm	-1	3.27	0.30	-0.98
	Directional Tile Pedstrian Crossing@ Footpath at Rossary Road	Sqm	-1	3.00	0.30	-0.90
	South West Footpath of Rossary Road	Sqm	-1	118.00	0.30	-35.40
	Bunder Road Footpath-1	Sqm	-1	70.00	0.30	-21.00
	Stop Tile	Sqm	-1	0.90	0.90	-0.81
	Directional Tile Pedstrian Crossing @ Rossary Road Footpath-1	Sqm	-1	5.37	0.30	-1.61
	Directional Tile Pedstrian Crossing @ Rossary Road Footpath-1	Sqm	-1	3.00	0.30	-0.90
	Bunder Road Footpath-2	Sqm	-1	70.00	0.30	-21.00
	Stop Tile	Sqm	-1	0.90	0.90	-0.81
	Stop Tile	Sqm	-1	0.90	0.30	-0.27
	Directional Tile Pedstrian Crossing @ Rossary Road Footpath-2	Sqm	-1	4.83	0.30	-1.45
	Directional Tile Pedstrian Crossing @ Rossary Road Footpath-2	Sqm	-1	3.00	0.30	-0.90
	Directional Tile at Footpath at Junction of Bunder Road and Rosarry Church Road	Sqm	-1	27.00	0.30	-8.10
	Stop Tile at Footpath at Junction of Bunder Road and Rosarry Church Road	Sqm	-1	0.90	0.30	-0.27
	Directional Tile at North West Side Footpath at Nellikai Road	Sqm	-1	19.26	0.30	-5.78
	Stop Tile at North West Side Footpath at Nellikai Road	Sqm	-1	0.90	0.90	-0.81
	Stop Tile at North West Side Footpath at Nellikai Road	Sqm	-1	0.90	0.30	-0.27
	Directional Tile Pedstrian Crossing @ Nellikai Road @ Ch.290.0(RHS)	Sqm	-1	0.63	0.30	-0.19
	Directional Tile Pedstrian Crossing @ Nellikai Road @ Ch.290.0(RHS)	Sqm	-1	0.30	0.30	-0.09
	Nellikai Road-LHS					
	Ch.10.0 to Ch.50.0	Sqm	1	38.91	2.20	85.60
	Ch.55.0 to Ch.125.0	Sqm	1	67.04	2.20	147.49
	Ch.120.0 to Ch.270.0	Sqm	1	119.69	2.20	263.32
	Ch.280.0 to Ch.310.0	Sqm	1	29.68	2.20	65.30
	Nellikai Road-RHS Ch.10.0 to Ch.35.0	Sqm	1	25.92	1.40	36.29
	Ch.45.0 to Ch.95.0	Sqm	1	47.00	1.40	65.80
	Ch.105.0 to Ch.180.0	Sqm	1	71.83	1.40	100.56
	Ch.190.0 to Ch.270.0	Sqm	1	84.11	1.40	117.75
	At Junction at Nellikai and 4th cross road	Sqm	1	165.00		165.00
	Landscape area(R-5.86m)	Sqm	-0.5	3.13	34.34	-53.74
	Triangular Island at Mission Street road and 4th Cross Road	Sqm	0.5	10.52	6.88	36.19
	Deduction of Landscape	Sqm	-0.5	4.45	2.00	-4.45
	Ded.of Tectile Tile @ Nellikai Road					
	Left Hand Side	0	4	11.00	0.00	0.55
	Directional Tiles Ch.24.50 to Ch.36.37 Stop Tiles Ch.24.50 to Ch.50.1	Sqm Sqm	-1 -1	11.83 0.90	0.30	-3.55 -0.27
	Directional Tiles Ch.50.00 to Ch.95.0	Sqm	-1	16.00	0.30	-4.80
	Stop Tiles Ch.50.00 to Ch.95.0	Sqm	-1	0.90	0.30	-0.27
	Directional Tiles Ch.112.00 to Ch.182.0	Sqm	-1	69.00	0.30	-20.70
	Stop Tiles Ch.112.00 to Ch.182.0	Sqm	-1	0.90	0.90	-0.81
	Stop Tiles Ch.112.00 to Ch.182.0	Sqm	-1	0.90	0.30	-0.27
	Directional Tile Pedstrian Crossing @ Ch.135.0	Sqm	-1	0.94	0.30	-0.28
	Directional Tile Pedstrian Crossing @ Ch.135.0	Sqm	-1	3.00	0.30	-0.90
	Directional Tiles Ch.190.0 to Ch.274.0	Sqm	-1	92.25	0.30	-27.68
	Stop Tiles Ch.190.0 to Ch.274.0	Sqm	-1	0.90	0.30	-0.27
	Right Hand Side	Carro	4	25.00	0.00	0.00
	Directional Tiles Ch.24.50 to Ch.50.0 Stop Tiles Ch.24.50 to Ch.50.1	Sqm Sqm	-1 -1	25.00 0.90	0.30	-7.50 -0.27
	Directional Tile Ch.60.0 to Ch.124.0	Sqm	-1	66.40	0.30	-19.92
	Stop Tile Ch.60.0 to Ch.124.1	Sqm	-1	0.90	0.30	-0.27
	Directional Tile at Ch.130.0 to Ch. 140.0	Sqm	-1	6.51	0.30	-1.95
	Stop Tile at Ch.130.0 to Ch. 140.1	Sqm	-1	0.90	0.90	-0.81
	Stop Tile at Ch.130.0 to Ch. 140.2	Sqm	-1	0.90	0.30	-0.27
	Directional Tile Pedstrian Crossing Ch.135.0	Sqm	-1	0.41	0.90	-0.37
	Directional Tile Pedstrian Crossing Ch.135.0	Sqm	-1	3.00	0.30	-0.90
	Directional Tiles Ch.150.0 to Ch.270.0	Sqm	-1	125.00	0.90	-112.50
	Stop Tiles Ch.150.0 to Ch.270.1	Sqm	-2	0.90	0.30	-0.54
	Directional Tiles Ch.280.0 to Ch.290.0	Sqm	-1	10.69	0.90	-9.62
		Cam	-1	0.90	0.30	-0.27
	Stop Tiles Ch.280.0 to Ch.290.1	Sqm	-1	0.00	0.00	
,	Stop Tiles Ch.280.0 to Ch.290.1 4th Cross Road	Sym	- 1	0.00	0.00	

Sr. No.	Description	Unit	No's	L	В	H Qty.
	Ch.20.0 to Ch.40.0	Sqm	1	20.00	4.86	97.20
	Ch.40.0 to Ch.350.0	Sqm	1	220.00	2.20	484.00
	Right Hand Side Footpath					
	Ch.15.0 to Ch.180.0	Sqm	1	165.00	2.20	363.00
	Offset at @ Ch.100.0 to Ch.110.0	Sqm	1	18.14	2.67	48.43
	4th Cross Road -Tactile Tile Ded.					0.00
	Left Hand Side Footpath-Directional Tile @ Ch.30.0 to 200.0	Sqm	-1	170.00	0.30	-51.00
	Disactional Tile Dedetsion Creasing @ Ch 105 0		4	4.00	0.00	-1.46
	Directional Tile Pedstrian Crossing @ Ch.105.0 Stop Tile Pedstrian Crossing @ Ch.105.0	Sqm Sqm	-1 -1	4.86 0.90	0.30	-1.46 -0.81
	Right Hand Side Footpath-Directional Tile @ Ch.30.0 to 200.0	Sym	-1	0.90	0.90	-0.01
		Sqm	-1	162.00	0.30	-48.60
	Directional Tile Pedstrian Crossing @ Ch.105.0	Sqm	-1	0.77	0.30	-0.23
	Stop Tile Pedstrian Crossing @ Ch.105.0	Sqm	-1	3.00	0.30	-0.90
	Stop Tile	Sqm	-1	0.90	0.90	-0.81
	Mission Street	oqin	•	0.00	0.00	0.01
	Right hand side Footpath					
	Ch.10.00 to Ch.25.00	Sqm	1	15.00	3.74	56.10
	Ch.47.0 to Ch.175.0	Sqm	1	148.88	2.20	327.54
	Ch.175.0 to Ch.190.0	Sqm	1	28.55	5.60	159.88
	Left Hand Side Footpath					
	Ch.0.0 to Ch.40.0	Sqm	1	70.00	2.20	154.00
	Ch.40.0 to Ch.110.0	Sqm	1	66.17	2.20	145.58
	Ch.120.0 to Ch.206.0	Sqm	1	100.00	2.20	220.00
	Ch.56.57 to Ch.84.36	Sqm	1	27.00	4.86	131.22
	Ded. Of tactile tile @ Mission street road					
	Left hand side Footpath					
	Directional Tile @Ch.24.00 to Ch.38.00	Sqm	-1	14.00	0.30	-4.20
	Stop Tile @Ch.24.00 to Ch.38.00	Sqm	-1	0.90	0.30	-0.27
	Directional Tile @Ch.47.0 to Ch.112.6	Sqm	-1	65.81	0.30	-19.74
	Stop Tile @Ch.47.0 to Ch.112.7	Sqm	-2	0.90	0.30	-0.54
	Directional Tile Pedstrian Crossing @ Ch.100.0	Sqm	-1	0.38	0.30	-0.11
	Stop Tile Pedstrian Crossing @ Ch.100.0	Sqm	-1	3.00	0.30	-0.90
	Stop Tile Pedstrian Crossing @ Ch.100.0	Sqm	-1	0.90	0.90	-0.81
	Directional Tile @ Ch.122.20 to Ch.176.57	Sqm	-1	54.36	0.30	-16.31
	Stop Tile @ Ch.122.20 to Ch.176.58	Sqm	-1	0.90	0.30	-0.27
	Right Hand Side Footpath					0.00
	Directional Tile @ Ch.20.00 to Ch.176.57	Sqm	-1	153.27	0.30	-45.98
	Directional Tile Pedstrian Crossing @ Ch.100.0	Sqm	-1	3.11	0.30	-0.93
	Stop Tile Pedstrian Crossing @ Ch.100.0	Sqm	-1	3.00	0.30	-0.90
	Stop Tile Pedstrian Crossing @ Ch.100.0	Sqm	-1	0.90	0.90	-0.81
	Compound Wall side paver Block					
	Maidan Road					
	RHS-Ch.40.00 to Ch.120.0( Average Width)	Sqm	1	80.23	1.60	128.37
	Rosario Church LHS	Sqm	1	56.92	3.94	224.26
	Bus Service Road-RHS	Sqm	1	30.94	4.20	129.95
	Bus Service Road-LHS	Sqm	1	38.90	1.61	62.63
	Ch.50.0 to 100.0	Sqm	1	48.00	2.16	103.68
	Ch. 0 to 50	Sqm	1	32.22	3.70	119.21
	Nellikai Road					
	RHS-Ch.150.0 to Ch.200.0	Sqm	1	66.79	2.92	195.03
	RHS-Ch.150.0 to Ch.210.0	Sqm	1	19.00	1.66	31.54
	LHS-Ch.10.0 to Ch.35.0	Sqm	1	69.49		69.49
	Ch.45.0 to Ch.95.0	Sqm	1	46.81	1.34	62.73
	Ch.110 to Ch.180.0	Sqm	1	45.00		45.00
	Mission Street	Sqm	1	82.26	1.50	123.39
	Ch.80.0 to Ch.115.0	Sqm	1	32.00	1.32	42.24
	Ch.120.0 to Ch.206.0	Sqm	1	98.68	2.00	197.36
	4th Cross Road			400.00		100.07
	RHS-Ch.20.0 to Ch.180.0(Avg. width)	Sqm	1	160.00	3.00	480.00
	LHS-0.0 to 63.0	Sqm	1	49.78	2.62	130.42
	Ch.63 to Ch.180.0(Avg. Width)	Sqm	1	117.00	1.00	117.00
		Sqm			Total Qty.	7584.76
	Providing and laying heavy duty Tactile Tiles (Direction and Stop					
	tiles-300 x 300 mm) 40mm thick and Yellow in colour , using					
	cement and course sand for manufacture of blocks of approved					
	size, shape with a minimum compressive strength of 281 kg per					
	sqm over 30mm thick sand bed (average thickness ) and					
40	compacting with plate vibrator having 3 tons compaction force					
	thereby forcing part of sand underneath to come up in between					
	joints, final compaction of paver surface joints into its final level,					
	including cost of materials, labour and HOM of machineries					
	including boot of matchalo, labour and from of matchinorito					
	complete as per specifications.					

r. No.	Description	Unit	No's	L	В	Н	Qty.
	Left Hand Side						
	Ch.40.0 to 100.0-Directional Tile	sqm	1.00	59.00	0.30		17.70
	Ch.40.0 to 100.0-Stop Tile	sqm	2.00	0.90	0.90		1.62
	Directional Tile at Pedstrian Crossing @ Ch.90.0	sqm	1.00	1.97	0.30		0.59
	Directional Tile at Pedstrian Crossing @ Ch.90.0	sqm	1.00	3.00	0.30		0.90
	Directional Tile at Pedstrian Crossing @ Service Bus Road(RHS)	sqm	1.00	0.75	0.30		0.23
	Directional Tile at Pedstrian Crossing @ Service Bus Road(RHS)	sqm	1.00	2.85	0.30		0.86
	Ch.110.0 to Ch. 170.0	sqm	1.00	74.53	0.30		22.36
	Directional Tile at Pedstrian Crossing @ Service Bus Road(LHS)	Sqiii	1.00	74.00	0.50		22.50
		sqm	1.00	0.75	0.30		0.23
	Directional Tile at Pedstrian Crossing @ Service Bus Road(LHS)	sqm	1.00	3.00	0.30		0.90
	Directional Tile at Pedstrian Crossing @ Ch.120.0	sqm	1.00	0.30	0.30		0.09
	Directional Tile at Pedstrian Crossing @ Ch.120.0	sqm	1.00	3.00	0.30		0.90
	Stop Tiles @ Ch.120.0 and Service Bus Road-Pedstriam Crossing	sqm	2.00	0.90	0.90		1.62
	Stop Tiles at Ch.170.00	sqm	1.00	0.90	0.30		0.27
	Stop tile @ Ch.180.0	sqm	1.00	0.90	0.30		0.27
	Ch.180.0 to Ch. 240.0 (Towards Maidan Road)	sqm	0.00	0.00	0.00		0.00
	Directional Tile at Pedstrian Crossing @ Ch.210.0	sqm	1.00	0.78	0.30		0.23
	Directional Tile at Pedstrian Crossing @ Ch.210.0	sqm	1.00	3.30	0.30		0.99
	Right Hand Side		0.00	0.00	0.00		0.00
		sqm					
	Directional Tile Ch.40.0 to Ch.170.0	sqm	1.00	127.00	0.30		38.10
	Directional Tile at Pedstrian Crossing @ Ch.90.0	sqm	1.00	0.80	0.30		0.24
	Directional Tile at Pedstrian Crossing @ Ch.90.0	sqm	1.00	3.00	0.30		0.90
	Directional Tile at Pedstrian Crossing @ Ch.120.0	sqm	1.00	0.54	0.30		0.16
	Directional Tile at Pedstrian Crossing @ Ch.120.1	sqm	1.00	3.00	0.30		0.90
	Stop Tile @ Ch.170.0	sqm	1.00	0.90	0.30		0.27
	Stop Tile @ Ch.90.0 and Ch.120.0	sqm	2.00	0.90	0.90		1.62
	Directional Tile @Ch.185.0 to 210.0	sqm	1.00	30.11	0.30		9.03
	Directional Tile at Pedstrian Crossing @ Ch.215.0	sqm	1.00	0.53	0.30		0.16
	Directional Tile at Pedstrian Crossing @ Ch.215.0	sqm	1.00	3.00	0.30		0.90
	Stop Tile at Ch.185.00	sqm	1.00	0.90	0.30		0.27
	Stop Tile at Ch.215.00	sqm	1.00	0.90	0.90		0.81
		Sqiii	1.00	0.30	0.30		0.00
	Ded Testile Tiles @ hemilten Oinsle Festusth						0.00
	Ded. Tectile Tiles @ hamilton Circle Footpath		4	05.57	0.00		
	North-East Side Footpath at Fourth Cross lane Side	sqm	1	85.57	0.30	-	25.67
	Stop Tiles @ North East Side Footpath at Fourth Cross lane	sqm	2	0.90	0.90		1.62
	Directional Tile Pedstrian Crossing@ North East Side Footpath at Maidan Road at Ch.30.0	sqm	1	2.20	0.30		0.66
	Directional Tile Pedstrian Crossing@ North East Side Footpath at Maidan Road at Ch.30.0	sqm	1	3.00	0.30		0.90
	Directional Tile Pedstrian Crossing@ Footpath at 4th Cross oad	sqm	1	3.83	0.30		1.15
	at Ch.210.0	•					
	South-East Side Footpath at Rosari Church Road	sqm	1	64.50	0.30		19.35
	Stop Tiles Directional Tile Pedstrian Crossing@ Footpath at Rossary Road	sqm	1	0.90	0.90		0.81
	- · · ·	sqm	1	3.27	0.30		0.98
	Directional Tile Pedstrian Crossing@ Footpath at Rossary Road	sqm	1	3.00	0.30		0.90
	South West Footpath of Rossary Road	sqm	1	118.00	0.30		35.40
	Bunder Road Footpath-1	sqm	1	70.00	0.30		21.00
	Stop Tile	sqm	1	0.90	0.90		0.81
	Directional Tile Pedstrian Crossing @ Rossary Road Footpath-1	sqm	1	5.37	0.30		1.61
	Directional Tile Pedstrian Crossing @ Rossary Road Footpath-1						
		sqm	1	3.00	0.30		0.90
	Bunder Road Footpath-2	sqm	1	70.00	0.30		21.00
	Stop Tile	sqm	1	0.90	0.90		0.81
	Stop Tile	sqm	1	0.90	0.30		0.27
	Directional Tile Pedstrian Crossing @ Rossary Road Footpath-2	sqm	1	4.83	0.30		1.45
	Directional Tile Pedstrian Crossing @ Rossary Road Footpath-2	sqm	1	3.00	0.30		0.90
	Directional Tile at Footpath at Junction of Bunder Road and	sqm	1	27.00	0.30		8.10
	Rosarry Church Road Stop Tile at Footpath at Junction of Bunder Road and Rosarry	sqm	1	0.90	0.30		0.27
	Church Road Directional Tile at North West Side Footpath at Nellikai Road	•					
	·	sqm	1	19.26	0.30		5.78
	Stop Tile at North West Side Footpath at Nellikai Road	sqm	1	0.90	0.90		0.81
				0.00	0.30	1	0.27
	Stop Tile at North West Side Footpath at Nellikai Road	sqm	1	0.90	0.30		0.21
	Stop Tile at North West Side Footpath at Nellikai Road Directional Tile Pedstrian Crossing @ Nellikai Road @	sqm sqm	1	0.90	0.30		0.19

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
	Directional Tile Pedstrian Crossing @ Nellikai Road @	cam	1	0.30	0.30		0.09
	Ch.290.0(RHS)	sqm		0.30	0.30		
							0.00
	4th Cross Road -Tactile Tile Ded.				-		0.00
	Left Hand Side Footpath-Directional Tile @ Ch.30.0 to 200.0	sqm	1	170.00	0.30		51.00
	Directional Tile Pedstrian Crossing @ Ch.105.0	sqm	1	4.86	0.30		1.46
	Stop Tile Pedstrian Crossing @ Ch.105.0	sqm	1	0.90	0.90		0.81
	Right Hand Side Footpath-Directional Tile @ Ch.30.0 to 200.0						
	3	sqm	1	162.00	0.30		48.60
	Directional Tile Pedstrian Crossing @ Ch.105.0	sqm	1	0.77	0.30		0.23
	Stop Tile Pedstrian Crossing @ Ch.105.0	sqm	1	3.00	0.30		0.90
	Stop Tile	sqm	1	0.90	0.90		0.81
							0.00
	Tactile tile @ Mission street road						0.00
	Left hand side Footpath Directional Tile @Ch.24.00 to Ch.38.00	cam	1	14.00	0.30		0.00 4.20
	Stop Tile @Ch.24.00 to Ch.38.00	sqm sqm	1	0.90	0.30		0.27
	Directional Tile @Ch.47.0 to Ch.112.6	sqm	1	65.81	0.30		19.74
	Stop Tile @Ch.47.0 to Ch.112.7	sqm	2	0.90	0.30		0.54
	Directional Tile Pedstrian Crossing @ Ch.100.0	sqm	1	0.38	0.30		0.11
	Stop Tile Pedstrian Crossing @ Ch.100.0	sqm	1	3.00	0.30		0.90
	Stop Tile Pedstrian Crossing @ Ch.100.0	sqm	1	0.90	0.90		0.81
	Directional Tile @ Ch.122.20 to Ch.176.57	sqm	1	54.36	0.30		16.31
	Stop Tile @ Ch.122.20 to Ch.176.58	sqm	1	0.90	0.30		0.27
	Right Hand Side Footpath	sqm	0	0.00	0.00		0.00
	Directional Tile @ Ch.20.00 to Ch.176.57	sqm	1	153.27	0.30		45.98
	Directional Tile Pedstrian Crossing @ Ch.100.0 Stop Tile Pedstrian Crossing @ Ch.100.0	sqm	1	3.11 3.00	0.30		0.93
	Stop Tile Pedstrian Crossing @ Ch.100.0	sqm sqm	1	0.90	0.30		0.90
		sqm		0.00	Total Qty.		450.40
41	cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 30mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level,						
	including cost of materials, labour and HOM of machineries complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7)						
	complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7)						
	complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7) Maidan Road ( AB shetty to Hamilton Circle)						
	complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7) Maidan Road ( AB shetty to Hamilton Circle) LHS Side	Sam	1	38.67	2.5		96,68
	complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7) Maidan Road ( AB shetty to Hamilton Circle)	Sqm Sqm	1	38.67	2.5		96.68
	complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7) Maidan Road ( AB shetty to Hamilton Circle) LHS Side Ch.46.80 to Ch.90.00	Sqm Sqm			2.5 2.5 2.5		
	complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7) Maidan Road ( AB shetty to Hamilton Circle) LHS Side Ch.46.80 to Ch.90.00 Ch.130.0 to Ch.170.0 Ch.180.0 to Ch.210.0 Nellikai Road	Sqm	1	45.72	2.5		114.30
	complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7) Maidan Road ( AB shetty to Hamilton Circle) LHS Side Ch.46.80 to Ch.90.00 Ch.130.0 to Ch.90.00 Ch.130.0 to Ch.170.0 Ch.180.0 to Ch.210.0 Nellikai Road Right hand Side Road	Sqm Sqm Sqm	1	45.72 29.7	2.5 2.5		114.30 74.25
	complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7) Maidan Road ( AB shetty to Hamilton Circle) LHS Side Ch.46.80 to Ch.90.00 Ch.130.0 to Ch.90.00 Ch.130.0 to Ch.170.0 Ch.180.0 to Ch.210.0 Nellikai Road Right hand Side Road Ch.25.0 to Ch.45.0	Sqm Sqm Sqm Sqm	1 1 	45.72 29.7 20	2.5 2.5 1.6		114.30 74.25 32.00
	Complete as per specifications.           (KSRB 18-19,Page No 103,SI No : 14.7)           Maidan Road ( AB shetty to Hamilton Circle)           LHS Side           Ch.46.80 to Ch.90.00           Ch.130.0 to Ch.170.0           Ch.180.0 to Ch.210.0           Nellikai Road           Right hand Side Road           Ch.25.0 to Ch.45.0           Ch.65.0 to Ch.120.0	Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1	45.72 29.7 20 55	2.5 2.5 1.6 1.8		114.30 74.25 32.00 99.00
	Complete as per specifications.           (KSRB 18-19,Page No 103,SI No : 14.7)           Maidan Road ( AB shetty to Hamilton Circle)           LHS Side           Ch.46.80 to Ch.90.00           Ch.130.0 to Ch.170.0           Ch.180.0 to Ch.210.0           Nellikai Road           Right hand Side Road           Ch.25.0 to Ch.45.0           Ch.65.0 to Ch.210.0	Sqm Sqm Sqm Sqm	1 1 	45.72 29.7 20	2.5 2.5 1.6		114.30 74.25 32.00
	Complete as per specifications.           (KSRB 18-19,Page No 103,SI No : 14.7)           Maidan Road ( AB shetty to Hamilton Circle)           LHS Side           Ch.46.80 to Ch.90.00           Ch.130.0 to Ch.170.0           Ch.180.0 to Ch.210.0           Nellikai Road           Right hand Side Road           Ch.25.0 to Ch.45.0           Ch.65.0 to Ch.210.0           Mission Street Road	Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1	45.72 29.7 20 55 55 55	2.5 2.5 1.6 1.8 2.6		114.30 74.25 32.00 99.00 143.00
	Complete as per specifications.           (KSRB 18-19,Page No 103,SI No : 14.7)           Maidan Road ( AB shetty to Hamilton Circle)           LHS Side           Ch.46.80 to Ch.90.00           Ch.130.0 to Ch.170.0           Ch.180.0 to Ch.210.0           Nellikai Road           Right hand Side Road           Ch.25.0 to Ch.45.0           Ch.65.0 to Ch.210.0           Mission Street Road           Ch.50 to Ch.100.0	Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1	45.72 29.7 20 55 55 47.64	2.5 2.5 1.6 1.8 2.6 2.42		114.30 74.25 32.00 99.00 143.00 115.29
	complete as per specifications.           (KSRB 18-19,Page No 103,SI No : 14.7)           Maidan Road ( AB shetty to Hamilton Circle)           LHS Side           Ch.46.80 to Ch.90.00           Ch.130.0 to Ch.170.0           Ch.180.0 to Ch.210.0           Nellikai Road           Right hand Side Road           Ch.25.0 to Ch.45.0           Ch.65.0 to Ch.210.0           Mission Street Road           Ch.50 to Ch.100.0           Ch.50 to Ch.180.0	Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1	45.72 29.7 20 55 55 55	2.5 2.5 1.6 1.8 2.6		114.30 74.25 32.00 99.00 143.00
	Complete as per specifications.           (KSRB 18-19,Page No 103,SI No : 14.7)           Maidan Road ( AB shetty to Hamilton Circle)           LHS Side           Ch.46.80 to Ch.90.00           Ch.130.0 to Ch.170.0           Ch.180.0 to Ch.210.0           Nellikai Road           Right hand Side Road           Ch.25.0 to Ch.45.0           Ch.65.0 to Ch.210.0           Mission Street Road           Ch.50 to Ch.100.0           Table top crossing	Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1	45.72 29.7 20 55 55 47.64 60.53	2.5 2.5 1.6 1.8 2.6 2.42		114.30 74.25 32.00 99.00 143.00 115.29
	complete as per specifications.           (KSRB 18-19,Page No 103,SI No : 14.7)           Maidan Road ( AB shetty to Hamilton Circle)           LHS Side           Ch.46.80 to Ch.90.00           Ch.130.0 to Ch.170.0           Ch.180.0 to Ch.210.0           Nellikai Road           Right hand Side Road           Ch.25.0 to Ch.45.0           Ch.65.0 to Ch.210.0           Mission Street Road           Ch.50 to Ch.100.0           Ch.50 to Ch.180.0	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 1	45.72 29.7 20 55 55 47.64	2.5 2.5 1.6 1.8 2.6 2.42 2.76		114.30 74.25 32.00 99.00 143.00 115.29 167.06
	complete as per specifications.           (KSRB 18-19,Page No 103,SI No : 14.7)           Maidan Road ( AB shetty to Hamilton Circle)           LHS Side           Ch.46.80 to Ch.90.00           Ch.130.0 to Ch.170.0           Ch.180.0 to Ch.210.0           Nellikai Road           Right hand Side Road           Ch.25.0 to Ch.45.0           Ch.65.0 to Ch.210.0           Mission Street Road           Ch.50 to Ch.100.0           Mission Street Road           Ch.50 to Ch.180           Table top crossing           AB Shetty	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 4 1 3	45.72 29.7 20 55 55 47.64 60.53 19.85	2.5 2.5 1.6 1.8 2.6 2.42 2.76 3 3 3 3		114.30 74.25 32.00 99.00 143.00 115.29 167.06 238.20
	complete as per specifications.           (KSRB 18-19,Page No 103,SI No : 14.7)           Maidan Road ( AB shetty to Hamilton Circle)           LHS Side           Ch.46.80 to Ch.90.00           Ch.130.0 to Ch.170.0           Ch.180.0 to Ch.210.0           Nellikai Road           Right hand Side Road           Ch.25.0 to Ch.45.0           Ch.65.0 to Ch.210.0           Mission Street Road           Ch.50 to Ch.100.0           Mission Street Road           Ch.15 to Ch.180           Table top crossing           AB Shetty           Service Road	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 4 1 3 3	45.72 29.7 20 55 55 47.64 60.53 19.85 12 6.3 9	2.5 2.5 1.6 1.8 2.6 2.42 2.76 3 3 3 3 3 3		114.30 74.25 32.00 99.00 143.00 115.29 167.06 238.20 36.00
	complete as per specifications.           (KSRB 18-19,Page No 103,SI No : 14.7)           Maidan Road ( AB shetty to Hamilton Circle)           LHS Side           Ch.46.80 to Ch.90.00           Ch.130.0 to Ch.170.0           Ch.180.0 to Ch.210.0           Nellikai Road           Right hand Side Road           Ch.25.0 to Ch.45.0           Ch.65.0 to Ch.210.0           Mission Street Road           Ch.155 to Ch.100.0           Ch.115 to Ch.180           Table top crossing           AB Shetty           Service Road           Rossary Road           Nellikai Road           Mission Road	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 4 1 3 3 3 3	45.72 29.7 20 55 55 47.64 60.53 19.85 12 6.3 9 7	2.5 2.5 1.6 1.8 2.6 2.42 2.76 3 3 3 3 3 3 3 3 3 3		114.30 74.25 32.00 99.00 143.00 115.29 167.06 238.20 36.00 56.70 81.00 63.00
	complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7) Maidan Road ( AB shetty to Hamilton Circle) LHS Side Ch.46.80 to Ch.90.00 Ch.130.0 to Ch.170.0 Ch.180.0 to Ch.210.0 Nellikai Road Right hand Side Road Ch.25.0 to Ch.45.0 Ch.65.0 to Ch.120.0 Ch.155.0 to Ch.210.0 Mission Street Road Ch.50 to Ch.100.0 Ch.115 to Ch.180 Table top crossing AB Shetty Service Road Rossary Road Nellikai Road	Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm Sqm	1 1 1 1 1 1 1 1 4 1 3 3	45.72 29.7 20 55 55 47.64 60.53 19.85 12 6.3 9	2.5 2.5 1.6 1.8 2.6 2.42 2.76 3 3 3 3 3 3		114.30 74.25 32.00 99.00 143.00 115.29 167.06 238.20 36.00 56.70 81.00

Sr. No.	Description KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, Supply and Installation of retro-reflective	Unit	No's	L	В	Н	Qty.
	Manufacturing, Supply and Installation of retro-reflective						
	contignery mandatory & Informatory signhoards made out of sub-						
	cautionary, mandatory & Informatory signboards made out of cube						
	corner micro prismatic grade sheeting confirming to type XI						
	standards of IRC:67:2012 specifications & fixed over 4mm thick						
	aluminium composite panel sheet having minimum 0.30 mm thick						
	aluminum skin on both sides & fixed over a support frame of						
	25X25X3mm MS angle and mounted on 75 mm dia OR						
	75X75X6mm mild steel angle to Total height 2.70 m with clear						
42	height of not less than 2.10 m from the ground level to the bottom						
	of the sign board & 60mm below ground level. the sign post should						
	be painted with be coat of red oxide paint and two coats of						
	synthetic enamel paint of black and white colour with bands of 30						
	cm height alternatively firmly fixed to the ground by means of						
	foundation with M20 grade cement concrete of 45cmX45cmX60cm						
	including cost & conveyance of all materials, equipment,						
	machinery & labour with all leads and lifts, loading charges						
	necessary for satisfactory completion of the works as directed be						
	engineer in-charge.						
	10 years warranty for Retro Reflective Sheeting from the original						
	sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified						
	copy of three years outdoor exposure report from an independent						
l I	test lab for the product offered shall be obtained from the supplier.						
	900MM Equilateral Triangle-TYPE XI						
	(KSRRB 18-19,Page No 180,SI No : 24.2.1)						
Í	(101110 10 10,1 age 10 100,01110 . 24.2.1)						
┝───	Maidan Daad( A.D. Chatter to Line item Ofer L.)						44.00
<b> </b>	Maidan Road( A B Shetty to Hamilton Circle)		14				14.00
	Rosario Church Road		3				3.00
L	Bunder Road-at hamilton		3				3.00
	Bunder Road-at Nillikai and Mission		3				3.00
	Nellikai Road		7				7.00
	Mission Road		7				7.00
	4th Cross Road		5				5.00
		Nos.			Total Qty.		42.00
	KSRRB M800-2. Retro-Reflectorised Traffic Signs -						
l I	Manufacturing, Supply and Installation of retro-reflective						
l I	cautionary, mandatory & Informatory signboards made out of cube						
	corner micro prismatic grade sheeting confirming to type XI						
	standards of IRC:67:2012 specifications & fixed over 4mm thick						
l I	aluminium composite panel sheet having minimum 0.30 mm thick						
	aluminum skin on both sides & fixed over a support frame of						
	25X25X3mm MS angle and mounted on 75 mm dia OR						
l I	75X75X6mm mild steel angle to Total height 2.70 m with clear						
	height of not less than 2.10 m from the ground level to the bottom						
10	of the sign board & 60mm below ground level. the sign post should						
	be painted with be coat of red oxide paint and two coats of						
l I	synthetic enamel paint of black and white colour with bands of 30						
	cm height alternatively firmly fixed to the ground by means of						
Í	foundation with M20 grade cement concrete of 45cmX45cmX60cm						
1	including cost & conveyance of all materials, equipment,						
	machinery & labour with all leads and lifts, loading charges						
	necessary for satisfactory completion of the works as directed be						
Í	engineer in-charge.						
1							
<b> </b>	10 years warranty for Potra Doflactive Chaption from the statist			<u> </u>			
1	10 years warranty for Retro Reflective Sheeting from the original						
	sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified						
i i	copy of three years outdoor exposure report from an independent						
1	test lab for the product offered shall be obtained from the supplier.						
1	900MM Octagon Stop Board-TYPE XI						
1	(KSRRB 18-19,Page No 180,SI No : 24.2.6)						
1							
	Maidan Road( A B Shetty to Hamilton Circle)		3				3.00
	Rosario Church Road		1				1.00
[	Bunder Road-at hamilton		1				1.00
	Bunder Road-at Nillikai and Mission		1		1		1.00
t	Nellikai Road		1				1.00
<b> </b>	Mission Road		1				1.00
┝────			1				
⊢	4th Cross Road	Nec			Tatal Offic		1.00
1		Nos.			Total Qty.		9.00

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
	KSRRB M800-2. Retro-Reflectorised Traffic Signs -						
	Manufacturing, Supply and Installation of retro-reflective						
	cautionary, mandatory & Informatory signboards made out of cube						
	corner micro prismatic grade sheeting confirming to type XI						
	standards of IRC:67:2012 specifications & fixed over 4mm thick						
	aluminium composite panel sheet having minimum 0.30 mm thick						
	aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR						
	75X75X6mm mild steel angle to Total height 2.70 m with clear						
	height of not less than 2.10 m from the ground level to the bottom						
44	of the sign board & 60mm below ground level. the sign post should						
	be painted with be coat of red oxide paint and two coats of						
	synthetic enamel paint of black and white colour with bands of 30						
	cm height alternatively firmly fixed to the ground by means of						
	foundation with M20 grade cement concrete of 45cmX45cmX60cm						
	including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges						
	necessary for satisfactory completion of the works as directed be						
	engineer in-charge.						
	onginool in onargo.						
	10 years warranty for Retro Reflective Sheeting from the original						1
	sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified						
	copy of three years outdoor exposure report from an independent						
	test lab for the product offered shall be obtained from the supplier.						
	600MM Circle-TYPE XI						
	(KSRRB 18-19,Page No 180,SI No : 24.2.3)						
	Nellikai Road Mission Road	Nos. Nos.	2				2.00 2.00
		Nos.			Total Qty.		4.00
	Road Marking with hot applied Thermoplastic Compound with						
	Reflectrising Glass Beads on Concrete Surface: Providing and						
	laying of hot applied thermoplastic compound 2.5mm thick						
	including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied						
45	glass beads as per IRC:35.The finished surface to be						
	level, uniform and free from streak and holes complete as per						
	specifications.MORTH specification No.803						
	(KSRRB 18-19,Page No 182,SI No : 24.15)						
	Maidan Daad (AD Obette ta Hamilton Oinda) Alana			l a a ath	\A/; alth		
	Maidan Road ( AB Shetty to Hamilton Circle)-4 lane Dash line(6x0.1)			Length	Width		+
	Ch.30.0 to Ch.100.0	Sqm	32	3	0.1		9.60
	Ch.120.0 to Ch.210.0	Sqm	40	3	0.1		12.00
	Edge Line						0.00
	Ch.30.0 to Ch.210.0	Sqm	4	180	0.1		72.00
	Nellikai Road						<b> </b>
	Dash line	0	00	2	0.4		07.00
	Ch.25.0 to Ch.290.0 Edge line	Sqm	90	3	0.1		27.00
	Edge line Ch.25.0 to Ch.290.0	Sqm	2	3	0.1		0.60
-	4th Cross Road	Juli		Area	0.1		0.00
	Arrows -Straight	Sqm	33	0.76			25.08
	Edge Line( Ch.0.0 to Ch.260.0)	Sqm	2	260	0.10		52.00
	Dash line( Ch.0.0 to Ch.260.0)	Sqm	90	3	0.10		27.00
	Mission Road						
	Edge Line( Ch.0.0 to Ch.210.0)	Sqm	2	210	0.10		42.00
	Dash line (Ch.0.0 to 210.0) Total Pedstrian Crossing	Sqm	72	3	0.10		21.60
<u> </u>	AB Shetty	Sqm	4	19.85	1.50		119.10
	Service Road	Sqm	1	12	1.50		18.00
	Rossary Road	Sqm	3	6.3	1.50		28.35
	Nellikai Road	Sqm	3	9	1.50		40.50
							04 50
	Mission Road	Sqm	3	7	1.50		31.50
		Sqm Sqm <b>Sqm</b>	3 3	7 19	1.50 1.50	Total	31.50 85.50 611.83

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
46	Providing & installing of E- toilet with Super structure of the electronic toilet to have asthetic ambience with inner room size 1.2 x 0.8 x 2.4 (LXWXH)meters and Size of electronic toilet overall size in meters 2.30x1.25x2.80 (LXWXH) Total area 35 Sft. with Built-acess controlled main door and side walls made of SS Grade 304,Toilet floor and closet are to be stainless steel of grade 304.E-Toilet shall have Built-in water tank with minimum 225 Lit capacity and Acess controll using coin validator for entering the unit based on automatic payment collection mechanism exit from the unit should be manual.Automatic lights inside the unit with gloves on opening the door.E-Toilet shall be Automatic flushing system which includes Automatic Pre flush cleaning before use,Automatic closet washing mechanism after use and Automatic platform cleaning mechanism programmed after specific numbers.In addition to these flush switch is to be provided for manual operation.Standard features should include heath faucet,exhaust fan and cloth hanger.	Nos.	2				2.00
	The E-Toilet shall have Alert to users-different indication on 'ready to use',busy are to be provided in the unit also with Voice guidence in the unit for users. Web enabled support-GPRS based Real time data to be provided from the unit through web for knowing the health status like number of users per day and coins collected.E-toilet shall have Modular and portable design enabling easy assembling and installation at site.Call ceneter and web portal facilities for registering complience and tracking usage,coin collection etc.Status display in LED,Printed instruction stickers are to be provided.For Advertisment purpose space for advertisement dispaly to be povided on the exterior of the unit for income generation and sustainability. Backup power facility like UPS is to be provided to supplement upto 30 Min Base of the unit to be placed on a suitable concrete structure with a ashthetic finish. (Non SOR Item)						
47	Supply and Fixing of Traffic signal Straight pole of 6 mtr, inner dia 100 mm from resistant to peeling with base plate size of (LXWXT) 200mm X200mmX6mm painted with redoxide and double coat with synthetic enamel paint of yellow colour assembly G.I., class B, as per technical specification (NON SOR Item)		8				8.00
48	Supply and fixing of Traffic signal Cantilever pole Class B having inner diameter of 100 mm or more with a height of 6m including extension arm assembly having outer diameter of 75mm with arm span of 4 mtr length and base plate of size 300mm X 300mm with thickness of 6 mm welded at the bottom of the pole base as per technical specification & drawings. (NON SOR Item)		8				8.00
49	Supply and fixing of 300 mm dia – single source – LED retrofit - Red (blow) as per Specification (NON SOR Item)	Nos.	16				16.00
50	Supply and fixing of 300 mm dia – single source – LED retrofit - Amber (blow) as per Specification (NON SOR Item)	Nos.	16				16.00
51	Supply and fixing of 300 mm dia – single source – LED retrofit - Green (arrow/U- Turn) EN-12368 as per Specification (NON SOR Item)	Nos.	16				16.00
52	Supply and fixing of 300 mm dia – single source – LED retrofit - Red (ped. standing) EN-12368 as per Specification (NON SOR Item)	Nos.	16				16.00
53	Supply and fixing of 300 mm dia – single source – LED retrofit - Green (ped.walking) EN-12368 as per Specification (NON SOR Item)	Nos.	16				16.00
54	Supply and fixing of 300 mm dia - No Right Turn/No Left turn/No Straight/No 'U' Turn aspects by using UV stabilized ink on face plate EN-12368 as per Specification (NON SOR Item)		16				16.00
55	Providing and fixing of S.S. Bollards(SS304) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	92				92.00

Sr. No.	Description	Unit	No's	L	В	Н	Qty.
56	Providing and fixing of railing as detail design in MS HOLLOW SECTION and bars ( shop drawing to be approved ),with vertical support of 0.9m @2.2mc/c , all complete to the satisfaction of the Landscape architect.(Non SOR Item)						
	Handrail Maidan Side Road						
	AB Shetty to Hamilton Circle						
	RHS	Rm	1	172			172.00
	LHS	Rm	1	86			86.00
		Rm				A=	258.00
	Hand Rail of length2.4 meter Steel Qty.					Wt/Rm	
	Horizontal Member-M.S.Box 25x25x3.2mm thk.	KG		3	2.4	4.536	32.66
	Vertical Member-M.S. Box 50x25x3.2mm thk.	KG		1	1.375	7.368	10.13
	Verical Bar-Dia 16mm	KG		20	0.475	0.7493296	7.12
					Area	Thk	
	Logo Plate	KG		1	0.07065	0.001	0.000071
		KG				Total Wight for 2.4 m Railing (A)	49.91
	Railing per 1m Weight( A / 2.4 m)	KG				B=	20.8
	Total Railing Weight (A x B)	MT					5.37
57	Providing and Fixing SS 304 Outdoor Dustbin(Pivoted Type and Mounted on SS Poles) of 55 liters capacity all complete to the satisfaction of the Engineer in charge.	Nos.	20				20.00
58	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5 km Item No 17.4 KSRRB M100-4.1-Earth	Cum	1.00	11797.81			11797.81
59	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5km Item No 17.4 KSRRB M100-4.1-Debris	Cum	1.00	1876.15			1876.15

Assistant Engineer MSCL Mangaluru

Executive Engineer MSCL Mangaluru General Manager Technical MSCL Mangaluru

4	Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made					
1	separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)					
	Basic rate		68.16			
		Rate	68.16			
	KSRRB M200.Dismantling of cement concrete pavement by	mechani	cal means ι	ising pueumatic		
	tools, breaking to pieces not exceeding 0.02 cum in volume and si					
2	disposal of dismantled material stacking serviceble and unservice					
2	per specifications.MORTH specification No.202.(Including transp	porting ch	harges,loading	g and unloading		
	for lead 5km-Extra) (KSRRB 18-19,Page No 140,SI No : 18.47)					
	Basic rate		899			
	Add 10% For area weightage (Mangalore City)		89.9	-		
		Rate	988.90	Cum		
	KEDDD M200 Diamontoling of Keth Stone and Channel KEDDD M	200.26.0	Diamontling K	arb atona by		
	KSRRB M200-Dismantaling of kerb Stone and Channel KSRRB M Manual means and disposal of dismantled materials with all lifts ar			erb stone by		
3	specifications.MORTH Specification No.202.		ele as per			
	(KSRRB 18-19,Page No.141,S.I.No.18.49)					
	Basic rate		12.00			
	Add 10% For area weightage (Mangalore City)		1.2			
		Rate	13.20	Rmt		
		nate	10.20			
	KSRRB M200-13.1. Dismantling of existing structures like culve	rts, bridg	es, retaining	walls and other		
	structure comprising of masonry, cement concrete, wood work, ste	el work,	including T&F	and scaffolding		
4	wherever necessary, sorting the dismantled material, disposal of u					
4	serviceable material with all lifts complete as per specifications.					
	Concrete Grade M-15 & M-20. MORTH Specification No. 202 (KSF	KRB 18-1	9,18.20,Page	NO.139)		
		1				
	Basic rate		390			
	Add 10% For area weightage (Mangalore City)		39			
		Rate	429.00	Cum		
	KSRRB 300-50. Scarifying bituminous course 50mm to 75mm th					
5	dressing by road roller attached with scarifier without disturbin					
Ű	including cost of all labour charges, HOM of machineries comp Section 5.(KSRRB 18-19, SI No.19.56,Pg No.146)	plete as	per specifica	tions. MORTH /		
	Basic rate		39			
	Add 10% For area weightage (Mangalore City)	Data	3.9			
		Rate	42.90	Sqm		
	KSRRB 300-46. Scarifying by mechanical means stone metal crus	l st 50mm	to 100mm thi	ck by along with		
	20mm premix carpet I surface dressing and stacking of old service					
6	labour charges, HOM complete as per specifications.			ing obot of all		
	MORTH I Chapter 3.(KSRRB 18-19,SI No.19.52,Pg No.146)					
			20			
	Basic rate Add 10% For area weightage (Mangalore City)		39			
l			30			
		Rate	3.9 <b>42.90</b>	Sam		

	KSRRB M200-12.1. Dismantling of existing structures like culve	rts, bridg	es, retaining	walls and other
structure comprising of masonary, cement concrete, woodwork, steel work, including T&P				
	scaffolding wherever necessary, sorting the dismantled material,	disposal	of unservicea	ble material and
7	stacking the serviceable material with all lifts complete as per spec			
'	i)Dismantaling Brick/Tile work B.In Cement mortar			
	(KSRRB 18-19,Page No 139,SI No : 18.23)			
		1		
	Basic rate		351	
	Add 10% For area weightage (Mangalore City)	_	35.1	-
		Rate	386.10	Cum
	KSRRB M800-Permanent type barricade in construction zone k			
	permanent type barricade made of steel components, 1.5 m high			
	rails 200 mm wide and 4 m long on 50 x 50 x 5 mm angle iron ve			
8	white strips, 150 mm in width at an angle of 45°, complete as			complete as per
	specifications . A. With steel components(KSRRB 18-19,Page No	187,SI No	5 : 24.45)	
	Basic rate		3829	
	Add 10% For area weightage (Mangalore City)		382.9	
		Rate	4211.90	
		Nate	4211.30	
	KSRRB M300-14. Excavation for roadwork in all types of soil b	v mechai	nical means	including cutting
	and loading to tippers, trimming bottom and side slopes, in ad			
	grades and cross sections, and transportation with a lead			
9	specifications.	01 1.00	KIII allu Cu	sinplete as per
Ŭ	MORTH Specification No.301			
	(KSRRB 18-19,Page No 143,SI No : 19.14)			
	(NSKKB 10-19, Fage NO 143, SI NO . 19.14)			
	Basic rate		41	
	Add 10% For area weightage (Mangalore City)		4.1	
		Rate	45.10	Cum
	KSRB 2-4 : Refilling available earth around pipe lines, cables in	layers no	ot exceeding	20cms in depth,
	compacting each deposited layer by ramming after watering wit	h lead up	oto 50m. and	lift upto 1.5 m.
10	including cost of all labour complete as per specifications.(KSRB 1	8-19,SI N	lo.2.11,Pg. N	o.7)
	Basic rate		120	
	Add 10% For area weightage (Mangalore City)		12	
		Rate	132.00	Cum
			.52.00	
	KSRRB 300-58. Compaction of original ground by mechanical me	ans inclu	dina fillina in	depression
	occuring during rolling including cost of all labour, HOM complet		• •	
4.4	MORTH I Chapter 3			
11	(KSRRB 18-19,SI No.19.64,Pg. No.147)			
		1		
L	Basic rate		6	
ļ	Add 10% For area weightage (Mangalore City)		0.6	
		Rate	6.60	Sqm
	KSRB 4-1.7 : Providing and laying in position plain cement concl			
	with 20mm and down size graded granite metal coarse aggrega			
40	@ 0.56cum, machine mixed, concrete laid in layers not exceed			
12	foundation, plinth and cills, including cost of all materials, la	bour, H	OM curing c	omplete as per
	specifications. Specification No. KBS 4.1, 4.2			
	(KSRB 18-19,SI No.4.7,Pg No.13			
	Basic Rate		5770	
	Add 10% For area weightage (Mangalore City)		5770	
		Rate	6347.00	Cum
		Nale	0347.00	Sum
		1		

	Construction of granular sub-base Grading-Vas Sub-base and dra	• •		• •
	crushed stone aggregates of granite/ trap/basalt material, mixing			
	Carriage of mixed material to work site, spreading in uniform I			
13	surface and compacting with vibratory power roller to achieve the	98% pro	octor density,	complete as per
	specifications. Clause 401 of MORTH V Revision.			
	(KSRRB 18-19,P.No.153, SI.No.20.4)			
	Basic Rate		2166	
	Add 10% For area weightage (Mangalore City)		216.6	
		Rate	2382.60	
	KSRB 4.2.1 : Providing and laying in position reiforcement cement	concrete	of design Mi	x M25 with OPC
	cement @340Kgs, with 20mm and down size graded granite met			
	super plasticisers @3 liters confirming to IS 9103-1999 reafirmed			
in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals				
14	walls, return walls, walls (any thickness) including attached pil			
17	buttresses, bed blocks,anchor blocks & plinths etc.,In			
	machinery,curing,complete but excluding cost of reinforcement as			,
	(KSRB 18-19, Page No 14, SI No :4.10)			
	Basic Rate		6198	
	Add 12% For area weightage (Mangalore City)		619.8	
		Rate	6817.80	
		Nate	0017.00	Cum
	KSRB 4.6.1 Providing and removing centering, shuttering, str	utting n	ropping etc	and removal of
	formwork for foundations, footings, bases of columns for n			
45	materials, labour complete as per specifications.	11233 00		ing cost of an
15	Specification No. KSB 4.6.2			
	(KSRB 18-19,Page No 16,SI No : 4.28)			
			Γ	1
	Basic Rate		263	
	Add 10% For area weightage (Mangalore City)	Data	26.3	
-		Rate	289.30	Sqiii
	KSRB 4.9.2 : Providing T.M.T steel reinforcement for RCC work inc	ludina		
	straighting,cutting,bending,hooking,placing in position,lapping and/		a wherever re	auired tving
	with binding wire and anchoring to thr adjoing members wherever i			
	(laps,hooks and wastage shall not be measured and paid) cost of i			
16	complete as per specifications. Specification No. KBS4.6.3.	natenais		or machinary
10	do with TMT bars Fe500			
	(KSRB 18-19,Page No 18,SI No : 4.46.2)			
	Basic Rate		70782	
	Add 10% For area weightage (Mangalore City)		7078.2	
		Rate	77860.20	МТ
	KSRRB M300-53. Construction of embankment with approved			
	and leads, transporting to site, spreading, grading to required slope	e and cor	npacting to m	eet requirement
4-	Table 300-2 complete			
17	as per specifications, including cost of gravel/ murrum, watering ch		compaction b	y vibratory roller
	to 95% of modified proctors density. MORTH Specification No. 30	5		
	(KSRRB 18-19,Pg No.147,SI No.19.60)			
	Basic Rate		489	
	Add 20km lead (17.4 KSRRB M100-4.1-Cost of haulage			
	excluding loading and unloading MORTH-100/Chapter 1-case 1-		51.2	
	Surface Road)=2.0 Rs/ Tkm x 1.28 T x 20km		51.2	
	Sub Total		540.2	
	Add 10% For area weightage (Mangalore City)		54.02	
		Rate	<b>594.22</b>	
<u> </u>				

18	KSRRB M600-1.Providing and Constructing dry lean cement concrete mix CC 1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @0.58cum over a prepared sub-base, coarse and fine aggregate conforming to IS: 383-2016,aggregate cement ratio not to exceed 15:1, Aggregate gradation after blending to be as per Table 600-1,optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. Clause 601of MORTH V Revision and IS 456 Table-5 -do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with Slip form paver with electronic sensor. (KSRRB 18-19,Page No 174,SI No : 22.1.1)					
	Basic Rate		4048			
	Add 10% For area weightage (Mangalore City)		404.8			
		Rate	4452.80			
19	KSRRB M600-2. Providing and Constructing un-reinforced, dowel jointed, plain cement Pavement Quality concrete for pavements using Grade concrete M40 having Flexural strength not less than 4.50 Mpa over a prepared base with OPC, coarse aggregate at 0.64 cum, fine aggregates at 0.36 cum,Coarse and fine aggregate conforming to IS:383- 2016 and Table 600-3 of MORTH V Revision, with Superplastizer at 3 Its conforming to IS 9103-2008. loading materials to batch mix plant by front end loader,mixed in a cement concrete batch mix plant as per approved mix design,transported to site in transit truck agitator 5 cum capacity, laid with Paver, compacted and finished in a continuous operation as per IRC-15 including cost for providing of contraction,expansion, co nstruction and longitudinal joints, joint filler, separation membrane of impermiable plastic sheet of 125 micron, groove cutting,sealant primer joint sealent, debonding strip,dowel bars at 9 kg/cum, tie rods at 1.15 kg/cum, admixtures as approved, curing compound, finishing to lines and grades, textured with texturing machine, and curing including cost of all materials, labour,hire charges of machineries, all lead & lift charges etc., complete as per specifications. Clause 601of MORTH V Revision and IS 456 Table-5 -do- with OPC at 420 kg/cum and coarse aggregate 0.64cum, fine aggregate 0.36cum using Concrete Batch mix Plant at 75 cum/hr capacity with fixed form paver. (KSRRB 18-19,Page No 175 & 176 ,SI No : 22.2.2)					
	Basic Rate		5765			
	Add 10% For area weightage (Mangalore City)		576.5			
		Rate	6341.50	Cum		
20	Providing and placing joint sealant compound of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower and as shown on drawing and as per MORTH specifications clause 602. (Non SOR Item)					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.2	Rate	115	Rmt		
21	KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (KSRRB 18-19,Page No 260,SI No : 35.8)					
	Basic Rate		331			
	Add 10% For area weightage (Mangalore City)		33.1			
		Rate	364.10	Rmt		

22	Providing and laying at or near ground level factory made kerb stone of M-20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge). Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)					
	Rate Arrived as per Rate analysis					
	Basic Rate		1806			
	Add 10% For area weightage (Mangalore City)		180.6			
		Rate	1986.60	Nos		
23	<ul> <li>Providing and fixing pre cast solid cement concrete kerb stones made out of C.C. 1:2:4 with top and bottom width 114 and 165 mm respectively, 400mm high and 450mm in length finished with CM 1 3 plastering and finishing cutting, including form work, curing, including cost of all materials, labour, hire charges of machinery, loading, unloading, lead and lift, transportation etc., complete.</li> <li>(Page No 27,SI No : 5.30)</li> </ul>					
	Basic rate		421			
	Add 10% For area weightage (Mangalore City)		42.1			
		Rate	463.10	Nos.		
24	KSRRB 800-1. Painting two coats after filling the surface with synth on new plastered concrete surfaces, with materials, labour comple section 8. (KSRRB 18-19,Page No 180,SI No : 24.1) Basic Rate Add 10% For area weightage (Mangalore City)		MORTH spe 80 8			
25	P/F Square shape 600mmx450 mm precast R.C.C. manhole cover (Rate analysis attached)	r with frar	ne			
	Rate Arrived as per Rate analysis	n				
	Basic Rate		917			
		Rate	917	Nos.		
26	Providing and Fixing Recessed Inception chamber cover - size: Iron / Ductile Iron (NON SOR Item)	(1250 x <sup>-</sup>	1250 x 80)mr	n Material: Cast		
	Basic Rate	r	1			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15	Rate	3500.00	Nos.		
27	Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line.The rate shall include all jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41,Item No.7,KUWSDB SOR 2016-17)					
	Basic Rate		297			
	Add 12% on Labor Charges=Rs.47,For area weightage (Mangalore City)		5.64			
<u> </u>		Rate	302.64	Rm		
28	KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (KSRB SR 2018-19,P.No.88, SI.No.12.89)					

	Basic Rate		830		
	Add 10% For area weightage (Mangalore City)		83		
		Rate	913	Nos.	
29	KSRB 12-8.2 : Constructing brick masonry inspection chamber 500 inside dimension ) for pipeline with one or two inlets, using table m designation 50 in cement mortar 1:5, C.I cover with frame (light du total weight of cover with frame to be not less than 38 kg ( weight of kg ) R.C.C. top slab with cement concrete M 15 with 20mm and do concrete M 5 with 40mm and downsize granite metal inside plaster 1:3, finished smooth with a floating coat of cement on walls and be design including cost of materials, labour charges, curing complete No. KBS (P.No. 76/ I.No.11.52 of PWD SR 2018-19) Basic Rate Add 10% For area weightage (Mangalore City) KSRRB M800-29.3.Cable Duct Across the road KSRRB M800-29 cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructing	Dx700mm oulded no ty) 455x6 of cover 2 wnsize g ring 12mr d concre e as per s <b>Rate</b>	913 h, and 450mm on-modular bi 10mm interna 3kg and weig ranite metal , n thick with co te complete a pecifications. 8296 8296 9125.6 9125.6 ling and laying tion), extendir alls at both e	icks of class al dimensions, ht of frame 15 foundation ement mortar s per standard Specification <b>Nos.</b> g of a reinforced ng from drain to nds, providing a	
30	minimum fill of granular material over top and sides of RCC pipe a thick layer of granular material free of rock pieces, outer to outer of subject to minimum450 mm in case of double and triple row duc level of duct to be above higher than ground level to prevent entry 1997 and approved drawings complete as per specifications. services. (KSRRB 2018-19,Pg No 186,SI.No.24.36)	listance o ts, joints / of wate	of pipe at leas to be made l r and dirt, all	t half dia of pipe eak proof, invert as per IRC: 98 -	
	Basic Rate		5022		
	Add 10% For area weightage (Mangalore City)		502.2		
		Rate	5524.20	Rmt	
31	Providing and laying Dia 225mm HDPE Power Duct with Sili dimensional ratio of 13.5, Deflection not greater than 5% whe temparature 90°C under the over burden soil presuure and oth ASTMF 2160 and /or NEMA TC7. The expected service life of HDF not be less than 50 years. (Market Rate)	en expos ier physi	ed to the n cal properties onduits and a	ormal operating comforming to	
	Basic Rate		2500		
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)		78		
	Add 12% For area weightage (Mangalore City)		9.36		
32	Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conve unloading at both destination and lowering,Jointing into trenches,C (Market Rate)				
	Basic Rate		1775		
		Rate	1775.00	Nos.	
33	Providing and laying Dia 160mm HDPE Power Duct with Silicore Lubricant inner layer with rib dimensional ratio of 13.5, Deflection not greater than 5% when exposed to the normal operation				
	Basic Rate		1350		
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)		66		
	Add 12% For area weightage (Mangalore City)		7.92		
		Rate	1423.92	Rm	
				1	

34	(Market Rate)					
	Basic Rate		1475			
		Rate	1475.00			
35	Providing and Fixixng Spacers for Power Ducts of size 225 mm, t Spacers shall be made of ABS raw material. (Market rate)	o be plac				
	Basic Rate		1003			
	GST @18%		180.54			
		Rate	1183.54	Nos.		
36	<ul> <li>Providing and Fixing Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 me</li> <li>36 Spacers shall be made of ABS raw material. (Market rate)</li> </ul>					
	Basic Rate		1947			
	GST @18%		350.46			
		Rate	2297.46	Nos.		
37	Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lub comforming to ASTMF 2160 and /or equivalent indian standard loading and unloading at both destination and rolling,lowering into of pipe etc.Complete. (Market Rate)	and con	veying to wo laying true to	rk site including line and jointing		
	Basic Rate		685			
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)		36			
	Add 12% For area weightage (Mangalore City)		4.32			
		Rate	725.32	Rm		
38	Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Du- loading and unloading at both destination and lowering into trenche (Market Rate)					
	Basic Rate		175			
		Rate	175.00			
		Trato				
39	Providing and laying heavy duty cobble stones 60mm thick, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 28 kg per sqm over 30mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (KSRB 18-19, Pg No 103,SI No : 14.6)					
	Basic rate		1056.00			
	Add 10% For area weightage (Mangalore City)		105.6			
		Rate	1161.60			
40	Providing and laying heavy duty Tactile Tiles (Direction and Stop tiles-300 x 300 mm) 40mm thick and Yellow in colour, using cement and course sand for manufacture of blocks of approved size, shape with a minimum compressive strength of 281 kg per sqm over 30mm thick sand bed (average thickness) ar compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Non SOR Item)					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.12	Rate	912.00	Sqm		
		1		1		

41	Providing and laying heavy duty cobble stones 75mm thick, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 30mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (KSRB 18-19,Page No 103,SI No : 14.7)				
	Basic rate		1114		
	Add 10% For area weightage (Mangalore City)		111.4		
		Rate	1225.40	Sqm	
42	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, Supply and Installation of retro reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild stee angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom				
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 900MM Equilateral Triangle-TYPE XI (KSRRB 18-19,Page No 180,SI No : 24.2.1)				
	Basic Rate		3511		
	Add 10% For area weightage (Mangalore City)		351.1		
		Rate	3862.10	Nos	
43	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, Supply and Installation of retro- reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild stee angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the botto of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with a leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.				
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 900MM Octagon Stop Board-TYPE XI (KSRRB 18-19,Page No 180,SI No : 24.2.6)				
	Basic Rate		4958		
	Add 10% For area weightage (Mangalore City)	Dut	495.8		
		Rate	5453.80	INOS	

44	KSRRB M800-2. Retro-Reflectorised Traffic Signs - Manufacturing, Supply and Installation of retro- reflective cautionary, mandatory & Informatory signboards made out of cube corner micro prismatic grade sheeting confirming to type XI standards of IRC:67:2012 specifications & fixed over 4mm thick aluminium composite panel sheet having minimum 0.30 mm thick aluminum skin on both sides & fixed over a support frame of 25X25X3mm MS angle and mounted on 75 mm dia OR 75X75X6mm mild steel angle to Total height 2.70 m with clear height of not less than 2.10 m from the ground level to the bottom of the sign board & 60mm below ground level. the sign post should be painted with be coat of red oxide paint and two coats of synthetic enamel paint of black and white colour with bands of 30 cm height alternatively firmly fixed to the ground by means of foundation with M20 grade cement concrete of 45cmX45cmX60cm including cost & conveyance of all materials, equipment, machinery & labour with all leads and lifts, loading charges necessary for satisfactory completion of the works as directed be engineer in-charge.					
	10 years warranty for Retro Reflective Sheeting from the original sheeting manufactures as per clause 6.9 in IRC: 2012 & a certified copy of three years outdoor exposure report from an independent test lab for the product offered shall be obtained from the supplier. 600MM Circle-TYPE XI (KSRRB 18-19,Page No 180,SI No : 24.2.3)					
	Basic Rate Add 10% For area weightage (Mangalore City)		3118 311.8			
		Rate	<b>3429.80</b>			
45	Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803 (KSRRB 18-19,Page No 182,SI No : 24.15)					
	Basic Rate		429			
	Add 10% For area weightage (Mangalore City)	Data	42.9			
		Rate	471.90	əqm		
	Providing & installing of E- toilet with Super structure of the electronic toilet to have asthetic ambience with inner room size 1.2 x 0.8 x 2.4 (LXWXH)meters and Size of electronic toilet overall size in meter 2.30x1.25x2.80 (LXWXH) Total area 35 Sft. with Built-acess controlled main door and side walls made of SS Grade 304,Toilet floor and closet are to be stainless steel of grade 304.E-Toilet shall have Built- water tank with minimum 225 Lit capacity and Acess controll using coin validator for entering the un based on automatic payment collection mechanism exit from the unit should be manual.Automatic light inside the unit with gloves on opening the door.E-Toilet shall be Automatic flushing system whic includes Automatic Pre flush cleaning before use,Automatic closet washing mechanism after use an Automatic platform cleaning mechanism programmed after specific numbers.In addition to these flus switch is to be provided for manual operation.Standard features should include heath faucet,exhaust fa and cloth hanger.					
46	with inner room size 1.2 x 0.8 x 2.4 (LXWXH)meters and Size of 2.30x1.25x2.80 (LXWXH) Total area 35 Sft. with Built-acess control SS Grade 304,Toilet floor and closet are to be stainless steel of water tank with minimum 225 Lit capacity and Acess controll us based on automatic payment collection mechanism exit from the uinside the unit with gloves on opening the door.E-Toilet shall includes Automatic Pre flush cleaning before use,Automatic clos Automatic platform cleaning mechanism programmed after species witch is to be provided for manual operation.Standard features shall shall be a standard features shall operation.	electron olled main grade 30 ing coin unit shou be Auto et washi fic numb	ic toilet overa n door and sid 04.E-Toilet sh validator for ld be manual matic flushin ng mechanisi pers.In additic	Il size in meters de walls made of nall have Built-in entering the unit Automatic lights g system which m after use and on to these flush		
46	with inner room size 1.2 x 0.8 x 2.4 (LXWXH)meters and Size of 2.30x1.25x2.80 (LXWXH) Total area 35 Sft. with Built-acess control SS Grade 304,Toilet floor and closet are to be stainless steel of water tank with minimum 225 Lit capacity and Acess controll us based on automatic payment collection mechanism exit from the uinside the unit with gloves on opening the door.E-Toilet shall includes Automatic Pre flush cleaning before use,Automatic clos Automatic platform cleaning mechanism programmed after species witch is to be provided for manual operation.Standard features shall shall be a standard features shall operation.	electron olled main grade 3 ing coin unit shou be Auto be Auto et washi fic numb nould incl to use',b abling eas nce and vided.For the unit o 30 Min	ic toilet overa n door and sid 04.E-Toilet sh validator for o ld be manual matic flushin ng mechanish bers.In additic lude heath far ousy are to be PRS based F number of us sy assembling tracking usag Advertismen for income	all size in meters de walls made of nall have Built-in entering the unit Automatic lights g system which m after use and on to these flush ucet, exhaust fan e provided in the Real time data to ers per day and g and installation je, coin collection it purpose space		
46	with inner room size 1.2 x 0.8 x 2.4 (LXWXH)meters and Size of 2.30x1.25x2.80 (LXWXH) Total area 35 Sft. with Built-acess control SS Grade 304,Toilet floor and closet are to be stainless steel of water tank with minimum 225 Lit capacity and Acess controll us based on automatic payment collection mechanism exit from the clinic task with gloves on opening the door.E-Toilet shall includes Automatic Pre flush cleaning before use,Automatic clos Automatic platform cleaning mechanism programmed after speci switch is to be provided for manual operation.Standard features shand cloth hanger. The E-Toilet shall have Alert to users-different indication on 'ready unit also with Voice guidence in the unit for users. Web enabled so be provided from the unit through web for knowing the health stat coins collected.E-toilet shall have Modular and portable design ena at site.Call ceneter and web portal facilities for registering complie etc.Status display in LED,Printed instruction stickers are to be provided in the unit to be provided on the exterior of sustainability. Backup power facility like UPS is to be provided to supplement uptor as the unit to be placed on a suitable concrete structure with a su	electron olled main grade 3 ing coin unit shou be Auto be Auto et washi fic numb nould incl to use',b abling eas nce and vided.For the unit o 30 Min	ic toilet overa n door and sid 04.E-Toilet sh validator for o ld be manual matic flushin ng mechanish bers.In additic lude heath far ousy are to be PRS based F number of us sy assembling tracking usag Advertismen for income	all size in meters de walls made of nall have Built-in entering the unit Automatic lights g system which m after use and on to these flush ucet, exhaust fan e provided in the Real time data to ers per day and g and installation je, coin collection it purpose space		
46	with inner room size 1.2 x 0.8 x 2.4 (LXWXH)meters and Size of 2.30x1.25x2.80 (LXWXH) Total area 35 Sft. with Built-acess control SS Grade 304,Toilet floor and closet are to be stainless steel of water tank with minimum 225 Lit capacity and Acess controll us based on automatic payment collection mechanism exit from the diside the unit with gloves on opening the door.E-Toilet shall includes Automatic Pre flush cleaning before use,Automatic clos Automatic platform cleaning mechanism programmed after species witch is to be provided for manual operation.Standard features shand cloth hanger. The E-Toilet shall have Alert to users-different indication on 'ready unit also with Voice guidence in the unit for users. Web enabled s be provided from the unit through web for knowing the health stat coins collected.E-toilet shall have Modular and portable design ena at site.Call ceneter and web portal facilities for registering complie etc.Status display in LED,Printed instruction stickers are to be provided for sustainability. Backup power facility like UPS is to be provided to supplement upt Base of the unit to be placed on a suitable concrete structure with a (Non SOR Item)	electron olled main grade 3 ing coin unit shou be Auto be Auto et washi fic numb nould incl to use',b abling eas nce and vided.For the unit o 30 Min	ic toilet overa n door and sid 04.E-Toilet sh validator for o ld be manual matic flushin ng mechanisi bers.In additic lude heath fai ousy are to be PRS based F number of us sy assembling tracking usag Advertismen for income	all size in meters de walls made of hall have Built-in entering the unit Automatic lights g system which m after use and on to these flush ucet, exhaust fan e provided in the Real time data to bers per day and g and installation ge, coin collection it purpose space generation and		

47	Supply and Fixing of Traffic signal Straight pole of 6 mtr, inner dia 100 mm from resistant to peeling with base plate size of (LXWXT) 200mm X200mmX6mm painted with redoxide and double coat with synthetic enamel paint of yellow colour assembly G.I., class B, as per technical specification (NON SOR Item)						
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.5	Rate	18691	Nos.			
48	base as per technical specification & drawings. (NON SOR Item)						
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.6	Rate	52850	Nos.			
49	Supply and fixing of 300 mm dia – single source – LED retrofit - Re (NON SOR Item)	ed (blow)	as per Specif	ication			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.7	Rate	11082	Nos.			
50	Supply and fixing of 300 mm dia – single source – LED retrofit - An (NON SOR Item)	l nber (blo	l w) as per Spe	cification			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.7	Rate	11082	Nos.			
51	Supply and fixing of 300 mm dia – single source – LED retrofit - Gr Specification (NON SOR Item)	een (arro	l ow/U- Turn) E	N-12368 as per			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.8	Rate	13973	Nos.			
52	Supply and fixing of 300 mm dia – single source – LED retrofit - Re Specification (NON SOR Item)	ed (ped. s	standing) EN-	12368 as per			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.9	Rate	11082	Nos.			
53	Supply and fixing of 300 mm dia – single source – LED retrofit - Gr Specification (NON SOR Item)	een (ped	l.walking) EN-	12368 as per			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.10	Rate	13973	Nos.			
54	Supply and fixing of 300 mm dia - No Right Turn/No Left turn/No S UV stabilized ink on face plate EN-12368 as per Specification (NON SOR Item)	traight/N	L o 'U' Turn asp	ects by using			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.11	Rate	6196				
55	Providing and fixing of S.S. Bollards(SS304) on footpath as specific charge	ed and c		gineer -in-			
	Basic Rate Rate Approved as per EOI by MD MSCL Mangalore,Refer		4500				
	Sr.No.13	Rate	4500.00	Nos.			
56	Providing and fixing of railing as detail design in MS HOLLOW SECTION and bars ( shop drawing to be approved ),with vertical support of 0.9m @2.2mc/c , all complete to the satisfaction of the Landscape architect.(Non SOR Item)						

Basic Rate		100000.00				
Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.26	Rate	100000.00	МТ			
57 Providing and Fixing SS 304 Outdoor Dustbin(Pivoted Type and M capacity all complete to the satisfaction of the Engineer in charge. (NON SOR Item)	ounted or	n SS Poles) c	f 55 liters			
Basic Rate		7500				
Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.14	Rate	7500.00	Nos.			
58 Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth	-		KIII			
Earth Baisc rate	2.0X1	.28x10km 25.60				
Add Loading and unloading charges(Item No 17.1 KSRRB M100- 1)		57.00				
Sub Total		82.60				
Add 10% For area weightage (Mangalore City)		8.26				
	Rate	90.86	Cum			
59 Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Debris	Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead of 5km Item No 17.4 KSRRB M100-4.1-Debris					
Debris	2.0x1	.30x10Km				
Baisc rate		26.00				
Add Loading and unloading charges(Item No 17.1 KSRRB M100- 1)		57.00				
Sub Total		83.00				
Add 10% For area weightage (Mangalore City)		8.3				
Add 10701 of area weightage (Mangalore Ory)						

Executive Engineer MSCL Mangaluru

### Name of the Work :- Mangalore Smart City

## 3.2.1 BOQ of Electrical lighting Works for Loop Roads

Sr.No.	Specification	Unit	Quantity	Rate	Amount	Remarks
<b>1</b> 1.1	Lighting Poles Dismantling, removal, transportation to client's storage place existing lighting poles (Non SOR Item)	Nos.	2	1,000	2,000	
1.2	Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)	Nos.	6	17,118	102,708	
1.3	Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	Nos.	52	12,420	645,840	
1.4	Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	Nos.	46	7,398	340,308	

Sr.No.	Specification	Unit	Quantity	Rate	Amount	Remarks
1.5	Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	Nos.	6	3,540	21,240	
1.6	Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.2)	Nos.	52	2,400	124,800	
1.7	Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole8mtr and above street light pole (Ref Electrical SOR SI No.16.28.3)	Nos.	14	700	9,800	
2	Lighting Panel Street Light Control Panel (SLCP) Supply, installation, testing and commissioning of SLCP Shall be conforming following IS standards – IS: 2147 – 1962 Degree of protection Floor / wall/ structure mounted, free standing, suitable for cable entry from bottom side, dust proof, vermin proof, 3 phase and neutral, bus bar, aluminium, neutral bus shall be of same size as phase bus bars, Short circuit capacity for the bus bars and switches shall be 10 kA, as SLD No. 1.01 (Non SOR Item)	No.	4	50,000	200,000	
3	LT Cable					
3.1	Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR SI No.7.5,7.5.4)	m	2325	117	272,025	
3.2	Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)	m	656	81.60	53,530	
3.3	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR SI No.7.21,7.21.6)	Nos	832	11.31	9,410	
3.4	Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR SI No.7.21.2)	Nos	660	3.21	2,119	
4	Earthing system					

Sr.No.	Specification	Unit	Quantity	Rate	Amount	Remarks
4.1	Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,SI No.7.23.6)	Kit	8	5,500.00	44,000	
4.2	Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)	Rmt	2299	19.50	44,831	
			TOTA		18,72,611	

Executive Engineer MSCL Mangaluru

## Name of the Work :- Mangalore Smart City

Sr.No.	Specification	Unit	No.	L	В	Н	Quantity
1	Lighting Poles						
1.1	Dismantling, removal, transportation to client's storage place existing lighting poles (Non SOR Item)						
	Maidan Road-2 (Consider 10% qty of Existing Electric pole)	Nos.	2				2.00
1.2	Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)						
	Maidan Road-2	Nos.	6				6.00
1.3	Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)						

22

16

14

Nos.

Nos.

Nos.

Nellikai Road

Mission Road

4th Cross Road

22.00

16.00 14.00

52

Total

Sr.No.	Specification	Unit	No.	L	В	н	Quantity
1.4	Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)						
	Maidan Road-2	Niss	40				40.00
1.5	Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	Nos.	46				46.00
	Maidan Road-2	Nos.	6				6.00
1.6	Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.2)						
	Nellikai Road	Nos.	22				22.00
	Mission Road	Nos.	16				16.00
	4th Cross Road	Nos.	14				14.00
					То	otal	52
1.7	Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole8mtr and above street light pole (Ref Electrical SOR SI No.16.28.3)						
	Maidan Road-2	Nos.	14				14.00
2	Lighting Panel Street Light Control Panel (SLCP) Supply, installation, testing and commissioning of SLCP Shall be conforming following IS standards – IS: 2147 – 1962 Degree of protection Floor / wall/ structure mounted, free standing, suitable for cable entry from bottom side, dust proof, vermin proof, 3 phase and neutral, bus bar, aluminium, neutral bus shall be of same size as phase bus bars, Short circuit capacity for the bus bars and switches shall be 10 kA, as SLD No. 1.01 (Non SOR Item)						
	Maidan Road-2	No.	1 1				1.00
	Nellikai Road Mission Road	No. No.	1				1.00 1.00
	4th Cross Road	No.	1				1.00
					То	tal	4

Sr.No.	Specification	Unit	No.	L	В	н	Quantity
3	LT Cable						+
J	Supplying of 1.1 kV LT cable having aluminium conductor						
	PVC insulated, extruded inner sheathed, galvanised, steel						
	strips (except 2C x 10 sq. mm wire armoured) as per IS-						
	3975:1990 and extruded PVC outer sheathed armoured cable						
.21							
	as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP						
	B						
	4 Core x16 Sq.mm PVC Aluminium Conductor,						
	(Ref Electrical SOR SI No.7.5,7.5.4)						_
	Maidan Road-2(Consider 25% more length for looping)	m	2	288			575.00
	Ch.0.0 to Ch.230.0		_				
	Nellikai Road(Consider 25% more length for looping) Ch.10.0	m	2	375			750.00
	to Ch.310.0			0.0			
	Mission Road(Consider 25% more length for looping) Ch.0.0	m	2	250			500.00
	to Ch.200.0	111	2	200			500.00
	4th Cross Road(Consider 25% more length for looping)	m	2	250			500.00
	Ch.0.0 to Ch.200.0	m	2	250			500.00
					Тс	otal	2325
	Supply and drawing flexible multicore cable with electrolyte						
	grade flexible copper with low conductor conforming to Table						
	3 Class 5 of IS:8130-1984 and vargin PVC insulation and						
	sheathed suitable for working voltage up to 1100 V as per IS-						
	694:1990 and conforming to GTP of Group A.						
	3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)						
	Maidan Road-2						
	9m high pole	m	6	18			108.00
	4m high pole	m	46	4			184.00
	Nellikai Road		40	4			104.00
	7m high pole	m	22	7			154.00
	Mission Road	m	22	1			134.00
		- m	16	7			112.00
	7m high pole	m	10	1			112.00
	4th Cross Road		1.1	7			08.00
	7m high pole	m	14	7	т		98.00
						otal	656
							_
	Supplying tinned copper lugs and crimping and wiring to						
3.3	terminal point for wire of following sizes		No.of	No.of			
	16 Sq.mm PVC Aluminium Conductor		Poles	Lugs			
	(Ref Electrical SOR SI No.7.21,7.21.6)						
	Maidan Road-2						
	9m high pole	Nos.	6				48.00
	4m high pole	Nos.	46	8			368.00
	Nellikai Road						
	7m high pole	Nos.	22	8			176.00
	Mission Road						
	7m high pole	Nos.	16	8			128.00
	4th Cross Road						
	7m high pole	Nos.	14	8			112.00
			<u> </u>		Тс	otal	832
7	Supplying tinned copper lugs and crimping and wiring to						
	terminal point for wire of following sizes						
3.4	2.5 sq. mm copper conductor						
		1	1	1			
¶	(Ref Electrical SOR SI No.7.21.2)						
	(Ref Electrical SOR SI No.7.21.2)						
	(Ref Electrical SOR SI No.7.21.2) Maidan Road-2						
	(Ref Electrical SOR SI No.7.21.2) Maidan Road-2 9m high pole( two Cables for two arm)	Nos.	12	6			72.00
	(Ref Electrical SOR SI No.7.21.2) Maidan Road-2 9m high pole( two Cables for two arm) 4m high pole	Nos. Nos.	12 46				72.00 276.00
	(Ref Electrical SOR SI No.7.21.2) Maidan Road-2 9m high pole( two Cables for two arm)						

Sr.No.	Specification	Unit	No.	L	В	н	Quantity
	Mission Road						
	7m high pole	Nos.	16	6			96.00
	4th Cross Road						
	7m high pole	Nos.	14	6			84.00
					Тс	otal	660
4.1	Chemical Earthing for grounding, conduits, IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally, conductive, potential, to permissible, limits, superior, fault, conductive capacity, non toxic, weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64, SI No.7.23.6)						
	Maidan Road-2	Nos.	2				2.00
	Nellikai Road	Nos.	2				2.00
	Mission Road	Nos.	2				2.00
	4th Cross Road	Nos.	2				2.00
					Тс	otal	8
4.2	Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)						
	Maidan Road-2(Consider 10% more length for looping) Ch.0.0 to Ch.230.0	Rm	3	253			759.00
	Nellikai Road(Consider 10% more length for looping) Ch.10.0 to Ch.310.0	Rm	2	330			660.00
	Mission Road(Consider 10% more length for looping) Ch.0.0 to Ch.200.0	Rm	2	220			440.00
	4th Cross Road(Consider 10% more length for looping) Ch.0.0 to Ch.200.0	Rm	2	220			440.00
		7	Т		Тс	otal	2299

Executive Engineer MSCL Mangaluru

## Name of the Work :- Mangalore Smart City 3.2.3 Rate Analysis of Electrical Lighting for Maidan Road

1	Lighting Poles								
1.1	Dismantling, removal, transportation to client poles (Non SOR Item)	's stora	ge place existi	ing lighting					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.22	Rate	1,000	Nos.					
	Lighting Pole, 9 m								
1.2	3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)								
	Basic rate		17118						
		Rate	17,118	Nos.					
1.3	Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters lo Octagonal pole with BSE 10025 grade S 355 for base plate with oor opening arrangement, bakelite sheet and MCBs as per IS specificat 47 m/sec for 5 m pole in single section and s 9595/IS 10178 AWG having dimensions bott 3 mm thick, suitable base plate and 4 nos. of template and the pole shall be hot dip galvan less than 65 micron as per ASTM - A123 and as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	JO ste , icludin tions su ingle jo om 155 f lon ized in	el plate for sha g suitable boa itable for wind int welded as p mm dia, top 7 g J bolts along single dipping	aft, IS 2062 rds, speed of per IS 70 mm with with with not					
	Basic rate		12420						
		Rate	12420	Nos.					
1.4									

	Basic rate		7398						
		Rate	7,398	Nos.					
1.5	Supplying and fixing of hot dip Galvinized M. Iuminaries and mounted on Octagonal pole u complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)								
			2540						
	Basic rate	Data	3540	Nee					
	Supplying and fixing of hot dip Galvinized M.	Rate	3,540						
1.6	Single Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.2)								
	Basic rate		2400						
		Rate	2,400	Nos.					
1.7	<ul> <li>Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole8mtr and above street light pole (Ref Electrical SOR SI No.16.28.3)</li> </ul>								
	Basic rate		700						
		Rate	700	Nos.					
2	Lighting Panel								
2.1	Shall be conforming following IS standards – IS: 2147 – 1962 Degree of protection Floor / wall/ structure mounted, free standing bottom side, dust proof, vermin proof, 3 pha aluminium, neutral bus shall be of same size capacity for the bus bars and switches shall I (Non SOR Item)	l, suitab se and as pha	neutral, bus ba se bus bars, S	ar, Short circuit					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.20	Rate	50,000	Nos.					
3	LT Cable								
3.1	Supplying of 1.1 kV LT cable having aluminit extruded inner sheathed, galvanised, steel st extruded PVC outer sheathed armoured cabl conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conduct (Ref Electrical SOR SI No.7.5,7.5.4)	trips as le as pe	per IS-3975:1	990 and					
	Basic rate		117						
		Rate		Rm					
3.2	Supply and drawing flexible multicore cable v copper with low conductor conforming to Tab and vargin PVC insulation and sheathed suit 1100 V as per IS-694:1990 and conforming t 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)	ole 3 Cla able for	ass 5 of IS:813 working volta of Group A.	30-1984 ge up to					
	Basic rate		81.6						
		Rate	81.60	Rm					
	Page 46								

3.3	16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR SI No.7.21,7.21.6)								
	Basic rate		11.31						
		Rate	11.31	Nos.					
3.4 Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR SI No.7.21.2)									
	Basic rate		3.21						
		Rate	3.21	Nos.					
4.1	Chemical Earthing for grounding,conduits,IC the mter boardby using copper /SS rod with e compound which is non corrosive ,thermally permissible,limits,superior,fault,conductive ca resistance and capable of achieving ohmic va less than one ohm (Ref Electrical SOR Pg.No.64,SI No.7.23.6)	earth er ,conduc apacity,	hancing back tive,potential,f	fill to					
	Basic rate		5500						
		Rate	5500.00	Kit					
4.2	4.2 Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)								
	Basic rate		19.5						
		Rate	19.50	Rmt					

Executive Engineer MSCL Mangaluru

## Name of the Work :- Manglore Smart City 3.3 BOQ OF SOFTSCAPE at Nellikai Road RHS

Sr.No.	Specifications	Unit	Quantity	Rate	Amount	Remarks
1.1	SOIL MIXES and Ground Preparation					
1.1.1	Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)		36.22	140.00	5,071	
1.1.2	KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300- 11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(KSRRB 18- 19,Page No.150,SI.No.19.90)	Cum	17.84	224.40	4,003	
1.1.3	KSRRB M300-Horticulture KSRRB M300- Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KSRRB 18-19,Page No.148,SI No.19.77)	Cum	54.05	113.30	6,124	
1.1.4	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	54.05	23.91	1,292	
1.1.5	Soil preparation of Lawn					
	KSRRB M300-3. Making lawns including ploughing and breaking of clod, removal of rubbish, dressing and supplying doobs grass roots and planting at 15 cm apart, including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 18-19, Pg No. 148, SI No. 19.80)	Sqm	13.93	17.60	245	
1.1.6	Bed Prepartion for , Ground covers, Climbers/ creepers, Shrubs					

Sr.No.	Specifications	Unit	Quantity	Rate	Amount	Remarks
	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)	Cum	236.40	146.00	34,514	
1.2	SHRUBS: Supply and Stacking of					
1.2.1	Shrubs Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)	Nos.	45.00	840.00	37,800	
1.2.2	Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in form (Non SOR Item)	Nos.	103.00	840.00	86,520	
1.0	7.10.5					
1.3 1.3.1	TURF ZOYSIA JAPONICA ( MAT) (Non SOR Item)	Sqm	19.00	156.80	2,979	
1.4	IRRIGATION					
1.4.1	supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	90.09	560.00	50,448	
	1		Total		2,28,996	

Executive Engineer MSCL Mangaluru

## Name of the Work :- Manglore Smart City 3.3.1 Measurement Sheet of softscape at Nellikai Road RHS

Sr.No.	Item	Unit	No.	L	В	н	Qty.
1.1	SOIL MIXES and Ground Preparation						
	Supplying and stacking of good earth at site						
	including royalty and carriage upto 5 k.m. lead						
1.1.1	complete (earth measured in stacks will be						
	reduced by 20% for payment).						
	(Non SOR Item)						
	Ch.10.0	Cum	0.67	9.65	1.48	0.60	5.74
	Ch.20.0	Cum	0.67	2.79	1.48	0.60	1.66
	Ch.40	Cum	0.67	4.67	1.48	0.60	2.78
	Ch.60	Cum	0.67	4.16	1.48	0.60	2.48
	Ch.120	Cum	0.67	4.76	1.48	0.60	2.83
	Ch.150	Cum	0.67	5.32	1.48	0.60	3.17
	At Junction of Nellikai and Fourth Cross lane-	0	0.335	3.14	22.28	0.60	44.00
	Semicircular Area of Radius =4.72m.	Cum					14.06
	Area =0.5x 3.14x 4.72x 4.72		0.005	0.00	0.04	0.00	
	Island at Junction of Nellikai and Fourth Cross lane	Cum	0.335	6.20	2.81	0.60	3.5
	Consider 2/3rd Qty of Item No.1.1.7	Cum					36.22
		Cum					30.22
	KSRRB M300-Supply at site of work well						
	decayed farm yard manure KSRRB M300-11.						
	Supply at site of work well decayed farm yard						
	manure, from any available source, approved by						
	the engineer in charge including screening and						
1.1.2	stackin complete as per specifications. MORTH						
	Specification No. 308.2(KSRRB 18-19,Page						
	No.150,SI.No.19.90)						
	140.100,01.140.10.00)						
	Ch.10.0	Cum	0.33	9.65	1.48	0.6	2.83
	Ch.20.0	Cum	0.33	2.79	1.48	0.6	0.82
	Ch.40	Cum	0.33	4.67	1.48	0.6	1.37
	Ch.60	Cum	0.33	4.16	1.48	0.6	1.22
	Ch.120	Cum	0.33	4.76	1.48	0.6	1.39
	Ch.150	Cum	0.33	5.32	1.48	0.6	1.56
	At Junction of Nellikai and Fourth Cross lane-		0.165	3.14	22.278	0.6	
	Semicircular Area of Radius =4.72m.	Cum					6.93
	Area =0.5x 3.14x 4.72x 4.72						
	Island at Junction of Nellikai and Fourth Cross	Cum	0.165	6.2	2.81	0.6	1.72
	lane						1.72
	Consider 1/3rd Qty of Item No.1.1.7	Cum					17.84
	KSRRB M300-Horticulture KSRRB M300-						
	Spreading of sludge farm yard manure or/ and						
	good earth KSRRB M300-1. Spreading of						
	sludge farm yard manure or/ and good earth in						
	required thickness (cost of sludge, farm yard						
1.1.3	manure or/and good earth to be paid for						
	separately) complete as per specifications.						
	MORTH Specification No. 307						
	(KSRRB 18-19,Page No.148,SI No.19.77)						

Sr.No.	Item	Unit	No.	L	В	н	Qty.
	Ch.10.0	Cum	1	9.65	1.48	0.6	8.57
	Ch.20.0	Cum	1	2.79	1.48	0.6	2.48
	Ch.40	Cum	1	4.67	1.48	0.6	4.15
	Ch.60	Cum	1	4.16	1.48	0.6	3.69
	Ch.120	Cum	1	4.76	1.48	0.6	4.23
	Ch.150	Cum	1	5.32	1.48	0.6	4.72
	At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72	Cum	0.5	3.14	22.278	0.6	20.99
	Island at Junction of Nellikai and Fourth Cross lane	Cum	0.5	6.2	2.81	0.6	5.23
						Total	54.05
1.1.4	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)						
	Consider Same Qty. of 1.1.7	Cum					54.05
1.1.5	Soil preparation of Lawn						
	KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)						
	In rows 5 cm apart in both directions						
	Ch.10.0	Sqm	2	9.65		0.15	2.90
	Ch.20.0	Sqm	2	2.79		0.15	0.84
	Ch.40	Sqm Sqm	2	4.67		0.15 0.15	1.40
	Ch.60 Ch.120	Sqm Sqm	2				1.25
	Ch.120 Ch.150	Sqm Sqm	2	4.76 5.32		0.15 0.15	1.43 1.60
	At Junction of Nellikai and Fourth Cross lane- Semicircular Perimeter =0.5x3.14xD	Sqm Cum	0.5	14.8208		0.15	1.11
	At Junction of Nellikai and Fourth Cross lane- Semicircular Diameter =D	Cum	1	4.72		0.15	0.71
	Island at Junction of Nellikai and Fourth Cross Iane,Perimeter= Nos.x (L+B)xWidth	Cum	2	6.2	2.81	0.15	2.70
						Total	13.93
1.1.6	Bed Prepartion for , Ground covers, Climbers/ creepers, Shrubs						

Ch.20.0       Cum       1       2.79       1.48       0.6       2         Ch.40       Cum       1       4.67       1.48       0.6       4         Ch.60       Cum       1       4.16       1.48       0.6       4         Ch.120       Cum       1       4.16       1.48       0.6       4         Ch.120       Cum       1       4.76       1.48       0.6       4         Ch.150       Cum       1       5.32       1.48       0.6       4         At Junction of Nellikai and Fourth Cross lane-Semicircular Area of Radius =4.72m.       Cum       1       14.82       22.278       0.6         Semicircular Area of Nellikai and Fourth Cross lane-Semicircular Area and thane       1       14.82       22.278       0.6       1         Island at Junction of Nellikai and Fourth Cross lane-Iane       Cum       1       6.20       2.81       0.6       1         Iane       Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         Iane       Iane       Iane       Iane       Iane	Sr.No.	ltem	Unit	No.	L	В	Н	Qty.
excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)       9.65       1.48       0.6       2         Ch.10.0       Cum       1       9.65       1.48       0.6       3         Ch.20.0       Cum       1       2.79       1.48       0.6       3         Ch.40       Cum       1       4.76       1.48       0.6       3         Ch.12.0       Cum       1       4.76       1.48       0.6       3         Ch.12.0       Cum       1       4.76       1.48       0.6       3         Ch.12.0       Cum       1       5.32       1.48       0.6       3         At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72       Cum       1       6.20       2.81       0.6       1         Island at Junction of Nellikai and Fourth Cross lane       unction of Nellikai		Preparation of beds for hedging and shrubbery						
refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)       0.6       1       9.65       1.48       0.6       2         Ch.10.0       Cum       1       9.65       1.48       0.6       2         Ch.20.0       Cum       1       4.67       1.48       0.6       2         Ch.40       Cum       1       4.76       1.48       0.6       2         Ch.120       Cum       1       4.76       1.48       0.6       2         Ch.150       Cum       1       4.76       1.48       0.6       1         At Junction of Nellikai and Fourth Cross lane- Semicroular Area of Radius =4.72m. Area = 0.5X 3.14X 4.72X 4.72       Cum       1       14.82       22.278       0.6       1         Island at Junction of Nellikai and Fourth Cross lane- lane       Cum       1       6.20       2.81       0.6       1         Island at Junction of Nellikai and Fourth C		by excavating 60 cm deep and trenching the						
and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)       9.65       1.48       0.6       2         Ch.10.0       Cum       1       9.65       1.48       0.6       3         Ch.20.0       Cum       1       2.79       1.48       0.6       3         Ch.40       Cum       1       4.76       1.48       0.6       3         Ch.120       Cum       1       4.76       1.48       0.6       3         Ch.130       Cum       1       4.76       1.48       0.6       3         At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5X.314X 4.72X 4.72X       1       1.4.82       22.278       0.6       1         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         1.21       SHRUBS: Supply and Stacking of Shrubs       Image: Supply and Stacking of Shrubs       Image: Supply and Stacking of		•						
8:1 (8 parts of stacked volume of stacked volume of sludge or manure after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)       Cum       1       9.65       1.48       0.6       2         Ch.10.0       Cum       1       2.79       1.48       0.6       2         Ch.40       Cum       1       4.67       1.48       0.6       2         Ch.40       Cum       1       4.67       1.48       0.6       2         Ch.120       Cum       1       4.67       1.48       0.6       2         Ch.120       Cum       1       4.67       1.48       0.6       2         Ch.130       Cum       1       1.48       0.6       2       3       4         At Junction of Nellikai and Fourth Cross lane-Semicrucular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72       Cum       1       14.82       2.2.11       2       2.2.11       1       14.82       2       2       1       1       1       1       1       1       <		•						
reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of matterials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)20020019.651.480.62Ch.10.0Cum19.651.480.6233 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>								
sludge or manure after reduction by 8%), flooding with water, filling with earth if neccessary, watering and flouging as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)       k       -       <		· ·						
flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)Summary and the second strategies and the second strategies and the second strategies and strategies		•						
necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)L9.651.480.60.6Ch.10.0Cum19.651.480.622333Ch.20.0Cum14.671.480.6233333Ch.40Cum14.671.480.633 <td></td> <td>•</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>		•						
leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately), (Non SOR Item)L9.651.480.60Ch.10.0Cum12.791.480.60Ch.20.0Cum12.791.480.60Ch.40Cum14.671.480.60Ch.40Cum14.761.480.60Ch.120Cum14.761.480.60Ch.150Cum15.321.480.60At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m.Cum114.8222.2780.6Island at Junction of Nellikai and Fourth Cross laneCum16.202.810.61Ficus Blackeana 5'-0" ht with 4-5 branches and (Non SOR Item)Nos.Image: Com SOR ItemImage: Com SOR ItemImage: Com SOR Item1Nerium Oleander variegated - 5'0" ht , 5-6 tranches and bushy in form (Non SOR Item)Nos.Image: Com SOR ItemImage:		5						
materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)LLL								
earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)								
within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)		•						
(cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)         Image: Chi and the second state of the secon								
for separately). (Non SOR Item)         Cum         Image: Supplement of the second state s		· · ·						
(Non SOR Item)         Cum         1         9.65         1.48         0.6         4           Ch.20.0         Cum         1         2.79         1.48         0.6         4           Ch.40         Cum         1         2.79         1.48         0.6         4           Ch.40         Cum         1         4.16         1.48         0.6         4           Ch.40         Cum         1         4.76         1.48         0.6         4           Ch.120         Cum         1         4.76         1.48         0.6         4           Ch.150         Cum         1         5.32         1.48         0.6         4           At Junction of Nellikai and Fourth Cross lane-Semicircular Area of Radius =4.72m.         1         14.82         22.278         0.6         1           Island at Junction of Nellikai and Fourth Cross lane-Iane         Cum         1         6.20         2.81         0.6         1           Iane         Island at Junction of Nellikai and Fourth Cross lane-Iane         Cum         1         6.20         2.81         0.6         1           Island at Junction of Nellikai and Fourth Cross lane-Iane         Nos.         Im         Im         1         1								
Ch.10.0       Cum       1       9.65       1.48       0.6       1         Ch.20.0       Cum       1       2.79       1.48       0.6       1         Ch.40       Cum       1       4.67       1.48       0.6       1         Ch.60       Cum       1       4.67       1.48       0.6       1         Ch.60       Cum       1       4.76       1.48       0.6       1         Ch.120       Cum       1       4.76       1.48       0.6       1         Ch.150       Cum       1       5.32       1.48       0.6       1         At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area = 0.5x 3.14x 4.72x 4.72       1       14.82       22.278       0.6         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         Ficus Blackeana 5'-0" ht with 4-5 branches and Nos.       Cum       1       6.20       2.81       0.6       1         1.2.1       bushy form (Non SOR Item)       Nos.       Image: Common of the common of the common of the common of the common of the common of the common of the common of the common of the common of the common of the common of the common of the common of the common of the common of the common of								
Ch.20.0       Cum       1       2.79       1.48       0.6       2         Ch.40       Cum       1       4.67       1.48       0.6       2         Ch.60       Cum       1       4.67       1.48       0.6       2         Ch.120       Cum       1       4.76       1.48       0.6       2         Ch.150       Cum       1       4.76       1.48       0.6       2         At Junction of Nellikai and Fourth Cross lane-Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72       1       14.82       22.278       0.6         Iane       Island at Junction of Nellikai and Fourth Cross lane-Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72       Cum       1       6.20       2.81       0.6       1         Island at Junction of Nellikai and Fourth Cross lane-Iane       Cum       1       6.20       2.81       0.6       1         Iane       View Matha 4.5 branches and bushy form (Non SOR Item)       Nos.       Ima       Ima       Ima       1         Nerium Oleander variegated - 5'0" ht , 5-6       Nos.       Ima								
Ch.40       Cum       1       4.67       1.48       0.6       -         Ch.60       Cum       1       4.16       1.48       0.6       -         Ch.120       Cum       1       4.76       1.48       0.6       -         Ch.150       Cum       1       4.76       1.48       0.6       -         At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72       1       14.82       22.278       0.6       1         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         SHRUBS: Supply and Stacking of Shrubs       Cum       1       6.20       2.81       0.6       1         I.2.1       bushy form (Non SOR Item)       Nos.       Image: Supply and Stacking of Shrubs       Image: Suply and Stacking of Shrubs       Image: Supply and Stacki		Ch.10.0	Cum	1	9.65	1.48	0.6	8.57
Ch.60       Cum       1       4.16       1.48       0.6       3         Ch.120       Cum       1       4.76       1.48       0.6       4         Ch.150       Cum       1       5.32       1.48       0.6       4         At Junction of Nellikai and Fourth Cross lane-Semicircular Area of Radius =4.72m.       1       14.82       22.278       0.6       1         Area =0.5x 3.14x 4.72x 4.72       Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         I.2.1       bushy form (Non SOR Item)       Nos.       Image: Supply and Stacking of Shrubs       Image: Suply and		Ch.20.0	Cum	1	2.79	1.48	0.6	2.48
Ch.120       Cum       1       4.76       1.48       0.6       -         Ch.150       Cum       1       5.32       1.48       0.6       -         At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72       1       14.82       22.278       0.6       11         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         Island at Junction of Nellikai and Fourth Cross lane       Cum       1       6.20       2.81       0.6       1         I.2.1       bushy form (Non SOR Item)       Nos.       Image: Cum       Nos.       Image: Cum       1       1         I.2.2       branches and bushy in form (Non SOR Item)       Nos.       Image: Cum       Image: Cum       1       1         I.3.1       TURF       Image: Cum		Ch.40	Cum	1	4.67	1.48	0.6	4.15
Ch.150         Cum         1         5.32         1.48         0.6           At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72         1         14.82         22.278         0.6         1           Island at Junction of Nellikai and Fourth Cross lane         Cum         1         6.20         2.81         0.6         1           SHRUBS: Supply and Stacking of Shrubs         Total         Total         2         7         2           Island at Junction of Nellikai and Fourth Cross lane         Supply and Stacking of Shrubs         Total         2           Ficus Blackeana 5'-0" ht with 4-5 branches and loushy form (Non SOR Item)         Nos.         1         4           1.2.1         bushy form (Non SOR Item)         Nos.         1         1         1           Total         Nos.         1         1         1         1           1.3.1         ZOYSIA JAPONICA (MAT)(Non SOR Item)         Sqm         1         1           At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72         Sqm         1         1		Ch.60	Cum	1	4.16	1.48	0.6	3.69
At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72114.8222.2780.61Island at Junction of Nellikai and Fourth Cross laneCum16.202.810.61TotalSHRUBS: Supply and Stacking of ShrubsFicus Blackeana 5'-0" ht with 4-5 branches and (Non SOR Item)NosNerium Oleander variegated - 5'0" ht , 5-6Nos114.8214.821.2.2branches and bushy in form (Non SOR Item)Nos11.3TURF11.3ZOYSIA JAPONICA (MAT)(Non SOR Item)Sqm1Area =0.5x 3.14x 4.72x 4.72-Sqm-1Island at Junction of Nellikai and Fourth CrossSqm11.3TURF1Area =0.5x 3.14x 4.72x 4.72SqmSqm-1Island at Junction of Nellikai and Fourth CrossSqm1			Cum	1	4.76	1.48	0.6	4.23
Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72CumCum16.202.810.61Island at Junction of Nellikai and Fourth Cross laneCum16.202.810.61Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)Nos.Image: ComImage: ComImage: ComImage: ComImage: ComNerium Oleander variegated - 5'0" ht , 5-6Nos.Image: ComImage: ComImage: ComImage: ComImage: ComImage: ComNon SOR Item)Image: ComImage: ComImage: ComImage: ComImage: ComImage: ComImage: ComImage: ComImage: Com1.2.2branches and bushy in form (Non SOR Item)Nos.Image: ComImage: ComImage: ComImage: ComImage: ComImage: Com1.3.1ZOYSIA JAPONICA (MAT)(Non SOR Item)SqmImage: ComImage: ComImage: ComImage: ComImage: ComImage: ComImage: Com1.3.1ZOYSIA JAPONICA (MAT)(Non SOR Item)SqmImage: ComImage: Com<			Cum	1	5.32			4.72
Area =0.5x 3.14x 4.72x 4.72Image: Constraint of Nellikai and Fourth Cross laneCum16.202.810.61Island at Junction of Nellikai and Fourth Cross laneCum16.202.810.61Image: Constraint of Nellikai and Fourth Cross laneFicus Blackeana 5'-0" ht with 4-5 branches and lushy form (Non SOR Item)Nos.Image: Constraint of Nellikai and Fourth Cross laneImage: Constraint of Nellikai and Fourth Cross lane1.3.1ZOYSIA JAPONICA (MAT)(Non SOR Item)SqmImage: Constraint of Nellikai and Fourth Cross laneSqmImage: Constraint of Nellikai and Fourth Cross laneSqmIsland at Junction of Nellikai and Fourth CrossSqmImage: Constraint of Nellikai and Fourth CrossSqmImage: Constraint of Nellikai and Fourth CrossSqm				1	14.82	22.278	0.6	
Island at Junction of Nellikai and Fourth Cross laneCum16.202.810.611			Cum					198.11
laneCumCum1IaneTotal221.2SHRUBS: Supply and Stacking of ShrubsImage: ComImage: ComFicus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)Nos.Image: ComImage: ComNerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in form (Non SOR Item)Nos.Image: ComImage: ComNerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in form (Non SOR Item)Nos.Image: ComImage: ComTotalNos.Image: ComImage: ComImage: ComImage: ComTotalNos.Image: ComImage: ComImage: ComImage: Com1.3TURFImage: ComImage: ComImage: ComImage: ComImage: Com1.3.1ZOYSIA JAPONICA (MAT)(Non SOR Item)SqmImage: ComImage: ComImage: ComImage: ComArea = 0.5x 3.14x 4.72x 4.72Image: ComSqmImage: ComImage: ComImage: ComImage: ComImage: ComIsland at Junction of Nellikai and Fourth CrossSqmImage: ComImage: ComImage: ComImage: ComImage: ComImage: ComIsland at Junction of Nellikai and Fourth CrossSqmImage: ComImage: ComImage: ComImage: ComImage: ComImage: ComIsland at Junction of Nellikai and Fourth CrossSqmImage: ComImage: ComImage: ComImage: ComImage: ComImage: ComImage: ComIsland at Junction of Nellikai and Fourth CrossSqmImage: Com<								
IaneImage: Second S			Cum	1	6.20	2.81	0.6	10.45
1.2       SHRUBS: Supply and Stacking of Shrubs       Image: Supply and Stacking of Shrubs       Image: Supply and Stacking of Shrubs         Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)       Nos.       Image: Supply and Stacking of Shrubs         Nerium Oleander variegated - 5'0" ht , 5-6       Nos.       Image: Supply and Stacking of Shrubs       Image: Supply and Stacking of Shrubs         Nerium Oleander variegated - 5'0" ht , 5-6       Nos.       Image: Supply and Stacking of Shrubs       Image: Supply and Stacking of Shrubs         1.2.2       branches and bushy in form (Non SOR Item)       Nos.       Image: Supply and Stacking of Shrubs       Image: Supply and Stacking of Shrubs         1.2.2       branches and bushy in form (Non SOR Item)       Nos.       Image: Supply and Stacking of Shrubs		lane					Total	236.40
Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)       Nos.       4         1.2.1       bushy form (Non SOR Item)       Nos.       4         1.2.2       branches and bushy in form (Non SOR Item)       Nos.       10         1.2.2       branches and bushy in form (Non SOR Item)       Nos.       10         1.3       TURF       10       10         1.3.1       ZOYSIA JAPONICA (MAT)(Non SOR Item)       Sqm       11         At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72       Sqm       11         Island at Junction of Nellikai and Fourth Cross       Sqm       11       12	1.2	SHRUBS: Supply and Stacking of Shrubs					Total	230.40
1.2.1bushy form (Non SOR Item)Nos.Nos.ANerium Oleander variegated - 5'0" ht , 5-6Nos.Image: Constraint of the strength of the stre		Ficus Blackeana 5'-0" ht with 4-5 branches and						
(Non SOR Item)Image: Constraint of the second s	1.2.1		Nos.					45.00
1.2.2branches and bushy in form (Non SOR Item)Nos.Nos.10TotalNos.14Image: Constraint of the second sec		5						
(Non SOR Item)Nos.Image: Constraint of the second se		Nerium Oleander variegated - 5'0" ht , 5-6						
Total       Nos.       14         1.3       TURF       1         1.3.1       ZOYSIA JAPONICA (MAT)(Non SOR Item)       Sqm       1         At Junction of Nellikai and Fourth Cross Iane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72       Sqm       1         Island at Junction of Nellikai and Fourth Cross       Sqm       1       1	1.2.2	branches and bushy in form	Nos.					103.00
1.3       TURF       Image: Constraint of the second secon		(Non SOR Item)						
1.3.1       ZOYSIA JAPONICA (MAT)(Non SOR Item)       Sqm       1         At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72       Sqm       5         Island at Junction of Nellikai and Fourth Cross       Sqm       5       5		Total	Nos.					148.00
1.3.1       ZOYSIA JAPONICA (MAT)(Non SOR Item)       Sqm       1         At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x 4.72       Sqm       1         Island at Junction of Nellikai and Fourth Cross       Sqm       I       1	10				-			
At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m.       Sqm         Area =0.5x 3.14x 4.72x 4.72       Island at Junction of Nellikai and Fourth Cross         Sqm       Sqm			Sam					19.00
Semicircular Area of Radius =4.72m.       Sqm         Area =0.5x 3.14x 4.72x 4.72       Island at Junction of Nellikai and Fourth Cross         Sqm       Sqm	1.0.1		Oqin					13.00
Area =0.5x 3.14x 4.72x 4.72     Island at Junction of Nellikai and Fourth Cross     Som			Sam					
Island at Junction of Nellikai and Fourth Cross			Cym					
Sam								
			Sqm					
		Total	C er m					40.00
Total Sqm 1			əqm					19.00
1.4 IRRIGATION	1.4	IRRIGATION						

Sr.No.	Item	Unit	No.	L	В	Н	Qty.
1.4.1	supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees , sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. ( Consider Same Qty. of 1.1.6) (Non SOR Item)						90.09
	Ch.10.0	Sqm	1	9.65	1.48		14.28
	Ch.20.0	Sqm	1	2.79	1.48		4.13
	Ch.40	Sqm	1	4.67	1.48		6.91
	Ch.60	Sqm	1	4.16	1.48		6.16
	Ch.120	Sqm	1	4.76	1.48		7.04
	Ch.150	Sqm	1	5.32	1.48		7.87
	At Junction of Nellikai and Fourth Cross lane- Semicircular Area of Radius =4.72m. Area =0.5x 3.14x 4.72x2	Sqm	0.5	3.14	22.278		34.98
	Island at Junction of Nellikai and Fourth Cross Iane,Perimeter= Nos.x (L+B)xWidth	Sqm	0.5	6.2	2.81		8.71
						Total	90.09

Executive Engineer MSCL Mangaluru

# Name of the Work :- Manglore Smart City 3.3.2 Rate Analysis of SOFTSCAPE at Nellikai Road RHS

## **RATE ANALYSIS - SOFTSCAPE**

	Supplying and stacking of good earth at	site in	cludina r	ovalty and				
1.1.1	carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)							
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.27	Rate	140.00	Cum				
1.1.2	KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(KSRRB 18-19,Page No.150,SI.No.19.90)							
	Basic rate		204					
	Add 10% For area weightage		20.4					
		Rate	224.40	Cum				
1.1.3	KSRRB M300-Horticulture KSRRB M300- yard manure or/ and good earth KSRRB M3 farm yard manure or/ and good earth in r sludge, farm yard manure or/and good earth complete as per specifications. MORTH Spe (KSRRB 18-19,Page No.148,SI No.19.77)	300-1. S equirect n to be	Spreading thicknes paid for	g of sludge ss (cost of separately)				
	Basic rate		103					
	Add 10% For area wightage		10.3					
		Rate	113.30	Cum				
1.1.4	Mixing earth and sludge or manure in the re or directed by the Officer-in-charge (Non SOR item)	equired	proportio	n specified				
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28	Rate	23.91	Cum				

<b></b>											
1.1.5	Soil preparation of Lawn KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)										
	Basic rate		16								
	Add 10% For area wightage		1.6								
		Rate	17.60								
1.1.6	Bed Prepartion for , Ground covers, Climb	Bed Prepartion for , Ground covers, Climbers/ creepers, Shrubs									
	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)										
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.29	Rate	146.00	Cum							
L											
1.2	SHRUBS: Supply and Stacking of Shrubs										
1.2.1	Ficus Blackeana 5'-0" ht with 4-5 branches (Non SOR Item)	and bu	shy form								
	Basic Rate		840								
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.30	Rate	840.00	No							
1.2.2	Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in form (Non SOR Item)										

	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.31	Rate	840.00	No				
1.3	TURF							
1.3.1	ZOYSIA JAPONICA ( MAT) (Non SOR Item)							
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.32	Rate	156.80	Sqm				
	IRRIGATION							
1.4								
1.4.1	supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)							
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.34	Rate	560.00	Sqm				

Executive Engineer MSCL Mangaluru

## Name of the Work :- Manglore Smart City 3.4.1 Measurement Sheet of softscape Medians for Loop Road

1.1	SOIL MIXES and Ground Preparation						1
	Supplying and stacking of good earth at						
	site including royalty and carriage upto 5						
1.1.1	k.m. lead complete (earth measured in						
	stacks will be reduced by 20% for						
	payment). (Non SOR Item)						
	Ch.22.228 to Ch.25.190	Cum	0.67	3.02	0.60	1.1	1.34
	Ch.28.48 to Ch.90.0	Cum	0.67	62.27	0.60	1.1	27.54
	Ch.94.05 to 97.46	Cum	0.67	3.37	0.60	1.1	1.49
	Ch.125.25 to Ch.213.0	Cum	0.67	87.64	0.60	1.1	38.75
	Rosario Church Lane Median	Cum	0.67	17.56	0.60	1.1	7.77
	Trafic Island at Maidan Road and Rosario	Cum	0.67	8.92	8.27	1.1	54.37
	Church Road		0.01	0.02	0.27	1.1	
	Consider 2/3rd Qty. of 1.1.8	Cum					131.25
	KSRRB M300-Supply at site of work well						
	decayed farm yard manure KSRRB M300-						
	11. Supply at site of work well decayed						
	farm yard manure, from any available						
1.1.2	source, approved by the engineer in						
1.1.2	charge including screening and stackin						
	complete as per specifications. MORTH						
	Specification No. 308.2(KSRRB 18-						
	19,Page No.150,SI.No.19.90)						
	Median Kerb Stone						
	Ch.22.228 to Ch.25.190	Cum	0.33	3.02	0.60	1.1	0.66
	Ch.28.48 to Ch.90.0	Cum	0.33	62.27	0.60	1.1	13.56
	Ch.94.05 to 97.46	Cum	0.33	3.37	0.60	1.1	0.73
	Ch.125.25 to Ch.213.0	Cum	0.33	87.64	0.60	1.1	19.09
	Rosario Church Lane Median	Cum	0.33	17.56	0.60	1.1	3.82
	Trafic Island at Maidan Road and Rosario						
	Church Road	Cum	0.33	8.92	8.27	1.1	26.78
	Consider 1/3rd Qty. of 1.1.8	Cum					64.64
	KSRRB M300-Horticulture KSRRB M300-						
	Spreading of sludge farm yard manure or/						
	and good earth KSRRB M300-1.						
	Spreading of sludge farm yard manure or/						
	and good earth in required thickness						
1.1.6	(cost of sludge, farm yard manure or/and						
	good earth to be paid for separately)						
	complete as per specifications. MORTH						
	Specification No. 307						
	(KSRRB 18-19,Page No.148,SI						
	No.19.77)						
	Median Kerb Stone						
	Ch.22.228 to Ch.25.190	Cum	1	3.02	0.60	0.15	0.3
	Ch.28.48 to Ch.90.0	Cum	1	62.27	0.60	0.15	5.6
	Ch.94.05 to 97.46	Cum	1	3.37	0.60	0.15	0.3
	Ch.125.25 to Ch.213.0	Cum	1	87.64	0.60	0.15	7.9
	Rosario Church Lane Median	Cum	1	17.56	0.60	0.15	1.6
	Trafic Island at Maidan Road and Rosario	Cum	1	8.92	8.27	0.15	11.1
	Church Road					-	
		Cum					26.71
	Mixing earth and sludge or manure in the						
–							
1.1.7	required proportion specified or directed by the Officer-in-charge (Non SOR item)						

Sr.No.	Specifications	Unit	Nos	L	В	Н	Qty.
	Median Kerb Stone						
	Consider Same Qty. of 1.1.6	Cum					26.71
		••••					
1.1.8	Bed Prepartion for , Ground covers , Climbers/ creepers, Shrubs						
	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately) (Non SOR Item)						
	separately). (Non SOR Item) Median Kerb Stone						
	Ch.22.228 to Ch.25.190	Cum	1	3.02	0.60	1.1	2.0
	Ch.28.48 to Ch.90.0	Cum	1	62.27	0.60	1.1	41.1
	Ch.94.05 to 97.46	Cum	1	3.37	0.60	1.1	2.2
	Ch.125.25 to Ch.213.0	Cum	1	87.64	0.60	1.1	57.8
	Rosario Church Lane Median	Cum	1	17.56	0.60	1.1	11.6
	Trafic Island at Maidan Road and Rosario Church Road	Cum	0.5	8.92	8.27	1.1	40.6
		Cum					155.32
1.1.9	Turf						
	Zoysia Japonic, should be brought to the site in sheets, and stacked on site with regualar watering; until after the planting.						
	Ch.22.228 to Ch.25.190	Sqm	2	3.02	0.15		0.9
	Ch.28.48 to Ch.90.0	Sqm	2	62.27	0.15		18.7
	Ch.94.05 to 97.46	Sqm	2	3.37	0.15		1.0
	Ch.125.25 to Ch.213.0	Sqm	2	87.64	0.15		26.3
	Rosario Church Lane Median	Sqm	2	17.56	0.15		5.3
	Trafic Island at Maidan Road and Rosario Church Road	Sqm	2	34.38	0.15		10.3
		Sqm					62.47
	CUDUDS, Supply and Stacking of						
1.2	SHRUBS: Supply and Stacking of Shrubs						
1.2.1	Pandanus variegted'gold ' 300mm ht , 300mm c/c in triangulation , with 4-5 fronds (Non SOR Item)	Nos.	1649				1649.0
	Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of landscape architect/PMC (Non SOR Item)		18				18.0

Sr.No.	Specifications	Unit	Nos	L	В	Н	Qty.
1.2.3	Ficus blackenia, c/c: 600m, must be bushy and multibranched(atleast 3), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	16				16.0
1.2.4	<i>Nerium oleander</i> , c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	19				19.0
	Total	Nos.					1702.0
1.3	IRRIGATION						
1.3.1	supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. ( Consider Same Qty. of 1.1.6) (Non SOR Item)						
	Median Kerb Stone						
	Ch.22.228 to Ch.25.190	Sqm	1	3.02	0.60		1.81
	Ch.28.48 to Ch.90.0	Sqm	1	62.27	0.60		37.36
	Ch.94.05 to 97.46	Sqm	1	3.37	0.60		2.02
	Ch.125.25 to Ch.213.0	Sqm	1	87.64	0.60		52.58
	Rosario Church Lane Median	Sqm	1	17.56	0.60		10.54
	Trafic Island at Maidan Road and Rosario Church Road	Sqm	1	8.92	8.27		73.77
		Sqm					178.1

Executive Engineer MSCL Mangaluru

## Name of the Work :- Manglore Smart City 3.4 BOQ OF SOFTSCAPE FOR MEDIAN -LOOP ROAD (A.B.Shetty to Hamilton Circle)

Sr.No.	Specifications	Unit	Quantity	Rate	Amount	Remarks
1.1	SOIL MIXES and Ground Preparation	Unit	Quantity	nato	/ inount	Romanic
1.1.1	Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)	Cum	131.25	140.00	18,375	
1.1.2	KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(KSRRB 18-19,Page No.150,SI.No.19.90)	Cum	64.64	224.40	14,506	
1.1.3	KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KSRRB 18-19,Page No.148,SI No.19.77)	Cum	26.71	113.30	3,026	
1.1.4	Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	26.71	23.91	639	
1.1.5	Bed Prepartion for , Ground covers , Climbers/ creepers, Shrubs					
	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)	Cum	155.32	146.00	22,677	
1.1.6	<b>Turf</b> Zoysia Japonic, should be brought to the site in sheets, and stacked on site with regualar watering; until after the planting.	Sqm	62.47	156.80	9,795	
1.2	SHRUBS: Supply and Stacking of Shrubs					
1.2.1	Pandanus variegted'gold ' 300mm ht , 300mm c/c in triangulation , with 4-5 fronds (Non SOR Item)	Nos.	1649.00	84.00	138,516	
1.2.2	Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of landscape architect/PMC (Non SOR Item)	Nos.	18.00	140.00	2,520	

Sr.No.	Specifications	Unit	Quantity	Rate	Amount	Remarks
1.2.3	Ficus blackenia, c/c: 600m, must be bushy and multibranched(atleast 3), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	16.00	840.00	13,440	
	Nerium oleander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	19.00	840.00	15,960	
1.3	IRRIGATION					
1.3.1	supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent)All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	178.08	560.00	99,727	
			Total		3,39,181	

Executive Engineer MSCL Mangaluru

# Name of the Work :- Manglore Smart City 3.4.2 Rate Analysis of SOFTSCAPE MEDIAN for Loop Road

# **RATE ANALYSIS - SOFTSCAPE**

1.1.1	Supplying and stacking of good earth at site carriage upto 5 k.m. lead complete (earth me reduced by 20% for payment). (Non SOR Ite	easured	0 7 7					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.27	Rate	140.00	Cum				
1.1.2	specifications. MORTH Specification No. 308.2(KSRRB 18-19,Page No.150,SI.No.19.90)							
	Basic rate		204					
	Add 10% For area weightage (Mangalore City)		20.4					
		Rate	224.40	Cum				
1.1.3	KSRRB M300-Horticulture KSRRB M300-Sp yard manure or/ and good earth KSRRB M30 sludge farm yard manure or/ and good earth (cost of sludge, farm yard manure or/and goo separately) complete as per specifications. N 307 (KSRRB 18-19,Page No.148,SI No.19.77)	00-1. Sp in requ od earth	breading of ired thick to be pa	of ness id for				
	Basic rate		103					
	Add 10% For area weightage (Mangalore City)		10.3					
		Rate	113.30	Cum				
1.1.4	Mixing earth and sludge or manure in the rec specified or directed by the Officer-in-charge	• •	•					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28Rate23.91Cum							

1.1.8	Bed Prepartion for , Ground covers , Clim	bers/ c	reepers,	Shrubs		
	Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20% : one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.29	Rate	146.00	Cum		
1.1.9	TURF					
1.1.9	Zoysia Japonic, should be brought to the sit on site with regualar watering; until a					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.32	Rate	156.80	Sqm		
1.2	SHRUBS: Supply and Stacking of Shrubs					
1.2.1	Pandanus variegted'gold ' 300mm ht , 300mm with 4-5 fronds (Non SOR Item)		triangula	ition ,		
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.39	Rate	84.00	Nos.		
1.2.2	Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.40	Rate	140.00	Nos.		

1.2.3	Ficus blackenia, c/c: 600m, must be bushy and multibranched(atleast 3), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.40	Rate	840.00	Nos.		
1.2.4	Nerium oleander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.40	Rate	840.00	Nos.		
1.3	IRRIGATION					
1.4.1	supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees , sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent)All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.29	Rate	560.00	Sqm		

Assistant Engineer MSCL Mangaluru

Executive Engineer MSCL Mangaluru

## Manglore Smart City : Maidan Road

## 3.5 Rate Analysis for Kerb Stone 900 mm High

Sr.No.	Description	Unit	Qty	Rate/Unit	Amount	Remarks
1	Providing and laying at or near ground level factory made kerb stone of M-20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).					
	Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m Details of cost 100 metre i.e. No. of kerb stones = $100/0.405=247$ Nos. width of kerb stone = $0.4m$ Precast C.C. Kerb stone M - $20 =$ 247x(((0.25+0.3)/2)*0.6+0.3*0.3))*0.405=25.5cu m					
	Material					
	Precast C.C. Kerb stone M - 20	Cum	25.500	14381.53	366729.05	Rate attached
	Shuttering Work					
	Mortar 1:3 for fixing joints = 246x1x [((0.250+0.30)/2)*0.60*0.005] + (0.30x0.30x0.005) = 0.313cum. Cement mortar 1:3 (1 cement : 3 coarse sand)	Cum	0.300	5666.00	1699.80	KSRB 18- 19,SI No 1.3 Pg No 2
	Mason (brick layer) 1st class	day	2.500	466.20	1165.50	KSRB 18-
	Mason (brick layer) 2nd class	day	2.500	456.20	1140.50	19
	Beldar	day	2.500	446.20	1115.50	Pg No LVI
	Coolie	day	1.650	446.20	736.23	. 9.10 . 11
	Total				372586.58	
	Add 1 % Water charges				3725.87	
	Add 40.0/ Constructions for the				376312.45	
	Add 10 % Contractor's profit				37631.24	
	Add 10% Contractor Overhead				37631.24	
	Cost of 25.5 cum				451574.93	
	cost for 1 cum.				17708.82	A
	Cost per Kerb of width 0.405m  =A X 0.102cum (Vol of one Kerb)				1806	Per No

Executive Engineer MSCL Mangaluru

#### Name of the Work :- Mangalore Smart City 3.6 Rate Analysis of Pre Cast RCC Square Cover DESCRIPTION Unit Qty Sr. No. No. Rate Amount Rectangular shape 600x450 mm precast R.C.C. 1 700.00 700 manhole cover with Nos. 1.00 frame(CPWD 2016,Material rate-7130,Pg.No.35) Transportation @ 1% Nos. 1.00 7 Fixing Charges @10% Nos. 1.00 70 1.00 Contractor Profit@10% Nos. 70 Contractor Overhead @10% 1.00 Nos. 70 Sub Total 917 Total 917

Executive Engineer MSCL Mangaluru

## Name of the Work :- Mangalore Smart City 3.7 Rate Analysis of taking out paver block

3.7 Rate Analysis of taking out paver block							
Sr.No.	Description	Unit	Quantity	Rate	Amount	Reference	
1	including remova	l of rubbis payment	h etc., dispo shall be ma	osal of una	serviceable ately and s	ootpath/ central verge, e material to the dumping tacking of serviceable n-Charge.	
	Details of cost for	r 10 sqm.					
а	Labour						
b	Beldar	Day	0.25	446.20	111.55	KPWD 18-19 SOR, Pg No.LVI SI No.5	
с	Collie	Day	1	446.20	446.2	KPWD18-19 SOR, Pg No.LVI,SI No.6	
d	Sundries	LS	2.7	1.73	4.67	CPWD Pg No 29,	
	Total				562.42		
е	Add 1% Water C	harges			5.62		
	Total				568.04		
f	Add 10 % Contra	ctor's prof	it		56.8		
g	Add 10 % Contra	ctor's over	rheads		56.804		
	Cost of 10 sqm				681.644		
	Cost of 1 sqm				68.16		

Executive Engineer MSCL Mangaluru

# 3.8 Comparitive Statement For Power Ducts

1	<b>Providing and laying Dia 225mm HDPE Electrical pipe</b> <b>Conduits</b> with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.	Dura Line	Aadarsha	Utkarsha
	Basic Cost per RM	2500	2250	2875
	GST 18%		405	
	Total Cost per RM	2500	2655	2875

2	<b>Providing and HDPE Coupler for pipe Dia 225mm(O.D.)</b> and conveying to work site including loading and unloading at both destination and lowering, Jointing into trenches, Complete.	Dura Line	Aadarsha (Including in pipe cost)	Utkarsha ( Not Quoted)
	Basic Cost per Nos.	1175	0	0
	GST 18%		0	
	Total Cost per Nos.	1175	0	0

3	<b>Providing and laying Dia 160mm HDPE Electrical pipe</b> <b>Conduits</b> with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.	Dura Line	Aadarsha	Utkarsha
	Basic Cost per RM	1350	1135	1550
	GST 18%		204.3	
	Total Cost per RM	1350	1339.3	1550

4	<b>Supplying HDPE pipe Coupler for Dia 160mm(O.D.)</b> and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe and special including encasing the pipe Complete.	Dura Lina	Aadarsha (Including in pipe cost)	Utkarsha ( Not Quoted)
	Basic Cost per Nos.	1475	0	0
	GST 18%		0	
	Total Cost per Nos.	1475	0	0

5	<b>Providing and Fixixng Spacers for Power Ducts of size</b> <b>225 mm</b> , to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material2Rows in One Column		Aadarsha (Not Quoted)	Utkarsha
	Basic Cost per Nos.	1003	0	1150
	GST 18%		0	
	Total Cost per Nos.	1003	0	1150

6	<b>Providing and Fixixng Spacers for Power Ducts of size</b> <b>160 mm,</b> to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material4 Rows in One Column		Aadarsha (Not Quoted)	Utkarsha
	Basic Cost per Nos.	1947	0	2150
	GST 18%		0	
	Total Cost per Nos.	1947	0	2150

Silicore Lubr comforming to standard and unloading at	way 40mm HDPE pipe Multi-way Duct cant inner layer for ICT fibre cables o ASTMF 2160 and /or equivalent indian conveying to work site including loading and both destination and rolling, lowering into g true to line and jointing of pipe	Dura Line	Aadarsha	Utkarsha
Basic Cost per	Nos.	685	745	750
GST 18%			134.1	
Total Cost pe	r Nos.	685	879.1	750

8	<b>Supplying Coupler for 7-way 40mmHDPE pipe With</b> <b>Multi-way Duct</b> and conveying to work site including loading and unloading at both destination and lowering into trenches, and jointing of pipe.Complete.		Aadarsha	Utkarsha
	Basic Cost per Nos.	175	0	0
	GST 18%		0	
	Total Cost per Nos.	175	0	0

Executive Engineer MSCL Mangaluru

	3.9 Summary for Maintenance of Loop Road								
Sr.No.	Description	Total Amount Rs.							
1	2nd year Maintenance Cost	1,958,422.00							
2	3rd year Maintenance Cost	2,030,140.00							
3	4th year Maintenance Cost	2,101,732.00							
	Total Maintenance Amount	6,090,294.00							

Note:Operation and Maintenance cost is approved by KUIDFC

EXECUTIVE ENGINEER MSCL MANGALURU

# GENERAL MANAGER TECHNICAL MSCL MANGALURU

## Name of the Work :- Mangalore Smart City 3.10 Maintenance BOQ of Road and Other Work for Loop Road-1st Year

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
		•			, unount
	Civil Works				
1.00	Operation & Maintenance for 1st Year: Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)	Sqm	15.00	70.89	1063
	Operation & Maintenance for 1st Year:				
2.00	KSRRB M200. <b>Dismantling of cement concrete pavement by mechanical</b> <b>means</b> using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (Page No 138,SI No : 18.47)	Cum	3.68	1028.46	3,785
	Operation & Maintenance for 1st Year:				
3.00	KSRRB M200- <b>Dismantaling of kerb Stone</b> and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202.	Rmt	10.00	13.73	137
4.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200-13.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 16-17,18.20,Page	Cum	0.50	446.16	223
	Operation & Maintenance for 1st Year:				
5.00	KSRRB M200-12.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications.	Cum	2.88	401.54	1156
	i)Dismantaling Brick/Tile work B.In Cement mortar				
6.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 (KSRRB 18-19,Page No 143,SI No : 19.14)	Cum	25.00	46.90	1,173
7.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRB 2-4 : <b>Refilling available earth</b> around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KPWD 16-17,SI No.2.11,Pg. No.6)	Cum	25.00	137.28	3,432
8.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB 300-Compaction KSRRB 300-58. <b>Compaction of original ground</b> with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3.(KPWD 16-	Sqm	50.00	6.86	343
9.00	Operation & Maintenance for 1st Year: KSRB 4-1.7 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2(KPWD 18-19,SI.No.4.7,Page No.13)	Cum	5.00	6600.88	33,004

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
10.00	<b>Operation &amp; Maintenance for 1st Year:</b> Construction of granular sub-base Grading-Vas Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98% proctor density, complete as per specifications. Clause 401 of MORTH V Revision. (KSRRB 18-19,P.No.153, SI.No.20.4)	Cum	7.50	2477.90	18,584
11.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRB 4.2.1 : Providing and laying in position <b>reiforcement cement</b> <b>concrete of design Mix M25</b> with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications.	Cum	6.30	7090.51	44,670
12.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRB 4.6.1 Providing and removing <b>centering, shuttering, strutting,</b> <b>propping</b> etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials,labour complete as per specifications. Specification No. KSB 4.6.2	Sam	36.00	300.87	10,831
13.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRB 4.9.2 : <b>Providing T.M.T steel reinforcement</b> for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500	мт	0.50	80974.61	40,487
14.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300- Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No. 305	Cum	6.13	615.74	3,774
15.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M600-1.Providing and Constructing dry lean cement concrete mix CC 1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @0.58cum over a prepared sub-base, coarse and fine aggregate conforming to IS: 383- 2016,aggregate cement ratio not to exceed 15:1, Aggregate gradation after blending to be as per Table 600-1,optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. Clause 601of MORTH V Revision and IS 456 Table-5 -do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with Slip form paver with electronic sensor. (KSRRB 18-19,Page No 174,SI No : 22.1.1)	Cum	1.23	4630.91	5,696

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
16.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSSRRB M600-2.Construction of unreinforced,dowel jointed, <b>plain cement</b> <b>concrete pavement</b> over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with <b>M40</b> (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,SI No : 22.2.2)	Cum	2.82	6595.16	18,598
17.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and placing <b>joint sealant compound</b> of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower (Non SOR Item)	Rmt	150.00	119.60	17,940
18.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB 3000 <b>Repair of Joint Grooves</b> with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Page No 257,SI No : 35.8)		150.00	378.66	56,799
19.00	Operation & Maintenance for 1st Year: Providing and laying at or near ground level factory made kerb stone of M- 20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge). Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)		6.00	1878.24	11,269
20.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providin and fixing <b>pre cast solid concrete Kerb stones</b> made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Page No 25,SI No : 5.3)	Nos.	50.00	481.62	24,081
21.00	<b>Operation &amp; Maintenance for 1st Year:</b> Removing and resetting of kerb stones. including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	m	50.00	112.11	5,606
22.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB 800-1. <b>Painting two coats</b> after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 (Page No 182,SI No : 24.1)		5.78	91.52	529
23.00	<b>Operation &amp; Maintenance for 1st Year:</b> P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)	Nos.	1.00	953.68	954

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
24.00	Operation & Maintenance for 1st Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron / Ductile Iron (NON SOR Item)	Nos.	1.00	3640.00	3,640
25.00	<b>Operation &amp; Maintenance for 1st Year:</b> <b>Providing gully pipe lowering, laying of PVC 100 mm dia pipes</b> to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include all jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)	Rmt	1.00	314.52	315
26.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRB 11-18-17.1 : <b>Providing and fixing sand cast iron trap of 100mm</b> <b>dia</b> , of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.	Nos.	1.00	949.52	950
27.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M800- <b>Cable Duct Across the road KSRRB M800-29.1. Providing</b> <b>and laying of a reinforced cement concrete pipe duct, 300 mm dia,</b> across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service ( KPWD SOR 16-17,Item No.24.34,Pg.No.188)	Rmt	4.00	5745.17	22,981
28.00	Operation & Maintenance for 1st Year: Providing and laying Dia 225mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)	Rmt	10.00	2690.85	26,909
29.00	Operation & Maintenance for 1st Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering, Jointing into trenches, Complete. (Market Rate)		2.00	1917.00	3,834
30.00	Operation & Maintenance for 1st Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)	Rmt	39.00	1480.88	57,754
31.00	Operation & Maintenance for 1st Year: Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and conveying to work site including loading and unloading at both destination and rolling, lowering into trenches, laying true to line and jointing of pipe and special including encasing the pipe Complete. (Market Rate)	Nos	4.00	1534.00	6,136
32.00	Operation & Maintenance for 1st Year: Providing and Fixixng Spacers for Power Ducts of size 225 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)		7.00	1223.66	8,566
33.00	Operation & Maintenance for 1st Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)		7.00	2375.34	16,627

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount			
34.00	Operation & Maintenance for 1st Year: Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling, lowering into trenches, laying true to line and jointing of pipe etc.Complete. (Market Rate)	Rmt	10.00	10.00	mt 10.00	10.00	754.33	7,543
35.00	Operation & Maintenance for 1st Year: Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Duct and conveying to work site including loading and unloading at both destination and lowering into trenches, and jointing of pipe.Complete. (Market Rate)		1.00	182.00	182			
36.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and laying heavy duty cobble stones <b>60mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.	Sqm	37.92	1208.06	45,810			
37.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and laying heavy duty <b>Tactile Tiles</b> (Direction and Stop tiles-300 x 300 mm) 60mm thick and Yellow in colour , using cement and course sand for manufacture of blocks of approved size, shape with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Non SOR Item)	Sqm	2.25	948.48	2,134			
38.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and laying heavy duty <b>cobble stones 75mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.	Sqm	4.21	1274.42	5,365			
39.00	Operation & Maintenance for 1st Year: Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803 (Page No 192,SI No : 24.57)	Sqm	305.91	490.78	1,50,135			
40.00	<b>Operation &amp; Maintenance for 1st Year:</b> Operation and Maintenance for <b>eToilets</b> Stainless Steel Public Model as specified in Road and Other works BOQ Item No.45.	Nos	2.00	63648.00	1,27,296			
41.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and fixing of <b>S.S. Bollards(SS304</b> ) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	1.00	4680.00	4,680			
42.00	Operation & Maintenance for 1st Year: Providing and fixing of railing as detail design in MS HOLLOW SECTION and bars (shop drawing to be approved),with vertical support of 0.9m @2.2mc/c, all complete to the satisfaction of the Landscape architect.(Non SOR Item)	МТ	0.30	104000.00	31,200			

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
43.00	<b>Operation &amp; Maintenance for 1st Year:</b> Excavation and removal of silt and silt mixed with sand in slussy condition from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts. For Desilting of drains and grit chambers including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in- charge.	Cum	198.00	193.61	38,335
44.00	Operation & Maintenance for 1st Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Earth	Cum	58.53	94.49	5,530
45.00	Operation & Maintenance for 1st Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Debris	Cum	9.38	102.39	,960
46.00	Electrical Works Operation & Maintenance for 1st Year: Dismantling, removal, transportation to client's storage place existing lighting poles (Non SOR Item)	Nos.	1.00	1040.00	1,040
47.00	<b>Operation &amp; Maintenance for 1st Year:</b> Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended	aft, IS 2062 Irds, I speed of per IS Nos. 1.00 70 mm with with with not	17802.72	17,803	
48.00	<b>Operation &amp; Maintenance for 1st Year:</b> Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	Nos.	1.00	12916.80	12,917
49.00	<b>Operation &amp; Maintenance for 1st Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	Nos.	1.00	7693.92	7,694
50.00	Operation & Maintenance for 1st Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	Nos.	1.00	3681.60	3,682

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
51.00	<b>Operation &amp; Maintenance for 1st Year:</b> Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.2)	Nos.	1.00	2496.00	2,496
52.00	<b>Operation &amp; Maintenance for 1st Year:</b> Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole8mtr and above street light pole (Ref Electrical SOR SI No.16.28.3)	Nos.	118.00	728.00	85,904
53.00	<b>LT Cable</b> <b>Operation &amp; Maintenance for 1st Year</b> : Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR SI No.7.5,7.5.4)	m	12.00	121.68	1,460
54.00	<b>Operation &amp; Maintenance for 1st Year:</b> Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)	m	5.00	84.86	424
55.00	<b>Operation &amp; Maintenance for 1st Year:</b> Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR SI No.7.21,7.21.6)	Nos	5.00	11.76	59
56.00	Operation & Maintenance for 1st Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR SI No.7.21.2)	Nos	4.00	3.34	13
57.00	Earthing system Operation & Maintenance for 1st Year: Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,SI No.7.23.6)	Kit	1.00	5720.00	5,720
58.00	<b>Operation &amp; Maintenance for 1st Year:</b> Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)	Rmt	12.00	20.28	243
	Landcaping Works				
	SOIL MIXES and Ground Preparation Operation & Maintenance for 1st Year:				
59.00	Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)	Cum	0.84	145.60	122

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
60.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)	Cum	0.41	233.38	96
61.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307	Cum	0.40	117.83	47
62.00	Operation & Maintenance for 1st Year: Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	0.40	24.87	10
63.00	Soil preparation of Lawn Operation & Maintenance for 2nd Year: Maintenance of lawns or Turfing of slopes (rough grassing) for a period of one year including watering etc complete including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Sqm	14.00	117.83	1,650
	Bed Prepartion for , Ground covers, Climbers/ creepers, Shrubs				
64.00	<b>Operation &amp; Maintenance for 1st Year:</b> Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)	Cum	1.96	151.84	298
	SHRUBS: Supply and Stacking of Shrubs				
65.00	<b>Operation &amp; Maintenance for 1st Year:</b> Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)	Nos.	10.00	873.60	8,736
66.00	<b>Operation &amp; Maintenance for 1st Year:</b> Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in form (Non SOR Item)	Nos.	20.00	873.60	17,472
67.00	<b>Operation &amp; Maintenance for 1st Year:</b> Pandanus variegted'gold ' 300mm ht, 300mm c/c in triangulation, with 4-5 fronds (Non SOR Item)	Nos.	330.00	87.36	28,829
68.00	<b>Operation &amp; Maintenance for 1st Year:</b> Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of landscape architect/PMC (Non SOR Item)		4.00	145.60	582
69.00	<b>Operation &amp; Maintenance for 1st Year:</b> Ficus blackenia, c/c: 600m, must be bushy and multibranched(atleast 3), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.		4.00	873.60	3,494
70.00	<b>Operation &amp; Maintenance for 1st Year:</b> Nerium oleander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	4.00	873.60	3,494
71.00	TURF Operation & Maintenance for 1st Year: ZOYSIA JAPONICA (MAT) (Non SOR Item)	Sqm	41.00	163.07	6,686

Sr. No.	Specification	Unit	Total Qty.	Rate	Amount
72.00	<b>Operation &amp; Maintenance for 1st Year:</b> Watering with tanker to landscape area and plants for one year	Year	1.00	38324.81	38,325
73.00	<b>Operation &amp; Maintenance for 1st Year:</b> supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	6.00	582.40	3,494
				11,23,806	

Executive Engineer MSCL Mangaluru

#### Name of the Work :- Mangalore Smart City 3.10.1 Maintenance BOQ of Road and Other Work for Loop Road-1st Year

Sr.No.	Specification	Unit	No.	L	В	D	Qty.	Actual %
	Civil Works							
1.00	Operation & Maintenance for 1st Year: Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)	Sqm	1	10	1.5		15.00	0.58%
2.00	Operation & Maintenance for 1st Year: KSRRB M200.Dismantling of cement concrete pavement by mechanical means using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km- Extra)		1	3.5	3.5	0.3	3.68	0.83%
3.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200- <b>Dismantaling of kerb Stone</b> and Channel KSRRB M200- 26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202.	Rmt	1	10			10.00	0.78%
4.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200-13.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 18-19,18.20,Page No.137)	Cum	1	1	1	0.5	0.50	1.94%
5.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200-12.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. <b>i)Dismantaling Brick/Tile work B.In Cement mortar</b>	Cum	1	25	0.5	0.23	2.88	0.57%
6.00	Operation & Maintenance for 1st Year: KSRRB M300-14. Excavation for roadwork in all types of soil by mechanical means including cutting and loading to tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transportation with a lead of 1.00 km and complete as per specifications. MORTH Specification No.301 (KSRRB 18-19,Page No 143,SI No : 19.14)		1.00	10	5	0.5	25.00	0.21%
7.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRB 2-4 : <b>Refilling available earth</b> around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KPWD 18-19,SI No.2.11,Pg. No.6)	Cum	1.00	10	5	0.5	25.00	0.54%
8.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB 300-Compaction KSRRB 300-58. <b>Compaction of original ground</b> with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3.(KPWD 16-	Sqm	1.00	10		5	50.00	0.60%
9.00	Operation & Maintenance for 1st Year: KSRB 4-1.7 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2(KPWD 18-19,SI.No.4.7,Page No.13)	Cum	1.00	10	5	0.1	5.00	0.54%

Sr.No.	Specification	Unit	No.	L	В	D	Qty.	Actual %
10.00	Operation & Maintenance for 1st Year: Construction of granular sub-base Grading-Vas Sub-base and drainage layer by providing coarse graded crushed stone aggregates of granite/ trap/basalt material, mixing in a mechanical mix plant at OMC, Carriage of mixed material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the 98% proctor density, complete as per specifications. Clause 401 of MORTH V Revision. (KSRRB 18-19,P.No.153, SI.No.20.4)	Cum	1.00	10	5	0.15	7.50	0.41%
11.00	Operation & Maintenance for 1st Year: KSRB 4.2.1 : Providing and laying in position reiforcement cement concrete of design Mix M25 with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications. (Page No 13,SI No : 4.10)	Cum	1.00	20	0.35	0.9	6.30	0.51%
12.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRB 4.6.1 Providing and removing <b>centering, shuttering, strutting,</b> <b>propping</b> etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KSB 4.6.2	Sqm	2.00	20		0.9	36.00	0.36%
13.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRB 4.9.2 : <b>Providing T.M.T steel reinforcement</b> for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500	MT	1.00	0.50			0.50	0.50%
14.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300- Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No. 305	Cum	1.00	3.5	3.5	0.5	6.13	0.36%
15.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M600-1.Providing and Constructing dry lean cement concrete mix CC 1:5:10 base with OPC 25mm and down size graded granite metal coarse aggregate at 0.86cum and fine aggregates @0.58cum over a prepared sub-base, coarse and fine aggregate conforming to IS: 383- 2016,aggregate cement ratio not to exceed 15:1, Aggregate gradation after blending to be as per Table 600-1,optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications. Clause 601of MORTH V Revision and IS 456 Table-5 -do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine aggregate 0.58cum using Concrete Batch mix Plant at 75 cum/hr capacity with Slip form paver with electronic sensor. (KSRRB 18-19,Page No 174,SI No : 22.1.1)	Cum	1.00	3.5	3.5	0.1	1.23	0.18%
16.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSSRRB M600-2.Construction of unreinforced,dowel jointed, <b>plain cement</b> <b>concrete pavement</b> over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with <b>M40</b> (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,SI No : 22.2.2)	Cum	1.00	3.5	3.5	0.23	2.82	0.18%

Sr.No.	Specification	Unit	No.	L	В	D	Qty.	Actual %
17.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and placing <b>joint sealant compound</b> of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower (Non SOR Item)	Rmt	1.00	150			150.00	5.66%
18.00	Operation & Maintenance for 1st Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1	Rmt	1.00	150			150.00	5.66%
19.00	Operation & Maintenance for 1st Year: Providing and laying at or near ground level factory made kerb stone of M- 20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in- charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge). Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)		6				6.00	0.58%
20.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providin and fixing <b>pre cast solid concrete Kerb stones</b> made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Page No 25,SI No : 5.3)		50				50.00	0.52%
21.00	<b>Operation &amp; Maintenance for 1st Year:</b> Removing and resetting of kerb stones. including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Nos.	50				50.00	
22.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB 800-1. <b>Painting two coats</b> after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 (Page No 182,SI No : 24.1)		1	35	0.165		5.78	0.49%
23.00	<b>Operation &amp; Maintenance for 1st Year:</b> P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)	Nos.	1.00				1.00	0.61%
24.00	Operation & Maintenance for 1st Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron / Ductile Iron (NON SOR Item)	Nos.	1.00				1.00	0.77%
25.00	Operation & Maintenance for 1st Year: Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include all jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)	Rmt	1.00	1.00			1.00	0.57%
26.00	Operation & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.	Nos.	1.00	1			1.00	0.57%

Sr.No.	Specification	Unit	No.	L	В	D	Qty.	Actual %
27.00	Operation & Maintenance for 1st Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)	Rmt	1	4.00			4.00	0.62%
28.00	Operation & Maintenance for 1st Year: Providing and laying Dia 225mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)		1	10			10.00	0.26%
29.00	Operation & Maintenance for 1st Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering,Jointing into trenches,Complete. (Market Rate)	Nos.	2				2.00	0.62%
30.00	Operation & Maintenance for 1st Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)		1	39			39.00	0.51%
31.00	Operation & Maintenance for 1st Year: Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe and special including encasing the pipe Complete. (Market Rate)	Nos.	4				4.00	0.62%
32.00	Operation & Maintenance for 1st Year: Providing and Fixixng Spacers for Power Ducts of size 225 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	7				7.00	0.54%
33.00	Operation & Maintenance for 1st Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	7				7.00	0.54%
34.00	Operation & Maintenance for 1st Year: Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)	Rmt	1	10			10.00	0.52%
35.00	Operation & Maintenance for 1st Year: Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Duct and conveying to work site including loading and unloading at both destination and lowering into trenches, and jointing of pipe.Complete. (Market Rate)	Nos.	1				1.00	4.35%
36.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and laying heavy duty cobble stones <b>60mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.		1	10	3.792		37.92	0.50%

Sr.No.	Specification	Unit	No.	L	в	D	Qty.	Actual %
37.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and laying heavy duty <b>Tactile Tiles</b> (Direction and Stop tiles-300 x 300 mm) 60mm thick and Yellow in colour , using cement and course sand for manufacture of blocks of approved size, shape with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Non SOR Item)		1.00	10	0.225		2.25	0.50%
38.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and laying heavy duty <b>cobble stones 75mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Page No 101,SI No : 14.7)		1.00	10	0.421		4.21	0.28%
39.00	Operation & Maintenance for 1st Year: Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803 (Page No 192,SI No : 24.57)	Sqm	1.00	2039.433	0.15		305.91	50.00%
40.00	<b>Operation &amp; Maintenance for 1st Year:</b> Operation and Maintenance for <b>eToilets</b> Stainless Steel Public Model as specified in Road and Other works BOQ Item No.45.	Nos	2.00				2.00	100.00%
41.00	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and fixing of <b>S.S. Bollards(SS304</b> ) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	1.00				1.00	1.09%
42.00	Operation & Maintenance for 1st Year: Providing and fixing of railing as detail design in MS HOLLOW SECTION and bars (shop drawing to be approved),with vertical support of 0.9m @2.2mc/c, all complete to the satisfaction of the Landscape architect.(Non SOR Item)	MT	1.00	0.3			0.30	5.59%
43.00	<b>Operation &amp; Maintenance for 1st Year:</b> Excavation and removal of silt and silt mixed with sand in slussy condition from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts. For Desilting of drains and grit chambers including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.		2.00	1650	0.6	0.1	198.00	
44.00	Operation & Maintenance for 1st Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Earth	Cum	1.00	58.53			58.53	0.50%
45.00	Operation & Maintenance for 1st Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Debris	Cum	1.00	9.38			9.38	0.50%
	Electrical Works							
46.00	Operation & Maintenance for 1st Year: Dismantling, removal, transportation to client's storage place existing lighting poles (Non SOR Item)	Nos.	1				1.00	50.00%
47.00	<b>Operation &amp; Maintenance for 1st Year:</b> Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)	Nos.	1				1.00	16.67%

Sr.No.	Specification	Unit	No.	L	В	D	Qty.	Actual %
48.00	<b>Operation &amp; Maintenance for 1st Year:</b> Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	Nos.	1				1.00	1.92%
49.00	<b>Operation &amp; Maintenance for 1st Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	Nos.	1				1.00	2.17%
50.00	Operation & Maintenance for 1st Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts, nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	Nos.	1				1.00	16.67%
51.00	Operation & Maintenance for 1st Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.2)	Nos.	1				1.00	1.92%
52.00	Operation & Maintenance for 1st Year: Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole 8mtr and above street light pole (Ref Electrical SOR SI No.16.28.3)	Nos.	118				118.00	
53.00	LT Cable Operation & Maintenance for 1st Year: Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR SI No.7.5,7.5.4)	m	1	12.00			12.00	0.52%
54.00	<b>Operation &amp; Maintenance for 1st Year:</b> Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)	m	1	5.00			5.00	0.76%
55.00	Operation & Maintenance for 1st Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR SI No.7.21,7.21.6)	Nos	5				5.00	0.60%
56.00	Operation & Maintenance for 1st Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR SI No.7.21.2) Earthing system	Nos	4				4.00	0.61%

Sr.No.	Specification	Unit	No.	L	в	D	Qty.	Actual %
57.00	Operation & Maintenance for 1st Year: Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,SI No.7.23.6)	Kit	1				1.00	12.50%
58.00	<b>Operation &amp; Maintenance for 1st Year:</b> Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)	Rmt	1	12			12.00	0.52%
	Landcaping Works							
59.00	SOIL MIXES and Ground Preparation Operation & Maintenance for 1st Year: Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)		1	10	0.558	0.15	0.84	0.50%
60.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)	Cum	1	10	0.412	0.1	0.41	0.50%
61.00	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77)		1	10	0.404	0.1	0.40	0.50%
62.00	<b>Operation &amp; Maintenance for 1st Year:</b> Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	1	10	0.404	0.1	0.40	0.50%
63.00	Soil preparation of Lawn Operation & Maintenance for 2nd Year: Maintenance of lawns or Turfing of slopes (rough grassing) for a period of one year including watering etc complete including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.		1.00	20	0.7		14.00	100.50%
	Bed Prepartion for , Ground covers, Climbers/ creepers, Shrubs							
64.00	<b>Operation &amp; Maintenance for 1st Year:</b> Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)	Cum	1	10	0.196		1.96	0.50%
65.00	SHRUBS: Supply and Stacking of Shrubs Operation & Maintenance for 1st Year: Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)	Nos.	10.00				10.00	22.22%
66.00	Operation & Maintenance for 1st Year: Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in form (Non SOR Item)	Nos.	20.00				20.00	19.42%
67.00	<b>Operation &amp; Maintenance for 1st Year:</b> Pandanus variegted'gold ' 300mm ht , 300mm c/c in triangulation , with 4-5 fronds (Non SOR Item)	Nos.	330.00				330.00	20.01%

Sr.No.	Specification	Unit	No.	L	В	D	Qty.	Actual %
68.00	<b>Operation &amp; Maintenance for 1st Year:</b> Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of landscape architect/PMC (Non SOR Item)		4.00				4.00	22.22%
69.00	<b>Operation &amp; Maintenance for 1st Year:</b> Ficus blackenia, c/c: 600m, must be bushy and multibranched(atleast 3), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	4.00				4.00	25.00%
70.00	<b>Operation &amp; Maintenance for 1st Year:</b> Nerium oleander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	4.00				4.00	21.05%
	TURF							
71.00	Operation & Maintenance for 1st Year: ZOYSIA JAPONICA ( MAT) (Non SOR Item)	Sqm	1	20	2.05		41.00	50.33%
	IRRIGATION							
72.00	Operation & Maintenance for 1st Year: Watering with tanker to landscape area and plants for one year							
73.00	<b>Operation &amp; Maintenance for 1st Year:</b> supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	1	10	0.6		6.00	2.24%

Assistant Engineer MSCL Mangaluru

Executive Engineer MSCL Mangaluru

## Name of the Work :- Mangalore Smart City 3.10.2 Maintenance of 1st Year - Rate Analysis of Road & Other Work for Loop Road

	Operation & Maintenance for 1st Year:			
	Taking out existing CC interlocking paver blocks from footpath/			
1	etc., disposal of unserviceable material to the dumping ground, fo			
	and stacking of serviceable material within 50 metre lead as attached)	per aire	ction of Engineer	-In-Charge.( RA
	Basic rate		68.16	
	O&M 1st year escalation of 4%		2.73	
		Rate	70.89	
	Operation & Maintenance for 1st Year:			
	KSRRB M200.Dismantling of cement concrete pavement b			
2	tools, breaking to pieces not exceeding 0.02 cum in volume and disposal of dismantled material stacking serviceble and unservice			
	specifications.MORTH specification No.202.(Including transportir			
	5km-Extra)	ig onlarge	so,loading and an	loading for load
	Basic rate	I	899	
	O&M 1st year escalation of 4%		35.96	
	Add 10% For area weightage (Mangalore City)		93.5	
		Rate	1028.46	Cum
	Operation & Maintenance for 1st Year:			
3	KSRRB M200-Dismantaling of kerb Stone and Channel KSRRB M			
	means and disposal of dismantled materials with all lifts and comp Specification No.202.	lete as pe	er specifications.iv	IORTH
	Basic rate		12.00	
	O&M 1st year escalation of 4%		0.48	
	Add 10% For area weightage (Mangalore City)		1.25	
		Rate	13.73	Rmt
	Operation & Maintenance for 1st Year:			
	KSRRB M200-13.1. Dismantling of existing structures like cu			walls and other
			rk including T2D	and coaffolding
4	structure comprising of masonry, cement concrete, wood work, wherever necessary sorting the dismantled material disposal of			
4	wherever necessary, sorting the dismantled material, disposal c	of unservi	iceable material a	and stacking the
4		of unservi is. II. By	iceable material a / Mechanical Mea	and stacking the ans. A. Cement
4	wherever necessary, sorting the dismantled material, disposal c serviceable material with all lifts complete as per specification	of unservi is. II. By	iceable material a / Mechanical Mea	and stacking the ans. A. Cement
4	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4%	of unservi is. II. By	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6	and stacking the ans. A. Cement No.137)
4	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate	of unservi is. II. By VD SOR	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56	and stacking the ans. A. Cement No.137)
4	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4%	of unservi is. II. By	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6	and stacking the ans. A. Cement No.137)
4	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City)	of unservi is. II. By VD SOR	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56	and stacking the ans. A. Cement No.137)
4	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 1st Year:	of unservi s. II. By VD SOR Rate	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 <b>446.16</b>	and stacking the ans. A. Cement No.137) Cum
	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 1st Year: KSRRB M200-12.1. Dismantling of existing structures like cu	of unservi s. II. By VD SOR Rate Iverts, br	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining	and stacking the ans. A. Cement No.137) Cum walls and other
4	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 1st Year:	of unservi s. II. By VD SOR Rate Iverts, br steel wo	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining r rk, including T&P	and stacking the ans. A. Cement No.137) Cum walls and other and scaffolding
	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications.	of unservi s. II. By VD SOR Rate Iverts, br steel wo	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining r rk, including T&P	and stacking the ans. A. Cement No.137) Cum walls and other and scaffolding
	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of	of unservi s. II. By VD SOR Rate Iverts, br steel wo	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining r rk, including T&P	and stacking the ans. A. Cement No.137) Cum walls and other and scaffolding
	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications.	of unservi s. II. By VD SOR Rate Iverts, br steel wo	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining v rk, including T&P iceable material a 351	and stacking the ans. A. Cement No.137) Cum walls and other and scaffolding and stacking the
	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar Basic rate O&M 1st year escalation of 4%	of unservi s. II. By VD SOR Rate Iverts, br steel wo	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining v rk, including T&P iceable material a 351 14.04	and stacking the ans. A. Cement No.137) Cum walls and other and scaffolding and stacking the
	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar Basic rate	of unservi s. II. By VD SOR Rate Iverts, br steel wo of unservi	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 ridges, retaining r rk, including T&P iceable material a 351 14.04 36.5	and stacking the ans. A. Cement No.137) Cum walls and other and scaffolding and stacking the
	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar Basic rate O&M 1st year escalation of 4%	of unservi s. II. By VD SOR Rate Iverts, br steel wo	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining v rk, including T&P iceable material a 351 14.04	and stacking the ans. A. Cement No.137) Cum walls and other and scaffolding and stacking the
	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 1st Year: KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar Basic rate O&M 1st year escalation of 4% Add 10% For area weightage	of unservi s. II. By VD SOR Rate Iverts, br steel wo of unservi	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 ridges, retaining r rk, including T&P iceable material a 351 14.04 36.5	and stacking the ans. A. Cement No.137) Cum walls and other and scaffolding and stacking the
	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 1st Year: KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar Basic rate O&M 1st year escalation of 4% Add 10% For area weightage Operation & Maintenance for 1st Year:	of unservi s. II. By VD SOR Rate Iverts, br steel wo of unservi	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 ridges, retaining v rk, including T&P iceable material a 351 14.04 36.5 401.54	And stacking the ans. A. Cement No.137) Cum walls and other and scaffolding and stacking the Cum Cum
	<ul> <li>wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification. Concrete Grade M-15 &amp;M-20. MORTH Specification No. 202 (KPV Basic rate</li> <li>O&amp;M 1st year escalation of 4%</li> <li>Add 10% For area weightage (Mangalore City)</li> </ul> Operation & Maintenance for 1st Year: KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. <ul> <li>i)Dismantaling Brick/Tile work B.In Cement mortar</li> <li>Basic rate</li> <li>O&amp;M 1st year escalation of 4%</li> <li>Add 10% For area weightage</li> </ul> Operation & Maintenance for 1st Year: KSRRB M300-14. Excavation for roadwork in all types of soil by	of unservi s. II. By VD SOR Rate Iverts, br steel wo of unservi Rate Rate	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining v rk, including T&P iceable material a 351 14.04 36.5 401.54 nical means include	And stacking the ans. A. Cement No.137) Cum Walls and other and scaffolding and stacking the Cum Cum
	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 1st Year: KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar Basic rate O&M 1st year escalation of 4% Add 10% For area weightage Operation & Maintenance for 1st Year: KSRRB M300-14. Excavation for roadwork in all types of soil by loading to tippers, trimming bottom and side slopes, in accordar cross sections, and transportation with a lead of 1.00 km and com	of unservi s. II. By VD SOR Rate Iverts, br steel wo of unservi Rate Rate	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining v rk, including T&P iceable material a 351 14.04 36.5 401.54 hical means includ requirements of li	And stacking the ans. A. Cement No.137) Cum walls and other and scaffolding and stacking the Cum Cum
5	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 1st Year: KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar Basic rate O&M 1st year escalation of 4% Add 10% For area weightage Operation & Maintenance for 1st Year: KSRRB M300-14. Excavation for roadwork in all types of soil by loading to tippers, trimming bottom and side slopes, in accordar cross sections, and transportation with a lead of 1.00 km and com MORTH Specification No.301	of unservi s. II. By VD SOR Rate Iverts, br steel wo of unservi Rate Rate	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining v rk, including T&P iceable material a 351 14.04 36.5 401.54 hical means includ requirements of li	And stacking the ans. A. Cement No.137) Cum walls and other and scaffolding and stacking the Cum Cum
5	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 1st Year: KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar Basic rate O&M 1st year escalation of 4% Add 10% For area weightage Operation & Maintenance for 1st Year: KSRRB M300-14. Excavation for roadwork in all types of soil by loading to tippers, trimming bottom and side slopes, in accordar cross sections, and transportation with a lead of 1.00 km and com	of unservi s. II. By VD SOR Rate Iverts, br steel wo of unservi Rate Rate	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining v rk, including T&P iceable material a 351 14.04 36.5 401.54 hical means includ requirements of li	And stacking the ans. A. Cement No.137) Cum walls and other and scaffolding and stacking the Cum Cum
5	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar Basic rate O&M 1st year escalation of 4% Add 10% For area weightage <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-14. Excavation for roadwork in all types of soil by loading to tippers, trimming bottom and side slopes, in accordar cross sections, and transportation with a lead of 1.00 km and com MORTH Specification No.301 (KSRRB 18-19,Page No 143,SI No : 19.14)	of unservi s. II. By VD SOR Rate Iverts, br steel wo of unservi Rate Rate	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining v rk, including T&P iceable material a 351 14.04 36.5 401.54 hical means include requirements of lipper specifications.	And stacking the ans. A. Cement No.137) Cum walls and other and scaffolding and stacking the Cum Cum
5	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 1st Year: KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar Basic rate O&M 1st year escalation of 4% Add 10% For area weightage Operation & Maintenance for 1st Year: KSRRB M300-14. Excavation for roadwork in all types of soil by loading to tippers, trimming bottom and side slopes, in accordar cross sections, and transportation with a lead of 1.00 km and com MORTH Specification No.301 (KSRRB 18-19,Page No 143,SI No : 19.14)	of unservi s. II. By VD SOR Rate Iverts, br steel wo of unservi Rate Rate	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining v rk, including T&P iceable material a 351 14.04 36.5 401.54 hical means includ requirements of lipper specifications.	And stacking the ans. A. Cement No.137) Cum Walls and other and scaffolding and stacking the Cum Cum Cum Cum Cum Cum Cum Cum Cum Cum
5	wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specification Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV Basic rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M200-12.1. Dismantling of existing structures like cu structure comprising of masonary, cement concrete, woodwork, wherever necessary, sorting the dismantled material, disposal of serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar Basic rate O&M 1st year escalation of 4% Add 10% For area weightage <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-14. Excavation for roadwork in all types of soil by loading to tippers, trimming bottom and side slopes, in accordar cross sections, and transportation with a lead of 1.00 km and com MORTH Specification No.301 (KSRRB 18-19,Page No 143,SI No : 19.14)	of unservi s. II. By VD SOR Rate Iverts, br steel wo of unservi Rate Rate	iceable material a / Mechanical Mea 18-19,18.20,Page 390 15.6 40.56 446.16 idges, retaining v rk, including T&P iceable material a 351 14.04 36.5 401.54 hical means include requirements of lipper specifications.	And stacking the ans. A. Cement No.137) Cum Walls and other and scaffolding and stacking the ding cutting and nes, grades and

		Rate	46.90	Cum
	Operation & Maintenance for 1st Year:			
7	KSRB 2-4 : Refilling available earth around pipe lines, cables			
7	compacting each deposited layer by ramming after watering with le			1.5 m. including
	cost of all labour complete as per specifications.(KPWD 18-19,SI N	lo.2.11,P	'g. No.6)	
	Basic rate		120	
	O&M 1st year escalation of 4%		4.8	
	Add 10% For area weightage (Mangalore City)		12.48	
		Rate	137.28	
		Trate	107.20	oum
	Operation & Maintenance for 1st Year:			
	KSRRB 300-Compaction KSRRB 300-58. Compaction of original g	iround wi	th maximum of 6 i	passes of 8 to
8	10 tonnes power roller including filling in depression occuring durin			
	of machinery complete as per specifications. MORTH / Chapter 3.(			
				· g
	Basic rate		6	
	O&M 1st year escalation of 4%		0.24	
	Add 10% For area weightage (Mangalore City)	Data	0.62	0
		Rate	6.86	Sqm
	Operation & Maintenance for 1st Year:			
	KSRB 4-1.7 : Providing and laying in position plain cement co			
9	220kgs, with 20mm and down size graded granite metal coarse ag			
0	0.56cum, machine mixed, concrete laid in layers not exceeding 15			
	plinth and cills, ncluding cost of all materials, labour, HOM			omplete as per
	specifications. Specification No. KBS 4.1, 4.2(KPWD 18-19,SI.No.4	4.7,Page	No.13)	
	Basic Rate		5770	
	O&M 1st year escalation of 4%		230.8	
	Add 10% For area weightage (Mangalore City)		600.08	
		Rate	6600.88	
	Operation & Maintenance for 1st Year:			
	Construction of granular sub-base Grading-Vas Sub-base and c	Irainage	layer by providing	g coarse graded
	crushed stone aggregates of granite/ trap/basalt material, mix	ing in a	mechanical mix	plant at OMC,
10	Carriage of mixed material to work site, spreading in uniform laye	ers with r	motor grader on p	repared surface
	and compacting with vibratory power roller to achieve the	98% pr	octor density, co	omplete as per
	specifications. Clause 401 of MORTH V Revision.			
	(KSRRB 18-19,P.No.153, SI.No.20.4)			
	Basic Rate		2166	
	O&M 1st year escalation of 4%		86.64	
	Add 10% For area weightage (Mangalore City)		225.26	
		Rate	2477.90	
	Operation & Maintenance for 1st Year:			
	KSRB 4.2.1 : Providing and laying in position reiforcement ceme	ent concr	ete of design Mix	M25 with OPC
	cement @340Kgs,with 20mm and down size graded granite meta			
				' cum with super
11	plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008		00 0	
	plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 not exceeding 15cms thick, vibrated for all works in foundation fo	8 at mac	hine mixed,concre	ete laid in layers
1	not exceeding 15cms thick, vibrated for all works in foundation fo	8 at mac r footings	hine mixed,concre s, pedastals, retai	ete laid in layers ning walls,return
	not exceeding 15cms thick, vibrated for all works in foundation fo walls, walls (any thickness) including attached pilasters, colum	8 at mac r footings nnspillars	hine mixed,concre s, pedastals, retai s, posts, struts,	ete laid in layers ning walls,return buttresses, bed
	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colum blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of	8 at mac r footings nnspillars	hine mixed,concre s, pedastals, retai s, posts, struts,	ete laid in layers ning walls,return buttresses, bed
	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colum blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of cost of reinforcement as per specifications.	8 at mac r footings nnspillars	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple	ete laid in layers ning walls,return buttresses, bed
	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colum blocks,anchor blocks & plinths etc.,Including cost of labour,HOM c cost of reinforcement as per specifications. Basic Rate	8 at mac r footings nnspillars	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple 6198	ete laid in layers ning walls,return buttresses, bed
	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colun blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of cost of reinforcement as per specifications. Basic Rate O&M 1st year escalation of 4%	8 at mac r footings nnspillars	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple 6198 247.92	ete laid in layers ning walls,return buttresses, bed ete but excluding
	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colum blocks,anchor blocks & plinths etc.,Including cost of labour,HOM c cost of reinforcement as per specifications. Basic Rate	8 at mac r footings nnspillars of machir	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple 6198 247.92 644.59	ete laid in layers ning walls,return buttresses, bed ete but excluding
	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colun blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of cost of reinforcement as per specifications. Basic Rate O&M 1st year escalation of 4%	8 at mac r footings nnspillars	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple 6198 247.92	ete laid in layers ning walls,return buttresses, bed ete but excluding
	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colum blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of cost of reinforcement as per specifications. Basic Rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City)	8 at mac r footings nnspillars of machir	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple 6198 247.92 644.59	ete laid in layers ning walls,return buttresses, bed ete but excluding
	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colum blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of cost of reinforcement as per specifications. Basic Rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 1st Year:	3 at mac r footings nnspillars of machir Rate	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple 6198 247.92 644.59 <b>7090.51</b>	ete laid in layers ning walls,return buttresses, bed ete but excluding
	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colum blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of cost of reinforcement as per specifications. Basic Rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRB 4.6.1 Providing and removing centering, shuttering, struttir	3 at mac r footings nnspillars of machir <b>Rate</b> ng, propp	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple 6198 247.92 644.59 <b>7090.51</b> hing etc.,and remo	ete laid in layers ning walls,return buttresses, bed ete but excluding Cum
12	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colum blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of cost of reinforcement as per specifications. Basic Rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRB 4.6.1 Providing and removing centering, shuttering, struttir for foundations, footings, bases of columns for mass concrete inc	3 at mac r footings nnspillars of machir <b>Rate</b> ng, propp	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple 6198 247.92 644.59 <b>7090.51</b> hing etc.,and remo	ete laid in layers ning walls,return buttresses, bed ete but excluding Cum
12	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colum blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of cost of reinforcement as per specifications. Basic Rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRB 4.6.1 Providing and removing centering, shuttering, struttir for foundations, footings, bases of columns for mass concrete inc as per specifications.	3 at mac r footings nnspillars of machir <b>Rate</b> ng, propp	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple 6198 247.92 644.59 <b>7090.51</b> hing etc.,and remo	ete laid in layers ning walls,return buttresses, bed ete but excluding Cum
12	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colum blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of cost of reinforcement as per specifications. Basic Rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 1st Year: KSRB 4.6.1 Providing and removing centering, shuttering, struttir for foundations, footings, bases of columns for mass concrete inc as per specifications. Specification No. KSB 4.6.2	3 at mac r footings nnspillars of machir <b>Rate</b> ng, propp	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple 6198 247.92 644.59 <b>7090.51</b> hing etc.,and remo st of all materials,	ete laid in layers ning walls,return buttresses, bed ete but excluding <b>Cum</b> oval of formwork labour complete
12	not exceeding 15cms thick, vibrated for all works in foundation fo walls,walls (any thickness) including attached pilasters, colum blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of cost of reinforcement as per specifications. Basic Rate O&M 1st year escalation of 4% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 1st Year:</b> KSRB 4.6.1 Providing and removing centering, shuttering, struttir for foundations, footings, bases of columns for mass concrete inc as per specifications.	3 at mac r footings nnspillars of machir <b>Rate</b> ng, propp	hine mixed,concre s, pedastals, retai s, posts, struts, hery,curing,comple 6198 247.92 644.59 <b>7090.51</b> hing etc.,and remo	ete laid in layers ning walls,return buttresses, bed ete but excluding Cum oval of formwork labour complete

	Add 10% For area weightage (Mangalore City)		27.35					
		Rate	300.87	Sqm				
13	<b>Operation &amp; Maintenance for 1st Year:</b> KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work inc straighting,cutting,bending,hooking,placing in position,lapping and/ binding wire and anchoring to thr adjoing members wherever nece and wastage shall not be measured and paid) cost of materials,lab specifications.Specification No. KBS4.6.3. do with TMT bars Fe500	or weldin ssary cor	nplete as per desi	gn (laps,hooks				
	Basic Rate		70782					
	O&M 1st year escalation of 4%		2831.28					
			7361.33					
	Add 10% For area weightage (Mangalore City)	Data	80974.61					
		Rate	00974.01					
14	<ul> <li>Operation &amp; Maintenance for 1st Year:</li> <li>KSRRB M300- Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges &amp; compaction by vibratory roller to 95% or proctors density) MORTH Specification No. 305</li> </ul>							
	Basic Rate		489					
	O&M 1st year escalation of 4%		19.56					
	Add 20km lead (17.4 KSRRB M100-4.1-Cost of haulage excluding loading and unloading MORTH-100/Chapter 1-case 1- Surface Road)=2.0 Rs/ Tkm x 1.28 T x 20km		51.2					
	Sub Total		559.76					
	Add 10% For area weightage (Mangalore City)		55.98					
		Rate	615.74	Cum				
15	KSRRB M600-1.Providing and Constructing dry lean cement cond and down size graded granite metal coarse aggregate at 0.86cu prepared sub-base, coarse and fine aggregate conforming to IS exceed 15:1, Aggregate gradation after blending to be as per Ta determined during trial length construction, concrete strength no in a batching plant, transported to site, laid with a paver, com finishing and curing complete as per specifications. Clause 601of MORTH V Revision and IS 456 Table-5 -do- with OPC at 150 kg/cum and coarse aggregate 0.86cum, fine mix Plant at 75 cum/hr capacity with Slip form paver with electronic (KSRRB 18-19,Page No 174,SI No : 22.1.1)	um and f S: 383-20 ble 600-1 bt to be le upacting e aggrega	ine aggregates @ 16,aggregate cen ,optimum moistu ess than 10 Mpa a with 8-10 tonnes	20.58cum over a nent ratio not to re content to be at 7 days, mixed vibratory roller,				
	Basic Rate		4048					
	O&M 1st year escalation of 4%		161.92					
	Add 10% For area weightage (Mangalore City)		420.99					
		Rate	4630.91					
	1		* -					
16	<b>Operation &amp; Maintenance for 1st Year</b> : KSSRRB M600-2.Construction of unreinforced,dowel jointed,p prepared sub base with 25mm and down size graded granite meta 3 Its confirming to IS9103-1999 reaffirmed 2008(Coarse and fine a batching and mixing plant as per approved mix design,transporte paver spread,compacted and finished in a continuos operation in construction and longitudinal joints,including groove cutting ch sealent primer, joints sealant, debonding strip, dowel bars at 4.5m curing compound,finishing to lines and grades as per drawing specification No.602.do with M40 (420Kg per cum Cement,C.A,0.6 (Page No 176,SI No : 22.2.2)	al coarse aggregate ed to site, ncluding p nrges, joi intervals g comple	aggregate with su e conforming to IS laid with a fixed for provision of contra ints filler,separation the rod, admixtur te as per sprcifio	uperplastisizer at :383) mixed in a orm or slip form action, expansio, on memberane, res as approved,				
16	KSSRRB M600-2.Construction of unreinforced,dowel jointed,p prepared sub base with 25mm and down size graded granite meta 3 Its confirming to IS9103-1999 reaffirmed 2008(Coarse and fine a batching and mixing plant as per approved mix design,transporte paver spread,compacted and finished in a continuos operation in construction and longitudinal joints,including groove cutting ch sealent primer, joints sealant, debonding strip, dowel bars at 4.5m curing compound,finishing to lines and grades as per drawing specification No.602.do with M40 (420Kg per cum Cement,C.A,0.6 (Page No 176,SI No : 22.2.2)	al coarse aggregate ed to site, ncluding p nrges, joi intervals g comple	aggregate with su e conforming to IS laid with a fixed f provision of contra ints filler,separation tie rod, admixtur te as per sprcific A.044Cum	uperplastisizer at :383) mixed in a orm or slip form action, expansio, on memberane, res as approved, cations MORTH				
16	KSSRRB M600-2.Construction of unreinforced,dowel jointed,p prepared sub base with 25mm and down size graded granite meta 3 Its confirming to IS9103-1999 reaffirmed 2008(Coarse and fine a batching and mixing plant as per approved mix design,transporte paver spread,compacted and finished in a continuos operation in construction and longitudinal joints,including groove cutting ch sealent primer, joints sealant, debonding strip, dowel bars at 4.5m curing compound,finishing to lines and grades as per drawing specification No.602.do with M40 (420Kg per cum Cement,C.A,0.6 (Page No 176,SI No : 22.2.2) Basic Rate	al coarse aggregate ed to site, ncluding p nrges, joi intervals g comple	aggregate with su e conforming to IS laid with a fixed f provision of contra ints filler,separation tie rod, admixtur te as per sprcific A.044Cum	uperplastisizer at :383) mixed in a orm or slip form action, expansio, on memberane, res as approved, cations MORTH				
16	KSSRRB M600-2.Construction of unreinforced,dowel jointed,p prepared sub base with 25mm and down size graded granite meta 3 Its confirming to IS9103-1999 reaffirmed 2008(Coarse and fine a batching and mixing plant as per approved mix design,transporte paver spread,compacted and finished in a continuos operation in construction and longitudinal joints,including groove cutting ch sealent primer, joints sealant, debonding strip, dowel bars at 4.5m curing compound,finishing to lines and grades as per drawing specification No.602.do with M40 (420Kg per cum Cement,C.A,0.6 (Page No 176,SI No : 22.2.2) Basic Rate O&M 1st year escalation of 4%	al coarse aggregate ed to site, ncluding p nrges, joi intervals g comple	aggregate with su e conforming to IS laid with a fixed f provision of contra ints filler,separation te as per sprcific A.044Cum 5765 230.6	uperplastisizer at :383) mixed in a orm or slip form action, expansio, on memberane, res as approved, cations MORTH				
16	KSSRRB M600-2.Construction of unreinforced,dowel jointed,p prepared sub base with 25mm and down size graded granite meta 3 Its confirming to IS9103-1999 reaffirmed 2008(Coarse and fine a batching and mixing plant as per approved mix design,transporte paver spread,compacted and finished in a continuos operation in construction and longitudinal joints,including groove cutting ch sealent primer, joints sealant, debonding strip, dowel bars at 4.5m curing compound,finishing to lines and grades as per drawing specification No.602.do with M40 (420Kg per cum Cement,C.A,0.6 (Page No 176,SI No : 22.2.2) Basic Rate	al coarse aggregate ed to site, ncluding p nrges, joi intervals g comple	aggregate with su e conforming to IS laid with a fixed f provision of contra ints filler,separation tie rod, admixtur te as per sprcific A.044Cum	uperplastisizer at :383) mixed in a orm or slip form action, expansio, on memberane, res as approved, cations MORTH				

17	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and placing joint sealant compound of cold polysulphide required width, sand blasting the groove face if recommended groove with air compressor, insertion of debonding strip, primi manufacturer recommends and pouring the sealant all complete in (Non SOR Item)	by the sea ing the side	alant manufactur es of the seala	er, cleaning the nt if the sealant					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.2		115						
	O&M 1st year escalation of 4%		4.6						
		Rate	119.6						
18	Operation & Maintenance for 1st Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Page No 257,SI No : 35.8)								
	Basic Rate		331						
	O&M 1st year escalation of 4%		13.24						
	Add 10% For area weightage (Mangalore City)		34.42						
		Rate	378.66	Rmt					
	Operation & Maintenance for 1st Year:								
19	Providing and laying at or near ground level factory made kerk position to the required line, level and curvature, jointed with cer including making joints with or without grooves (thickness of join than 5mm), including making drainage opening wherever required in-charge (length of finished kerb edging shall be measured for pa (Precast C.C. kerb stone shall be approved by Engineer-in-charge Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)	nent mortar nts except a d complete a ayment).	r 1:3 (1 cement: at sharp curve s	3 coarse sand), hall not to more					
	Rate Arrived as per Rate analysis								
	Basic Rate		1806						
	O&M 1st year escalation of 4%		72.24						
		Rate	1878.24	Nos					
20	Operation & Maintenance for 1st Year: Providin and fixing pre cast solid concrete Kerb stones made out and 165mm respectively,400mm high and 450mm in length fin cutting, including cost of all materials,labour,hire charges lift,transportation etc.,complete Basic rate	ished with	CM 1:3 Plasteri nery,loading,unlo 421	ng and finishing pading,lead and					
	O&M 1st year escalation of 4%		16.84						
	Add 10% For area weightage		43.78						
		Rate	481.62	NOS.					
21	Operation & Maintenance for 1st Year: Removing and resetting of kerb stones. including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.								
	Basic rate		98						
	O&M 1st year escalation of 4%		3.92						
	Add 10% For area weightage		10.19						
		Rate	112.11	Nos.					
22	<b>Operation &amp; Maintenance for 1st Year:</b> KSRRB 800-1. Painting two coats after filling the surface with symmetry plastered concrete surfaces, with materials, labour complete (Page No 182,SI No : 24.1)								

Deak Native         00           OAM 1st year escalation of 4%         3.2           Add 10% For area weightage (Mangalore City)         8.32           PF Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)         8.32           Rate Arrived as per Rate analysis         917           Ogenation & Maintenance for 1st Year:         917           O&M 1st year escalation of 4%         36.68           Operation & Maintenance for 1st Year:         917           O&M 1st year escalation of 4%         36.68           Operation & Maintenance for 1st Year:         953.68           Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR tiem)           Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15         3500.00           OAM 1st year escalation of 4%         140           Operation & Maintenance for 1st Year:         3500.00           Providing gully pipe lowering,Jaying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawing/design and hydraulically testing of the pipe line. The rate shall include a jointing materials, lesting aparatus and water for test g etc as directed by the Engineer in charge (page No.41), term No.7, KUWSDB SOR 2016-17)           Basic Rate         297           OAM 1st year escalation of 4%         11.88           Add 12%, on Labor Charges-R		Basic Rate		20	
Add 10% For area weightage (Mangalore City)       8.32         Add 10% For area weightage (Mangalore City)       Rate       91.52       Sqm         Operation & Maintenance for 1st Year:       91.52       Sqm         PF Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis strached)       91.71         Rate Arrived as per Rate analysis       91.71         Basic Rate       91.71         Og&M 1st year escalation of 4%       36.68         Operation & Maintenance for 1st Year:       953.68         Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer       3500.00         Sr.No.15       140         Operation & Maintenance for 1st Year:       90.400         Providing gully pipe lowering,Jaying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicately and grad grading with 0250 SOR 2016-17)         Basic Rate       249         Operation & Maintenance for 1st Year:         Providing gully pipe lowering,Jaying of PVC 1000 mm dia pipes to the required alignments including specials and grade as indicately and motor proveing and hydraulically testing of the pipe line.The rate shall include al jointing materials,testing apparatus and water for testing of the pipe line.The rate shall include al jointing materials,testing apparatus and water for testing of the pipe line.The rate shall	-			80	
Rate         91.52         Sqm           Operation & Maintenance for 1st Year: (Rate analysis attached)         P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)           Rate Arrived as per Rate analysis         917           OsM 1st year escalation of 4%         917           OsM 1st year escalation of 4%         836.68           Operation & Maintenance for 1st Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ducible Iron (NON SOR Item)           Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15         3500.00           OAM 1st year escalation of 4%         840           Quart of a maintenance for 1st Year: Providing gully pipe Iowering,Iaying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include a jointing materials,testing apparatus and water for test ig etc as directed by the Engineer in charge (page No 41, Item No.7, KUWSDB SOR 2016-17)           Basic Rate         00           Operation & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16.P. No.86, SI.No.12.89)           Basic Rate         00           Operation & Maintenance for 1st Year: KSRB M800: C				3.2	
Rate         91.52         Sqm           Operation & Maintenance for 1st Year: (Rate analysis attached)         P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)           Rate Arrived as per Rate analysis         917           OsM 1st year escalation of 4%         917           OsM 1st year escalation of 4%         836.68           Operation & Maintenance for 1st Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ducible Iron (NON SOR Item)           Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15         3500.00           OAM 1st year escalation of 4%         840           Quart of a maintenance for 1st Year: Providing gully pipe Iowering,Iaying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include a jointing materials,testing apparatus and water for test ig etc as directed by the Engineer in charge (page No 41, Item No.7, KUWSDB SOR 2016-17)           Basic Rate         00           Operation & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16.P. No.86, SI.No.12.89)           Basic Rate         00           Operation & Maintenance for 1st Year: KSRB M800: C		Add 10% For area weightage (Mangalore City)		8.32	
Operation & Maintenance for 1st Year:           23         P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)           Rate Arrived as per Rate analysis         917           Basic Rate         917           Q&M 1st year escalation of 4%         86.68           Operation & Maintenance for 1st Year:         953.68           Operation & Maintenance for 1st Year:         0           Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron . Ductile Iron (NON SOR Item)         8           Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15         3500.00           Q&M 1st year escalation of 4%         140           Quarticle Iron (INON SOR Item)         Rate           Qadd grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials.testing apparatus and water for testi g et as directed by the Engineer in charge (page No.41 (them No.7.KUVSDB SOR 2016-17)           Basic Rate         297           QAM 11.88         Add 12% on Labor Charges=Rs.47.For area weightage (Mangalore City)         Rate         314.52 Rm           Qperation & Maintenance for 1st Year:         830         33.2         Add 10% For area weightage (Mangalore City)         83.2           Add 12% on Labor Charges=Rs.47.For area weightage         5.64         11.88         Add 12% on Labor Charg			Rate	91 52	Sam
23       P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)         Rate Arrived as per Rate analysis       917         Basic Rate       917         O&M fst year escalation of 4%       36.68         Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15       3500.00         Sr.No.15       Rate 3664.00         Operation & Maintenance for 1st Year:       140         Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials       and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials.testing apparatus and water for test ig etc as directed by the Engineer in charge (page No.41).tem No.7,KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges-Rs.47,For area weightage       5.64         (Mangalore City)       Rate       314.52         Rate       33.2         Add 10% For area weightage (Mangalore City)       63.01         Coperation & Maintenance for 1st Year:       KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without went arm including cutting and making good the walls and floors, cost			Nate	51.52	oqiii
23       P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)         Rate Arrived as per Rate analysis       917         Basic Rate       917         O&M fst year escalation of 4%       36.68         Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15       3500.00         Sr.No.15       Rate 3664.00         Operation & Maintenance for 1st Year:       140         Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials       and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials.testing apparatus and water for test ig etc as directed by the Engineer in charge (page No.41).tem No.7,KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges-Rs.47,For area weightage       5.64         (Mangalore City)       Rate       314.52         Rate       33.2         Add 10% For area weightage (Mangalore City)       63.01         Coperation & Maintenance for 1st Year:       KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without went arm including cutting and making good the walls and floors, cost					
(Rate analysis attached)         Rate Arived as per Rate analysis         Basic Rate       917         OkM 1st year escalation of 4%       Rate         Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer S.No.15         Operation & Maintenance for 1st Year:         Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer S.No.15         Operation & Maintenance for 1st Year:         Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include a jointing materials.testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage       5.64         (Mangalore City)       Rate       314.52 Rm         Operation & Maintenance for 1st Year:       Rate       33.0         Operation & Maintenance for 1st Year:       83.0       83.0         (Mangalore City)       83.2       83.0         Operation & Maint		Operation & Maintenance for 1st Year:			
(Rate analysis attached)         Rate Arived as per Rate analysis         Basic Rate       917         OkM 1st year escalation of 4%       Rate         Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer S.No.15         Operation & Maintenance for 1st Year:         Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer S.No.15         Operation & Maintenance for 1st Year:         Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include a jointing materials.testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage       5.64         (Mangalore City)       Rate       314.52 Rm         Operation & Maintenance for 1st Year:       Rate       33.0         Operation & Maintenance for 1st Year:       83.0       83.0         (Mangalore City)       83.2       83.0         Operation & Maint	23	P/F Square shape 600mmx450 mm precast R.C.C. manhole cover	r with frar	me	
Rate Arrived as per Rate analysis       917         Basic Rate       917         O&M Ist year escalation of 4%       36.68         Operation & Maintenance for 1st Year:       953.68         Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron . Ductile Iron .       1000         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15       3500.00         OPeration & Maintenance for 1st Year:       7000         Providing gully pipe lowering,Javing of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawing/design and hydraulically testing of the pipe line. The rate shall include at a fact as a directed in drawing/design and hydraulically testing of the pipe line. The rate shall include at a fact as a directed in drawing/design and hydraulically testing of the pipe line. The rate shall include at a fact as indicated in drawing/design and hydraulically testing of the pipe line. The rate shall include at a fact as a directed in drawing design with a stream escalation of 4%       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges–Rs.47. For area weightage       5.64         (Mangalore City)       Rate 314.52         Coperation & Maintenance for 1st Year:       KSRB 11.18.17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cuting and making good the walls and floors, cost of materials, labour, testing, complete as perespecifications No. KBS 11.1.10.	_				
Basic Rate       917         O&M 1st year escalation of 4%       36.68         Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron.         Ductile Iron       Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer       3500.00         Sr.No.15       140         Operation & Maintenance for 1st Year:       140         Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials         2and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al ioniting materials, testing apparatus and water for testi g etc as directed by the Engineen charge (page No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         O&&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage       5.64         (Mangalore City)       Rate       314.52 Rm         Operation & Maintenance for 1st Year:       KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screed down on hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16, P. No.86, S1.No.12.89)         Basic Rate       830       0&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore Cit					
O&M 1st year escalation of 4%         36.68           Operation & Maintenance for 1st Year:         Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron. Ductile Iron           24         Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron. Ductile Iron           NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         3500.00           Sr.No.15         140         140           Oberation & Maintenance for 1st Year:         Providing gully pipe lowering,laving of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)           Basic Rate         297           O&M 1st year escalation of 4%         11.88           Add 12% on Labor Charges=Rs.47, For area weightage         5.64           (Mangalore City)         Rate         314.52           Coperation & Maintenance for 1st Year:         KSRB 11-18.17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including outting and making good the walls and floors, cost of materials, labour, testing, complete as persectifications. Resection on No. KBS 11.1.10.           (PVD SR 2015-16, P.No.86, SI.No.12.89)         83.32           O					
Rate         953.68         Nos.           Operation & Maintenance for 1st Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)           Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15         3500.00           O&&M 1st year escalation of 4%         140           Providing gully pipe lowering,Iaying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line.The rate shall include a jointing materials testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41,Item No.7 KUWSDB SOR 2016-17)           Basic Rate         297           O&&M 1st year escalation of 4%         11.88           Add 12% on Labor Charges=Rs.47,For area weightage (Mangalore City)         5.64           Mangalore City)         Rate         314.52           Rm         0         33.2           OPeration & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)           Basic Rate         830         33.2           Add 10% For area weightage (Mangalore City)         86.32           Add 10% For area weightage (Mangalore City) <td></td> <td>Basic Rate</td> <td></td> <td></td> <td></td>		Basic Rate			
Rate         953.68         Nos.           Operation & Maintenance for 1st Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)           Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15         3500.00           O&&M 1st year escalation of 4%         140           Providing gully pipe lowering,Iaying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line.The rate shall include a jointing materials testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41,Item No.7 KUWSDB SOR 2016-17)           Basic Rate         297           O&&M 1st year escalation of 4%         11.88           Add 12% on Labor Charges=Rs.47,For area weightage (Mangalore City)         5.64           Mangalore City)         Rate         314.52           Rm         0         33.2           OPeration & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)           Basic Rate         830         33.2           Add 10% For area weightage (Mangalore City)         86.32           Add 10% For area weightage (Mangalore City) <td></td> <td>O&amp;M 1st year escalation of 4%</td> <td></td> <td>36.68</td> <td></td>		O&M 1st year escalation of 4%		36.68	
Operation & Maintenance for 1st Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)           Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15         3500.00           O&M 1st year escalation of 4%         140           Operation & Maintenance for 1st Year: Providing gully pipe lowering,Iaying of PVC 100 mm dia pipes to the required alignments including specials and grade as incicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41,Item No.7,KUWSDB SOR 2016-17)           Basic Rate         297           O&M 1st year escalation of 4%         11.88           Add 12% on Labor Charges=Rs.47,For area weightage         5.64           (Mangalore City)         Rate         314.52           Operation & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.           (PW DSR 2015-16, PN.ob.86, SI.N.012.69)         33.2           Add 10% For area weightage (Mangalore City)         86.32           Add 10% For area weightage (Mangalore City)         86.32           Add 10% For area weightage (Mangalore City)         86.32           Add 10% For area			Rate		
24       Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15       3500.00         O&M 1st year escalation of 4%       140         Operation & Maintenance for 1st Year:       Rate 3640.00 Nos.         Operation & Maintenance for 1st Year:       Providing gully pipe lowering Jaying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage       5.64         (Mangalore City)       Rate       314.52         Rm       0         Operation & Maintenance for 1st Year:       KSRB 11-18-17.1: Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 111.10.         (PWD SR 2015-16,P.No.86, SI.No.12.89)       33.2         Add 10% For area weightage (Mangalore City)       86.32         Add 10% For area weightage (Mangalore City)       86.32      <			Mate	500.00	1105.
24       Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron Ductile Iron (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15       3500.00         O&M 1st year escalation of 4%       140         Operation & Maintenance for 1st Year:       Rate 3640.00 Nos.         Operation & Maintenance for 1st Year:       Providing gully pipe lowering Jaying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage       5.64         (Mangalore City)       Rate       314.52         Rm       0         Operation & Maintenance for 1st Year:       KSRB 11-18-17.1: Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 111.10.         (PWD SR 2015-16,P.No.86, SI.No.12.89)       33.2         Add 10% For area weightage (Mangalore City)       86.32         Add 10% For area weightage (Mangalore City)       86.32      <					
24*       Ductile from (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15       3500.00         OS&M 1st year escalation of 4%       140         OBM 1st year escalation of 4%       Rate         Operation & Maintenance for 1st Year: Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7,KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47,For area weightage (Mangalore City)       Rate       314.52         Operation & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications No. KBS 11.10.         (PWD SR 2015-16, P.No.86, SI.No.12.89)       Basic Rate       830         OAM 1st year escalation of 4%       33.2       Add 10% For area weightage (Mangalore City)       86.32         Operation & Maintenance for 1st Year: KSRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm		Operation & Maintenance for 1st Year:			
24*       Ductile from (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15       3500.00         OS&M 1st year escalation of 4%       140         OBM 1st year escalation of 4%       Rate         Operation & Maintenance for 1st Year: Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7,KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47,For area weightage (Mangalore City)       Rate       314.52         Operation & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications No. KBS 11.10.         (PWD SR 2015-16, P.No.86, SI.No.12.89)       Basic Rate       830         OAM 1st year escalation of 4%       33.2       Add 10% For area weightage (Mangalore City)       86.32         Operation & Maintenance for 1st Year: KSRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm		Providing and Fixing Recessed Inception chamber cover - size: (	1250 x 1	250 x 80)mm Mat	erial: Cast Iron /
(NON SOR Item)           Rate Approved as per EOI by MD MSCL Mangalore,Refer         3500.00           Sr.No.15         140           O&M 1st year escalation of 4%         Rate           Operation & Maintenance for 1st Year:         Rate           Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7,KUWSDB SOR 2016-17)           Basic Rate         297           O&M 1st year escalation of 4%         11.88           Add 12% on Labor Charges=Rs.47,For area weightage         5.64           (Mangalore City)         Rate         314.52           Operation & Maintenance for 1st Year:         KSRB 11.18.17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)           Basic Rate         830         33.2           Add 10% For area weightage (Mangalore City)         86.32           Add 10% For area weightage (Mangalore City)         86.32           Add 10% For area weightage (Mangalore City)         86.32           Add 10	24			,	
Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15         3500.00           O&M 1st year escalation of 4%         140           Common C					
Sr.No.15       3300.00         O&M 1st year escalation of 4%       140         Rate       3640.00         Operation & Maintenance for 1st Year:         Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage       5.64         (Mangalore City)       Rate       314.52         Operation & Maintenance for 1st Year:       KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specification Specification No. KBS 11.1.10.         (PWD SR 2015-16, P.No.86, SI.No.12.89)       830         D&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       Rate       949.52         Add 10% For area weightage (Mangalore City)       Rate       949.52         Add 10% For area weightage of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock picees, outer to outer distance of pipe at leas t					
Sr.No.15       140         Q&M 1st year escalation of 4%       140         Rate       3640.00 Nos.         Operation & Maintenance for 1st Year:       Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         Q&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage       5.64         (Mangalore City)       Rate       314.52         Poperation & Maintenance for 1st Year:       KSRB 11.18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.         (PWD SR 2015-16, P.No.86, SI.No.12.89)       Basic Rate       830         Q&M 1st year escalation of 4%       33.2       Add 10% For area weightage (Mangalore City)       Rate         949.52       Nos.       S6.32       S6.32       S6.32         Add 10% For area weightage (Mangalore City)       Rate       949.52       Nos.         277       SRRB M800-Cable Duct Across the road (N				3500.00	
Rate         3640.00         Nos.           Operation & Maintenance for 1st Year: Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41,1tem No.7, KUWSDB SOR 2016-17)           Basic Rate         297           O&M 1st year escalation of 4%         11.88           Add 12% on Labor Charges=Rs.47, For area weightage         5.64           (Mangalore City)         Rate         314.52           Poperation & Maintenance for 1st Year:         KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)         830           Basic Rate         830         3.2           Add 10% For area weightage (Mangalore City)         Rate         949.52           Rate         949.52         Nos.           277         Coperation & Maintenance for 1st Year: KSRB M800- Cable Duct Across the road KSRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (NRB M800-29.1. Providing an laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cu		Sr.No.15		5500.00	
Rate         3640.00         Nos.           Operation & Maintenance for 1st Year: Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41,1tem No.7, KUWSDB SOR 2016-17)           Basic Rate         297           O&M 1st year escalation of 4%         11.88           Add 12% on Labor Charges=Rs.47, For area weightage         5.64           (Mangalore City)         Rate         314.52           Poperation & Maintenance for 1st Year:         KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)         830           Basic Rate         830         3.2           Add 10% For area weightage (Mangalore City)         Rate         949.52           Rate         949.52         Nos.           277         Coperation & Maintenance for 1st Year: KSRB M800- Cable Duct Across the road KSRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (NRB M800-29.1. Providing an laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cu		O&M 1st year escalation of 4%		140	
Operation & Maintenance for 1st Year: Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)           Basic Rate         297           O&M 1st year escalation of 4%         11.88           Add 12% on Labor Charges=Rs.47, For area weightage         5.64           (Mangalore City)         Rate         314.52           Poperation & Maintenance for 1st Year:         KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.           (PWD SR 2015-16, P.No.86, SI.No.12.89)         830         63.2           Basic Rate         830         63.2           Qeration & Maintenance for 1st Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum456 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be aboow higher than gr			Pata		Nec
Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage       5.64         (Mangalore City)       Rate       314.52         Providing gully pipe lowering, laying and fixing sand cast iron trap of 100mm dia, of self cleaning design with strewed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16, P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawing complete as per specification (PWD SR - 1997 and approved drawing complete as per specification (PWD SR - 1997 and approved drawing complete as per specification (PWD SR - 1997 and approved drawing complete as per specifications. Case - 1997 and approved drawing complete as per specification (PWD SR -			Rale	3040.00	NUS.
Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage       5.64         (Mangalore City)       Rate       314.52         Providing gully pipe lowering, laying and fixing sand cast iron trap of 100mm dia, of self cleaning design with strewed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16, P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawing complete as per specification (PWD SR - 1997 and approved drawing complete as per specification (PWD SR - 1997 and approved drawing complete as per specification (PWD SR - 1997 and approved drawing complete as per specifications. Case - 1997 and approved drawing complete as per specification (PWD SR -					
Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage       5.64         (Mangalore City)       Rate       314.52         Providing gully pipe lowering, laying and fixing sand cast iron trap of 100mm dia, of self cleaning design with strewed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16, P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawing complete as per specification (PWD SR - 1997 and approved drawing complete as per specification (PWD SR - 1997 and approved drawing complete as per specification (PWD SR - 1997 and approved drawing complete as per specifications. Case - 1997 and approved drawing complete as per specification (PWD SR -		Operation & Maintenance for 1st Year:			
25       and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include al jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage (Mangalore City)       8 ate         Operation & Maintenance for 1st Year:       KSRB 11.18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.         (PWD SR 2015-16, P.No.86, SI.No.12.89)       Basic Rate       830         OAM 1st year escalation of 4%       33.2       Add 10% For area weightage (Mangalore City)       86.32         Add 10% For area weightage in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1: Single row for one utility service (KPWD SOR 16-17, Item No.24.34, Pg.No.188)         Basic Rate       5022       08.410% For are			the requ	ired alignments in	cluding specials
jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41,tlem No.7,KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47,For area weightage       5.64         (Mangalore City)       Rate       314.52         Rm       0         Operation & Maintenance for 1st Year:       KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with streaved down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Coperation & Maintenance for 1st Year:       KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope to to outer distance of pipe at least half dia of pipe subject to minimum fill of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1: Sing	25			•	• •
No.41, Item No.7, KUWSDB SOR 2016-17)         Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47, For area weightage       5.64         (Mangalore City)       Rate       314.52         Operation & Maintenance for 1st Year:       KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.         (PWD SR 2015-16, P.No.86, SI.No.12.89)       830         Dasic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Operation & Maintenance for 1st Year:       KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and teo of slope to teo of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1: Single row for	25				
Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47,For area weightage       5.64         (Mangalore City)       Rate       314.52         Operation & Maintenance for 1st Year:       KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with         Screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.         (PWD SR 2015-16,P.No.86, SI.No.12.89)       8asic Rate       830         D&M 1st year escalation of 4%       33.2       Add 10% For area weightage (Mangalore City)       86.32         Rate       949.52       Nos.         Operation & Maintenance for 1st Year:       KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and to of slope to to of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1 : Single row for one utility service (KPWD SOR 16-17,Item No.24.34, Pg.No			directed	by the Engineer	in charge (page
Basic Rate       297         O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47,For area weightage       5.64         (Mangalore City)       Rate       314.52         Operation & Maintenance for 1st Year:       KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with         Screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.         (PWD SR 2015-16,P.No.86, SI.No.12.89)       8asic Rate       830         D&M 1st year escalation of 4%       33.2       Add 10% For area weightage (Mangalore City)       86.32         Rate       949.52       Nos.         Operation & Maintenance for 1st Year:       KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and to of slope to to of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1 : Single row for one utility service (KPWD SOR 16-17,Item No.24.34, Pg.No		No.41,Item No.7,KUWSDB SOR 2016-17)			
O&M 1st year escalation of 4%       11.88         Add 12% on Labor Charges=Rs.47,For area weightage (Mangalore City)       Rate       314.52         Rm       Rate       314.52         Operation & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Coperation & Maintenance for 1st Year: KSRB M800- Cable Duct Across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum4500 min case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1 : Single row for o		,		297	
Add 12% on Labor Charges=Rs.47,For area weightage (Mangalore City)       Rate       5.64         Rate       314.52       Rm         Operation & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.0. (PWD SR 2015-16,P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Veration & Maintenance for 1st Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pip at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1 : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore C					
(Mangalore City)       3.04         Rate       314.52         Rm       Operation & Maintenance for 1st Year:         KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.         (PWD SR 2015-16,P.No.86, SI.No.12.89)       Basic Rate         Basic Rate       830         OQ8M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Permitting       Rate         949.52       Nos.         Coperation & Maintenance for 1st Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material over top and sides of RCC pipe as per lRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1 : Single row				11.00	
Image (Mangalore City)       Rate       314.52       Rm         Operation & Maintenance for 1st Year:       KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.         (PWD SR 2015-16,P.No.86, SI.No.12.89)       830         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         P       Rate       949.52         Nos.       SRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17, Item No.24.34, Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% Fo				5 64	
27       Operation & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Provide a specification of a structure of the read weightage (Mangalore City)       86.32         Operation & Maintenance for 1st Year:       KSRRB M800- Cable Duct Across the road (NSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material over top and sides of RCC pipe as per IRC:997, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1: Single row for one utility service (KPWD SOR 16-17.]tem No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29		(Mangalore City)		0.01	
27       Operation & Maintenance for 1st Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Provide a specification of a structure of the read weightage (Mangalore City)       86.32         Operation & Maintenance for 1st Year:       KSRRB M800- Cable Duct Across the road (NSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material over top and sides of RCC pipe as per IRC:997, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1: Single row for one utility service (KPWD SOR 16-17.]tem No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29			Rate	314.52	Rm
KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with         26       screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Coperation & Maintenance for 1st Year:       Rate         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1 : Single row for one utility service (KPWD SOR 16-17, Item No.24.34, Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29					
KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with         26       screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Coperation & Maintenance for 1st Year:       Rate         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1 : Single row for one utility service (KPWD SOR 16-17, Item No.24.34, Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29		Operation 8 Maintonance for 1st Veer			
26       screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Particle       949.52         Nos.       0         Operation & Maintenance for 1st Year:       KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1 : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         0&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29					
floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.         (PWD SR 2015-16, P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Rate       949.52         Nos.       0         Operation & Maintenance for 1st Year:       KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - 1 : Single row for one utility service (KPWD SOR 16-17, Item No.24.34, Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29					
(PWD SR 2015-16,P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Rate       949.52         Nos.       949.52         Operation & Maintenance for 1st Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29	26	screwed down or hinged grating with or without vent arm including	cutting a	nd making good th	ne walls and
(PWD SR 2015-16,P.No.86, SI.No.12.89)         Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Rate       949.52         Nos.       949.52         Operation & Maintenance for 1st Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29		floors, cost of materials, labour, testing, complete as per specificat	ions Spe	cification No. KBS	11.1.10.
Basic Rate       830         O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Rate       949.52         Nos.       949.52         Operation & Maintenance for 1st Year:       KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29					
O&M 1st year escalation of 4%       33.2         Add 10% For area weightage (Mangalore City)       86.32         Rate       949.52         Nos.       949.52         Operation & Maintenance for 1st Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29					
Add 10% For area weightage (Mangalore City)       86.32         Rate       949.52         Nos.         Operation & Maintenance for 1st Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17, Item No.24.34, Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29					
Rate       949.52       Nos.         Operation & Maintenance for 1st Year:       KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         0&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29		O&M 1st year escalation of 4%		33.2	
Rate       949.52       Nos.         Operation & Maintenance for 1st Year:       KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         0&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29		Add 10% For area weightage (Mangalore City)		86.32	
Operation & Maintenance for 1st Year:           KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)           Basic Rate         5022           O&M 1st year escalation of 4%         200.88           Add 10% For area weightage (Mangalore City)         522.29			Rato		Nos
KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)Basic Rate5022O&M 1st year escalation of 4%200.88Add 10% For area weightage (Mangalore City)522.29			Nale	545.JZ	1405.
KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)Basic Rate5022O&M 1st year escalation of 4%200.88Add 10% For area weightage (Mangalore City)522.29					
KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cemen concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granula material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granula material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)Basic Rate5022O&M 1st year escalation of 4%200.88Add 10% For area weightage (Mangalore City)522.29		Operation & Maintenance for 1st Year:			
concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)Basic Rate5022O&M 1st year escalation of 4%200.88Add 10% For area weightage (Mangalore City)522.29		KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. P	Providina	and laving of a re	inforced cement
toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)Basic Rate5022O&M 1st year escalation of 4%200.88Add 10% For area weightage (Mangalore City)522.29			•		
27       material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         0&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29					
27       material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29				•	•
material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29	27	material over top and sides of RCC pipe as per IRC:98-1997, b	edded o	on a 0.3 m thick I	ayer of granular
mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29	21	material free of rock pieces, outer to outer distance of pipe at lea	ast half d	lia of pipe subiect	to minimum450
higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29					
complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       5022         O&M 1st year escalation of 4%       200.88         Add 10% For area weightage (Mangalore City)       522.29					
(KPWD SOR 16-17,Item No.24.34,Pg.No.188)Basic Rate5022O&M 1st year escalation of 4%200.88Add 10% For area weightage (Mangalore City)522.29				96 - 1997 and ap	proved drawings
Basic Rate5022O&M 1st year escalation of 4%200.88Add 10% For area weightage (Mangalore City)522.29		complete as per specifications. Case - I : Single row for one utility s	service		
Basic Rate5022O&M 1st year escalation of 4%200.88Add 10% For area weightage (Mangalore City)522.29		(KPWD SOR 16-17, Item No.24.34, Pg. No.188)			
O&M 1st year escalation of 4%200.88Add 10% For area weightage (Mangalore City)522.29				5022	
Add 10% For area weightage (Mangalore City) 522.29					
Rate 5745.17 Rm		Add 10% For area weightage (Mangalore City)			
			Rate	5745.17	Rm

	Operation & Maintenance for 1st Year:			
	Providing and laying Dia 225mm HDPE Electrical pipe Conduits	with Silico	ore Lubricant inne	r layer with ribs,
	dimensional ratio of 13.5, Deflection not greater than 5% when ex	posed to	the normal operation	ting temparature
28	90°C under the over burden soil presuure and other physical prop	erties co	mforming to ASTI	MF 2160 and /or
	NEMA TC7. The expected service life of HDPE pipe conduits and a	accessori	es shall not be les	s than 50 years.
	(Market Rate)			
	Basic Rate		2500	
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item		78	
	No.50,Pg.No.123)		70	
	Add 12% For area weightage (Mangalore City)		9.36	
	Sub Total		2587.36	
	O&M 1st year escalation of 4%		103.49	
		Rate	2690.85	Rm
	Operation & Maintenance for 1st Year:			
29	Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and co			ling loading and
23	unloading at both destination and lowering, Jointing into trenches, C	omplete.		
	(Market Rate)			
	Basic Rate		1775	
	Escalation @ 8% on Basic rate		142	
		Rate	1917.00	Nos.
	Operation & Maintenance for 1st Year:			
	Providing and laying Dia 160mm HDPE Electrical pipe Conduits	with Silico	ore Lubricant inne	r layer with ribs,
30	dimensional ratio of 13.5, Deflection not greater than 5% when ex			
30	90°C under the over burden soil presuure and other physical prop			
	NEMA TC7. The expected service life of HDPE pipe conduits a	nd acces	ssories shall not	be less than 50
	years.(Market Rate)			
	Basic Rate		1350	
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item		66	
	No.50,Pg.No.123)		66	
	Add 12% For area weightage (Mangalore City)		7.92	
	Sub Total		1423.92	
	O&M 1st year escalation of 4%		56.96	
		Rate	1480.88	Rm
	Operation & Maintenance for 1st Year:			
	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and conv			
31	unloading at both destination and rolling, lowering into trenches, l	aying tru	e to line and join	ting of pipe and
	special including encasing the pipe Complete.			
	(Market Rate)	1	1	
	Basic Rate		1475	
	O&M 1st year escalation of 4%		59	
		Rate	1534.00	NOS.
	Operation & Maintenance for 1st Year:	4. 1	lanad of a lot	
32	Providing and Fixixng Spacers for Power Ducts of size 225 mm	, to be p	placed at an interv	al of 1.5 meter.
	Spacers shall be made of ABS raw material.			
	(Market rate)	1		
	Basic Rate		1003	
	O&M 1st year escalation of 4%		40.12	
	GST @18%		180.54	
		Rate	1223.66	Nos.
	Operation & Maintenance for 1st Year:		1	
33	Providing and Fixixng Spacers for Power Ducts of size 160 mm	, to be p	placed at an interv	al of 1.5 meter.
	Spacers shall be made of ABS raw material.			
	(Market rate)		· · · -	[
	Basic Rate		1947	
	O&M 1st year escalation of 4%		77.88	
	GST @18%	Dete	350.46	
		Rate	2375.34	NOS.
1		1	1	

L

	Operation & Maintenance for 1st Year:			
	Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore L	ubricant	inner layer for le	CT fibre cables
24	comforming to ASTMF 2160 and /or equivalent indian standard and	nd conve	ying to work site i	ncluding loading
34	and unloading at both destination and rolling, lowering into trenc	hes,layin	g true to line and	jointing of pipe
	etc.Complete.		-	
	(Market Rate)			
	Basic Rate		685	
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item			
	No.50,Pg.No.123)		36	
	Add 12% For area weightage (Mangalore City)		4.32	
	Sub Total		725.32	
	O&M 1st year escalation of 4%		29.01	
		Rate	754.33	Rm
35	<b>Operation &amp; Maintenance for 1st Year:</b> Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way I loading and unloading at both destination and lowering into trenche (Market Rate)			
	Basic Rate		175	
	O&M 1st year escalation of 4%		7	
		Rate	182.00	Nos.
36	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and laying heavy duty cobble stones 60mm thick, using of of blocks of approved size, shape and colour with a minimum com 50mm thick sand bed (average thickness) and compacting with pl force thereby forcing part of sand underneath to come up in betwee joints into its final level, including cost of materials, labour and HOM specifications.	pressive ate vibrat en joints,	strength of 281 kg tor having 3 tons c final compaction (	per sqm over compaction of paver surface
	Basic rate		1056.00	
	O&M 1st year escalation of 4%		42.24	
	Add 10% For area weightage (Mangalore City)		109.82	
		Rate	1208.06	Sqm
37	<b>Operation &amp; Maintenance for 1st Year:</b> Providing and laying heavy duty Tactile Tiles (Direction and Stop til in colour, using cement and course sand for manufacture of block compressive strength of 281 kg per sqm over 50mm thick sand be with plate vibrator having 3 tons compaction force thereby forcing p between joints, final compaction of paver surface joints into its fina and HOM of machineries complete as per specifications. (Non SOR Item)	s of appr d (averaç part of sa	oved size, shape v ge thickness ) and nd underneath to	with a minimum compacting come up in
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.12		912.00	
	O&M 1st year escalation of 4%		36.48	
		Rate	948.48	Sqm
38	<b>Operation &amp; Maintenance for 1st Year</b> : Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness) and compacting with force thereby forcing part of sand underneath to come up in betwe joints into its final level, including cost of materials, labour an specifications. (Page No 101,SI No : 14.7)	npressive h plate v en joints,	e strength of 281 ibrator having 3 t , final compaction	kg per sqm over ons compaction of paver surface
<u> </u>	Basic rate		1114	
	O&M 1st year escalation of 4%		44.56	
	Add 10% For area weightage (Mangalore City)		115.86	
		Rate	1274.42	Sam

	Operation & Maintenance for 1st Year:			
Ì	Road Marking with hot applied Thermoplastic Compound with			
	Surface: Providing and laying of hot applied thermoplastic comp			
	glass beads at 250 gms and 2 ltr of primer per sqm area, thicknes			
	glass beads as per IRC:35.The finished surface to be level, uniform	m and free	from streak and	holes complet
	as per specifications.MORTH specification No.803			
	Basic Rate		429	
	O&M 1st year escalation of 4%		17.16	
	Add 10% For area weightage (Mangalore City)		44.62	
		Rate	490.78	Sqm
	Operation & Maintenance for 1st Year:			
	Operation and Maintenance for eToilets Stainless Steel Public Me	odel as spe	ecified in Road a	and Other work
	BOQ Item No.45.			
	Baisc rate		61200	
	O&M 1st year escalation of 4%		2448	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer	Rate	63648	Nos
	Sr.No.1	Nate	00040	N03.
	Operation & Maintenance for 1st Year:			
	Providing and fixing of S.S. Bollards(SS304) on footpath as specifi	ed and dir	ected by Engine	er -in-charge
	(NON SOR Item)			
		1 1		
	Rate Approved as per EOI by MD MSCL Mangalore,Refer		4500.00	
	Sr.No.13			
	O&M 1st year escalation of 4%		180	
		Rate	4680	Nos.
	Operation & Maintenance for 1st Year:			
	Providing and fixing of railing as detail design in MS HOLLOW SEC			
	approved ),with vertical support of 0.9m @2.2mc/c $% = 100000000000000000000000000000000000$	to the satis	sfaction of the La	andscape
	architect.(Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore.Refer			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.26		100000.00	
	Sr.No.26			
		Rate	4000	МТ
	Sr.No.26	Rate		МТ
	Sr.No.26 O&M 1st year escalation of 4%	Rate	4000	МТ
	Sr.No.26 O&M 1st year escalation of 4% Operation & Maintenance for 1st Year:		4000 <b>104000</b>	
	Sr.No.26 O&M 1st year escalation of 4% Operation & Maintenance for 1st Year: Excavation and removal of silt and silt mixed with sand in slussy co	ondition fro	4000 <b>104000</b> m canal bed incl	uding disposin
	Sr.No.26 O&M 1st year escalation of 4% Operation & Maintenance for 1st Year: Excavation and removal of silt and silt mixed with sand in slussy co off the same in spoil bank or on the canal embankment in layers as	ondition fro s directed e	4000 <b>104000</b> m canal bed incl etc., complete wi	uding disposin th lead upto 50
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy co off the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including of the same in spoil bank or on the canal embankment in layers as m and all lifts.	ondition fro s directed e cost of all r	4000 104000 m canal bed incl etc., complete wi naterials, scaffol	uding disposin th lead upto 50 ding HOM of
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy construction of the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implement	ondition fro s directed e cost of all r nentation of	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental	uding disposin th lead upto 50 ding HOM of and Social
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy co off the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including of the same in spoil bank or on the canal embankment in layers as m and all lifts.	ondition fro s directed e cost of all r nentation of	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental	uding disposing th lead upto 50 ding HOM of and Social
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy cooff the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and	ondition fro s directed e cost of all r nentation of	4000 <b>104000</b> m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl	uding disposing th lead upto 50 ding HOM of and Social
43	Sr.No.26 O&M 1st year escalation of 4% Operation & Maintenance for 1st Year: Excavation and removal of silt and silt mixed with sand in slussy co off the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate	ondition fro s directed e cost of all r nentation of	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy cooff the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and	ondition fro s directed e cost of all r nentation of directions	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26 O&M 1st year escalation of 4% Operation & Maintenance for 1st Year: Excavation and removal of silt and silt mixed with sand in slussy co off the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate	ondition fro s directed e cost of all r nentation of	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy coord off the same in spoil bank or on the canal embankment in layers are mand all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%	ondition fro s directed e cost of all r nentation of directions	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy cooff the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61	uding disposin th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy correction of the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implement Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy cooff the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy coord off the same in spoil bank or on the canal embankment in layers are mand all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 em canal bed inclet etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy coord off the same in spoil bank or on the canal embankment in layers at m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth         Earth	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61 al Lead	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy coord off the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth         Basic rate	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 Im canal bed incletc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61 al Lead 1.28x10km 25.60	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy coord off the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth         Basic rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61 al Lead	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy coord off the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including implem Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth         Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 m canal bed incletc., complete wi materials, scaffol f Environmental i of Engineer-in-cl 186.16 7.45 193.61 al Lead 1.28x10km 25.60 57.00	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy coord off the same in spoil bank or on the canal embankment in layers at m and all lifts. For Desilting of drains and grit chambers including implements with all lead and lifts, labour charges including implements afeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth         Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 m canal bed incletc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61 al Lead 1.28x10km 25.60 57.00 82.60	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy coroff the same in spoil bank or on the canal embankment in layers at m and all lifts. For Desilting of drains and grit chambers including implements with all lead and lifts, labour charges including implements afeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth         Basic rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 m canal bed incletc., complete wi materials, scaffol f Environmental i of Engineer-in-cl 186.16 7.45 193.61 al Lead 1.28x10km 25.60 57.00 82.60 8.26	uding disposing th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy cords off the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth         Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61 al Lead 1.28x10km 25.60 57.00 82.60 8.26 90.86	uding disposin th lead upto 50 ding HOM of and Social narge.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy coroff the same in spoil bank or on the canal embankment in layers at m and all lifts. For Desilting of drains and grit chambers including implements with all lead and lifts, labour charges including implements afeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth         Basic rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)	eyond initia	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61 al Lead 1.28x10km 25.60 57.00 82.60 8.26 90.86 3.63	uding disposing th lead upto 50 ding HOM of and Social narge. Nos.
43	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy cords off the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth         Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2	ondition fro s directed e cost of all r nentation of directions <b>Rate</b>	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61 al Lead 1.28x10km 25.60 57.00 82.60 8.26 90.86	uding disposing th lead upto 50 ding HOM of and Social narge. Nos.
43	Sr.No.26 O&M 1st year escalation of 4% Operation & Maintenance for 1st Year: Excavation and removal of silt and silt mixed with sand in slussy co off the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including implem Safeguards & as per design, drawing, technical specifications and Basic Rate O&M 1st year escalation of 4% Operation & Maintenance for 1st Year: Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth Earth Baisc rate Add Loading and unloading charges(Item No 17.1 KSRRB M100- 1) Sub Total-1 Add 10% For area weightage (Mangalore City) Sub Total-2 O&M 1st year escalation of 4%	eyond initia	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61 al Lead 1.28x10km 25.60 57.00 82.60 8.26 90.86 3.63	uding disposing th lead upto 50 ding HOM of and Social narge. Nos.
43 43 44	Sr.No.26         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Excavation and removal of silt and silt mixed with sand in slussy cords off the same in spoil bank or on the canal embankment in layers as m and all lifts. For Desilting of drains and grit chambers including machineries with all lead and lifts, labour charges including implem Safeguards & as per design, drawing, technical specifications and Basic Rate         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth         Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2	eyond initia	4000 104000 m canal bed incl etc., complete wi materials, scaffol f Environmental of Engineer-in-cl 186.16 7.45 193.61 al Lead 1.28x10km 25.60 57.00 82.60 8.26 90.86 3.63 94.49	uding disposin th lead upto 50 ding HOM of and Social narge. Nos.

	Debris	2.0	x1.30x10Km	
	Baisc rate		32.50	
	Add Loading and unloading charges(Item No 17.1 KSRRB M100-		F7 00	
	1)		57.00	
	Sub Total-1		89.50	
	Add 10% For area weightage (Mangalore City)		8.95	
	Sub Total-2		98.45	
	O&M 1st year escalation of 4%		3.94	
		Rate	102.39	
	Lighting Poles	nuto	102.00	oum
	Operation & Maintenance for 1st Year:			
46	Dismantling, removal, transportation to client's storage place existin (Non SOR Item)	ng lightin	g poles	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.22		1,000	
	O&M 1st year escalation of 4%		40	
		Rate	1040	Nos.
47	Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanise 355 JO steel plate for shaft, IS 2062 for base plate with oor opening bakelite sheet and MCBs as per IS specifications suitable for wind section and single joint welded as per IS 9595/IS 10178 AWG havin mm with 3 mm thick, suitable base plate and 4 nos. of long J bo be hot dip galvanized in single dipping with not less than 65 micron (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7) Basic rate O&M 1st year escalation of 4% <b>Operation &amp; Maintenance for 1st Year:</b> Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised 355 JO steel plate for shaft, IS 2062 for base plate with oor opening bakelite sheet and MCBs as per IS specifications suitable for wind section and single joint welded as per IS 9595/IS 10178 AWG havin mm with 3 mm thick, suitable base plate and 4 nos. of long J bo be hot dip galvanized in single dipping with not less than 65 micron (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	g arrange speed of ng dimer lits along as per A <b>Rate</b> d Octagon g arrange speed of ng dimer lits along	ement, icluding su 47 m/sec for 5 m osions bottom 155 with template and STM - A123 and 17118 684.72 17,802.72 nal pole with BSE ement, icluding su 47 m/sec for 5 m osions bottom 155 with template and	itable boards, pole in single mm dia, top 70 d the pole shall 153 etc., <b>Nos.</b> 10025 grade S itable boards, pole in single mm dia, top 70 d the pole shall
	Basic rate		12420	
	O&M 1st year escalation of 4%		496.8	
		Rate	12,916.80	Nos.
49	<b>Operation &amp; Maintenance for 1st Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanise 355 JO steel plate for shaft, IS 2062 for base plate with door openin bakelite sheet and MCBs as per IS specifications suitable for wind section and single joint welded as per IS 9595/IS 10178 AWG havin mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts hot dip galvanized in single dipping with not less than 65 micron as foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	ng arrang speed of ng dimer along wit	gement, icluding s 47 m/sec for 5 4 hsions bottom 130 th template and th M - A123 and 153	uitable boards, pole in single mm dia, top 70 e pole shall be 8 etc., (excluding
	Basic rate		7398	
	O&M 1st year escalation of 4%		295.92	
		Rate	7,693.92	Nos.
50	Operation & Maintenance for 1st Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5) Basic rate	outdoor l		
	Basic rate Page 96		3540	

	O&M 1st year escalation of 4%		141.6	
		Rate	3,681.60	
	Operation & Maintenance for 1st Year:		-,	
	Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for	outdoor l	uminaries and mo	unted on
51	Octagonal pole using necessary bolts, nuts, etc. complete			
51	Single Cross arm - 1500 mm			
	(Ref Electrical SOR SI No.5.18.2)			
			2400	
	Basic rate		2400	
	O&M 1st year escalation of 4%	Data	96	
	On anotion 9 Mainton and a fan dat Vaan	Rate	2,496	NOS.
	Operation & Maintenance for 1st Year:		den itte and table and	
52	Painting of Existing street light pole after scrapping the old paint ar		a with suitable cold	bur enamei
-	including coping/footing of the pole8mtr and above street light po	le		
	(Ref Electrical SOR SI No.16.28.3)		r	r
	Basic rate		700	
	O&M 1st year escalation of 4%		28	
		Rate	728	Nos.
	LT Cable			
	Operation & Maintenance for 1st Year:			
	Supplying of 1.1 kV LT cable having aluminium conductor PVC ins	ulated, ex	xtruded inner shea	athed,
	galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as	per IS-39	975:1990 and extr	uded PVC outer
53	sheathed armoured cable as per IS - 1554 Part 1:1988 & conformi			
	4 Core x16 Sq.mm PVC Aluminium Conductor,	-		
	(Ref Electrical SOR SI No.7.5,7.5.4)			
	Basic rate		117	
	O&M 1st year escalation of 4%		4.68	
		Rate	121.68	
	Operation & Maintenance for 1st Year:	nato	121100	
	Supply and drawing flexible multicore cable with electrolyte grade	loviblo co	oppor with low con	ductor
54	conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC ins			ble for working
	voltage up to 1100 V as per IS-694:1990 and conforming to GTP	of Group	А.	
	3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)			
	Desta sete		01.0	
	Basic rate		81.6	
	O&M 1st year escalation of 4%	Data	3.26 <b>84.86</b>	
		Rate	84.80	RM
	On another O. Malatanana (an Ast Mass			
	Operation & Maintenance for 1st Year:			
55	Supplying tinned copper lugs and crimping and wiring to terminal p	point for w	rre of following siz	es
00	16 Sq.mm PVC Aluminium Conductor			
	(Ref Electrical SOR SI No.7.21,7.21.6)			
	Basic rate		11.31	
	O&M 1st year escalation of 4%		0.45	
		Rate	11.76	Nos.
	Operation & Maintenance for 1st Year:			
	Supplying tinned copper lugs and crimping and wiring to terminal p	oint for w	vire of following siz	es
56	2.5 sq. mm copper conductor		U	
	(Ref Electrical SOR SI No.7.21.2)			
	Basic rate	<u> </u>	0.04	
			3.21	
	O&M 1st year escalation of 4%	Det	0.13	
		Rate	3.34	INOS.
	Operation & Maintenance for 1st Year:			
	Chemical Earthing for grounding, conduits, IC cut outs and otherequ			
	/SS rod with earth enhancing backfill compound which is non corr			
57	permissible, limits, superior, fault, conductive capacity, non toxic, weat	ner resist	ance and capable	e of achieving
	ohmic value			
	less than one ohm			
	(Ref Electrical SOR Pg.No.64,SI No.7.23.6)	,		
	Basic rate		5500	
	O&M 1st year escalation of 4%		220	
-	Dece 07	Rate	5720	Kit

Page 97

	Operation & Maintenance for 1st Year:			
-0	Supply and running GI conductor for grounding and (along with ot	ther wires i	in conduits system	n of wiring) usi
58	necessasary suitable size clamps, nails, guttas/spacers etc-8 SW	/G		-
	(Ref Electrical SOR SI No.7.22.3)			
	Basic rate		19.5	
			0.78	
	O&M 1st year escalation of 4%	Dete	20.28	
		Rate	20.20	RIII
	Operation & Maintenance for 1st Year:			
-0	Supplying and stacking of good earth at site including royalty an	d carriage	upto 5 k.m. lead	complete (ea
59	measured in stacks will be reduced by 20% for payment).			
	(Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore, Refer			
	Sr.No.27		140.00	
	O&M 1st year escalation of 4%		5.6	
		Rate	145.60	
		Rale	145.00	Cum
	Operation & Maintenance for 1st Year:			
	KSRRB M300-Supply at site of work well decayed farm yard mar			
60	well decayed farm yard manure, from any available source, ap			
	screening and stackin complete as per specifications.	MORTH	Specification N	No. 308.2(Pa
	No.152,SI.No.19.90)			
	Basic rate		204	
	Dasic fate			
	O&M 1st year escalation of 4%		8 16	
	O&M 1st year escalation of 4%		8.16	
	O&M 1st year escalation of 4% Add 10% For area weightage	Dete	21.22	
61	Add 10% For area weightage Operation & Maintenance for 1st Year: KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa M300-1. Spreading of sludge farm yard manure or/ and good ear	th in requir	21.22 233.38 nanure or/ and go red thickness (cos	Cum od earth KSRI st of sludge, fa
61	Add 10% For area weightage <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa M300-1. Spreading of sludge farm yard manure or/ and good ear yard manure or/and good earth to be paid for separately) Specification No. 307	irm yard m th in requir	21.22 233.38 nanure or/ and go red thickness (cos	Cum od earth KSRI st of sludge, fa
61	Add 10% For area weightage Operation & Maintenance for 1st Year: KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa M300-1. Spreading of sludge farm yard manure or/ and good ear yard manure or/and good earth to be paid for separately)	irm yard m th in requir	21.22 233.38 nanure or/ and go red thickness (cos	Cum od earth KSRI st of sludge, fa
61	Add 10% For area weightage <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa M300-1. Spreading of sludge farm yard manure or/ and good ear yard manure or/and good earth to be paid for separately) Specification No. 307	irm yard m th in requir	21.22 233.38 nanure or/ and go red thickness (cos	Cum od earth KSRI st of sludge, fa cations. MOR
61	Add 10% For area weightage <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa M300-1. Spreading of sludge farm yard manure or/ and good ear yard manure or/and good earth to be paid for separately) Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77) Basic rate	irm yard m th in requir	21.22 233.38 nanure or/ and go red thickness (cos as per specific	Cum od earth KSRf at of sludge, fa cations. MOR
61	Add 10% For area weightage <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa M300-1. Spreading of sludge farm yard manure or/ and good ear yard manure or/and good earth to be paid for separately) Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77) Basic rate O&M 1st year escalation of 4%	irm yard m th in requir	21.22 233.38 nanure or/ and goo red thickness (cos as per specific 103 4.12	Cum od earth KSRI at of sludge, fa cations. MOR
61	Add 10% For area weightage <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa M300-1. Spreading of sludge farm yard manure or/ and good ear yard manure or/and good earth to be paid for separately) Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77) Basic rate	irm yard m th in requir	21.22 233.38 nanure or/ and goo red thickness (cos as per specific 103 4.12 10.71	Cum od earth KSRI st of sludge, fa cations. MOR
61	Add 10% For area weightage <b>Operation &amp; Maintenance for 1st Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa M300-1. Spreading of sludge farm yard manure or/ and good ear yard manure or/and good earth to be paid for separately) Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77) Basic rate O&M 1st year escalation of 4% Add 10% For area wightage	th in requir complete	21.22 233.38 nanure or/ and goo red thickness (cos as per specific 103 4.12	Cum od earth KSRI st of sludge, fa cations. MOR
	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge far         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage	th in requir complete	21.22 233.38 nanure or/ and goo red thickness (cos as per specific 103 4.12 10.71 117.83	Cum od earth KSRf st of sludge, fa cations. MOR
	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe	th in requir complete	21.22 233.38 nanure or/ and goo red thickness (cos as per specific 103 4.12 10.71 117.83	Cum od earth KSRI st of sludge, fa cations. MOR
	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge far         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage	th in requir complete	21.22 233.38 nanure or/ and goo red thickness (cos as per specific 103 4.12 10.71 117.83	Cum od earth KSRf st of sludge, fa cations. MOR
61	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge far         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe (Non SOR item)	th in requir complete	21.22 233.38 nanure or/ and goo red thickness (cos as per specific 103 4.12 10.71 117.83	Cum od earth KSRf st of sludge, fa cations. MOR
	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer	th in requir complete	21.22 233.38 nanure or/ and goo red thickness (cos as per specific 103 4.12 10.71 117.83	Cum od earth KSRf at of sludge, fa cations. MOR Cum cer-in-charge
	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28	th in requir complete	21.22 233.38 nanure or/ and go red thickness (cos as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91	Cum od earth KSRf at of sludge, fa cations. MOR Cum
	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer	rm yard m th in requir complete Rate	21.22 233.38 nanure or/ and gov red thickness (cos as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91 0.96	Cum od earth KSRI at of sludge, fa cations. MOR Cum
	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28	th in requir complete	21.22 233.38 nanure or/ and gov red thickness (cos as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91 0.96	Cum od earth KSRf at of sludge, fa cations. MOR Cum
	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         O&M 1st year escalation of 4%	rm yard m th in requir complete Rate	21.22 233.38 nanure or/ and gov red thickness (cos as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91 0.96	Cum od earth KSRI at of sludge, fa cations. MOR Cum
	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 1st year escalation of 4%         O&M 1st year escalation of 4%	rm yard m th in requir complete <b>Rate</b> cified or di	21.22 233.38 nanure or/ and goured thickness (cost as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91 0.96 24.87	Cum od earth KSRf st of sludge, fa sations. MOR Cum cer-in-charge
	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge far         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 1st year escalation of 4%         Oald 1st year escalation of 4%	a period of market	21.22 <b>233.38</b> nanure or/ and governed thickness (cost as per specific 103 4.12 10.71 <b>117.83</b> rected by the Office 23.91 0.96 <b>24.87</b> of one year incluce	Cum od earth KSRI st of sludge, fa sations. MOR Cum cer-in-charge
	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge far         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 1st year escalation of 4%         Oald 1st year escalation of 4%         Mixing earth and sludge or manure in the required proportion spe         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for         complete including cost of all materials, scaffolding HOM of mach	a period or di	21.22 233.38 nanure or/ and goo red thickness (cos as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91 0.96 24.87	Cum od earth KSRI at of sludge, fa cations. MOR Cum cer-in-charge ding watering o s, labour charge
62	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 1st year escalation of 4%         O&M 1st year escalation of 4%         Oat 1st year escalation of 4%         Mixing earth and sludge or manure in the required proportion spe (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 1st year escalation of 4%         Ometation & Maintenance for 1st Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for complete including cost of all materials, scaffolding HOM of mach including implementation of Environmental and Social Safegu	a period or di	21.22 233.38 nanure or/ and goo red thickness (cos as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91 0.96 24.87	Cum od earth KSRI at of sludge, fa cations. MOR Cum cer-in-charge ding watering o s, labour charge
62	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge far         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 1st year escalation of 4%         Oald 1st year escalation of 4%         Mixing earth and sludge or manure in the required proportion spe         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for         complete including cost of all materials, scaffolding HOM of mach	a period or di	21.22 233.38 nanure or/ and goo red thickness (cos as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91 0.96 24.87	Cum od earth KSR of sludge, fa cations. MOR Cum Cum ding watering s, labour charge
62	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for         complete including cost of all materials, scaffolding HOM of mach         including implementation of Environmental and Social Safegu         specifications and directions of Engineer-in-charge.	a period or di	21.22 233.38 nanure or/ and goor red thickness (cos as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91 0.96 24.87 of one year incluc th all lead and lifts s per design, dr	Cum od earth KSRI od earth KSRI of sludge, fa cations. MOR Cum Cum Cum ding watering of s, labour charge awing, techni
62	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for         complete including cost of all materials, scaffolding HOM of mach         including implementation of Environmental and Social Safegu         Basic rate	a period or di	21.22 233.38 nanure or/ and goor red thickness (cos as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91 0.96 24.87 of one year incluc th all lead and lifts s per design, dr	Cum od earth KSRI of sludge, fa cations. MOR Cum Cer-in-charge ding watering of s, labour charg awing, technic
62	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good earry         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spet (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 1st year escalation of 4%         Oberation & Maintenance for 1st Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for complete including cost of all materials, scaffolding HOM of mach including implementation of Environmental and Social Safegu specifications and directions of Engineer-in-charge.         Basic rate       O&M 1st year escalation of 4%	a period or di	21.22 233.38 nanure or/ and goor red thickness (cost as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91 0.96 24.87 of one year incluc th all lead and lifts s per design, dr	Cum od earth KSRI od satth KSRI of sludge, fa cations. MOR Cum Cum ding watering of s, labour charge rawing, technic
62	Add 10% For area weightage         Operation & Maintenance for 1st Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge fa         M300-1. Spreading of sludge farm yard manure or/ and good ear         yard manure or/and good earth to be paid for separately)         Specification No. 307         (KPWD SR 16-17,Page No.150,SI No.19.77)         Basic rate         O&M 1st year escalation of 4%         Add 10% For area wightage         Operation & Maintenance for 1st Year:         Mixing earth and sludge or manure in the required proportion spe         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 1st year escalation of 4%         Operation & Maintenance for 1st Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for         complete including cost of all materials, scaffolding HOM of mach         including implementation of Environmental and Social Safegu         Basic rate	a period or di	21.22 233.38 nanure or/ and goor red thickness (cos as per specific 103 4.12 10.71 117.83 rected by the Offic 23.91 0.96 24.87 of one year incluc th all lead and lifts s per design, dr	Cum od earth KSR of sludge, fa cations. MOR Cum Cer-in-charge ding watering s, labour charg rawing, techni

64	<ul> <li>watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)</li> </ul>							
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.29		146.00					
	O&M 1st year escalation of 4%		5.84					
		Rate	151.84					
	SHRUBS: Supply and Stacking of Shrubs							
65	Operation & Maintenance for 1st Year: Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)							
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.30		840.00					
	O&M 1st year escalation of 4%		33.6					
		Rate	873.60	Nos.				
66	Operation & Maintenance for 1st Year: Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in (Non SOR Item)	form						
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.31		840.00					
	O&M 1st year escalation of 4%		33.6					
		Rate	873.60	Nos.				
67	Operation & Maintenance for 1st Year: Pandanus variegted'gold ' 300mm ht , 300mm c/c in triangulation (Non SOR Item) Rate Approved as per EOI by MD MSCL Mangalore,Refer	, with 4-5 from	nds 84.00					
	Sr.No.39 O&M 1st year escalation of 4%		3.36					
		Rate	87.36					
68	Operation & Maintenance for 1st Year: Bougenvilla variety 'red ' 600mm dia , specimen plant in round sh bushy to satisfaction of landscape architect/PMC (Non SOR Item) Rate Approved as per EOI by MD MSCL Mangalore,Refer	ape the plan	t should be rea	dy in form and				
	Sr.No.40							
	O&M 1st year escalation of 4%	Rate	5.6 <b>145.60</b>	Nos				
			170.00					
69	<b>Operation &amp; Maintenance for 1st Year:</b> Ficus blackenia, c/c: 600m, must be bushy and multibranched(atle packed in tree bags and stacked well on site, and regularly watered			should be				
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.40		840.00					
	O&M 1st year escalation of 4%		33.6					
		Rate	873.60	Nos.				
70	Operation & Maintenance for 1st Year: Nerium oleander, c/c: 600m, must be bushy and multibranched(at packed in tree bags and stacked well on site, and regularly watered			s should be				
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.40		840.00					
	O&M 1st year escalation of 4%		33.6					
	Page 99	Rate	873.60	Nos.				

	TURF								
71	Operation & Maintenance for 1st Year: ZOYSIA JAPONICA (MAT) (Non SOR Item)								
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.32		156.80						
	O&M 1st year escalation of 4%		6.27						
		Rate	163.07	Sqm					
	IRRIGATION Operation & Maintenance for 1st Year:								
72	Watering with tanker to landscape area and plants for one year								
	Water Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs/day								
	x 61rs/hr ( 365days-90 days of mansoon=275 days/3 days=92		14352						
	days,consider watering at every 3 days)		11002						
	Mazdoor = $0.5$ days x 446.2		20525.2						
	Add 10% For area wightage		2052.52						
	O&M 1st year escalation of 4%		1395.09						
		Rate	38324.81	Sqm					
73	<ul> <li>Operation &amp; Maintenance for 1st Year: supply and fixing of irrigation lines such that all the green areas and plants are adequately wat of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop u lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump require commissioning to be installed. (Non SOR Item)</li> </ul>								
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.34		560.00						
	O&M 1st year escalation of 4%		22.4						

Assistant Engineer MSCL Mangaluru

Executive Engineer MSCL Mangaluru General Manager Technical MSCL Mangaluru

## Name of the Work :- Mangalore Smart City3.11Maintenance BOQ of Road and Other Work for Loop Road-2nd Year

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
	Civil Works				
1.00	Operation & Maintenance for 2nd Year: Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)	Sqm	15.00	73.61	1104
2.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M200. <b>Dismantling of cement concrete pavement by mechanical</b> <b>means</b> using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (Page No 138,SI No : 18.47)	Cum	3.68	1068.01	3,930
3.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M200- <b>Dismantaling of kerb Stone</b> and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202.		10.00	14.26	143
4.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M200-13.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 16-17,18.20,Page	Cum	0.15	463.32	69
5.00	Operation & Maintenance for 2nd Year: KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar	Cum	2.88	416.99	1201
6.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M300-14. <b>Excavation for roadwork in all types of soil</b> with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers,trimming bottom and side slopes,in accordance with requirements of lines and grades and cross sections,and transporting disposal location up to a lead of 1.00Km and complete as per specifications. MORTH specification No.301(Including transporting charges, loading and unloading for lead 5km) (Page No 143,SI No : 19.14)	Cum	25.00	48.71	1,218
7.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 2-4 : <b>Refilling available earth</b> around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KPWD 18-19,SI No.2.11,Pg. No.6)	Cum	25.00	142.56	3,564
8.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB 300-Compaction KSRRB 300-58. <b>Compaction of original ground</b> with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3.(KPWD 18- 19,SI No.19.64,Pg. No.149)	Sqm	50.00	7.13	357

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
9.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 4-1.7 : Providing and laying in position <b>plain cement concrete of mix</b> <b>1:3:6</b> with OPC cement @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, <b>in foundation, plinth and cills</b> , ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2(KPWD 18-19,SI.No.4.7,Page No.13)	Cum	5.00	6854.76	34,274
10.00	Operation & Maintenance for 2nd Year: KSRRB M400-6.2.Construction of granular sub base by providing close graded crushed stone aggregate of granite/trap/basalit material,spreading in uniform layers with motor on prepared surface,mixing by mix in place methode by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density,complete as per specification. B.By Mix in Place Methode. Close graded granular sub base material as per 400-1 For Grading II material	Cum	7.50	2573.21	19,299
11.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 4.2.1 : Providing and laying in position <b>reiforcement cement</b> <b>concrete of design Mix M25</b> with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications.	Cum	45.00	7363.22	331,345
12.00	Operation & Maintenance for 2nd Year: KSRB 4.6.1 Providing and removing centering, shuttering, strutting, propping etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials,labour complete as per specifications. Specification No. KSB 4.6.2	Sam	36.00	312.44	11,248
13.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 4.9.2 : <b>Providing T.M.T steel reinforcement</b> for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500	MT	0.50	84089.02	42,045
14.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M300- Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No. 305	Cum	12.50	637.25	7,966
15.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M600-1.Construction of <b>dry lean cement concrete</b> mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes vibratory roller,finishing and curing complete as per specifications.Morth specification No.601	Cum	5.00	4809.02	24,045

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
16.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSSRRB M600-2.Construction of unreinforced,dowel jointed, <b>plain cement</b> <b>concrete pavement</b> over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with <b>M40</b> (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,SI No : 22.2.2)	Cum	11.50	6848.82	78,761
17.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Providing and placing <b>joint sealant compound</b> of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower (Non SOR Item)	Rmt	300.00	124.20	37,260
18.00	Operation & Maintenance for 2nd Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Page No 257,SI No : 35.8)		300.00	393.23	117,969
19.00	Operation & Maintenance for 2nd Year: Providing and laying at or near ground level factory made kerb stone of M- 20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge). Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)		6.00	1950.48	11,703
20.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Providin and fixing <b>pre cast solid concrete Kerb stones</b> made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Page No 25,SI No : 5.3)	Nos.	50.00	500.15	25,008
21.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Removing and resetting of kerb stones. including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	m	50.00	116.42	5,821
22.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB 800-1. <b>Painting two coats</b> after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 (Page No 182,SI No : 24.1)		1190.00	95.04	113,098
23.00	<b>Operation &amp; Maintenance for 2nd Year:</b> P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)	Nos.	10.00	990.36	9,904

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
24.00	Operation & Maintenance for 2nd Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron / Ductile Iron (NON SOR Item)	Nos.	10.00	3780.00	37,800
25.00	Operation & Maintenance for 2nd Year: Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include all jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)	Rmt	5.00	326.40	1,632
26.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 11-18-17.1 : <b>Providing and fixing sand cast iron trap of 100mm</b> <b>dia</b> , of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.	Nos.	5.00	986.04	4,930
27.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M800- <b>Cable Duct Across the road KSRRB M800-29.1. Providing</b> <b>and laying of a reinforced cement concrete pipe duct, 300 mm dia,</b> across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service ( KPWD SOR 16-17,Item No.24.34,Pg.No.188)	Rmt	5.00	5966.14	29,831
28.00	Operation & Maintenance for 2nd Year: Providing and laying Dia 225mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)	Rmt	10.00	2794.35	27,944
29.00	Operation & Maintenance for 2nd Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering,Jointing into trenches,Complete. (Market Rate)		2.00	1917.00	3,834
30.00	Operation & Maintenance for 2nd Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)	Rmt	39.00	1537.83	59,975
31.00	Operation & Maintenance for 2nd Year: Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and conveying to work site including loading and unloading at both destination and rolling, lowering into trenches, laying true to line and jointing of pipe and special including encasing the pipe Complete. (Market Rate)	Nos	4.00	1593.00	6,372
32.00	Operation & Maintenance for 2nd Year: Providing and Fixixng Spacers for Power Ducts of size 225 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)		7.00	1263.78	8,846

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
33.00	Operation & Maintenance for 2nd Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)		7.00	2453.22	17,173
34.00	Operation & Maintenance for 2nd Year: Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)	Rmt	10.00	783.35	7,834
35.00	Operation & Maintenance for 2nd Year: Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Duct and conveying to work site including loading and unloading at both destination and lowering into trenches, and jointing of pipe.Complete. (Market Rate)		1.00	189.00	189
36.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Providing and laying heavy duty cobble stones <b>60mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.	Sqm	37.92	1254.53	47,572
37.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Providing and laying heavy duty <b>Tactile Tiles</b> (Direction and Stop tiles-300 x 300 mm) 60mm thick and Yellow in colour , using cement and course sand for manufacture of blocks of approved size, shape with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Non SOR Item)	Sqm	2.25	984.96	2,216
38.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Providing and laying heavy duty <b>cobble stones 75mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.	Sqm	4.21	1323.43	5,572
39.00	Operation & Maintenance for 2nd Year: Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803	Sqm	305.91	509.65	1,55,907
40.00	<b>Operation &amp; Maintenance for 1st Year:</b> Operation and Maintenance for eToilets Stainless Steel Public Model as specified in Road and Other works BOQ Item No.45.	Nos	2.00	66096.00	1,32,192
41.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Providing and fixing of <b>S.S. Bollards(SS304</b> ) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	5.00	4860.00	24,300
42.00	Operation & Maintenance for 2nd Year: Providing and fixing of railing as detail design in MS HOLLOW SECTION and bars (shop drawing to be approved),with vertical support of 0.9m @2.2mc/c, all complete to the satisfaction of the Landscape architect.(Non SOR Item)	МТ	0.30	108000.00	32,400

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
43.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Excavation and removal of silt and silt mixed with sand in slussy condition from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts. For Desilting of drains and grit chambers including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-incharge.		198.00	201.05	39,808
44.00	Operation & Maintenance for 2nd Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Earth	Cum	58.53	98.13	5,744
45.00	Operation & Maintenance for 2nd Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Debris	Cum	9.38	98.60	,925
46.00	Electrical Works Operation & Maintenance for 2nd Year: Dismantling, removal, transportation to client's storage place existing lighting poles (Non SOR Item)	Nos.	1.00	1080.00	1,080
47.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)	Nos.	1.00	18487.44	18,487
48.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	Nos.	1.00	13413.60	13,414
49.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	Nos.	1.00	7989.84	7,990
50.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	Nos.	1.00	3823.20	3,823

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
51.00	Operation & Maintenance for 2nd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.2)	Nos.	1.00	2592.00	2,592
52.00	Operation & Maintenance for 2nd Year: Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole8mtr and above street light pole (Ref Electrical SOR SI No.16.28.3) LT Cable	Nos.	118.00	756.00	89,208
53.00	Operation & Maintenance for 2nd Year: Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR SI No.7.5,7.5.4)	m	12.00	126.36	1,516
54.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)	m	10.00	88.13	881
55.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR SI No.7.21,7.21.6)	Nos	5.00	12.21	61
56.00	Operation & Maintenance for 2nd Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR SI No.7.21.2)	Nos	4.00	3.47	14
57.00	Earthing system Operation & Maintenance for 2nd Year: Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,SI No.7.23.6)	Kit	1.00	5940.00	5,940
58.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)	Rmt	12.00	21.06	253
	Landcaping Works SOIL MIXES and Ground Preparation				
59.00	Operation & Maintenance for 2nd Year: Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)		150.00	151.20	22680
60.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)	Cum	45.00	242.35	10906

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
61.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307	Cum	0.40	122.36	49
62.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	0.40	25.82	10
	Soil preparation of Lawn				
63.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Maintenance of lawns or Turfing of slopes (rough grassing) for a period of one year including watering etc complete including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Sqm	12.00	122.36	1,468
	Bed Prepartion for , Ground covers, Climbers/ creepers, Shrubs				
64.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)	Cum	240.00	157.68	37843
	SHRUBS: Supply and Stacking of Shrubs				
65.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)	Nos.	23.00	907.20	20,866
66.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in form (Non SOR Item)	Nos.	50.00	907.20	45,360
67.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Pandanus variegted'gold ' 300mm ht, 300mm c/c in triangulation, with 4-5 fronds (Non SOR Item)	Nos.	800.00	90.72	72,576
68.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of landscape architect/PMC (Non SOR Item)		9.00	151.20	1361
69.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Ficus blackenia, c/c: 600m, must be bushy and multibranched(atleast 3), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.		8.00	907.20	7,258
70.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Nerium oleander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	9.00	907.20	8,165
71.00	TURF Operation & Maintenance for 2nd Year: ZOYSIA JAPONICA (MAT) (Non SOR Item)	Sqm	41.00	169.34	6,943
72.00	IRRIGATION Operation & Maintenance for 2nd Year: Watering with tanker to landscape area and plants for one year	Year	1.00	39720.98	39,721

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
73.00	<b>Operation &amp; Maintenance for 2nd Year:</b> supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	6.00	604.80	3,629
			19,58,422		

Executive Engineer MSCL Mangaluru General Manager Technical MSCL Mangaluru

## Name of the Work :- Mangalore Smart City 3.11.1 Maintenance BOQ of Road and Other Work for Loop Road-2nd Year

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
1.00	Civil Works Operation & Maintenance for 2nd Year: Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in- Charge.( RA attached)	Sqm	1	10	1.5		15.00
2.00	Operation & Maintenance for 2nd Year: KSRRB M200.Dismantling of cement concrete pavement by mechanical means using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (Page No 138,SI No : 18.47)		1	3.5	3.5	0.3	3.68
3.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M200- <b>Dismantaling of kerb Stone</b> and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202.	Rmt	1	10			10.00
4.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M200-13.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 16-17,18.20,Page No.137)	Cum	1	1	0.3	0.5	0.15
5.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M200-12.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. <b>i)Dismantaling Brick/Tile work B.In Cement mortar</b> (Page No 137,SI No : 18.23)	Cum	1	25	0.5	0.23	2.88
6.00	Operation & Maintenance for 2nd Year: KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines and grades and cross sections, and transporting disposal location up to a lead of 1.00Km and complete as per specifications. MORTH specification No.301(Including transporting charges, loading and unloading for lead 5km)	Cum	1.00	10	5	0.5	25.00
7.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 2-4 : <b>Refilling available earth</b> around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KPWD 16-17,SI No.2.11,Pg. No.6)		1.00	10	5	0.5	25.00
8.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB 300-Compaction KSRRB 300-58. <b>Compaction of original ground</b> with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3.(KPWD 16- 17,SI No.19.64,Pg. No.149)	Sqm	1.00	10		5	50.00
9.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 4-1.7 : Providing and laying in position <b>plain cement concrete of mix</b> <b>1:3:6</b> with OPC cement @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, <b>in</b> <b>foundation, plinth and cills</b> , ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2(KPWD 18-19,SI.No.4.7,Page No.13)	Cum	1.00	10	5	0.1	5.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
10.00	Operation & Maintenance for 2nd Year: KSRRB M400-6.2.Construction of granular sub base by providing close graded crushed stone aggregate of granite/trap/basalit material,spreading in uniform layers with motor on prepared surface,mixing by mix in place methode by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density,complete as per specification. B.By Mix in Place Methode. Close graded granular sub base material as per 400-1 For Grading II material (Page No 155,SI No : 20.5.2)	Cum	1.00	10	5	0.15	7.50
11.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 4.2.1 : Providing and laying in position <b>reiforcement cement concrete</b> <b>of design Mix M25</b> with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications. (Page No 13,SI No : 4.10)	Cum	1.00	10	5	0.9	45.00
12.00	Operation & Maintenance for 2nd Year: KSRB 4.6.1 Providing and removing centering, shuttering, strutting, propping etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials,labour complete as per specifications. Specification No. KSB 4.6.2 (Page No 15,SI No : 4.28)	Sqm	2.00	20		0.9	36.00
13.00	Operation & Maintenance for 2nd Year: KSRB 4.9.2 : Providing T.M.T steel reinforcement for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500	MT	1.00	0.50			0.50
14.00	Operation & Maintenance for 2nd Year: KSRRB M300- Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No. 305	Cum	1.00	10	5	0.25	12.50
15.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M600-1.Construction of <b>dry lean cement concrete</b> mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes vibratory roller,finishing and curing complete as per specifications.Morth specification No.601 (Page No 176,SI No : 22.1)	Cum	1.00	10	5	0.1	5.00
16.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSSRRB M600-2.Construction of unreinforced,dowel jointed, <b>plain cement</b> <b>concrete pavement</b> over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with <b>M40</b> (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,SI No : 22.2.2)	Cum	1.00	10	5	0.23	11.50

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
17.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Providing and placing <b>joint sealant compound</b> of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower (Non SOR Item)	Rmt	1.00	300			300.00
18.00	Operation & Maintenance for 2nd Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Page No 257,SI No : 35.8)	Rmt	1.00	300			300.00
19.00	Operation & Maintenance for 2nd Year: Providing and laying at or near ground level factory made kerb stone of M-20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge). Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)		6				6.00
20.00	Operation & Maintenance for 2nd Year: Providin and fixing pre cast solid concrete Kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Page No 25,SI No : 5.3)	Nos.	50				50.00
21.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Removing and resetting of kerb stones. including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	m	50				50.00
22.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB 800-1. <b>Painting two coats</b> after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 (Page No 182, SI No : 24.1)		1	10	119		1190.00
23.00	<b>Operation &amp; Maintenance for 2nd Year:</b> P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)	Nos.	10.00				10.00
24.00	Operation & Maintenance for 2nd Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron / Ductile Iron (NON SOR Item)	Nos.	10.00				10.00
25.00	Operation & Maintenance for 2nd Year: Providing gully pipe lowering,laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include all jointing materials,testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)		1.00	5.00			5.00
26.00	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 11-18-17.1 : <b>Providing and fixing sand cast iron trap of 100mm dia</b> , of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. ( PWD SR 2015-16,P.No.86, SI.No.12.89)		5.00				5.00

Sr.No.	Specification	Unit	No.	L	в	D	Qty.
27.00	Operation & Maintenance for 2nd Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98 1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)	Rmt	1	5.00			5.00
28.00	Operation & Maintenance for 2nd Year: Providing and laying Dia 225mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)	Rmt	1	10			10.00
29.00	Operation & Maintenance for 2nd Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering, Jointing into trenches, Complete. (Market Rate)	Nos.	2				2.00
30.00	Operation & Maintenance for 2nd Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)	Rmt	1	39			39.00
31.00	Operation & Maintenance for 2nd Year: Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and conveying to work site including loading and unloading at both destination and rolling, lowering into trenches, laying true to line and jointing of pipe and special including encasing the pipe Complete. (Market Rate)	Nos.	4				4.00
32.00	Operation & Maintenance for 2nd Year: Providing and Fixixng Spacers for Power Ducts of size 225 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	7				7.00
33.00	Operation & Maintenance for 2nd Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	7				7.00
34.00	Operation & Maintenance for 2nd Year: Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)	Rmt	1	10			10.00
35.00	Operation & Maintenance for 2nd Year: Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Duct and conveying to work site including loading and unloading at both destination and lowering into trenches, and jointing of pipe.Complete. (Market Rate)		1				1.00
36.00	Operation & Maintenance for 2nd Year: Providing and laying heavy duty cobble stones 60mm thick, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Page No 101,SI No : 14.6)	Sqm	1	10	3.792		37.92

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
37.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Providing and laying heavy duty <b>Tactile Tiles</b> (Direction and Stop tiles-300 x 300 mm) 60mm thick and Yellow in colour , using cement and course sand for manufacture of blocks of approved size, shape with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Non SOR Item)		1.00	10	0.225		2.25
38.00	Operation & Maintenance for 2nd Year: Providing and laying heavy duty cobble stones 75mm thick, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Page No 101,SI No : 14.7)		1.00	10	0.421		4.21
39.00	Operation & Maintenance for 2nd Year: Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803 (Page No 192,SI No : 24.57)		1.00	2039.433	0.15		305.91
40.00	Operation & Maintenance for 2nd Year: Operation and Maintenance for eToilets Stainless Steel Public Model as specified in Road and Other works BOQ Item No.45.	Nos	2.00				2.00
41.00	Operation & Maintenance for 2nd Year: Providing and fixing of S.S. Bollards(SS304) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	5.00				5.00
42.00	Operation & Maintenance for 2nd Year: Providing and fixing of railing as detail design in MS HOLLOW SECTION and bars (shop drawing to be approved), with vertical support of 0.9m @2.2mc/c, all complete to the satisfaction of the Landscape architect. (Non SOR Item)	MT	1.00	0.3			0.30
43.00	Operation & Maintenance for 2nd Year: Excavation and removal of silt and silt mixed with sand in slussy condition from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts. For Desilting of drains and grit chambers including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Cum	2.00	1650	0.6	0.1	198.00
44.00	Operation & Maintenance for 2nd Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Earth	Cum	1.00	58.53			58.53
45.00	Operation & Maintenance for 2nd Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Debris	Cum	1.00	9.38			9.38
46.00	Electrical Works Operation & Maintenance for 2nd Year: Dismantling, removal, transportation to client's storage place existing lighting poles (Non SOR Item)	Nos.	1				1.00
47.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)	Nos.	1				1.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
48.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	Nos.	1				1.00
49.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	Nos.	1				1.00
50.00	Operation & Maintenance for 2nd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	Nos.	1				1.00
51.00	Operation & Maintenance for 2nd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.2)	Nos.	1				1.00
52.00	Operation & Maintenance for 2nd Year: Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole8mtr and above street light pole (Ref Electrical SOR SI No.16.28.3)	Nos.	118				118.00
53.00	LT Cable Operation & Maintenance for 2nd Year: Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR SI No.7.5,7.5.4)	m	1	12.00			12.00
54.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)	m	1	10.00			10.00
55.00	Operation & Maintenance for 2nd Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR SI No.7.21,7.21.6)	Nos	5				5.00
56.00	Operation & Maintenance for 2nd Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR SI No.7.21.2) Earthing system	Nos	4				4.00
57.00	Operation & Maintenance for 2nd Year: Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,SI No.7.23.6)	Kit	1				1.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
	<b>Operation &amp; Maintenance for 2nd Year:</b> Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)	Rmt	1	12			12.00
	Landcaping Works						
	SOIL MIXES and Ground Preparation Operation & Maintenance for 2nd Year: Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)	Cum	1	500	0.5	0.6	150.00
<u> </u>	Operation & Maintenance for 2nd Year: KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)	Cum	1	500	0.6	0.15	45.00
61.00	Operation & Maintenance for 2nd Year: KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77)	Cum	1	10	0.404	0.1	0.40
	<b>Operation &amp; Maintenance for 2nd Year:</b> Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	1	10	0.404	0.1	0.40
63.00	Soil preparation of Lawn Operation & Maintenance for 2nd Year: Maintenance of lawns or Turfing of slopes (rough grassing) for a period of one year including watering etc complete including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Sqm	1.00	20	0.6		12.00
64.00	Bed Prepartion for , Ground covers, Climbers/ creepers, Shrubs Operation & Maintenance for 2nd Year: Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately).	Cum	1	400	0.6		240.00
	(Non SOR Item) SHRUBS: Supply and Stacking of Shrubs						
65.00	Operation & Maintenance for 2nd Year: Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)	Nos.	23.00				23.00
66.00	Operation & Maintenance for 2nd Year: Nerium Oleander variegated - 5'0" ht, 5-6 branches and bushy in form (Non SOR Item)	Nos.	50.00				50.00
67.00	<b>Operation &amp; Maintenance for 2nd Year:</b> Pandanus variegted'gold ' 300mm ht , 300mm c/c in triangulation , with 4-5 fronds (Non SOR Item)	Nos.	800.00				800.00
	Operation & Maintenance for 2nd Year: Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of landscape architect/PMC (Non SOR Item)	Nos.	9.00				9.00
	<b>Operation &amp; Maintenance for 2nd Year:</b> Ficus blackenia, c/c: 600m, must be bushy and multibranched(atleast 3), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	8.00				8.00
	<b>Operation &amp; Maintenance for 2ndYear:</b> Nerium oleander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	9.00				9.00
71.00	TURF Operation & Maintenance for 2nd Year: ZOYSIA JAPONICA (MAT) (Non SOR Item)	Sqm	1	20	2.05		41.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
	IRRIGATION						
72.00	Operation & Maintenance for 2nd Year: Watering with tanker to landscape area and plants for one year	Year	1.00				1.00
73.00	<b>Operation &amp; Maintenance for 2nd Year:</b> supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	1	10	0.6		6.00

Assistant Engineer MSCL Mangaluru

Executive Engineer MSCL Mangaluru General Manager Technical MSCL Mangaluru

## Name of the Work :- Mangalore Smart City 3.11.2 Maintenance 2nd Year - Rate Analysis of Road & Other Work for Loop Road

1	<b>Operation &amp; Maintenance for 2nd Year</b> : Taking out existing CC interlocking paver blocks from footpath rubbish etc., disposal of unserviceable material to the dumping gro separately and stacking of serviceable material within 50 metre Charge.(RA attached)	ound, for	which payme	nt shall be made
	Basic rate		68.16	
	O&M 2nd year escalation of 8%		5.45	
		Rate	73.61	Sqm
				•
2	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M200.Dismantling of cement concrete pavement by tools,breaking to pieces not exceeding 0.02 cum in volume and st disposal of dismantled material stacking serviceble and unservice per specifications.MORTH specification No.202.(Including transp for lead 5km-Extra) (Page No 138,SI No : 18.47)	ock pilling able mat	g at designat erials separa	ed locations and tely complete as
	Basic rate		899	
	O&M 2nd year escalation of 8%		71.92	
	Add 10% For area weightage (Mangalore City)		97.09	
		Rate	1068.01	
3	KSRRB M200-Dismantaling of kerb Stone and Channel KSRRB M Manual means and disposal of dismantled materials with all lifts ar specifications.MORTH Specification No.202. (Page No.139,S.I.No.18.49)			erb stone by
	Basic rate		12.00	
	O&M 2nd year escalation of 8%		0.96	
	Add 10% For area weightage (Mangalore City)		1.3	
		Rate	14.26	
4	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M200-13.1. Dismantling of existing structures like culve structure comprising of masonry, cement concrete, wood work, ste wherever necessary, sorting the dismantled material, disposal of u serviceable material with all lifts complete as per specifications. Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPV	el work, i nservicea II. By M	ncluding T&F able material echanical Me	P and scaffolding and stacking the ans. A. Cement
	Basic rate		390	
	O&M 2nd year escalation of 8%		31.2	
	Add 10% For area weightage (Mangalore City)		42.12	
		Rate	463.32	Cum
5	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M200-12.1. Dismantling of existing structures like culve structure comprising of masonary, cement concrete, woodwo scaffolding wherever necessary, sorting the dismantled material, of stacking the serviceable material with all lifts complete as per spect i)Dismantaling Brick/Tile work B.In Cement mortar (Page No 137,SI No : 18.23)	ork, stee disposal o	l work, inclu of unservicea	uding T&P and
	Basic rate		351	
	O&M 2nd year escalation of 8%		28.08	
	Add 10% For area weightage		37.91	
		Rate	416.99	
			+10.00	
1				1

	Operation & Maintenance for 2nd Year:			
	KSRRB M300-14. Excavation for roadwork in all types of soil v			
	capacity including cutting and loading in tippers, trimming botton			
0	requirements of lines and grades and cross sections, and transpo	orting disp	oosal locatior	n up to a lead of
6	1.00Km and complete as per specifications.			
	MORTH specification No.301(Including transporting charges, load	ing and u	nloading for l	ead 5km)
	(Page No 143,SI No : 19.14)	0	0	,
	Basic rate		41	
	O&M 2nd year escalation of 8%		3.28	
	Add 10% For area weightage (Mangalore City)		4.43	
		Rate	48.71	
		Nale	40.71	Cum
	Oneration 8 Maintenance for 2nd Veer			
	Operation & Maintenance for 2nd Year:	lovero na	at avaa adina	20 ama in danth
	KSRB 2-4 : Refilling available earth around pipe lines, cables in			
7	compacting each deposited layer by ramming after watering with			
	including cost of all labour complete as per specifications.(KPWD	16-17,51	NO.2.11,Pg. I	NO.6)
	Basic rate		120	
	O&M 2nd year escalation of 8%		9.6	
	Add 10% For area weightage (Mangalore City)		12.96	
		Rate	142.56	Cum
	Operation & Maintenance for 2nd Year:			•
	KSRRB 300-Compaction KSRRB 300-58. Compaction of original of	around wi	th maximum	of 6 passes of 8
8	to 10 tonnes power roller including filling in depression occuring du			
0	HOM of machinery complete as per specifications. MORTH / Chap			
	No.149)		112 10 11,01	i torroror, gi
	Basic rate		6	
	O&M 2nd year escalation of 8%		0.48	
	Add 10% For area weightage (Mangalore City)		0.65	
		Rate	7.13	Sqm
	Operation & Maintenance for 2nd Year:			
	KSRB 4-1.7 : Providing and laying in position plain cement conc			
	220kgs, with 20mm and down size graded granite metal coa		•	
9	aggregtes @ 0.56cum, machine mixed, concrete laid in layer		•	
	compacted, in foundation, plinth and cills, ncluding cost of all r			
	curing complete as per specifications. Specification No. KBS	4.1, 4.2(	KPWD 16-17	,SI.No.4.7,Page
	No.13)			
	Basic Rate		5770	
	O&M 2nd year escalation of 8%		461.6	
	Add 10% For area weightage (Mangalore City)		623.16	
		Rate	6854.76	Cum
	Operation & Maintenance for 2nd Year:		-	
	KSRRB M400-6.2.Construction of granular sub base by providing	close ara	ded crushed	stone aggregate
	of granite/trap/basalit material,spreading in uniform layers with mo	•		
	in place methode by rotavator at OMC, and compacting with vibrat			
10	density,complete as per specification. B.By Mix in Place Methode.			
10	Close graded granular sub base material as per 400-1			
	For Grading II material			
	(Page No 155,SI No : 20.5.2)			
	Pasia Pata		0400	
	Basic Rate		2166	
	O&M 2nd year escalation of 8%		173.28	
	Add 10% For area weightage (Mangalore City)	Data	233.93	
	Page 119	Rate	2573.21	Cum

	Operation & Maintenance for 2nd Year:			
	KSRB 4.2.1 : Providing and laying in position reiforcement cement cement @340Kgs,with 20mm and down size graded granite met super plasticisers @3 liters confirming to IS 9103-1999 reafirmed	tal coarse I -2008 at	aggregate ( machine mix	0.47 cum wi ked,concrete la
11	in layers not exceeding 15cms thick, vibrated for all works in foun walls,return walls,walls (any thickness) including attached pi buttresses, bed blocks,anchor blocks & plinths etc.,Ir machinery,curing,complete but excluding cost of reinforcement as	lasters, c ncluding	columnspillars	
	(Page No 13,SI No : 4.10)	por opeo		
	Basic Rate		6198	
	O&M 2nd year escalation of 8%		495.84	
	Add 10% For area weightage (Mangalore City)		669.38	
		Rate	7363.22	Cum
	Operation & Maintenance for 2nd Year:			
	Specification No. KSB 4.6.2 (Page No 15,SI No : 4.28) Basic Rate O&M 2nd year escalation of 8%		263 21.04	
	Add 10% For area weightade (Mandalore City)		20.4	
	Add 10% For area weightage (Mangalore City)  Operation & Maintenance for 2nd Year: KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work inc		28.4 <b>312.44</b>	Sqm
13	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work in straighting,cutting,bending,hooking,placing in position,lapping and with binding wire and anchoring to thr adjoing members wherever (laps,hooks and wastage shall not be measured and paid) cost of complete as per specifications.Specification No. KBS4.6.3.	cluding /or weldin necessar	312.44 ng wherever re y complete as	Sqm equired,tying s per design
13	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work in straighting,cutting,bending,hooking,placing in position,lapping and with binding wire and anchoring to thr adjoing members wherever (laps,hooks and wastage shall not be measured and paid) cost of complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500	cluding /or weldin necessar	312.44 ng wherever ro y complete as ,labour,HOM	Sqm equired,tying s per design of machinary
13	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work in straighting,cutting,bending,hooking,placing in position,lapping and with binding wire and anchoring to thr adjoing members wherever (laps,hooks and wastage shall not be measured and paid) cost of complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500 Basic Rate	cluding /or weldin necessar	312.44 ng wherever re y complete as ,labour,HOM 70782	Sqm equired,tying s per design of machinary
13	Operation & Maintenance for 2nd Year:         KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work independence straighting, cutting, bending, hooking, placing in position, lapping and with binding wire and anchoring to thr adjoing members wherever (laps, hooks and wastage shall not be measured and paid) cost of complete as per specifications. Specification No. KBS4.6.3. do with TMT bars Fe500         Basic Rate       O&M 2nd year escalation of 8%	cluding /or weldin necessar	312.44 ng wherever ro y complete as ,labour,HOM 70782 5662.56	Sqm equired,tying s per design of machinary
13	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work in straighting,cutting,bending,hooking,placing in position,lapping and with binding wire and anchoring to thr adjoing members wherever (laps,hooks and wastage shall not be measured and paid) cost of complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500 Basic Rate	cluding /or weldin necessar	312.44 ng wherever re y complete as ,labour,HOM 70782	Sqm equired,tying s per design of machinary
13	Operation & Maintenance for 2nd Year:         KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work independence straighting, cutting, bending, hooking, placing in position, lapping and with binding wire and anchoring to thr adjoing members wherever (laps, hooks and wastage shall not be measured and paid) cost of complete as per specifications. Specification No. KBS4.6.3. do with TMT bars Fe500         Basic Rate       O&M 2nd year escalation of 8%	cluding /or weldir necessar materials	<b>312.44</b> ng wherever ro y complete as ,labour,HOM 70782 5662.56 7644.46	Sqm equired,tying s per design of machinary
13	Operation & Maintenance for 2nd Year:         KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work independence straighting, cutting, bending, hooking, placing in position, lapping and with binding wire and anchoring to thr adjoing members wherever (laps, hooks and wastage shall not be measured and paid) cost of complete as per specifications. Specification No. KBS4.6.3. do with TMT bars Fe500         Basic Rate       O&M 2nd year escalation of 8%	cluding /or weldin necessar materials Rate Murrum. m with all eet require	312.44 ag wherever re y complete as labour,HOM 70782 5662.56 7644.46 84089.02 KSRRB M30 I lifts and lead ement Table 3	Sqm equired,tying s per design of machinary MT 0-53. Is, transporting 300- 2 complet
	Operation & Maintenance for 2nd Year:         KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work independence of the straighting, cutting, bending, hooking, placing in position, lapping and with binding wire and anchoring to thr adjoing members wherever (laps, hooks and wastage shall not be measured and paid) cost of complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500         Basic Rate       O&M 2nd year escalation of 8%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 2nd Year:         KSRRB M300- Construction of Embankment with Material Gravel/Construction of embankment with approved material Gravel/Murru to site, spreading, grading to required slope and compacting to meas per specifications.(Including cost of gravel / murrum, watering of the specifications.(Including cost of gravel / murrum, watering of the specifications.)	cluding /or weldin necessar materials Rate Murrum. m with all eet require	312.44 ag wherever re y complete as labour,HOM 70782 5662.56 7644.46 84089.02 KSRRB M30 I lifts and lead ement Table 3	Sqm equired,tying s per design of machinary MT 0-53. Is, transporting 300- 2 complet by vibratory
	Operation & Maintenance for 2nd Year:         KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work in         straighting,cutting,bending,hooking,placing in position,lapping and         with binding wire and anchoring to thr adjoing members wherever         (laps,hooks and wastage shall not be measured and paid) cost of         complete as per specifications.Specification No. KBS4.6.3.         do with TMT bars Fe500         Basic Rate         O&M 2nd year escalation of 8%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 2nd Year:         KSRRB M300- Construction of Embankment with Material Gravel/         Construction of embankment with approved material Gravel//Murrue         to site, spreading, grading to required slope and compacting to me         as per specifications.(Including cost of gravel / murrum, watering coller to 95% of proctors density) MORTH Specification No. 305	cluding /or weldin necessar materials Rate Murrum. m with all eet require	312.44 ng wherever re y complete as labour,HOM 70782 5662.56 7644.46 84089.02 KSRRB M30 l lifts and lead ement Table 3 compaction l	Sqm equired,tying s per design of machinary MT 0-53. Is, transporting 300- 2 complet by vibratory
	Operation & Maintenance for 2nd Year:         KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work in         straighting,cutting,bending,hooking,placing in position,lapping and         with binding wire and anchoring to thr adjoing members wherever         (laps,hooks and wastage shall not be measured and paid) cost of         complete as per specifications.Specification No. KBS4.6.3.         do with TMT bars Fe500         Basic Rate         O&M 2nd year escalation of 8%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 2nd Year:         KSRRB M300- Construction of Embankment with Material Gravel/         Construction of embankment with approved material Gravel/Murru         to site, spreading, grading to required slope and compacting to me         as per specifications.(Including cost of gravel / murrum, watering or         roller to 95% of proctors density) MORTH Specification No. 305         Basic Rate	cluding /or weldin necessar materials Rate Murrum. m with all eet require	312.44 ag wherever re y complete as labour,HOM 70782 5662.56 7644.46 84089.02 KSRRB M30 I lifts and lead ement Table 3 compaction	Sqm equired,tying s per design of machinary MT 0-53. Is, transporting 300- 2 complet by vibratory
	Operation & Maintenance for 2nd Year:         KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work ind         straighting,cutting,bending,hooking,placing in position,lapping and         with binding wire and anchoring to thr adjoing members wherever         (laps,hooks and wastage shall not be measured and paid) cost of         complete as per specifications.Specification No. KBS4.6.3.         do with TMT bars Fe500         Basic Rate         O&M 2nd year escalation of 8%         Add 10% For area weightage (Mangalore City)         Construction of embankment with approved material Gravel/Construction of embankment with approved material Gravel/Murru         to site, spreading, grading to required slope and compacting to me as per specifications.(Including cost of gravel / murrum, watering or roller to 95% of proctors density) MORTH Specification No. 305         Basic Rate         O&M 2nd year escalation of 8%         Add 20km lead (17.4 KSRRB M100-4.1-Cost of haulage excluding loading and unloading MORTH-100/Chapter 1-case 1-	cluding /or weldin necessar materials Rate Murrum. m with all eet require	312.44 ag wherever re y complete as labour,HOM 70782 5662.56 7644.46 84089.02 KSRRB M30 lifts and lead ement Table 3 compaction l 489 39.12	Sqm equired,tying s per design of machinary MT 0-53. Is, transporting 300- 2 complet by vibratory
	Operation & Maintenance for 2nd Year:         KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work indistraighting, cutting, bending, hooking, placing in position, lapping and with binding wire and anchoring to thr adjoing members wherever (laps, hooks and wastage shall not be measured and paid) cost of complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500         Basic Rate       O&M 2nd year escalation of 8%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 2nd Year:         KSRRB M300- Construction of Embankment with Material Gravel/Construction of embankment with approved material Gravel/Murru to site, spreading, grading to required slope and compacting to meas per specifications.(Including cost of gravel / murrum, watering or roller to 95% of proctors density) MORTH Specification No. 305         Basic Rate         O&M 2nd year escalation of 8%         Add 20km lead (17.4 KSRRB M100-4.1-Cost of haulage excluding loading and unloading MORTH-100/Chapter 1-case 1-Surface Road)=2.0 Rs/ Tkm x 1.28 T x 20km	cluding /or weldin necessar materials Rate Murrum. m with all eet require	312.44 ag wherever re y complete as labour,HOM 70782 5662.56 7644.46 84089.02 KSRRB M30 KSRRB M30 KSRRB M30 I lifts and lead compaction l 489 39.12 51.2	Sqm equired,tying s per design of machinary MT 0-53. Is, transporting 300- 2 complet by vibratory

	Operation & Maintenance for 2nd Year:			
	KSRRB M600-1.Construction of dry lean cement concrete	mix M15	5 with 1:5:10	0 OPC cement
	@160Kgs,with 25mm and down size graded granite/trap/basalt m	etal coar	se aggregate	at 0.86cum and
	fine aggregate @ 0.58cum Sub-base over prepared sub gra	de with	(coarse and	fine aggregate
15	confirming to IS:383) aggregate cement ration not to excee 15:1.	Aggrega	te gradation	after blending to
	be as per Table 600-1, cement content to be determined duri	ng trail	length constr	uction, concrete
	strength not to be less than 10Mpa at 7 days, mixed in a batchin	ng plant,	transported to	o site,laid with a
	paver with electronic sensor, compacting with 8-10 tonnes vibrato	ry roller,	finishing and	curing complete
	as per specifications.Morth specification No.601		-	_
	Basic Rate		4048	
	O&M 2nd year escalation of 8%		323.84	
	Add 10% For area weightage (Mangalore City)		437.18	
		Rate	4809.02	Cum
	Operation & Maintenance for 2nd Year:			
	KSSRRB M600-2.Construction of unreinforced,dowel jointed,plai			
	prepared sub base with 25mm and down size graded gr			
	superplastisizer at 3 Its confirming to IS9103-1999 reaffirme			
	conforming to IS:383) mixed in a batching and mixing plant as p			
16	site, laid with a fixed form or slip form paver spread, compacted			
10	including provision of contraction, expansio, construction and long			
	chrges, joints filler, separation memberane, sealent primer, joints s		•	
	4.5m intervals, tie rod, admixtures as approved, curing compoun		•	• ·
	drawing complete as per sprcifications MORTH specification N	lo.602.do	with M40 (	420Kg per cum
	Cement,C.A,0.67 cum F.A.044Cum			
	(Page No 176,SI No : 22.2.2)			
	Basic Rate		5765	
	O&M 2nd year escalation of 8%		461.2	
	Add 10% For area weightage (Mangalore City)		622.62	
		Rate	6848.82	Cum
	Operation & Maintenance for 2nd Year:			
	Providing and placing joint sealant compound of cold polysulph		•	ter widening the
	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom	mended	by the seala	ter widening the nt manufacturer
17	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s	mended trip, prim	by the seala ing the sides	ter widening the nt manufacturer of the sealant i
17	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal	mended trip, prim	by the seala ing the sides	ter widening the nt manufacturer of the sealant it
17	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower	mended trip, prim	by the seala ing the sides	ter widening the nt manufacturer of the sealant it
17	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal	mended trip, prim	by the seala ing the sides	ter widening the nt manufacturer, of the sealant if
17	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b>	mended trip, prim	by the seala ing the sides complete inc	ter widening the nt manufacturer, of the sealant if cluding material,
17	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b>	mended trip, prim	by the seala ing the sides complete inc 115	ter widening the nt manufacturer, of the sealant if cluding material,
17	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b>	mended trip, prim ant all	by the seala ing the sides complete inc 115 9.2	ter widening the nt manufacturer, of the sealant if cluding material,
17	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b>	mended trip, prim	by the seala ing the sides complete inc 115	ter widening the nt manufacturer of the sealant it cluding material
17	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b> O&M 2nd year escalation of 8%	mended trip, prim ant all	by the seala ing the sides complete inc 115 9.2	ter widening the nt manufacturer of the sealant it cluding material
17	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b> O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year:	mended trip, prim ant all	by the seala ing the sides complete inc 115 9.2	ter widening the nt manufacturer of the sealant i cluding material
	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b> O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar	mended trip, prim ant all <b>Rate</b>	by the seala ing the sides complete inc 115 9.2 <b>124.2</b>	ter widening the nt manufacturer of the sealant i cluding material
17	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b> O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction j	mended trip, prim ant all <b>Rate</b>	by the seala ing the sides complete inc 115 9.2 <b>124.2</b> gitudinal joint	ter widening the nt manufacturer of the sealant i cluding material <b>Rmt</b> s and expansior
	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b> O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction j joints in concrete pavement using epoxy mortar concrete c	mended trip, prim ant all <b>Rate</b>	by the seala ing the sides complete inc 115 9.2 <b>124.2</b> gitudinal joint	ter widening the nt manufacturer of the sealant i cluding material <b>Rmt</b> s and expansior
	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b> O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction j	mended trip, prim ant all <b>Rate</b>	by the seala ing the sides complete inc 115 9.2 <b>124.2</b> gitudinal joint	ter widening the nt manufacturer of the sealant i cluding material <b>Rmt</b> s and expansior
	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b> O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction j joints in concrete pavement using epoxy mortar concrete c	mended trip, prim ant all <b>Rate</b>	by the seala ing the sides complete inc 115 9.2 <b>124.2</b> gitudinal joint	ter widening the nt manufacturer of the sealant in cluding material <b>Rmt</b> s and expansion cifications.Morth
	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b> <b>O&amp;M</b> 2nd year escalation of 8% <b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction j joints in concrete pavement using epoxy mortar concrete c specification No.3005.1	mended trip, prim ant all <b>Rate</b>	by the seala ing the sides complete inc 115 9.2 124.2 gitudinal joint as per spe	ter widening the nt manufacturer of the sealant in cluding material <b>Rmt</b> s and expansion crifications.Morth
	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b> O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction j joints in concrete pavement using epoxy mortar concrete c specification No.3005.1 Basic Rate	mended trip, prim ant all <b>Rate</b>	by the seala ing the sides complete inc 115 9.2 124.2 gitudinal joint as per spe	ter widening the nt manufacturer, of the sealant it cluding material, <b>Rmt</b> s and expansion cifications.Morth
	Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom- cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the seal manpower (Non SOR Item) <b>Rate Approved as per EOI by MD MSCL Mangalore,Refer</b> <b>Sr.No.2</b> <b>O&amp;M</b> 2nd year escalation of 8% <b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction j joints in concrete pavement using epoxy mortar concrete c specification No.3005.1 Basic Rate O&M 2nd year escalation of 8%	mended trip, prim ant all <b>Rate</b>	by the seala ing the sides complete inc 115 9.2 124.2 gitudinal joint as per spe <u>331</u> 26.48	ter widening the nt manufacturer, of the sealant if cluding material, <b>Rmt</b> s and expansion cifications.Morth

19	<b>Operation &amp; Maintenance for 2nd Year:</b> Providing and laying at or near ground level factory made kerb steposition to the required line, level and curvature, jointed with cers and), including making joints with or without grooves (thickness of to more than 5mm), including making drainage opening wherever of Engineer-in-charge (length of finished kerb edging shall be mea (Precast C.C. kerb stone shall be approved by Engineer-in-charge Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)	ment mo of joints e required sured for	ortar 1:3 (1 co except at shar complete etc.	ement: 3 coarse p curve shall not
	Rate Arrived as per Rate analysis			
	Basic Rate		1806	
	O&M 2nd year escalation of 8%		144.48	
		Rate	1950.48	
20	114 and 165mm respectively,400mm high and 450mm in length finishing cutting, including cost of all materials,labour,hire charge and lift,transportation etc.,complete (Page No 25,SI No : 5.3)		chinery,loadin	0
	Basic rate		421	
	O&M 2nd year escalation of 8% Add 10% For area weightage		33.68	
			45.47	
		Data		
	Operation & Maintenance for 2nd Year:	Rate	500.15	Nos.
21		erials, sca Environr ÉEnginee	500.15 affolding HON nental and So er-in-charge. 98 7.84 10.58	Nos. / of machineries ocial Safeguards
21	Operation & Maintenance for 2nd Year:         Removing and resetting of kerb stones. including cost of all mate         with all lead and lifts, labour charges including implementation of         & as per design, drawing, technical specifications and directions of         Basic rate         O&M 2nd year escalation of 8%	erials, sca Environr	500.15 affolding HON nental and So er-in-charge. 98 7.84	Nos. / of machineries ocial Safeguards
21	Operation & Maintenance for 2nd Year:         Removing and resetting of kerb stones. including cost of all mate         with all lead and lifts, labour charges including implementation of         & as per design, drawing, technical specifications and directions of         Basic rate         O&M 2nd year escalation of 8%         Add 10% For area weightage         Operation & Maintenance for 2nd Year:         KSRRB 800-1. Painting two coats after filling the surface with synth         on new plastered concrete surfaces, with materials, labour comple         Chapter 8         (Page No 182,SI No : 24.1)         Basic Rate	erials, sca Environr Enginee <b>Rate</b>	500.15 affolding HON nental and So er-in-charge. 98 7.84 10.58 116.42 mel paint in a specifications	Nos.
	Operation & Maintenance for 2nd Year:         Removing and resetting of kerb stones. including cost of all mate         with all lead and lifts, labour charges including implementation of         & as per design, drawing, technical specifications and directions of         Basic rate         O&M 2nd year escalation of 8%         Add 10% For area weightage         Operation & Maintenance for 2nd Year:         KSRRB 800-1. Painting two coats after filling the surface with synth         on new plastered concrete surfaces, with materials, labour comple         Chapter 8         (Page No 182,SI No : 24.1)         Basic Rate         O&M 2nd year escalation of 8%	erials, sca Environr Enginee <b>Rate</b>	500.15 affolding HOM nental and So er-in-charge. 98 7.84 10.58 116.42 mel paint in a specifications 80 6.4	Nos.
	Operation & Maintenance for 2nd Year:         Removing and resetting of kerb stones. including cost of all mate         with all lead and lifts, labour charges including implementation of         & as per design, drawing, technical specifications and directions of         Basic rate         O&M 2nd year escalation of 8%         Add 10% For area weightage         Operation & Maintenance for 2nd Year:         KSRRB 800-1. Painting two coats after filling the surface with synth         on new plastered concrete surfaces, with materials, labour comple         Chapter 8         (Page No 182,SI No : 24.1)         Basic Rate	erials, sca Environr Enginee <b>Rate</b> netic ena te as per	500.15 affolding HON nental and So er-in-charge. 98 7.84 10.58 116.42 mel paint in a specification 80 6.4 8.64	Nos.
	Operation & Maintenance for 2nd Year:         Removing and resetting of kerb stones. including cost of all mate         with all lead and lifts, labour charges including implementation of         & as per design, drawing, technical specifications and directions of         Basic rate         O&M 2nd year escalation of 8%         Add 10% For area weightage         Operation & Maintenance for 2nd Year:         KSRRB 800-1. Painting two coats after filling the surface with synth         on new plastered concrete surfaces, with materials, labour comple         Chapter 8         (Page No 182,SI No : 24.1)         Basic Rate         O&M 2nd year escalation of 8%	erials, sca Environr Enginee <b>Rate</b>	500.15 affolding HOM nental and So er-in-charge. 98 7.84 10.58 116.42 mel paint in a specifications 80 6.4	Nos.
	Operation & Maintenance for 2nd Year:         Removing and resetting of kerb stones. including cost of all mate         with all lead and lifts, labour charges including implementation of         & as per design, drawing, technical specifications and directions of         Basic rate         O&M 2nd year escalation of 8%         Add 10% For area weightage         Operation & Maintenance for 2nd Year:         KSRRB 800-1. Painting two coats after filling the surface with synth         on new plastered concrete surfaces, with materials, labour comple         Chapter 8         (Page No 182,SI No : 24.1)         Basic Rate         O&M 2nd year escalation of 8%	erials, sca Environr Enginee <b>Rate</b> netic ena te as per	500.15 affolding HOM nental and So er-in-charge. 98 7.84 10.58 116.42 mel paint in a specifications 80 6.4 8.64 95.04	Nos.
22	Operation & Maintenance for 2nd Year:         Removing and resetting of kerb stones. including cost of all mate         with all lead and lifts, labour charges including implementation of         & as per design, drawing, technical specifications and directions of         Basic rate         O&M 2nd year escalation of 8%         Add 10% For area weightage         Operation & Maintenance for 2nd Year:         KSRRB 800-1. Painting two coats after filling the surface with syntl         on new plastered concrete surfaces, with materials, labour comple         Chapter 8         (Page No 182,Sl No : 24.1)         Basic Rate         O&M 2nd year escalation of 8%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 2nd Year:         P/F Square shape 600mmx450 mm precast R.C.C. manhole cover         (Rate analysis attached)         Rate Arrived as per Rate analysis	erials, sca Environr Enginee <b>Rate</b> netic ena te as per	500.15 affolding HON nental and So er-in-charge. 98 7.84 10.58 116.42 mel paint in a specification: 80 6.4 8.64 95.04 me	Nos.
22	Operation & Maintenance for 2nd Year:         Removing and resetting of kerb stones. including cost of all mate         with all lead and lifts, labour charges including implementation of         & as per design, drawing, technical specifications and directions of         Basic rate         O&M 2nd year escalation of 8%         Add 10% For area weightage         Operation & Maintenance for 2nd Year:         KSRRB 800-1. Painting two coats after filling the surface with syntl         on new plastered concrete surfaces, with materials, labour comple         Chapter 8         (Page No 182,Sl No : 24.1)         Basic Rate         O&M 2nd year escalation of 8%         Add 10% For area weightage (Mangalore City)         Otheration & Maintenance for 2nd Year:         P/F Square shape 600mmx450 mm precast R.C.C. manhole cover         (Rate analysis attached)         Rate Arrived as per Rate analysis         Basic Rate	erials, sca Environr Enginee <b>Rate</b> netic ena te as per	500.15 affolding HOM nental and So er-in-charge. 98 7.84 10.58 116.42 mel paint in a specification 80 6.4 8.64 95.04 me	Nos.
22	Operation & Maintenance for 2nd Year:         Removing and resetting of kerb stones. including cost of all mate         with all lead and lifts, labour charges including implementation of         & as per design, drawing, technical specifications and directions of         Basic rate         O&M 2nd year escalation of 8%         Add 10% For area weightage         Operation & Maintenance for 2nd Year:         KSRRB 800-1. Painting two coats after filling the surface with syntl         on new plastered concrete surfaces, with materials, labour comple         Chapter 8         (Page No 182,Sl No : 24.1)         Basic Rate         O&M 2nd year escalation of 8%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 2nd Year:         P/F Square shape 600mmx450 mm precast R.C.C. manhole cover         (Rate analysis attached)         Rate Arrived as per Rate analysis	erials, sca Environr Enginee <b>Rate</b> netic ena te as per	500.15 affolding HON nental and So er-in-charge. 98 7.84 10.58 116.42 mel paint in a specification: 80 6.4 8.64 95.04 me	Nos.

24	Operation & Maintenance for 2nd Year: Providing and Fixing Recessed Inception chamber cover - size: Iron / Ductile Iron (NON SOR Item)	(1250 x	1250 x 80)m	m Material: Cast
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15		3500.00	
	O&M 2nd year escalation of 8%		280	
		Rate	3780.00	Nos.
25	<b>Operation &amp; Maintenance for 2nd Year:</b> Providing gully pipe lowering, laying of PVC 100 mm dia pipes specials and grade as indicated in drawings/design and hydraul shall include all jointing materials, testing apparatus and water for in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)	lically tes	ting of the p	ipe line.The rate
	Basic Rate		297	
	O&M 2nd year escalation of 8%		23.76	
	Add 12% on Labor Charges=Rs.47,For area weightage (Mangalore City)		5.64	
		Rate	326.4	Rm
26	and floors, cost of materials, labour, testing, complete as per spec 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89) Basic Rate		. 830	
	O&M 2nd year escalation of 8%		66.4	
	Add 10% For area weightage (Mangalore City)			
			89.64	
	Operation & Maintenance for 2nd Year:	Rate	986.04	Nos.
27		. Providir construct g head was s per IRC distance o ts, joints y of wate	986.04 ng and laying tion), extendi alls at both e 2:98-1997, be of pipe at leas to be made l r and dirt, all	Nos. g of a reinforced ng from drain to ends, providing a edded on a 0.3 m st half dia of pipe leak proof, invert as per IRC: 98 -
27	<b>Operation &amp; Maintenance for 2nd Year:</b> KSRRB M800- Cable Duct Across the road KSRRB M800-29.1 cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructing minimum fill of granular material over top and sides of RCC pipe a thick layer of granular material free of rock pieces, outer to outer of subject to minimum450 mm in case of double and triple row duc level of duct to be above higher than ground level to prevent entr 1997 and approved drawings complete as per specifications. Case ( KPWD SOR 16-17, Item No.24.34, Pg.No.188)	. Providir construct g head was s per IRC distance o ts, joints y of wate	986.04 ng and laying tion), extendi alls at both e 2:98-1997, be of pipe at leas to be made l r and dirt, all gle row for on	Nos. g of a reinforced ng from drain to ends, providing a edded on a 0.3 m st half dia of pipe leak proof, invert as per IRC: 98 - e utility service
27	Operation & Maintenance for 2nd Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29.1 cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructing minimum fill of granular material over top and sides of RCC pipe a thick layer of granular material free of rock pieces, outer to outer of subject to minimum450 mm in case of double and triple row duc level of duct to be above higher than ground level to prevent entr 1997 and approved drawings complete as per specifications. Case ( KPWD SOR 16-17, Item No.24.34, Pg.No.188) Basic Rate	. Providir construct g head was s per IRC distance o ts, joints y of wate	986.04 ng and laying tion), extendi alls at both e 2:98-1997, be of pipe at leas to be made l r and dirt, all gle row for on 5022	Nos. g of a reinforced ng from drain to ends, providing a edded on a 0.3 m st half dia of pipe eak proof, invert as per IRC: 98 - e utility service
27	Operation & Maintenance for 2nd Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1         cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructing minimum fill of granular material over top and sides of RCC pipe a thick layer of granular material free of rock pieces, outer to outer of subject to minimum450 mm in case of double and triple row duc level of duct to be above higher than ground level to prevent entre 1997 and approved drawings complete as per specifications. Case (KPWD SOR 16-17, Item No.24.34, Pg.No.188)         Basic Rate       O&M 2nd year escalation of 8%	. Providir construct g head was s per IRC distance o ts, joints y of wate	986.04 ng and laying tion), extendi alls at both e 0:98-1997, be of pipe at leas to be made l r and dirt, all gle row for on 5022 401.76	Nos. g of a reinforced ng from drain to ends, providing a edded on a 0.3 m at half dia of pipe leak proof, inver as per IRC: 98 e utility service
27	Operation & Maintenance for 2nd Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29.1 cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructing minimum fill of granular material over top and sides of RCC pipe a thick layer of granular material free of rock pieces, outer to outer of subject to minimum450 mm in case of double and triple row duc level of duct to be above higher than ground level to prevent entr 1997 and approved drawings complete as per specifications. Case ( KPWD SOR 16-17, Item No.24.34, Pg.No.188) Basic Rate	. Providir construct g head was s per IRC distance o ts, joints y of wate	986.04 ng and laying tion), extendi alls at both e 2:98-1997, be of pipe at leas to be made l r and dirt, all gle row for on 5022	Nos. g of a reinforced ng from drain to ends, providing a edded on a 0.3 m st half dia of pipe leak proof, inver as per IRC: 98 e utility service
27	Operation & Maintenance for 2nd Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1         cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructing minimum fill of granular material over top and sides of RCC pipe a thick layer of granular material free of rock pieces, outer to outer of subject to minimum450 mm in case of double and triple row duc level of duct to be above higher than ground level to prevent entre 1997 and approved drawings complete as per specifications. Case (KPWD SOR 16-17, Item No.24.34, Pg.No.188)         Basic Rate       O&M 2nd year escalation of 8%	. Providir construct g head was ls per IRC distance of ts, joints y of wate e - I : Sing	986.04 ng and laying tion), extendi alls at both e 2:98-1997, be of pipe at leas to be made l r and dirt, all gle row for on 5022 401.76 542.38	Nos. g of a reinforced ng from drain to ends, providing a edded on a 0.3 m st half dia of pipe leak proof, inver as per IRC: 98 e utility service
27	Operation & Maintenance for 2nd Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1         cement concrete pipe duct, 300 mm dia, across the road (new         drain in cuts and toe of slope to toe of slope in fills, constructing         minimum fill of granular material over top and sides of RCC pipe a         thick layer of granular material free of rock pieces, outer to outer of         subject to minimum450 mm in case of double and triple row duc         level of duct to be above higher than ground level to prevent entr         1997 and approved drawings complete as per specifications. Case         (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate         O&M 2nd year escalation of 8%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 2nd Year:         Providing and laying Dia 225mm HDPE Electrical pipe Conduits         ribs, dimensional ratio of 13.5,Deflection not greater than 5% w         temparature 90°C under the over burden soil presuure and otf         ASTMF 2160 and /or NEMA TC7.The expected service life of HDI         not be less than 50 years.         (Market Rate)	. Providir construct g head was s per IRC distance of ts, joints y of wate e - I : Sing <b>Rate</b> with Silic then expon ner physi	986.04 ng and laying tion), extendi alls at both e 2:98-1997, be of pipe at leas to be made l r and dirt, all gle row for on 5022 401.76 542.38 5966.14 ore Lubricant osed to the r cal properties onduits and a	Nos. g of a reinforced ng from drain to ends, providing a edded on a 0.3 m st half dia of pipe leak proof, inver as per IRC: 98 - e utility service <b>Rm</b> t inner layer with normal operating s comforming to accessories shal
	Operation & Maintenance for 2nd Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1         cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructing minimum fill of granular material over top and sides of RCC pipe a thick layer of granular material free of rock pieces, outer to outer or subject to minimum450 mm in case of double and triple row duc level of duct to be above higher than ground level to prevent entr 1997 and approved drawings complete as per specifications. Case ( KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate         O&M 2nd year escalation of 8%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 2nd Year:         Providing and laying Dia 225mm HDPE Electrical pipe Conduits ribs, dimensional ratio of 13.5,Deflection not greater than 5% w temparature 90°C under the over burden soil presuure and otf ASTMF 2160 and /or NEMA TC7.The expected service life of HDI not be less than 50 years. (Market Rate)         Basic Rate	. Providir construct g head was s per IRC distance of ts, joints y of wate e - I : Sing <b>Rate</b> with Silic then expon ner physi	986.04 ng and laying tion), extendi alls at both e 2:98-1997, be of pipe at leas to be made l r and dirt, all gle row for on 5022 401.76 542.38 5966.14 ore Lubricant osed to the r cal properties	Nos. g of a reinforced ng from drain to ends, providing a edded on a 0.3 m st half dia of pipe leak proof, inver as per IRC: 98 - e utility service <b>Rm</b> t inner layer with normal operating s comforming to accessories shal
	Operation & Maintenance for 2nd Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.1         cement concrete pipe duct, 300 mm dia, across the road (new         drain in cuts and toe of slope to toe of slope in fills, constructing         minimum fill of granular material over top and sides of RCC pipe a         thick layer of granular material free of rock pieces, outer to outer of         subject to minimum450 mm in case of double and triple row duc         level of duct to be above higher than ground level to prevent entr         1997 and approved drawings complete as per specifications. Case         (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate         O&M 2nd year escalation of 8%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 2nd Year:         Providing and laying Dia 225mm HDPE Electrical pipe Conduits         ribs, dimensional ratio of 13.5,Deflection not greater than 5% w         temparature 90°C under the over burden soil presuure and otf         ASTMF 2160 and /or NEMA TC7.The expected service life of HDI         not be less than 50 years.         (Market Rate)	. Providir construct g head was s per IRC distance of ts, joints y of wate e - I : Sing <b>Rate</b> with Silic then expon ner physi	986.04 ng and laying tion), extendi alls at both e 2:98-1997, be of pipe at leas to be made l r and dirt, all gle row for on 5022 401.76 542.38 5966.14 ore Lubricant osed to the r cal properties onduits and a	Nos. g of a reinforced ng from drain to ends, providing a edded on a 0.3 m st half dia of pipe leak proof, inver as per IRC: 98 - e utility service  Rm t inner layer with normal operating s comforming to accessories shal

	Sub Total		2587.36	
	O&M 2nd year escalation of 8%		206.99	
		Rate	2794.35	
	Operation & Maintenance for 2nd Year:	ļ		ļ
	Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and co	nvevina t	o work site i	ncludina loadina
29	and unloading at both destination and lowering, Jointing into trench			J 1 1 J
	(Market Rate)			
	Basic Rate		1775	
	O&M 2nd year escalation of 8%		142	
		Rate	1917.00	Nos.
	Operation & Maintenance for 2nd Year:			
	Providing and laying Dia 160mm HDPE Electrical pipe Conduits	with Silic	ore Lubricant	inner laver with
	ribs, dimensional ratio of 13.5, Deflection not greater than 5% w			
30	temparature 90°C under the over burden soil presuure and oth			
	ASTMF 2160 and /or NEMA TC7. The expected service life of HDI			
	not be less than 50 years.(Market Rate)			
	Basic Rate		1350	
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item		1000	
	No.50,Pg.No.123)		66	
	Add 12% For area weightage (Mangalore City)		7.92	
	Sub Total		1423.92	
	O&M 2nd year escalation of 8%		113.91	
		Rate	1537.83	Pm
		Nale	1557.05	
	Operation & Maintenance for 2nd Year:			
31	unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete. (Market Rate)	ving true t	o line and joir	nting of pipe and
	Basic Rate		1475	
	O&M 2nd year escalation of 8%		118	
		Rate	1593.00	Nos.
32	<b>Operation &amp; Maintenance for 2nd Year:</b> Providing and Fixixng Spacers for Power Ducts of size 225 mm, t Spacers shall be made of ABS raw material. (Market rate)	o be plac		
	Basic Rate		1003	
	O&M 2nd year escalation of 8%		80.24	
	GST @18%		180.54	
		Rate	1263.78	Nos.
33	<b>Operation &amp; Maintenance for 2nd Year</b> : Providing and Fixixng Spacers for Power Ducts of size 160 mm, t Spacers shall be made of ABS raw material. (Market rate)	o be plac	ed at an inter	val of 1.5 meter.
	Basic Rate		1947	
	O&M 2nd year escalation of 8%		155.76	
	GST @18%		350.46	
		Rate	2453.22	

	Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lub comforming to ASTMF 2160 and /or equivalent indian standard						
34	loading and unloading at both destination and rolling, lowering into trenches, laying true to line and jointing						
	of pipe etc.Complete.						
	(Market Rate)						
	Basic Rate		685				
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item						
	No.50,Pg.No.123)		36				
	Add 12% For area weightage (Mangalore City)		4.32				
	Sub Total		725.32				
	O&M 2nd year escalation of 8%		58.03				
		Rate	783.35	Rm			
35	Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Du loading and unloading at both destination and lowering into trench (Market Rate)						
	Basic Rate		175				
	O&M 2nd year escalation of 8%		14				
		Rate	189.00	Nos.			
36	Operation & Maintenance for 2nd Year: Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness ) and co tons compaction force thereby forcing part of sand underneath to c	ninimum ompacting come up i	compressive g with plate vi n between jo	strength of 281 brator having 3 ints, final			
36	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness) and co tons compaction force thereby forcing part of sand underneath to c compaction of paver surface joints into its final level, including cos machineries complete as per specifications.	ninimum ompacting come up i	compressive g with plate vi n between jo	strength of 281 brator having 3 ints, final			
36	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness) and co tons compaction force thereby forcing part of sand underneath to compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,SI No : 14.6)	ninimum ompacting come up i	compressive g with plate vi n between jo rials, labour a	strength of 281 brator having 3 ints, final nd HOM of			
36	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness) and co tons compaction force thereby forcing part of sand underneath to compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,SI No : 14.6) Basic rate	ninimum ompacting come up i	compressive g with plate vi n between jo rials, labour a 1056.00	strength of 281 brator having 3 ints, final nd HOM of			
36	<ul> <li>Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness) and co tons compaction force thereby forcing part of sand underneath to compaction of paver surface joints into its final level, including cos machineries complete as per specifications.</li> <li>(Page No 101,SI No : 14.6)</li> <li>Basic rate</li> <li>O&amp;M 2nd year escalation of 8%</li> </ul>	ninimum ompacting come up i	compressive g with plate vi n between jo rials, labour a <u>1056.00</u> 84.48	strength of 281 brator having 3 ints, final nd HOM of			
36	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness) and co tons compaction force thereby forcing part of sand underneath to compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,SI No : 14.6) Basic rate	ninimum o ompacting come up i t of mater	compressive g with plate vi n between jo rials, labour a 1056.00 84.48 114.05	strength of 281 brator having 3 ints, final nd HOM of			
36	<ul> <li>Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness) and co tons compaction force thereby forcing part of sand underneath to compaction of paver surface joints into its final level, including cos machineries complete as per specifications.</li> <li>(Page No 101,SI No : 14.6)</li> <li>Basic rate</li> <li>O&amp;M 2nd year escalation of 8%</li> </ul>	ninimum ompacting come up i	compressive g with plate vi n between jo rials, labour a <u>1056.00</u> 84.48	strength of 281 brator having 3 ints, final nd HOM of			
36	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness ) and co tons compaction force thereby forcing part of sand underneath to o compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,Sl No : 14.6) Basic rate O&M 2nd year escalation of 8% Add 10% For area weightage (Mangalore City)	ninimum o ompacting come up i t of mater	compressive g with plate vi n between jo rials, labour a 1056.00 84.48 114.05	strength of 28 <sup>2</sup> brator having 3 ints, final nd HOM of			
36	<ul> <li>Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness) and co tons compaction force thereby forcing part of sand underneath to compaction of paver surface joints into its final level, including cos machineries complete as per specifications.</li> <li>(Page No 101,SI No : 14.6)</li> <li>Basic rate</li> <li>O&amp;M 2nd year escalation of 8%</li> </ul>	ninimum o ompacting come up i t of mater Rate	compressive g with plate vi n between jo rials, labour a <u>1056.00</u> <u>84.48</u> <u>114.05</u> <b>1254.53</b>	strength of 28 <sup>4</sup> brator having 3 ints, final nd HOM of <b>Sqm</b>			
36	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness ) and co tons compaction force thereby forcing part of sand underneath to o compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,SI No : 14.6) Basic rate O&M 2nd year escalation of 8% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 2nd Year: Providing and laying heavy duty Tactile Tiles (Direction and Stop to	ninimum o ompacting come up i t of mater <b>Rate</b> les-300 x	compressive g with plate vi n between jo rials, labour a <u>1056.00</u> 84.48 114.05 <b>1254.53</b>	strength of 28 <sup>4</sup> brator having 3 ints, final nd HOM of <b>Sqm</b> mm thick and			
36	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness ) and co tons compaction force thereby forcing part of sand underneath to o compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,Sl No : 14.6) Basic rate O&M 2nd year escalation of 8% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 2nd Year:	ninimum o ompacting come up i t of mater <b>Rate</b> les-300 x of blocks	compressive g with plate vi n between jo ials, labour a <u>1056.00</u> 84.48 <u>114.05</u> <b>1254.53</b> 300 mm) 60 of approved s	strength of 28 <sup>°</sup> brator having 3 ints, final nd HOM of <b>Sqm</b> mm thick and size, shape wit			
36	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness ) and co tons compaction force thereby forcing part of sand underneath to a compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,SI No : 14.6) Basic rate O&M 2nd year escalation of 8% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 2nd Year: Providing and laying heavy duty Tactile Tiles (Direction and Stop to Yellow in colour , using cement and course sand for manufacture of a minimum compressive strength of 281 kg per sqm over 50mm th compacting with plate vibrator having 3 tons compaction force the	ninimum o ompacting come up i t of mater <b>Rate</b> les-300 x of blocks nick sand reby forci	compressive g with plate vi n between jo rials, labour a <u>1056.00</u> 84.48 114.05 <b>1254.53</b> 300 mm) 600 of approved s bed (average ng part of sar	strength of 28 <sup>4</sup> brator having 3 ints, final nd HOM of <b>Sqm</b> mm thick and size, shape wit thickness ) ar id underneath			
	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness ) and co tons compaction force thereby forcing part of sand underneath to of compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,Sl No : 14.6) Basic rate O&M 2nd year escalation of 8% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 2nd Year: Providing and laying heavy duty Tactile Tiles (Direction and Stop the Yellow in colour , using cement and course sand for manufacture of a minimum compressive strength of 281 kg per sqm over 50mm the compacting with plate vibrator having 3 tons compaction force the come up in between joints, final compaction of paver surface joints	ninimum o ompacting come up i t of mater <b>Rate</b> les-300 x of blocks nick sand reby forcing into its fi	compressive g with plate vi n between jo rials, labour a <u>1056.00</u> 84.48 114.05 <b>1254.53</b> 300 mm) 600 of approved s bed (average ng part of sar	strength of 28 <sup>4</sup> brator having 3 ints, final nd HOM of <b>Sqm</b> mm thick and size, shape wit thickness ) ar id underneath			
	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness ) and co tons compaction force thereby forcing part of sand underneath to of compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,SI No : 14.6) Basic rate O&M 2nd year escalation of 8% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 2nd Year: Providing and laying heavy duty Tactile Tiles (Direction and Stop the Yellow in colour , using cement and course sand for manufacture of a minimum compressive strength of 281 kg per sqm over 50mm the compacting with plate vibrator having 3 tons compaction force the come up in between joints, final compaction of paver surface joints materials, labour and HOM of machineries complete as per specific	ninimum o ompacting come up i t of mater <b>Rate</b> les-300 x of blocks nick sand reby forcing into its fi	compressive g with plate vi n between jo rials, labour a <u>1056.00</u> 84.48 114.05 <b>1254.53</b> 300 mm) 600 of approved s bed (average ng part of sar	strength of 281 brator having 3 ints, final nd HOM of <b>Sqm</b> mm thick and size, shape with thickness ) are ad underneath			
	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness ) and co tons compaction force thereby forcing part of sand underneath to of compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,Sl No : 14.6) Basic rate O&M 2nd year escalation of 8% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 2nd Year: Providing and laying heavy duty Tactile Tiles (Direction and Stop the Yellow in colour , using cement and course sand for manufacture of a minimum compressive strength of 281 kg per sqm over 50mm the compacting with plate vibrator having 3 tons compaction force the come up in between joints, final compaction of paver surface joints	ninimum o ompacting come up i t of mater <b>Rate</b> les-300 x of blocks nick sand reby forcing into its fi	compressive g with plate vi n between jo rials, labour a <u>1056.00</u> 84.48 114.05 <b>1254.53</b> 300 mm) 600 of approved s bed (average ng part of sar	strength of 28 <sup>4</sup> brator having 3 ints, final nd HOM of <b>Sqm</b> mm thick and size, shape wit thickness ) ar id underneath			
	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness ) and co tons compaction force thereby forcing part of sand underneath to o compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,SI No : 14.6) Basic rate O&M 2nd year escalation of 8% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 2nd Year: Providing and laying heavy duty Tactile Tiles (Direction and Stop the Yellow in colour , using cement and course sand for manufacture of a minimum compressive strength of 281 kg per sqm over 50mm the compacting with plate vibrator having 3 tons compaction force the come up in between joints, final compaction of paver surface joints materials, labour and HOM of machineries complete as per specific (Non SOR Item)	ninimum o ompacting come up i t of mater <b>Rate</b> les-300 x of blocks nick sand reby forcing into its fi	compressive g with plate vi n between jo rials, labour a <u>1056.00</u> 84.48 <u>114.05</u> <b>1254.53</b> 300 mm) 60 of approved s bed (average ng part of sar inal level, incl	strength of 281 brator having 3 ints, final nd HOM of <b>Sqm</b> mm thick and size, shape with thickness ) ar id underneath uding cost of			
	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness ) and co tons compaction force thereby forcing part of sand underneath to of compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,SI No : 14.6) Basic rate O&M 2nd year escalation of 8% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 2nd Year: Providing and laying heavy duty Tactile Tiles (Direction and Stop the Yellow in colour , using cement and course sand for manufacture of a minimum compressive strength of 281 kg per sqm over 50mm the compacting with plate vibrator having 3 tons compaction force the come up in between joints, final compaction of paver surface joints materials, labour and HOM of machineries complete as per specific	ninimum o ompacting come up i t of mater <b>Rate</b> les-300 x of blocks nick sand reby forcing into its fi	compressive g with plate vi n between jo rials, labour a <u>1056.00</u> 84.48 114.05 <b>1254.53</b> 300 mm) 600 of approved s bed (average ng part of sar	strength of 281 brator having 3 ints, final nd HOM of <b>Sqm</b> mm thick and size, shape with thickness ) ar id underneath uding cost of			
	Providing and laying heavy duty cobble stones 60mm thick, using manufacture of blocks of approved size, shape and colour with a r kg per sqm over 50mm thick sand bed (average thickness ) and co tons compaction force thereby forcing part of sand underneath to of compaction of paver surface joints into its final level, including cos machineries complete as per specifications. (Page No 101,SI No : 14.6) Basic rate O&M 2nd year escalation of 8% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 2nd Year: Providing and laying heavy duty Tactile Tiles (Direction and Stop to Yellow in colour , using cement and course sand for manufacture of a minimum compressive strength of 281 kg per sqm over 50mm th compacting with plate vibrator having 3 tons compaction force their come up in between joints, final compaction of paver surface joints materials, labour and HOM of machineries complete as per specific (Non SOR Item) Rate Approved as per EOI by MD MSCL Mangalore,Refer	ninimum o ompacting come up i t of mater <b>Rate</b> les-300 x of blocks nick sand reby forcing into its fi	compressive g with plate vi n between jo rials, labour a <u>1056.00</u> 84.48 <u>114.05</u> <b>1254.53</b> 300 mm) 60 of approved s bed (average ng part of sar inal level, incl	strength of 281 brator having 3 ints, final nd HOM of <b>Sqm</b> mm thick and size, shape with thickness ) ar id underneath uding cost of			

	Operation & Maintenance for 2nd Year:			
	Providing and laying heavy duty cobble stones 75mm thick,	using c	ement and o	course sand for
		•		
	manufacture of blocks of approved size, shape and colour with a			
20	kg per sqm over 50mm thick sand bed (average thickness ) and c			
38	tons compaction force thereby forcing part of sand underneath	n to com	e up in betw	veen joints, final
	compaction of paver surface joints into its final level, including			
	machineries complete as per specifications.			
	(Page No 101,SI No : 14.7)			
	Basic rate		1114	
	O&M 2nd year escalation of 8%		89.12	
	Add 10% For area weightage (Mangalore City)		120.31	
		Data	1323.43	
		Rate	1323.43	Sqm
	Operation & Maintenance for 2nd Year:			
	Road Marking with hot applied Thermoplastic Compound with R	eflectrisir	ng Glass Bea	ads on Concrete
	Surface: Providing and laying of hot applied thermoplastic compound		•	
	glass beads at 250 gms and 2 ltr of primer per sqm area, thickr			• •
39	applied glass beads as per IRC:35.The finished surface to be lo			
			ini anu nee	nom sueak and
	holes complete as per specifications.MORTH specification No.803	)		
	(Page No 192,SI No : 24.57)			
	Basic Rate		429	
	O&M 2nd year escalation of 8%		34.32	
			46.33	
	Add 10% For area weightage (Mangalore City)	Data		
		Rate	509.65	Sqm
	Operation & Maintenance for 2nd Year:			
40	Operation and Maintenance for eToilets Stainless Steel Public N	Nodel as	specified in	Road and Other
	works BOQ Item No.45.		•	
	Baisc rate		61200	
	Baloo lato			
	O&M 2nd year escalation of 8%			
	O&M 2nd year escalation of 8%		4896	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer	Rate		
		Rate	4896	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer	Rate	4896	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer	Rate	4896	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.1	Rate	4896	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.1 Operation & Maintenance for 2nd Year:		4896 66096	Nos.
41	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1		4896 66096	Nos.
41	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.1 Operation & Maintenance for 2nd Year: Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge		4896 66096	Nos.
41	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.1 Operation & Maintenance for 2nd Year: Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge (NON SOR Item)		4896 66096	Nos.
41	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.1 Operation & Maintenance for 2nd Year: Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge		4896 66096 lirected by Er	Nos. ngineer -in-
41	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.1 Operation & Maintenance for 2nd Year: Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge (NON SOR Item)		4896 66096	Nos. ngineer -in-
41	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1       Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge         (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.13		4896 66096 lirected by Er 4500.00	Nos. ngineer -in-
41	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1       Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge         (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer	ied and c	4896 66096 lirected by Er 4500.00 360	Nos.
41	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1       Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge         (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.13		4896 66096 lirected by Er 4500.00 360	Nos. ngineer -in-
41	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1       Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge         (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.13         O&M 2nd year escalation of 8%	ied and c	4896 66096 lirected by Er 4500.00 360	Nos. ngineer -in-
41	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1         Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge         (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.13         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:	ed and c	4896 66096 lirected by Er 4500.00 360 4860	Nos.
	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1       Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge       (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer       Sr.No.13         O&M 2nd year escalation of 8%       Operation & Maintenance for 2nd Year:         Providing and fixing of railing as detail design in MS HOLLOW SE	Rate	4896 66096 lirected by Er 4500.00 360 4860 nd bars ( shop	Nos.
41	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1       Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge       (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer       Sr.No.13         O&M 2nd year escalation of 8%       Operation & Maintenance for 2nd Year:         Providing and fixing of railing as detail design in MS HOLLOW SE approved ), with vertical support of 0.9m @2.2mc/c , all complete	Rate	4896 66096 lirected by Er 4500.00 360 4860 nd bars ( shop	Nos.
	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1       Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge       (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer       Sr.No.13         O&M 2nd year escalation of 8%       Operation & Maintenance for 2nd Year:         Providing and fixing of railing as detail design in MS HOLLOW SE	Rate	4896 66096 lirected by Er 4500.00 360 4860 nd bars ( shop	Nos.
	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1         Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge         (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.13         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Providing and fixing of railing as detail design in MS HOLLOW SE approved ),with vertical support of 0.9m @2.2mc/c , all complete architect.(Non SOR Item)	Rate	4896 66096 lirected by Er 4500.00 360 4860 nd bars ( shop	Nos.
	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1       Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge       (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer       Sr.No.13         O&M 2nd year escalation of 8%       Operation & Maintenance for 2nd Year:         Providing and fixing of railing as detail design in MS HOLLOW SE approved ), with vertical support of 0.9m @2.2mc/c , all complete	Rate	4896 66096 lirected by Er 4500.00 360 4860 hd bars ( shop isfaction of th	Nos.
	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1         Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specificharge         (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.13         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Providing and fixing of railing as detail design in MS HOLLOW SE approved ),with vertical support of 0.9m @2.2mc/c , all complete architect.(Non SOR Item)	Rate	4896 66096 lirected by Er 4500.00 360 4860 nd bars ( shop	Nos.
	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1       Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specific charge         (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.13         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Providing and fixing of railing as detail design in MS HOLLOW SE approved ),with vertical support of 0.9m @2.2mc/c , all complete architect.(Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer	Rate	4896 66096 lirected by Er 4500.00 360 4860 hd bars ( shop isfaction of th	Nos.
	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1         Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specific charge         (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.13         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Providing and fixing of railing as detail design in MS HOLLOW SE approved ),with vertical support of 0.9m @2.2mc/c , all complete architect.(Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.26	Rate	4896 66096 directed by Er 4500.00 360 4860 nd bars ( shop isfaction of th 100000.00 8000	Nos.
	Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.1         Operation & Maintenance for 2nd Year:         Providing and fixing of S.S. Bollards(SS304) on footpath as specific charge         (NON SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.13         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Providing and fixing of railing as detail design in MS HOLLOW SE approved ),with vertical support of 0.9m @2.2mc/c , all complete architect.(Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.26	Rate	4896 66096 lirected by Er 4500.00 360 4860 hd bars ( shop isfaction of th 100000.00	Nos.

	Operation & Maintenance for 2nd Year:			
	Excavation and removal of silt and silt mixed with sand in slussy co	ondition fi	rom canal be	d including
	disposing off the same in spoil bank or on the canal embankment i			
43	with lead upto 50 m and all lifts. For Desilting of drains and grit cha			
43	scaffolding HOM of machineries with all lead and lifts, labour charg			
	Environmental and Social Safeguards & as per design, drawing, te			
	of Engineer-in-charge.		peomodiono	
		1		1
	Basic Rate		186.16	
	O&M 2nd year escalation of 8%		14.89	
		Rate	201.05	Nos.
	Operation & Maintenance for 2nd Year:			
44	Extra Lead for Disposing off unserviceable materials upto 10 Km b	eyond ini	tial Lead	
	Item No 17.4 KSRRB M100-4.1-Earth			
	Earth	2 0v1	.28x10km	
	Baisc rate	2.071	25.60	
	Add Loading and unloading charges(Item No 17.1 KSRRB M100-		25.00	
	1)		57.00	
	Sub Total-1		82.60	
	Add 10% For area weightage (Mangalore City) Sub Total-2		8.26 90.86	
	O&M 2nd year escalation of 8%	Dete	7.27	
		Rate	98.13	Cum
	Operation & Maintenance for 2nd Year:			
45	Extra Lead for Disposing off unserviceable materials upto 10 Km b	eyond in	tial Lead	
	Item No 17.4 KSRRB M100-4.1-Debris			1
	Debris	2.0x1	.30x10Km	
	Baisc rate		26.00	
	Add Loading and unloading charges(Item No 17.1 KSRRB M100-		57.00	
	1)			
	Sub Total-1		83.00	
	Add 10% For area weightage (Mangalore City)		8.3	
	Sub Total-2		91.30	
	O&M 2nd year escalation of 8%		7.3	
		Rate	98.60	Cum
	Lighting Poles			
	Operation & Maintenance for 2nd Year:			
46	Dismantling, removal, transportation to client's storage place existing	ng lightin	g poles	
	(Non SOR Item)			1
	Rate Approved as per EOI by MD MSCL Mangalore,Refer		1,000	
	Sr.No.22		•	
	O&M 2nd year escalation of 8%	<b></b>	80	
		Rate	1080	Nos.
	On another O Maintenan ( O D D)			
	Operation & Maintenance for 2nd Year:			
	Lighting Pole, 9 m			
	Fabrication, supply and erection of 9 meters long hot dip Galvanise	•		
	grade S 355 JO steel plate for shaft, IS 2062 for base plate with oc		• •	
	suitable boards, bakelite sheet and MCBs as per IS specifications		•	
47	for 5 m pole in single section and single joint welded as per IS 959			•
	bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plat			g J bolts along
	with template and the pole shall be hot dip galvanized in single dip			65 micron as
	per ASTM - A123 and 153 etc., (excluding foundation) as per draw	ing appe	nded	
	(Ref Electrical SOR SI No. 5.14.7)			
	Basic rate		17118	
	O&M 2nd year escalation of 8%		1369.44	

-			
	Rate	18,487.44	Nos.
k	· · · · · · · · · · · · · · · · · · ·		•

	Operation & Maintenance for 2nd Year:						
	Lighting Pole, 7 m						
	Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025						
	grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding						
48	suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec						
	for 5 m pole in single section and single joint welded as per IS 959			•			
	bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plat			g J bolts along			
	with template and the pole shall be hot dip galvanized in single dip			65 micron as			
	per ASTM - A123 and 153 etc., (excluding foundation) as per draw	ving appe	nded				
	(Ref Electrical SOR SI No. 5.14.5)						
	Basic rate		12420				
	Escalation @ 8% on Basic rate		993.6				
		Rate	13,413.60	Nos.			
	Operation & Maintenance for 2nd Year:	•					
	Lighting Pole, 4 m						
	Fabrication, supply and erection of 4 meters long hot dip Galvanise	ed Octag	onal pole with	BSE 10025			
	grade S 355 JO steel plate for shaft, IS 2062 for base plate with do	•					
	suitable boards, bakelite sheet and MCBs as per IS specifications	•	• •	•			
49	for 5 4 pole in single section and single joint welded as per IS 9595			•			
	bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plat		•	•			
	template and the pole shall be hot dip galvanized in single dipping			nicron as per			
	ASTM - A123 and 153 etc., (excluding foundation) as per drawing	appende	d				
	(Ref Electrical SOR SI No.5.14.2)						
	Basic rate		7398				
	Basic rate		7398				
	Basic rate O&M 2nd year escalation of 8%	Dete	591.84				
	O&M 2nd year escalation of 8%	Rate					
	O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year:	1	591.84 <b>7,989.84</b>	Nos.			
	O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for	1	591.84 <b>7,989.84</b>	Nos.			
50	O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete	1	591.84 <b>7,989.84</b>	Nos.			
50	O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm	1	591.84 <b>7,989.84</b>	Nos.			
50	O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete	1	591.84 <b>7,989.84</b>	Nos.			
50	O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	1	591.84 <b>7,989.84</b> Iuminaries an	Nos. d mounted on			
50	O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5) Basic rate	1	591.84 <b>7,989.84</b> luminaries an 3540	Nos. d mounted on			
50	O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	outdoor	591.84 <b>7,989.84</b> luminaries an <u>3540</u> 283.2	Nos. d mounted on			
50	O&M 2nd year escalation of 8% Operation & Maintenance for 2nd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5) Basic rate O&M 2nd year escalation of 8%	1	591.84 <b>7,989.84</b> luminaries an 3540	Nos. d mounted on			
50	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:	outdoor Rate	591.84 <b>7,989.84</b> luminaries an 3540 283.2 <b>3,823.20</b>	Nos. d mounted on Nos.			
	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for	outdoor Rate	591.84 <b>7,989.84</b> luminaries an 3540 283.2 <b>3,823.20</b>	Nos. d mounted on Nos.			
50	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete	outdoor Rate	591.84 <b>7,989.84</b> luminaries an 3540 283.2 <b>3,823.20</b>	Nos. d mounted on Nos.			
	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm	outdoor Rate	591.84 <b>7,989.84</b> luminaries an 3540 283.2 <b>3,823.20</b>	Nos. d mounted on Nos.			
	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete	outdoor Rate	591.84 <b>7,989.84</b> luminaries an 3540 283.2 <b>3,823.20</b>	Nos. d mounted on Nos.			
	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm	outdoor Rate	591.84 <b>7,989.84</b> luminaries an 3540 283.2 <b>3,823.20</b>	Nos. d mounted on Nos. d mounted on			
	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)	outdoor Rate	591.84 <b>7,989.84</b> luminaries an <u>3540</u> 283.2 <b>3,823.20</b> luminaries an	Nos. d mounted on Nos. d mounted on			
	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate	outdoor Rate outdoor	591.84 <b>7,989.84</b> Iuminaries an <u>3540</u> 283.2 <b>3,823.20</b> Iuminaries an <u>2400</u> 192	Nos.			
	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Escalation @ 8% on Basic rate	outdoor Rate	591.84 <b>7,989.84</b> luminaries an <u>3540</u> 283.2 <b>3,823.20</b> luminaries an 2400	Nos.			
	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Escalation @ 8% on Basic rate         Goperation & Maintenance for 2nd Year:	outdoor Rate outdoor Rate	591.84 <b>7,989.84</b> luminaries an <u>3540</u> 283.2 <b>3,823.20</b> luminaries an <u>2400</u> 192 <b>2,592</b>	Nos. d mounted on Nos. d mounted on Nos. Nos.			
51	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Escalation @ 8% on Basic rate         Operation & Maintenance for 2nd Year:         Painting of Existing street light pole after scrapping the old paint ar	outdoor Rate outdoor Rate	591.84 <b>7,989.84</b> luminaries an <u>3540</u> 283.2 <b>3,823.20</b> luminaries an <u>2400</u> 192 <b>2,592</b>	Nos. d mounted on Nos. d mounted on Nos. Nos.			
	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Escalation @ 8% on Basic rate         Operation & Maintenance for 2nd Year:         Painting of Existing street light pole after scrapping the old paint ar         including coping/footing of the pole8mtr and above street light po	outdoor Rate outdoor Rate	591.84 <b>7,989.84</b> luminaries an <u>3540</u> 283.2 <b>3,823.20</b> luminaries an <u>2400</u> 192 <b>2,592</b>	Nos. d mounted on Nos. d mounted on Nos. Nos.			
51	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Escalation @ 8% on Basic rate         Operation & Maintenance for 2nd Year:         Painting of Existing street light pole after scrapping the old paint ar	outdoor Rate outdoor Rate	591.84 <b>7,989.84</b> luminaries an <u>3540</u> 283.2 <b>3,823.20</b> luminaries an <u>2400</u> 192 <b>2,592</b>	Nos. d mounted on Nos. d mounted on Nos. Nos.			
51	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Escalation @ 8% on Basic rate         Operation & Maintenance for 2nd Year:         Painting of Existing street light pole after scrapping the old paint ar including coping/footing of the pole8mtr and above street light po (Ref Electrical SOR SI No.16.28.3)	outdoor Rate outdoor Rate	591.84 <b>7,989.84</b> Iuminaries an <u>3540</u> 283.2 <b>3,823.20</b> Iuminaries an <u>2400</u> 192 <b>2,592</b> d with suitable	Nos. d mounted on Nos. d mounted on Nos. e colour ename			
51	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Escalation @ 8% on Basic rate         Operation & Maintenance for 2nd Year:         Painting of Existing street light pole after scrapping the old paint ar including coping/footing of the pole8mtr and above street light po (Ref Electrical SOR SI No.16.28.3)         Basic rate         Basic rate	outdoor Rate outdoor Rate	591.84 <b>7,989.84</b> Iuminaries an <u>3540</u> 283.2 <b>3,823.20</b> Iuminaries an <u>2400</u> 192 <b>2,592</b> d with suitable	Nos. d mounted on Nos. d mounted on Nos. e colour ename			
51	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Escalation @ 8% on Basic rate         Operation & Maintenance for 2nd Year:         Painting of Existing street light pole after scrapping the old paint ar including coping/footing of the pole8mtr and above street light po (Ref Electrical SOR SI No.16.28.3)	outdoor Rate outdoor dpainted le	591.84 <b>7,989.84</b> Iuminaries an <u>3540</u> 283.2 <b>3,823.20</b> Iuminaries an <u>2400</u> 192 <b>2,592</b> d with suitable 700 56	Nos. d mounted on Nos. d mounted on Nos. e colour ename			
51	O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Single Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.2)         Basic rate         Escalation @ 8% on Basic rate         Operation & Maintenance for 2nd Year:         Painting of Existing street light pole after scrapping the old paint ar including coping/footing of the pole8mtr and above street light po (Ref Electrical SOR SI No.16.28.3)         Basic rate         Basic rate	outdoor Rate outdoor Rate	591.84 <b>7,989.84</b> Iuminaries an <u>3540</u> 283.2 <b>3,823.20</b> Iuminaries an <u>2400</u> 192 <b>2,592</b> d with suitable 700 56	Nos. d mounted on Nos. d mounted on Nos. e colour ename			

	Operation & Maintenance for 2nd Year:			
	Supplying of 1.1 kV LT cable having aluminium conductor PVC ins	sulated, e	xtruded inner	sheathed,
	galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as	per IS-3	975:1990 and	l extruded PVC
53	outer sheathed armoured cable as per IS - 1554 Part 1:1988 & col			
00	4 Core x16 Sq.mm PVC Aluminium Conductor,			
	(Ref Electrical SOR SI No.7.5,7.5.4)			
	Basic rate		117	
	O&M 2nd year escalation of 8%		9.36	
		Rate	9.30 <b>126.36</b>	
	Operation & Maintenance for 2nd Year:	Nale	120.30	NIII
		flowible of	a mana wukita law	
	Supply and drawing flexible multicore cable with electrolyte grade			
54	conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC in			suitable for
0.	working voltage up to 1100 V as per IS-694:1990 and conforming	to GIPC	of Group A.	
	3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)			
	Basic rate		81.6	
	O&M 2nd year escalation of 8%		6.53	
		Rate	88.13	Rm
	Operation & Maintenance for 2nd Year:	*	•	*
	Supplying tinned copper lugs and crimping and wiring to terminal p	point for w	vire of followir	na sizes
55	16 Sq.mm PVC Aluminium Conductor			0
	(Ref Electrical SOR SI No.7.21,7.21.6)			
	Basic rate		11.31	
	O&M 2nd year escalation of 8%		0.9	
		Rate	12.21	
		Nate	12.21	1403.
	Operation & Maintenance for 2nd Year:			
	Supplying tinned copper lugs and crimping and wiring to terminal p	noint for w	vire of followir	na sizos
56	2.5 sq. mm copper conductor			19 51205
	(Ref Electrical SOR SI No.7.21.2)			
	Basic rate		2.01	
			3.21	
	O&M 2nd year escalation of 8%	Dete	0.26	
		Rate	3.47	Nos.
	Oneretien 9 Meintenense for 2nd Veer			
	Operation & Maintenance for 2nd Year:			
	Chemical Earthing for grounding, conduits, IC cut outs and othereq	•		oardby using
	copper /SS rod with earth enhancing backfill compound which is r			, ·,
57	,thermally,conductive,potential,to permissible,limits,superior,fault,c	conductive	e capacity,nor	n toxic,weather
	resistance and capable of achieving ohmic value			
	less than one ohm			
	(Ref Electrical SOR Pg.No.64,SI No.7.23.6)		1	1
	Basic rate		5500	
	O&M 2nd year escalation of 8%		440	
		Rate	5940	Kit
	Operation & Maintenance for 2nd Year:			
	Supply and running GI conductor for grounding and (along with oth	ner wires	in conduits sy	/stem of wiring)
58	using necessasary suitable size clamps, nails, guttas/spacers etc-	8 SWG		
	(Ref Electrical SOR SI No.7.22.3)			
			10 5	
	Basic rate		19.5	
	O&M 2nd year escalation of 8%	Deta	1.56	
		Rate	21.06	RIII
				1

59	Operation & Maintenance for 2nd Year: Supplying and stacking of good earth at site including royalty a (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)	and carriag	ge upto 5 k.n	n. lead complete
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.27		140.00	
	O&M 2nd year escalation of 8%		11.2	
		Rate	151.20	Cum
60	Operation & Maintenance for 2nd Year: KSRRB M300-Supply at site of work well decayed farm yard ma work well decayed farm yard manure, from any available source including screening and stackin complete as per specifications. No.152,SI.No.19.90)	ce, approve	ed by the en	gineer in charge
	Basic rate		204	
	O&M 2nd year escalation of 8%		16.32	
	Add 10% For area weightage		22.03	
		Rate	242.35	
	sludge, farm yard manure or/and good earth to be paid for sep MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77) Basic rate	_, 	103	
	O&M 2nd year escalation of 8%		8.24 11.12	
	Add 10% For area wightage	Rate	122.36	
62	Operation & Maintenance for 2nd Year: Mixing earth and sludge or manure in the required proportion charge (Non SOR item)			
	Dete Annual de la Colles MD MOOL Men veleve Defen			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28		23.91	
			1.91	
	Sr.No.28	Rate	1.91	Cum
63	Sr.No.28	a period o machinerie	1.91 <b>25.82</b> f one year in s with all lead	Cum cluding watering and lifts, labou design, drawing
63	Sr.No.28         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for etc complete including cost of all materials, scaffolding HOM of r charges including implementation of Environmental and Social technical specifications and directions of Engineer-in-charge.	a period o machinerie	1.91 <b>25.82</b> If one year in s with all lead ds & as per	Cum cluding watering and lifts, labou design, drawing
63	Sr.No.28         O&M 2nd year escalation of 8%         Operation & Maintenance for 2nd Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for etc complete including cost of all materials, scaffolding HOM of r charges including implementation of Environmental and Social technical specifications and directions of Engineer-in-charge.         Basic rate	a period o machinerie	1.91 <b>25.82</b> f one year in s with all lead ds & as per 103	Cum cluding watering and lifts, labour design, drawing

64 Preparat base to a sludge o of stacke necessa declared lift up to (Non SO <b>Rate Ap</b> <b>Sr.No.30</b> 65 <b>SHRUBS</b> 65 Ficus Bla (Non SO <b>Rate Ap</b> <b>Sr.No.30</b> 0&M 2nd 66 Nerium 0 (Non SO <b>Rate Ap</b> <b>Sr.No.31</b> 0&M 2nd 66 Nerium 0 (Non SO <b>Rate Ap</b> <b>Sr.No.31</b> 0&M 2nd 66 <b>Sr.No.32</b> 0&M 2nd 67 <b>Pandanu</b> (Non SO <b>Rate Ap</b> <b>Sr.No.32</b> 0&M 2nd 67 <b>Operatio</b> (Non SO <b>Rate Ap</b> <b>Sr.No.32</b> 0&M 2nd 67 <b>Sr.No.32</b> 0&M 2nd 67 <b>Sr.No.34</b> 0 <b>Sr.No.35</b> 0 <b>Sr.No.35</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> 0 <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b> <b>Sr.No.36</b>	proved as per EOI by MD MSCL Mangalore,Refer d year escalation of 8% S: Supply and Stacking of Shrubs on & Maintenance for 2nd Year: ackeana 5'-0" ht with 4-5 branches and bushy form R Item) proved as per EOI by MD MSCL Mangalore,Refer d year escalation of 8% on & Maintenance for 2nd Year: Dleander variegated - 5'0" ht , 5-6 branches and bushy in	er breaking of f earth after r ooding with v ing stacking a ling as direct be paid for s Rate	clods and m reduction by vater, filling and disposa ed, within a	ixing with <sup>7</sup> 20%: one part with earth if al of materials lead of 50 m, Cum
(Non SO Rate Ap Sr.No.29 O&M 2nd O&M 2nd SHRUBS Operatio Ficus Bla (Non SO Rate Ap Sr.No.30 O&M 2nd OB Sr.No.31 O&M 2nd Sr.No.31 O&M 2nd A Sr.No.31 O&M 2nd Sr.No.31 O&M 2nd Sr.No.31 O&M 2nd Sr.No.32 O&M 2nd Sr.No.32 O&M 2nd Sr.No.32 O&M 2nd Sr.No.32 OB Sr.No.32 O&M 2nd Sr.No.32 OB Sr.No.32 O&M 2nd Sr.No.32 OB Sr.No.32 O&M 2nd Sr.No.32 O&M 2nd Sr.No.32 OB Sr.No.32	R Item) proved as per EOI by MD MSCL Mangalore,Refer d year escalation of 8% S: Supply and Stacking of Shrubs on & Maintenance for 2nd Year: ackeana 5'-0" ht with 4-5 branches and bushy form R Item) proved as per EOI by MD MSCL Mangalore,Refer d year escalation of 8% Den & Maintenance for 2nd Year: Den & Maintenance	Rate	146.00 11.68 <b>157.68</b> 840.00 67.2	Cum
Sr.No.29           O&M 2nd           O&M 2nd           O&M 2nd           SHRUBS           Operation           Ficus Blad           (Non SO)           Rate Ap           Sr.No.30           O&M 2nd           Sr.No.30           OAM 2nd           Sr.No.30           OAM 2nd           Sr.No.30           OAM 2nd           Sr.No.31           OAM 2nd           Sr.No.31           OAM 2nd           Sr.No.32           OAM 2nd           Sr.No.33           O&M 2nd           Sr.No.32           O&M 2nd           Sr.No.32           O&M 2nd           Sr.No.33           O&M 2nd           Sr.No.32           OAM 2nd           Sr.No.33           OAM 2nd           Sr.No.33           OAM 2nd           Sr.No.34           OAM 2nd           Sr.No.35           OAM 2nd           Sr.No.35           OAM 2nd           Sr.No.35           Sr.No.35           Sr.No.35	S: Supply and Stacking of Shrubs     S: Supply and Stacking of Shrubs     Son & Maintenance for 2nd Year:     ackeana 5'-0" ht with 4-5 branches and bushy form     R Item)     proved as per EOI by MD MSCL Mangalore,Refer     d year escalation of 8%     On & Maintenance for 2nd Year:     Dleander variegated - 5'0" ht , 5-6 branches and bushy in     R Item)	Rate	11.68 <b>157.68</b> 840.00 67.2	Cum
O&M 2ndSHRUBS65SHRUBS65Ficus Bla (Non SO)8Operation65Sr.No.300&M 2ndO&M 2nd66Operation66Nerium C (Non SO)66Rate Ap Sr.No.3166Operation67Pandanu (Non SO)67Pandanu (Non SO)67Operation67Sr.No.32 O&M 2nd67Operation Pandanu (Non SO)68Operation Bougenv and bush (Non SO)68Rate Ap Sr.No.40	d year escalation of 8% S: Supply and Stacking of Shrubs on & Maintenance for 2nd Year: ackeana 5'-0" ht with 4-5 branches and bushy form R Item) proved as per EOI by MD MSCL Mangalore,Refer d year escalation of 8% on & Maintenance for 2nd Year: Dleander variegated - 5'0" ht , 5-6 branches and bushy in R Item)	Rate	<b>157.68</b> 840.00 67.2	Cum
65 Operation Ficus Bla (Non SO Rate Ap Sr.No.30 O&M 2nd O&M 2nd O&M 2nd O Rate Ap Sr.No.31 O&M 2nd Operation Sr.No.31 O&M 2nd O Rate Ap Sr.No.32 O Pandanu (Non SO Rate Ap Sr.No.39 O&M 2nd O Pandanu (Non SO Rate Ap Sr.No.39 O&M 2nd Sr.No.39 O&M 2nd O Rate Ap Sr.No.39 O&M 2nd Sr.No.39 O&M 2nd O Rate Ap Sr.No.39 O&M 2nd C Pandanu (Non SO Rate Ap Sr.No.39 O&M 2nd C Pandanu (Non SO Rate Ap Sr.No.39 O Sr.No.30 O Rate Ap Sr.No.30 O Sr.No.30 O Rate Ap Sr.No.30 O Sr.No.30 Sr.No.40 Sr.Sr.No.40 Sr.Sr.No.40 Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.S	on & Maintenance for 2nd Year: ackeana 5'-0" ht with 4-5 branches and bushy form R Item) proved as per EOI by MD MSCL Mangalore,Refer d year escalation of 8% on & Maintenance for 2nd Year: Dleander variegated - 5'0" ht , 5-6 branches and bushy in R Item)	Rate	840.00	
65 Operation Ficus Bla (Non SO Rate Ap Sr.No.30 O&M 2nd O&M 2nd O&M 2nd O Rate Ap Sr.No.31 O&M 2nd Operation Sr.No.31 O&M 2nd O Rate Ap Sr.No.32 O Pandanu (Non SO Rate Ap Sr.No.39 O&M 2nd O Pandanu (Non SO Rate Ap Sr.No.39 O&M 2nd Sr.No.39 O&M 2nd O Rate Ap Sr.No.39 O&M 2nd Sr.No.39 O&M 2nd O Rate Ap Sr.No.39 O&M 2nd C Pandanu (Non SO Rate Ap Sr.No.39 O&M 2nd C Pandanu (Non SO Rate Ap Sr.No.39 O Sr.No.30 O Rate Ap Sr.No.30 O Sr.No.30 O Rate Ap Sr.No.30 O Sr.No.30 Sr.No.40 Sr.Sr.No.40 Sr.Sr.No.40 Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.Sr.S	on & Maintenance for 2nd Year: ackeana 5'-0" ht with 4-5 branches and bushy form R Item) proved as per EOI by MD MSCL Mangalore,Refer d year escalation of 8% on & Maintenance for 2nd Year: Dleander variegated - 5'0" ht , 5-6 branches and bushy in R Item)		67.2	
65 Ficus Bla (Non SO Rate Ap Sr.No.30 O&M 2nd O@M 2nd 66 Operatio (Non SO Rate Ap Sr.No.31 O&M 2nd O&M 2nd Sr.No.31 O&M 2nd O&M 2nd Sr.No.32 O&M 2nd O&M 2nd Sr.No.32 O&M 2nd O&M 2nd Sr.No.32 O&M 2nd Coeratio Bougenv and bush (Non SO Rate Ap Sr.No.30 Sr.No.30 Coeratio Bougenv and bush (Non SO Coeratio Bougenv and bush (Non SO	ackeana 5'-0" ht with 4-5 branches and bushy form R Item) proved as per EOI by MD MSCL Mangalore,Refer d year escalation of 8% on & Maintenance for 2nd Year: Dleander variegated - 5'0" ht , 5-6 branches and bushy in R Item)		67.2	
Rate Ap         Sr.No.30         O&M 2nd         O&M 2nd         OB         66         Nerium C         (Non SO)         Rate Ap         Sr.No.31         O&M 2nd         66         Nerium C         (Non SO)         Rate Ap         Sr.No.31         O&M 2nd         67         Pandanu (Non SO)         Rate Ap         Sr.No.32         O&M 2nd         67         Bandanu (Non SO)         68         Bougenv and bush (Non SO)         Rate Ap         Sr.No.40	proved as per EOI by MD MSCL Mangalore,Refer d year escalation of 8% on & Maintenance for 2nd Year: Dleander variegated - 5'0" ht , 5-6 branches and bushy in R Item)		67.2	
68 68 68 68 68 68 68 68 68 68	d year escalation of 8% on & Maintenance for 2nd Year: Dleander variegated - 5'0" ht , 5-6 branches and bushy in R Item)			
66 Nerium ( (Non SO <b>Rate Ap</b> <b>Sr.No.31</b> 0&M 2nd 0 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Dleander variegated - 5'0" ht , 5-6 branches and bushy in R Item)		907.20	Nos.
66 Nerium ( (Non SO <b>Rate Ap</b> <b>Sr.No.31</b> 0&M 2nd 0 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Dleander variegated - 5'0" ht , 5-6 branches and bushy in R Item)	n form		
(Non SO Rate Ap Sr.No.31 O&M 2nd O&M 2nd O&M 2nd Pandanu (Non SO Rate Ap Sr.No.39 O&M 2nd Bougenv and bush (Non SO Rate Ap Sr.No.40	R Item)			
68 67 68 68 68 68 68 68 57 57 57 57 57 57 57 57 57 57	proved as per EOI by MD MOCL Mangalore, Refer			<u> </u>
67 67 Pandanu (Non SO Rate Ap Sr.No.39 O&M 2nd 0 0 0 0 0 8 0 8 0 9 0 8 1 1 1 1 1 1 1 1 1 1 1 1 1			840.00	
67 Pandanu (Non SO Rate Ap Sr.No.39 O&M 2nd O&M 2nd O&M 2nd OB Bougenv and bush (Non SO Rate Ap Sr.No.40	d year escalation of 8%	Rate	67.2 <b>907.20</b>	
67 Pandanu (Non SO Rate Ap Sr.No.39 O&M 2nd O&M 2nd O&M 2nd OB Bougenv and bush (Non SO Rate Ap Sr.No.40		Rale	907.20	NOS.
68 Rate Ap Sr.No.39 O&M 2nd Operation Bougenv and bush (Non SO Rate Ap Sr.No.40	on & Maintenance for 2nd Year: is variegted'gold ' 300mm ht , 300mm c/c in triangulatior R Item)	n , with 4-5 fro	onds	
68 Rate Ap Sr.No.40			84.00	
68 Bougenv and bush (Non SO Rate Ap Sr.No.40	d year escalation of 8%		6.72	
68 Bougenv and bush (Non SO Rate Ap Sr.No.40		Rate	90.72	NOS.
Sr.No.40	-	hape the pla	nt should be	ready in form
O&M 2nd			140.00	
	d year escalation of 8%		11.2	
		Rate	151.20	NOS.
Ficus bla	on & Maintenance for 2nd Year:			
Rate Ap Sr.No.40	nckenia, c/c: 600m, must be bushy and multibranched(at n tree bags and stacked well on site, and regularly wate		840.00	
	n tree bags and stacked well on site, and regularly wate proved as per EOI by MD MSCL Mangalore,Refer		<b>-</b> -	
	n tree bags and stacked well on site, and regularly wate proved as per EOI by MD MSCL Mangalore,Refer		67.2	Nos.

lers for lawn areas. (Equipment make - Rainbird or equivale Iterial used should be comply to BSI code. All the necessary issioning to be installed. SOR Item) Approved as per EOI by MD MSCL Mangalore,Refer .34 2nd year escalation of 8%	y value an	560.00 44.8 <b>604.80</b>		
iterial used should be comply to BSI code. All the necessary issioning to be installed. SOR Item) Approved as per EOI by MD MSCL Mangalore,Refer .34	y value an			
iterial used should be comply to BSI code. All the necessary issioning to be installed. SOR Item)	y value an			
terial used should be comply to BSI code. All the necessary issioning to be installed.	y value an	a pamp roqu		
ation & Maintenance for 2nd Year: / and fixing of irrigation lines such that all the green areas s of drip irrigation for trees , sub surface for shrubs and la	awn areas ent)	/ ground cov	vers and pop	
ation & Maintonanco for 2nd Voor				
	Rate	39720.98	Year	
2nd year escalation of 8%		2790.25		
0% For area wightage		2052.612		
oor = 0.5 days x 446.20		20526.12		
r ( 365days-90 days of mansoon=275 days/3 days=92 consider watering at every 3 days)		14352		
ing with tanker to landscape area and plants for one year Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x				
Operation & Maintenance for 2nd Year:				
ATION				
	Nate	103.34		
Linu year escaration of 0 /0	Rate	12.54 169.34		
.32 2nd year escalation of 8%		156.80 12.54		
SOR Item) Approved as per EOI by MD MSCL Mangalore,Refer				
ation & Maintenance for 2nd Year: IA JAPONICA (MAT)				
	•			
	Rate	907.20	Nos.	
2nd year escalation of 8%		67.2		
Approved as per EOI by MD MSCL Mangalore,Refer .40		840.00		
n o d ir	n tree bags and stacked well on site, and regularly water	leander, c/c: 600m, must be bushy and multibranched(atleast 5), E n tree bags and stacked well on site, and regularly watered; untill a	leander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Finite the planting tree bags and stacked well on site, and regularly watered; untill after the planting tree bags and stacked well on site.	

Assistant Engineer MSCL Mangaluru

## Name of the Work :- Mangalore Smart City 3.12 Maintenance BOQ of Road and Other Work for Loop Road-3rd Year

	3.12 Maintenance BOQ of Road and Other Work fo				
Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
	Civil Works				
1.00	Operation & Maintenance for 3rd Year: Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.(RA attached)	Sqm	15.00	76.34	1145
2.00	Operation & Maintenance for 3rd Year: KSRRB M200.Dismantling of cement concrete pavement by mechanical means using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (Page No 138,SI No : 18.47)	Cum	3.68	1107.57	4,076
3.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB M200- <b>Dismantaling of kerb Stone</b> and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202.	Rmt	10.00	14.78	148
4.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB M200-13.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 16-17,18.20,Page No.137)	Cum	0.15	480.48	72
5.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB M200-12.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications.	Cum	2.88	432.43	1245
6.00	i)Dismantaling Brick/Tile work B.In Cement mortar Operation & Maintenance for 3rd Year: KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers,trimming bottom and side slopes,in accordance with requirements of lines and grades and cross sections,and transporting disposal location up to a lead of 1.00Km and complete as per specifications. MORTH specification No.301(Including transporting charges, loading and unloading for lead 5km) (Page No 143,SI No : 19.14)	Cum	25.00	50.51	1,263
7.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRB 2-4 : <b>Refilling available earth</b> around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KPWD 18-19,SI No.2.11,Pg. No.6)	Cum	25.00	147.84	3,696
8.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB 300-Compaction KSRRB 300-58. <b>Compaction of original ground</b> with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3.(KPWD 16-		50.00	7.39	370
9.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRB 4-1.7 : Providing and laying in position <b>plain cement concrete of mix</b> <b>1:3:6</b> with OPC cement @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, <b>in foundation, plinth and cills</b> , ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2(KPWD 18-19,SI.No.4.7,Page No.13)	Cum	5.00	7108.64	35,543

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
10.00	Operation & Maintenance for 3rd Year: KSRRB M400-6.2.Construction of granular sub base by providing close graded crushed stone aggregate of granite/trap/basalit material,spreading in uniform layers with motor on prepared surface,mixing by mix in place methode by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density,complete as per specification. B.By <b>Mix in Place</b> <b>Methode.</b> Close graded granular sub base material as per 400-1 For Grading II material	Cum	7.50	2668.51	20,014
11.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRB 4.2.1 : Providing and laying in position <b>reiforcement cement</b> <b>concrete of design Mix M25</b> with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications.	Cum	45.00	7635.94	343,617
12.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRB 4.6.1 Providing and removing <b>centering, shuttering, strutting,</b> <b>propping</b> etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials,labour complete as per specifications. Specification No. KSB 4.6.2	Sam	36.00	324.02	11,665
13.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRB 4.9.2 : <b>Providing T.M.T steel reinforcement</b> for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500	МТ	0.50	87203.42	43,602
14.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB M300- Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No. 305	Cum	12.50	658.77	8,235
15.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB M600-1.Construction of <b>dry lean cement concrete</b> mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes vibratory roller,finishing and curing complete as per specifications.Morth specification No.601	Cum	5.00	4987.14	24,936
16.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSSRRB M600-2.Construction of unreinforced,dowel jointed, <b>plain cement</b> <b>concrete pavement</b> over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with <b>M40</b> (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,SI No : 22.2.2)	Cum	11.50	7102.48	81,679

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
17.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Providing and placing <b>joint sealant compound</b> of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower (Non SOR Item)	Rmt	300.00	128.80	38,640
18.00	Operation & Maintenance for 3rd Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Page No 257,SI No : 35.8)	Rmt	300.00	407.79	122,337
19.00	Operation & Maintenance for 3rd Year: Providing and laying at or near ground level factory made kerb stone of M- 20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge). Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)		6.00	2022.72	12,136
20.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Providin and fixing <b>pre cast solid concrete Kerb stones</b> made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete		50.00	518.67	25,934
21.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Removing and resetting of kerb stones. including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Nos.	50.00	120.74	6,037
22.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB 800-1. <b>Painting two coats</b> after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8	Sqm	1190.00	98.56	117,286
23.00	<b>Operation &amp; Maintenance for 3rd Year:</b> P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)	Nos.	10.00	1027.04	10,270
24.00	Operation & Maintenance for 3rd Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron / Ductile Iron (NON SOR Item)	Nos.	10.00	3920.00	39,200
25.00	<b>Operation &amp; Maintenance for 3rd Year:</b> <b>Providing gully pipe lowering, laying of PVC 100 mm dia pipes</b> to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include all jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)	Rmt	5.00	337.34	1,687
26.00	Operation & Maintenance for 3rd Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.	Nos	5.00	1022.56	5,113

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
27.00	Operation & Maintenance for 3rd Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)	Rmt	5.00	6187.10	30,936
28.00	Operation & Maintenance for 3rd Year: Providing and laying Dia 225mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)	Rmt	10.00	2897.84	28,978
29.00	Operation & Maintenance for 3rd Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering, Jointing into trenches, Complete. (Market Rate)		2.00	1988.00	3,976
30.00	Operation & Maintenance for 3rd Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)	Rmt	39.00	1594.79	62,197
31.00	Operation & Maintenance for 3rd Year: Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe and special including encasing the pipe Complete. (Market Rate)	Nee	4.00	1652.00	6,608
32.00	Operation & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 225 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)		7.00	1263.78	8,846
33.00	Operation & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)		7.00	2531.10	17,718
34.00	Operation & Maintenance for 3rd Year: Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)	Rmt	10.00	812.36	8,124
35.00	Operation & Maintenance for 3rd Year: Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Duct and conveying to work site including loading and unloading at both destination and lowering into trenches, and jointing of pipe.Complete. (Market Rate)		1.00	196.00	196

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
36.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Providing and laying heavy duty cobble stones <b>60mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.	Sqm	37.92	1300.99	49,334
37.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Providing and laying heavy duty <b>Tactile Tiles</b> (Direction and Stop tiles-300 x 300 mm) 60mm thick and Yellow in colour , using cement and course sand for manufacture of blocks of approved size, shape with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Non SOR Item)	Sqm	2.25	1021.44	2,298
38.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Providing and laying heavy duty <b>cobble stones 75mm thick,</b> using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.	Sqm	4.21	1372.45	5,778
39.00	Operation & Maintenance for 3rd Year: Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803	Sqm	305.91	528.53	1,61,683
40.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Operation and Maintenance for eToilets Stainless Steel Public Model as specified in Road and Other works BOQ Item No.45.	Nos	2.00	68544.00	1,37,088
41.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Providing and fixing of <b>S.S. Bollards(SS304</b> ) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	5.00	5040.00	25,200
42.00	Operation & Maintenance for 3rd Year: Providing and fixing of railing as detail design in MS HOLLOW SECTION and bars (shop drawing to be approved),with vertical support of 0.9m @2.2mc/c, all complete to the satisfaction of the Landscape architect.(Non SOR Item)	MT	0.30	112000.00	33,600
43.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Excavation and removal of silt and silt mixed with sand in slussy condition from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts. For Desilting of drains and grit chambers including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-incharge.		198.00	208.50	41,283
44.00	Operation & Maintenance for 3rd Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Earth	Cum	58.53	101.76	5,956
45.00	Operation & Maintenance for 3rd Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Debris	Cum	9.38	102.26	,959
	Electrical Works				

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
46.00	<b>Operation &amp; Maintenance for 3rd Year</b> : Dismantling, removal, transportation to client's storage place existing lighting poles (Non SOR Item)	Nos.	1.00	1120.00	1,120
47.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)	Nos.	1.00	19172.16	19,172
48.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	Nos.	1.00	13910.40	13,910
49.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	Nos.	1.00	8285.76	8,286
50.00	Operation & Maintenance for 3rd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	Nos.	1.00	3964.80	3,965
51.00	Operation & Maintenance for 3rd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.2)	Nos.	1.00	2688.00	2,688
52.00	Operation & Maintenance for 3rd Year: Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole8mtr and above street light pole (Ref Electrical SOR SI No.16.28.3)	Nos.	118.00	784.00	92,512
53.00	LT Cable Operation & Maintenance for 3rd Year: Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR SI No.7.5,7.5.4)	m	12.00	131.04	1,572

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
54.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)	m	10.00	91.39	914
55.00	Operation & Maintenance for 3rd Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR SI No.7.21,7.21.6)	Nos	5.00	12.67	63
56.00	Operation & Maintenance for 3rd Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR SI No.7.21.2)	Nos	4.00	3.60	14
57.00	Earthing system Operation & Maintenance for 3rd Year: Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,SI No.7.23.6)	Kit	1.00	6160.00	6,160
58.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)	Rmt	12.00	21.84	262
	Landcaping Works				
59.00	SOIL MIXES and Ground Preparation Operation & Maintenance for 3rd Year: Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)	Cum	150.00	156.80	23520
60.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page	Cum	45.00	251.33	11310
61.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307	Cum	0.40	126.90	51
62.00	Operation & Maintenance for 3rd Year: Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	0.40	26.78	11
63.00	Soil preparation of Lawn Operation & Maintenance for 3rd Year: KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80) Bed Prepartion for , Ground covers, Climbers/ creepers, Shrubs	Sqm	12.00	126.90	1,523

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
64.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)	Cum	240.00	163.52	39245

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
	SHRUBS: Supply and Stacking of Shrubs				
	<b>Operation &amp; Maintenance for 3rd Year:</b> Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)	Nos.	23.00	940.80	21,638
66.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in form (Non SOR Item)	Nos.	50.00	940.80	47,040
67.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Pandanus variegted'gold ' 300mm ht, 300mm c/c in triangulation, with 4-5 fronds (Non SOR Item)	Nos.	800.00	94.08	75,264
	<b>Operation &amp; Maintenance for 3rd Year:</b> Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of landscape architect/PMC (Non SOR Item)	Nos.	9.00	156.80	1411
69.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Ficus blackenia, c/c: 600m, must be bushy and multibranched(atleast 3), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	8.00	940.80	7,526
70.00	<b>Operation &amp; Maintenance for 3rdYear:</b> Nerium oleander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	9.00	940.80	8,467
	TURF				
71.00	Operation & Maintenance for 3rd Year: ZOYSIA JAPONICA (MAT) (Non SOR Item)	Sqm	41.00	175.62	7,200
	IRRIGATION Operation & Maintenance for 3rd Year: Watering with tanker to landscape area and plants for one year	Year	1.00	40829.06	40,829
	Operation & Maintenance for 3rd Year: supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	6.00	627.20	3,763
				Total	20,30,140

Executive Engineer MSCL Mangaluru General Manager Technical MSCL Mangaluru

## Name of the Work :- Mangalore Smart City 3.12.1 Maintenance BOQ of Road and Other Work for Loop Road-3rd Year

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
	Civil Works						
1.00	Operation & Maintenance for 3rd Year: Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in- Charge.(RA attached)	Sqm	1	10	1.5		15.00
2.00	Operation & Maintenance for 3rd Year: KSRRB M200.Dismantling of cement concrete pavement by mechanical means using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (Page No 138,SI No : 18.47)	Cum	1	3.5	3.5	0.3	3.68
3.00	Operation & Maintenance for 3rd Year: KSRRB M200-Dismantaling of kerb Stone and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202. (Page No.139,S.I.No.18.49)	Rmt	1	10			10.00
4.00	Operation & Maintenance for 3rd Year: KSRRB M200-13.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 16-17,18.20,Page No.137)	Cum	1	1	0.3	0.5	0.15
5.00	Operation & Maintenance for 3rd Year: KSRRB M200-12.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. i)Dismantaling Brick/Tile work B.In Cement mortar (Page No 137,SI No : 18.23)	Cum	1	25	0.5	0.23	2.88
6.00	Operation & Maintenance for 3rd Year: KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers,trimming bottom and side slopes, in accordance with requirements of lines and grades and cross sections, and transporting disposal location up to a lead of 1.00Km and complete as per specifications. MORTH specification No.301(Including transporting charges, loading and unloading for lead 5km) (Page No 143,SI No : 19.14)	Cum	1.00	10	5	0.5	25.00
7.00	Operation & Maintenance for 3rd Year: KSRB 2-4 : Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KPWD 18-19,SI No.2.11,Pg. No.6)	Cum	1.00	10	5	0.5	25.00
8.00	Operation & Maintenance for 3rd Year: KSRRB 300-Compaction KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3.(KPWD 16-	Sqm	1.00	10		5	50.00
9.00	Operation & Maintenance for 3rd Year: KSRB 4-1.7 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2(KPWD 18-19,SI.No.4.7,Page No.13)	Cum	1.00	10	5	0.1	5.00
10.00	Operation & Maintenance for 3rd Year: KSRRB M400-6.2.Construction of granular sub base by providing close graded crushed stone aggregate of granite/trap/basalit material,spreading in uniform layers with motor on prepared surface,mixing by mix in place methode by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density,complete as per specification. B.By Mix in Place Methode. Close graded granular sub base material as per 400-1 For Grading II material (Page No 155,SI No : 20.5.2)	Cum	1.00	10	5	0.15	7.50

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
11.00	Operation & Maintenance for 3rd Year: KSRB 4.2.1 : Providing and laying in position reiforcement cement concrete of design Mix M25 with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed, concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls, return walls, walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks, anchor blocks & plinths etc., Including cost of labour, HOM of machinery, curing, complete but excluding cost of reinforcement as per specifications.	Cum	1.00	10	5	0.9	45.00
12.00	Operation & Maintenance for 3rd Year: KSRB 4.6.1 Providing and removing centering, shuttering, strutting, propping etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials,labour complete as per specifications. Specification No. KSB 4.6.2	Sqm	2.00	20		0.9	36.00
13.00	Operation & Maintenance for 3rd Year: KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500		1.00	0.50			0.50
14.00	Operation & Maintenance for 3rd Year: KSRRB M300- Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No. 305	Cum	1.00	10	5	0.25	12.50
15.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB M600-1.Construction of <b>dry lean cement concrete</b> mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes vibratory roller,finishing and curing complete as per specifications.Morth specification No.601	Cum	1.00	10	5	0.1	5.00
16.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSSRRB M600-2.Construction of unreinforced,dowel jointed, <b>plain cement</b> <b>concrete pavement</b> over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with <b>M40</b> (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,SI No : 22.2.2)	Cum	1.00	10	5	0.23	11.50
17.00	Operation & Maintenance for 3rd Year: Vaccum de-watering with vaccum pump and suction mat and compaction with skin floater clubbed with floating disc including cost of generator, HOM of machinery, Screed Vibratory, Power Floater, blade and disc etc., with all lead and lift.	Sqm	1.00	10	5		50.00
17.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Providing and placing <b>joint sealant compound</b> of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower (Non SOR Item)		1.00	300			300.00
18.00	Operation & Maintenance for 3rd Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Page No 257,SI No : 35.8)	Rumt	1.00	300			300.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
19.00	Operation & Maintenance for 3rd Year: Providing and laying at or near ground level factory made kerb stone of M-20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge). Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)	Nos.	6				6.00
20.00	Operation & Maintenance for 3rd Year: Providin and fixing pre cast solid concrete Kerb stones made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete	Nos.	50				50.00
21.00	Operation & Maintenance for 3rd Year: Removing and resetting of kerb stones. including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Nos.	50				50.00
22.00	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB 800-1. <b>Painting two coats</b> after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8	Sqm	1	10	119		1190.00
23.00	<b>Operation &amp; Maintenance for 3rd Year:</b> P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)	Nos.	10.00				10.00
24.00	Operation & Maintenance for 3rd Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron / Ductile Iron (NON SOR Item)	Nos.	10.00				10.00
25.00	Operation & Maintenance for 3rd Year: Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include all jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)		1.00	5.00			5.00
26.00	Operation & Maintenance for 3rd Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100mm dia, of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)	Nos.	5.00				5.00
27.00	Operation & Maintenance for 3rd Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98- 1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)	Rmt	1	5.00			5.00
28.00	Operation & Maintenance for 3rd Year: Providing and laying Dia 225mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)		1	10			10.00
29.00	Operation & Maintenance for 3rd Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering,Jointing into trenches,Complete. (Market Rate)	Nos.	2				2.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
30.00	Operation & Maintenance for 3rd Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)	Rmt	1	39			39.00
31.00	Operation & Maintenance for 3rd Year: Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe and special including encasing the pipe Complete. (Market Rate)	Nos.	4				4.00
32.00	Operation & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 225 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	7				7.00
33.00	Operation & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	7				7.00
34.00	Operation & Maintenance for 3rd Year: Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)	Rmt	1	10			10.00
35.00	Operation & Maintenance for 3rd Year: Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Duct and conveying to work site including loading and unloading at both destination and lowering into trenches, and jointing of pipe.Complete. (Market Rate)		1				1.00
36.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Providing and laying heavy duty cobble stones <b>60mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.		1	10	3.792		37.92
37.00	Operation & Maintenance for 3rd Year: Providing and laying heavy duty Tactile Tiles (Direction and Stop tiles-300 x 300 mm) 60mm thick and Yellow in colour , using cement and course sand for manufacture of blocks of approved size, shape with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Non SOR Item)	Sqm	1.00	10	0.225		2.25
38.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Providing and laying heavy duty <b>cobble stones 75mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.		1.00	10	0.421		4.21
39.00	Operation & Maintenance for 3rd Year: Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803	Sqm	1.00	2039.433	0.15		305.91
40.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Operation and Maintenance for eToilets Stainless Steel Public Model as specified in Road and Other works BOQ Item No.45.	Nos	2.00				2.00
41.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Providing and fixing of <b>S.S. Bollards(SS304</b> ) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	5.00				5.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
42.00	Operation & Maintenance for 3rd Year: Providing and fixing of railing as detail design in MS HOLLOW SECTION and bars ( shop drawing to be approved ),with vertical support of 0.9m @2.2mc/c , all complete to the satisfaction of the Landscape architect.(Non SOR Item)	MT	1.00	0.3			0.30
43.00	Operation & Maintenance for 3rd Year: Excavation and removal of silt and silt mixed with sand in slussy condition from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts. For Desilting of drains and grit chambers including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Cum	2.00	1650	0.6	0.1	198.00
44.00	Operation & Maintenance for 3rd Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Earth	Cum	1.00	58.53			58.53
45.00	Operation & Maintenance for 3rd Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Debris	Cum	1.00	9.38			9.38
	Electrical Works						
46.00	Operation & Maintenance for 3rd Year: Dismantling, removal, transportation to client's storage place existing lighting poles (Non SOR Item)	Nos.	1				1.00
47.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)	Nos.	1				1.00
48.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	Nos.	1				1.00
49.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	Nos.	1				1.00
50.00	Operation & Maintenance for 3rd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	Nos.	1				1.00
51.00	Operation & Maintenance for 3rd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.2)	Nos.	1				1.00
52.00	Operation & Maintenance for 3rd Year: Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole8mtr and above street light pole (Ref Electrical SOR SI No.16.28.3)	Nos.	118				118.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
	LT Cable						
53.00	Operation & Maintenance for 3rd Year: Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR SI No.7.5,7.5.4)	m	1	12.00			12.00
54.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sg. mm (Ref. Electrical SOR 2.8.8)	m	1	10.00			10.00
55.00	Operation & Maintenance for 3rd Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR SI No.7.21,7.21.6)	Nos	5				5.00
56.00	Operation & Maintenance for 3rd Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR SI No.7.21.2) Earthing system	Nos	4				4.00
57.00	Operation & Maintenance for 3rd Year: Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,SI No.7.23.6)	Kit	1				1.00
58.00	Operation & Maintenance for 3rd Year: Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)	Rmt	1	12			12.00
	Landcaping Works						
59.00	SOIL MIXES and Ground Preparation Operation & Maintenance for 3rd Year: Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)	Cum	1	500	0.5	0.6	150.00
60.00	Operation & Maintenance for 3rd Year: KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page	Cum	1	500	0.6	0.15	45.00
61.00	Operation & Maintenance for 3rd Year: KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307	Cum	1	10	0.404	0.1	0.40
62.00	Operation & Maintenance for 3rd Year: Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	1	10	0.404	0.1	0.40
63.00	Soil preparation of Lawn Operation & Maintenance for 3rd Year: KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)	Sqm	1.00	20	0.6		12.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
	Bed Prepartion for , Ground covers, Climbers/ creepers, Shrubs						
64.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)	Cum	1	400	0.6		240.00
	SHRUBS: Supply and Stacking of Shrubs						
65.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)	Nos.	23.00				23.00
66.00	Operation & Maintenance for 3rd Year: Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in form (Non SOR Item)	Nos.	50.00				50.00
67.00	Operation & Maintenance for 3rd Year: Pandanus variegted'gold ' 300mm ht , 300mm c/c in triangulation , with 4-5 fronds (Non SOR Item)	Nos.	800.00				800.00
68.00	Operation & Maintenance for 3rd Year: Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of landscape architect/PMC (Non SOR Item)	Nos.	9.00				9.00
69.00	<b>Operation &amp; Maintenance for 3rd Year:</b> Ficus blackenia, c/c: 600m, must be bushy and multibranched(atleast 3), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	8.00				8.00
70.00	<b>Operation &amp; Maintenance for 3rdYear:</b> Nerium oleander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	9.00				9.00
	TURF						
71.00	Operation & Maintenance for 3rd Year: ZOYSIA JAPONICA ( MAT) (Non SOR Item)	Sqm	1	20	2.05		41.00
	IRRIGATION						
72.00	Operation & Maintenance for 3rd Year: Watering with tanker to landscape area and plants for one year	Year	1.00				1.00
73.00	Operation & Maintenance for 3rd Year: supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	1	10	0.6		6.00

Assistant Engineer MSCL Mangaluru

Executive Engineer MSCL Mangaluru General Manager Technical MSCL Mangaluru

## Name of the Work :- Mangalore Smart City 3.12.2 Maintenance 3rd Year - Rate Analysis of Road & Other Work for Loop Road

	Operation & Maintenance for 3rd Year:						
	Taking out existing CC interlocking paver blocks from for	ootpath/ central	verge, includi	ng removal o			
1	rubbish etc., disposal of unserviceable material to the dump	ing ground, for	which payment	shall be mad			
	separately and stacking of serviceable material within 50						
	Charge.(RA attached)						
			69.46				
	Basic rate		68.16				
	O&M 3rd year escalation of 12%		8.18				
		Rate	76.34	Sqm			
	Operation & Maintenance for 3rd Year:						
	KSRRB M200.Dismantling of cement concrete pavemer	•		• •			
2	tools, breaking to pieces not exceeding 0.02 cum in volume	•	• •				
-	disposal of dismantled material stacking serviceble and uns						
	per specifications.MORTH specification No.202.(Including	transporting ch	narges,loading	and unloadin			
	for lead 5km-Extra)						
	Basic rate		899				
	O&M 3rd year escalation of 12%		107.88				
	Add 10% For area weightage (Mangalore City)		100.69				
		Rate	1107.57	Cum			
				••••			
	Operation & Maintenance for 3rd Year:						
	KSRRB M200-Dismantaling of kerb Stone and Channel KSR	288 M200-26	Dismontling Ker	rh stone by			
3	•		•	ib storie by			
	Manual means and disposal of dismantled materials with all lifts and complete as per						
	•	lifts and comple	ele as per				
	specifications.MORTH Specification No.202.	lifts and comple					
	specifications.MORTH Specification No.202. Basic rate	lifts and comple	12.00				
	specifications.MORTH Specification No.202. Basic rate O&M 3rd year escalation of 12%		<b>12.00</b>				
	specifications.MORTH Specification No.202. Basic rate		<b>12.00</b> 1.44 1.34	Date			
	specifications.MORTH Specification No.202. Basic rate O&M 3rd year escalation of 12%	Rate	<b>12.00</b>	Rmt			
	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)		<b>12.00</b> 1.44 1.34	Rmt			
	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:	Rate	<b>12.00</b> 1.44 1.34 <b>14.78</b>				
	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like	Rate Rate	<b>12.00</b> 1.44 1.34 <b>14.78</b> wes, retaining w	alls and othe			
	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wood	Rate Rate culverts, bridg prk, steel work,	<b>12.00</b> 1.44 1.34 <b>14.78</b> wincluding T&P a	alls and othe			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispose	Rate Rate culverts, bridg ork, steel work, sal of unservice	12.00 1.44 1.34 14.78 Jes, retaining w including T&P a able material ar	valls and othe and scaffoldin nd stacking th			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispose serviceable material with all lifts complete as per specification	Rate Rate Rate culverts, bridg ork, steel work, sal of unservice ations. II. By M	12.00 1.44 1.34 14.78 ues, retaining w including T&P a able material ar echanical Mear	valls and othe and scaffoldin nd stacking th ns. A. Cemer			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispose	Rate Rate Rate culverts, bridg ork, steel work, sal of unservice ations. II. By M	12.00 1.44 1.34 14.78 ues, retaining w including T&P a able material ar echanical Mear	valls and othe and scaffoldin nd stacking th ns. A. Cemer			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispose serviceable material with all lifts complete as per specification	Rate Rate Rate culverts, bridg ork, steel work, sal of unservice ations. II. By M	12.00 1.44 1.34 14.78 14.78 ues, retaining w including T&P a able material ar echanical Mear	valls and othe and scaffoldin nd stacking th ns. A. Cemer			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispose serviceable material with all lifts complete as per specification No. 202         Basic rate	Rate Rate Rate culverts, bridg ork, steel work, sal of unservice ations. II. By M	12.00 1.44 1.34 14.78 14.78 14.78 16.17,18.20,Pa 390	valls and othe and scaffoldin nd stacking th ns. A. Cemer			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispose serviceable material with all lifts complete as per specification No. 202         Basic rate         O&M 3rd year escalation of 12%	Rate Rate Rate culverts, bridg ork, steel work, sal of unservice ations. II. By M	12.00 1.44 1.34 14.78 14.88 14.8	valls and othe and scaffoldin nd stacking th ns. A. Cemer			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispose serviceable material with all lifts complete as per specification No. 202         Basic rate	Rate Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR	12.00 1.44 1.34 14.78 14.78 14.78 16.17,18.20,Pa 16-17,18.20,Pa 390 46.8 43.68	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137)			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispose serviceable material with all lifts complete as per specification No. 202         Basic rate         O&M 3rd year escalation of 12%	Rate Rate Rate culverts, bridg ork, steel work, sal of unservice ations. II. By M	12.00 1.44 1.34 14.78 14.88 14.8	valls and othe and scaffoldin nd stacking th ns. A. Cemer			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispos serviceable material with all lifts complete as per specificat Concrete Grade M-15 & M-20. MORTH Specification No. 202         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)	Rate Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR	12.00 1.44 1.34 14.78 14.78 14.78 16.17,18.20,Pa 16-17,18.20,Pa 390 46.8 43.68	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137)			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispose serviceable material with all lifts complete as per specification No. 202         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Oakm 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:	Rate Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR Rate	12.00 1.44 1.34 14.78 14.78 14.78 16-17,18.20,Pa 390 46.8 43.68 480.48	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137) Cum			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispos serviceable material with all lifts complete as per specifica Concrete Grade M-15 &M-20. MORTH Specification No. 202         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-12.1. Dismantling of existing structures like	Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR Rate Rate	12.00 1.44 1.34 14.78 14.78 14.78 14.78 16.17,18.20,Pa 390 46.8 43.68 43.68 480.48 16.17,18.20	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137) Cum			
4	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispose serviceable material with all lifts complete as per specification No. 202         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-12.1. Dismantling of existing structures like structure comprising of masonary, cement concrete, wo structures like structure comprising of masonary, cement concrete, wo structures like structure comprising of masonary, cement concrete, wo structures like structure comprising of masonary, cement concrete, wo structures like structure comprising of masonary, cement concrete, wo structures like structure comprising of masonary, cement concrete, wo structure comprising of masonary, cement concrete, wo structure comprising of masonary, cement concrete, wo structure comprising of masonary, cement concrete, wo structure comprising of masonary, cement concrete, wo structure comprising of masonary, cement concrete, wo structure comprising of masonary, cement concrete, wo structure comprising of masonary, cement concrete, wo structure comprising of masonary, cement concrete, wo structure comprising of masonary, cement concrete, wo structure comprising of masonary, cement concrete, wo structure comprising of masonary, cement concrete, wo structure comprising contexpecting structures comprising concrete comprising co	Rate Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR Rate Rate	12.00 1.44 1.34 14.78 14.78 14.78 14.78 16.17,18.20,Pa 16.17,18.20,Pa 390 46.8 43.68 480.48 480.48 480.48 480.48	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137) <b>Cum</b> valls and othe ling T&P an			
	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Image: Comparison of the second sec	Rate Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR (KPWD SOR Rate Rate culverts, bridg voodwork, stee terial, disposal	12.001.441.341.3414.78ues, retaining wincluding T&P aable material arechanical Mear16-17,18.20,Pa39046.843.68480.48es, retaining wel work, includof unserviceabl	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137) <b>Cum</b> valls and othe ling T&P an			
	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wo wherever necessary, sorting the dismantled material, dispose serviceable material with all lifts complete as per specificat Concrete Grade M-15 & M-20. MORTH Specification No. 202         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Coperation & Maintenance for 3rd Year:         KSRRB M200-12.1. Dismantling of existing structures like structure comprising of masonary, cement concrete, we scaffolding wherever necessary, sorting the dismantled material stacking the serviceable material with all lifts complete as per specification material weightage for 3rd Year:	Rate Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR (KPWD SOR Rate Rate culverts, bridg voodwork, stee terial, disposal	12.001.441.341.3414.78ues, retaining wincluding T&P aable material arechanical Mear16-17,18.20,Pa39046.843.68480.48es, retaining wel work, includof unserviceabl	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137) <b>Cum</b> valls and othe ling T&P an			
	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wow wherever necessary, sorting the dismantled material, disposs serviceable material with all lifts complete as per specificat Concrete Grade M-15 &M-20. MORTH Specification No. 202         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Coperation & Maintenance for 3rd Year:         KSRRB M200-12.1. Dismantling of existing structures like structure comprising of masonary, cement concrete, we scaffolding wherever necessary, sorting the dismantled material stacking the serviceable material with all lifts complete as per specification material with all lifts complete as per specification for 3rd Year:         KSRRB M200-12.1. Dismantling of existing structures like structure comprising of masonary, cement concrete, we scaffolding wherever necessary, sorting the dismantled material stacking the serviceable material with all lifts complete as per specification for 3rd Year:	Rate Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR (KPWD SOR Rate Rate culverts, bridg voodwork, stee terial, disposal	12.001.441.341.3414.7814.78ges, retaining wable material arechanical Mear16-17,18.20,Pa39046.843.68480.48es, retaining wel work, includof unserviceables.	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137) <b>Cum</b> valls and othe ling T&P an			
	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Image: Comparison of the second sec	Rate Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR (KPWD SOR Rate Rate culverts, bridg voodwork, stee terial, disposal	12.001.441.341.3414.78ues, retaining wincluding T&P aable material arechanical Mear16-17,18.20,Pa39046.843.68480.48es, retaining wwork, includof unserviceabl351	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137) <b>Cum</b> valls and othe ling T&P an			
	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M200-13.1. Dismantling of existing structures like structure comprising of masonry, cement concrete, wood wow wherever necessary, sorting the dismantled material, disposs serviceable material with all lifts complete as per specificat Concrete Grade M-15 &M-20. MORTH Specification No. 202         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Coperation & Maintenance for 3rd Year:         KSRRB M200-12.1. Dismantling of existing structures like structure comprising of masonary, cement concrete, we scaffolding wherever necessary, sorting the dismantled material stacking the serviceable material with all lifts complete as per specification material with all lifts complete as per specification for 3rd Year:         KSRRB M200-12.1. Dismantling of existing structures like structure comprising of masonary, cement concrete, we scaffolding wherever necessary, sorting the dismantled material stacking the serviceable material with all lifts complete as per specification for 3rd Year:	Rate Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR (KPWD SOR Rate Rate culverts, bridg voodwork, stee terial, disposal	12.001.441.341.3414.7814.78ges, retaining wable material arechanical Mear16-17,18.20,Pa39046.843.68480.48es, retaining wel work, includof unserviceables.	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137) <b>Cum</b> valls and othe ling T&P an			
	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Image: Comparison of the second sec	Rate Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR (KPWD SOR Rate Rate culverts, bridg voodwork, stee terial, disposal	12.001.441.341.3414.78ues, retaining wincluding T&P aable material arechanical Mear16-17,18.20,Pa39046.843.68480.48es, retaining wwork, includof unserviceabl351	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137) <b>Cum</b> valls and othe ling T&P an			
	specifications.MORTH Specification No.202.         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Image: Comparison of the second sec	Rate Rate Rate Rate ork, steel work, sal of unservice ations. II. By M 2 (KPWD SOR (KPWD SOR Rate Rate culverts, bridg voodwork, stee terial, disposal	12.001.441.341.3414.78ues, retaining wincluding T&P aable material arechanical Mear16-17,18.20,Pa39046.843.68480.48480.48user, retaining wel work, includof unserviceable35142.12	valls and othe and scaffoldin nd stacking th ns. A. Cemer age No.137) <b>Cum</b> valls and othe ling T&P an			

	Operation & Maintenance for 3rd Year:	سامد ما ماداند		
	KSRRB M300-14. Excavation for roadwork in all types of soil			
•	capacity including cutting and loading in tippers, trimming botto			
6	requirements of lines and grades and cross sections, and transp	orting dis	posal location	up to a lead
	1.00Km and complete as per specifications.			
	MORTH specification No.301(Including transporting charges, load	ding and u	inloading for lea	ad 5km)
	(Page No 143,SI No : 19.14)	1		
	Basic rate		41	
	O&M 3rd year escalation of 12%		4.92	
	Add 10% For area weightage (Mangalore City)		4.59	
		Rate	50.51	Cum
7	Operation & Maintenance for 3rd Year: KSRB 2-4 : Refilling available earth around pipe lines, cables in compacting each deposited layer by ramming after watering wi including cost of all labour complete as per specifications.(KPWD	th lead up	pto 50m. and	lift upto 1.5 r
	Basic rate		120	
	O&M 3rd year escalation of 12%		14.4	
	Add 10% For area weightage (Mangalore City)		13.44	
		Rate	147.84	Cum
		ntor 2 ///F		
	HOM of machinery complete as per specifications. MORTH / Cha Basic rate	pter 3.(KF	2WD 16-17,SI	
		pter 3.(KF		
	Basic rate	pter 3.(KF	6 0.72 0.67	
	Basic rate       O&M 3rd year escalation of 12%	pter 3.(KF	6 0.72	
	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)		6 0.72 0.67	No.19.64,Pg.
	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:	Rate	6 0.72 0.67 <b>7.39</b>	No.19.64,Pg.
	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement condition	Rate	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C	No.19.64,Pg.
	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement cond         220kgs, with 20mm and down size graded granite metal co	Rate crete of m arse agg	6 0.72 0.67 <b>7.39</b> hix 1:3:6 with C regates @0.84	No.19.64,Pg. Sqm PPC cement 4cum and fin
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement cond         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye	Rate crete of m arse agg rs not ex	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 cceeding 15 c	No.19.64,Pg. Sqm DPC cement 4cum and fin ms. thick, w
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement cond         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all	Rate Rate crete of m arse agg rs not ex materials	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 cceeding 15 c , labour, HOM	No.19.64,Pg. Sqm DPC cement 4cum and fir ms. thick, w
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement cond         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye	Rate crete of m arse agg rs not ex materials	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 cceeding 15 c , labour, HOM	No.19.64,Pg. Sqm DPC cement 4cum and fir ms. thick, we
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement cond         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all	Rate crete of m arse agg rs not ex materials	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 (ceeding 15 c , labour, HOM KPWD 16-17, 5770	No.19.64,Pg. Sqm DPC cement 4cum and fir ms. thick, we
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement cond         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS	Rate crete of m arse agg rs not ex materials	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 cceeding 15 c , labour, HOM KPWD 16-17,	Sqm DPC cement 4cum and fir ms. thick, we of machiner
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement cond         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate	Rate crete of m arse agg rs not ex materials 4.1, 4.2(	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 cceeding 15 c , labour, HOM KPWD 16-17, 5770 692.4 646.24	No.19.64,Pg. Sqm PC cement 4cum and fir ms. thick, we of machiner SI.No.4.7,Pag
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement cond         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%	Rate crete of m arse agg rs not ex materials	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 (ceeding 15 c , labour, HOM KPWD 16-17, 5770 692.4	No.19.64,Pg. Sqm DPC cement 4cum and fir ms. thick, we
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement cond         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)	Rate crete of m arse agg rs not ex materials 4.1, 4.2(	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 cceeding 15 c , labour, HOM KPWD 16-17, 5770 692.4 646.24	No.19.64,Pg. Sqm PC cement 4cum and fir ms. thick, w of machiner SI.No.4.7,Pag
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement cond         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:	Rate Rate crete of m arse agg rs not ex materials 4.1, 4.2( Rate	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 cceeding 15 c , labour, HOM KPWD 16-17, 5770 692.4 646.24 <b>7108.64</b>	No.19.64,Pg. Sqm OPC cement 4cum and fir ms. thick, w of machiner SI.No.4.7,Pag
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement condectors         220kgs, with 20mm and down size graded granite metal condectors         aggregtes @ 0.56cum, machine mixed, concrete laid in layed         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M400-6.2.Construction of granular sub base by providing	Rate Rate Crete of m arse agg rs not ex materials 4.1, 4.2( Rate	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 ceeding 15 c , labour, HOM KPWD 16-17, 5770 692.4 646.24 <b>7108.64</b> aded crushed s	No.19.64,Pg. Sqm DPC cement 4cum and fin ms. thick, w of machine SI.No.4.7,Pag Cum
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement condector         220kgs, with 20mm and down size graded granite metal condector         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M400-6.2.Construction of granular sub base by providing of granite/trap/basalit material,spreading in uniform layers with m	Rate Rate Crete of m arse agg rs not ex materials 4.1, 4.2( Rate I close gra otor on pr	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 (ceeding 15 cf , labour, HOM KPWD 16-17, 5770 692.4 646.24 <b>7108.64</b> aded crushed s repared surface	No.19.64,Pg. Sqm DPC cement 4cum and fin ms. thick, w of machiner SI.No.4.7,Pag Cum tone aggrega e,mixing by m
	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement condector         220kgs, with 20mm and down size graded granite metal condector         aggregtes @ 0.56cum, machine mixed, concrete laid in layed         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M400-6.2.Construction of granular sub base by providing         of granite/trap/basalit material,spreading in uniform layers with m         in place methode by rotavator at OMC, and compacting with vibra	Rate Rate Crete of m arse agg rs not ex materials 4.1, 4.2( Rate close gra otor on pr atory powe	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 (ceeding 15 cf , labour, HOM KPWD 16-17, 5770 692.4 646.24 <b>7108.64</b> aded crushed s repared surface	No.19.64,Pg. Sqm DPC cement 4cum and fin ms. thick, w of machiner SI.No.4.7,Pag Cum tone aggrega e,mixing by m
9	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement condectors         220kgs, with 20mm and down size graded granite metal condectors         aggregtes @ 0.56cum, machine mixed, concrete laid in layed         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M400-6.2.Construction of granular sub base by providing         of granite/trap/basalit material,spreading in uniform layers with m         in place methode by rotavator at OMC, and compacting with vibra         density,complete as per specification. B.By Mix in Place Methode	Rate Rate Crete of m arse agg rs not ex materials 4.1, 4.2( Rate close gra otor on pr atory powe	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 (ceeding 15 cf , labour, HOM KPWD 16-17, 5770 692.4 646.24 <b>7108.64</b> aded crushed s repared surface	No.19.64,Pg. Sqm DPC cement 4cum and fir ms. thick, w of machinel SI.No.4.7,Pag Cum tone aggrega e,mixing by m
	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement condector         220kgs, with 20mm and down size graded granite metal condector         aggregtes @ 0.56cum, machine mixed, concrete laid in layed         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M400-6.2.Construction of granular sub base by providing         of granite/trap/basalit material,spreading in uniform layers with m         in place methode by rotavator at OMC, and compacting with vibra	Rate Rate Crete of m arse agg rs not ex materials 4.1, 4.2( Rate close gra otor on pr atory powe	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 (ceeding 15 cf , labour, HOM KPWD 16-17, 5770 692.4 646.24 <b>7108.64</b> aded crushed s repared surface	No.19.64,Pg. Sqm DPC cement 4cum and fin ms. thick, w of machiner SI.No.4.7,Pag Cum tone aggrega e,mixing by m
	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement com         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M400-6.2.Construction of granular sub base by providing         of granite/trap/basalit material,spreading in uniform layers with m         in place methode by rotavator at OMC, and compacting with vibra         density,complete as per specification. B.By Mix in Place Methode         Close graded granular sub base material as per 400-1         For Grading II material	Rate Rate Crete of m arse agg rs not ex materials 4.1, 4.2( Rate close gra otor on pr atory powe	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 (ceeding 15 cf , labour, HOM KPWD 16-17, 5770 692.4 646.24 <b>7108.64</b> aded crushed s repared surface	No.19.64,Pg. Sqm DPC cement 4cum and fir ms. thick, w of machinel SI.No.4.7,Pag Cum tone aggrega e,mixing by m
	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement com         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M400-6.2.Construction of granular sub base by providing         of granite/trap/basalit material,spreading in uniform layers with m         in place methode by rotavator at OMC, and compacting with vibra         density,complete as per specification. B.By Mix in Place Methode         Close graded granular sub base material as per 400-1         For Grading II material         (Page No 155, SI No : 20.5.2)	Rate Rate Crete of m arse agg rs not ex materials 4.1, 4.2( Rate close gra otor on pr atory powe	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 (ceeding 15 cf , labour, HOM KPWD 16-17, 5770 692.4 646.24 <b>7108.64</b> aded crushed s repared surface	No.19.64,Pg. Sqm DPC cement 4cum and fir ms. thick, w of machinel SI.No.4.7,Pag Cum tone aggrega e,mixing by m
	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement com         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M400-6.2.Construction of granular sub base by providing         of granite/trap/basalit material,spreading in uniform layers with m         in place methode by rotavator at OMC, and compacting with vibra         density,complete as per specification. B.By Mix in Place Methode         Close graded granular sub base material as per 400-1         For Grading II material	Rate Rate Crete of m arse agg rs not ex materials 4.1, 4.2( Rate close gra otor on pr atory powe	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 (ceeding 15 cf , labour, HOM KPWD 16-17, 5770 692.4 646.24 <b>7108.64</b> aded crushed s repared surface	No.19.64,Pg. Sqm DPC cement 4cum and fir ms. thick, w of machinel SI.No.4.7,Pag Cum tone aggrega e,mixing by m
	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement com         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M400-6.2.Construction of granular sub base by providing         of granite/trap/basalit material,spreading in uniform layers with m         in place methode by rotavator at OMC, and compacting with vibra         density,complete as per specification. B.By Mix in Place Methode         Close graded granular sub base material as per 400-1         For Grading II material         (Page No 155, SI No : 20.5.2)	Rate Rate Crete of m arse agg rs not ex materials 4.1, 4.2( Rate close gra otor on pr atory powe	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 (ceeding 15 cf , labour, HOM KPWD 16-17, 5770 692.4 646.24 <b>7108.64</b> aded crushed s repared surface er roller to achie 2166 259.92	No.19.64,Pg. Sqm DPC cement 4cum and fin ms. thick, w of machiner SI.No.4.7,Pag Cum tone aggrega e,mixing by m
	Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRB 4-1.7 : Providing and laying in position plain cement com         220kgs, with 20mm and down size graded granite metal co         aggregtes @ 0.56cum, machine mixed, concrete laid in laye         compacted, in foundation, plinth and cills, ncluding cost of all         curing complete as per specifications. Specification No. KBS         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         KSRRB M400-6.2.Construction of granular sub base by providing         of granite/trap/basalit material,spreading in uniform layers with m         in place methode by rotavator at OMC, and compacting with vibra         density,complete as per specification. B.By Mix in Place Methode         Close graded granular sub base material as per 400-1         For Grading II material         (Page No 155,SI No : 20.5.2)         Basic Rate	Rate Rate Crete of m arse agg rs not ex materials 4.1, 4.2( Rate close gra otor on pr atory powe	6 0.72 0.67 <b>7.39</b> nix 1:3:6 with C regates @0.84 cceeding 15 cr , labour, HOM KPWD 16-17, 5770 692.4 646.24 <b>7108.64</b> aded crushed s repared surface er roller to achie	No.19.64,Pg. Sqm DPC cement 4cum and fin ms. thick, w of machiner SI.No.4.7,Pag Cum tone aggrega e,mixing by m

	Operation & Maintenance for 3rd Year:			
	KSRB 4.2.1 : Providing and laying in position reiforcement cement	concrete	e of design Mi	x M25 with OPC
	cement @340Kgs, with 20mm and down size graded granite met	al coarse	e aggregate	0.47 cum with
	super plasticisers @3 liters confirming to IS 9103-1999 reafirmed			
11	in layers not exceeding 15cms thick, vibrated for all works in found			
	walls, return walls, walls (any thickness) including attached pil		0 1	
	buttresses, bed blocks, anchor blocks & plinths etc., In		•	abour,HOM of
	machinery, curing, complete but excluding cost of reinforcement as	0		, <u> </u>
	(Page No 13,SI No : 4.10)			
	Basic Rate		6198	
	O&M 3rd year escalation of 12%		743.76	
	Add 10% For area weightage (Mangalore City)		694.18	
		Rate	7635.94	Cum
		Nate	1000.04	oum
	Operation & Maintenance for 3rd Year:	l		
	KSRB 4.6.1 Providing and removing centering, shuttering, str	uttina n	ropping etc :	and removal of
12	formwork for foundations, footings, bases of columns for n			
12	materials, labour complete as per specifications.	1000 001		ing coot of an
	Specification No. KSB 4.6.2			
	Basic Rate		263	
	O&M 3rd year escalation of 12%		31.56	
	Add 10% For area weightage (Mangalore City)		29.46	
		Rate	324.02	Sqm
		Nate	024.02	Öqiii
13	KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work ind straighting,cutting,bending,hooking,placing in position,lapping and with binding wire and anchoring to thr adjoing members wherever (laps,hooks and wastage shall not be measured and paid) cost of complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500	/or weldir necessar	y complete as	per design
	Basic Rate		70782	
	O&M 3rd year escalation of 12%		8493.84	
	Add 10% For area weightage (Mangalore City)		7927.58	
		Rate	87203.42	МТ
14	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB M300- Construction of Embankment with Material Gravel/ Construction of embankment with approved material Gravel/Murru to site, spreading, grading to required slope and compacting to me as per specifications.(Including cost of gravel / murrum, watering c roller to 95% of proctors density) MORTH Specification No. 305	m with al	l lifts and lead ement Table 3	s, transporting 800- 2 complete
	Basic Rate		489	
	O&M 3rd year escalation of 12%		58.68	
	Add 20km lead (17.4 KSRRB M100-4.1-Cost of haulage		00100	
	excluding loading and unloading MORTH-100/Chapter 1-case 1-		51.2	
	Surface Road)=2.0 Rs/ Tkm x 1.28 T x 20km		01.2	
	Sub Total		598.88	
	Add 10% For area weightage (Mangalore City)		59.89	
		Rate	658.77	Cum
L		1	1	

	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB M600-1.Construction of dry lean cement concrete @160Kgs,with 25mm and down size graded granite/trap/basalt m						
15	fine aggregate @ 0.58cum Sub-base over prepared sub gra confirming to IS:383) aggregate cement ration not to excee 15:1. be as per Table 600-1, cement content to be determined duri strength not to be less than 10Mpa at 7 days,mixed in a batchin paver with electronic sensor,compacting with 8-10 tonnes vibrated as per specifications.Morth specification No.601	de with Aggrega ing trail ng plant,	(coarse and ate gradation a length constru- transported to	fine aggregate after blending to uction, concrete site,laid with a			
	Basic Rate		4048				
	O&M 3rd year escalation of 12%		485.76				
	Add 10% For area weightage (Mangalore City)		453.38				
		Rate	4987.14	Cum			
	Operation & Maintenance for 3rd Year:						
16	KSSRRB M600-2.Construction of unreinforced,dowel jointed,pla prepared sub base with 25mm and down size graded gr superplastisizer at 3 lts confirming to IS9103-1999 reaffirmer conforming to IS:383) mixed in a batching and mixing plant as p site,laid with a fixed form or slip form paver spread,compacted including provision of contraction, expansio, construction and long chrges, joints filler,separation memberane, sealent primer, joints s 4.5m intervals, tie rod, admixtures as approved, curing compound drawing complete as per sprcifications MORTH specification N Cement,C.A,0.67 cum F.A.044Cum	anite m ed 2008( er approv and finis gitudinal sealant, c id,finishir	etal coarse Coarse and ved mix desig hed in a cont joints,including debonding strij ng to lines and	aggregate with fine aggregate n,transported to inuos operation g groove cutting p, dowel bars at d grades as per			
	(Page No 176,SI No : 22.2.2)						
			5765				
	Basic Rate		5765 691.8				
	Basic Rate O&M 3rd year escalation of 12%	Rate	691.8	Cum			
17	Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the sea manpower	ide in th imended strip, prim	691.8 645.68 <b>7102.48</b> e grooves aft by the sealar ing the sides	er widening the nt manufacturer of the sealant i			
17	Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the sea manpower (Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer	ide in th imended strip, prim	691.8 645.68 <b>7102.48</b> e grooves aft by the sealar ing the sides	er widening the nt manufacturer of the sealant it			
17	Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the sea manpower (Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.2	ide in th imended strip, prim	691.8 645.68 <b>7102.48</b> e grooves aft by the sealar ing the sides complete incl	er widening the nt manufacturer of the sealant i			
17	Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the sea manpower (Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer	ide in th imended strip, prim	691.8 645.68 <b>7102.48</b> e grooves aft by the sealar ing the sides complete incl	er widening the nt manufacturer of the sealant i			
17	Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the sea manpower (Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.2	ide in th mended strip, prim lant all	691.8 645.68 <b>7102.48</b> e grooves after by the sealar ing the sides complete incl 115 13.8	er widening the nt manufacturer of the sealant i luding material			
17	Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the sea manpower (Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.2	ide in th mended strip, prim lant all <b>Rate</b>	691.8 645.68 <b>7102.48</b> e grooves aft by the sealar ing the sides complete incl 115 13.8 <b>128.8</b> gitudinal joints	er widening the of manufacturer of the sealant in luding material <b>Rmt</b>			
	Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the sea manpower (Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.2         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints in concrete pavement using epoxy mortar concrete or power is the sealant of the sealant of the sealant of the sealant of the sealant of the sealant of the sealant power (Non SOR Item)	ide in th mended strip, prim lant all <b>Rate</b>	691.8 645.68 <b>7102.48</b> e grooves aft by the sealar ing the sides complete incl 115 13.8 <b>128.8</b> gitudinal joints	er widening the of manufacturer of the sealant in luding material <b>Rmt</b>			
	Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the sea manpower         (Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.2         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints in concrete pavement using epoxy mortar concrete of specification No.3005.1	ide in th mended strip, prim lant all <b>Rate</b>	691.8 645.68 <b>7102.48</b> e grooves aft by the sealar ing the sides complete incl 115 13.8 <b>128.8</b> gitudinal joints as per spec	er widening the of manufacturer of the sealant in luding material <b>Rmt</b>			
	Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         Providing and placing joint sealant compound of cold polysulph groove to required width, sand blasting the groove face if recom cleaning the groove with air compressor, insertion of debonding s the sealant manufacturer recommends and pouring the sea manpower         (Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.2         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar         KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints in concrete pavement using epoxy mortar concrete of specification No.3005.1         Basic Rate	ide in th mended strip, prim lant all <b>Rate</b>	691.8 645.68 7102.48 e grooves aft by the sealar ing the sides complete incl 115 13.8 128.8 gitudinal joints as per spec 331	er widening the at manufacturer, of the sealant if luding material, <b>Rmt</b>			

	Operation & Maintenance for 3rd Year:			
	Providing and laying at or near ground level factory made	kerb stone of M-	20 grade cer	nent concrete
	position to the required line, level and curvature, jointed			
	sand), including making joints with or without grooves (this	•		
	to more than 5mm), including making drainage opening whether the second se	-	•	as per direction
	of Engineer-in-charge (length of finished kerb edging shall		payment).	
19	(Precast C.C. kerb stone shall be approved by Engineer-in	n-charge).		
	Kerb Dimension=			
	Top Width=0.25m,			
	Bottom Width=0.3 m,			
	Height =0.9 m			
	(RA Attached)			
	Rate Arrived as per Rate analysis			
	Basic Rate		1806	
	O&M 3rd year escalation of 12%		216.72	
		Data		N
		Rate	2022.72	Nos
	Operation & Maintenance for 3rd Year:	I		
	Providin and fixing pre cast solid concrete Kerb stones ma	ade out of CC 1:2	2:4 with top a	nd bottom wid
20	114 and 165mm respectively,400mm high and 450mm i		•	
	finishing cutting, including cost of all materials, labour, hire	-		•
	and lift,transportation etc.,complete	gee er mae		g,g,
	Basic rate		421	
	O&M 3rd year escalation of 12%		50.52	
	Add 10% For area weightage		47.15	
		Rate		Nos.
	Add 10% For area weightage	Rate	47.15	
	Add 10% For area weightage Operation & Maintenance for 3rd Year:		47.15 <b>518.67</b>	Nos.
	Add 10% For area weightage Operation & Maintenance for 3rd Year: Removing and resetting of kerb stones. including cost of	all materials, sca	47.15 <b>518.67</b> Iffolding HOM	Nos. 1 of machinerie
21	Add 10% For area weightage Operation & Maintenance for 3rd Year: Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement	all materials, sca ation of Environm	47.15 <b>518.67</b> affolding HOM nental and Sc	Nos. 1 of machinerie
21	Add 10% For area weightage Operation & Maintenance for 3rd Year: Removing and resetting of kerb stones. including cost of	all materials, sca ation of Environm	47.15 <b>518.67</b> affolding HOM nental and Sc	Nos. 1 of machinerie
21	Add 10% For area weightage Operation & Maintenance for 3rd Year: Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement	all materials, sca ation of Environm	47.15 <b>518.67</b> affolding HOM nental and Sc	Nos. 1 of machinerie
21	Add 10% For area weightage Operation & Maintenance for 3rd Year: Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate	all materials, sca ation of Environm	47.15 <b>518.67</b> affolding HOM nental and So r-in-charge. 98	Nos. 1 of machinerie
21	Add 10% For area weightage Operation & Maintenance for 3rd Year: Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate O&M 3rd year escalation of 12%	all materials, sca ation of Environm	47.15 518.67 offolding HOM nental and So r-in-charge. 98 11.76	Nos. 1 of machinerie ocial Safeguard
21	Add 10% For area weightage Operation & Maintenance for 3rd Year: Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate	all materials, sca	47.15 <b>518.67</b> affolding HOM nental and So r-in-charge. 98	Nos. 1 of machinerie ocial Safeguarc
21	Add 10% For area weightage Operation & Maintenance for 3rd Year: Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate O&M 3rd year escalation of 12%	all materials, sca ation of Environm ctions of Enginee	47.15 518.67 offolding HOM nental and Sc r-in-charge. 98 11.76 10.98	Nos. 1 of machinerie ocial Safeguarc
21	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement.         & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage	all materials, sca ation of Environm ctions of Enginee Rate	47.15 518.67 offolding HOM nental and Sc r-in-charge. 98 11.76 10.98 120.74	Nos.
	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage	all materials, sca ation of Environm ctions of Enginee Rate vith synthetic enar	47.15 518.67 518.67 affolding HOM nental and So r-in-charge. 98 11.76 10.98 120.74 mel paint in a	Nos. 1 of machinerie ocial Safeguard Nos. pproved shade
21	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface w on new plastered concrete surfaces, with materials, labour	all materials, sca ation of Environm ctions of Enginee Rate vith synthetic enar	47.15 518.67 518.67 affolding HOM nental and So r-in-charge. 98 11.76 10.98 120.74 mel paint in a	Nos. 1 of machinerie ocial Safeguard Nos. pproved shade
	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface woon new plastered concrete surfaces, with materials, labour Chapter 8	all materials, sca ation of Environm ctions of Enginee Rate vith synthetic enar	47.15 518.67 offolding HOM nental and So r-in-charge. 98 11.76 10.98 120.74 mel paint in a specifications	Nos. 1 of machinerie ocial Safeguard Nos. pproved shade
	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface w on new plastered concrete surfaces, with materials, labour Chapter 8         Basic Rate	all materials, sca ation of Environm ctions of Enginee Rate vith synthetic enar	47.15 518.67 offolding HOM nental and So r-in-charge. 98 11.76 10.98 120.74 mel paint in a specifications	Nos. 1 of machinerie ocial Safeguard Nos. pproved shade
	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface w on new plastered concrete surfaces, with materials, labour Chapter 8         Basic Rate         O&M 3rd year escalation of 12%	all materials, sca ation of Environm ctions of Enginee Rate vith synthetic enar	47.15 518.67 518.67 offolding HOM nental and So r-in-charge. 98 11.76 10.98 120.74 mel paint in a specifications 80 9.6	Nos. 1 of machinerie ocial Safeguard Nos. pproved shade
	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface w on new plastered concrete surfaces, with materials, labour Chapter 8         Basic Rate	all materials, sca ation of Environm ctions of Enginee <b>Rate</b> vith synthetic enar	47.15 <b>518.67</b> affolding HOM hental and So r-in-charge. 98 11.76 10.98 <b>120.74</b> mel paint in a specifications 80 9.6 8.96	Nos.
	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface w on new plastered concrete surfaces, with materials, labour Chapter 8         Basic Rate         O&M 3rd year escalation of 12%	all materials, sca ation of Environm ctions of Enginee Rate vith synthetic enar	47.15 518.67 518.67 offolding HOM nental and So r-in-charge. 98 11.76 10.98 120.74 mel paint in a specifications 80 9.6	Nos. 1 of machinerie ocial Safeguard Nos. pproved shade
	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement.         & as per design, drawing, technical specifications and direct as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface woon new plastered concrete surfaces, with materials, labour Chapter 8         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)	all materials, sca ation of Environm ctions of Enginee <b>Rate</b> vith synthetic enar	47.15 <b>518.67</b> affolding HOM hental and So r-in-charge. 98 11.76 10.98 <b>120.74</b> mel paint in a specifications 80 9.6 8.96	Nos.
22	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface w on new plastered concrete surfaces, with materials, labour Chapter 8         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage	all materials, sca ration of Environm ctions of Enginee <b>Rate</b> vith synthetic enar- complete as per <b>Rate</b>	47.15 <b>518.67</b> affolding HOM mental and So r-in-charge. 98 11.76 10.98 <b>120.74</b> mel paint in a specifications 80 9.6 8.96 <b>98.56</b>	Nos.
	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface w on new plastered concrete surfaces, with materials, labour Chapter 8         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage	all materials, sca ration of Environm ctions of Enginee <b>Rate</b> vith synthetic enar- complete as per <b>Rate</b>	47.15 <b>518.67</b> affolding HOM mental and So r-in-charge. 98 11.76 10.98 <b>120.74</b> mel paint in a specifications 80 9.6 8.96 <b>98.56</b>	Nos.
22	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface woon new plastered concrete surfaces, with materials, labour Chapter 8         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         O         Poperation & Maintenance for 3rd Year:         P/F Square shape 600mmx450 mm precast R.C.C. manhor (Rate analysis attached)	all materials, sca ration of Environm ctions of Enginee <b>Rate</b> vith synthetic enar- complete as per <b>Rate</b>	47.15 <b>518.67</b> affolding HOM mental and So r-in-charge. 98 11.76 10.98 <b>120.74</b> mel paint in a specifications 80 9.6 8.96 <b>98.56</b>	Nos.
22	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement.         & as per design, drawing, technical specifications and direct as per design, drawing, technical specifications and direct as per design, drawing, technical specifications and direct Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface woon new plastered concrete surfaces, with materials, labour Chapter 8         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         P/F Square shape 600mmx450 mm precast R.C.C. manhor (Rate analysis attached)         Rate Arrived as per Rate analysis	all materials, sca ration of Environm ctions of Enginee <b>Rate</b> vith synthetic enar- complete as per <b>Rate</b>	47.15 <b>518.67</b> affolding HOM nental and So r-in-charge. 98 11.76 10.98 <b>120.74</b> mel paint in a specifications 80 9.6 8.96 <b>98.56</b> ne	Nos.
22	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement & as per design, drawing, technical specifications and direct Basic rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface w on new plastered concrete surfaces, with materials, labour Chapter 8         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage         Add 10% For area weightage         Veature 8         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         P/F Square shape 600mmx450 mm precast R.C.C. manhor (Rate analysis attached)         Rate Arrived as per Rate analysis         Basic Rate	all materials, sca ration of Environm ctions of Enginee <b>Rate</b> vith synthetic enar- complete as per <b>Rate</b>	47.15 <b>518.67</b> affolding HOM hental and So r-in-charge. <u>98</u> 11.76 10.98 <b>120.74</b> mel paint in a specifications <u>80</u> <u>9.6</u> <u>8.96</u> <u>98.56</u> ne <u>917</u>	Nos.
22	Add 10% For area weightage         Operation & Maintenance for 3rd Year:         Removing and resetting of kerb stones. including cost of with all lead and lifts, labour charges including implement.         & as per design, drawing, technical specifications and direct as per design, drawing, technical specifications and direct as per design, drawing, technical specifications and direct Add 10% For area weightage         KSRRB 800-1. Painting two coats after filling the surface woon new plastered concrete surfaces, with materials, labour Chapter 8         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         P/F Square shape 600mmx450 mm precast R.C.C. manhor (Rate analysis attached)         Rate Arrived as per Rate analysis	all materials, sca ration of Environm ctions of Enginee <b>Rate</b> vith synthetic enar- complete as per <b>Rate</b>	47.15 <b>518.67</b> affolding HOM nental and So r-in-charge. 98 11.76 10.98 <b>120.74</b> mel paint in a specifications 80 9.6 8.96 <b>98.56</b> ne	Nos.

24	Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron / Ductile Iron (NON SOR Item)						
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.15		3500.00				
	O&M 3rd year escalation of 12%		420				
		Rate	3920.00	Nos.			
25	Operation & Maintenance for 3rd Year: Providing gully pipe lowering,laying of PVC 100 mm dia pipe specials and grade as indicated in drawings/design and hydrar shall include all jointing materials,testing apparatus and water fo in charge (page No.41,Item No.7,KUWSDB SOR 2016-17)	ulically tes	ting of the pip	be line.The ra			
	Basic Rate		297				
	O&M 3rd year escalation of 12%		35.64				
	Add 10% on Labor Charges=Rs.47,For area weightage (Mangalore City)		4.7				
		Rate	337.34	Rm			
	Operation & Maintenance for 3rd Year: KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100						
26	screwed down or hinged grating with or without vent arm includin and floors, cost of materials, labour, testing, complete as per spe 11.1.10.	g cutting a	nd making goo	od the walls			
	Basic Rate		830				
	O&M 3rd year escalation of 12%		99.6				
	Add 10% For area weightage (Mangalore City)		00.00				
			92.96				
	Operation & Maintenance for 3rd Year:	1 Providir	1022.56	Nos.			
27	Operation & Maintenance for 3rd Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29. cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructir minimum fill of granular material over top and sides of RCC pipe thick layer of granular material free of rock pieces, outer to outer subject to minimum450 mm in case of double and triple row du level of duct to be above higher than ground level to prevent ent 1997 and approved drawings complete as per specifications. Case	1. Providir construct ng head wa as per IRC distance c cts, joints try of wate	<b>1022.56</b> Ing and laying tion), extendin alls at both er C:98-1997, bec of pipe at least to be made le r and dirt, all a	of a reinforce g from drain nds, providing dded on a 0.3 half dia of pi eak proof, inve as per IRC: 98			
27	<b>Operation &amp; Maintenance for 3rd Year:</b> KSRRB M800- Cable Duct Across the road KSRRB M800-29. cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructir minimum fill of granular material over top and sides of RCC pipe thick layer of granular material free of rock pieces, outer to outer subject to minimum450 mm in case of double and triple row du level of duct to be above higher than ground level to prevent ent 1997 and approved drawings complete as per specifications. Cas ( KPWD SOR 16-17, Item No.24.34, Pg.No.188)	1. Providir construct ng head wa as per IRC distance c cts, joints try of wate	<b>1022.56</b> Ing and laying tion), extendin alls at both er D:98-1997, bec of pipe at least to be made le r and dirt, all a gle row for one	of a reinforce g from drain nds, providing dded on a 0.3 half dia of pi eak proof, inve as per IRC: 98			
27	Operation & Maintenance for 3rd Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29. cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructir minimum fill of granular material over top and sides of RCC pipe thick layer of granular material free of rock pieces, outer to outer subject to minimum450 mm in case of double and triple row du level of duct to be above higher than ground level to prevent ent 1997 and approved drawings complete as per specifications. Case	1. Providir construct ng head wa as per IRC distance c cts, joints try of wate	<b>1022.56</b> Ing and laying tion), extendin alls at both er C:98-1997, bec of pipe at least to be made le r and dirt, all a	of a reinforce g from drain nds, providing dded on a 0.3 half dia of pij eak proof, inve as per IRC: 98			
27	Operation & Maintenance for 3rd Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29. cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructir minimum fill of granular material over top and sides of RCC pipe thick layer of granular material free of rock pieces, outer to outer subject to minimum450 mm in case of double and triple row du level of duct to be above higher than ground level to prevent ent 1997 and approved drawings complete as per specifications. Cas ( KPWD SOR 16-17, Item No.24.34, Pg.No.188) Basic Rate	1. Providir construct ng head wa as per IRC distance c cts, joints try of wate	<b>1022.56</b> Ing and laying tion), extendin alls at both er C:98-1997, bec of pipe at least to be made le r and dirt, all a gle row for one	of a reinforc g from drain nds, providing dded on a 0.3 half dia of pi eak proof, inve as per IRC: 98			
27	Operation & Maintenance for 3rd Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29. cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructir minimum fill of granular material over top and sides of RCC pipe thick layer of granular material free of rock pieces, outer to outer subject to minimum450 mm in case of double and triple row du level of duct to be above higher than ground level to prevent ent 1997 and approved drawings complete as per specifications. Cas ( KPWD SOR 16-17,Item No.24.34,Pg.No.188) Basic Rate O&M 3rd year escalation of 12%	1. Providir construct ng head wa as per IRC distance c cts, joints try of wate	<b>1022.56</b> Ing and laying tion), extendin alls at both er C:98-1997, bec of pipe at least to be made le r and dirt, all a gle row for one 5022 602.64	of a reinforc g from drain nds, providing dded on a 0.3 half dia of pi eak proof, inve as per IRC: 98			
27	Operation & Maintenance for 3rd Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29. cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructir minimum fill of granular material over top and sides of RCC pipe thick layer of granular material free of rock pieces, outer to outer subject to minimum450 mm in case of double and triple row du level of duct to be above higher than ground level to prevent ent 1997 and approved drawings complete as per specifications. Cas ( KPWD SOR 16-17,Item No.24.34,Pg.No.188) Basic Rate O&M 3rd year escalation of 12%	1. Providir y construct ing head was as per IRC distance of cts, joints try of wate se - I : Sing Rate Rate s with Silic when expo ther physic	1022.56 ng and laying tion), extendin alls at both er 2:98-1997, bec of pipe at least to be made least to be made least to be made least and dirt, all a gle row for one 5022 602.64 562.46 6187.10 ore Lubricant osed to the no cal properties	of a reinforc g from drain nds, providing dded on a 0.3 half dia of pi eak proof, inve as per IRC: 98 utility service <b>Rm</b> inner layer w ormal operati comforming			
	Operation & Maintenance for 3rd Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.         cement concrete pipe duct, 300 mm dia, across the road (new         drain in cuts and toe of slope to toe of slope in fills, constructir         minimum fill of granular material over top and sides of RCC pipe         thick layer of granular material free of rock pieces, outer to outer         subject to minimum450 mm in case of double and triple row du         level of duct to be above higher than ground level to prevent ent         1997 and approved drawings complete as per specifications. Case         (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         Providing and laying Dia 225mm HDPE Electrical pipe Conduits         ribs, dimensional ratio of 13.5,Deflection not greater than 5%         temparature 90°C under the over burden soil presuure and o         ASTMF 2160 and /or NEMA TC7.The expected service life of HE         not be less than 50 years.         (Market Rate)	1. Providir y construct ing head was as per IRC distance of cts, joints try of wate se - I : Sing Rate Rate s with Silic when expo ther physic	1022.56 ng and laying tion), extendin alls at both er 2:98-1997, bec of pipe at least to be made	of a reinforc g from drain nds, providing dded on a 0.3 half dia of pi eak proof, inv as per IRC: 9 utility service <b>Rm</b> inner layer w ormal operati comforming			
	Operation & Maintenance for 3rd Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.         cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructir minimum fill of granular material over top and sides of RCC pipe thick layer of granular material free of rock pieces, outer to outer subject to minimum450 mm in case of double and triple row du level of duct to be above higher than ground level to prevent ent 1997 and approved drawings complete as per specifications. Case (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)       Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:       Providing and laying Dia 225mm HDPE Electrical pipe Conduits ribs, dimensional ratio of 13.5,Deflection not greater than 5% temparature 90°C under the over burden soil presuure and o ASTMF 2160 and /or NEMA TC7.The expected service life of HE not be less than 50 years. (Market Rate)         Basic Rate       Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item	1. Providir y construct ing head was as per IRC distance of cts, joints try of wate se - I : Sing Rate Rate s with Silic when expo ther physic	1022.56 ng and laying tion), extendin alls at both er 2:98-1997, bec of pipe at least to be made least to be made least to be made least and dirt, all a gle row for one 5022 602.64 562.46 6187.10 ore Lubricant osed to the no cal properties	of a reinforc g from drain nds, providing dded on a 0.3 half dia of pi eak proof, inv as per IRC: 9 utility service <b>Rm</b> inner layer w ormal operati comforming			
	Operation & Maintenance for 3rd Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.         cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructir minimum fill of granular material over top and sides of RCC pipe thick layer of granular material free of rock pieces, outer to outer subject to minimum450 mm in case of double and triple row du level of duct to be above higher than ground level to prevent ent 1997 and approved drawings complete as per specifications. Case (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate         O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:         Providing and laying Dia 225mm HDPE Electrical pipe Conduits ribs, dimensional ratio of 13.5,Deflection not greater than 5% temparature 90°C under the over burden soil presuure and o ASTMF 2160 and /or NEMA TC7.The expected service life of HE not be less than 50 years.         (Market Rate)         Basic Rate         Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)	1. Providir y construct ing head was as per IRC distance of cts, joints try of wate se - I : Sing Rate Rate s with Silic when expo ther physic	1022.56 Ing and laying tion), extendin alls at both er 2:98-1997, bec of pipe at least to be made least to be made least to be made least to be made least to be made least to be made least to be made least 1022 602.64 562.46 6187.10 ore Lubricant ore Lubricant ore Lubricant ore and of the non- cal properties onduits and act 2500 78	of a reinforc g from drain nds, providing dded on a 0.3 half dia of pi eak proof, inv as per IRC: 9 utility service <b>Rm</b> inner layer w ormal operati comforming			
	Operation & Maintenance for 3rd Year:         KSRRB M800- Cable Duct Across the road KSRRB M800-29.         cement concrete pipe duct, 300 mm dia, across the road (new drain in cuts and toe of slope to toe of slope in fills, constructir minimum fill of granular material over top and sides of RCC pipe thick layer of granular material free of rock pieces, outer to outer subject to minimum450 mm in case of double and triple row du level of duct to be above higher than ground level to prevent ent 1997 and approved drawings complete as per specifications. Case (KPWD SOR 16-17,Item No.24.34,Pg.No.188)         Basic Rate       O&M 3rd year escalation of 12%         Add 10% For area weightage (Mangalore City)       Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 3rd Year:       Providing and laying Dia 225mm HDPE Electrical pipe Conduits ribs, dimensional ratio of 13.5,Deflection not greater than 5% temparature 90°C under the over burden soil presuure and o ASTMF 2160 and /or NEMA TC7.The expected service life of HE not be less than 50 years. (Market Rate)         Basic Rate       Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item	1. Providir y construct ing head was as per IRC distance of cts, joints try of wate se - I : Sing Rate Rate s with Silic when expo ther physic	1022.56 ng and laying tion), extendin alls at both er 2:98-1997, bec of pipe at least to be made le r and dirt, all a gle row for one 5022 602.64 562.46 6187.10 ore Lubricant osed to the no cal properties onduits and ac	of a reinforce g from drain nds, providing dded on a 0.3 half dia of pi eak proof, inv as per IRC: 9 utility service <b>Rm</b> inner layer w ormal operati comforming			

		Rate	2897.84	Rm		
	Operation & Maintonance for 2rd Veer					
29	<b>Operation &amp; Maintenance for 3rd Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering, Jointing into trenches, Complete.					
	(Market Rate)	1 1	4775			
	Basic Rate		1775			
	O&M 3rd year escalation of 12%	Dete	213	Nee		
		Rate	1988.00	Nos.		
30	Operation & Maintenance for 3rd Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits ribs, dimensional ratio of 13.5,Deflection not greater than 5% w temparature 90°C under the over burden soil presuure and oth ASTMF 2160 and /or NEMA TC7.The expected service life of HD not be less than 50 years.(Market Rate)	/hen expo her physio	sed to the norical properties c	mal operatir		
	Basic Rate		1350			
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)		66			
	Add 12% For area weightage (Mangalore City)		7.92			
	Sub Total		1423.92			
	O&M 3rd year escalation of 12%		170.87			
				D		
		Rate	1594.79	кт		
31	Operation & Maintenance for 3rd Year: Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete.	•				
31	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete. (Market Rate) Basic Rate	/ing to wo	ork site including o line and jointir 1475	g loading an		
31	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete. (Market Rate)	ving to wo	ork site including to line and jointin 1475 177	g loading an ng of pipe an		
31	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete. (Market Rate) Basic Rate	/ing to wo	ork site including o line and jointir 1475	g loading an		
31	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete. (Market Rate) Basic Rate	ving to wo ving true to Rate	ork site including to line and jointin 1475 177 <b>1652.00</b>	g loading an ng of pipe an <b>Nos.</b>		
	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete. (Market Rate) Basic Rate O&M 3rd year escalation of 12% <b>Operation &amp; Maintenance for 3rd Year:</b> Providing and Fixixng Spacers for Power Ducts of size 225 mm, to Spacers shall be made of ABS raw material. (Market rate)	ving to wo ving true to Rate	ork site including o line and jointin 1475 177 <b>1652.00</b> ed at an interval	g loading an ng of pipe an <b>Nos.</b>		
	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete. (Market Rate) Basic Rate O&M 3rd year escalation of 12% <b>Operation &amp; Maintenance for 3rd Year:</b> Providing and Fixixng Spacers for Power Ducts of size 225 mm, to Spacers shall be made of ABS raw material. (Market rate) Basic Rate	ving to wo ving true to <b>Rate</b> to be place	ork site including o line and jointin 1475 177 <b>1652.00</b> ed at an interval 1003 80.24 180.54	g loading an ng of pipe an <b>Nos.</b> I of 1.5 mete		
	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete. (Market Rate) Basic Rate O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 225 mm, 1 Spacers shall be made of ABS raw material. (Market rate) Basic Rate O&M 3rd year escalation of 12%	ving to wo ving true to Rate	ork site including o line and jointin 1475 177 <b>1652.00</b> ed at an interval 1003 80.24	g loading ar ng of pipe ar <b>Nos.</b>		
	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling, lowering into trenches, lay special including encasing the pipe Complete.         (Market Rate)         Basic Rate         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Providing and Fixixng Spacers for Power Ducts of size 225 mm, for Spacers shall be made of ABS raw material.         (Market rate)         Basic Rate         O&M 3rd year escalation of 12%         GST @18%         Operation & Maintenance for 3rd Year:         Providing and Fixixng Spacers for Power Ducts of size 160 mm, for Spacers shall be made of ABS raw material.         (Market rate)         Basic Rate         Oxeration & Maintenance for 3rd Year:         Providing and Fixixng Spacers for Power Ducts of size 160 mm, for Spacers shall be made of ABS raw material.         (Market rate)	ving to wo ving true to Rate to be place	ed at an interval	g loading an ng of pipe an <b>Nos.</b> I of 1.5 mete <b>Nos.</b>		
32	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete. (Market Rate) Basic Rate O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 225 mm, 1 Spacers shall be made of ABS raw material. (Market rate) Basic Rate O&M 3rd year escalation of 12% GST @18% Operation & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, 1 Spacers shall be made of ABS raw material. (Market rate) Basic Rate Deferies the made of ABS raw material. (Market rate) Basic Rate	ving to wo ving true to Rate to be place	ed at an interval 1003 80.24 1263.78 ed at an interval 1003	g loading an ng of pipe an <b>Nos.</b> I of 1.5 mete <b>Nos.</b>		
32	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete. (Market Rate) Basic Rate O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 225 mm, 1 Spacers shall be made of ABS raw material. (Market rate) Basic Rate O&M 3rd year escalation of 12% GST @18% Operation & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, 1 Spacers shall be made of ABS raw material. (Market rate) Basic Rate Objection & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, 1 Spacers shall be made of ABS raw material. (Market rate) Basic Rate O&M 3rd year escalation of 12%	ving to wo ving true to Rate to be place	ork site including         1475         177         1652.00         ed at an interval         1003         80.24         180.54         1263.78         ed at an interval	g loading an ng of pipe an <b>Nos.</b> I of 1.5 mete <b>Nos.</b>		
32	Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and convey unloading at both destination and rolling,lowering into trenches,lay special including encasing the pipe Complete. (Market Rate) Basic Rate O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 225 mm, 1 Spacers shall be made of ABS raw material. (Market rate) Basic Rate O&M 3rd year escalation of 12% GST @18% Operation & Maintenance for 3rd Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, 1 Spacers shall be made of ABS raw material. (Market rate) Basic Rate Deferies the made of ABS raw material. (Market rate) Basic Rate	ving to wo ving true to Rate to be place	ed at an interval 1003 80.24 1263.78 ed at an interval 1003	g loading an ng of pipe an <b>Nos.</b> I of 1.5 mete <b>Nos.</b>		

	Operation & Maintenance for 3rd Year:			
	Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lub	ricant inr	ner laver for l	CT fibre cables
	comforming to ASTMF 2160 and /or equivalent indian standard			
34	loading and unloading at both destination and rolling, lowering into			
	of pipe etc.Complete.		, aying theo to	into ana jointing
	(Market Rate)			
	Basic Rate		685	
	Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item		000	
	No.50,Pg.No.123)		36	
	Add 12% For area weightage (Mangalore City)		4.32	
	Sub Total		725.32	
	O&M 3rd year escalation of 12%		87.04	
		Rate	812.36	Rm
		Nale	012.30	NIII
	Operation 9 Maintenance for 2rd Veer			
	Operation & Maintenance for 3rd Year:		nun inn to un	ساد منامه اسمانيم
25	Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Du			•
35	loading and unloading at both destination and lowering into trench	es, and jo	binting of pipe.	Complete.
	(Market Rate)			
	Paoia Data		475	
	Basic Rate		175	
	O&M 3rd year escalation of 12%	Data	21	Nee
		Rate	196.00	Nos.
	Operation & Maintenance for 3rd Year:			
	Providing and laying heavy duty cobble stones 60mm thick, using			
	manufacture of blocks of approved size, shape and colour with a r			
36	kg per sqm over 50mm thick sand bed (average thickness ) and co			•
	tons compaction force thereby forcing part of sand underneath to o	•	•	
	compaction of paver surface joints into its final level, including cos	t of mate	rials, labour ar	nd HOM of
	machineries complete as per specifications.	1		
	Basic rate		1056.00	
	O&M 3rd year escalation of 12%		126.72	
	Add 10% For area weightage (Mangalore City)		118.27	-
		Rate	1300.99	Sqm
	Operation & Maintenance for 3rd Year:			
	Providing and laying heavy duty Tactile Tiles (Direction and Stop ti		,	
	Yellow in colour , using cement and course sand for manufacture of			
	a minimum compressive strength of 281 kg per sqm over 50mm th			
37	compacting with plate vibrator having 3 tons compaction force the	eby forci	ng part of san	d underneath to
	come up in between joints, final compaction of paver surface joints	s into its f	inal level, inclu	uding cost of
	materials, labour and HOM of machineries complete as per specifi	cations.		
	(Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer		012.00	
	Sr.No.12		912.00	
	O&M 3rd year escalation of 12%		109.44	
		Rate	1021.44	Sqm
		1		-

	Operation & Maintenance for 3rd Year:			
	Providing and laying heavy duty cobble stones 75mm thick,	using c	ement and c	ourse sand for
	manufacture of blocks of approved size, shape and colour with a			
38	kg per sqm over 50mm thick sand bed (average thickness ) and c			
00	tons compaction force thereby forcing part of sand underneath			
	compaction of paver surface joints into its final level, including		•	•
	machineries complete as per specifications.			
			4444	
	Basic rate		1114	
	O&M 3rd year escalation of 12%		133.68	
	Add 10% For area weightage (Mangalore City)		124.77	
		Rate	1372.45	Sqm
	Operation & Maintenance for 3rd Year:			
	Road Marking with hot applied Thermoplastic Compound with R	eflectrisi	ng Glass Bea	ds on Concrete
	Surface: Providing and laying of hot applied thermoplastic compou	nd 2.5mr	m thick includi	ng reflectorising
39	glass beads at 250 gms and 2 ltr of primer per sqm area, thickr	ness of 2	.5mm is exclu	usive of surface
	applied glass beads as per IRC:35.The finished surface to be le			
	holes complete as per specifications.MORTH specification No.803			
	(Page No 192,SI No : 24.57)			
	Basic Rate		429	
	O&M 3rd year escalation of 12%		51.48	
	Add 10% For area weightage (Mangalore City)		48.05	
		Rate	528.53	Sqm
		Nate	520.55	Öqin
	Operation 8 Maintenance for 2rd Veer			
40	Operation & Maintenance for 3rd Year:		an a sified in F	Dood and Other
40	Operation and Maintenance for eToilets Stainless Steel Public N	lodel as	specified in F	Road and Other
	works BOQ Item No.45.	1		
	Baisc rate		61200	
	O&M 3rd year escalation of 12%		7344	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer	Rate	68544	Nos.
	Sr.No.1	Mate	00044	103.
	Operation & Maintenance for 3rd Year:			
44	Providing and fixing of S.S. Bollards(SS304) on footpath as specifi	ed and d	directed by En	gineer -in-
41	charge		-	•
	(NON SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore, Refer		1-00.00	
	Sr.No.13		4500.00	
	O&M 3rd year escalation of 12%		540	
		Rate	5040	Nos.
<u> </u>		Trate	5040	1103.
	Operation 8 Maintenance for 2rd Veer	I	I	
	Operation & Maintenance for 3rd Year:		nd have ( ahar	drowing to be
42	Providing and fixing of railing as detail design in MS HOLLOW SE		• •	•
	approved ), with vertical support of 0.9m @2.2mc/c , all complete	to the sa	tistaction of th	e Landscape
	architect.(Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore, Refer		100000.00	
	Sr.No.26		100000.00	
	O&M 3rd year escalation of 12%		12000	
		Rate	112000	MT
	:	•	·	

43	<b>Operation &amp; Maintenance for 3rd Year:</b> Excavation and removal of silt and silt mixed with sand in slussy co disposing off the same in spoil bank or on the canal embankment i with lead upto 50 m and all lifts. For Desilting of drains and grit cha scaffolding HOM of machineries with all lead and lifts, labour charg Environmental and Social Safeguards & as per design, drawing, te of Engineer-in-charge.	n layers a mbers ir jes incluc	as directed etc. Including cost o ling implement	., complete f all materials, ation of		
	Basic Rate		186.16			
	O&M 3rd year escalation of 12%		22.34			
		Rate	208.5	Nos.		
44	<b>Operation &amp; Maintenance for 3rd Year:</b> Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth	eyond ini	tial Lead			
	Earth	2.0x1	.28x10km			
	Baisc rate		25.60			
	Add Loading and unloading charges(Item No 17.1 KSRRB M100- 1)		57.00			
	Sub Total-1		82.60			
	Add 10% For area weightage (Mangalore City)		8.26			
	Sub Total-2		90.86			
	O&M 3rd year escalation of 12%		10.9			
		Rate	101.76	Cum		
45	<b>Operation &amp; Maintenance for 3rd Year:</b> Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Debris					
	Debris	2.0x1	.30x10Km			
	Baisc rate		26.00			
	Add Loading and unloading charges(Item No 17.1 KSRRB M100- 1)		57.00			
	Sub Total-1		83.00			
	Add 10% For area weightage (Mangalore City)		8.3			
	Sub Total-2		91.30			
	O&M 3rd year escalation of 12%	<b>-</b>	10.96			
	Link (in a Dalan	Rate	102.26	Cum		
	Lighting Poles					
46	<b>Operation &amp; Maintenance for 3rd Year:</b> Dismantling, removal, transportation to client's storage place existing lighting poles (Non SOR Item)					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer		1,000			
	Sr.No.22					
	O&M 3rd year escalation of 12%	Dete	120	No -		
		Rate	1120	Nos.		

	<b>Operation &amp; Maintenance for 3rd Year:</b> Lighting Pole, 9 m							
	Fabrication, supply and erection of 9 meters long hot dip Galvanise grade S 355 JO steel plate for shaft, IS 2062 for base plate with oc suitable boards, bakelite sheet and MCBs as per IS specifications	or openin	g arrangement	, icluding				
47	for 5 m pole in single section and single joint welded as per IS 959							
47	bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plat			J bolts along				
	with template and the pole shall be hot dip galvanized in single dip		•	0				
	per ASTM - A123 and 153 etc., (excluding foundation) as per draw			55 micron as				
	(Ref Electrical SOR SI No. 5.14.7)							
	(Ref Electrical SOR SI NO. 5.14.7)							
	Basic rate		17118					
	O&M 3rd year escalation of 12%		2054.16					
		Rate	19,172.16	Nos.				
	Operation & Maintenance for 3rd Year:							
	Lighting Pole, 7 m							
	Fabrication, suppl and erection of 7 meters long hot dip Galvanised	•	•					
	grade S 355 JO steel plate for shaft, IS 2062 for base plate with oc	•	• •	· · · · ·				
40	suitable boards, bakelite sheet and MCBs as per IS specifications		•					
48	for 5 m pole in single section and single joint welded as per IS 959			•				
	bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plat with template and the pole shall be hot dip galvanized in single dip		Ų	J bolts along				
	per ASTM - A123 and 153 etc., (excluding foundation) as per draw			of micron as				
	(Ref Electrical SOR SI No. 5.14.5)	ing appe	nueu					
	Basic rate		12420					
	Basic rate O&M 3rd year escalation of 12%		12420 1490 4					
	Basic rate O&M 3rd year escalation of 12%	Rate	1490.4	Nos.				
	O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Lighting Pole, 4 m	Rate	1490.4 <b>13,910.40</b>	Nos.				
49	O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year:	ed Octage oor openi suitable f 5/IS 1017 e and 4 r with not l	1490.4 13,910.40 onal pole with I ng arrangemer for wind speed 8 AWG having nos. of long J b less than 65 m	BSE 10025 ht, icluding of 47 m/sec dimensions olts along with				
49	O&M 3rd year escalation of 12% <b>Operation &amp; Maintenance for 3rd Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanise grade S 355 JO steel plate for shaft, IS 2062 for base plate with do suitable boards, bakelite sheet and MCBs as per IS specifications for 5 4 pole in single section and single joint welded as per IS 9595 bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plat template and the pole shall be hot dip galvanized in single dipping ASTM - A123 and 153 etc., (excluding foundation) as per drawing (Ref Electrical SOR SI No.5.14.2) Basic rate	ed Octage oor openi suitable f 5/IS 1017 e and 4 r with not l	1490.4 13,910.40 Ing arrangemer for wind speed 78 AWG having hos. of long J b less than 65 m d	BSE 10025 ht, icluding of 47 m/sec dimensions olts along with				
49	O&M 3rd year escalation of 12% <b>Operation &amp; Maintenance for 3rd Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanise grade S 355 JO steel plate for shaft, IS 2062 for base plate with do suitable boards, bakelite sheet and MCBs as per IS specifications for 5 4 pole in single section and single joint welded as per IS 9595 bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plat template and the pole shall be hot dip galvanized in single dipping ASTM - A123 and 153 etc., (excluding foundation) as per drawing (Ref Electrical SOR SI No.5.14.2)	ed Octage oor openi suitable f 5/IS 1017 e and 4 r with not l	1490.4 13,910.40 onal pole with I ng arrangemer for wind speed 8 AWG having nos. of long J b less than 65 m d 7398 887.76	BSE 10025 nt, icluding of 47 m/sec dimensions olts along with icron as per				
49	O&M 3rd year escalation of 12% <b>Operation &amp; Maintenance for 3rd Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanise grade S 355 JO steel plate for shaft, IS 2062 for base plate with do suitable boards, bakelite sheet and MCBs as per IS specifications for 5 4 pole in single section and single joint welded as per IS 9595 bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plat template and the pole shall be hot dip galvanized in single dipping ASTM - A123 and 153 etc., (excluding foundation) as per drawing (Ref Electrical SOR SI No.5.14.2) Basic rate O&M 3rd year escalation of 12%	ed Octage oor openi suitable f 5/IS 1017 e and 4 r with not l	1490.4 13,910.40 Ing arrangemer for wind speed 78 AWG having hos. of long J b less than 65 m d	BSE 10025 ht, icluding of 47 m/sec dimensions olts along with				
49	O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanise grade S 355 JO steel plate for shaft, IS 2062 for base plate with do suitable boards, bakelite sheet and MCBs as per IS specifications for 5 4 pole in single section and single joint welded as per IS 9595 bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plat template and the pole shall be hot dip galvanized in single dipping ASTM - A123 and 153 etc., (excluding foundation) as per drawing (Ref Electrical SOR SI No.5.14.2) Basic rate O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm	ed Octage bor openi suitable f 5/IS 1017 e and 4 r with not l appende <b>Rate</b>	1490.4 13,910.40 onal pole with I ng arrangemer for wind speed 78 AWG having hos. of long J b less than 65 m d 7398 887.76 8,285.76	BSE 10025 of 47 m/sec dimensions olts along with icron as per				
	O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanise grade S 355 JO steel plate for shaft, IS 2062 for base plate with do suitable boards, bakelite sheet and MCBs as per IS specifications for 5 4 pole in single section and single joint welded as per IS 9595 bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plat template and the pole shall be hot dip galvanized in single dipping ASTM - A123 and 153 etc., (excluding foundation) as per drawing (Ref Electrical SOR SI No.5.14.2) Basic rate O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	ed Octage bor openi suitable f 5/IS 1017 e and 4 r with not l appende <b>Rate</b>	1490.4 <b>13,910.40</b> onal pole with I ng arrangemer for wind speed 78 AWG having hos. of long J b less than 65 m d 7398 887.76 <b>8,285.76</b> luminaries and	BSE 10025 of 47 m/sec dimensions olts along with icron as per				
	O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanise grade S 355 JO steel plate for shaft, IS 2062 for base plate with do suitable boards, bakelite sheet and MCBs as per IS specifications for 5 4 pole in single section and single joint welded as per IS 9595 bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plat template and the pole shall be hot dip galvanized in single dipping ASTM - A123 and 153 etc., (excluding foundation) as per drawing (Ref Electrical SOR SI No.5.14.2) Basic rate O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5) Basic rate	ed Octage bor openi suitable f 5/IS 1017 e and 4 r with not l appende <b>Rate</b>	1490.4 <b>13,910.40</b> onal pole with I ng arrangemen for wind speed 78 AWG having hos. of long J b less than 65 m d 7398 887.76 <b>8,285.76</b> luminaries and 3540	BSE 10025 of 47 m/sec dimensions olts along with icron as per				
	O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanise grade S 355 JO steel plate for shaft, IS 2062 for base plate with do suitable boards, bakelite sheet and MCBs as per IS specifications for 5 4 pole in single section and single joint welded as per IS 9595 bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plat template and the pole shall be hot dip galvanized in single dipping ASTM - A123 and 153 etc., (excluding foundation) as per drawing (Ref Electrical SOR SI No.5.14.2) Basic rate O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	ed Octage bor openi suitable f 5/IS 1017 e and 4 r with not l appende <b>Rate</b> outdoor	1490.4 <b>13,910.40</b> onal pole with I ng arrangemer for wind speed '8 AWG having hos. of long J b less than 65 m d 7398 887.76 <b>8,285.76</b> luminaries and 3540 424.8	BSE 10025 ht, icluding of 47 m/sec dimensions holts along with icron as per <b>Nos.</b> mounted on				
	O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanise grade S 355 JO steel plate for shaft, IS 2062 for base plate with do suitable boards, bakelite sheet and MCBs as per IS specifications for 5 4 pole in single section and single joint welded as per IS 9595 bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plat template and the pole shall be hot dip galvanized in single dipping ASTM - A123 and 153 etc., (excluding foundation) as per drawing (Ref Electrical SOR SI No.5.14.2) Basic rate O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5) Basic rate	ed Octage bor openi suitable f 5/IS 1017 e and 4 r with not l appende <b>Rate</b> outdoor	1490.413,910.40Ing arrangementfor wind speed8 AWG havingnos. of long J bless than 65 md7398887.768,285.76luminaries and3540424.83,964.80	BSE 10025 nt, icluding of 47 m/sec g dimensions olts along with icron as per Nos. mounted on				
50	O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Lighting Pole, 4 m         Fabrication, supply and erection of 4 meters long hot dip Galvanise         grade S 355 JO steel plate for shaft, IS 2062 for base plate with do         suitable boards, bakelite sheet and MCBs as per IS specifications         for 5 4 pole in single section and single joint welded as per IS 9595         bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plat         template and the pole shall be hot dip galvanized in single dipping         ASTM - A123 and 153 etc., (excluding foundation) as per drawing         (Ref Electrical SOR SI No.5.14.2)         Basic rate         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Oward year escalation of 12%         Operation & Maintenance for 3rd Year:         Supplying and fixing of hot dip Gal	ed Octage bor openi suitable f 5/IS 1017 e and 4 r with not l appende <b>Rate</b> outdoor	1490.413,910.40Ing arrangementfor wind speed8 AWG havingnos. of long J bless than 65 md7398887.768,285.76luminaries and3540424.83,964.80	BSE 10025 nt, icluding of 47 m/sec g dimensions holts along with icron as per Nos. mounted on				
50	O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Lighting Pole, 4 m         Fabrication, supply and erection of 4 meters long hot dip Galvanise         grade S 355 JO steel plate for shaft, IS 2062 for base plate with do         suitable boards, bakelite sheet and MCBs as per IS specifications         for 5 4 pole in single section and single joint welded as per IS 9595         bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plat         template and the pole shall be hot dip galvanized in single dipping         ASTM - A123 and 153 etc., (excluding foundation) as per drawing         (Ref Electrical SOR SI No.5.14.2)         Basic rate         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for         Octagonal pole using necessary bolts,nuts, etc. complete </td <td>ed Octage bor openi suitable f 5/IS 1017 e and 4 r with not l appende <b>Rate</b> outdoor</td> <td>1490.413,910.40Ing arrangemerfor wind speed8 AWG havingnos. of long J bless than 65 m8887.768,285.76Iuminaries and3540424.83,964.80Iuminaries and</td> <td>BSE 10025 nt, icluding of 47 m/sec g dimensions holts along with icron as per Nos. mounted on</td>	ed Octage bor openi suitable f 5/IS 1017 e and 4 r with not l appende <b>Rate</b> outdoor	1490.413,910.40Ing arrangemerfor wind speed8 AWG havingnos. of long J bless than 65 m8887.768,285.76Iuminaries and3540424.83,964.80Iuminaries and	BSE 10025 nt, icluding of 47 m/sec g dimensions holts along with icron as per Nos. mounted on				

	Operation & Maintenance for 3rd Year:						
52	Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel						
52	including coping/footing of the pole8mtr and above street light po	le					
	(Ref Electrical SOR SI No.16.28.3)						
	Basic rate		700				
	O&M 3rd year escalation of 12%		84				
		Rate	784	Nos.			
	LT Cable						
	Operation & Maintenance for 3rd Year:						
	Supplying of 1.1 kV LT cable having aluminium conductor PVC ins						
	galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as						
53	outer sheathed armoured cable as per IS - 1554 Part 1:1988 & cor	nforming	to GTP of GR	OUP B			
	4 Core x16 Sq.mm PVC Aluminium Conductor,						
	(Ref Electrical SOR SI No.7.5,7.5.4)						
		1	447				
	Basic rate		117				
	O&M 3rd year escalation of 12%		14.04				
		Rate	131.04	Rm			
	Operation & Maintenance for 3rd Year:						
	Supply and drawing flexible multicore cable with electrolyte grade t						
54	conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC ins			suitable for			
	working voltage up to 1100 V as per IS-694:1990 and conforming	to GIP o	of Group A.				
	3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)						
	Paoia rata		01.6				
	Basic rate		81.6				
	O&M 3rd year escalation of 12%	Data	9.79	Dm			
		Rate	91.39	Rm			
	Oneration & Maintenance for 2rd Veer						
	<b>Operation &amp; Maintenance for 3rd Year:</b> Supplying tinned copper lugs and crimping and wiring to terminal p	oint for y	vira of followin				
55	16 Sq.mm PVC Aluminium Conductor			y 51265			
	(Ref Electrical SOR SI No.7.21,7.21.6)						
	Basic rate		11.31				
	O&M 3rd year escalation of 12%		1.36				
		Rate	12.67	Nos.			
		Nate	12.07	103.			
	Operation & Maintenance for 3rd Year:						
	Supplying tinned copper lugs and crimping and wiring to terminal p	noint for w	vire of followin	a sizes			
56	2.5 sq. mm copper conductor			9 01200			
	(Ref Electrical SOR SI No.7.21.2)						
	Basic rate		3.21				
	O&M 3rd year escalation of 12%		0.39				
		Rate	<b>3.60</b>	Nos.			
		Nate	5.00	103.			
	Operation & Maintenance for 3rd Year:	1	1				
		linments	on the mter he	ardhy using			
	Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive						
57	thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather						
57	resistance and capable of achieving ohmic value						
	less than one ohm						
	(Ref Electrical SOR Pg.No.64,SI No.7.23.6)						
	Basic rate		5500				
	O&M 3rd year escalation of 12%		660				
			000				
		Rate	6160	Kit			

58	Supply and running GI conductor for grounding and (along with o		in conduits syst	en or wining		
	using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)					
	Basic rate		19.5			
	O&M 3rd year escalation of 12%		2.34			
		Rate	21.84	Rmt		
	Operation & Maintenance for 3rd Year:					
59	Supplying and stacking of good earth at site including royalty a	and carriag	ge upto 5 k.m.	lead comple		
29	(earth measured in stacks will be reduced by 20% for payment).					
	(Non SOR Item)					
	Rate Approved as per EOI by MD MSCL Mangalore, Refer		140.00			
	Sr.No.27		140.00			
	O&M 3rd year escalation of 12%		16.8			
		Rate	156.80	Cum		
	Operation & Maintenance for 3rd Year:					
	KSRRB M300-Supply at site of work well decayed farm yard ma	nure KSRI	RB M300-11. Su	upply at site		
60	work well decayed farm yard manure, from any available source	e, approv	ed by the engir	neer in char		
	including screening and stackin complete as per specifications.	MORTH	Specification N	o. 308.2(Pa		
	No.152,SI.No.19.90)		-			
	Basic rate		204			
	O&M 3rd year escalation of 12%		24.48			
			22.85			
			22.00			
61	Add 10% For area weightage Operation & Maintenance for 3rd Year: KSRRB M300-Horticulture KSRRB M300-Spreading of sludge KSRRB M300-1. Spreading of sludge farm yard manure or/ and good parth to be paid for some	good earth	<b>251.33</b> I manure or/ ar	kness (cost		
61	Operation & Maintenance for 3rd Year: KSRRB M300-Horticulture KSRRB M300-Spreading of sludge KSRRB M300-1. Spreading of sludge farm yard manure or/ and sludge, farm yard manure or/and good earth to be paid for sep	farm yard good earth	<b>251.33</b> I manure or/ ar	nd good ea kness (cost		
61	Operation & Maintenance for 3rd Year: KSRRB M300-Horticulture KSRRB M300-Spreading of sludge KSRRB M300-1. Spreading of sludge farm yard manure or/ and	farm yard good earth	<b>251.33</b> I manure or/ ar	nd good ea kness (cost		
61	Operation & Maintenance for 3rd Year: KSRRB M300-Horticulture KSRRB M300-Spreading of sludge KSRRB M300-1. Spreading of sludge farm yard manure or/ and sludge, farm yard manure or/and good earth to be paid for sep MORTH Specification No. 307 Basic rate	farm yard good earth	<b>251.33</b> I manure or/ ar in required thic omplete as per 103	nd good ea kness (cost		
61	Operation & Maintenance for 3rd Year: KSRRB M300-Horticulture KSRRB M300-Spreading of sludge KSRRB M300-1. Spreading of sludge farm yard manure or/ and sludge, farm yard manure or/and good earth to be paid for sep MORTH Specification No. 307 Basic rate O&M 3rd year escalation of 12%	farm yard good earth	251.33 I manure or/ ar in required thic omplete as per	nd good ea kness (cost		
61	Operation & Maintenance for 3rd Year: KSRRB M300-Horticulture KSRRB M300-Spreading of sludge KSRRB M300-1. Spreading of sludge farm yard manure or/ and sludge, farm yard manure or/and good earth to be paid for sep MORTH Specification No. 307 Basic rate	farm yard good earth	251.33 I manure or/ ar in required thic omplete as per 103 12.36 11.54	nd good ea kness (cost		
61	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage	farm yard good earth arately) co	<b>251.33</b> I manure or/ ar in required thic pmplete as per 103 12.36	nd good ea ckness (cost specificatior		
	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:	farm yard good earth arately) co Rate	<b>251.33</b> I manure or/ ar in required thic omplete as per 103 12.36 11.54 <b>126.90</b>	nd good ea ckness (cost specificatior <b>Cum</b>		
61	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and g         sludge, farm yard manure or/and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion	farm yard good earth arately) co Rate	<b>251.33</b> I manure or/ ar in required thic omplete as per 103 12.36 11.54 <b>126.90</b>	nd good ea ckness (cost specification <b>Cum</b>		
	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge	farm yard good earth arately) co Rate	<b>251.33</b> I manure or/ ar in required thic omplete as per 103 12.36 11.54 <b>126.90</b>	nd good ea ckness (cost specificatior <b>Cum</b>		
	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)	farm yard good earth arately) co Rate	<b>251.33</b> I manure or/ ar in required thic omplete as per 103 12.36 11.54 <b>126.90</b>	nd good ear ckness (cost specification		
	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer	farm yard good earth arately) co Rate	<b>251.33</b> I manure or/ ar in required thic omplete as per 103 12.36 11.54 <b>126.90</b>	nd good ear ckness (cost specification		
	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28	farm yard good earth arately) co Rate	251.33 I manure or/ ar in required thic omplete as per 103 12.36 11.54 126.90 or directed by 23.91	nd good ea ckness (cost specificatior <b>Cum</b>		
	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer	farm yard good earth arately) co <b>Rate</b> specified	<b>251.33</b> I manure or/ ar in required thic omplete as per 103 12.36 11.54 <b>126.90</b> or directed by 23.91 2.87	nd good ea kness (cost specification <b>Cum</b> the Officer-		
	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28	farm yard good earth arately) co Rate	251.33 I manure or/ ar in required thic omplete as per 103 12.36 11.54 126.90 or directed by 23.91	nd good ea ckness (cost specification <b>Cum</b>		
	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and sludge, farm yard manure or/and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 3rd year escalation of 12%	farm yard good earth arately) co <b>Rate</b> specified	<b>251.33</b> I manure or/ ar in required thic omplete as per 103 12.36 11.54 <b>126.90</b> or directed by 23.91 2.87	nd good ea kness (cost specification <b>Cum</b> the Officer-		
	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 3rd year escalation of 12%	farm yard good earth arately) co <b>Rate</b> specified <b>Rate</b>	<b>251.33</b> I manure or/ ar in required thic omplete as per 103 12.36 11.54 <b>126.90</b> or directed by 23.91 2.87 <b>26.78</b>	nd good ea kness (cost specification Cum the Officer- Cum		
62	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 3rd year escalation of 12%         Maintenance for 3rd Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for	farm yard good earth arately) co <b>Rate</b> specified <b>Rate</b> a period co	251.33         I manure or/ ar         in required thic         omplete as per         103         12.36         11.54         126.90         or directed by         23.91         2.87         26.78         of one year inclust	nd good ea ckness (cost specification Cum the Officer- Cum uding wateri		
	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and sludge, farm yard manure or/and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 3rd year escalation of 12%         Omeration & Maintenance for 3rd Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for etc complete including cost of all materials, scaffolding HOM of r	farm yard good earth arately) co <b>Rate</b> specified <b>Rate</b> a period conachinerie	251.33I manure or/ arin required thicomplete as per10312.3611.54126.90or directed by23.912.8726.78of one year inclus with all lead a	nd good ea ckness (cost specification Cum the Officer- Cum uding wateri and lifts, labo		
62	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and sludge, farm yard manure or/and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 3rd year escalation of 12%         Oam 3rd year escalation of 12%         Oken 3rd year escalation of 12%	farm yard good earth arately) co <b>Rate</b> specified <b>Rate</b> a period conachinerie	251.33I manure or/ arin required thicomplete as per10312.3611.54126.90or directed by23.912.8726.78of one year inclus with all lead a	nd good ea ckness (cost specification Cum the Officer- Cum uding wateri and lifts, labo		
62	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and sludge, farm yard manure or/and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for etc complete including cost of all materials, scaffolding HOM of r charges including implementation of Environmental and Social technical specifications and directions of Engineer-in-charge.	farm yard good earth arately) co <b>Rate</b> specified <b>Rate</b> a period conachinerie	251.33I manure or/ arin required thicomplete as per10312.3611.54126.90or directed by23.912.8726.78of one year inclustion of the second content	nd good ea ckness (cost specification Cum the Officer- Cum uding wateri and lifts, labo		
62	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and y         sludge, farm yard manure or/and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for etc complete including cost of all materials, scaffolding HOM of r charges including implementation of Environmental and Social technical specifications and directions of Engineer-in-charge.         Basic rate	farm yard good earth arately) co <b>Rate</b> specified <b>Rate</b> a period conachinerie	251.33I manure or/ arin required thicomplete as per10312.3611.54126.90or directed by23.912.8726.78of one year inclustion of the second content	nd good ea ckness (cost specification Cum the Officer- Cum uding wateri und lifts, labo		
62	Operation & Maintenance for 3rd Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and sludge, farm yard manure or/and good earth to be paid for sep         MORTH Specification No. 307         Basic rate         O&M 3rd year escalation of 12%         Add 10% For area wightage         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Mixing earth and sludge or manure in the required proportion charge         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for etc complete including cost of all materials, scaffolding HOM of r charges including implementation of Environmental and Social technical specifications and directions of Engineer-in-charge.	farm yard good earth arately) co <b>Rate</b> specified <b>Rate</b> a period conachinerie	251.33I manure or/ arin required thicomplete as per10312.3611.54126.90or directed by23.912.8726.78of one year inclustion of the second content	nd good ea ckness (cost specification Cum the Officer- Cum uding wateri und lifts, labo		

64	<b>Operation &amp; Maintenance for 3rd Year:</b> Preparation of beds for hedging and shrubbery by excavating 60 base to a further depth of 30 cm, refilling the excavated earth aft sludge or manure in the ratio of 8:1 (8 parts of stacked volume or of stacked volume of sludge or manure after reduction by 8%), flucture	er breaking c f earth after r	lods and mixir eduction by 20	ng with )%: one par		
64	necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.29		146.00			
	O&M 3rd year escalation of 12%		17.52			
		Rate	163.52	Cum		
	SHRUBS: Supply and Stacking of Shrubs					
65	<b>Operation &amp; Maintenance for 3rd Year:</b> Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.30		840.00			
	O&M 3rd year escalation of 12%		100.8			
		Rate	940.80	Nos.		
66	Operation & Maintenance for 3rd Year: Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in (Non SOR Item)	n form	I			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.31		840.00			
	O&M 3rd year escalation of 12%		100.8			
		Rate	940.80	Nos.		
67	<b>Operation &amp; Maintenance for 3rd Year:</b> Pandanus variegted'gold ' 300mm ht , 300mm c/c in triangulation (Non SOR Item)	n , with 4-5 fro	onds			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.39		84.00			
	O&M 3rd year escalation of 12%		10.08			
		Rate	94.08	Nos.		
68	Operation & Maintenance for 3rd Year: Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of landscape architect/PMC (Non SOR Item)					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.40		140.00			
	O&M 3rd year escalation of 12%	Pata	16.8	Nee		
		Rate	16.8 <b>156.80</b>	Nos.		
69		tleast 3), Dia:	156.80	ts should be		
69	O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Ficus blackenia, c/c: 600m, must be bushy and multibranched(at	tleast 3), Dia:	156.80	ts should be		
69	O&M 3rd year escalation of 12% Operation & Maintenance for 3rd Year: Ficus blackenia, c/c: 600m, must be bushy and multibranched(at packed in tree bags and stacked well on site, and regularly wate Rate Approved as per EOI by MD MSCL Mangalore,Refer	tleast 3), Dia:	156.80 750mm. Plan er the planting.	ts should be		

70	<b>Operation &amp; Maintenance for 3rd Year:</b> Nerium oleander, c/c: 600m, must be bushy and multibranched(a packed in tree bags and stacked well on site, and regularly water			
	packed in thee bags and stacked well on site, and regularly water	ieu, unun a		ng.
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.40		840.00	
	O&M 3rd year escalation of 12%		100.8	
		Rate	940.80	Nos.
	TURF			
71	Operation & Maintenance for 3rd Year: ZOYSIA JAPONICA (MAT) (Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.32		156.80	
	O&M 3rd year escalation of 12%		18.82	
		Rate	175.62	Sqm
72	Operation & Maintenance for 3rd Year:           Watering with tanker to landscape area and plants for one year			
72	Operation & Maintenance for 3rd Year:Watering with tanker to landscape area and plants for one yearWater Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x61rs/hr (365days-90 days of mansoon=275 days/3 days=92		14352	
72	Operation & Maintenance for 3rd Year:           Watering with tanker to landscape area and plants for one year           Water Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x		14352 20526.12	
72	Operation & Maintenance for 3rd Year:Watering with tanker to landscape area and plants for one yearWater Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x61rs/hr ( 365days-90 days of mansoon=275 days/3 days=92days,consider watering at every 3 days)			
72	Operation & Maintenance for 3rd Year: Watering with tanker to landscape area and plants for one yearWater Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x 61rs/hr ( 365days-90 days of mansoon=275 days/3 days=92 days,consider watering at every 3 days)Mazdoor = 0.5 days x 446.2		20526.12 2463.1344 3487.81	
72	Operation & Maintenance for 3rd Year: Watering with tanker to landscape area and plants for one yearWater Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x 61rs/hr ( 365days-90 days of mansoon=275 days/3 days=92 days,consider watering at every 3 days)Mazdoor = 0.5 days x 446.2 Add 10% For area wightage	Rate	20526.12 2463.1344	
72	Operation & Maintenance for 3rd Year: Watering with tanker to landscape area and plants for one yearWater Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x 61rs/hr ( 365days-90 days of mansoon=275 days/3 days=92 days,consider watering at every 3 days)Mazdoor = 0.5 days x 446.2 	Rate	20526.12 2463.1344 3487.81	
72	Operation & Maintenance for 3rd Year:         Watering with tanker to landscape area and plants for one year         Water Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x         61rs/hr ( 365days-90 days of mansoon=275 days/3 days=92         days,consider watering at every 3 days)         Mazdoor = 0.5 days x 446.2         Add 10% For area wightage         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         supply and fixing of irrigation lines such that all the green areas         means of drip irrigation for trees , sub surface for shrubs and sprinklers for lawn areas. (Equipment make - Rainbird or equival	s and plant lawn areas ent)	20526.12 2463.1344 3487.81 <b>40829.06</b> ts are adequa	Year Ately watered; vers and pop
	Operation & Maintenance for 3rd Year:         Watering with tanker to landscape area and plants for one year         Water Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x         61rs/hr ( 365days-90 days of mansoon=275 days/3 days=92         days,consider watering at every 3 days)         Mazdoor = 0.5 days x 446.2         Add 10% For area wightage         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         supply and fixing of irrigation lines such that all the green areas         means of drip irrigation for trees , sub surface for shrubs and sprinklers for lawn areas. (Equipment make - Rainbird or equival All material used should be comply to BSI code. All the necessa commissioning to be installed. (Non SOR Item)	s and plant lawn areas ent)	20526.12 2463.1344 3487.81 <b>40829.06</b> ts are adequa	Year Ately watered; vers and pop
	Operation & Maintenance for 3rd Year:         Watering with tanker to landscape area and plants for one year         Water Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x         61rs/hr (365days-90 days of mansoon=275 days/3 days=92         days,consider watering at every 3 days)         Mazdoor = 0.5 days x 446.2         Add 10% For area wightage         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         supply and fixing of irrigation lines such that all the green areas         means of drip irrigation for trees , sub surface for shrubs and sprinklers for lawn areas. (Equipment make - Rainbird or equival All material used should be comply to BSI code. All the necessa commissioning to be installed. (Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer	s and plant lawn areas ent)	20526.12 2463.1344 3487.81 <b>40829.06</b> ts are adequa	Year Ately watered; vers and pop
	Operation & Maintenance for 3rd Year:         Watering with tanker to landscape area and plants for one year         Water Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x         61rs/hr ( 365days-90 days of mansoon=275 days/3 days=92         days,consider watering at every 3 days)         Mazdoor = 0.5 days x 446.2         Add 10% For area wightage         O&M 3rd year escalation of 12%         Operation & Maintenance for 3rd Year:         supply and fixing of irrigation lines such that all the green areas         means of drip irrigation for trees , sub surface for shrubs and sprinklers for lawn areas. (Equipment make - Rainbird or equival All material used should be comply to BSI code. All the necessa commissioning to be installed. (Non SOR Item)	s and plant lawn areas ent)	20526.12 2463.1344 3487.81 <b>40829.06</b> is are adequa	Year ately watered; vers and pop red for comple

Assistant Engineer MSCL Mangaluru

## Name of the Work :- Mangalore Smart City 3.13 Maintenance BOQ of Road and Other Work for Loop Road-4th Year

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
	Civil Works				
1.00	Operation & Maintenance for 4th Year: Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in-Charge.( RA attached)	Sqm	15.00	79.07	1186
2.00	Operation & Maintenance for 4th Year: KSRRB M200.Dismantling of cement concrete pavement by mechanical means using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (Page No 138,SI No : 18.47)	Cum	3.68	1147.12	4,221
3.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M200- <b>Dismantaling of kerb Stone</b> and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202.		10.00	15.31	153
4.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M200-13.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 16-17,18.20,Page No.137)	Cum	0.15	497.64	75
5.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M200-12.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. <b>i)Dismantaling Brick/Tile work B.In Cement mortar</b> (Page No 137,SI No : 18.23)	Cum	2.88	447.88	1290
6.00	Operation & Maintenance for 4th Year: KSRRB M300-14. Excavation for roadwork in all types of soil with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers,trimming bottom and side slopes, in accordance with requirements of lines and grades and cross sections, and transporting disposal location up to a lead of 1.00Km and complete as per specifications. MORTH specification No.301(Including transporting charges, loading and unloading for lead 5km)	Cum	25.00	52.32	1,308
7.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRB 2-4 : <b>Refilling available earth</b> around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KPWD 16-17,SI No.2.11,Pg. No.6)	Cum	25.00	153.12	3,828
8.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB 300-Compaction KSRRB 300-58. <b>Compaction of original ground</b> with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3.(KPWD 18- 19,SI No.19.64,Pg. No.149)	Sam	50.00	7.66	383
9.00	Operation & Maintenance for 4th Year: KSRB 4-1.7 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2(KPWD 18-19,SI.No.4.7,Page No.13)		5.00	7362.52	36,813

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
10.00	Operation & Maintenance for 4th Year: KSRRB M400-6.2.Construction of granular sub base by providing close graded crushed stone aggregate of granite/trap/basalit material,spreading in uniform layers with motor on prepared surface,mixing by mix in place methode by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density,complete as per specification. B.By Mix in Place Methode. Close graded granular sub base material as per 400-1 For Grading II material	Cum	7.50	2763.82	20,729
11.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4.2.1 : Providing and laying in position <b>reiforcement cement</b> <b>concrete of design Mix M25</b> with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications.	Cum	45.00	7908.65	355,889
12.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4.6.1 Providing and removing <b>centering, shuttering, strutting,</b> <b>propping</b> etc.,and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials,labour complete as per specifications. Specification No. KSB 4.6.2	Sam	36.00	335.59	12,081
13.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4.9.2 : <b>Providing T.M.T steel reinforcement</b> for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500	МТ	0.50	90317.83	45,159
14.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M300- Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No. 305	Cum	12.50	681.69	8,521
15.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M600-1.Construction of <b>dry lean cement concrete</b> mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days, mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing and curing complete as per specifications.Morth specification No.601	Cum	5.00	5165.25	25,826
16.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSSRRB M600-2.Construction of unreinforced,dowel jointed, <b>plain cement</b> <b>concrete pavement</b> over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with <b>M40</b> (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,SI No : 22.2.2)	Cum	11.50	7356.14	84,596

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
17.00	<b>Operation &amp; Maintenance for 4th Year:</b> Providing and placing <b>joint sealant compound</b> of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower (Non SOR Item)	Rmt	300.00	133.40	40,020
18.00	Operation & Maintenance for 4th Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Page No 257,SI No : 35.8)		300.00	422.36	126,708
19.00	Operation & Maintenance for 4th Year: Providing and laying at or near ground level factory made kerb stone of M- 20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge). Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)		6.00	2094.96	12,570
20.00	<b>Operation &amp; Maintenance for 4th Year:</b> Providin and fixing <b>pre cast solid concrete Kerb stones</b> made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete	Nos.	50.00	537.20	26,860
21.00	<b>Operation &amp; Maintenance for 4th Year:</b> Removing and resetting of kerb stones. including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Nos.	50.00	102.08	5,104
22.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB 800-1. <b>Painting two coats</b> after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8		1190.00	102.08	121,475
23.00	<b>Operation &amp; Maintenance for 4th Year:</b> P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)	Nos.	10.00	1063.72	10,637
24.00	Operation & Maintenance for 4th Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron / Ductile Iron (NON SOR Item)	Nos.	10.00	4060.00	40,600
25.00	<b>Operation &amp; Maintenance for 4th Year:</b> <b>Providing gully pipe lowering, laying of PVC 100 mm dia pipes</b> to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include all jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)	Rmt	5.00	350.16	1,751
26.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRB 11-18-17.1 : <b>Providing and fixing sand cast iron trap of 100mm</b> <b>dia</b> , of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10.	Nos	5.00	1059.08	5,295

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
27.00	Operation & Maintenance for 4th Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98-1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)	Rmt	5.00	6408.07	32,040
28.00	Operation & Maintenance for 4th Year: Providing and laying Dia 225mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)	Rmt	10.00	3001.34	30,013
29.00	Operation & Maintenance for 4th Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering, Jointing into trenches, Complete. (Market Rate)	Nos.	2.00	1988.00	3,976
30.00	Operation & Maintenance for 4th Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)	Rmt	39.00	1651.75	64,418
31.00	Operation & Maintenance for 4th Year: Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe and special including encasing the pipe Complete. (Market Rate)	Nos.	4.00	1711.00	6,844
32.00	Operation & Maintenance for 4thYear: Providing and Fixixng Spacers for Power Ducts of size 225 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)		7.00	1344.02	9,408
33.00	Operation & Maintenance for 4th Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)		7.00	2608.98	18,263
34.00	Operation & Maintenance for 4th Year: Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)		10.00	841.37	8,414
35.00	Operation & Maintenance for 4th Year: Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Duct and conveying to work site including loading and unloading at both destination and lowering into trenches, and jointing of pipe.Complete. (Market Rate)		1.00	203.00	203
36.00	<b>Operation &amp; Maintenance for 4th Year:</b> Providing and laying heavy duty cobble stones <b>60mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.		37.92	1347.46	51,096

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
37.00	<b>Operation &amp; Maintenance for 4th Year:</b> Providing and laying heavy duty <b>Tactile Tiles</b> (Direction and Stop tiles-300 x 300 mm) 60mm thick and Yellow in colour , using cement and course sand for manufacture of blocks of approved size, shape with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Non SOR Item)	Sqm	2.25	1057.92	2,380
	<b>Operation &amp; Maintenance for 4th Year:</b> Providing and laying heavy duty <b>cobble stones 75mm thick,</b> using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications.	Sqm	4.21	1421.46	5,984
39.00	Operation & Maintenance for4th Year: Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area, thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level, uniform and free from streak and holes complete as per specifications.MORTH specification No.803	Sqm	305.91	547.40	1,67,455
40.00	<b>Operation &amp; Maintenance for 4th Year:</b> Operation and Maintenance for eToilets Stainless Steel Public Model as specified in Road and Other works BOQ Item No.45.	Nos	2.00	70992.00	1,41,984
41.00	<b>Operation &amp; Maintenance for 4th Year:</b> Providing and fixing of <b>S.S. Bollards(SS304</b> ) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	5.00	5220.00	26,100
42.00	<b>Operation &amp; Maintenance for 4th Year:</b> Providing and fixing of <b>railing as detail design in MS HOLLOW SECTION</b> <b>and bars</b> ( shop drawing to be approved ),with vertical support of 0.9m @2.2mc/c , all complete to the satisfaction of the Landscape architect.(Non SOR Item)	MT	0.30	116000.00	34,800
43.00	<b>Operation &amp; Maintenance for 4th Year:</b> Excavation and removal of silt and silt mixed with sand in slussy condition from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts. For Desilting of drains and grit chambers including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-incharge.	Cum	198.00	215.95	42,758
44.00	Operation & Maintenance for 4th Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Earth	Cum	58.53	105.40	6,169
45.00	Operation & Maintenance for 4th Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Debris	Cum	9.38	105.91	,993
46.00	Electrical Works Operation & Maintenance for 4th Year: Dismantling, removal, transportation to client's storage place existing lighting poles (Non SOR Item)	Nos.	1.00	1160.00	1,160

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
47.00	<b>Operation &amp; Maintenance for 4th Year:</b> Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)	Nos.	1.00	19856.88	19,857
48.00	<b>Operation &amp; Maintenance for 4th Year:</b> Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	Nos.	1.00	14407.20	14,407
49.00	<b>Operation &amp; Maintenance for 4th Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	Nos.	1.00	8581.68	8,582
50.00	Operation & Maintenance for 4th Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	Nos.	1.00	4106.40	4,106
51.00	<b>Operation &amp; Maintenance for 4thYear:</b> Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.2)	Nos.	1.00	2784.00	2,784
52.00	<b>Operation &amp; Maintenance for 4th Year:</b> Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole8mtr and above street light pole (Ref Electrical SOR SI No.16.28.3)	Nos.	118.00	812.00	95,816
53.00	LT Cable Operation & Maintenance for 4th Year: Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR SI No.7.5,7.5.4)	m	12.00	135.72	1,629
54.00	<b>Operation &amp; Maintenance for 4th Year:</b> Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)	m	10.00	94.66	947

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
55.00	Operation & Maintenance for 4th Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR SI No.7.21,7.21.6)	Nos	5.00	13.12	66
56.00	Operation & Maintenance for 4thYear: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR SI No.7.21.2)	Nos	4.00	3.72	15
57.00	Earthing system Operation & Maintenance for 4th Year: Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,SI No.7.23.6)	Kit	1.00	6380.00	6,380
58.00	<b>Operation &amp; Maintenance for 4th Year:</b> Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)	Rmt	12.00	22.62	271
	Landcaping Works				
59.00	SOIL MIXES and Ground Preparation Operation & Maintenance for 4th Year: Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)	Cum	150.00	162.40	24360
60.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)	Cum	45.00	260.30	11714
61.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307		0.40	131.43	53
62.00	Operation & Maintenance for 4th Year: Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	0.40	27.74	11
	Soil preparation of Lawn				
63.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)	Sqm	12.00	131.43	1,577
	Bed Prepartion for , Ground covers, Climbers/ creepers, Shrubs				
64.00	<b>Operation &amp; Maintenance for 4thYear:</b> Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)		240.00	169.36	40646

Sr.No.	Specification	Unit	Total Qty.	Rate	Amount
	SHRUBS: Supply and Stacking of Shrubs				
65.00	<b>Operation &amp; Maintenance for 4th Year:</b> Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)	Nos.	23.00	974.40	22,411
66.00	<b>Operation &amp; Maintenance for 4th Year:</b> Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in form (Non SOR Item)	Nos.	50.00	974.40	48,720
67.00	<b>Operation &amp; Maintenance for 4th Year:</b> Pandanus variegted'gold ' 300mm ht , 300mm c/c in triangulation , with 4-5 fronds (Non SOR Item)	Nos.	800.00	97.44	77,952
68.00	<b>Operation &amp; Maintenance for 4th Year:</b> Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of landscape architect/PMC (Non SOR Item)	Nos.	9.00	162.40	1462
69.00	<b>Operation &amp; Maintenance for 4th Year:</b> Ficus blackenia, c/c: 600m, must be bushy and multibranched(atleast 3), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	8.00	974.40	7,795
70.00	<b>Operation &amp; Maintenance for 4th Year:</b> Nerium oleander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	9.00	974.40	8,770
	TURF				
71.00	Operation & Maintenance for 4th Year: ZOYSIA JAPONICA (MAT) (Non SOR Item) IRRIGATION	Sqm	41.00	181.89	7,457
72.00	Operation & Maintenance for 4th Year: Watering with tanker to landscape area and plants for one year	Year	1.00	42510.07	42,510
73.00	Operation & Maintenance for 4th Year: supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	6.00	649.60	3,898
			1	Total	21,01,732

Executive Engineer MSCL Mangaluru General Manager Technical MSCL Mangaluru

## Name of the Work :- Mangalore Smart City 3.13.1 Maintenance BOQ of Road and Other Work for Loop Road-4th Year

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
	Civil Works						
1.00	Operation & Maintenance for 4th Year: Taking out existing CC interlocking paver blocks from footpath/ central verge, including removal of rubbish etc., disposal of unserviceable material to the dumping ground, for which payment shall be made separately and stacking of serviceable material within 50 metre lead as per direction of Engineer-in- Charge.(RA attached)	Sam	1	10	1.5		15.00
2.00	Operation & Maintenance for 4th Year: KSRRB M200.Dismantling of cement concrete pavement by mechanical means using pueumatic tools,breaking to pieces not exceeding 0.02 cum in volume and stock pilling at designated locations and disposal of dismantled material stacking serviceble and unserviceable materials separately complete as per specifications.MORTH specification No.202.(Including transporting charges,loading and unloading for lead 5km-Extra) (Page No 138,SI No : 18.47)	Cum	1	3.5	3.5	0.3	3.68
3.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M200- <b>Dismantaling of kerb Stone</b> and Channel KSRRB M200-26. Dismantling Kerb stone by Manual means and disposal of dismantled materials with all lifts and complete as per specifications.MORTH Specification No.202. (Page No.139,S.I.No.18.49)	Rmt	1	10			10.00
4.00	Operation & Maintenance for 4th Year: KSRRB M200-13.1. Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. II. By Mechanical Means. A. Cement Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPWD SOR 16-17,18.20,Page No.137)		1	1	0.3	0.5	0.15
5.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M200-12.1. <b>Dismantling of existing structures</b> like culverts, bridges, retaining walls and other structure comprising of masonary, cement concrete, woodwork, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications. <b>i)Dismantaling Brick/Tile work B.In Cement mortar</b> (Page No 137,SI No : 18.23)	Cum	1	25	0.5	0.23	2.88
6.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M300-14. <b>Excavation for roadwork in all types of soil</b> with hydraulic excavator of 0.9 bucket capacity including cutting and loading in tippers,trimming bottom and side slopes,in accordance with requirements of lines and grades and cross sections, and transporting disposal location up to a lead of 1.00Km and complete as per specifications. MORTH specification No.301(Including transporting charges, loading and unloading for lead 5km) (Page No 143,SI No : 19.14)	Cum	1.00	10	5	0.5	25.00
7.00	Operation & Maintenance for 4th Year: KSRB 2-4 : Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m. including cost of all labour complete as per specifications.(KPWD 16-17,SI No.2.11,Pg. No.6)	Cum	1.00	10	5	0.5	25.00
8.00	Operation & Maintenance for 4th Year: KSRRB 300-Compaction KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to 10 tonnes power roller including filling in depression occuring during rolling including cost of all labour, HOM of machinery complete as per specifications. MORTH / Chapter 3.(KPWD 16- 17,SI No.19.64,Pg. No.149)	Sqm	1.00	10		5	50.00
9.00	Operation & Maintenance for 4th Year: KSRB 4-1.7 : Providing and laying in position plain cement concrete of mix 1:3:6 with OPC cement @ 220kgs, with 20mm and down size graded granite metal coarse aggregates @0.84cum and fine aggregtes @ 0.56cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, in foundation, plinth and cills, ncluding cost of all materials, labour, HOM of machinery, curing complete as per specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No.4.7,Page No.13)	Cum	1.00	10	5	0.1	5.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
10.00	Operation & Maintenance for 4th Year: KSRRB M400-6.2.Construction of granular sub base by providing close graded crushed stone aggregate of granite/trap/basalit material,spreading in uniform layers with motor on prepared surface,mixing by mix in place methode by rotavator at OMC, and compacting with vibratory power roller to achieve the desired density,complete as per specification. B.By Mix in Place Methode. Close graded granular sub base material as per 400-1 For Grading II material (Page No 155,SI No : 20.5.2)	Cum	1.00	10	5	0.15	7.50
11.00	Operation & Maintenance for 4th Year: KSRB 4.2.1 : Providing and laying in position reiforcement cement concrete of design Mix M25 with OPC cement @340Kgs,with 20mm and down size graded granite metal coarse aggregate @ 0.47 cum with super plasticisers @3 liters confirming to IS 9103-1999 reafirmed -2008 at machine mixed,concrete laid in layers not exceeding 15cms thick, vibrated for all works in foundation for footings, pedastals, retaining walls,return walls,walls (any thickness) including attached pilasters, columnspillars, posts, struts, buttresses, bed blocks,anchor blocks & plinths etc.,Including cost of labour,HOM of machinery,curing,complete but excluding cost of reinforcement as per specifications. (Page No 13,SI No : 4.10)	Cum	1.00	10	5	0.9	45.00
12.00	Operation & Maintenance for 4th Year: KSRB 4.6.1 Providing and removing centering, shuttering, strutting, propping etc., and removal of formwork for foundations, footings, bases of columns for mass concrete including cost of all materials, labour complete as per specifications. Specification No. KSB 4.6.2 (Page No 15, SI No : 4.28)	Sqm	2.00	20		0.9	36.00
	<b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4.9.2 : <b>Providing T.M.T steel reinforcement</b> for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500	MT	1.00	0.50			0.50
14.00	Operation & Maintenance for 4th Year: KSRRB M300- Construction of Embankment with Material Gravel/ Murrum. KSRRB M300-53. Construction of embankment with approved material Gravel/Murrum with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement Table 300- 2 complete as per specifications.(Including cost of gravel / murrum, watering charges & compaction by vibratory roller to 95% of proctors density) MORTH Specification No. 305	Cum	1.00	10	5	0.25	12.50
	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M600-1.Construction of <b>dry lean cement concrete</b> mix M15 with 1:5:10 OPC cement @160Kgs,with 25mm and down size graded granite/trap/basalt metal coarse aggregate at 0.86cum and fine aggregate @ 0.58cum Sub-base over prepared sub grade with (coarse and fine aggregate confirming to IS:383) aggregate cement ration not to excee 15:1. Aggregate gradation after blending to be as per Table 600-1, cement content to be determined during trail length construction, concrete strength not to be less than 10Mpa at 7 days,mixed in a batching plant,transported to site,laid with a paver with electronic sensor,compacting with 8-10 tonnes vibratory roller,finishing and curing complete as per specifications.Morth specification No.601 (Page No 176,SI No : 22.1)	Cum	1.00	10	5	0.1	5.00
16.00	Operation & Maintenance for 4th Year: KSSRRB M600-2.Construction of unreinforced,dowel jointed,plain cement concrete pavement over a prepared sub base with 25mm and down size graded granite metal coarse aggregate with superplastisizer at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and fine aggregate conforming to IS:383) mixed in a batching and mixing plant as per approved mix design,transported to site,laid with a fixed form or slip form paver spread,compacted and finished in a continuos operation including provision of contraction, expansio, construction and longitudinal joints,including groove cutting chrges, joints filler,separation memberane, sealent primer, joints sealant, debonding strip, dowel bars at 4.5m intervals, tie rod, admixtures as approved, curing compound,finishing to lines and grades as per drawing complete as per sprcifications MORTH specification No.602.do with M40 (420Kg per cum Cement,C.A,0.67 cum F.A.044Cum (Page No 176,Sl No : 22.2.2)	Cum	1.00	10	5	0.23	11.50
17.00	<b>Operation &amp; Maintenance for 4th Year:</b> Providing and placing <b>joint sealant compound</b> of cold polysulphide in the grooves after widening the groove to required width, sand blasting the groove face if recommended by the sealant manufacturer, cleaning the groove with air compressor, insertion of debonding strip, priming the sides of the sealant if the sealant manufacturer recommends and pouring the sealant all complete including material, manpower (Non SOR Item)	Rmt	1.00	300			300.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
18.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB 3000 <b>Repair of Joint Grooves</b> with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints longitudinal joints and expansion joints in concrete pavement using epoxy mortar concrete complete as per specifications.Morth specification No.3005.1 (Page No 257,SI No : 35.8)	Rmt	1.00	300			300.00
19.00	Operation & Maintenance for 4th Year: Providing and laying at or near ground level factory made kerb stone of M-20 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5mm), including making drainage opening wherever required complete etc. as per direction of Engineer-in-charge (length of finished kerb edging shall be measured for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge). Kerb Dimension= Top Width=0.25m, Bottom Width=0.3 m, Height =0.9 m (RA Attached)		6				6.00
20.00	<b>Operation &amp; Maintenance for 4th Year:</b> Providin and fixing <b>pre cast solid concrete Kerb stones</b> made out of CC 1:2:4 with top and bottom width 114 and 165mm respectively,400mm high and 450mm in length finished with CM 1:3 Plastering and finishing cutting, including cost of all materials,labour,hire charges of machinery,loading,unloading,lead and lift,transportation etc.,complete (Page No 25,SI No : 5.3)		50				50.00
21.00	<b>Operation &amp; Maintenance for 4th Year:</b> Removing and resetting of kerb stones. including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Nos.	50				50.00
22.00	Operation & Maintenance for 4th Year: KSRRB 800-1. Painting two coats after filling the surface with synthetic enamel paint in approved shades on new plastered concrete surfaces, with materials, labour complete as per specifications. MORTH Chapter 8 (Page No 182,SI No : 24.1)		1	10	119		1190.00
23.00	<b>Operation &amp; Maintenance for 4th Year:</b> P/F Square shape 600mmx450 mm precast R.C.C. manhole cover with frame (Rate analysis attached)	Nos.	10.00				10.00
24.00	Operation & Maintenance for 4th Year: Providing and Fixing Recessed Inception chamber cover - size: (1250 x 1250 x 80)mm Material: Cast Iron / Ductile Iron (NON SOR Item)	Nos.	10.00				10.00
25.00	Operation & Maintenance for 4th Year: Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the required alignments including specials and grade as indicated in drawings/design and hydraulically testing of the pipe line. The rate shall include all jointing materials, testing apparatus and water for testi g etc as directed by the Engineer in charge (page No.41, Item No.7, KUWSDB SOR 2016-17)		1.00	5.00			5.00
26.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRB 11-18-17.1 : <b>Providing and fixing sand cast iron trap of 100mm dia</b> , of self cleaning design with screwed down or hinged grating with or without vent arm including cutting and making good the walls and floors, cost of materials, labour, testing, complete as per specifications Specification No. KBS 11.1.10. (PWD SR 2015-16,P.No.86, SI.No.12.89)		5.00				5.00
27.00	Operation & Maintenance for 4th Year: KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. Providing and laying of a reinforced cement concrete pipe duct, 300 mm dia, across the road (new construction), extending from drain to drain in cuts and toe of slope to toe of slope in fills, constructing head walls at both ends, providing a minimum fill of granular material over top and sides of RCC pipe as per IRC:98 1997, bedded on a 0.3 m thick layer of granular material free of rock pieces, outer to outer distance of pipe at least half dia of pipe subject to minimum450 mm in case of double and triple row ducts, joints to be made leak proof, invert level of duct to be above higher than ground level to prevent entry of water and dirt, all as per IRC: 98 - 1997 and approved drawings complete as per specifications. Case - I : Single row for one utility service (KPWD SOR 16-17,Item No.24.34,Pg.No.188)	Rmt	1	5.00			5.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
28.00	<b>Operation &amp; Maintenance for 4th Year:</b> <b>Providing and laying Dia 225mm HDPE Electrical pipe Conduits</b> with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years. (Market Rate)	Rmt	1	10			10.00
29.00	Operation & Maintenance for 4th Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and conveying to work site including loading and unloading at both destination and lowering,Jointing into trenches,Complete. (Market Rate)	Nos.	2				2.00
30.00	Operation & Maintenance for 4th Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits with Silicore Lubricant inner layer with ribs, dimensional ratio of 13.5,Deflection not greater than 5% when exposed to the normal operating temparature 90°C under the over burden soil presuure and other physical properties comforming to ASTMF 2160 and /or NEMA TC7.The expected service life of HDPE pipe conduits and accessories shall not be less than 50 years.(Market Rate)	Rmt	1	39			39.00
31.00	Operation & Maintenance for 4th Year: Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe and special including encasing the pipe Complete. (Market Rate)	Nos.	4				4.00
32.00	Operation & Maintenance for 4thYear: Providing and Fixixng Spacers for Power Ducts of size 225 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	7				7.00
33.00	Operation & Maintenance for 4th Year: Providing and Fixixng Spacers for Power Ducts of size 160 mm, to be placed at an interval of 1.5 meter. Spacers shall be made of ABS raw material. (Market rate)	Nos.	7				7.00
34.00	Operation & Maintenance for 4th Year: Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lubricant inner layer for ICT fibre cables comforming to ASTMF 2160 and /or equivalent indian standard and conveying to work site including loading and unloading at both destination and rolling,lowering into trenches,laying true to line and jointing of pipe etc.Complete. (Market Rate)	Rmt	1	10			10.00
35.00	Operation & Maintenance for 4th Year: Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way Duct and conveying to work site including loading and unloading at both destination and lowering into trenches, and jointing of pipe.Complete. (Market Rate)		1				1.00
36.00	<b>Operation &amp; Maintenance for 4th Year:</b> Providing and laying heavy duty cobble stones <b>60mm thick</b> , using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Page No 101,SI No : 14.6)	Sqm	1	10	3.792		37.92
37.00	<b>Operation &amp; Maintenance for 4th Year:</b> Providing and laying heavy duty <b>Tactile Tiles</b> (Direction and Stop tiles-300 x 300 mm) 60mm thick and Yellow in colour , using cement and course sand for manufacture of blocks of approved size, shape with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Non SOR Item)	Sqm	1.00	10	0.225		2.25
38.00	Operation & Maintenance for 4th Year: Providing and laying heavy duty cobble stones 75mm thick, using cement and course sand for manufacture of blocks of approved size, shape and colour with a minimum compressive strength of 281 kg per sqm over 50mm thick sand bed (average thickness ) and compacting with plate vibrator having 3 tons compaction force thereby forcing part of sand underneath to come up in between joints, final compaction of paver surface joints into its final level, including cost of materials, labour and HOM of machineries complete as per specifications. (Page No 101,SI No : 14.7)	Sqm	1.00	10	0.421		4.21

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
39.00	Operation & Maintenance for4th Year: Road Marking with hot applied Thermoplastic Compound with Reflectrising Glass Beads on Concrete Surface:Providing and laying of hot applied thermoplastic compound 2.5mm thick including reflectorising glass beads at 250 gms and 2 ltr of primer per sqm area,thickness of 2.5mm is exclusive of surface applied glass beads as per IRC:35.The finished surface to be level,uniform and free from streak and holes complete as per specifications.MORTH specification No.803 (Page No 192,SI No : 24.57)	Sqm	1.00	2039.433	0.15		305.91
40.00	Operation & Maintenance for 4th Year: Operation and Maintenance for eToilets Stainless Steel Public Model as specified in Road and Other works BOQ Item No.45.	Nos	2.00				2.00
41.00	Operation & Maintenance for 4th Year: Providing and fixing of S.S. Bollards(SS304) on footpath as specified and directed by Engineer -in-charge (NON SOR Item)	Nos.	5.00				5.00
42.00	Operation & Maintenance for 4th Year: Providing and fixing of railing as detail design in MS HOLLOW SECTION and bars (shop drawing to be approved),with vertical support of 0.9m @2.2mc/c, all complete to the satisfaction of the Landscape architect.(Non SOR Item)	МТ	1.00	0.3			0.30
43.00	Operation & Maintenance for 4th Year: Excavation and removal of silt and silt mixed with sand in slussy condition from canal bed including disposing off the same in spoil bank or on the canal embankment in layers as directed etc., complete with lead upto 50 m and all lifts. For Desilting of drains and grit chambers including cost of all materials, scaffolding HOM of machineries with all lead and lifts, labour charges including implementation of Environmental and Social Safeguards & as per design, drawing, technical specifications and directions of Engineer-in-charge.	Cum	2.00	1650	0.6	0.1	198.00
44.00	Operation & Maintenance for 4th Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Earth	Cum	1.00	58.53			58.53
45.00	Operation & Maintenance for 4th Year: Extra Lead for Disposing off unserviceable materials upto 10 Km beyond initial Lead Item No 17.4 KSRRB M100-4.1-Debris	Cum	1.00	9.38			9.38
	Electrical Works						
46.00	Operation & Maintenance for 4th Year: Dismantling, removal, transportation to client's storage place existing lighting poles (Non SOR Item)	Nos.	1				1.00
47.00	<b>Operation &amp; Maintenance for 4th Year:</b> Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)	Nos.	1				1.00
48.00	<b>Operation &amp; Maintenance for 4th Year:</b> Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	Nos.	1				1.00
49.00	<b>Operation &amp; Maintenance for 4th Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grade S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 pole in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 mm dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	Nos.	1				1.00

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
50.00	Operation & Maintenance for 4th Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	Nos.	1				1.00
51.00	Operation & Maintenance for 4thYear: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts,nuts, etc. complete Single Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.2)	Nos.	1				1.00
	<b>Operation &amp; Maintenance for 4th Year:</b> Painting of Existing street light pole after scrapping the old paint and painted with suitable colour enamel including coping/footing of the pole8mtr and above street light pole (Ref Electrical SOR SI No.16.28.3)	Nos.	118				118.00
53.00	LT Cable Operation & Maintenance for 4th Year: Supplying of 1.1 kV LT cable having aluminium conductor PVC insulated, extruded inner sheathed, galvanised, steel strips (except 2C x 10 sq. mm wire armoured) as per IS-3975:1990 and extruded PVC outer sheathed armoured cable as per IS - 1554 Part 1:1988 & conforming to GTP of GROUP B 4 Core x16 Sq.mm PVC Aluminium Conductor, (Ref Electrical SOR SI No.7.5,7.5.4)	m	1	12.00			12.00
54.00	<b>Operation &amp; Maintenance for 4th Year:</b> Supply and drawing flexible multicore cable with electrolyte grade flexible copper with low conductor conforming to Table 3 Class 5 of IS:8130-1984 and vargin PVC insulation and sheathed suitable for working voltage up to 1100 V as per IS-694:1990 and conforming to GTP of Group A. 3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)	m	1	10.00			10.00
55.00	Operation & Maintenance for 4th Year: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 16 Sq.mm PVC Aluminium Conductor (Ref Electrical SOR SI No.7.21,7.21.6)	Nos	5				5.00
56.00	Operation & Maintenance for 4thYear: Supplying tinned copper lugs and crimping and wiring to terminal point for wire of following sizes 2.5 sq. mm copper conductor (Ref Electrical SOR SI No.7.21.2)	Nos	4				4.00
57.00	Earthing system Operation & Maintenance for 4th Year: Chemical Earthing for grounding,conduits,IC cut outs and otherequipmentson the mter boardby using copper /SS rod with earth enhancing backfill compound which is non corrosive ,thermally,conductive,potential,to permissible,limits,superior,fault,conductive capacity,non toxic,weather resistance and capable of achieving ohmic value less than one ohm (Ref Electrical SOR Pg.No.64,SI No.7.23.6)	Kit	1				1.00
58.00	<b>Operation &amp; Maintenance for 4th Year:</b> Supply and running GI conductor for grounding and (along with other wires in conduits system of wiring) using necessasary suitable size clamps, nails, guttas/spacers etc-8 SWG (Ref Electrical SOR SI No.7.22.3)	Rmt	1	12			12.00
	Landcaping Works						
59.00	SOIL MIXES and Ground Preparation Operation & Maintenance for 4th Year: Supplying and stacking of good earth at site including royalty and carriage upto 5 k.m. lead complete (earth measured in stacks will be reduced by 20% for payment). (Non SOR Item)		1	500	0.5	0.6	150.00
60.00	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M300-Supply at site of work well decayed farm yard manure KSRRB M300-11. Supply at site of work well decayed farm yard manure, from any available source, approved by the engineer in charge including screening and stackin complete as per specifications. MORTH Specification No. 308.2(Page No.152,SI.No.19.90)	Cum	1	500	0.6	0.15	45.00
	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M300-Horticulture KSRRB M300-Spreading of sludge farm yard manure or/ and good earth KSRRB M300-1. Spreading of sludge farm yard manure or/ and good earth in required thickness (cost of sludge, farm yard manure or/and good earth to be paid for separately) complete as per specifications. MORTH Specification No. 307 (KPWD SR 16-17,Page No.150,SI No.19.77)	Cum	1	10	0.404	0.1	0.40

Sr.No.	Specification	Unit	No.	L	В	D	Qty.
62.00	<b>Operation &amp; Maintenance for 4th Year:</b> Mixing earth and sludge or manure in the required proportion specified or directed by the Officer-in-charge (Non SOR item)	Cum	1	10	0.404	0.1	0.40
63.00	Soil preparation of Lawn Operation & Maintenance for 4th Year: KSRRB M300-3.Making lawns including ploughing and breaking of clod,removal of rubbish,dressing and supplying doobs grass roots and planting at 15 cm apart,including supplying and spreading of farm yard manure at rate of 0.18cum per 100 sqm complete as per specifications. MORTH Specification No.307 (KSRRB 19.80)	Sqm	1.00	20	0.6		12.00
	Bed Prepartion for , Ground covers, Climbers/ creepers, Shrubs						
64.00	<b>Operation &amp; Maintenance for 4thYear:</b> Preparation of beds for hedging and shrubbery by excavating 60 cm deep and trenching the excavated base to a further depth of 30 cm, refilling the excavated earth after breaking clods and mixing with sludge or manure in the ratio of 8:1 (8 parts of stacked volume of earth after reduction by 20%: one part of stacked volume of sludge or manure after reduction by 8%), flooding with water, filling with earth if necessary, watering and finally fine dressing, leveling etc. including stacking and disposal of materials declared unserviceable and surplus earth by spreading and leveling as directed, within a lead of 50 m, lift up to 1.5 m complete (cost of sludge, manure or extra earth to be paid for separately). (Non SOR Item)	Cum	1	400	0.6		240.00
	SHRUBS: Supply and Stacking of Shrubs						
65.00	<b>Operation &amp; Maintenance for 4th Year:</b> Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)	Nos.	23.00				23.00
66.00	Operation & Maintenance for 4th Year: Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy in form (Non SOR Item)	Nos.	50.00				50.00
67.00	<b>Operation &amp; Maintenance for 4th Year:</b> Pandanus variegted'gold ' 300mm ht, 300mm c/c in triangulation, with 4-5 fronds (Non SOR Item)	Nos.	800.00				800.00
68.00	Operation & Maintenance for 4th Year: Bougenvilla variety 'red ' 600mm dia , specimen plant in round shape the plant should be ready in form and bushy to satisfaction of landscape architect/PMC (Non SOR Item)	Nos.	9.00				9.00
69.00	<b>Operation &amp; Maintenance for 4th Year:</b> Ficus blackenia, c/c: 600m, must be bushy and multibranched(atleast 3), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	8.00				8.00
70.00	<b>Operation &amp; Maintenance for 4th Year:</b> Nerium oleander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be packed in tree bags and stacked well on site, and regularly watered; untill after the planting.	Nos.	9.00				9.00
	TURF						
71.00	Operation & Maintenance for 4th Year: ZOYSIA JAPONICA ( MAT) (Non SOR Item)	Sqm	1	20	2.05		41.00
	IRRIGATION						
72.00	Operation & Maintenance for 4th Year: Watering with tanker to landscape area and plants for one year	Year	1.00				1.00
73.00	Operation & Maintenance for 4th Year: supply and fixing of irrigation lines such that all the green areas and plants are adequately watered; by means of drip irrigation for trees, sub surface for shrubs and lawn areas / ground covers and pop up sprinklers for lawn areas. (Equipment make - Rainbird or equivalent) All material used should be comply to BSI code. All the necessary value and pump required for complete commissioning to be installed. (Non SOR Item)	Sqm	1	10	0.6		6.00

Assistant Engineer MSCL Mangaluru

Executive Engineer MSCL Mangaluru General Manager Technical MSCL Mangaluru

## Name of the Work :- Mangalore Smart City 3.13.2 Maintenance 4th Year - Rate Analysis of Road & Other Work for Loop Road

	Operation & Maintenance for 4th Year:			
	Taking out existing CC interlocking paver blocks from footpath/ ce		•	
1	etc., disposal of unserviceable material to the dumping ground, for			
	and stacking of serviceable material within 50 metre lead as peattached)	er directi	on of Engineer	-In-Charge.( RA
	Basic rate		69.16	
	O&M 4th year escalation of 16%		68.16 10.91	
		Poto		Sam
		Rate	79.07	Sqm
	Operation & Maintenance for 4th Year:			
	KSRRB M200.Dismantling of cement concrete pavement by	mechar	nical means u	sing pueumatic
	tools, breaking to pieces not exceeding 0.02 cum in volume and			
2	disposal of dismantled material stacking serviceble and unservicea	•	• •	
	specifications.MORTH specification No.202.(Including transporting			
	5km-Extra)	-	-	-
	Basic rate		899	
	O&M 4th year escalation of 16%		143.84	
	Add 10% For area weightage (Mangalore City)		104.28	
		Rate	1147.12	Cum
	Operation & Maintenance for 4th Year:			
3	KSRRB M200-Dismantaling of kerb Stone and Channel KSRRB M2			stone by
0	Manual means and disposal of dismantled materials with all lifts an	d comple	te as per	
	specifications.MORTH Specification No.202.			
	Basic rate		12.00	
	O&M 4th year escalation of 16%		1.92	
	Add 10% For area weightage (Mangalore City)		1.39	
		Rate	15.31	Rmt
	One retion 8 Maintenance for 4th Veen			
	Operation & Maintenance for 4th Year: KSRRB M200-13.1. Dismantling of existing structures like culve	orto brid	and rotaining	walls and other
	structure comprising of masonry, cement concrete, wood work, st			
4	wherever necessary, sorting the dismantled material, disposal of			
	serviceable material with all lifts complete as per specifications.			
	Concrete Grade M-15 &M-20. MORTH Specification No. 202 (KPW			
	Basic rate		390	, ,
	O&M 4th year escalation of 16%		62.4	
	Add 10% For area weightage (Mangalore City)		45.24	
		Rate	497.64	Cum
	Operation & Maintenance for 4th Year:			
	KSRRB M200-12.1. Dismantling of existing structures like culve	erts, brid	ges, retaining	walls and other
5	structure comprising of masonary, cement concrete, woodwork, st		-	-
5	wherever necessary, sorting the dismantled material, disposal of	unservice	eable material a	and stacking the
	serviceable material with all lifts complete as per specifications.			
	i)Dismantaling Brick/Tile work B.In Cement mortar			
	Basic rate		351	
	O&M 4th year escalation of 16%		56.16	
	Add 10% For area weightage	Dete	40.72	<b>C</b>
		Rate	447.88	Cum
			1	

	Operation & Maintenance for 4th Year: KSRRB M300-14. Excavation for roadwork in all types of soil	with hvd	raulic excavator	of 0.9 buck				
	capacity including cutting and loading in tippers,trimming bottom and side slopes,in accordance with							
6	requirements of lines and grades and cross sections, and transporting disposal location up to a lead of							
	1.00Km and complete as per specifications.							
	MORTH specification No.301 (Including transporting charges, loading and unloading for lead 5km)							
	Basic rate		41					
	O&M 4th year escalation of 16%		6.56					
	Add 10% For area weightage (Mangalore City)		4.76					
		Rate	52.32	Cum				
	Operation & Maintenance for 4th Year:							
7	KSRB 2-4 : Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth							
7	compacting each deposited layer by ramming after watering with lead upto 50m. and lift upto 1.5 m.							
	including cost of all labour complete as per specifications.(KPWD	18-19,SI N	lo.2.11,Pg. No.6)					
	Basic rate		120					
	O&M 4th year escalation of 16%		19.2					
	Add 10% For area weightage (Mangalore City)		13.92					
		Rate	153.12	Cum				
	Operation & Maintenance for 4th Year:							
0	KSRRB 300-Compaction KSRRB 300-58. Compaction of original ground with maximum of 6 passes of 8 to							
8	10 tonnes power roller including filling in depression occuring during rolling including cost of all labour,							
	HOM of machinery complete as per specifications. MORTH / Chapter 3.(KPWD 16-17,SI No.19.64,Pg.							
	Basic rate		6					
	O&M 4th year escalation of 16%		0.96					
	O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City)		0.96					
		Rate		Sqm				
	Add 10% For area weightage (Mangalore City)	Rate	0.7	Sqm				
	Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year:		0.7 <b>7.66</b>	•				
	Add 10% For area weightage (Mangalore City)           Operation & Maintenance for 4th Year:           KSRB 4-1.7 : Providing and laying in position plain cement cor	crete of r	0.7 7.66 nix 1:3:6 with OF	PC cement				
	Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a	crete of r ggregates	0.7 7.66 mix 1:3:6 with OF @0.84cum and 1	PC cement fine aggreg				
9	Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a @ 0.56cum, machine mixed, concrete laid in layers not excee	crete of r ggregates ding 15 d	0.7 7.66 mix 1:3:6 with OF @0.84cum and f cms. thick, well o	PC cement fine aggreg compacted,				
9	Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a @ 0.56cum, machine mixed, concrete laid in layers not exceed foundation, plinth and cills, ncluding cost of all materials, labour, H	crete of r ggregates ding 15 c OM of ma	0.7 7.66 0.84cum and f cms. thick, well o chinery, curing co	PC cement fine aggregt				
9	Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a @ 0.56cum, machine mixed, concrete laid in layers not excee	crete of r ggregates ding 15 c OM of ma	0.7 7.66 0.84cum and f cms. thick, well o chinery, curing co	PC cement fine aggregi				
9	Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a @ 0.56cum, machine mixed, concrete laid in layers not exceed foundation, plinth and cills, ncluding cost of all materials, labour, H specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No. Basic Rate	crete of r ggregates ding 15 c OM of ma	0.7 7.66 0.84cum and f cms. thick, well o chinery, curing co No.13) 5770	PC cement fine aggregt				
9	Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a @ 0.56cum, machine mixed, concrete laid in layers not exceet foundation, plinth and cills, ncluding cost of all materials, labour, H specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No. Basic Rate O&M 4th year escalation of 16%	crete of r ggregates ding 15 c OM of ma	0.7 <b>7.66</b> mix 1:3:6 with OF @0.84cum and f cms. thick, well of chinery, curing co No.13) <u>5770</u> 923.2	PC cement fine aggregt				
9	Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a @ 0.56cum, machine mixed, concrete laid in layers not exceed foundation, plinth and cills, ncluding cost of all materials, labour, H specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No. Basic Rate	crete of r ggregates ding 15 o OM of ma 4.7,Page	0.7 7.66 7.66 0.84cum and f cms. thick, well o chinery, curing co No.13) 5770 923.2 669.32	PC cement fine aggregt compacted, pmplete as p				
9	Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a @ 0.56cum, machine mixed, concrete laid in layers not exceet foundation, plinth and cills, ncluding cost of all materials, labour, H specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No. Basic Rate O&M 4th year escalation of 16%	crete of r ggregates ding 15 c OM of ma	0.7 <b>7.66</b> mix 1:3:6 with OF @0.84cum and f cms. thick, well of chinery, curing co No.13) <u>5770</u> 923.2	PC cement fine aggregt				
9	Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a @ 0.56cum, machine mixed, concrete laid in layers not exceed foundation, plinth and cills, ncluding cost of all materials, labour, H specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No. Basic Rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City)	crete of r ggregates ding 15 o OM of ma 4.7,Page	0.7 7.66 7.66 0.84cum and f cms. thick, well o chinery, curing co No.13) 5770 923.2 669.32	PC cement fine aggregt compacted, pmplete as p				
9	Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a @ 0.56cum, machine mixed, concrete laid in layers not exceed foundation, plinth and cills, ncluding cost of all materials, labour, H specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No. Basic Rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) <b>Operation &amp; Maintenance for 4th Year:</b>	crete of r ggregates ding 15 c OM of ma 4.7,Page Rate	0.7 7.66 mix 1:3:6 with OF @0.84cum and f cms. thick, well o chinery, curing co No.13) 5770 923.2 669.32 7362.52	PC cement fine aggreg compacted, pmplete as p Cum				
9	Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a @ 0.56cum, machine mixed, concrete laid in layers not exceed foundation, plinth and cills, ncluding cost of all materials, labour, H specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No. Basic Rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: KSRRB M400-6.2.Construction of granular sub base by providing	crete of r ggregates ding 15 c OM of ma 4.7,Page Rate close grad	0.7 <b>7.66</b> mix 1:3:6 with OF @0.84cum and forms. thick, well of chinery, curing co No.13) 5770 923.2 669.32 <b>7362.52</b> ded crushed stone	PC cement fine aggreg compacted, pmplete as p Cum				
9	Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRB 4-1.7 : Providing and laying in position plain cement cor         220kgs, with 20mm and down size graded granite metal coarse a         @ 0.56cum, machine mixed, concrete laid in layers not exceed         foundation, plinth and cills, ncluding cost of all materials, labour, H         specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No.         Basic Rate         O&M 4th year escalation of 16%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRRB M400-6.2.Construction of granular sub base by providing granite/trap/basalit material, spreading in uniform layers with mot	crete of r ggregates ding 15 c OM of ma 4.7,Page <b>Rate</b> close grac or on pre	0.7 <b>7.66</b> mix 1:3:6 with OF @0.84cum and f cms. thick, well of chinery, curing co No.13) 5770 923.2 669.32 <b>7362.52</b> ded crushed stone pared surface,mix	PC cement fine aggreg compacted, pmplete as p Cum e aggregate king by mix				
	Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRB 4-1.7 : Providing and laying in position plain cement cor         220kgs, with 20mm and down size graded granite metal coarse a         @ 0.56cum, machine mixed, concrete laid in layers not exceed         foundation, plinth and cills, ncluding cost of all materials, labour, H         specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No.         Basic Rate         O&M 4th year escalation of 16%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRRB M400-6.2.Construction of granular sub base by providing granite/trap/basalit material,spreading in uniform layers with mot place methode by rotavator at OMC, and compacting with vibra	crete of r ggregates ding 15 c OM of ma 4.7,Page <b>Rate</b> close grac or on pre	0.7 <b>7.66</b> mix 1:3:6 with OF @0.84cum and f cms. thick, well of chinery, curing co No.13) 5770 923.2 669.32 <b>7362.52</b> ded crushed stone pared surface,mix	PC cement fine aggreg compacted, pmplete as p Cum e aggregate king by mix				
9	Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRB 4-1.7 : Providing and laying in position plain cement cor         220kgs, with 20mm and down size graded granite metal coarse a         @ 0.56cum, machine mixed, concrete laid in layers not exceed         foundation, plinth and cills, ncluding cost of all materials, labour, H         specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No.         Basic Rate         O&M 4th year escalation of 16%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRRB M400-6.2.Construction of granular sub base by providing         granite/trap/basalit material,spreading in uniform layers with mot         place methode by rotavator at OMC, and compacting with vibra         density,complete as per specification. B.By Mix in Place Methode.	crete of r ggregates ding 15 c OM of ma 4.7,Page <b>Rate</b> close grac or on pre	0.7 <b>7.66</b> mix 1:3:6 with OF @0.84cum and f cms. thick, well of chinery, curing co No.13) 5770 923.2 669.32 <b>7362.52</b> ded crushed stone pared surface,mix	PC cement fine aggreg compacted, pmplete as p Cum e aggregate king by mix				
	Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRB 4-1.7 : Providing and laying in position plain cement cor         220kgs, with 20mm and down size graded granite metal coarse a         @ 0.56cum, machine mixed, concrete laid in layers not exceed         foundation, plinth and cills, ncluding cost of all materials, labour, H         specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No.         Basic Rate         O&M 4th year escalation of 16%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRRB M400-6.2.Construction of granular sub base by providing granite/trap/basalit material,spreading in uniform layers with mot place methode by rotavator at OMC, and compacting with vibra density,complete as per specification. B.By Mix in Place Methode. Close graded granular sub base material as per 400-1	crete of r ggregates ding 15 c OM of ma 4.7,Page <b>Rate</b> close grac or on pre	0.7 <b>7.66</b> mix 1:3:6 with OF @0.84cum and f cms. thick, well of chinery, curing co No.13) 5770 923.2 669.32 <b>7362.52</b> ded crushed stone pared surface,mix	PC cement fine aggreg compacted, pmplete as p Cum e aggregate king by mix				
	Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRB 4-1.7 : Providing and laying in position plain cement cor         220kgs, with 20mm and down size graded granite metal coarse a         @ 0.56cum, machine mixed, concrete laid in layers not exceed         foundation, plinth and cills, ncluding cost of all materials, labour, H         specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No.         Basic Rate         O&M 4th year escalation of 16%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRRB M400-6.2.Construction of granular sub base by providing granite/trap/basalit material,spreading in uniform layers with mot place methode by rotavator at OMC, and compacting with vibra density,complete as per specification. B.By Mix in Place Methode.         Close graded granular sub base material as per 400-1         For Grading II material	crete of r ggregates ding 15 c OM of ma 4.7,Page <b>Rate</b> close grac or on pre	0.7 <b>7.66</b> mix 1:3:6 with OF @0.84cum and f cms. thick, well of chinery, curing co No.13) 5770 923.2 669.32 <b>7362.52</b> ded crushed stone pared surface,mix	PC cement fine aggreg compacted, pmplete as p Cum e aggregate king by mix				
	Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: KSRB 4-1.7 : Providing and laying in position plain cement cor 220kgs, with 20mm and down size graded granite metal coarse a @ 0.56cum, machine mixed, concrete laid in layers not exceed foundation, plinth and cills, ncluding cost of all materials, labour, H specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No. Basic Rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: KSRRB M400-6.2.Construction of granular sub base by providing granite/trap/basalit material,spreading in uniform layers with mot place methode by rotavator at OMC, and compacting with vibra density,complete as per specification. B.By Mix in Place Methode. Close graded granular sub base material as per 400-1 For Grading II material (Page No 155,SI No : 20.5.2)	crete of r ggregates ding 15 c OM of ma 4.7,Page <b>Rate</b> close grac or on pre	0.7 7.66 mix 1:3:6 with OF @0.84cum and forms. thick, well of chinery, curing condition No.13) 5770 923.2 669.32 7362.52 ded crushed stone pared surface, mixer roller to achiev	PC cement fine aggreg compacted, pmplete as p Cum e aggregate king by mix				
	Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRB 4-1.7 : Providing and laying in position plain cement cor         220kgs, with 20mm and down size graded granite metal coarse a         @ 0.56cum, machine mixed, concrete laid in layers not exceed         foundation, plinth and cills, ncluding cost of all materials, labour, H         specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No.         Basic Rate         O&M 4th year escalation of 16%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRRB M400-6.2.Construction of granular sub base by providing granite/trap/basalit material,spreading in uniform layers with mot place methode by rotavator at OMC, and compacting with vibra density,complete as per specification. B.By Mix in Place Methode.         Close graded granular sub base material as per 400-1         For Grading II material         (Page No 155,SI No : 20.5.2)         Basic Rate	crete of r ggregates ding 15 c OM of ma 4.7,Page <b>Rate</b> close grac or on pre	0.7 7.66 7.66 mix 1:3:6 with OF @0.84cum and forms. thick, well of chinery, curing condition No.13) 5770 923.2 669.32 7362.52 ded crushed stone pared surface, mixer roller to achiev	PC cement fine aggregt compacted, pmplete as p Cum cum				
	Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRB 4-1.7 : Providing and laying in position plain cement cor         220kgs, with 20mm and down size graded granite metal coarse a         @ 0.56cum, machine mixed, concrete laid in layers not exceet         foundation, plinth and cills, ncluding cost of all materials, labour, H         specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No.         Basic Rate         O&M 4th year escalation of 16%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRRB M400-6.2.Construction of granular sub base by providing         granite/trap/basalit material,spreading in uniform layers with mot         place methode by rotavator at OMC, and compacting with vibra         density,complete as per specification. B.By Mix in Place Methode.         Close graded granular sub base material as per 400-1         For Grading II material         (Page No 155,SI No : 20.5.2)         Basic Rate         O&M 4th year escalation of 16%	crete of r ggregates ding 15 c OM of ma 4.7,Page <b>Rate</b> close grac or on pre	0.7 <b>7.66</b> mix 1:3:6 with OF @0.84cum and forms. thick, well of chinery, curing co No.13) 5770 923.2 669.32 <b>7362.52</b> ded crushed stone pared surface,mixer roller to achiev 2166 346.56	PC cement fine aggreg compacted, pmplete as p Cum e aggregate king by mix				
	Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRB 4-1.7 : Providing and laying in position plain cement cor         220kgs, with 20mm and down size graded granite metal coarse a         @ 0.56cum, machine mixed, concrete laid in layers not exceed         foundation, plinth and cills, ncluding cost of all materials, labour, H         specifications. Specification No. KBS 4.1, 4.2(KPWD 16-17,SI.No.         Basic Rate         O&M 4th year escalation of 16%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         KSRRB M400-6.2.Construction of granular sub base by providing granite/trap/basalit material,spreading in uniform layers with mot place methode by rotavator at OMC, and compacting with vibra density,complete as per specification. B.By Mix in Place Methode.         Close graded granular sub base material as per 400-1         For Grading II material         (Page No 155,SI No : 20.5.2)         Basic Rate	crete of r ggregates ding 15 c OM of ma 4.7,Page <b>Rate</b> close grac or on pre	0.7 7.66 7.66 mix 1:3:6 with OF @0.84cum and forms. thick, well of chinery, curing condition No.13) 5770 923.2 669.32 7362.52 ded crushed stone pared surface,mixer roller to achiev	PC cement fine aggreg compacted, pmplete as p Cum e aggregate king by mix				

11	<b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4.2.1 : Providing and laying in position reiforcement cement cement @340Kgs,with 20mm and down size graded granite me super plasticisers @3 liters confirming to IS 9103-1999 reafirmed layers not exceeding 15cms thick, vibrated for all works in foun walls,return walls,walls (any thickness) including attached p buttresses, bed blocks,anchor blocks & plinths etc.,li machinery,curing,complete but excluding cost of reinforcement as p	tal coars -2008 at dation fo ilasters, ncluding	e aggregate @ machine mixed or footings, ped columnspillars cost of la	0.47 cum with ,concrete laid in astals, retaining			
	(Page No 13,SI No : 4.10)						
	Basic Rate		6198				
	O&M 4th year escalation of 16%		991.68				
	Add 10% For area weightage (Mangalore City)		718.97				
		Rate	7908.65	Cum			
12	<b>Operation &amp; Maintenance for 4th Year:</b> KSRB 4.6.1 Providing and removing centering, shuttering, strutting for foundations, footings, bases of columns for mass concrete complete as per specifications. Specification No. KSB 4.6.2		ng cost of all				
	Basic Rate		263				
	O&M 4th year escalation of 16%		42.08				
	Add 10% For area weightage (Mangalore City)	Rate	30.51 <b>335.59</b>	Sqm			
		Nale	333.39	Sqiii			
13	<ul> <li>Operation &amp; Maintenance for 4th Year: KSRB 4.9.2 :Providing T.M.T steel reinforcement for RCC work including straighting,cutting,bending,hooking,placing in position,lapping and/or welding wherever required,tying with binding wire and anchoring to thr adjoing members wherever necessary complete as per design (laps,hooks and wastage shall not be measured and paid) cost of materials,labour,HOM of machinary complete as per specifications.Specification No. KBS4.6.3. do with TMT bars Fe500</li> </ul>						
	Basic Rate		70782				
	O&M 4th year escalation of 16%		11325.12				
	Add 10% For area weightage (Mangalore City)		8210.71				
		Rate	90317.83	MT			
14	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M300- Construction of Embankment with Material Gravel/ N of embankment with approved material Gravel/Murrum with all lifts spreading, grading to required slope and compacting to meet requir specifications.(Including cost of gravel / murrum, watering charges of proctors density) MORTH Specification No. 305	and leads rement Ta	s, transporting t able 300- 2 com	o site, Iplete as per			
	Basic Rate		489				
	O&M 4th year escalation of 16%		78.24				
	Add 20km lead (17.4 KSRRB M100-4.1-Cost of haulage excluding loading and unloading MORTH-100/Chapter 1-case 1-Surface Road)=2.0 Rs/ Tkm x 1.28 T x 20km		52.48				
	Sub Total		619.72				
	Add 10% For area weightage (Mangalore City)		61.97				
		Rate	681.69	Cum			
15	<b>Operation &amp; Maintenance for 4th Year:</b> KSRRB M600-1.Construction of dry lean cement concrete mix M15 25mm and down size graded granite/trap/basalt metal coarse aggr 0.58cum Sub-base over prepared sub grade with (coarse and aggregate cement ration not to excee 15:1. Aggregate gradation a cement content to be determined during trail length construction 10Mpa at 7 days,mixed in a batching plant,transported to sensor,compacting with 8-10 tonnes vibratory roller,finish specifications.Morth specification No.601	egate at fine ag after blen , concret site,laid	0.86cum and fi gregate confiru iding to be as p re strength not with a paver	ne aggregate @ ming to IS:383) per Table 600-1, to be less than			

	Basic Rate		4048	
	O&M 4th year escalation of 16%		647.68	
	Add 10% For area weightage (Mangalore City)		469.57	
		Rate	5165.25	Cum
16	Operation & Maintenance for 4th Year: KSSRRB M600-2.Construction of unreinforced,dowel jointed,pla prepared sub base with 25mm and down size graded granite meta at 3 lts confirming to IS9103-1999 reaffirmed 2008(Coarse and find in a batching and mixing plant as per approved mix design,transp form paver spread,compacted and finished in a continuos oper expansio, construction and longitudinal joints,including groove memberane, sealent primer, joints sealant, debonding strip, of admixtures as approved, curing compound,finishing to lines and sprcifications MORTH specification No.602.do with M40 (42 F.A.044Cum Basic Rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City)	al coarse e aggrega orted to s ation incl cutting dowel ba grades a	aggregate with s ate conforming to site, laid with a fixe uding provision chrges, joints f rs at 4.5m inte s per drawing co	uperplastisiz IS:383) mixe ed form or s of contractio iller,separatio rvals, tie ro omplete as p
17	Operation & Maintenance for 4th Year: Providing and placing joint sealant compound of cold polysulphide to required width, sand blasting the groove face if recommended b groove with air compressor, insertion of debonding strip, priming manufacturer recommends and pouring the sealant all complete ind (Non SOR Item) Rate Approved as per EOI by MD MSCL Mangalore,Refer	y the sea the side	lant manufacture es of the sealant aterial, manpowe	r, cleaning th if the seala
	Sr.No.2		115	
			18.4	_
	Sr.No.2 O&M 4th year escalation of 16%	Rate		Rmt
18	Sr.No.2	joints lo	18.4 133.4 ngitudinal joints a pecifications.Mort 331 52.96 38.4	and expansic h specificatic
18	Sr.No.2 O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints in concrete pavement using epoxy mortar concrete complete No.3005.1 Basic Rate O&M 4th year escalation of 16%	joints lo	18.4 133.4 ngitudinal joints a pecifications.Mort 331 52.96	and expansio
18	Sr.No.2 O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar KSRRB M3000-8 Repairs of spalled joints grooves of contraction joints in concrete pavement using epoxy mortar concrete complete No.3005.1 Basic Rate O&M 4th year escalation of 16%	tone of M nt mortar except a ired com	18.4         133.4         133.4         133.4         ngitudinal joints a         pecifications.Mort         331         52.96         38.4         422.36         1:3 (1 cement: 3 at sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc.	and expansion in specification Rmt ent concrete coarse sand all not to mo
	Sr.No.2         O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar         KSRRB M3000-8 Repairs of spalled joints grooves of contractior         joints in concrete pavement using epoxy mortar concrete complete         No.3005.1         Basic Rate         O&M 4th year escalation of 16%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         Providing and laying at or near ground level factory made kerb sposition to the required line, level and curvature, jointed with ceme including making joints with or without grooves (thickness of joints than 5mm), including making drainage opening wherever reque Engineer-in-charge (length of finished kerb edging shall be measur (Precast C.C. kerb stone shall be approved by Engineer-in-charge)         Kerb Dimension=         Top Width=0.25m,         Bottom Width=0.3 m,         Height =0.9 m         (RA Attached)	tone of M nt mortar except a ired com	18.4         133.4         133.4         133.4         ngitudinal joints a         pecifications.Mort         331         52.96         38.4         422.36         1:3 (1 cement: 3 at sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc.	and expansion in specification Rmt ent concrete coarse sand all not to mo
	Sr.No.2         O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar         KSRRB M3000-8 Repairs of spalled joints grooves of contractior         joints in concrete pavement using epoxy mortar concrete complete         No.3005.1         Basic Rate         O&M 4th year escalation of 16%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         Providing and laying at or near ground level factory made kerb sposition to the required line, level and curvature, jointed with ceme including making joints with or without grooves (thickness of joints than 5mm), including making drainage opening wherever reque Engineer-in-charge (length of finished kerb edging shall be measur (Precast C.C. kerb stone shall be approved by Engineer-in-charge)         Kerb Dimension=         Top Width=0.25m,         Bottom Width=0.3 m,         Height =0.9 m         (RA Attached)         Rate Arrived as per Rate analysis	tone of M nt mortar except a ired com	18.4         133.4         133.4         ngitudinal joints a         becifications.Mort         331         52.96         38.4         422.36         A-20 grade ceme         1:3 (1 cement: 3         at sharp curve sh         plete etc. as per         yment).	and expansion in specification Rmt ent concrete coarse sand all not to mo
	Sr.No.2         O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         KSRRB 3000 Repair of Joint Grooves with Epoxy Mortar         KSRRB M3000-8 Repairs of spalled joints grooves of contractior         joints in concrete pavement using epoxy mortar concrete complete         No.3005.1         Basic Rate         O&M 4th year escalation of 16%         Add 10% For area weightage (Mangalore City)         Operation & Maintenance for 4th Year:         Providing and laying at or near ground level factory made kerb sposition to the required line, level and curvature, jointed with ceme including making joints with or without grooves (thickness of joints than 5mm), including making drainage opening wherever reque Engineer-in-charge (length of finished kerb edging shall be measur (Precast C.C. kerb stone shall be approved by Engineer-in-charge)         Kerb Dimension=         Top Width=0.25m,         Bottom Width=0.3 m,         Height =0.9 m         (RA Attached)	tone of M nt mortar except a ired com	18.4         133.4         133.4         133.4         ngitudinal joints a         pecifications.Mort         331         52.96         38.4         422.36         1:3 (1 cement: 3 at sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc. as per state of the sharp curve shuplete etc.	and expansion in specification Rmt ent concrete coarse sand all not to mo

	Operation & Maintenance for 4th Year:		•			
	Providin and fixing pre cast solid concrete Kerb stones made out of CC 1:2:4 with top and bottom width					
20	114 and 165mm respectively,400mm high and 450mm in length	h finishe	d with CM 1:3	B Plastering and		
	finishing cutting, including cost of all materials, labour, hire charges	of machi	nery,loading,un	loading,lead and		
	lift,transportation etc.,complete			-		
	Basic rate		421			
	O&M 4th year escalation of 16%		67.36			
	Add 10% For area weightage		48.84			
		Rate	537.20			
	Operation & Maintenance for 4th Year:					
	Removing and resetting of kerb stones. including cost of all ma	terials s	caffolding HOM	1 of machineries		
21	with all lead and lifts, labour charges including implementation of		•			
21	as per design, drawing, technical specifications and directions of E			ai Galeguaius G		
		ngineer-ii	Fondige.			
	Decis rate					
	Basic rate		80			
	O&M 4th year escalation of 16%		12.8			
	Add 10% For area weightage		9.28			
		Rate	102.08	Nos.		
	Operation & Maintenance for 4th Year:					
	KSRRB 800-1. Painting two coats after filling the surface with synth	netic enar	mel paint in app	roved shades		
22	on new plastered concrete surfaces, with materials, labour complet					
	8					
	(Page No 182,SI No : 24.1)					
	Basic Rate		80			
	O&M 4th year escalation of 16%		12.8			
	Add 10% For area weightage (Mangalore City)		9.28			
		Rate	102.08			
		Nate	102.00	Sqiii		
	Operation & Maintenance for 4th Year:					
23	P/F Square shape 600mmx450 mm precast R.C.C. manhole cover	with from				
25	(Rate analysis attached)	with han				
	Rate Arrived as per Rate analysis					
	Basic Rate		917.00			
	O&M 4th year escalation of 16%	Dete	146.72			
		Rate	1063.72	Nos.		
	Operation & Maintenance for 4th Year:					
24	Providing and Fixing Recessed Inception chamber cover - size: (1)	250 x 125	50 x 80)mm Ma	terial: Cast Iron /		
	(NON SOR Item)	1	1	r		
	Rate Approved as per EOI by MD MSCL Mangalore, Refer		3500.00			
	Sr.No.15		0000.00			
	O&M 4th year escalation of 16%		560			
		Rate	4060.00	Nos.		
	Operation & Maintenance for 4th Year:					
	Providing gully pipe lowering, laying of PVC 100 mm dia pipes to the	ne require	ed alignments ir	cluding specials		
25	and grade as indicated in drawings/design and hydraulically testing	•	•	• ·		
	jointing materials, testing apparatus and water for testi g etc as d					
	No.41,Item No.7,KUWSDB SOR 2016-17)			5 (1-9-		
	Basic Rate		297			
	O&M 4th year escalation of 16%		47.52			
	Add 12% on Labor Charges=Rs.47,For area weightage		47.32	 		
			5.64			
	(Mangalore City)	Poto	250.40	Dm		
		Rate	350.16	Rm		
		•	1			

	Our section 0 Maintenance (en 4th Mann			
	Operation & Maintenance for 4th Year:			
	KSRB 11-18-17.1 : Providing and fixing sand cast iron trap of 100			
26	screwed down or hinged grating with or without vent arm including	cutting an	d making good th	e walls and
	floors, cost of materials, labour, testing, complete as per specifica	tions Spec	ification No. KBS	11.1.10.
	(PWD SR 2015-16,P.No.86, SI.No.12.89)			
	Basic Rate		830	
	O&M 4th year escalation of 16%		132.8	
	Add 10% For area weightage (Mangalore City)		96.28	
		Rate	1059.08	Nos.
	Operation & Maintenance for 4th Year:			
	KSRRB M800- Cable Duct Across the road KSRRB M800-29.1. P	roviding ar	nd laying of a reint	forced ceme
	concrete pipe duct, 300 mm dia, across the road (new constructi	ion), exten	ding from drain to	o drain in cu
	and toe of slope to toe of slope in fills, constructing head walls	at both en	ds, providing a n	ninimum fill
	granular material over top and sides of RCC pipe as per IRC:98			
27	granular material free of rock pieces, outer to outer distance of			•
	minimum450 mm in case of double and triple row ducts, joints to		•	• •
	be above higher than ground level to prevent entry of water and di		•	
				and approve
	drawings complete as per specifications. Case - I : Single row for (	one utility s	service	
	(KPWD SOR 16-17,Item No.24.34,Pg.No.188)			
	Basic Rate		5022	
	O&M 4th year escalation of 16%		803.52	
	Add 10% For area weightage (Mangalore City)		582.55	
		Rate	6408.07	Rm
	Operation & Maintenance for 4th Year:			
28	dimensional ratio of 13.5, Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical prop NEMA TC7. The expected service life of HDPE pipe conduits ar	erties com	forming to ASTM	= 2160 and /
28	dimensional ratio of 13.5, Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical prop	erties com	e normal operatin forming to ASTM	= 2160 and /
28	dimensional ratio of 13.5, Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical proponent NEMA TC7. The expected service life of HDPE pipe conduits ary years.	erties com	e normal operatin forming to ASTM	= 2160 and /
28	dimensional ratio of 13.5, Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7. The expected service life of HDPE pipe conduits ar years. (Market Rate)	erties com	e normal operatin forming to ASTMF pries shall not be 2500	= 2160 and /
28	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate	erties com	e normal operatin forming to ASTMF pries shall not be	= 2160 and /
28	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item	erties com	e normal operatin forming to ASTMF pries shall not be 2500	= 2160 and /
28	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)	erties com	e normal operatin forming to ASTMF pries shall not be 2500 78	= 2160 and /
28	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total	erties com	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36	= 2160 and /
28	<ul> <li>dimensional ratio of 13.5, Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7. The expected service life of HDPE pipe conduits ar years. (Market Rate)</li> <li>Basic Rate</li> <li>Labour Cost for laying and Jointing-KUWSDB, HDPE Pipes, Item No.50, Pg. No.123)</li> <li>Add 12% For area weightage (Mangalore City)</li> </ul>	erties comi	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98	2160 and /
28	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total	erties com	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36	= 2160 and /
28	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16%	erties comi	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98	2160 and /
28	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% Operation & Maintenance for 4th Year:	erties comi nd accesso Rate	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b>	2160 and /
	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con	Rate	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b>	2160 and /
28	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,C	Rate	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b>	2160 and /
	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con	Rate	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b>	2160 and / e less than s
	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,C	Rate	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b>	2160 and / e less than s
	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,O (Market Rate) Basic Rate	Rate	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin	2160 and / e less than the less than the less than the less that the less the less that the less the les
	dimensional ratio of 13.5, Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,C (Market Rate)	Rate	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213	E 2160 and / e less than s Rm
	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,O (Market Rate) Basic Rate	Rate	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin	2160 and /
	dimensional ratio of 13.5, Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7. The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB, HDPE Pipes, Item No.50, Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering, Jointing into trenches, C (Market Rate) Basic Rate O&M 2nd year escalation of 12%	Rate	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213	E 2160 and / e less than s Rm
	dimensional ratio of 13.5, Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo- NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con- unloading at both destination and lowering,Jointing into trenches,C (Market Rate) Basic Rate O&M 2nd year escalation of 12% Operation & Maintenance for 4th Year:	Rate Rate Rate Rate	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213 <b>1988.00</b>	Rm Balloading and /
	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical prope NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,O (Market Rate) Basic Rate O&M 2nd year escalation of 12% Operation & Maintenance for 4th Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits w	erties comf ad accesso Rate Nevying to Complete.	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 3001.34 work site includin 1775 213 1988.00	E 2160 and / e less than e Rm g loading at Nos. ayer with rik
29	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical proportion NEMA TC7.The expected service life of HDPE pipe conduits are years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,C (Market Rate) Basic Rate O&M 2nd year escalation of 12% Operation & Maintenance for 4th Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits w dimensional ratio of 13.5,Deflection not greater than 5% when exp	erties comf nd accesso Rate Rate Nevying to Y Complete.	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213 1988.00	E 2160 and / e less than e Rm g loading at Nos. ayer with rib g temparatu
	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical proportion NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,C (Market Rate) Basic Rate O&M 2nd year escalation of 12% Operation & Maintenance for 4th Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits w dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical proportion	erties comf accesso Rate Nevying to Complete.	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213 1988.00 E Lubricant inner l e normal operatin forming to ASTMF	Rm Rm g loading and Nos. ayer with rib g temparatu 2160 and /
29	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical proponent NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,O (Market Rate) Basic Rate O&M 2nd year escalation of 12% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and laying Dia 160mm HDPE Electrical pipe Conduits w dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propon NEMA TC7.The expected service life of HDPE pipe conduits ar	erties comf accesso Rate Nevying to Complete.	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213 1988.00 E Lubricant inner l e normal operatin forming to ASTMF	Rm Rm g loading and Nos. ayer with rik g temparatu 2160 and /
29	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical proportion NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,C (Market Rate) Basic Rate O&M 2nd year escalation of 12% Operation & Maintenance for 4th Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits w dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical proportion	erties comf accesso Rate Nevying to Complete.	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213 1988.00 213 1988.00	Rm Rm g loading and Nos. ayer with rik g temparatu 2160 and /
29	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,O (Market Rate) Basic Rate O&M 2nd year escalation of 12% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and laying Dia 160mm HDPE Electrical pipe Conduits w dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo NEMA TC7.The expected service life of HDPE pipe conduits ar years.(Market Rate)	erties comf accesso Rate Nevying to Complete.	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213 1988.00 e Lubricant inner l e normal operatin forming to ASTMF pries shall not be	Rm Rm g loading and Nos. ayer with rib g temparatu 2160 and /
29	dimensional ratio of 13.5, Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical proponent NEMA TC7. The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB, HDPE Pipes, Item No.50, Pg. No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and com unloading at both destination and lowering, Jointing into trenches, C (Market Rate) Basic Rate O&M 2nd year escalation of 12% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and laying Dia 160mm HDPE Electrical pipe Conduits w dimensional ratio of 13.5, Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propon NEMA TC7. The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate	erties comf accesso Rate Nevying to Complete.	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213 1988.00 213 1988.00	Rm Rm g loading an Nos. ayer with rib g temparatu 2160 and /
29	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,C (Market Rate) Basic Rate O&M 2nd year escalation of 12% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and laying Dia 160mm HDPE Electrical pipe Conduits w dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo NEMA TC7.The expected service life of HDPE pipe conduits ar years.(Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item	erties comf accesso Rate Nevying to Complete.	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213 1988.00 e Lubricant inner l e normal operatin forming to ASTMF pries shall not be	Rm Rm g loading ar Nos. ayer with rib g temparatu 2160 and /
29	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,C (Market Rate) Basic Rate O&M 2nd year escalation of 12% Operation & Maintenance for 4th Year: Providing and laying Dia 160mm HDPE Electrical pipe Conduits w dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo NEMA TC7.The expected service life of HDPE pipe conduits ar years.(Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)	erties comf accesso Rate Nevying to Complete.	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213 1988.00 e Lubricant inner l e normal operatin forming to ASTMF pries shall not be 1350 66	Rm Rm g loading ar Nos. ayer with rib g temparatu 2160 and /
29	dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo NEMA TC7.The expected service life of HDPE pipe conduits ar years. (Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123) Add 12% For area weightage (Mangalore City) Sub Total O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and HDPE Coupler for pipe Dia 225mm(O.D.) and con unloading at both destination and lowering,Jointing into trenches,C (Market Rate) Basic Rate O&M 2nd year escalation of 12% <b>Operation &amp; Maintenance for 4th Year:</b> Providing and laying Dia 160mm HDPE Electrical pipe Conduits w dimensional ratio of 13.5,Deflection not greater than 5% when exp 90°C under the over burden soil presuure and other physical propo NEMA TC7.The expected service life of HDPE pipe conduits ar years.(Market Rate) Basic Rate Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item	erties comf accesso Rate Nevying to Complete.	e normal operatin forming to ASTMF pries shall not be 2500 78 9.36 2587.36 413.98 <b>3001.34</b> work site includin 1775 213 1988.00 e Lubricant inner l e normal operatin forming to ASTMF pries shall not be 1350	Rm Rm g loading and Nos. ayer with rib g temparatu 2160 and /

	O&M 4th year escalation of 16%		227.83			
		Rate	1651.75	Rm		
31	<b>Operation &amp; Maintenance for 4th Year:</b> Supplying HDPE pipe Coupler for Dia 160mm(O.D.) and conve unloading at both destination and rolling,lowering into trenches,la special including encasing the pipe Complete. (Market Rate)			0 0		
	Basic Rate O&M 4th year escalation of 16%		1475 236			
		Poto	230 1711.00	Nos.		
		Rate	1711.00	NOS.		
32	<b>Operation &amp; Maintenance for 4th Year:</b> Providing and Fixixng Spacers for Power Ducts of size 225 mm, Spacers shall be made of ABS raw material. (Market rate)	to be pla	ced at an interv	val of 1.5 mete		
	Basic Rate		1003			
	O&M 4th year escalation of 16%		160.48			
	GST @18%		180.54			
		Rate	1344.02	Nos.		
33	Spacers shall be made of ABS raw material. (Market rate) Basic Rate		1947			
	O&M 4th year escalation of 16%		311.52			
			311.32			
			250 46			
	GST @18%	Rate	350.46 2608 98	Nos		
		Rate	350.46 <b>2608.98</b>	Nos.		
34	GST @18% Operation & Maintenance for 4th Year: Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lu comforming to ASTMF 2160 and /or equivalent indian standard an and unloading at both destination and rolling,lowering into trench etc.Complete. (Market Rate)	bricant in d conveyir	2608.98 ner layer for I ng to work site i	CT fibre cabl ncluding loadi		
34	<b>Operation &amp; Maintenance for 4th Year:</b> Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lucomforming to ASTMF 2160 and /or equivalent indian standard an and unloading at both destination and rolling,lowering into trench etc.Complete. (Market Rate)	bricant in d conveyir	2608.98 ner layer for I ng to work site i true to line and	CT fibre cabl ncluding loadi		
34	Operation & Maintenance for 4th Year:         Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lucomforming to ASTMF 2160 and /or equivalent indian standard an and unloading at both destination and rolling,lowering into trench etc.Complete.         (Market Rate)         Basic Rate         Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item	bricant in d conveyir	2608.98 ner layer for I ng to work site i	CT fibre cabl ncluding loadi		
34	Operation & Maintenance for 4th Year:         Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lucomforming to ASTMF 2160 and /or equivalent indian standard an and unloading at both destination and rolling,lowering into trench etc.Complete.         (Market Rate)         Basic Rate         Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)	bricant in d conveyir	2608.98 ner layer for I ng to work site i true to line and 685 36	CT fibre cabl ncluding loadi		
34	Operation & Maintenance for 4th Year:         Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lucomforming to ASTMF 2160 and /or equivalent indian standard and and unloading at both destination and rolling, lowering into trench etc.Complete.         (Market Rate)         Basic Rate         Labour Cost for laying and Jointing-KUWSDB, HDPE Pipes, Item No.50, Pg.No.123)         Add 12% For area weightage (Mangalore City)	bricant in d conveyir	2608.98 ner layer for I ng to work site i true to line and 685 36 4.32	CT fibre cabl ncluding loadi		
34	Operation & Maintenance for 4th Year:         Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lucomforming to ASTMF 2160 and /or equivalent indian standard an and unloading at both destination and rolling, lowering into trench etc.Complete.         (Market Rate)         Basic Rate         Labour Cost for laying and Jointing-KUWSDB, HDPE Pipes, Item No.50, Pg.No.123)         Add 12% For area weightage (Mangalore City)         Sub Total	bricant in d conveyir	2608.98 ner layer for I ng to work site i true to line and 685 36 4.32 725.32	CT fibre cabl ncluding loadi		
34	Operation & Maintenance for 4th Year:         Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lucomforming to ASTMF 2160 and /or equivalent indian standard and and unloading at both destination and rolling, lowering into trench etc.Complete.         (Market Rate)         Basic Rate         Labour Cost for laying and Jointing-KUWSDB, HDPE Pipes, Item No.50, Pg.No.123)         Add 12% For area weightage (Mangalore City)	bricant in d conveyir	2608.98 ner layer for I ng to work site i true to line and 685 36 4.32 725.32 116.05	CT fibre cabl ncluding loadi l jointing of pi		
34	Operation & Maintenance for 4th Year:         Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lucomforming to ASTMF 2160 and /or equivalent indian standard an and unloading at both destination and rolling, lowering into trench etc.Complete.         (Market Rate)         Basic Rate         Labour Cost for laying and Jointing-KUWSDB, HDPE Pipes, Item No.50, Pg.No.123)         Add 12% For area weightage (Mangalore City)         Sub Total	bricant in d conveyir es,laying	2608.98 ner layer for I ng to work site i true to line and 685 36 4.32 725.32	CT fibre cabl ncluding loadi		
34	Operation & Maintenance for 4th Year:         Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lucomforming to ASTMF 2160 and /or equivalent indian standard an and unloading at both destination and rolling, lowering into trench etc.Complete.         (Market Rate)         Basic Rate         Labour Cost for laying and Jointing-KUWSDB, HDPE Pipes, Item No.50, Pg.No.123)         Add 12% For area weightage (Mangalore City)         Sub Total	bricant in d conveyir es,laying Rate uct and c	2608.98 ner layer for I ng to work site i true to line and 685 36 4.32 725.32 116.05 841.37 onveying to wo	CT fibre cabl ncluding loadi l jointing of pi Rm rk site includi		
	Operation & Maintenance for 4th Year:         Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lucomforming to ASTMF 2160 and /or equivalent indian standard an and unloading at both destination and rolling,lowering into trench etc.Complete.         (Market Rate)         Basic Rate         Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)         Add 12% For area weightage (Mangalore City)         Sub Total         O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way D loading and unloading at both destination and lowering into trenche (Market Rate)	bricant in d conveyir es,laying Rate uct and c	2608.98 ner layer for I ng to work site i true to line and 685 36 4.32 725.32 116.05 841.37 onveying to wo nting of pipe.Co	CT fibre cabl ncluding loadi l jointing of pi Rm rk site includi		
	Operation & Maintenance for 4th Year:         Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lucomforming to ASTMF 2160 and /or equivalent indian standard an and unloading at both destination and rolling,lowering into trench etc.Complete.         (Market Rate)         Basic Rate         Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)         Add 12% For area weightage (Mangalore City)         Sub Total         O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way D loading and unloading at both destination and lowering into trenche (Market Rate)         Basic Rate	bricant in d conveyir es,laying Rate uct and c	2608.98 ner layer for I ng to work site i true to line and 685 36 4.32 725.32 116.05 841.37 onveying to wo nting of pipe.Co	CT fibre cable ncluding loadin l jointing of pi Rm		
	Operation & Maintenance for 4th Year:         Supplying 7-way 40mm HDPE pipe Multi-way Duct Silicore Lucomforming to ASTMF 2160 and /or equivalent indian standard an and unloading at both destination and rolling,lowering into trench etc.Complete.         (Market Rate)         Basic Rate         Labour Cost for laying and Jointing-KUWSDB,HDPE Pipes,Item No.50,Pg.No.123)         Add 12% For area weightage (Mangalore City)         Sub Total         O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Supplying Coupler for 7-way 40mmHDPE pipe With Multi-way D loading and unloading at both destination and lowering into trenche (Market Rate)	bricant in d conveyir es,laying Rate uct and c	2608.98 ner layer for I ng to work site i true to line and 685 36 4.32 725.32 116.05 841.37 onveying to wo nting of pipe.Co	CT fibre cable ncluding loadii I jointing of pip Rm rk site includii		

36	Operation & Maintenance for 4th Year: Providing and laying heavy duty cobble stones 60mm thick, using of blocks of approved size, shape and colour with a minimum con 50mm thick sand bed (average thickness ) and compacting with	npressive st	rength of 281 kg	per sqm over
00	force thereby forcing part of sand underneath to come up in betw surface joints into its final level, including cost of materials, labou per specifications.	een joints, fi	inal compaction o	of paver
	Basic rate		1056.00	
	O&M 4th year escalation of 16%		168.96	
	Add 10% For area weightage (Mangalore City)		122.5	
		Rate	1347.46	Sqm
37	Operation & Maintenance for 4th Year: Providing and laying heavy duty Tactile Tiles (Direction and Stop Yellow in colour, using cement and course sand for manufacture minimum compressive strength of 281 kg per sqm over 50mm thi compacting with plate vibrator having 3 tons compaction force the come up in between joints, final compaction of paver surface joint materials, labour and HOM of machineries complete as per speci (Non SOR Item)	of blocks of ck sand bec ereby forcing ts into its fin	f approved size, s I (average thickne g part of sand unc	shape with a ess ) and derneath to
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.12		912.00	
	O&M 4th year escalation of 16%		145.92	
		Rate	1057.92	Sqm
				•4
38	<b>Operation &amp; Maintenance for 4th Year</b> : Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness) and compacting wit force thereby forcing part of sand underneath to come up in I surface inits into its final layer including sort of materials.	mpressive si h plate vibra between joir	trength of 281 kg ator having 3 ton nts, final compac	per sqm ove s compactio ction of pave
38	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness) and compacting wit force thereby forcing part of sand underneath to come up in a surface joints into its final level, including cost of materials, labor per specifications.	mpressive si h plate vibra between joir	trength of 281 kg ator having 3 ton nts, final compac	per sqm ove s compactio ction of pave
38	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness) and compacting wit force thereby forcing part of sand underneath to come up in a surface joints into its final level, including cost of materials, labor	mpressive si h plate vibra between joir	trength of 281 kg ator having 3 ton nts, final compac	per sqm ove s compaction ction of pave
38	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labor per specifications. (Page No 101,SI No : 14.7)	mpressive si h plate vibra between joir	trength of 281 kg ator having 3 ton nts, final compac M of machineries	per sqm ove s compaction ction of pave
38	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labo per specifications. (Page No 101,SI No : 14.7) Basic rate	mpressive si h plate vibra between joir	trength of 281 kg ator having 3 ton nts, final compace M of machineries 1114	per sqm ove s compaction ction of pave
38	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labo per specifications. (Page No 101,SI No : 14.7) Basic rate O&M 4th year escalation of 16%	mpressive si h plate vibra between joir	trength of 281 kg ator having 3 ton nts, final compace M of machineries <u>1114</u> 178.24	per sqm ov is compaction ction of pav
38	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness ) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labo per specifications. (Page No 101,Sl No : 14.7) Basic rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: Road Marking with hot applied Thermoplastic Compound with Surface:Providing and laying of hot applied thermoplastic comp glass beads at 250 gms and 2 ltr of primer per sqm area,thickness	Reflectrisings of 2.5mm	trength of 281 kg ator having 3 ton nts, final compace M of machineries <u>1114</u> <u>178.24</u> <u>129.22</u> <b>1421.46</b> ng Glass Beads m thick including is exclusive of se	per sqm ov is compaction ction of pave s complete a <b>Sqm</b> on Concre reflectorisin urface applie
	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness ) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labo per specifications. (Page No 101,SI No : 14.7) Basic rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: Road Marking with hot applied Thermoplastic Compound with Surface:Providing and laying of hot applied thermoplastic comp glass beads at 250 gms and 2 ltr of primer per sqm area,thickness glass beads as per IRC:35.The finished surface to be level, complete as per specifications.MORTH specification No.803 (Page No 192.SI No : 24.57)	Reflectrisings of 2.5mm	trength of 281 kg ator having 3 ton nts, final compace M of machineries <u>1114</u> <u>178.24</u> <u>129.22</u> <b>1421.46</b> ng Glass Beads m thick including is exclusive of se d free from stream	per sqm over s compaction s complete a s complete a <b>Sqm</b> on Concret reflectorisin urface applie
	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness ) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labo per specifications. (Page No 101,SI No : 14.7) Basic rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: Road Marking with hot applied Thermoplastic Compound with Surface:Providing and laying of hot applied thermoplastic comp glass beads at 250 gms and 2 ltr of primer per sqm area,thicknes glass beads as per IRC:35.The finished surface to be level, complete as per specifications.MORTH specification No.803 (Page No 192.SI No : 24.57) Basic Rate	Reflectrisings of 2.5mm	trength of 281 kg ator having 3 ton nts, final compace M of machineries 1114 178.24 129.22 1421.46 mg Glass Beads m thick including is exclusive of star d free from streat 429	per sqm over s compaction s complete a s complete a <b>Sqm</b> on Concre- reflectorisin urface applie
	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness ) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labor per specifications. (Page No 101,SI No : 14.7) Basic rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City)	Reflectrisings of 2.5mm	trength of 281 kg ator having 3 ton nts, final compace M of machineries 1114 178.24 129.22 1421.46 mg Glass Beads m thick including is exclusive of st d free from streat 429 68.64	per sqm over s compaction s complete a s complete a <b>Sqm</b> on Concret reflectorisin urface applie
	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness ) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labo per specifications. (Page No 101,SI No : 14.7) Basic rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: Road Marking with hot applied Thermoplastic Compound with Surface:Providing and laying of hot applied thermoplastic comp glass beads at 250 gms and 2 ltr of primer per sqm area,thicknes glass beads as per IRC:35.The finished surface to be level, complete as per specifications.MORTH specification No.803 (Page No 192.SI No : 24.57) Basic Rate	Reflectrisings of 2.5mm	trength of 281 kg ator having 3 ton nts, final compace M of machineries 1114 178.24 129.22 1421.46 mg Glass Beads m thick including is exclusive of state d free from streat 429	per sqm ov as compaction ction of pav s complete a <b>Sqm</b> on Concre reflectorisin urface applie
	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness ) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labor per specifications. (Page No 101,SI No : 14.7) Basic rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City)	Reflectrisin bound 2.5mm uniform and Rate	trength of 281 kg ator having 3 ton nts, final compace M of machineries 1114 178.24 129.22 1421.46 mg Glass Beads m thick including is exclusive of st d free from streat 429 68.64 49.76 547.40	per sqm over s compaction ction of paver s complete a s c
39	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness ) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labo per specifications. (Page No 101,SI No : 14.7) Basic rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: Road Marking with hot applied Thermoplastic Compound with Surface:Providing and laying of hot applied thermoplastic comp glass beads at 250 gms and 2 ltr of primer per sqm area,thicknes glass beads as per IRC:35.The finished surface to be level, complete as per specifications.MORTH specification No.803 (Page No 192.SI No : 24.57) Basic Rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City)	Reflectrisin bound 2.5mm uniform and Rate	trength of 281 kg ator having 3 ton nts, final compace M of machineries 1114 178.24 129.22 1421.46 mg Glass Beads m thick including is exclusive of st d free from streat 429 68.64 49.76 547.40	per sqm over s compaction ction of paver s complete a s c
39	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness ) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labor per specifications. (Page No 101,SI No : 14.7) Basic rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: Road Marking with hot applied Thermoplastic Compound with Surface:Providing and laying of hot applied thermoplastic comp glass beads at 250 gms and 2 ltr of primer per sqm area,thicknes glass beads as per IRC:35.The finished surface to be level, complete as per specifications.MORTH specification No.803 (Page No 192.SI No : 24.57) Basic Rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: Operation and Maintenance for eToilets Stainless Steel Public M BOQ Item No.45.	Reflectrisin bound 2.5mm uniform and Rate	trength of 281 kg ator having 3 ton nts, final compace M of machineries <u>1114</u> 178.24 129.22 <b>1421.46</b> ng Glass Beads m thick including is exclusive of su d free from streat <u>429</u> 68.64 49.76 <b>547.40</b> cified in Road and	per sqm over s compaction ction of paver s complete a s c
39	Providing and laying heavy duty cobble stones 75mm thick, using of blocks of approved size, shape and colour with a minimum cor 50mm thick sand bed (average thickness ) and compacting wit force thereby forcing part of sand underneath to come up in I surface joints into its final level, including cost of materials, labor per specifications. (Page No 101,SI No : 14.7) Basic rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: Road Marking with hot applied Thermoplastic Compound with Surface:Providing and laying of hot applied thermoplastic comp glass beads at 250 gms and 2 ltr of primer per sqm area,thicknes glass beads as per IRC:35.The finished surface to be level, complete as per specifications.MORTH specification No.803 (Page No 192.SI No : 24.57) Basic Rate O&M 4th year escalation of 16% Add 10% For area weightage (Mangalore City) Operation & Maintenance for 4th Year: Operation and Maintenance for eToilets Stainless Steel Public M BOQ Item No.45. Baisc rate	Reflectrisin bound 2.5mm uniform and Rate	trength of 281 kg ator having 3 ton nts, final compace M of machineries 1114 178.24 129.22 1421.46 mg Glass Beads m thick including is exclusive of su d free from streat 429 68.64 49.76 547.40 cified in Road and 61200	per sqm ov is compaction of paves complete Sqm on Concre reflectorisi urface appli ak and hol

	Operation & Maintenance for 4th Year:			
41	Providing and fixing of S.S. Bollards(SS304) on footpath as specifi	ed and dire	cted by Enginee	er -in-char
+1	(NON SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore, Refer		4500.00	
	Sr.No.13			
	O&M 4th year escalation of 16%	_	720	
		Rate	5220	Nos.
	Operation & Maintenance for 4th Year:			
	Providing and fixing of railing as detail design in MS HOLLOW SEC	CTION and b	oars ( shop drav	vina to be
42	approved ), with vertical support of 0.9m @2.2mc/c , all complete			
	architect.(Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer		100000.00	
	Sr.No.26			
	O&M 4th year escalation of 16%		16000	
		Rate	116000	MT
	Operation & Maintenance for 4th Year:	<u>                                     </u>		
	Excavation and removal of silt and silt mixed with sand in slussy co	ondition from	canal bed inclu	Jdina
	disposing off the same in spoil bank or on the canal embankment i			0
43	lead upto 50 m and all lifts. For Desilting of drains and grit chambe			
43	scaffolding HOM of machineries with all lead and lifts, labour charge			
	Environmental and Social Safeguards & as per design, drawing, te			
		chinical spec	incations and u	
	Engineer-in-charge.	<u>.</u>		
	Basic Rate		186.16	
	O&M 4th year escalation of 16%		29.79	
		Rate		Nos.
		Rate	29.79	Nos.
		Rate	29.79	Nos.
44	O&M 4th year escalation of 16%		29.79 <b>215.95</b>	Nos.
44	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year:		29.79 <b>215.95</b>	Nos.
44	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth	eyond initial	29.79 215.95 Lead	Nos.
44	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Extra Lead for Disposing off unserviceable materials upto 10 Km b	eyond initial	29.79 215.95 Lead	Nos.
44	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth Earth Baisc rate	eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60	Nos.
44	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth Earth Baisc rate Add Loading and unloading charges(Item No 17.1 KSRRB M100-	eyond initial	29.79 215.95 Lead	Nos.
44	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Extra Lead for Disposing off unserviceable materials upto 10 Km b Item No 17.4 KSRRB M100-4.1-Earth Earth Baisc rate	eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60	Nos.
44	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1	eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00	Nos.
44	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)	eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60	Nos.
44	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)	eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26	Nos.
44	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2	eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26 90.86	Nos.
44	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%	eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26 90.86 14.54	
	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%	eyond initial 2.0x1.2 Rate	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 82.60 8.26 90.86 14.54 <b>105.40</b>	
44	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%         Extra Lead for Disposing off unserviceable materials upto 10 Km b	eyond initial 2.0x1.2 Rate	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 82.60 8.26 90.86 14.54 <b>105.40</b>	
	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Debris	eyond initial 2.0x1.2 Rate eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26 90.86 14.54 <b>105.40</b> Lead	
	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Debris         Debris	eyond initial 2.0x1.2 Rate eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26 90.86 14.54 <b>105.40</b> Lead 0x10Km	
	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Debris         Debris         Baisc rate	eyond initial 2.0x1.2 Rate eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26 90.86 14.54 <b>105.40</b> Lead	
	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%         Depration & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Debris         Debris         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-4.1-Debris	eyond initial 2.0x1.2 Rate eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26 90.86 14.54 <b>105.40</b> Lead 0x10Km	
	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Debris         Debris         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)	eyond initial 2.0x1.2 Rate eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26 90.86 14.54 <b>105.40</b> Lead 0x10Km 26.00 57.00	
	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Debris         Debris         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1.1	eyond initial 2.0x1.2 Rate eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26 90.86 14.54 <b>105.40</b> Lead 0x10Km 26.00 57.00 83.00	
	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Debris         Debris         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)	eyond initial 2.0x1.2 Rate eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26 90.86 14.54 <b>105.40</b> Lead 0x10Km 26.00 57.00 83.00 83.00 8.3	
	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Debris         Debris         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2	eyond initial 2.0x1.2 Rate eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26 90.86 14.54 <b>105.40</b> Lead 0x10Km 26.00 57.00 83.00 8.3 91.30	
	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Earth         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)         Sub Total-2         O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Extra Lead for Disposing off unserviceable materials upto 10 Km b         Item No 17.4 KSRRB M100-4.1-Debris         Debris         Baisc rate         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add Loading and unloading charges(Item No 17.1 KSRRB M100-1)         Sub Total-1         Add 10% For area weightage (Mangalore City)	eyond initial 2.0x1.2 Rate eyond initial	29.79 <b>215.95</b> Lead 28x10km 25.60 57.00 82.60 8.26 90.86 14.54 <b>105.40</b> Lead 0x10Km 26.00 57.00 83.00 83.00 8.3	

Rate Approved as per EOI by MD MSCL Mangalore,Refer         1,000           O&M 4th year escalation of 16%         160           Operation & Maintenance for 4th Year:         Itel           Lighting Pole, 9 m         Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 gr.           S 355. JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pr           17         in single section and single joint welded as per IS 956/51 0178 AWG having dimensions bottom 155 nd dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template an the pole shall be hot dip galvanized in single depping with not less than 65 micron as per ASTM - A123 a 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)           Basic rate         177118           OAM 4th year escalation of 16%         2738.88           Operation, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 gras 3355.00 Staft, 15 20025 for base plate or for 5 m pr           S 355. JO Steel plate for shaft, 15 2062 for base plate and 4 nos. of long J bolts along with template an the pole shall be hot dip galvanized in single depping with not less than 65 micron as per ASTM - A123 a 15 at e., (excluding foundatized as per 15 9565/51 0176 AWG ReVing Charge as a presention strate of 5 m pr           18         tec., (excluding foundatized in single dipping with not less than 65 micron as per ASTM - A123 a 15 at e., (excluding foundatiz	46	Dismantling, removal, transportation to client's storage place exis (Non SOR Item)	ung lignung	,	
O&M 4th year escalation of 16%         160           Operation & Maintenance for 4th Year:         Infe0         Nos.           Upthing Pole, 9 m         Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 gr.         S 355.0 Steel plate for shaft, 15 2062 for base plate with our opening arrangement, icluding suitable boards, bakelite sheet and MCSB as per IS spocifications suitable for wind speed of 47 m/sec for 5 m pr.           10 ai, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bobts along with template an the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 a 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)           Basic rate         17118           O&M 4th year escalation of 16%         2730.88           Operation & Maintenance for 4th Year:         Ighting Pole, 7 m           Lighting Pole, 7 m         Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 gra S 355 JO steel plate for shaft, IS 2062 for base plate with our opening arrangement, icluding suitable baser, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pr.           48         in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 nt.           49         in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 150 n dia, top 70 mm with 3 mm thick, suitable base plate with door opening arrangement, icluding suitable base plate with act and 4 nos. of 10 g J botta a		Rate Approved as per EOI by MD MSCL Mangalore,Refer		1,000	
Rate         1160         Nos.           Operation & Maintenance for 4th Year: Lighting Pole. 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 gr. S 355 JO steel plate for shart, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pd in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 m dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of         Job 18 along with template an the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 a 153 etc. (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.7)           Basic rate         17118           O&M Mty sear escalation of 16%         2738.88           Vogeration & Maintenance for 4th Year: Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 gra S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pd in single section and single joint welded as per IS Sp5/IS 10178 AWG having dimensions bottom 155 n dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J botts along with template an the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 a 153 etc. (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)           Basic rate         12420           OAM 4th year escalation of 16%         12420           OA				160	
Lighting Pole, 9 m         Fabrication, supply and erection of 9 meters long hot dip Galvanised Octagonal pole with BSE 10025 grs         3 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pr         in single section and single joint welded as per IS 959/SI 10178 AWG having dimensions bottom 155 n         dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J botts along with template an the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 a         High Pole, 7 m         Basic rate       17118         O&M 4th year escalation of 16%       2738.88         Nos.       Operation & Maintenance for 4th Year:         Lighting Pole, 7 m       Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 gra S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable baards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pr         Basic rate       17178         O mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template an the pole shall be not dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 a 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)         Basic rate       12420         O&M mwith 3 mm thick, suitable base plate and 4 nos. of long J bolts along with te			Rate		Nos.
Basic rate       17118         O&M 4th year escalation of 16%       2738.88         Operation & Maintenance for 4th Year:       Lighting Pole, 7 m         Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 gras       S 355.JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable         boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pc       in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 m         dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template an the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 a         153 etc., (excluding foundation) as per drawing appended       (Ref Electrical SOR SI No. 5.14.5)         Basic rate       12420         OBM 4th year escalation of 16%       Rate       14,407.20         Vost       Nos.         Operation & Maintenance for 4th Year:       Lighting Pole, 4 m         Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 gr       S 355.JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 po         19 in single section and single joint welded as per S 9595/IS 10178 AWG having dimensions bottom 130 n       dia, 102 or 5 Jo	47	Lighting Pole, 9 m Fabrication, supply and erection of 9 meters long hot dip Galvanis S 355 JO steel plate for shaft, IS 2062 for base plate with oor ope boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of the pole shall be hot dip galvanized in single dipping with not less 153 etc., (excluding foundation) as per drawing appended	ed Octago ning arrang for wind s AWG havir long J b	nal pole with BSE gement, icluding s peed of 47 m/sec ng dimensions bo polts along with te	E 10025 grad suitable c for 5 m pole ttom 155 mn emplate and
O&M 4th year escalation of 16%       2738.88         Rate       19,856.88       Nos.         Operation & Maintenance for 4th Year:       Lighting Pole, 7 m       Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 gra         S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pc         in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 n       nis, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template an the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 a 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)         Basic rate       12420         O&M 4th year escalation of 16%       1987.2         Vegration & Maintenance for 4th Year:       Lighting Pole, 4 m         Lighting Pole, 4 m       Fabrications suitable for wind speed of 47 m/sec for 5 4 po in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 2 (Ref Electrical SOR SI No.5.14.2)         Qeation & Maintenance for 4th Year:       Lighting Pole, 4 m         Lighting Pole, 4 m       Tong ab pols along with template and the pole shall be hot				17118	
Rate         19,856.88         Nos.           Operation & Maintenance for 4th Year: Lighting Pole, 7 m Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 gra S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS 9595/IS 10178 AWG having dimensions bottom 155 n dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 a 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)           Basic rate         12420           OQ&M 4th year escalation of 16%         1987.2           QaM 4th year escalation of 16%         1987.2           Operation & Maintenance for 4th Year: Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 gra S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 po in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and th pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and th pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and th pole shall be hot dip galvanized in					
Operation & Maintenance for 4th Year: Lighting Pole, 7 m           Fabrication, suppl and erection of 7 meters long hot dip Galvanised Octagonal pole with BSE 10025 gra S 355 JO steel plate for shaft, IS 2062 for base plate with oor opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 m pc in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 155 n dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template an the pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 a 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)           Basic rate         12420           O&&M 4th year escalation of 16%         1987.2           Coperation & Maintenance for 4th Year: Lighting Pole, 4 m         12420         Nos.           Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 gr. S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 po in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and t pole shall be hot dig galvanized in single dipping with not less than 65 micron as per ASTM - A123 an detc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)           Basic rate         7398           O&&M 4th year escalation of 16%         1183.68			Pata		Nos
O&M 4th year escalation of 16%       1987.2         Rate       14,407.20       Nos.         Operation & Maintenance for 4th Year:       Lighting Pole, 4 m       Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 gr. S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 po in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and th pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 7 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)         Basic rate       7398         O&M 4th year escalation of 16%       Rate       8,581.68         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts, nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)       50         Basic rate       3540			•	•	
Rate       14,407.20       Nos.         Operation & Maintenance for 4th Year:       Lighting Pole, 4 m       Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 gr: S 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 po in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of long J bolts along with template and th pole shall be hot dip galvanized in single dipping with not less than 65 micron as per ASTM - A123 and 4 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)         Basic rate       7398         O&M 4th year escalation of 16%       1183.68         Operation & Maintenance for 4th Year:       Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts, nuts, etc. complete       0ctagonal pole using necessary bolts, nuts, etc. complete         Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)       Basic rate       3540	48	boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of the pole shall be hot dip galvanized in single dipping with not less 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5)	for wind s AWG havir long J b	peed of 47 m/sec og dimensions bo polts along with te cron as per ASTI	c for 5 m pole ottom 155 mn emplate and
Operation & Maintenance for 4th Year:         Lighting Pole, 4 m         Fabrication, supply and erection of 4 meters long hot dip Galvanised Octagonal pole with BSE 10025 grass 355 JO steel plate for shaft, IS 2062 for base plate with door opening arrangement, icluding suitable boards, bakelite sheet and MCBs as per IS specifications suitable for wind speed of 47 m/sec for 5 4 po         49       in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n         49       in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n         49       in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n         49       in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n         49       in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n         49       in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n         49       in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n         49       in single section and single joint welded as per IS 9595/IS 10178 AWG having dimensions bottom 130 n         49       in single dipping with not less than 65 micron as per ASTM - A123 and retc., (excluding foundation) as per drawing appended         (Ref Electrical SOR SI No.5.14.2)       Rate       8,581.68       Nos.         50	48	boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of the pole shall be hot dip galvanized in single dipping with not less 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5) Basic rate	for wind s AWG havir long J b	peed of 47 m/sec og dimensions bo polts along with te cron as per ASTI 12420	tor 5 m pole ottom 155 mn emplate and
O&M 4th year escalation of 16%       1183.68         Rate       8,581.68       Nos.         Operation & Maintenance for 4th Year:       Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on         50       Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm       (Ref Electrical SOR SI No.5.18.5)         Basic rate       3540	48	boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of the pole shall be hot dip galvanized in single dipping with not less 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5) Basic rate	for wind s AWG havir long J b than 65 mi	peed of 47 m/sec og dimensions bo polts along with te cron as per ASTI 12420 1987.2	c for 5 m pole ottom 155 mn emplate and M - A123 and
Rate8,581.68Nos.Operation & Maintenance for 4th Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on Octagonal pole using necessary bolts, nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)Image: Complete of the second		boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of the pole shall be hot dip galvanized in single dipping with not less 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5) Basic rate O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanis S 355 JO steel plate for shaft, IS 2062 for base plate with door op boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of pole shall be hot dip galvanized in single dipping with not less tha etc., (excluding foundation) as per drawing appended	e for wind s AWG havir long J b than 65 mi <b>Rate</b> eed Octago ening arrar for wind s AWG havir long J bolts	12420 1987.2 1987.2 14,407.20 1987.2 14,407.20	c for 5 m pole ottom 155 mn emplate and M - A123 and Nos. E 10025 grad g suitable c for 5 4 pole ottom 130 mn plate and the
Operation & Maintenance for 4th Year:         Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on         50       Octagonal pole using necessary bolts,nuts, etc. complete         Double Cross arm - 1500 mm         (Ref Electrical SOR SI No.5.18.5)         Basic rate       3540		boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of the pole shall be hot dip galvanized in single dipping with not less 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5) Basic rate O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanis S 355 JO steel plate for shaft, IS 2062 for base plate with door op boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of pole shall be hot dip galvanized in single dipping with not less tha etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	e for wind s AWG havir long J b than 65 mi <b>Rate</b> eed Octago ening arrar for wind s AWG havir long J bolts	nal pole with BSE ng dimensions bo polts along with te cron as per ASTI 12420 1987.2 14,407.20 nal pole with BSE ngement, icluding peed of 47 m/sec ng dimensions bo s along with temp n as per ASTM - 2 7398	c for 5 m pole ottom 155 mn emplate and M - A123 and Nos. E 10025 grad g suitable c for 5 4 pole ottom 130 mn plate and the
<ul> <li>Supplying and fixing of hot dip Galvinized M.S.bracket Suitable for outdoor luminaries and mounted on</li> <li>Octagonal pole using necessary bolts, nuts, etc. complete</li> <li>Double Cross arm - 1500 mm</li> <li>(Ref Electrical SOR SI No.5.18.5)</li> <li>Basic rate</li> <li>3540</li> </ul>		boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of the pole shall be hot dip galvanized in single dipping with not less 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5) Basic rate O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanis S 355 JO steel plate for shaft, IS 2062 for base plate with door op boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of pole shall be hot dip galvanized in single dipping with not less tha etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2)	e for wind s AWG havir long J b than 65 mi <b>Rate</b> eed Octago ening arrar for wind s AWG havir long J bolts n 65 micror	12420 12420 1987.2 14,407.20 nal pole with BSE ngement, icluding peed of 47 m/sec ag dimensions bo s along with temp n as per ASTM - 7 7398 1183.68	c for 5 m pole ottom 155 mn emplate and M - A123 and Nos. E 10025 grac g suitable c for 5 4 pole ottom 130 mn olate and the A123 and 15
		boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of the pole shall be hot dip galvanized in single dipping with not less 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5) Basic rate O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanis S 355 JO steel plate for shaft, IS 2062 for base plate with door op boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of pole shall be hot dip galvanized in single dipping with not less tha etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2) Basic rate O&M 4th year escalation of 16%	e for wind s AWG havir long J b than 65 mi <b>Rate</b> eed Octago ening arrar for wind s AWG havir long J bolts n 65 micror	12420 12420 1987.2 14,407.20 nal pole with BSE ngement, icluding peed of 47 m/sec ag dimensions bo s along with temp n as per ASTM - 7 7398 1183.68	c for 5 m pole ottom 155 mr emplate and M - A123 and Nos. E 10025 grad g suitable c for 5 4 pole ottom 130 mr olate and the A123 and 15
O&M 4th year escalation of 16%	49	boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of the pole shall be hot dip galvanized in single dipping with not less 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5) Basic rate O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanis S 355 JO steel plate for shaft, IS 2062 for base plate with door op boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of pole shall be hot dip galvanized in single dipping with not less tha etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2) Basic rate O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Supplying and fixing of hot dip Galvinized M.S.bracket Suitable fo Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5)	e for wind s AWG havir long J b than 65 mi <b>Rate</b> eed Octago ening arrar for wind s AWG havir long J bolts n 65 micror	peed of 47 m/sec         ag dimensions bo         poolts along with te         cron as per ASTI         12420         1987.2         14,407.20         nal pole with BSE         ngement, icluding         peed of 47 m/sec         ng dimensions bo         s along with temp         n as per ASTM - /         7398         1183.68         8,581.68         uminaries and mode	c for 5 m pole ottom 155 mr emplate and M - A123 and Nos. E 10025 grac g suitable c for 5 4 pole ottom 130 mr olate and the A123 and 15 Nos.
Rate 4,106.40 Nos.	49	boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of the pole shall be hot dip galvanized in single dipping with not less 153 etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No. 5.14.5) Basic rate O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Lighting Pole, 4 m Fabrication, supply and erection of 4 meters long hot dip Galvanis S 355 JO steel plate for shaft, IS 2062 for base plate with door op boards, bakelite sheet and MCBs as per IS specifications suitable in single section and single joint welded as per IS 9595/IS 10178 dia, top 70 mm with 3 mm thick, suitable base plate and 4 nos. of pole shall be hot dip galvanized in single dipping with not less tha etc., (excluding foundation) as per drawing appended (Ref Electrical SOR SI No.5.14.2) Basic rate O&M 4th year escalation of 16% <b>Operation &amp; Maintenance for 4th Year:</b> Supplying and fixing of hot dip Galvinized M.S.bracket Suitable fo Octagonal pole using necessary bolts,nuts, etc. complete Double Cross arm - 1500 mm (Ref Electrical SOR SI No.5.18.5) Basic rate	e for wind s AWG havir long J b than 65 mi <b>Rate</b> eed Octago ening arrar for wind s AWG havir long J bolts n 65 micror	peed of 47 m/sec         ag dimensions bo         poolts along with te         cron as per ASTI         12420         1987.2         14,407.20         nal pole with BSE         ngement, icluding         peed of 47 m/sec         ng dimensions bo         s along with temp         n as per ASTM - A         7398         1183.68         8,581.68         uminaries and mode         3540	c for 5 m pole ottom 155 mr emplate and M - A123 and Nos. E 10025 grac g suitable c for 5 4 pole ottom 130 mr olate and the A123 and 15 Nos.

	Operation & Maintenance for 4th Year:			
	Supplying and fixing of hot dip Galvinized M.S.bracket Suitab	le for outdoor lum	inaries and mo	unted on
51	Octagonal pole using necessary bolts, nuts, etc. complete			
	Single Cross arm - 1500 mm			
	(Ref Electrical SOR SI No.5.18.2)			
	Basic rate		2400	
	O&M 4th year escalation of 16%		384	
		Rate	2,784	Nos.
	Operation & Maintenance for 4th Year:			
52	Painting of Existing street light pole after scrapping the old pa		th suitable cold	our enamel
52	including coping/footing of the pole8mtr and above street lig	ht pole		
	(Ref Electrical SOR SI No.16.28.3)			
	Basic rate		700	
	O&M 4th year escalation of 16%		112	
		Rate	812	Nos.
	LT Cable			
	Operation & Maintenance for 4th Year:			
	Supplying of 1.1 kV LT cable having aluminium conductor PV			
	galvanised, steel strips (except 2C x 10 sq. mm wire armoure			
53	outer sheathed armoured cable as per IS - 1554 Part 1:1988	& conforming to G	TP of GROUP	В
	4 Core x16 Sq.mm PVC Aluminium Conductor,			
	(Ref Electrical SOR SI No.7.5,7.5.4)			
	Basic rate		117	
	O&M 4th year escalation of 16%		18.72	
		Rate	135.72	Rm
	Operation & Maintenance for 4th Year:			
	Supply and drawing flexible multicore cable with electrolyte g	rade flexible coppe	er with low con	ductor
54	conforming to Table 3 Class 5 of IS:8130-1984 and vargin P			
•	working voltage up to 1100 V as per IS-694:1990 and conform			
	3C x 2.5 sq. mm (Ref. Electrical SOR 2.8.8)			
	Basic rate		81.6	
	O&M 4th year escalation of 16%		13.06	
		Rate	94.66	Rm
	Operation & Maintenance for 4th Year:			
	Supplying tinned copper lugs and crimping and wiring to term	inal point for wire	of following siz	es
55	16 Sq.mm PVC Aluminium Conductor			
	(Ref Electrical SOR SI No.7.21,7.21.6)			
	Basic rate		11 21	
	O&M 4th year escalation of 16%		<u>11.31</u> 1.81	
		Rate	13.12	Nos.
		Rale	13.12	1405.
	Operation 8 Maintonence for 4th Vers			
	Operation & Maintenance for 4th Year:	inal paint for wire	of following oiz	~~
56	Supplying tinned copper lugs and crimping and wiring to term	linal point for wire	or following siz	es
	2.5 sq. mm copper conductor			
	(Ref Electrical SOR SI No.7.21.2)			
	Basic rate		3.21	
	O&M 4th year escalation of 16%		0.51	
		Rate	3.72	Nos.
	Operation & Maintenance for 4th Year:			
	Chemical Earthing for grounding, conduits, IC cut outs and oth			y using
	copper /SS rod with earth enhancing backfill compound which			
57	,thermally,conductive,potential,to permissible,limits,superior,f	ault, conductive ca	pacity,non toxi	c,weather
	resistance and capable of achieving ohmic value			
	less than one ohm			
	(Ref Electrical SOR Pg.No.64,SI No.7.23.6)			
	Basic rate	I	5500	

	O&M 4th year escalation of 16%		880	
		Rate	6380	Kit
	Our and the set of the set of the Alle Manual			
58	<b>Operation &amp; Maintenance for 4th Year:</b> Supply and running GI conductor for grounding and (along with oth using necessasary suitable size clamps, nails, guttas/spacers etc- (Ref Electrical SOR SI No.7.22.3)		n conduits system	n of wiring)
	Basic rate		19.5	
	O&M 4th year escalation of 16%		3.12	
		Rate	22.62	Rmt
59	Operation & Maintenance for 4th Year: Supplying and stacking of good earth at site including royalty and measured in stacks will be reduced by 20% for payment). (Non SOR Item)	carriage u	ipto 5 k.m. lead c	omplete (ea
	Rate Approved as per EOI by MD MSCL Mangalore,Refer		140.00	
	Sr.No.27 O&M 4th year escalation of 16%		22.4	
		Rate	162.40	Cum
	including screening and stackin complete as per specifications No.152,SI.No.19.90)			0. 000.2(12
	Basic rate		204	
			204 32.64	
	O&M 4th year escalation of 16%		32.64	
	O&M 4th year escalation of 16% Add 10% For area weightage	Rate		Cum
61	O&M 4th year escalation of 16%	farm yard good eart	32.64 23.66 <b>260.30</b> d manure or/ an h in required thic	id good ea kness (cost
61	O&M 4th year escalation of 16%         Add 10% For area weightage         Operation & Maintenance for 4th Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and         sludge, farm yard manure or/and good earth to be paid for se         MORTH Specification No. 307         Basic rate         O&M 4th year escalation of 16%	farm yard good eart parately) d Rate	32.64 23.66 260.30 d manure or/ an h in required thic complete as per 103 16.48 11.95 131.43	nd good ea kness (cost specification Cum
	O&M 4th year escalation of 16%         Add 10% For area weightage         Operation & Maintenance for 4th Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and         sludge, farm yard manure or/and good earth to be paid for se         MORTH Specification No. 307         Basic rate         O&M 4th year escalation of 16%         Add 10% For area wightage         Operation & Maintenance for 4th Year:         Mixing earth and sludge or manure in the required proportion spector	farm yard good eart parately) d Rate	32.64 23.66 260.30 d manure or/ an h in required thic complete as per 103 16.48 11.95 131.43	nd good ea kness (cost specification Cum
	O&M 4th year escalation of 16%         Add 10% For area weightage         Operation & Maintenance for 4th Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and         sludge, farm yard manure or/and good earth to be paid for seg         MORTH Specification No. 307         Basic rate         O&M 4th year escalation of 16%         Add 10% For area wightage         Operation & Maintenance for 4th Year:         Mixing earth and sludge or manure in the required proportion spect (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore, Refer	farm yard good eart parately) d Rate	32.64 23.66 260.30 d manure or/ an h in required thic complete as per 103 16.48 11.95 131.43 ected by the Offic	nd good ea kness (cost specificatio Cum
	O&M 4th year escalation of 16%         Add 10% For area weightage         Operation & Maintenance for 4th Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and         sludge, farm yard manure or/and good earth to be paid for seg         MORTH Specification No. 307         Basic rate         O&M 4th year escalation of 16%         Add 10% For area wightage         Operation & Maintenance for 4th Year:         Mixing earth and sludge or manure in the required proportion spect         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore, Refer         Sr.No.28	farm yard good eart parately) d Rate	32.64         23.66         260.30         d manure or/ an         h in required thic         complete as per         103         16.48         11.95         131.43         ected by the Offic         23.91	nd good ea kness (cost specification Cum
	O&M 4th year escalation of 16%         Add 10% For area weightage         Operation & Maintenance for 4th Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and         sludge, farm yard manure or/and good earth to be paid for seg         MORTH Specification No. 307         Basic rate         O&M 4th year escalation of 16%         Add 10% For area wightage         Operation & Maintenance for 4th Year:         Mixing earth and sludge or manure in the required proportion spect         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore, Refer         Sr.No.28	farm yard good eart parately) o <b>Rate</b> cified or dir <b>Rate</b> period of pachineries	32.6423.66260.30260.30d manure or/ an h in required thic complete as per10316.4811.95131.43rected by the Offic23.913.8327.74one year includin s with all lead ar	d good ea kness (cost specification Cum cer-in-charg
62	O&M 4th year escalation of 16%         Add 10% For area weightage         Operation & Maintenance for 4th Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and         sludge, farm yard manure or/and good earth to be paid for set         MORTH Specification No. 307         Basic rate         O&M 4th year escalation of 16%         Add 10% For area wightage         Operation & Maintenance for 4th Year:         Mixing earth and sludge or manure in the required proportion spect         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 4th year escalation of 16%         Oatmathematic for 4th Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for a complete including cost of all materials, scaffolding HOM of m charges including implementation of Environmental and Social technical specifications and directions of Engineer-in-charge.	farm yard good eart parately) o <b>Rate</b> cified or dir <b>Rate</b> period of pachineries	32.6423.66260.30260.30d manure or/ anh in required thiccomplete as per10316.4811.95131.43rected by the Offic23.913.8327.74one year includingwith all lead arrds & as per de	d good ea kness (cost specificatio Cum cer-in-charg Cum g watering d lifts, labo
62	O&M 4th year escalation of 16%         Add 10% For area weightage         Operation & Maintenance for 4th Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and sludge, farm yard manure or/and good earth to be paid for set MORTH Specification No. 307         Basic rate         O&M 4th year escalation of 16%         Add 10% For area wightage         Operation & Maintenance for 4th Year:         Mixing earth and sludge or manure in the required proportion spect (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 4th year escalation of 16%         Math thy ear escalation of 16%         Basic rate         Operation & Maintenance for 4th Year:         Mixing earth and sludge or manure in the required proportion spect (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.28         O&M 4th year escalation of 16%         Dependence for 4th Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for a complete including cost of all materials, scaffolding HOM of m charges including implementation of Environmental and Social technical specifications and directions of Engineer-in-charge.         Basic rate	farm yard good eart parately) o <b>Rate</b> cified or dir <b>Rate</b> period of pachineries	32.64         23.66         260.30         d manure or/ an         h in required thic         complete as per         103         16.48         11.95         131.43         ected by the Offic         23.91         3.83         27.74         one year including with all lead ar         as per de         103	d good ea kness (cost specification Cum cer-in-charg
62	O&M 4th year escalation of 16%         Add 10% For area weightage         Operation & Maintenance for 4th Year:         KSRRB M300-Horticulture KSRRB M300-Spreading of sludge         KSRRB M300-1. Spreading of sludge farm yard manure or/ and         sludge, farm yard manure or/and good earth to be paid for set         MORTH Specification No. 307         Basic rate         O&M 4th year escalation of 16%         Add 10% For area wightage         Operation & Maintenance for 4th Year:         Mixing earth and sludge or manure in the required proportion spect         (Non SOR item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.28         O&M 4th year escalation of 16%         Oatmathematic for 4th Year:         Maintenance of lawns or Turfing of slopes (rough grassing) for a complete including cost of all materials, scaffolding HOM of m charges including implementation of Environmental and Social technical specifications and directions of Engineer-in-charge.	farm yard good eart parately) o <b>Rate</b> cified or dir <b>Rate</b> period of pachineries	32.6423.66260.30260.30d manure or/ anh in required thiccomplete as per10316.4811.95131.43rected by the Offic23.913.8327.74one year includingwith all lead arrds & as per de	d good ea kness (cost specification Cum cer-in-charg

	<b>Operation &amp; Maintenance for 4th Year:</b> Preparation of beds for hedging and shrubbery by excavating 60 base to a further depth of 30 cm, refilling the excavated earth after manure in the ratio of 8:1 (8 parts of stacked volume of earth after the state of the state	er breaking clo	ods and mixing	with sludge or
64	volume of sludge or manure after reduction by 8%), flooding with watering and finally fine dressing, leveling etc. including stacking	water, filling v	vith earth if nec	essary,
	unserviceable and surplus earth by spreading and leveling as dir complete (cost of sludge, manure or extra earth to be paid for se	ected, within a		
	(Non SOR Item)	paratery).		
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.29		146.00	
	O&M 4th year escalation of 16%		23.36	
		Rate	169.36	Cum
	SHRUBS: Supply and Stacking of Shrubs			
65	<b>Operation &amp; Maintenance for 4th Year:</b> Ficus Blackeana 5'-0" ht with 4-5 branches and bushy form (Non SOR Item)			
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.30		840.00	
	O&M 4th year escalation of 16%		134.4	
		Rate	974.40	Nos.
	Operation & Maintenance for 4th Year:			
66	Nerium Oleander variegated - 5'0" ht , 5-6 branches and bushy ir (Non SOR Item)	n form		
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.31		840.00	
	O&M 4th year escalation of 16%		134.4	
		Rate	974.40	Nos.
67	<b>Operation &amp; Maintenance for 4th Year:</b> Pandanus variegted'gold ' 300mm ht , 300mm c/c in triangulation (Non SOR Item)	n , with 4-5 fror	nds	
	Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.39		84.00	
			000	
	O&M 4th year escalation of 16%		13.44	
		Rate		Nos.
68	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Bougenvilla variety 'red ' 600mm dia , specimen plant in round s bushy to satisfaction of landscape architect/PMC		13.44 97.44	
68	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Bougenvilla variety 'red ' 600mm dia , specimen plant in round s bushy to satisfaction of landscape architect/PMC (Non SOR Item) Rate Approved as per EOI by MD MSCL Mangalore,Refer		13.44 97.44	
68	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Bougenvilla variety 'red ' 600mm dia , specimen plant in round s bushy to satisfaction of landscape architect/PMC (Non SOR Item)		13.44 97.44 should be read	
68	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Bougenvilla variety 'red ' 600mm dia , specimen plant in round s bushy to satisfaction of landscape architect/PMC (Non SOR Item) Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.40		13.44 97.44 should be read	
68	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Bougenvilla variety 'red ' 600mm dia , specimen plant in round s bushy to satisfaction of landscape architect/PMC (Non SOR Item) Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.40	hape the plant	13.44 97.44 97.44 should be read 140.00 22.4 162.40	ly in form and
	O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Bougenvilla variety 'red ' 600mm dia , specimen plant in round s         bushy to satisfaction of landscape architect/PMC         (Non SOR Item)         Rate Approved as per EOI by MD MSCL Mangalore,Refer         Sr.No.40         O&M 4th year escalation of 16%         Operation & Maintenance for 4th Year:         Ficus blackenia, c/c: 600m, must be bushy and multibranched(at packed in tree bags and stacked well on site, and regularly water         Rate Approved as per EOI by MD MSCL Mangalore,Refer	hape the plant	13.44 97.44 97.44 should be read 140.00 22.4 162.40	ly in form and Nos.
	O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Bougenvilla variety 'red ' 600mm dia , specimen plant in round s bushy to satisfaction of landscape architect/PMC (Non SOR Item) Rate Approved as per EOI by MD MSCL Mangalore,Refer Sr.No.40 O&M 4th year escalation of 16% Operation & Maintenance for 4th Year: Ficus blackenia, c/c: 600m, must be bushy and multibranched(at packed in tree bags and stacked well on site, and regularly water	hape the plant	13.44 97.44 97.44 140.00 22.4 162.40 750mm. Plants s the planting.	ly in form and Nos.

	Operation & Maintenance for 4th Year:			I		
	Nerium oleander, c/c: 600m, must be bushy and multibranched(atleast 5), Dia: 750mm. Plants should be					
70	packed in tree bags and stacked well on site, and regularly water					
	packed in tree bags and stacked wen on site, and regularly water	eu, until arte				
	Rate Approved as per EOI by MD MSCL Mangalore, Refer		0.40.00			
	Sr.No.40		840.00			
	O&M 4th year escalation of 16%		134.4			
		Rate	974.40	Nos.		
	TURF					
	Operation & Maintenance for 4th Year:					
71	ZOYSIA JAPONICA ( MAT)					
	(Non SOR Item)					
	Rate Approved as per EOI by MD MSCL Mangalore, Refer		450.00			
	Sr.No.32		156.80			
	O&M 4th year escalation of 16%		25.09			
		Rate	181.89	Sqm		
	IRRIGATION					
72	Operation & Maintenance for 4th Year:					
	Watering with tanker to landscape area and plants for one year			I		
	Water Tanker =52 Rs/ Hour,One Year Cost=92 days x 3 hrs x		4 4050			
	61rs/hr ( 365days-90 days of mansoon=275 days/3 days=92		14352			
	days,consider watering at every 3 days)		20525.2			
	Mazdoor = 0.5 days x 446.20 Add 10% For area wightage		20525.2 2052.52			
	O&M 4th year escalation of 16%		5580.35			
		Rate	42510.07			
		Tuto	12010101	loui		
	Operation & Maintenance for 4th Year:	- <b>I</b>				
	supply and fixing of irrigation lines such that all the green area	as and plant	s are adequa	telv watered.		
	means of drip irrigation for trees , sub surface for shrubs and					
73	sprinklers for lawn areas. (Equipment make - Rainbird or equivale		, ground cor	fore and pop		
10	All material used should be comply to BSI code. All the necessary		d pump requi	red for compl		
	commissioning to be installed.	ary value ar				
	(Non SOR Item)					
	Rate Approved as per EOI by MD MSCL Mangalore,Refer		E60.00			
	Sr.No.34		560.00			
	O&M 4th year escalation of 16%		89.6			
			<u>649.60</u>			

Assistant Engineer MSCL Mangaluru

Executive Engineer MSCL Mangaluru General Manager Technical MSCL Mangaluru