

SCHEDULE : A**NAME OF WORK: CONSTRUCTION OF NEW ROADS (PHASE IV) AT NIT, ROURKELA.****BT ROAD: ACADEMIC area, Golden jubilee ring road, FR Inside, FE front upto post office and D flat road. And any other short road****EARTH WORK AND WMM : Outer periphri road from South kantajhar road to Tower 2,**

SL NO	ITEM & DESCRIPTION	UNIT	QTY	RATE	AMOUNT
1	Earth work in excavation of foundation of structures as per drawing & technical specification including setting out, construction of shoring and bracing, removal of stumps and other deleterious matters, dressing of side and bottom and back filling with approved material, complete as per direction of engineer incharge. All kind of soil including dewatering as per site condition & transportation of debris up to 1Km as per site.				
(a)	By manual / mechanical means depth up to 3m.	Cum.	73500.00	107.37	7891695.00
(b)	By manual / mechanical means depth 3m. To 6m.	Cum.	240.00	124.78	29947.20
2	Earth work in excavation of foundation of structures as per drawing and technical specification including setting out construction of shoring & bracing removal of stumps & other deleterious mater, dressing of sides & bottom & back filling with approved material complete as per direction of engineer In charge. Ordinary rock including dewatering as per site condition & transportation of debris up to 1Km as per site.				
(a)	By Mechanical means depth up to 3m.	Cum.	150.00	154.93	23239.50

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3	Earth work excavation of foundation of structures as per drawing & technical specification, including setting out, construction of shoring and bracing, removal of stums & other deleterious matter, dressing of sides & bottom & back filling with approved material complete as per direction of Engineer In Charge. MARSHY SOIL including dewatering as per site condition & transportation of debris up to 1 km as per site By manual / mechanical means depth upto 3mtrs.	Cum.	60.00	232.75	13965.00
4	Carriage of excavated earth including loading & stacking as per the instruction of Engineer In Charge. Lead up to 1KM.	Cum.	150.00	41.00	6150.00
5	Filling available excavated earth (excluding rock in trenches plinth side of foundation etc in layers not exceeding 20 cm in depth, consolidating deposited layers by ramming & watering lead up to 50m & lift upto 1.5m back filling in MARSHY foundation pits.	Cum.	240.00	167.49	40197.60
6	Suppling & filling in plinth with local river sand filling in foundation, trenches as per drawing & technical specification including watering ramming consolidating & dressing complete.	Cum.	300.00	334.96	100488.00
7	Providing & Laying in position Cement Concrete of specified grade excluding the cost of centering & shuttering all work up to plinth level. Plain cement concrete 1:3:6 normal mix in foundation with crushed stone aggregate 40mm normal size mechanically mixed placed in fondation & compacted by vibration including curing for 14 days.	Cum.	30.00	3591.76	107752.80
8	Providing & construction brick masonry work in cement motar 1:3 in foundation complete excluding pointing & plastering, as per drawing & technical specifications complete in all respect as per direction of engineer in charge.	Cum.	30.00	3488.67	104660.10

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9	Providing & Laying in position reinforced/plain cement concrete of specified grade including the cost of centering & shuttering plain/reinforced cement concrete in open foundation complete as per drawing & technical specification. All work including required form work & shuttering & removal of the same completely by vibration including curing 14 days as per direction of engineer in charge up to foundation.				
(a)	P.C.C grades(1:2:4) nominal mix	Cum.	18.00	4509.28	81167.04
(b)	R.C.C grades M20 (1:1.5:3) nominal mix	Cum.	6.00	5112.48	30674.88
(c)	R.C.C grades M25 (1:1:2) nominal mix	Cum.	24.00	5568.22	133637.28
10	Supplying filling & placing uncoated HYSD bar reinforcement in foundation complete as per drawing & technical specification complete as per direction of Engineer-in-charge up to foundation (invert level of stream/nalla substructure).	Kg	300.00	66.78	20034.00
11	Providing & laying in position reinforced/plain cement concrete of specified grade including the cost of centering & shuttering plain/reinforced cement concrete in open foundation complete as per drawing & technical specification. All work including required form work & shuttering & removal of the same complete by vibration including curing for 14 days as per direction of Engineer-in-charge up to ground level (invert level to embankment level.)				
(a)	R.C.C grades M20 (1:1.5:3) nominal mix upto 5m height from invert level.	Cum.	6.00	5407.43	32444.58
(b)	R.C.C grade M25 (1:1:2) nominal mix up to 5m height from invert level.	Cum.	6.00	5903.66	35421.96

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12	Providing and construction brick masonry work in cement mortar 1:3 in foundation complete excluding pointing and plastering as per drawing & technical specifications complete in all respect as per direction of Engineer-in-charge upto ground level/invert level to embankment level & above	Cum.	42.00	3751.75	157573.50
13	Supplying, fitting & placing un coated HYSD bar reinforcement in foundation complete as per drawing & technical specification complete s per direction of engineer in charge up to ground level (invert level to emankment top level)	Kg.	300.00	60.70	18210.00
14	Providing 'Weep' holes in brick massonry plain / reinforced cement concrete, abutment, wing wall / returned wall with 75 dia PVC pipe extending through the full width of the structure with slope of 1 V 20 H to wards drawing force complition as per drawing & technical specification and direction of engineer incharge (Rate including, cutting, providing all materials) and refitting complete.	Nos.	60.00	247.29	14837.40
15	Providing & laying bouldern apron on river bed for protection against scour with stone boulders weighing not less than 40kg each complete as per drawing and technical specification. Boulder laid Dry without wire crates .	Cum.	60.00	1817.23	109033.80
16	Brick work with F.P.S bricks of class designation 75 in Super structure above plinth levell upto V floor level in all shapes and size in Cement mortar 1:6 (1cement: 6 sand) (above plinth)	Cum.	12.00	3318.10	39817.20
17	15mm cement plaster finished with a floating coat of neat cement of mix 1:4 (1 cement: 4 Sand)	Sq.M	15.00	122.66	1839.90
18	15mm cement plaster of mix 1:6 (1 cement: 6 Sand)over rough side of half brickwork	Sq.M	30.00	84.69	2540.70
19	20mm cement plaster of mix 1:6 (1 cement: 6 Sand)	Sq.M	24.00	102.34	2456.16
20	White washing with KATNI lime to give an even shade				

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	New work (Three or more coat	Sq.M	60.00	10.01	600.60
21	Providing & back filling behind abutment, wing wall & returnwall complete as per drawing & technical specification. Including ramming watering etc. all complete as per direction of Engineer in Charge(Rate including ,material, labour, transportation all)				
(a)	Granular materials (Morrum)	Cum.	60.00	306.55	18393.00
(b)	Granular Material (Sand)	Cum.	45.00	436.99	19664.55
22	Demolishing cement concrete manually/ by mechanical means including disposal of materials with in 50mtr lead as per direction of Engineer in Charge.				
	Cement concrete 1:3:6 or richer Mix	Cum	12.00	405.36	4864.32
23	Demolishing cement concrete manually/ by mechanical means including disposal of materials with in 50mtr lead as per direction of Engineer inCharge.				
	Cement concrete 1:4:8 or leanear Mix	Cum	3.00	249.75	749.25
24	Providing and laying non pressure NP2 class (light duty) R.C.C pipes with collars jointed with Stiff mixture of cement mortar in proportion of 1:2 (1 cement: 2 sand) including testing of joints etc complete				
	450mm dia R.C.C pipe	RM	30.00	1067.95	32038.50
	600mm dia R.C.C pipe	RM	36.00	1483.41	53402.76
	1000 mm dia R.C.C pipe	RM	60.00	3036.04	182162.40
	1200 mm dia R.C.C.hung pipe (NP3)	RM	60.00	4610.00	276600.00
25	Dry stone pitching on the sides of bank, roads for retaining of earth of minimum thickness of 300mm (Not Exceeding 30Cm in depth 1.5m in width but exceeding 10 Sq.M on Plan) on a bed of sand including filling joints with river sand complete as per direction of Engineer in charge including earh work sand all complete (work incuding all labour and materials). (measurement done on Sq.M)	Sq.M	1950.00	364.71	711184.50

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26	Grass turving with doob or other type of grass on sloping portion of roads, embankment, channel etc including watering and maintenance of the turving for 30 days or more till the grass forms a thick lawn free from weeds and fit for mowing including supplying good earth if needed (cost of the good earth and other material such as sludge and dump manure and cost of labour included) including mixing and spreading of all materials at site.	Sq.M	3000.00	30.84	92520.00
27	Stone pitching on the side of bank, road for retaining of earth of minimum thickness of 300mm (not exceeding 30cm in depth 1.5m in width but exceeding 10sqm in plan) on a bed of cement mortat 1:4 including filling joints with cement mortar 1:4 (1cement & 4sand) complete as per direction of Engineer In Charge including earth work, cement mortar & sand all complete (work including all labour & materials) measurement will be on Sqm. basis.	Sq.M	60.00	502.89	30173.40
28	Providing & laying for admixing sand and mormum and laying subbase in shoulder in layers not exceeding 22.5cm watering and compacting to the required density in OMC with Prr including cost and conveyance of sub base materials and cost of all labours and hire charges of T&P required for work including cost, conveyance of all materials, taxes, cess, royalties, cost of all labour with T&P etc complete as per specification and direction of Engineer-In-charge.	Cum.	4800.00	383.06	1838688.00
29	Construction of granular sub-base by providing close graded 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 desired density, complete as per clause 401	Cum.	2394.00	1385.88	3317796.72

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30	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.	Cum.	6015.00	1778.57	10698098.55
31	Providing and laying dense graded bituminous macadam with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.0 to 4.5 per cent by weight of total 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.	Cum.	1041.00	7891.00	8214531.00
32	Providing and laying semi dense bituminous concrete with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder @ 4.5 to 5 per cent 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. 508 complete in all respects	Cum.	520.00	8196.00	4261920.00
33	Providing and applying primer coat with bitumen emulsion on prepared surface of granular Base including cleaning of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means.	Sq.M	20880.00	33.92	708249.60

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34	Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.20 kg per sqm on the prepared bituminous/granular surface cleaned with mechanical broom.	Sq.M	20880.00	11.43	238658.40
35	Preparation & consolidation of sub grade with power road roller of 8-12 tonne capacity after excavating earth to an average of 22.5 cm depth, dressing to camber & consolidation with road roller including making good the undulation etc. and rerolling the subgrade & disposal of surplus earth & lead up to 50 metre .	Sq.M	64170.00	38.45	2467336.50
36	Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M 20 grade PCC on M-10 grade foundation 150 mm thick. Foundation having 150 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 408	RM	11310.00	224.25	2536267.50
37	Painting lines, dashes, arrows etc on roads in two coats on new work with ready mixed road marking paint conforming to IS:164 on bituminous surface, including cleaning the surface of all dust, dirt and other foreign matter, demarcation at site and traffic control	Sq.M	1898.85	86.80	164820.18
38	Providing and fixing of road stud 100x 100 mm, die-cast in aluminium, resistant to corrosive effect of salt and grit, fitted with lense reflectors, installed in concrete or asphaltic surface by drilling hole 30 mm upto a depth of 60 mm and bedded in a suitable bituminous grout or epoxy mortar, all as per BS 873 part 4:1973				
	Reflective Road studs (Cats eye)	Each	600.00	259.00	155400.00
	Solar Road studs with 6 lights (Solar powered road studs) (Solar cats Eye)	Each	600.00	450.00	270000.00
				TOTAL=	45291903.33