

Sector C Commercial Layout

Item	Work Description	Detail Specifications
Water Supply	Installation,testing and commissioning of MDPE & HDPE pipes and fittings for Domestic water supply and Garden Hydrant system work	Lowering, Laying & Jointing of Following MAINS Pipe sizes
		63MM
		90MM
		Fixing of Sluice Valves on following Pipe Sizes
		63MM & 90MM (2" & 3" Valve)
		Excavation and Backfilling of Trenches for Strata
		Soft Soil for pipe size 63, 90 & 110MM Pipes
		Earth work in excavating trenches by mechanical means (Hydraulic Excavator)/ manual mean in all kinds of soil of required width for sewerage pipe line, cables etc, including excavation for sockets and dressing of sides, ramming of bottoms and getting out the excavated soil, stacking the soil for back filling the trenches (to be laid after laying of necessary pipe as required) within a lead of 50m and as directed by Engineer in charge.(<i>Sewer & drainage line shall be excavated in conjunction and shall be paid only once in this item.</i>)
		Upto depth of 1.5 M.
		Same as above but for depth exceeding 1.5 M but not exceeding 3.0 M .
		Return filling (as excavated soil corresponding to Item No.1 above) soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering etc. and disposing of the surplus excavated soil as directed by Engineer in charge.
		MANHOLE CONSTRUCTION
		Constructing brick masonry circular type manhole (TYPE -I) 0.91m internal dia at bottom and 0.56m dia at top using Non Modular first class bricks of class designation 100 in cement mortar 1:6 (1 cement :6 stone dust), in side cement plaster 12 mm thick with cement mortar 1:2:2 (1 cement : 2 coarse sand : 2 stone dust) finished with a floating coat of neat cement, 200mm thick foundation concrete 1:4:8 mix (1 cement : 4 stone dust : 8 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 stone dust : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement, all complete as per standard design : (Excavation and back filling for manhole shall be paid seperately in respective BOQ items)

Sewer Line

Laying and Jointing Sewer Lines, Construction of Brick Manholes and other associated works

0.91 m deep with S.F.R.C. cover and frame (cover & frame being supplied free of cost at the company's Store) fixed in cement mortar 1:2 (1 cement : 2 Stone dust) etc complete
Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91m to 1.67m (Note:- This rate is applicable for higher depth in (+) Plus and lesser depth in (-) Minus also as per site)
Constructing brick masonry circular type manhole (TYPE - II) 1.22 m internal dia at bottom and 0.56m dia at top using Non Modular first class bricks of class designation 100 in cement mortar 1:6 (1 cement :6 stone dust), in side cement plaster 12 mm thick with cement mortar 1:2:2 (1 cement : 2 coarse sand : 2 stone dust) finished with a floating coat of neat cement, 200mm thick foundation concrete 1:4:8 mix (1 cement : 4 stone dust : 8 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 stone dust : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement, all complete as per standard design : (Excavation and back filling for manhole shall be paid seperately in respective BOQ items)
1.68 m deep with S.F.R.C. cover and frame (cover & frame being supplied free of cost at the company's Store) fixed in cement mortar 1:2 (1 cement : 2 Stone dust) etc complete
Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 1.68 m to 2.29 m: (Note:- This rate is applicable for higher depth in (+) Plus and lesser depth in (-) Minus also as per site)
Constructing brick masonry circular type manhole (TYPE - III) 1.52 m internal dia at bottom and 0.56m dia at top using Non Modular first class bricks of class designation 100 in cement mortar 1:6 (1 cement :6 stone dust), in side cement plaster 12 mm thick with cement mortar 1:2:2 (1 cement : 2 coarse sand : 2 stone dust) finished with a floating coat of neat cement, 200mm thick foundation concrete 1:4:8 mix (1 cement : 4 stone dust : 8 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 stone dust : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement, all complete as per standard design : (Excavation and back filling for manhole shall be paid seperately in respective BOQ items)
2.30 m deep with S.F.R.C. cover and frame (cover & frame being supplied free of cost at the company's Store) fixed in cement mortar 1:2 (1 cement : 2 Stone dust) etc complete
Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m to 2.85 m: (Note:- This rate is applicable for higher depth in (+) Plus and lesser depth in (-) Minus also as per site)
Laying of non-pressure NP2 / NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 (1 cement :2 fine sand) to required line and level as per drawing etc. complete includingtesting of joints etc complete.
200mm dia R.C.C. pipe

		250mm dia R.C.C. pipe MISCELLANEOUS P/L cement concrete 1:4:8 with 20 mm nominal aggregate in bedding & haunching complete in all respect as per design, drawing and specifications and as directed by EIC.
		Earth work in excavating trenches by mechanical means (Hydraulic Excavator)/ manual mean in all kinds of soil of required width for sewerage pipe line, cables etc, including excavation for sockets and dressing of sides, ramming of bottoms and getting out the excavated soil, stacking the soil for back filling the trenches (to be laid after laying of necessary pipe as required) within a lead of 50m and as directed by Engineer in charge. <i>(Sewer & drainage line shall be excavated in conjunction and shall be paid only once in this item.)</i> Upto depth of 1.5 M. Same as above but for depth exceeding 1.5 M but not exceeding 3.0 M . Return filling (as excavated soil corresponding to Item No.1 above) soil as required, in layers not exceeding 20 cm in depth, including consolidating each deposited layer by ramming, watering etc. and disposing of the surplus excavated soil as directed by Engineer in charge. MANHOLE CONSTRUCTION Constructing brick masonry circular type manhole (TYPE -I) 0.91m internal dia at bottom and 0.56m dia at top using Non Modular first class bricks of class designation 100 in cement mortar 1:6 (1 cement :6 stone dust), in side cement plaster 12 mm thick with cement mortar 1:2:2 (1 cement : 2 coarse sand : 2 stone dust) finished with a floating coat of neat cement, 200mm thick foundation concrete 1:4:8 mix (1 cement : 4 stone dust : 8 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 stone dust : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement, all complete as per standard design : (Excavation and back filling for manhole shall be paid separately in respective BOQ items) 0.91 m deep with S.F.R.C. cover and frame (cover & frame being supplied free of cost at the company's Store) fixed in cement mortar 1:2 (1 cement : 2 Stone dust) etc complete Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91m to 1.67m (Note:- This rate is applicable for higher depth in (+) Plus and lesser depth in (-) Minus also as per site)

<p>Storm Water Line</p>	<p>Laying and Jointing Drainage Lines, Construction of Brick Manholes and other associated works</p>	<p>Constructing brick masonry circular type manhole (TYPE - II) 1.22 m internal dia at bottom and 0.56m dia at top using Non Modular first class bricks of class designation 100 in cement mortar 1:6 (1 cement :6 stone dust), in side cement plaster 12 mm thick with cement mortar 1:2:2 (1 cement : 2 coarse sand : 2 stone dust) finished with a floating coat of neat cement, 200mm thick foundation concrete 1:4:8 mix (1 cement : 4 stone dust : 8 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 stone dust : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement, all complete as per standard design : (Excavation and back filling for manhole shall be paid seperately in respective BOQ items)</p> <p>1.68 m deep with S.F.R.C. cover and frame (cover & frame being supplied free of cost at the company's Store) fixed in cement mortar 1:2 (1 cement : 2 Stone dust) etc complete</p> <p>Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 1.68 m to 2.29 m: (Note:- This rate is applicable for higher depth in (+) Plus and lesser depth in (-) Minus also as per site)</p> <p>Constructing brick masonry circular type manhole (TYPE - III) 1.52 m internal dia at bottom and 0.56m dia at top using Non Modular first class bricks of class designation 100 in cement mortar 1:6 (1 cement :6 stone dust), in side cement plaster 12 mm thick with cement mortar 1:2:2 (1 cement : 2 coarse sand : 2 stone dust) finished with a floating coat of neat cement, 200mm thick foundation concrete 1:4:8 mix (1 cement : 4 stone dust : 8 graded stone aggregate 40mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 stone dust : 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement, all complete as per standard design : (Excavation and back filling for manhole shall be paid seperately in respective BOQ items)</p> <p>2.30 m deep with S.F.R.C. cover and frame (cover & frame being supplied free of cost at the company's Store) fixed in cement mortar 1:2 (1 cement : 2 Stone dust) etc complete</p> <p>Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m to 2.85 m: (Note:- This rate is applicable for higher depth in (+) Plus and lesser depth in (-) Minus also as per site)</p> <p>Laying of non-pressure NP2 / NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 (1 cement :2 fine sand) to required line and level as per drawing etc. complete includingtesting of joints etc complete.</p> <p>250mm dia R.C.C. pipe</p> <p>300mm dia R.C.C. pipe</p> <p>MISCELLNEOUS</p> <p>P/L cement concrete 1:4:8 with 20 mm nominal aggregate in bedding & haunching complete in all respect as per design, drawing and specifications and as directed by EIC.</p>
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Road	Construction of Bituminous Road (9M,12M,18M,24M,30M & 45M Wide Road)	Excavation in Soil using Hydraulic Excavator and Tippers with disposal upto 3000 metres. (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, minning permission cost and transporting to the embankment location within all lifts and lead upto 3000m)
		Preparation & consolidation of subgrade with power road roller with 8-12 tonnes capacity after excavation earth to an average of 22.5 cm depth, dressing to camber & consolidating to road roller including making good the undulation etc . & re-rolling the subgrade & disposal the surplus earth with lead up to 50.0 mtrs.
		Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. With material conforming to Grade-I (size)
		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 Material 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.
		Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means.
		Providing & Laying dense bituminous macadam with 100-120 TPH Batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading ,pre mixed with bituminous binder @4.5 percent of the mix with 60/70 bitumen (VG-30) and filler ,transporting the hot mix to works site laying with a hydrostatics paver finisher with sensor control to the required grade , level & alignment rolling with smooth wheeled , vibratory and tandem roller to achieve the desired compaction as per MORTH specification clause no 508 complete in all respects as per entire satisfaction of engineer -in-charge. (Complete all respect with material & resources shall be in scope of Contractor)
Electrification	Installation, testing and commissioning of transformer, laying of HT & LT Cable, Installation of LT panels and street lights.	Transformer 11/0.4 KV - 1000 KVA
		HT Cable 3C X 300 sqmm XLPE Armoured Aluminium cable
		LT Cable 3.5C X 300 sqmm XLPE Armoured Aluminium cable
		Service cables of size 4C X 25 sqmm, 4C X 16 sqmm and 4C X 10 sqmm XLPE Armoured Aluminium cable
		Staggered street light MS Poles 9 meter high with LED light fitting of 45 watt
		LT Panels of Incoming – 630 Amp , Outgoing – MCCB 100 Amp, MCB 63 Amp & 32 Amp. with dust and waterproof protection