

BILL OF QUANTITIES

SN	Item Code	Descriptions of items	Unit	Qty	Rate (Nu)	Amount (Nu)	Remarks
SECTION 1: GENERAL							
1.1	A/R	Installation of labor camps, contractor's site office, accommodation with proper toilets and sanitation, stores, signage, water supply, electricity, lab facilities including equipment etc. as per Technical Specification.	LS	1.00			
Sub-total =							
SECTION 2: EARTH WORK (Excavation & Embankment)							
2.1	A/R	Excavation of road formation with excavator including disposal of muck to designated dump yards and clearing, grubbing and removal of bushes - all kinds of soil and rock. The item to be executed correct to specified batter slope, road width, gradient and to the Technical Specifications.	m	12,000.00			
2.2	A/R	Construction of Embankment with an approved material deposited at site from roadway cutting. Spreading and compaction of soil embankment by vibratory roller as per Technical Specification	Cum	18,333.23			
Sub-total =							

SECTION 3: PERMANENT WORKS							
a) L-DRAIN							
3.1	A/R	Construct L-shaped road side drain clear width 800 mm with 150mm thick PCC 1:3:6, 300mm thick plum concrete (60% PCC 1:3:6 and 40% 75mm down boulder) hill side, including excavation, leveling, backfilling, necessary form works and disposal of surplus earth within 50m lead complete as per drawing.	m	10,000.00			
3.2	A/R	Construct box-drain with clear width 450 mm with 150mm thick base PCC 1:3:6, 300mm thick plum concrete (60% PCC 1:3:6 and 40% 75mm down boulder), including excavation, leveling, backfilling, necessary form works and disposal of surplus earth within 50m lead complete as per drawing.	m	2,000.00			
b) RRM WALL							
3.3	A/R	Excavation in foundation trenches or drains not exceeding 1.5 m in width or areas 10 sqm on plan, including dressing and ramming, disposal of surplus soil within 50 m lead and 1.5 m lift for all kinds of soil and rock.	Cum	7,671.22			
3.4	RC0090	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork (Foundation and plinth etc.)	Sqm	247.40			

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3.11	A/R	Construction of Gabion wall using gabion boxes with dry stone hammer dressed facing as per drawings, including excavation of foundations in all types of soil/rock, sides and backfilling, delivery of materials etc. complete.					
	RW0067	Height up to 3.0m	m	207.00			
	RW0065	Height up to 1.0 m (Toe wall)	m	128.00			
d) RCC CULVERTS							
3.12	A/R	Excavation in foundation trenches or drains not exceeding 1.5 m in width or areas 10 sqm on plan, including dressing and ramming, disposal of surplus soil within 50 m lead and 1.5 m lift for all kinds of soil and rock.	Cum	3,058.18			
3.13	RC0090	Providing & fixing centering and shuttering (formwork), including strutting, propping etc. and removal of formwork (Foundation and plinth etc.)	Sqm	940.99			
3.14	CW0005	Providing and laying in position plain cement concrete excluding the cost of centering and shuttering - All work upto plinth level. 1:3:6 (1 cement : 3 sand : 6 graded crushed stone 20 mm nominal size.	Cum	199.12			
3.15	A/R	Providing and Laying Random Rubble Masonry in CM 1:4 in road side structures incl. headwalls, wingwalls, catchpit, channels. Weep holes to be provided as per drawing.	Cum	776.94			

3.16	A/R	Backfilling of structures including masonry walls with graded filter material as directed by Engineer	Cum	731.52			
3.17	A/R	Selected backfilling behind structures, trenches, sides of foundations with suitable material incl lead and lift	Cum	1,070.40			
3.18	RC0083	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 500 MPa) for R.C.C work including cutting, bending, binding and placing in position complete - Culvert	kg	25,270.76			
3.19	A/R	Providing & laying reinforced cement concrete (M25 grade) works in suspended floor, roofs having slope upto 15°, landings, balconies, shelves and chajjas upto floor five level excluding the cost of centering, shuttering and reinforcement.	Cum	167.04			
3.20	A/R	Providing and Laying PCC (M25) under the deck slab as per drawing.	Cum	63.48			
3.21	SM0072	Providing and laying Hand packed stone filling or soling with stones.	Cum	163.70			
3.22	CW0011	Providing and laying in position plain cement concrete excluding the cost of centering and shuttering - All work upto plinth level. 1:5:10 (1 cement : 5 sand : 10 graded crushed stone 40 mm nominal size.	Cum	84.48			

3.23	PL0041	P&L 20mm cement plaster - C.M 1:4	Cum	758.17			
Sub-total =							
SECTION 4: PAVEMENT WORKS							
4.1	A/R	Preparation of sub grade with proper camber by excavating earth to depth equal to pavement thickness, consolidation with roller, disposal of surplus earth up to 50m. All kinds of soil/rock.	Cum	25,200.00			
4.2	A/R	Providing and laying Granular Sub-Base (GSB) Course to required degree of compaction with proper formation of cross fall using motor grader for laying and compacted to required density as per material gradation and aggregate quality specified. 250 mm thick.	Cum	10,500.00			
4.3	A/R	Providing and laying Wet Mix Macadam (WMM) graded aggregate base course to required degree of compaction with proper formation of cross fall by using well graded crushed aggregates premixed with OMC using suitable mixer, motor grader as per material gradation and aggregates quality specified. 225 mm thick.	Cum	17,550.00			
4.4	A/R	Provide and place road shoulder to required degree of compaction as per technical specification and drawing	Cum	10,800.00			

4.5	A/R	Providing and Laying Dense Bituminous Macadam (DBM) to required degree of compaction based on mix design (job mix formula) approved by the supervising engineer including preparation of surface with road broom, application of prime coat @ 0.75 kg/sq.m by mechanized method using asphalt plant, paver, vibratory roller, steel roller, etc. complete – 75mm thick	Sqm	78,000.00			
4.6	A/R	Providing and Laying Asphalt/Bituminous Concrete to required degree of compaction based on the job mix design approved by the supervising engineer using asphalt plant, paver, steel roller, vibratory roller, pneumatic roller etc. as per material gradation and aggregate quality specified. 50 mm thick	Sqm	78,000.00			
4.7	RW0145	Scarifying metalled (water bond) road surface disposal of rubbish upto 50m and consolidation of the aggregate received from scarifying.	Sq.m	78,000.00			
Sub-total =							
SECTION 5: PROTECTIVE WORKS							
5.1	A/R	Providing and constructing Log Barrier. Suitable logs to be obtained from authorized tree felling operations from the ROW	m	60.00			

5.2	A/R	Providing and constructing boulder barriers as directed by the Engineer					
		Height 1.5 m	m	120.00			
Sub-total =							
SECTION 6: BIO-ENGINEERING WORKS							
6.1	RW0233	Supply and live stacking	m	500.00			
6.2	RW0234	Supply and plant live pegs for brush layering	m	1,000.00			
Sub-total =							
SECTION 7: INSTALLATION OF CRASH BARRIER							
7.1	AR	Providing and erecting a "W" metal beam crash barrier comprising of 3mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150X75x5mm spaced 2m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanized by hot dip process, all fittings to conform to IS: 1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150x75x5mm, 330mm long all complete as per technical specifications and as directed by the Engineer-In-Charge	m	3,200.00			
Sub-total =							

SECTION 8: DAYWORKS							
8.1 LABOR							
8.1(a)		Skilled	Man-day				
8.1(b)		Carpenter	Man-day				
8.1(c)		Unskilled	Man-day				
8.1(d)		Plumber	Man-day				
8.2 MATERIAL							
8.2(a)		Cement	MT				
8.2(b)		Sand	Cum				
8.2(c)		Hume Pipe NP3 – 600 mm dia	No				
8.2(d)		Hume Pipe NP3 – 300 mm dia	No				
8.2(e)		HDPE Pipe 90 mm dia	m				
8.2(f)		Aggregate – 20 mm	Cum				
8.2(g)		Aggregate – 10 mm	Cum				
8.2(h)		Boulder	Cum				
8.2(i)		Timber	Cft				
8.2(j)		HDPE Pipe (1/2'' to 3'' dia)	m				
8.2(k)		GI Pipe (1/2'' to 3'' dia) including GI fittings	m				
8.3 MACHINERY							
8.3(a)		Excavator PC 200	Hr				

8.3(b)		Pay loader	Hr				
8.3(c)		Tipper Truck	Hr				
8.3(d)		Vibratory Roller	Hr				
8.3(e)		Power chainsaw	Hr				

