

2.072	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. up to floor five level excluding cost of centering, shuttering, finishing and reinforcement :1:1.5:3(1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	16.898	cum	8163.91	INR Eight Thousand One Hundred & Sixty Three and Paise Ninety One Only	137953.75
2.073	Steel reinforcement for R.C.C work including straightening, cutting, bending, placing in position and binding all complete upto plinth level Thermo - Mechanically Treated bars of grade Fe-500D or more	2112.250	kilogram	86.88	INR Eighty Six and Paise Eighty Eight Only	183512.28
2.074	Centering and shuttering including strutting, etc. and removal of form for: Walls (any thickness) including attached pilasters, buttresses, plinth and string courses etc.	121.281	sqm	644.48	INR Six Hundred & Forty Four and Paise Forty Eight Only	78163.18
2.075	Taking connection from the line of size above 100/110 mm dia to 150/160 mm dia for connecting to the branch line using PVC/GI/MS Saddle or Tee and specials including cost of saddle / Tee, all labour charges, necessary earth work excavation and refilling, bailing out water, providing fencing and caution boards etc. but excluding cost of CID/CIR joints tail pieces and specials	25.000	No	1379.77	INR One Thousand Three Hundred & Seventy Nine and Paise Seventy Seven Only	34494.25
2.076	Taking connection from the line of size upto 100/110 mm for connecting to the branch line using PVC/GI/MS Saddle and specials including cost of saddle / Tee, all labour charges, necessary earth work excavation and refilling, bailing out water, providing fencing and caution boards etc. but excluding cost of CID/CIR joints tail pieces and specials	30.000	No	1064.59	INR One Thousand & Sixty Four and Paise Fifty Nine Only	31937.70

2.077	Repair work for 1m to 2m length in 20mm (3/4 inch) house connections, using 25mm PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression specials, including trenching and refilling in all kinds of soil, hire for tools, cost of consumables and labour charges, cost of materials, including charges for lighting, watching, providing caution boards, traffic control etc. complete, but excluding the cost of cutting of concrete / tarred / bituminous roads and as per the directions of the department officers.	300.000	Nos	796.65	INR Seven Hundred & Ninety Six and Paise Sixty Five Only	238995.00
2.078	Replacing the chocked / damaged 20mm (3/4 inch) house connection with 15mm meter from existing mains, up to a length of 5m using 25mm (3/4 inch) PE Pipe, PE80, PN16, Conforming to IS 4984: 2016 or later edition and PP PN 16 Compression / GM / Brass specials viz. brass ferrule, brass hexagonal nipple, GM full way wheel valve, bend, MTA, FTA, couplers etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges but excluding cost of water meter and meter box and excluding charges for cutting the concrete / tarred / bituminous roads and as per the directions of the department officers.	300.000	Nos	5323.76	INR Five Thousand Three Hundred & Twenty Three and Paise Seventy Six Only	1597128.00
3	Providing FHTCs					0.00

3.001	<p>Providing 15mm (1/2 inch) house connection with 15mm (1/2 inch) water meter from existing PVC / HDPE mains up to 110 mm dia., up to a length of 5 m using 20mm Indian Standard Class 6 uPVC pipe and uPVC / GM / Brass specials viz. brass ferrule, GM full way wheel valve, Elbow, MTA, FTA, couplers, PVC Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.</p>	1050.0000	Nos	5304.31	<p>INR Five Thousand Three Hundred & Four and Paise Thirty One Only</p>	5569525.50
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3.002	<p>Providing 15mm (1/2 inch) house connection with 15mm (1/2 inch) water meter from existing PVC / HDPE mains from 140mm to 200mm dia., up to a length of 5 m using 20mm Indian Standard Class 6 uPVC pipe and uPVC / GM / Brass specials viz. brass ferrule, GM full way wheel valve, Elbow, MTA, FTA, couplers, PVC Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.</p>	100.0000	Nos	5484.03	<p>INR Five Thousand Four Hundred & Eighty Four and Paise Three Only</p>	548403.00
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3.003	<p>Providing 15mm (1/2 inch) house connection with 15mm (1/2 inch) water meter from existing AC / GI mains up to 125 mm dia., up to a length of 5 m using 20mm Indian Standard Class 6 uPVC pipe and uPVC / GM / Brass specials viz. brass ferrule, GM full way wheel valve, Elbow, MTA, FTA, couplers, GI / MS / SS Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.</p>	100.0000	Nos	5405.76	INR Five Thousand Four Hundred & Five and Paise Seventy Six Only	540576.00
3.004	<p>Providing 15mm (1/2 inch) house connection with 15mm (1/2 inch) water meter from existing AC / GI mains from 150mm to 200mm dia., up to a length of 5 m using 20mm Indian Standard Class 6 uPVC pipe and uPVC / GM / Brass specials viz. brass ferrule, GM full way wheel valve, Elbow, MTA, FTA, couplers, GI / MS / SS Service Saddle of suitable size etc. and connecting with the mains, testing the joints etc. complete including trenching and refilling in all kinds of soil up to a depth of 1.50m for main line tracing and trench of average cross section 0.3m x 0.75m for laying connection pipe and service pipe, fixing water meter, lighting, watching, providing caution boards, traffic control etc. complete including cost of materials, hire for tools, cost of consumables and labour charges, including the cost of tested Class B Multijet water meter with ISI mark and weather resistant PP / PE meter box of minimum size 300mm x 200mm x 150mm, but excluding charges for cutting the concrete / tarred / bituminous roads etc, and as per the direction of the departmental officers.</p>	24.0000	Nos	5484.03	INR Five Thousand Four Hundred & Eighty Four and Paise Three Only	131616.72

3.005	Providing 20mm (1/2 inch) PVC Air Valve in the water meter assembly for 15mm connection, using 20mm Indian Standard Class 6 uPVC pipes and specials including cost of materials, consumables, hire for tools and labour charges etc. complete and as per the directions of the department officers.	600.000	Nos	337.85	INR Three Hundred & Thirty Seven and Paise Eighty Five Only	202710.00
3.006	Providing 15mm PVC Tap in the water meter assembly for 15mm connection, using 20mm Indian Standard Class 6 uPVC pipes and specials including cost of materials, consumables, hire charges for tools and labour charges etc. complete and as per the direction of departmental officers.	1274.000	Nos	523.76	INR Five Hundred & Twenty Three and Paise Seventy Six Only	667270.24
3.007	Providing additional length of house connection pipe using 20mm Indian Standard Class 6 uPVC pipe and specials and testing the joints etc., by trenching and refilling in all kinds of soil with trench of average cross section 0.3m x 0.75m for laying of connection pipe and service pipe, lighting, watching, providing caution boards, traffic control etc., including cost of materials, hire for tools, cost of consumables and labour charges etc. complete, but excluding the cost of cutting of concrete / tarred / bituminous roads etc., and as per the directions of the department officers.	8000.000	metre	167.95	INR One Hundred & Sixty Seven and Paise Ninety Five Only	1343600.00
3.008	Cutting the bituminous / concrete roads with cutting machine for a minimum depth of 200mm along the sides of proposed alignment of the pipe to be laid without causing any damage to other utilities, including the charges for hire and conveyance of tools and plant, cost of consumables and charges for lighting, watching, ribbon fencing, caution boards, traffic diversion, and as per the direction of departmental officers etc. complete, before carrying out the demolition of bituminous / concrete road by mechanical means and carrying out the excavation.	5000.000	metre	26.96	INR Twenty Six and Paise Ninety Six Only	134800.00

3.009	Dismantling manually / by mechanical means disposal of unserviceable material within 50 metres lead as per direction of Engineer -in-Charge: Bituminous/ concrete road	2500.000	sqm	763.81	INR Seven Hundred & Sixty Three and Paise Eighty One Only	1909525.00
3.01	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:2:4)1 cement : 2 coarse sand : 4 graded stone aggregate 40 mm nominal size)	375.000	cum	7717.60	INR Seven Thousand Seven Hundred & Seventeen and Paise Sixty Only	2894100.00
4	Temporary restoration work					0.00
4.001	Supply ,stacking,spreading and consolidating of Quarry Muck in the trench of pipe line, including carriage, loading ,unloading & stacking up to any lead.	450.000	cum	587.15	INR Five Hundred & Eighty Seven and Paise Fifteen Only	264217.50
4.002	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	5.250	cum	7625.52	INR Seven Thousand Six Hundred & Twenty Five and Paise Fifty Two Only	40033.98
5	PWD Road restoration					0.00
5.001	Supply ,stacking,spreading and consolidating of Quarry Muck in the trench of pipe line, including carriage, loading ,unloading & stacking up to any lead.	1800.000	cum	587.15	INR Five Hundred & Eighty Seven and Paise Fifteen Only	1056870.00
5.002	PWD Code 3.6 Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacityincluding cutting and loading in tippers, trimming bottom and side slopes, in accordance withrequirements of lines, grades and cross sections, and transporting to the embankment locationwithin all lifts and lead upto 1000m	11055.000	cum	186.01	INR One Hundred & Eighty Six and Paise One Only	2056340.55

5.003	PWD Code 4.1.B.2 Construction of granular sub base by providing graded materials, mixing in a mechanical mix plant at OMC ,carriage of mixed materials to work site ,spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, completed as per clause 401 grading I -Plant Mix method	7312.500	cum	2605.94	INR Two Thousand Six Hundred & Five and Paise Ninety Four Only	19055936.25
5.004	PWD Code 4.12 Providing,laying,spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mix plant carriage of mixed materials by tipper to site ,laying in uniform layers with paver in sub -base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density	3431.250	cum	2695.80	INR Two Thousand Six Hundred & Ninety Five and Paise Eighty Only	9249963.75
5.005	PWD-12.4- Plain cement concrete 1.3.6 nominal mix in foundation with crushed stone aggregate 40 mm nominal size mechanically mixed, placed in foundation and compacted by vibration including curing for 14 days.	2.800	cum	6110.48	INR Six Thousand One Hundred & Ten and Paise Forty Eight Only	17109.34
5.006	PWD-12.8.1.C- Plain/ reinforced cement concrete in open foundation complete as per drawing and technical specification R.C.C grade M 20- using concrete mixer-(without form work)	2.800	cum	7727.96	INR Seven Thousand Seven Hundred & Twenty Seven and Paise Ninety Six Only	21638.29
5.007	PWD -12.40_ Supply, fitting and placing un-coated HYSD bar reinforcement in foundation complete as per drawing and technical specifications	0.378	MT	87164.20	INR Eighty Seven Thousand One Hundred & Sixty Four and Paise Twenty Only	32948.07
5.008	PWD 55.4 supplying and stacking36mm size hard broken stone in standard heaps for measurement.	862.500	cum	1986.60	INR One Thousand Nine Hundred & Eighty Six and Paise Sixty Only	1713442.50

5.009	PWD55.8.A Filling up pot holes (cut and formed to regular shapes and all loose and defective materials removed) after supplying a prime coat of hot bitumen using 36mm departmental broken stone and compacting with power roller to get a compact surface	862.500	cum	2875.52	INR Two Thousand Eight Hundred & Seventy Five and Paise Fifty Two Only	2480136.00
5.01	PWD Code 5.1.a providing and applying primer coat with bitumen emulsion (SS) on prepared surface of granular base including clearing of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means	9237.500	sqm	51.22	INR Fifty One and Paise Twenty Two Only	473144.75
5.011	PWD : 5.2.a Providing and applying tack coat with bitumen emulsion (RS) using emulsion pressure distributor at the rate of 0.2- 0.30 kg per sqm.	27250.000	sqm	9.93	INR Nine and Paise Ninety Three Only	270592.50
5.012	for Tarring workProviding, laying and rolling of close - graded premix surfacing material of 20mm thickness composed of 11.2 mm to 0.09 mm (Type -A) aggregates using viscosity grade bitumen (VG -30) to the required line ,grade, and level to serve as wearing course on a previously prepared base ,including mixing in a suitable HMP of appropriate capacity not less than 75 tones /hour laying and rolling with smooth wheeled roller 8-10 tone capacity and finishing to the required level and grade	487.500	sqm	170.73	INR One Hundred & Seventy and Paise Seventy Three Only	83230.88
5.013	PWD5.3.1.aProviding and laying bituminous macadam with 80-100 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with bituminous binder (VG 30), transported to site, laid over a previously prepared surface with paver finisher to the required grade, level and alignment and rolled as per clauses 501.6 and 501.7 to achieve the desired compaction. For Grading I (40 mm nominal size)	375.000	cum	7188.80	INR Seven Thousand One Hundred & Eighty Eight and Paise Eighty Only	2695800.00

5.014	PWD5.6.2.a Providing and laying bituminous concrete with 80-100 TPH hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with a bituminous binder(NRMB) @ 5.4 percent of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level, and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 507 complete in all respects For Grading - II (13.2 mm Nominal Size)	225.000	cum	9445.94	INR Nine Thousand Four Hundred & Forty Five and Paise Ninety Four Only	2125336.50
6	LSGD Road restoration					0.00
6.001	LSGD3.15.1 Compacting Original Ground(i) Compacting original ground supporting embankment Loosening, Levelling and Compacting original ground supporting embankment to facilitate placement of first layer of embankment, scarified to a depth of 150 mm, mixed with water at OMC and then compacted by rolling so as to achieve minimum dry density as given in Tables 300.1 and 300.2 for embankment construction as per Technical Specification Clause 301.4.1.	10350.000	cum	55.26	INR Fifty Five and Paise Twenty Six Only	571941.00
6.002	Supply ,stacking,spreading and consolidating of Quarry Muck in the trench of pipe line, including carriage, loading ,unloading & stacking up to any lead.	675.000	cum	1078.32	INR One Thousand & Seventy Eight and Paise Thirty Two Only	727866.00
6.003	PWD Code 3.6 Excavation for roadwork in soil with hydraulic excavator of 0.9 cum bucket capacity including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all lifts and lead upto 1000m	18900.000	cum	43.72	INR Forty Three and Paise Seventy Two Only	826308.00

6.004	LSGD4.11.2Granular sub-base/base/surface course with local materials (Table 400.13) by mix in place method normal. Construction of granular sub-base by providing local material spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at once and compacting with smooth wheel roller to achieve the desired density complete as per Clause 401.4 as per Technical Specification Clause 408.(ii)Using Gravel mix soil.	7200.000	cum	2605.94	INR Two Thousand Six Hundred & Five and Paise Ninety Four Only	18762768.00
6.005	LSGD4.9Wet Mix MacadamProviding, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the material with water at OMC in mechanical mixer (Pug Mill), carriage of mixed material by tipper to site, laying in uniform layers in sub-base/base course on a well prepared sub-base and compacting with smooth wheel roller of 80 to 100kN weight to achieve the desired density including lighting, barricading and maintenance of diversion, etc as per Tables 400.11 & 400.12 and Technical Specification Clause 406.By Mechanical Means with 1 km lead	4725.000	cum	2695.80	INR Two Thousand Six Hundred & Ninety Five and Paise Eighty Only	12737655.00
6.006	LSGD75.5.1.1pbPrime Coat - Low porosity - With Packed Bitumen RatesProviding and applying primer coat with bitumen emulsion (SS-1) on prepared surface of granular base including cleaning of road surface and spraying primer at the rate of 0.70-1.0 kg/sqm using mechanical means as per Technical Specification Clause 502	63000.000	sqm	51.22	INR Fifty One and Paise Twenty Two Only	3226860.00
6.007	LSGD75.5.2.3pbTack Coat - With Packed Bitumen RatesProviding and applying tack coat with Bitumen emulsion (RS-1) using emulsion distributor at the rate of 0.25 to 0.30 kg per sqm on the prepared granular surfaces treated with primer & cleaned with Hydraulic broom as per Technical Specification Clause 503.	63000.000	sqm	9.88	INR Nine and Paise Eighty Eight Only	622440.00

6.008	LSGD75.5.9.1.2pb20mm thick Open-Graded Premix Carpet using Bituminous (penetration grade/modified bitumen) Binder - Bitumen S-65 - Packed Bitumen Rates Providing, laying and rolling of open-graded premix carpet of 20 mm thickness composed of 13.2 mm to 5.6 mm aggregates either using penetration grade bitumen or emulsion to required line, grade and level to serve as wearing course on a previously prepared base, including mixing in a suitable plant, laying and rolling with a three wheel 80-100 kN static roller capacity, finished to required level and grades to be followed by seal coat of either Type A or Type B or Type C as per Technical Specification Clause 508. Case - I By Manual Means (II) Bitumen (S-65), including supplying and stacking of materials	63000.000	sqm	191.40	INR One Hundred & Ninety One and Paise Forty Only	1205100.00
6.009	LSGD- 75.5.12.A.3.2pb- Seal coat - Manual means - Type C - Bitumen S-65 - Packed bitumen rates Providing and laying seal coat sealing the voids in a bituminous surface laid to the specified levels, grade and cross fall using Type A, Type B and Type C as per technical specification clause 510 A. By manual means Case III : Type C (II) Bitumen (S-65), including supplying and stacking of materials.	63000.000	sqm	80.87	INR Eighty and Paise Eighty Seven Only	5094810.00
Total in Figures						226108164.27
ACCEPTED PAC						226108164.00

Twenty Two Crore Sixty One Lakh Eight Thousand One Hundred & Sixty Four Only


SUPERINTENDING ENGINEER
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 Kerala Water Authority
 Public Health Circle, Thrissur