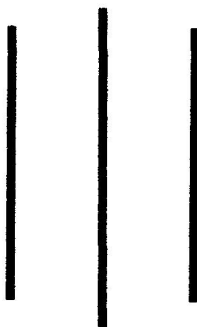
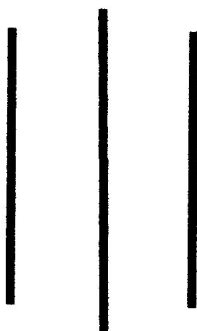


**Government of Nepal
Madhyapur Thimi Municipality
Office of Municipality
Bagmati Province
Bhaktapur**



Analysis of Rates of Road Works

CONTRACT



FY 079/080

Madhyapur Thimi Municipality
Office of the Municipal Executive
 (According to Work Norms of Department of Roads and Agricultural Roads)
SUMMARY OF RATE ANALYSIS FOR ROADS FOR FY 079/080

SN	SECTION	Ref. to SS	DESCRIPTION	For Contract Works	
				UNIT	Rate With Overhead
	Section 1		GENERAL		
1	Item No 1.30	110	Providing and installation of project signboards with size of 1.8 x 1.2 m as per specification and instruction of engineer.	nos	6,405.50
	Section 2		SITE CLEARANCE		
2	Item No 2.01	201	(I) Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable Material to be used or auctioned, up to a lead of 30 meters including removal and disposal of top organic soil not exceeding 150 mm in thickness.		
			(i) By Manual Means		
			a) In area of light jungle (less than 15 number per 100 sqm)	sqm	20.70
			b) In area of thorny jungle (more than 15 numbers per 100 sqm)	sqm	31.05
			c) Felling and uprooting of bamboo clearing the area, stacking of bamboo and disposing of wastes	sqm	2,070.00
			(ii) By Mechanical Means		
			a) In area of light jungle (less than 15 number per 100 sqm)	sqm	5.53
			b) In area of thorny jungle (more than 15 numbers per 100 sqm)	sqm	5.84
			c) Felling and uprooting of bamboo clearing the area, stacking of bamboo and disposing of wastes	sqm	697.46
		201	(II) Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable Material to be used or auctioned, up to a lead of 1000 meters including removal and disposal of top organic soil not exceeding 150 mm in thickness.		
			(i) By Manual Means		
			a) In area of light jungle (less than 15 number per 100 sqm)	sqm	28.19
			b) In area of thorny jungle (more than 15 numbers per 100 sqm)	sqm	35.04
			c) Felling and uprooting of bamboo clearing the area, stacking of bamboo and disposing of wastes	sqm	2,819.21
			(ii) By Mechanical Means		
			a) In area of light jungle (less than 15 number per 100 sqm)	sqm	7.34
			b) In area of thorny jungle (more than 15 numbers per 100 sqm)	sqm	7.76
			c) Felling and uprooting of bamboo clearing the area, stacking of bamboo and disposing of wastes	sqm	806.77
3	Item No 2.02	201	Cutting of Trees, including cutting of Trunks, Branches and Removal Cutting of trees, including cutting of trunks, branches and removal of stumps, roots, stacking of serviceable Material with all lifts and up to a lead of 1000 meters and earth filling in the depression/pit.		
			(i) Girth from 300 mm to 600 mm	nos	1,130.93
			(ii) Girth from 600 mm to 900 mm	nos	3,392.80
			(iii) Girth from 900 mm to 1800 mm	nos	8,855.60
			(iv) Girth from 1800 - 2500 mm	nos	20,586.51
			(v) Girth above 2500 mm	nos	67,856.04
4	Item No 2.03	201	Clearing Grass and Removal of Rubbish and Dressing and levelling the construction surface		
			Clearing grass/ top soil and removal up to a distance of 50 meters outside the periphery of the area , including cutting and filling of small undulation.		
			By Manual Means		
5	Item No 2.04	202	Dismantling of Structures	sqm	10.35
			Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including scaffolding wherever necessary, sorting the dismantled Material, disposal of unserviceable Material and stacking the serviceable Material with all lifts and lead of 1000 meters		
			(i) Lime /Cement Concrete		
			(I) By Manual Means		
			(a) Lime Concrete, cement concrete grade M-10 and below	cum	1,713.65
			(b) Cement Concrete Grade M-15 & M-20	cum	2,024.15
			(c) Pre-stressed / Reinforced cement concrete grade M-20 & above	cum	4,462.30

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SUMMARY OF RATE ANALYSIS FOR ROADS FOR FY 079/080

SN	SECTION	Ref. to SS	ITEMS DESCRIPTION	For Contract Works	
				UNIT	Rate With Overhead
			(II) By Mechanical Means		
			(a) Cement Concrete Grade M-15 & M-20		
			(b) Pre-stressed / Reinforced cement concrete grade M-20 & above	cum	3,013.89
			(ii) Dismantling Brick/Tile Work	cum	3,565.89
			a. In Lime Mortar		
			b. In Cement Mortar	cum	1,092.65
			c. In Mud Mortar	cum	1,978.30
			d. Dry Brick Pitching or Brick Soling	cum	989.15
			(iii) Dismantling Stone Masonry	cum	1,092.65
			a. Random rubble stone masonry in cement mortar	cum	1,978.30
			(iv) Removing all type of Hume Pipes and Stacking within a lead of 50 metres including Earthwork and Dismantling of Masonry Works.		
			i) upto 600mm dia.	rm	675.17
			ii) above 600mm to 900mm dia.	rm	994.98
			iii) above 900mm dia.	rm	1,421.40
6	item no:2.50	202	(i) Dismantling of Flexible Pavements		
			Dismantling of flexible pavements and disposal of dismantled Material up to a lead of 1000 metres, stacking serviceable and unserviceable Material separately		
			(I) By Manual Means		
			(a) Bituminous courses	cum	2,495.80
			(b) Granular courses	cum	2,185.30
			(II) By Mechanical Means		
			(a) Bituminous courses	cum	1,340.05
7	item no:2.60	202	Dismantling of Cement Concrete Pavement		
			Dismantling of cement concrete pavement by mechanical means using pneumatic tools, breaking to pieces not exceeding 0.02 cum in volume and stock piling at designated locations and disposal of dismantled Material up to a lead of 1000 metres, stacking serviceable and unserviceable Material separately	cum	3,822.49
8	item no:2.70	202	Removal of Telephone / Electric Poles and Lines		
			Removal of telephone / Electric poles including excavation and dismantling of foundation concrete and lines under the supervision of concerned department, disposal with all lifts and up to a lead of 1000 metres and stacking the serviceable and unserviceable Material separately	nos	923.93
9	item no:2.80.		Dismantling gabion works including stockpiling the reusable materials and disposal of reusable materials within 50m lead	cum	1,208.19
	Section 4		FENCING		
10	item no:4.1.a	404	GI Barbed wire fencing		
	a.		GI Barbed wire fencing 1.2m high with RCC Post		
			Providing and fixing 1.2m high GI barbed wire fencing with 1.8m RCC posts 150mm*150mm placed every 3m center to center founded in M15 grade cement concrete, 0.6m below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on end post one side only and provided with 9 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc., complete as per Drawing and Technical Specification	m	983.33
11	b.	404	GI Barbed wire fencing 1.8m high with RCC Post		
			Providing and fixing 1.8m high GI barbed wire fencing with 12.4m RCC posts 150mm*150mm placed every 3m center to center founded in M15 grade cement concrete, 0.6m below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on end post one side only and provided with 9 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc., complete as per Drawing and Technical Specification	m	1,322.30
12	c.	404	GI Barbed wire fencing 1.2m high		
			Providing and fixing 1.2m high GI barbed wire fencing with 1.8m angle iron posts 40mm x 40mm x 6mm placed every 3m center to center founded in M15 grade cement concrete, 0.6m below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on end post one side only and provided with 9 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc., complete as per Drawing and Technical Specification	m	542.68

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SUMMARY OF RATE ANALYSIS FOR ROADS FOR FY 079/080

SN	SECTION	Ref. to SS	ITEMS DESCRIPTION	For Contract Works	
				UNIT	Rate With Overhead
13	d.	404	GI Barbed wire fencing 1.8m high		
			Providing and fixing 1.8m high GI barbed wire fencing with 2.4m angle iron posts 50mm x 50mm x 6mm placed every 3m center to center founded in M15 grade cement concrete, 0.6m below ground level, every 15th post, last but one end post and corner post shall be strutted on both sides and end post on end post one side only and provided with 12 horizontal lines and 2 diagonals interwoven with horizontal wires, fixed with GI staples, turn buckles etc., complete as per Drawing and Technical Specification.	m	913.82
14	item no:4.2	400	Fencing with welded steel wire fabric 75mm x 50mm		
			Providing and fixing 1.2m high fencing with angle iron posts 50mm x 50mm x 6mm placed every 3m center to center with 0.4m embedded in M15 grade cement concrete, corner, end and every 10th post to strutted, provided with welded steel wire fabric of 75mm x 50mm mesh or 75mm x 25mm mesh and fixed to iron posts by flat iron 50 x 5mm and bolts etc. complete as per Drawing and Technical Specification.	m	1,929.01
	Section 7		PIPE DRAIN, PIPE CULVERTS AND CONCRETE		
15	item no:7.01	701	Providing, jointing and laying HDP pipes with or without collar etc. complete in place as per specification.		
			a) 110 mm/125mm outer diameter	m	859.21
16	item no:7.02	701	Providing and Laying Reinforced Cement Concrete Flush jointed Pipe for culverts		
			Providing and Laying Reinforced cement concrete NP3 Flush jointed pipe for culverts including fixing with cement mortar 1:2 as per Drawing and Technical Specifications.		
			a) 300mm dia (Int.)	m	4,251.26
			b) 450mm dia (Int.)	m	5,916.28
			c) 600mm dia (Int.)	m	7,972.30
			d) 900mm dia (Int.)	m	14,943.98
			e) 1000mm dia (Int.)	m	15,190.00
			f) 1200mm dia (Int.)	m	19,997.56
17	item no:7.03	701	Providing and Laying Reinforced Cement Concrete Pipe for culverts including fixing collar		
			Providing and Laying Reinforced cement concrete NP3 Collar jointed pipe for culverts including fixing collar with cement mortar 1:2 as per Drawing and Technical Specifications.		
			a) 300mm dia (Int.)	m	4,539.41
			b) 450mm dia (Int.)	m	6,330.28
			c) 600mm dia (Int.)	m	8,542.70
			d) 900mm dia (Int.)	m	16,063.44
			e) 1000mm dia (Int.)	m	16,309.45
			f) 1200mm dia (Int.)	m	21,478.40

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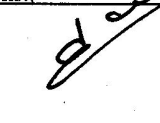
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SUMMARY OF RATE ANALYSIS FOR ROADS FOR FY 079/080

For Contract Works

SN	SECTION	Ref. to SS	ITEMS DESCRIPTION	UNIT	Rate With Overhead
	Section 9		EARTH WORKS		
18	item no:9.01	905	Earthwork Excavation in Cutting.		
			I) Roadway Excavation in All types of Soil		
			Roadway Excavation in all types of soil as per drawing and technical specification, including removal of stumps and other deleterious matter, with all lifts and lead as per Drawing and instruction of the Engineer.		
			A. Manual means	cum	829.15
			B. Mechanical Means	cum	80.58
			II) Roadway Excavation in ordinary rock		
			Roadway Excavation in ordinary rock as per Drawing and Technical specification, including all lift and lead as per Drawing and instruction of the Engineer.		
			A. Manual means	cum	959.45
			B. Roadway Excavation in ordinary rock by Mechanical Means	cum	241.73
			III) Roadway Excavation in Hard Rock		
			A. Mechanical Drilling		
			Roadway Excavation in hard rock with mechanical drilling, including blasting and breaking, and disposal of cut road within all lifts and leads as per Drawing and instruction of the Engineer.	cum	3,176.77
			B. Manual Drilling		
			Roadway excavation in hard rock with manual drilling, blasting, breaking, lifts and leads all complete as per Drawing and instruction of the Engineer.	cum	3,998.84
19	item no:9.02		Removal of Unserviceable Soil with Disposal upto 1000 meters Removal of unserviceable soil including excavation, loading and disposal upto 1000 meters lead	cum	176.95
20	item no:9.04		Excavation for Structures Foundation		
			Earth work in excavation of foundation of structures, including construction of shoring and bracing, removal of stumps and other deleterious matter and backfilling with approved Material as per Drawing and Technical Specifications.		
			A. Manual Means		
	a.		Ordinary soil		
			(i) Depth upto 3m	cum	966.00
			(ii) Depth 3m to 6m	cum	1,380.00
			(iii) Depth above 6m	cum	2,139.00
	b.		B. Mechanical Means		
			(i) Depth upto 3m	cum	120.87
			(ii) Depth 3m to 6m	cum	145.04
			(iii) Depth above 6m	cum	192.03
21	item no:9.06		Stripping, Storing and Re-laying Top Soil from Borrow Areas in Agriculture Fields.		
			Stripping of top soil from borrow areas located in agriculture fields, storing at a suitable place, spreading and re-laying after taking the borrow earth to maintain fertility of the agricultural field, finishing it to the required levels to the satisfaction of the farmer as per Drawing and Technical Specifications.	cum	334.99
22	item no:9.05		Stripping and Storing Top Soil		
			Stripping, storing of top soil by road side at 15 m internal and re-application on embankment slopes, cut slopes and other areas in localities where the available embankment Material is not conducive to plant growth as per Drawing and Technical Specifications.	cum	150.25
23	item no:9.06		Stripping, Storing and Re-laying Top Soil from Borrow Areas in Agriculture Fields.		
			Stripping of top soil from borrow areas located in agriculture fields, storing at a suitable place, spreading and re-laying after taking the borrow earth to maintain fertility of the agricultural field, finishing it to the required levels to the satisfaction of the farmer as per Drawing and Technical Specifications.	cum	334.99
24	item no:9.07		Preparation and Surface Treatment of Formation.		
			Preparation and surface treatment of Formation by removing mud and slurry, watering to the extent needed to maintain desired moisture content, compacting all complete as per Drawing and Technical Specifications.	sqm	7.69
25	item no:9.08		Construction of Embankment with Material obtained from Borrow pits		
			Providing, laying, spreading and compacting embankment with borrow material as per Drawing and Technical Specifications.	cum	802.99
26	item no:9.09		Construction of Embankment with Material Deposited from Roadway Cutting		
			Providing, laying, spreading and compacting embankment with roadway cutting material and compact to the required density as per Drawing and Technical Specifications.		

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SUMMARY OF RATE ANALYSIS FOR ROADS FOR FY 079/080



For Contract Works

SN	SECTION	Ref. to SS	ITEMS DESCRIPTION	UNIT	Rate With Overhead
			A. Manually	cum	765.87
			B. Mechanically	cum	396.81
27	item no:9.10		Construction of Rock fill Embankment		
			Providing and laying of rock fill embankment with broken hard rock fragments of size not exceeding 300 mm laid in layers not exceeding 500 mm thick including filling of surface voids with stone spalls, blinding top layer with granular Material, rolled to required density all complete as per Drawing and Technical Specifications. (Excluding transportation)	cum	451.69
28	item no:9.11		Providing suitable material and Back filling behind abutment, wing wall and return wall complete as per Drawing and Technical Specifications.		
			A. Granular Material	cum	4,268.96
			B. Sandy Material	cum	5,007.57
			C. Locally available Material including compaction by tamping rod (with watering)	cum	1,001.63
			D. Locally available Material including compaction by tamping rod (without watering)	cum	861.67
29	item no:9.12		Providing and laying of Filter media with granular Material/stone crushed aggregates to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and Technical Specification.	cum	5,074.48
30	item no:9.13		Providing and filling sand in Foundation Trenches as per Drawing & Technical Specification	cum	4,608.70
	Section 10		SUB-GRADE		
31	item no 10.01		Scarifying Existing road Surface to a Depth of 50 mm by Manual Means		
			a. Scarifying the existing road surface to a depth of 50 mm and disposal of scarified Material with all lifts and leads as per Drawing and Technical Specifications.	sqm	41.60
			b. Scarifying the existing granular road surface to a depth of 50 mm and disposal of scarified Material with all lifts and leads within Right of way as per Drawing and Technical Specifications.(lead Upto 30m)	sqm	23.00
32	item no 10.02		Scarifying Existing road Surface to a depth of 50 mm by Mechanical Means		
			a. Scarifying the existing road surface to a depth of 50 mm and disposal of scarified Material with in all lifts and 30m lead as per Drawing and Technical Specifications.	sqm	26.07
			b. Scarifying the existing bituminous road surface to a depth of 50 mm and disposal of scarified Material with in all lifts and lead as per Drawing and Technical Specifications.	sqm	15.08
33	item no 10.03		Construction of Subgrade and Earthen Shoulders with approved Material (capping layer)		
			Providing and laying sub-grade and earthen shoulders with approved Material obtained from borrow pits with all lifts & leads as per Drawing and Technical Specifications.	cum	871.93
34	item no 10.04		Compacting Original Ground		
	Case (i)		Compacting original ground supporting sub-grade Loosening of the ground upto a level of 500 mm below the sub-grade level, watered, graded and compacted in layers as per Drawing and Technical Specifications.	cum	160.13
	Case (ii)		Loosening, leveling 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 dry density as per Drawing and Technical Specifications.	cum	82.87
35	item no 10.08		Providing and laying of hand pack Stone soling with 150 to 200 mm thick stones and packing with smaller stone on prepared surface as per Drawing and Technical Specifications.	cum	8,001.32

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SUMMARY OF RATES FOR ROADS FOR FY 079/080

SN	SECTION	Ref. to SS	ITEMS DESCRIPTION	For Contract Works	
				UNIT	Rate With Overhead
	Section 12		SUB BASE, BASE, HARD SHOULDER		
36	item no 12.1		Providing and laying Granular Sub-Base Material		
			Providing and laying granular sub-base on prepared surface, mixing at OMC, and compacting to achieve the desired density, complete as per Drawing and Technical Specifications.		
			A. By Mechanical means	cum	4,468.35
			B. By Manual means	cum	4,559.03
37	item no 12.2		Water Bound Macadam		
			Providing, laying, spreading and compacting Water bound macadam including brooming requisite type of screening/ binding Materials to fill up the interstices of coarse aggregate, watering and compacting to the required density as per Drawing and Technical Specifications.		
			A. By Manual means	cum	6,552.10
			B. By Mechanical means	cum	5,608.37
38	item no 12.3		Crusher Run Macadam Base and sub-base		
			Providing and laying Crusher Run Macadam on a prepared surface, spreading and mixing, watering and compacting to form a layer of 63mm maximum size sub-base course as per Drawing and Technical Specifications.	cum	5,096.76
			b. Providing and laying Crusher Run Macadam on a prepared surface, spreading and mixing, watering and compacting to form a layer of 45mm maximum size base course as per Drawing and Technical Specifications.	cum	5,456.59
39	item no 12.5		Dry Bound Macadam		
			A. By Manual Means		
			Providing, laying, spreading and compacting stone aggregates of specific sizes to dry bound macadam including spreading in uniform thickness, hand packing, rolling and brooming requisite type of screening/ binding Materials to fill up the interstices of coarse aggregate, and compacting to the required density as per Drawing and Technical Specifications.	cum	7,430.16
40	item no 12.6		Wet Mix Macadam		
			Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC laying in uniform layers in sub- base / base course on well prepared surface and compacting to achieve required density as per Drawing and Technical Specifications.		
			A. Base course with B1 material	cum	5,489.74
			B. Base course with B2 material	cum	5,489.74
			C. Sub Base course with S1 material	cum	5,512.74
			D. Sub Base course with S2 material	cum	5,473.53
	Section 13		BITUMINOUS SURFACE AND BASE COURSE		
41	item no 13.1	1302	Prime Coat, with MC 30 / 70		
			Providing and applying prime coat with Hot Bitumen (including cutter) on prepared surface of granular base including cleaning of road surface and spraying as per Technical Specification .		
			A. Prime Coat, with MC 30 / 70 by Mechanical Means	lit	164.45
			B. Prime Coat, with MC 30 / 70 by Bitumen , by manual means	lit	305.60
			C. Prime Coat, with Emulsion by Mechanical Means	lit	118.53
			D. Prime Coat with emulsion, for manual works	lit	208.82
42	item no 13.2	1302	Tack Coat		
			Providing and applying tack coat with hot Bitumen at specified rate on the prepared non-bituminous surfaces including cleaning as per Technical Speciation .		
			A. Tack coat with Bitumen By Mechanical Means	lit	152.98
			B. Tack coat with Bitumen by Manual Means	lit	240.16
			C. Tack coat with Emulsion By Mechanical Means	lit	111.25
			D. Tack coat with Emulsion By Manual Means	lit	139.09
		1307	Bituminous Macadam		
43	Item No 13.30		Providing and laying bituminous macadam with hot mix plant using crushed aggregates of grading as per specification premixed with bituminous binder, laid over a previously prepared surface as per Drawing and Technical Specifications.	cum	18,221.87
44	Item No 13.60		Bituminous Concrete / Asphalt Concrete		
			Providing and laying Bituminous concrete/ Asphalt concrete using crushed aggregates of specified grading, premixed with bituminous binder and filler as per Drawing and Technical Specifications	cum	27,401.24

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SUMMARY OF RATE ANALYSIS FOR ROADS FOR FY 079/080

SN	SECTION	Ref. to SS	ITEM DESCRIPTION	For Contract Works	
				UNIT	Rate With Overhead
	Section 14		KERBS AND FOOTPATH		
45	Item No 14.10		Precast Cement Concrete M 20 Kerb		
			Providing and laying of M25/20 precast cement concrete Kerb 38 cm * 20 cm * 25 cm (H*B*L) with 12 mm thick 1:3 cement sand mortar bedding and joints including foundation excavation levelling but excluding foundation concrete for foundation or sand gravel material, all complete as per Drawing and Technical Specifications.	rm	1,585.68
46	Item No 14.20		Cast in Situ Cement Concrete or natural stone block for footpath		
			A. Providing and laying of precast / cast in situ 50 mm thick cement concrete slab footpath on 12 mm thick 1: 3 cement sand mortar over the prepared base, all complete as per Drawing and Technical Specifications.	sqm	1,474.86
			B. Providing and laying 25 mm thick Natural stone slab footpath on 12 mm thick 1: 3 cement sand mortar over the prepared base, all complete as per specification.	sqm	1,797.61
47	Item No 14.30		Brick work for footpath		
			A. Providing and laying brick on edge over 60 mm thick sand bed in footpath including excavation sand bedding all complete as per Drawing and Technical Specifications.	sqm	1,907.36
			B. Providing and laying flat brick over 60 mm thick sand bed in footpath including excavation sand bedding all complete as per specification.	sqm	1,185.74
	Section 15		TRAFFIC SIGN, ROAD MARKING , ROAD SAFETY		
48	Item no 15.01	1501	supplying and erecting traffic sign in place including 50mm dia steel tube ,2mm thick steel plate ,cement concrete,painting, writing and supporting steel angle nuts and bolt etc complete		
			a).60 cm Dia. circular 60 cm .equilateral triangle and 60cm*45cm rectangular shaped sign(single post)	nos	2,507.91
49	Item no 15.02	1503	b).1.2m*0.75m size bigger traffic sign with back support and two or more post	nos	6,589.05
			Painting Lines, Dashes, Arrows etc. on Roads in Two Coats		
			Providing required material and Painting lines, dashes, arrows etc. on roads in two coats on new work with ready mixed road marking paint conforming to NS 408/ IS 164 on bituminous surface, including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control as per Drawing and Technical Specifications		
50	Item no 15.03	1503	Over 10 cm in width/Up to 10 cm in width	sqm	443.55
			Painting Lines, Dashes, Arrows etc. on Roads in Two Coats on Old Works		
			Providing required material and Painting lines, dashes, arrows etc. on roads in two coats on new work with ready mixed road marking paint conforming to NS 408/ IS 164 on bituminous surface, including cleaning the surface of all dirt, dust and other foreign matter, demarcation at site and traffic control as per Drawing and Technical Specifications		
51	Item no 15.04	1504	Over 10 cm in width/Up to 10 cm in width	sqm	404.93
			Road Marking with Hot Applied Thermoplastic Compoundwith Reflectorizing Glass Beads on Bituminous Surface		
			Providing and laying of hot applied thermoplastic compound at least 2 mm thick including reflectorizing glass beads as per DOR Traffic sign manual/ Specifications .The finished surface to be level, uniform and free from streaks and holes.		
			i) On smooth surface (similar to Asphalt concrete and rigid pavement).	sqm.	1,076.64
			ii) On rough surface (similar to surface dressing)	sqm	1,380.76
52	Item no 15.05	1506	Supplying and placing R.C.C. kilometer post including excavation ,backfill ,painting and writing etc.all complete as per specification		
			a).standard kilometer post (placed at each kilometer)	nos	4,092.54
			b).Bigger Km post(placed at each 5 KM)		
53	Item no 15.07	1507	Supplying and fixing in place R.C.C delineator and guard post including excavation ,back filling,painting and erection etc.all complete as per drawing.	nos	1,586.01
	Section 16		PILING FOR STRUCTURES		
54	Item No 16.1		Providing, Boring and installing bored cast-in-situ RCC Pile excluding Reinforcement and Concrete in all types of soil including Bentonite and other consumable and removal of excavated earth with necessary lifts and lead all complete as per Drawing and Technical Specifications.		
			(i) Pile diameter-500 mm	rm	6,154.91
			(ii) Pile diameter-600 mm	rm	7,715.56
			(iii) Pile diameter-750 mm	rm	11,711.34
			(iv) Pile diameter-1000 mm	rm	15,538.46

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SUMMARY OF RATE ANALYSIS FOR ROADS FOR FY 079/080

			For Contract Works		
SN	SECTION	Ref. to SS	ITEMS DESCRIPTION	UNIT	Rate With Overhead
			(v) Pile diameter-1200 mm	rm	19,802.57
55	Item No 16.2		Providing, Boring and installing bored cast-in-situ RCC Pile excluding Reinforcement and Concrete in all types of Rock including Bentonite and other consumable and removal of excavated material with necessary lifts and lead all complete as per Drawing and Technical Specifications.		
			(i) Pile diameter-300 mm	rm	8,624.06
			(ii) Pile diameter-500 mm	rm	11,404.19
			(iii) Pile diameter-600 mm	rm	15,629.49
			(iv) Pile diameter-750 mm	rm	16,972.12
			(v) Pile diameter-1000 mm	rm	26,631.19
	Section 18		FALSEWORK, FORMWORK AND SURFACE FINISH FOR CONCRETE STRUCTURES		
56	Item no 18.01		Providing , Preparing and Installing form work including necessary supports and removing after completion for foundation and footings.		
			a) Using timber (soft wood)	sqm	783.48
57	Item no 18.04a		Providing , Preparing and Installing form work including necessary supports and removing after completion for slab structure [class F2 finish] (Falsework not included).		
			a)Using timber planks	sqm	1,017.10
58	Item no 18.05		Providing , Preparing and Installing form work & removing after completion for Slab & beam structure.		
			a)Using timber	sqm	1,401.19
59	Item no 18.08.1		Providing and assembling in position falsework for the construction of RCC superstructure and removing after completion including design & drawings as per specification.		
			a) Using timber		
			ii)Height more than 2m and upto 4m	sqm	5,049.80
60	Item no 18.08.2		For RCC Beam Bridges		
			I) Height upto 3m	sqm	9,981.06
	Section 20		CONCRETE FOR STRUCTURES		
61	Item no 20.1		CONCRETE FOR STRUCTURES		
			Providing and laying of Plain Cement Concrete M 10 (or 1:3:6 for nominal mix) in Foundation complete as per Drawing and Technical Specifications.		
			By Mechanical means	cum	11,402.64
			By Manual Means	cum	11,622.86
62	Item no 20.2		Providing and laying of Plain/Reinforced Cement Concrete in Foundation complete as per Drawing and Technical Specifications.		
			By Mechanical means		
			a. PCC Grade M 15/40	cum	13,307.69
			b. PCC Grade M 20/40	cum	14,464.98
			c. PCC Grade M 20/20	cum	14,512.74
			d. PCC Grade M 25/20	cum	15,424.80
			e. PCC Grade M 30/20	cum	15,443.18
			By Manual means		
			a. PCC Grade M 15/40	cum	13,871.61
			b. PCC Grade M 20/40	cum	15,028.90
			c. PCC Grade M 20/20	cum	15,076.66
			d. PCC Grade M 25/20	cum	15,987.36
			e. PCC Grade M 30/20	cum	16,004.38
63	Item no 20.3		Providing and laying , fitting and placing un-coated Mild steel / HYSD reinforcement complete in foundation as per drawing and technical specification	ton	141,045.20
64	Item no 20.4		Providing and laying of Plain/Reinforced cement concrete in sub-structure complete as per drawing and Technical Specifications		
			a. PCC Grade M 15 (Height upto 5 m)	cum	14,075.44
			b. PCC Grade M 20/40 (Height upto 5 m)	cum	15,299.50
			c1. PCC Grade M 25/20 (Height upto 5 m)	cum	16,354.00
			c2. PCC Grade M 25/20 (Height upto 5-10 m)	cum	16,948.70
			c3. PCC Grade M 25/20 (Height above 10 m)	cum	17,692.06
			d1. PCC Grade M 30/20 (Height upto 5 m)	cum	16,413.04
			d2. PCC Grade M 30/20 (Height above 5 m to 10 m)	cum	17,009.88
			d3. PCC Grade M 30/20 (Height above 10 m)	cum	17,755.92

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SUMMARY OF RATE ANALYSIS FOR ROADS FOR FY 079/080

For Contract Works

SN	SECTION	Ref. to SS	ITEMS DESCRIPTION	UNIT	Rate With Overhead
65	Item no 20.5		Providing and laying , fitting and placing HYSD bar reinforcement in sub-structure complete as per Drawing and Technical Specifications	ton	143,444.10
66	Item no 20.6		Providing and laying ,fitting and placing Mild steel reinforcement complete in sub-structure as per drawing and Technical Specification	ton	147,894.60
67	Item no 20.7		Providing and laying weep holes in Brick dry/Plain/ Reinforced concrete abutment, wing wall/ return wall with 110 mm dia HDPE pipe, extending through the full width of the structure with slope of 1V :20H towards drawing face Complete as per Drawing and Technical Specifications.(the size of the weep hole shall be 150 mm x 80 mm or circular with 150 mm diameter)	m	627.40
			SUPER STRUCTURE		
68	Item no 20.8		Providing and laying of Reinforced/ Pre-stressed cement concrete in super-structure as per drawing and Technical Specification		
			A. PCC Grade M 20/20		
			a. For solid slab super-structure		
			(i)Height upto 5 m	cum	20,803.62
			(ii) Height above 5 m to 10 m	cum	21,497.07
			(iii) Height above 10 m	cum	22,190.52
			b. For T-beam & slab,		
			(i)Height upto 5 m	cum	22,190.52
			(ii) Height above 5 m to 10 m	cum	22,883.98
			(iii) Height above 10 m	cum	23,577.43
			B. PCC Grade M 25/20		
			a. For solid slab super-structure		
			(i)Height upto 5 m	cum	22,204.32
			(ii) Height above 5 m to 10 m	cum	22,944.46
			(iii) Height above 10 m	cum	23,684.60
			b. For T-beam & slab,		
			(i)Height upto 5 m	cum	23,684.60
			(ii) Height above 5 m to 10 m	cum	24,424.75
			(iii) Height above 10 m	cum	25,164.89
			C. PCC Grade M 30/20		
			a. For solid slab super-structure		
			(i)Height upto 5 m	cum	22,588.42
			(ii) Height above 5 m to 10 m	cum	23,341.36
			(iii) Height above 10 m	cum	24,094.31
			b. For T-beam & slab,		
			(i)Height upto 5 m	cum	24,094.31
			(ii) Height above 5 m to 10 m	cum	24,847.26
			(iii) Height above 10 m	cum	25,600.20
69	Item no 20.9		Providing and laying , fitting and placing HYSD bar reinforcement in super-structure complete as per drawing and technical specifications	ton	142,885.20
70	Item no 20.10		Providing and laying of PCC M 15 Grade leveling course below approach slab complete as per drawing and Technical specification	cum	12,795.86
	Section 24		RIVER TRAINING AND PROTECTION WORKS		
71	Item no 24.1		Gabion Structure for Retaining Wall		
			Providing and laying Gabion structure for retaining earth with diaphragm including rolling, cutting weaving , placing, laying sides and diaphragms with binding wire and filling boulders all complete as per Drawing and Technical Specification		
			A. Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (0.1057 kg/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 100 mm X 120 mm,		
			(i) Box size 3 X 1 X 1 m (16 sqm)	cum	7,170.46
			(ii) Box size 2 X 1 X 1 m (11 sqm)	cum	7,246.57
			(iii) Box size 1.5 X 1 X 1 m (9 sqm)	cum	7,621.62
			(iv) Box size 1.0 X 1 X 1 m (6 sqm)	cum	7,638.64
			B. Mesh wire- 10 Swg(0.0615 kg/m), Selvedge Wire 8 Swg (/m), binding wire 12 Swg (0.0409 kg/m) Hexagonal mesh Type 80 mm X 100 mm,		
			(i) Box size 3 X 1 X 1 m (16 sqm)	cum	7,616.93
			(ii) Box size 2 X 1 X 1 m (11 sqm)	cum	7,699.87
			(iii) Box size 1.5 X 1 X 1 m (9 sqm)	cum	7,932.22
			(iv) Box size 1.0 X 1 X 1 m (6 sqm)	cum	7,949.68
72	Item no 24.7		GEOSYNTHETIC AND REINFORCED EARTH		

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SUMMARY OF RATE ANALYSIS FOR ROADS FOR FY 079/080

			For Contract Works		
SN	SECTION	Ref. to SS	ITEMS DESCRIPTION	UNIT	Rate With Overhead
			Sub-Surface Drain with Geotextiles		
			Providing and laying sub surface drain 200 mm dia using geotextiles treated with carbon black to a stable network and a planar geo-composite structure, joints wrapped with geotextile to prevent ingress of soil, including excavation and backfilling as per Drawing and Technical Specifications.	m	2,175.50
73	Item no 24.17		Providing and laying Grouted Stone Pitching in protection work, with stone size not less than 0.01 cum and cement: sand mortar (1:3) all complete as per Drawing and Technical Specifications.	cum	14,209.18
74	Item no 24.20		Providing and laying HDPE pipes with perforations including joining, providing and laying HDPE pipes with perforations including joining series II		
			(i) series II, HDPE pipe 250 mm dia	m	2,508.48
			(ii) series II, HDPE pipe 160 mm dia	m	890.55
75	Item no 24.21	2421	Providing and laying Plum concrete (Boulder mixed concrete) as per Drawing and Specifications (using Mechanical Aids)		
			A. 60% M 15 concrete and 40% boulders/stones	cum	11,359.60
			B. 70% M 15 concrete and 30% boulders/stones	cum	13,231.79

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SUMMARY OF RATE ANALYSIS FOR ROADS FOR FY 079/080

				For Contract Works	
SN	SECTION	Ref. to SS	ITEMS DESCRIPTION	UNIT	Rate With Overhead
	Section 25		BRICK WORKS FOR STRUCTURES		
76	Item no 25.1		Providing and laying Brick Masonry Work in Cement mortar in Foundation / structure complete excluding Pointing and Plastering, as per Drawing and Technical Specifications.		
			A. Cement sand mortar (1:2)	cum	16,860.43
			B. Cement sand mortar (1:3)	cum	16,348.59
			C. Cement sand mortar (1:4)	cum	15,994.26
			D. Cement sand mortar (1:6)	cum	15,647.07
77	Item no 25.2		Providing and laying Brick masonry work in superstructure/ sub-structure complete excluding pointing and plastering, as per drawing and Technical Specifications		
			A. Cement sand mortar (1:2)	cum	16,983.17
			B. Cement sand mortar (1:3)	cum	17,673.17
			C. Cement sand mortar (1:4)	cum	17,301.12
			D. Cement sand mortar (1:6)	cum	16,936.57
78	Item no 25.3		Providing, and applying Pointing with cement mortar (1:3) on brick work in structure as per Technical Specifications .	sqm	298.11
79	Item no 25.4		Providing and applying 12.5 mm thick Plaster with cement mortar on brick work structure as per Technical Specifications		
			A. Cement Mortar 1:2 (1 cement : 2 sand)	sqm	467.03
			B. Cement Mortar 1:3 (1 cement : 3 sand)	sqm	432.34
			C. Cement Mortar 1:4 (1 cement : 4 sand)	sqm	413.27
80	Item no 25.5		Providing and laying weep holes in Brick works / Masonry/ Plain/ Reinforced concrete abutment, wing wall/ return wall with 100 mm dia HDPE pipe as per Drawing and Technical Specifications.	m	786.45
	Section 26		MASONRY FOR STRUCTURES		
81	Item no 26.1		Providing and laying of dry Stone Masonry Work as per Drawing and Technical Specifications.	cum	6,460.43
82	Item no 26.2		Providing and laying of Random rubble stone Masonry in mud Mortar as per Drawing and Technical Specifications.	cum	8,042.74
			Rubble Random Masonry		
83	Item no 26.3.1		Providing and laying of Stone Masonry Work in Cement Mortar 1:3 in Foundation complete as per Drawing and Technical Specifications.	cum.	12,546.36
84	Item no 26.3.2		Providing and laying of Stone Masonry Work in Cement Mortar 1:4 in Foundation complete as per Drawing and Technical Specifications.	cum	12,077.51
85	Item no 26.3.3		Providing and laying of Stone Masonry Work in Cement Mortar 1:6 in Foundation complete as per Drawing and Technical Specifications.	cum	11,531.39
86	Item no 26.4		Providing and laying Stone Masonry work in cement mortar 1:3 in structure complete as per drawing and Technical Specifications		
			A. Random Rubble Masonry	cum	14,082.87
			B. Coursed rubble Masonry (first sort)	cum	14,474.86
87	Item no 26.5		Providing and laying Stone Masonry work in cement mortar 1:4 in structure complete as per Drawing and Technical Specifications		
			A. Random Rubble Masonry (uncoursed)	cum	13,588.95
			B. Coursed rubble Masonry (first sort)	cum	13,998.86
88	Item no 26.6		Providing and lying Stone Masonry work in cement mortar 1:6 in structure complete as per Drawing and Technical Specifications		
			A. Random Rubble Masonry (coursed/uncoursed)	cum	13,102.18
			B. Coursed rubble Masonry (first sort)	cum	13,569.35
89	Item no 26.7		Providing and Pointing with cement mortar on masonry work in structure as per Technical Specifications		
			A. cement mortar (1:3)	sqm	289.92
			B. cement mortar (1:2)	sqm	301.98
			C. cement mortar (1:1)	sqm	330.89

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SUMMARY OF ANALYSIS FOR ROADS FOR FY 079/080

SN	SECTION	Ref. to SS	ITEMS DESCRIPTION	For Contract Works	
				UNIT	Rate With Overhead
	Section 30		SUB-SURFACE GEOTECHNICAL INVESTIGATION		
90	Item no 30.1		Excavation of pits/trenches for sub-surface Geo-technical investigation in mixed soil and lifting of material all complete (Length & breath depending upon working condition) as per direction of the Engineer.		
			I. Depth up to 3 m		
			II. Depth up to 3 - 4.5 m	cum	862.50
91	Item no 30.2		Mobilisation and Demobilisation of drilling / Boring equipments, accessories, etc for sub-surface Geo-technical investigation as per direction .	cum	1,069.50
			I. BT Surfaced Road (Speed with load : 15 km / hour.)	km-job	916.64
92	Item no		RCC Hume Pipe		
			A) Rcc hume pipe - NP2		
I			For one or first pipe.		
a)			Pipe having 150 mm diameter.	R.m	763.03
b)			Pipe having 200 mm diameter.	R.m	1,006.25
c)			Pipe having 250 mm diameter.	R.m	1,233.95
d)			Pipe having 300 mm diameter.	R.m	1,684.75
e)			Pipe having 400 mm diameter.	R.m	2,285.05
f)			Pipe having 450 mm diameter.	R.m	2,409.25
g)			Pipe having 500 mm diameter.	R.m	2,685.25
h)			Pipe having 600 mm diameter.	R.m	3,797.30
i)			Pipe having 700 mm diameter.	R.m	4,611.50
j)			Pipe having 750 mm diameter.	R.m	5,016.30
k)			Pipe having 900 mm diameter.	R.m	7,460.05
l)			Pipe having 1000 mm diameter.	R.m	8,625.00
m)			Pipe having 1200 mm diameter.	R.m	10,609.90
n)			Pipe having 1500 mm diameter.	R.m	21,890.25
			For every subsequent pipe having a length of minimum 1 m		
a)			Pipe having 150 mm diameter.	R.m	748.56
b)			Pipe having 200 mm diameter.	R.m	1,019.85
c)			Pipe having 250 mm diameter.	R.m	1,247.55
d)			Pipe having 300 mm diameter.	R.m	1,727.69
e)			Pipe having 375 mm diameter.	R.m	2,049.69
f)			Pipe having 400 mm diameter.	R.m	2,327.99
g)			Pipe having 450 mm diameter.	R.m	2,452.19
h)			Pipe having 500 mm diameter.	R.m	2,728.19
i)			Pipe having 600 mm diameter.	R.m	3,996.82
j)			Pipe having 750 mm diameter.	R.m	5,403.58
k)			Pipe having 800 mm diameter.	R.m	5,949.83
l)			Pipe having 900 mm diameter.	R.m	8,172.55
m)			Pipe having 1000 mm diameter.	R.m	9,337.50
n)			Pipe having 1200 mm diameter.	R.m	12,013.88
o)			Pipe having 1200 mm diameter.	R.m	23,449.48
n)			Pipe having 1200 mm diameter.	R.m	19,032.50
p)			Pipe having 1500 mm diameter.	R.m	29,767.75
93	Section		HDPE DOUBLE WALL CORRUGATED PIPE		
	Item no		Providing and laying HDPE DWC pipes for sewage and rain water Non-pressure pipes		
			(i) Laying of HDPE Double Wall Corrugated Pipes (internal dia. 150mm)	rm	1,361.72
			(ii) Laying of HDPE Double Wall Corrugated Pipes (internal dia. 200mm)	rm	2,035.62
			(iii) Laying of HDPE Double Wall Corrugated Pipes (internal dia. 250mm)	rm	2,581.87
			(iv) Laying of HDPE Double Wall Corrugated Pipes (internal dia. 300mm)	rm	4,228.67
			(v) Laying of HDPE Double Wall Corrugated Pipes (internal dia. 400mm)	rm	5,461.47
			(vi) Laying of HDPE Double Wall Corrugated Pipes (internal dia. 500mm)	rm	6,552.82
			(vii) Laying of HDPE Double Wall Corrugated Pipes (internal dia. 600mm)	rm	11,078.53
			(viii) Laying of HDPE Double Wall Corrugated Pipes (internal dia. 800mm)	rm	17,754.28
			(ix) Laying of HDPE Double Wall Corrugated Pipes (internal dia. 1000mm)	rm	26,513.83

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