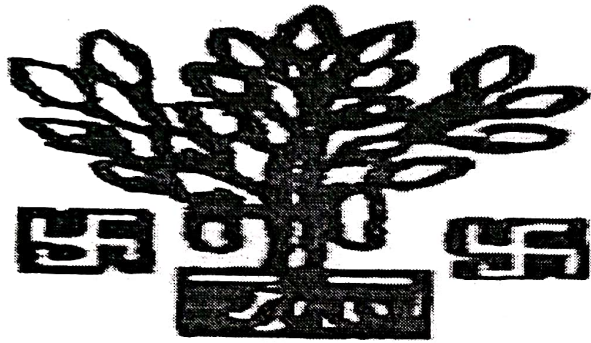


RURAL WORKS DEPARTMENT
GOVT OF BIHAR



NAME OF WORKS :- Hatwa Malopada Road mai Bankor More to
Baharbari P V Bankoda

BLOCK :- Jokihat

FDR

Phase-I

11,00,169

YEAR(2024-25)

R.W.D., WORKS CIRCLE, KISHANGANJ

R.W.D., WORKS DIVISION, ARARIA

प्रतिवेदन

Hatwa Malopada Road mai Bankor More to Baharbari P V Bankoda

पथ का नाम :-

कार्य का नाम :-

Hatwa Malopada Road mai Bankor More to Baharbari P V Bankoda

में बाढ़ से क्षतिग्रस्त भाग में यातायात चालू करने का कार्य।

संलग्न प्राक्कलन 2024 को प्रखण्ड में आयी भीषण बाढ़ से क्षतिग्रस्त पथ
..... में बाढ़ क्षतिग्रस्त मरम्मति मद से यातायात चालू करने हेतु तैयार किया गया है जिसकी
प्राक्कलित लागत 1100169 (Eleven lakh one hundred sixty-nine) उक्त पथ
का निर्माण M.M.S.V. (P) योनान्तर्गत हुआ है एवं योजना अनुरक्षण अवधि में है।
पथ के कटे (क्षतिग्रस्त) भाग में आवश्यकता अनुसार Hume Pipe, Bamboo, लोकल बालू एवं
Brick Bats देने के बाद यातायात चालू कराया गया है। पथ के विभिन्न हिस्से में कराये गये कार्य
का विवरणी स्पष्ट रूप से प्राक्कलन में दर्शाया गया है।
प्राक्कलन मदों का दर वर्तमान अनुसूचित दर के अनुरूप है।

Deva Vaswan
6/11/24

कनीय अभियंता,

ग्रामीण कार्य विभाग,

कार्य प्रशाखा, जी.ओ.ई.ए-01

Prashant
6/11/24

सहायक अभियंता,

ग्रामीण कार्य विभाग,

कार्य अवर प्रमण्डल,

Prashant
6/11/24

कार्यपालक अभियंता,

ग्रामीण कार्य विभाग,

कार्य प्रमण्डल,

SUMMARY OF COST ESTIMATE FOR THE PROJECT

NAME OF ROAD :-	Hatwa Malopada Road mal Bankor More to Baharbari P V Bankoda	
DISTRICT :-	ARARIA	
BLOCK :-	Jokihat	
Length of Road:-	0.00KM	
Length of Cutting in mtr :-	171.000	
Sl. No.	DESCRIPTION	AMOUNT (LAKHS)
1	Filling of local sand	417365.78
2	Labour for cutting 62mm to 75mm dia bamboo	181937.56
3	Labour for fitting 62mm to 75mm dia bamboo	30737.25
4	Labour for filling empty cement bags with local sand Nylon crate	0.00
5	Supplying of EC bag, of local sand	230560.88
6	Supply and Carriage of brick bats	224567.82
7	Supply, laying and carriage of 1000 mm HPC	0.00
8	Drone Videography Charj Three times	15000.00
	SUB TOTAL COST =	1100169.28
	TOTAL (RS.) =	11,00,169

J.E *[Signature]*
6/11/24

A.E *[Signature]*
6/11/24

E.E *[Signature]*
6/11/24

S.E

Technically ^{Approved} ~~Sanctioned~~ for ₹ 11,00,169 = 00
(Eleven Lakhs, One hundred sixty-nine) only

[Signature]
Superintending Engineer
RWD Work Circle
Kishanganj

Bill of Quantity

NAME OF ROAD :- Hatwa Malopada Road mal Bankor More to Baharbari P V Bankoda
DISTRICT :- ARARIA
BLOCK :- Jokihat

Sl. No.	DESCRIPTION OF ITEMS	QUANTITY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
1	Filling of local sand obtained from river bed, watering & ramming, all complete job as per specification & direction of Engineer-in-charge	327.92	CUM	1272.78	417365.78
3	Labour for cutting 62 mm to 75mm dia bamboo piles to size and making shoes & driving by jet machine etc. all complete job as per specification & direction of Engineer- in -charge.	2629.69	MTR	69.19	181937.56
4	Labour for fitting & fixing 62 mm to 75 mm dia bamboo runners in position at every vertical pile with 150 mm long nails or 38 swg G.I wire including cost of G.I wire or nails etc all complete job as per specification & direction of Engineer-in-charge.	855.00	MTR	35.95	30737.25
5	Labour for fitting empty cement bags with loocal sand, stitching the bags and placing in Nylon crate of size (1 m X 1 m X 1 m)with lead of 150 M including supply of sutli etc. at site in dry portion all complete as per approved design, specification and direction of E/I	0.00	Each	1151.80	0.00
6	Supplying of EC bag, filling of local sand stitching and placing in position as the direction of Engineer-in-charge.	4126.00	Each	55.88	230560.88
7	Supply and Carriage of brick bats upto 8 km breach and placing in breaches and lying of bats, all complete job.	81.39	CUM	2759.12	224567.82
8	Supplaying and carriage of hume pipe 1000 mm dia , all complete job.	0.00	RM	5172.30	0.00
A) SUB TOTAL =					1085169.28
TOTAL COST =					1085169

J.E

A.F

E.E

ESTIMATE FOR REPAIRING / RESTORATION/ MAKING MOTORABLE ROADS DAMAGED DURING FLOOD

NAME OF ROAD :-	Hatwa Malopada Road mai Bankor More to Baharbari P V Bankoda
DISTRICT :-	ARARIA
BLOCK :-	Jokihat
Length of Cutting:-	171.00 mtr

Sl. No.	DESCRIPTION OF ITEMS	Unit	Nos.	L(m)	B(m)	D(m)	QUANTITY	RATE (Rs.)	AMOUNT (Rs.)
1	Filling of local sand obtained from river bed, watering & ramming, all complete job as per specification & direction of Engineer-in-charge								
	At ch:-100M	cum	1	15.00	(1.75+1.5)/2	(0.5+0.85+1.25)/3	21.13		
	At ch:-150M	cum	1	25.00	(1.75+1.45)/2	(0.05+2.5+1.05)/3	48.00		
	At ch:-200M	cum	1	26.00	(1.75+1.25)/2	(0.5+3.85+1.75)/3	79.30		
	At ch:-250M	cum	1	11.00	(1.5+1.15)/2	(0.5+1.85+1.75)/3	19.92		
	At ch:-300M	cum	1	7.00	(1.35+1.15)/2	(1.85+1.85+0.65)/3	12.69		
	At ch:-0.350 km	cum	1	16.00	(1.5+1.15)/2	(1.5+1.25+0.85)/3	25.44		
	At ch:-0.400 km	cum	1	13.00	(1.45+1.15)/2	(1.85+1.85+0.65)/3	24.51		
	At ch:-0.450 km	cum	1	3.00	(1.45+1.15)/2	(1.5+1.25+0.85)/3	4.68		
	At ch:-0.500 km	cum	1	6.00	(1.25+1.15)/2	(1.5+1.25+0.85)/3	8.64		
	At ch:-0.550 km	cum	1	8.00	(1.45+1.15)/2	(1.85+1.85+0.65)/3	15.08		
	At ch:-0.600 km	cum	1	5.00	(1.45+1.15)/2	(1.5+1.25+0.85)/3	7.80		
	At ch:-0.700 km	cum	1	8.00	(1.25+1.15)/2	(1.5+1.25+0.85)/3	11.52		
	At ch:-0.800 km	cum	1	20.00	(1.45+1.15)/2	(1.85+1.85+0.65)/3	37.70		
	At ch:-0.900 km	cum	1	8.00	(1.25+1.15)/2	(1.5+1.25+0.85)/3	11.52		
		cum			total qty :-		327.917	1,272.78	417365.78
1	Labour for cutting 62 mm to 75mm dia bamboo piles to size and making shoes & driving by jet machine etc. all complete job as per specification & direction of Engineer- in -charge.								
	At ch:-100M		1	50.00	4.50		225.00		
	At ch:-150M		1	100.00	4.50		450.00		
	At ch:-200M		1	86.67	4.50		390.00		
	At ch:-250M		1	34.38	4.50		154.69		
	At ch:-300M		1	23.33	4.50		105.00		
	At ch:-0.350 km		1	53.33	4.50		240.00		
	At ch:-0.400 km		1	43.33	4.50		195.00		
	At ch:-0.450 km		1	10.00	4.50		45.00		
	At ch:-0.500 km		1	20.00	4.50		90.00		
	At ch:-0.550 km		1	26.67	4.50		120.00		
	At ch:-0.600 km		1	16.67	4.50		75.00		
	At ch:-0.700 km		1	26.67	4.50		120.00		
	At ch:-0.800 km		1	66.67	4.50		300.00		
	At ch:-0.900 km		1	26.67	4.50		120.00		
		Mtr.			total qty:-		2629.69	69.19	1,81,937.56

2 Labour for fitting & fixing 62 mm to 75 mm dia bamboo runners in position at every vertical pile with 150 mm long nails or 38 swg G.I wire including cost of G.I wire or nails etc all complete job as per specification & direction of Engineer-in-charge.

At ch -100M		1	15.00	5.00		75.00			
At ch -150M		1	25.00	5.00		125.00			
At ch -200M		1	26.00	5.00		130.00			
At ch -250M		1	11.00	5.00		55.00			
At ch -300M		1	7.00	5.00		35.00			
At ch-0.350 km		1	16.00	5.00		80.00			
At ch-0.400 km		1	13.00	5.00		65.00			
At ch-0.450 km		1	3.00	5.00		15.00			
At ch-0.500 km		1	6.00	5.00		30.00			
At ch -0.550 km		1	8.00	5.00		40.00			
At ch-0.600 km		1	5.00	5.00		25.00			
At ch-0.700 km		1	8.00	5.00		40.00			
At ch-0.800 km		1	20.00	5.00		100.00			
At ch-0.900 km		1	8.00	5.00		40.00			
	Mtr.		total qty :-			855.00	35.95	30737.25	

3 Supplying of EC bag, filling of local sand stitching and placing in position as the direction of Engineer-in-charge.

At ch -100M	cum	1	15.00	0.40	2.20	13.20			
At ch -150M	cum	1	25.00	0.40	1.87	18.67			
At ch -200M	cum	1	26.00	0.40	2.70	28.08			
At ch -250M	cum	1	11.00	0.40	1.70	7.48			
At ch -300M	cum	1	7.00	0.40	1.45	4.06			
At ch-0.350 km	cum	1	16.00	0.60	1.20	11.52			
At ch-0.400 km	cum	1	13.00	0.60	1.45	11.31			
At ch-0.450 km	cum	1	3.00	0.60	1.20	2.16			
At ch-0.500 km	cum	1	6.00	0.60	1.20	4.32			
At ch-0.550 km	cum	1	8.00	0.60	1.45	6.96			
At ch-0.600 km	cum	1	5.00	0.60	1.20	3.60			
At ch-0.700 km	cum	1	8.00	0.60	1.20	5.76			
At ch-0.800 km	cum	1	20.00	0.60	1.45	17.40			
At ch-0.900 km	cum	1	8.00	0.60	1.20	5.76			
Total No of E C Bags(0.034cum=100Bags)			140.28	/	0.034	4126.00			
	Each		Say No of Bage :-			4126.00	55.88	230560.880	

4 Providing laying & filling Geo bags of size 1m X 0.700m (Type A) 300 GSM nonwoven) weight 420 gm volume of filled bag 0.070 cum Weight of filled Geo bag 126 kg with local sand including stitching in four lines by approved Nylon thread with Staching machine and generator, stacking and placing after loading, Unloading and carriage with the help of Trolley within 150 mtr. lead and all complete as per specification and direction of E/I.

At ch:-23500 m	cum	0	15.00	4.50	2.73	0.00		
(0.07m ³ =1 no. of Geo Bags)			0.00	/	0.07	0.00		
	Each					0.00	332.74	0.000

Supply and Carriage of brick bats upto 8 km breach and placing in breaches and lying of bats, all complete job.								
At ch:-100M	cum	1	15.00	1.50	0.42	9.38		
At ch:-150M	cum	1	25.00	1.45	0.37	13.29		
At ch:-200M	cum	1	26.00	1.38	0.35	12.51		
At ch:-250M	cum	1	11.00	1.10	0.32	3.83		
At ch:-300M	cum	1	7.00	1.20	0.35	2.94		
At ch:-0.350 km	cum	1	16.00	1.50	0.35	8.40		
At ch:-0.400 km	cum	1	13.00	1.45	0.32	5.97		
At ch:-0.450 km	cum	1	3.00	1.38	0.42	1.72		
At ch:-0.500 km	cum	1	6.00	1.10	0.37	2.42		
At ch:-0.550 km	cum	1	8.00	1.20	0.35	3.36		
At ch:-0.600 km	cum	1	5.00	1.45	0.32	2.30		
At ch:-0.700 km	cum	1	8.00	1.38	0.35	3.85		
At ch:-0.800 km	cum	1	20.00	1.10	0.37	8.07		
At ch:-0.900 km	cum	1	8.00	1.20	0.35	3.36		
	cum		total qty :-			81.39	2,759.12	224567.82
						A) SUB TOTAL =		1085169.28
						TOTAL COST =		1085169.28

Sanjiv
6/11/24
Junior Engineer

Asstt. Engineer

Prasad
6/11/24
Executive Engineer

S.E
KISHANGANJ

FINAL RATE UNDER WORKS CIRCLE KISHANGANJ

S.,No	Description of Item	Unit	Final Rate (Excluding GST, Solgnlorago & L.Coss)	Final Rate (Including GST, Solgnlorago & L.Coss)	S.F. Per Cum / Per Bag BAG
1	EARTH WORK	CUM	459.003	549.740	3.530
2	BRICK BAT	CUM	2209.576	2759.115	129.720
3	G.S,B	CUM	4328.501	5172.300	21.380
4	SAND BAG (Coment Bag)	Each	46.550	55.880	0.490
5	BAMBOO PILE	Por Mtr.	58.140	69.186	
6	BAMBOO CHACHRI	Por Mtr.	302.258	359.690	
7	BAMBOO RUNNER	Por Mtr.	30.210	35.950	
8	HUME PIPE (1000 mm Div)	Per Mtr.	6206.598	7385.850	
9	HUME PIPE (600 mm Div)	Per Mtr.	2492.260	2965.790	
10	STEEL DRUM SHEET	Por Sqr.Mtr.	215.352	256.270	
11	GEO BAG WITH SAND	EACH	967.490	1152.320	1.010
12	EACH N.C. BAG WITH SAND (Cement Bag)	Each E.C	967.490	1151.800	0.490
13	LOCAL SAND	CUM	721.110	1272.780	0.490

[Signature]
Junior Engineer 6/11/24

[Signature]
Assistant Engineer

[Signature]
Executive Engineer

Superintending Engineer
Rural Works Department
Works Circle Kishanganj

**BASIC RATES
(A) Labour**

Sl. No.	Description of Labour	Unit	Rate (Rs.)
L-01	Bhisti	day	373
L-02	Battmen Sprayer(semi skilled)	day	393
L-03	Blacksmith, special	day	503
L-04	Blaster, 2nd class	day	619
L-05	Carpenter 1st Class	day	503
L-06	Chips spreader, semi-skilled	day	449
L-07	Chiseller (Skilled)	day	577
L-08	Dresser (Skilled)	day	472
L-09	Driller, 2nd class	day	449
L-10	Electrician, skilled	day	476
L-11	Fitter, skilled	day	511
L-12	Mason (1st class)	day	503
L-13	Mason (2nd Class)	day	449
L-14	Mate Semi skilled	day	397
L-15	Mazdoor (Unskilled)	day	373
L-16	Mazdoor (Semi skilled)	day	388
L-17	Mazdoor (Skilled)	day	472
L-18	Painter (1st class)	day	476
L-19	Plumber, Special	day	476
L-20	Surveyor	day	454
L-21	White Washer	day	476
L-22	Head blacksmith	day	531
L-23	Welder 1 St Class	day	584
	Carpenter Head	day	531
	Night Gurad	day	415

*(Basic Rates Taken From SOR, Seventeenth Edition, Road Construction Department, Govt. of Bihar
effective from 01/04/2023)*

**BASIC RATES
(B) Material**

Sl. No.	Description	Unit	Basic Rate as per SOR	Add Royalty	Final Rate With Royalty
M-001	Bamboo (1st Class) 100 mm - 100 mm dia, 6.0 m -8.0 m long (per mtr.- 23.52 Rs.)	No.	188.00		188.00
M-002	Bamboo (1st Class) 100 mm - 100 mm dia, 6.0 m -8.0 m long (per mtr.- 23.52 Rs.)	No.	188.00		188.00
M-003	Bamboo (1st Class) 50 mm - 100 mm dia, 6.0 m -8.0 m long (per mtr.- 14.71 Rs.)	No.	118.00		118.00
M-004	Bamboo (1st Class) 50 mm - 100 mm dia, 6.0 m -8.0 m long (per mtr.- 14.71 Rs.)	No.	118.00		118.00
M-005	Bamboo (2nd Class) 75mm dia, 1.8 m - 6.0 m -8.0 m long (per mtr.- 22.03 Rs.)	No.	176.00		176.00
M-006	Bamboo (2nd Class) 75mm dia, 6.0 m -8.0 m long (per mtr.- 22.03 Rs.)	No.	176.00		176.00
M-007	Brick Bats	cum	1063.00	18.00	1081.00
M-008	Selected earth (Including @ Rs. 33.00 per cum & compensation @ Rs. 2.25 Per Cum	cum	2.25	33.00	35.25
M-009	Empety Cement Bag IS 11652:2000	Nos.	11.11		11.11
M-010	Steel Drum 300 mm dia 1.2 m high / empty bitumen drum	Nos.	170.13		170.13
M-011	Sand bags (Cost of sand and Empty cement bag)	Nos.	7.31	2.59	9.90
M-012	Sutli (Brown)	kg	20.59		20.59
M-013	Granular material (Natural occuring, soil gravel mixture / quarry waste, kankar, laterite, dhandla	cum	84.03	83.00	167.03
M-014	Nails	kg	108.00		108.00
M-014	RCC Pipe NP3 (1000 mm dia)	m	5787.23		5787.23
M-015	RCC Pipe NP3 (600 mm dia)	m	2310.00		2310.00
M-015	Sand (Fine) at source	cum	69.75	75.00	144.75
M-016	Empety Steel Drum 300 mm dia 1.2 m height	Nos.	170.13		170.13
M-016	Water	kl	60.30		60.30
M-017	Geo Bags	Each	124.00		124.00
M-018	G.S.B.	cum	69.75	75.00	144.75

(Basic Rates Taken From SOR, Seventeenth Edition, Road Construction Department, Govt. of Bihar effective from 01/04/2023.

**BASIC RATES
(C) USAGE RATES OF PLANT & MACHINERY**

Sl. No.	Item Code	Description of		Output of Machine		Usage Rates in Rs.		
		Machine	Activity	Unit	Output	Unit	Rate	
PM-009	PXAM-012		Crane upto 80 T					
PM-010	PXAM-015		Dozer D 80 - 412 Dozer D 50 - 415			per hour	5,573.00	
PM-011				Lifting of materials				
PM-012			From end-loader 1 cum bucket capacity at 45 cum hour			per hour	2,997.00	
PM-014	PXAM-017			Dozing cutting	cum h	260.00		
PM-015			Hydraulic Excavator of 1 cum bucket			per hour	1,119.00	
PM-017	PXAM-026			Loading Aggregates	cum h	120.00		1,326.00
PM-018	PXAM-024		Three wheel 80-100 kN Static Roller			per hour	2,272.00	
PM-019				Excavation	cum h	100.00		
PM-020			Earth:- Embankment or sub-grade			per hour	1,593.00	
PM-021				Compaction Rolling				1,593.00
PM-022			Sub-base G-I	cum h	80.70			1,593.00
PM-023			Sub-base G-II G-III	cum h	10.00			1,593.00
PM-024			W/M	cum h	8.00			1,593.00
PM-025			HUSG	cum h	16.00			1,593.00
PM-026			BM 50 75 mm	cum h	10.00			1,593.00
PM-027			Precix 20 mm	cum h	12.00			1,593.00
PM-028			Seal Coat	sqm h	250.00			1,593.00
PM-029			Surface Dressing 1st Coat	sqm h	500.00			1,593.00
PM-030			Surface Dressing 2nd Coat	sqm h	400.00		1,593.00	
PM-031	PXAM-028		Tipper 5.5 cum 10 t	sqm h	500.00		1,593.00	
PM-032	PXAM-053		Tractor with Disc Harrows	carriage	cum trip	5.50	per hour	1,426.00
PM-033	PXAM-055		Tractor with ripper at 60 cum per hour	Pulverisation of soil	cum h	80.00	per hour	693.00
PM-034	PXAM-053		Tractor with trolley with Grading equipment	Ripping Pavements, uprooting trees	cum h	60.00	per hour	697.00
PM-035	PXAM-054		Tractor with Rotavator	Transportation of materials	t trip	3 to 5	per hour	676.00
PM-036	PXAM-057		Truck 10 t capacity	Scarifier	cum h	25.00	per hour	693.00
PM-037	PXAM-059		Vibratory roller 80-100 kN	Carriage	cum trip	5.50	per hour	1,051.00
PM-038				Compaction of soil W/M	cum h	100.00	per hour	2,053.00
PM-039				Compaction of BM	cum h	60.00		2,053.00
PM-040	PXAM-060		Water tanker 6 H capacity (Truck Mounted)	Carriage of water	litre h	12000.00	per hour	752.00
PM-041	PXAM-060		generator 3KVA	stiching	per hour		per hour	74.00
PM-042	PXAM-060		stiching machine	stiching	day		day	50.00

(Basic Rates Taken From SOR, Seventeenth Edition, Road Construction Department, Govt. of Bihar effective from 01/04/2023.

SUMMARY OF CARRIGE COST

Sl. No.	Item	Unit	Amount (Rs.)
1	Earth Work	Cum	274.42
2	Brick Bats	Cum	521.97
3	Bamboo	Per Mtr.	3.00
4	G.S.B.	Cum	2960.13
5	Local Sand	Cum	345.14
6	HUME PIPE (1000 mm DIA)	Per Pipe	745.93
7	HUME PIPE PIR METER	Per Mtr.	298.37
8	HUME PIPE (600 mm DIA)	Per Pipe	310.88
9	HUME PIPE (600 mm DIA)	Per Mtr.	124.35
10	Local Sand	Cum	345.10

Comparison of carriage cost of Material Via Road from different sources
Carriage Cost & Lead in Km

Sl No	Item	Unit	Source	Pukka / Surface				Katcha				Loading & Unloading	Carriage by Road	Total	
				3.60	2.04	0 Km	Rs 0.00	3.60	2.04	1 Km	Rs 55.24				
1	By Tractor														
A	Earth Work Via Road	Cum	Local	3.60	2.04	0 Km	Rs 0.00	3.60	2.04	1 Km	Rs 55.24	219.18	274.42	274.42	
B	Brick Bat Via Road	Cum	Local	3.60	2.04	7 Km	Rs 247.55	3.60	2.04	1 Km	Rs 55.24	219.18	521.97	521.97	
B	Bamboo Via Road	per mtr.	Local	3.60	2.04	2 Km	Rs 1.15	3.60	2.04	1 Km	Rs 0.89	0.96	3.00	3.00	
D	Local Sand Via Road	Cum	Local	126.00	3.60	2 Km	Rs 70.73	126.00	3.60	1 Km	Rs 0.00	170.70	2960.13	2960.13	
2	By Tipper														
A	GSB Via Road	Cum	Siliguri	8.00	4.99	177 Km	Rs 2789.43	8.00	4.99	0 Km	Rs 0.00	437.68	745.93	745.93	
3	By Truck														
A	Hume Pipe (1000 mm) Via Road	Mtr.	purnea	8.00	10.00	53 Km	Rs 308.25	8.00	10.00	0 Km	Rs 0.00	187.58	310.88	310.88	
A1	Rate Per Mtr. Pipe	Mtr.	purnea												
B	Hume Pipe (600 mm) Via Road	Mtr.	purnea	8.00	25.00	53 Km	Rs 123.30	8.00	25.00	0 Km	Rs 0.00	124.35	124.35	124.35	
B1	Rate Per Mtr. Pipe	Mtr.	purnea												

Cost of Haulage Excluding Loading & Unloading as per SO. Subjected to Verification of Lead

Junior Engineer

R.W.D. Works Section

Asstt. Engineer

R.W.D. Works Sub - Division,

Executive Engineer

R.W.D. Works

	NDBSL No.	MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount In Rs
1	4.4		Carriage Of Material (By Tractor)				
			Loading and unloading of stone Boulder /stone aggregates sand/ kankar/ moorum				
			Placing tractor at loading point loading with front end loader dumping ,turning for return trip excludng time for haulage and return trip				
			Unit = cum				
			Taking output = 2.25 cum				
			Time required for				
		i)	positioning of tractor at loading point	min	1 min		
		ii)	Loading by front end loader 1 cum bucket capacity @ 25 cum	min	5 min		
			Total		6 min		
		a)	Labour				
			Mate	day	0.030	397.00	11.91
			Mazdoor (Unskilled)	day	0.720	373.00	268.56
		b)	Machinery				
			Tractor 3.60 Tonnes Capcaity	hour	0.100	676.00	67.60
			Front end loader 1 cum buckert capacity @ 25 Cum/hour	hour	0.083	1,419.00	117.78
			Cost for 2.25 cum = a+b+c				465.85
			Rate per cum = (a+b+c)/2.25	cum			207.044
			Total per cum	cum			207.044
	1.10		Haulage excluding Loading & Unloading				
			Haulage of materials by truck excluding cost of Loading, Unloading and stacking				
			Unit = 7km				
			Taking output 3.6t load and lead 10km = 36t/km				
			Case- I : Surfaced Road				
			Speed with load : 15km per hour				
			Speed while returning empty : 25km per hour				
		a)	Machinery				
			Tractor 3.6 tonnes Capacity	hour	0.667	676.00	450.89
			Haulage with load	hour	0.400	676.00	270.40
			Empty return trip				721.29
			Cost for 36t/km = a+b+c				20.040
			Cost for 1 t_km = a+b/36				20.040
			Total per t per km				20.040
			Case - II Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed				
			Speed with load : 10km per hour				
			Speed while returning empty : 15km per hour				
		a)	Machinery				
			Tractor 3.6 tonnes Capacity	hour	1.00	676.00	676.00
			Haulage with load	hour	0.667	676.00	450.89
			Empty return trip				1126.89
			Cost for 36t/km = a+b+c				31.300
			Cost for 1 t_km = a+b/36				31.300
			Total per t per km				31.300
2	1.1		Carriage Of Material (By Tipper)				
			Loading and Unloading Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by Manual Means				
		(i)	Loading of lime, Aggregates, Stone boulder, Brick aggregate, Kankar, Building Rubbish, Crushed Slag Stone for masonry work by manual means including a lead upto 30m				
			Unit = cum				
			Taking output = 5.5 cum				
			Time required for				
		(i)	Position of tipper at loading point		1Min		
		(ii)	loading by front end loader 1 cum bucket capacity @25		13Min		
		(iii)	maneuvering, reversing, dumping and turning for return		2Min		
		(iv)	Waiting time unforeseen contingnencies etc.		4Min		
			Total		20Min		
		b)	Machinery				
			Tipper 5.5 Tonnes Capcaity	hour	0.330	1,426.00	470.58
			Front end loader 1 cum buckert capacity @ 25 Cum/hour	hour	0.330	1,419.00	468.27
			Cost for 5.5 cum = a+b+c				938.85

		Rate per cum = $(a+b+c) / 3.3$				
		Total per cum	cum			170.70
1.10		Haulage excluding Loading & Unloading	cum			170.700
		Haulage of materials by truck excluding cost of Loading, Unloading and stacking				
		Unit = 1km				
		Taking output 10t load and lead 10km = 100t km				
		Case - I: Surfaced Road				
		Speed with load : 25km per hour				
		Speed while returning empty : 35km per hour				
a)		Machinery				
		Truck				
		Haulage with load	hour	0.40	1426.00	570.40
		Empty return trip	hour	0.29	1426.00	413.54
		Cost for 100t km = a + b + c				983.94
		Cost for 1 t km = $a+b/100$				9.830
		Total per t per km				9.830
		Case - III Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed				
		Speed with load : 10km per hour				
		Speed while returning empty : 15km per hour				
a)		Machinery				
		Truck				
		Haulage with load	hour	1.00	1426.00	1426.00
		Empty return trip	hour	0.67	1426.00	955.42
		Cost for 100t km = a + b				2381.42
		Cost for 1 t km = $a+b+c/100$				23.81
		Total per t per km				23.810
3		Carriage Of Material (By Truck)				
1.10		Haulage excluding Loading & Unloading				
		Haulage of materials by truck excluding cost of Loading, Unloading and stacking				
		Unit = 1km				
		Taking output 10t load and lead 10km = 100t km				
		Case - I: Surfaced Road				
		Speed with load : 25km per hour				
		Speed while returning empty : 35km per hour				
a)		Machinery				
		Truck				
		Haulage with load	hour	0.40	1054.00	421.60
		Empty return trip	hour	0.29	1054.00	305.66
		Cost for 100t km = a + b + c				727.26
		Cost for 1 t km = $a+b/100$				7.270
		Total per t per km				7.270
		Case - III Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed				
		Speed with load : 10km per hour				
		Speed while returning empty : 15km per hour				
a)		Machinery				
		Truck	hour	1.00	1054.00	1054.00
		Haulage with load	hour	0.67	1054.00	706.18
		Empty return trip				1760.18
		Cost for 100t km = a + b				17.60
		Cost for 1 t km = $a+b+c/100$				17.600
		Total per t per km				
1.9		Loading and Unloading of Hume Pipes				
	(i)	Loading of RCC Hume pipes by mechanical means including a lead upto 30 m				
	A.	1000 / 1200 mm dia Hume pipe				
		Unit = per pipe				
		Taking output = 9 pipes				
a)		Labour				
		Mate	day	0.02	397.00	7.94
		Mazdoor (Unskilled)	day	0.50	373.00	186.50
b)		Machinery	hour	0.33	1054.00	347.82
		Truick	hour	0.33	5573.00	1839.09
		Crane				2381.35
		Cost for 9 pipes = $a+b+c+d$				

			Rate per cum = (a+b+c+d)/100					
			Total per cum					
3.5	301.5	Excavation in soil with Dozer with lead upto 100 m	cum					58.073
	(ii)	Excavation for roadway in soil by mechanical means including cutting and pushing the earth to site of embankment upto a distance of 100 m, including trimming bottom and side slopes in accordance with requirements of lines, grades and cross-sections.	cum					58.073
		Unit = cum						
		Taking output = 100 cum						
	a)	Labour						
		Mate						
		Mazdoor (Unskilled)						
	b)	Machinery	day	0.08	397.00			31.60
		Dozer D-50 for spreading @200 cum per hour	day	2.00	373.00			822.00
		Cost for 100 cum = a-b-c-d-e						
		Rate per cum = (a+b+c+d)/180	hour	3.60	4326.00			15,573.60
		Total per cum	cum					16427.20
3.5	301.5	Construction of Embankment with approved material obtained from borrow pits with a lift upto 1.5 m transporting to site, spreading grading to required slope and compacting to meet requirement of Table 300.1 and 300.2 with a lead of 1000 m as per Technical	cum					91.262
			cum					91.260
		Unit = cum						
		Rate item no. 3.3 Clause 301.5						
		Rate item no. 3.5(ii) Clause 301.5						
		Royalty Compensation for earth taken from private land						
		Carriage of Earth by Tractor Lead 1 K.M.						
		Total Cost of 1 cum =						
		Labour Cess @ 1%						
		G.S.T. @ 18%						
		Add Seigniorage Fee @ 10 % of Materials						
		Total Cost of 1 cum 1% Cess & 18 % GST =						
			cum	1.00	35.25			3.53
4.5		Providing and Laying of Brick Bats						549.743
		Placing tractor at loading point loading with front end loader dumpoing ,turning for return trip excludng time for haulage and return trip						
		Unit = cum						
		Taking output = 2.83 cum						
	a)	Labour						
		Mazdoor (Unskilled)						
	b)	Materilas	day	2.170	373.00			809.41
		Brick Bats						
		Total (a+b)=	cum	3.396	1,081.00			3671.08
	d)	Carriage						4480.49
		Brick Bats						4480.49
		TOTAL	cum	3.396	521.97			1772.61
		Rate per cum = (a+b+c+d)/2.83						6253.10
		Total per cum	cum					2209.576
		Labour Cess @ 1%	cum					2209.576
		G.S.T. @ 18%						22.096
		Add Seigniorage Fee @ 10 % of Materials						397.724
		Total Cost of 1 cum 1% Cess & 18 % GST =	cum	1.20	1,081.00			129.72
8	4.1	401 PAVEMENT CRUST LAYERS						2,759.115
		For Grading II Material						
		Construction of granular sub-base by providing well graded material, spreading in uniform layers with tractor mounted grader arrangement on prepared surface, mixing by mix in place method with rotavator at OMC, and compacting with smooth wheel roller to achieve the desired density, complete as per Technical Specification Clause 401.						
	(ii)	For Grading II Material						
		Unit = cum						
		Taking output = 300 cum						
	a)	Labour						
		Mate						
		Mazdoor (Skilled)	day	0.48	397.00			190.56
		Mazdoor (Unskilled)	day	2.00	472.00			944.00
			day	10.00	373.00			3730.00

		b)	Machinery				4864.56	
			Tractor mounted grader arrangement	hour	12.00	676.00	8112.00	
			Three wheel 80-100 kN static roller @ 10 cum per hour	hour	30.00	1593.00	47790.00	
			Tractor with Rotavator 25 cum per hour	hour	12.00	693.00	8316.00	
			Water tanker 6 kl capacity	hour	5.00	752.00	3760.00	
		c)	Material				67978.00	
			Well graded granular sub-base material as per Table 400.1					
			GSB	cum	1.28	167.03	213.80	
			Cost of 300 cum without Carriage = (a+b+c+d+e)				73056.36	
			A) Basic Cost per cum = (a+b+c+d+e)/300	cum			243.521	
			CARRIAGE					
			G.S.B.	Cum	414.00	2960.13	1225493.82	
			Carriage cost of 300 cum				1225493.82	
			B) Carriage cost per cum				4084.98	
			Rate per cum = (A+B)	CUM			4328.501	
			Total per cum	CUM			4328.501	
			Labour Cess @ 1%				43.285	
			G.S.T. @ 18%				779.130	
			Add Seigniorage Fee @ 10 % of Materials	cum	1.28	167.03	21.38	
			Total Cost of 1 cum 1% Cess & 18 % GST =				5,172.296	
9	9.3	1100	Providing and laying reinforced cement concrete pipe NP3 for culverts on first class bedding of granular material in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets Clause 1106.					
		B.	1000 MM DIA (Single Row)					
		a)	Material					
			RCC NP3 pipe including collar	m	7.50	5787.23	43404.23	
		b)	Labour					
			Mate	day	0.09	397.00	35.73	
			Mason (1st class)	day	0.25	503.00	125.75	
			Mazdoor (Unskilled)	day	2.00	373.00	746.00	
			Cost for 7.5m = (a+b+c)					
			A) Basic Cost per m = (a+b)/7.5	m			44311.71	
			Rate per m of Pipe				5908.23	
		(d)	CARRIAGE COST				5908.23	
			NP3 Pipe	m	7.5	298.37	2237.78	
			Carriage cost of 7.5 m				2237.78	
			Carriage cost per m	m			298.37	
			Rate per m with Carriage	m			6,206.598	
			Total per m	m			6,206.598	
			Labour Cess @ 1%				62.066	
			G.S.T. @ 18%				1,117.188	
			Total Cost of 1 mtr. 1% Cess & 18 % GST =				7,385.852	
2		C.	600 MM DIA (Single Row)					
		a)	Material					
			RCC NP3 pipe including collar	m	7.50	2310.00	17325.00	
		b)	Labour					
			Mate	day	0.04	397.00	15.88	
			Mason (1st class)	day	0.12	503.00	60.36	
			Mazdoor (Unskilled)	day	0.96	373.00	358.08	
			Cost of 7.5m = (a+b+c+d)				17759.32	
			A) Basic Cost per m = (a+b)/7.5	m			2367.91	
			Rate per m of Pipe				2367.91	
			CARRIAGE COST					
			NP3 Pipe	m	7.5	124.35	932.63	
			Carriage cost of 7.5 m				932.63	
			B) Carriage cost per m	m			124.35	
			Rate per m with Carriage	m			2,492.260	
			Total per m	m			2,492.260	
			Labour Cess @ 1%				24.923	
			G.S.T. @ 18%				448.607	
			Total Cost of 1 mtr. 1% Cess & 18 % GST =				2,965.789	
3	5.7.40.1		Labour for filling empty cement bags with local sand, stitching the bags and placing including supply of sutti etc. all complete as per approved design, specification and direction E/I.					

		Unit = Per % Nos.				
		(A) For Filling & Stitching & Stacking				
		Labour				
		Skilled Labour for filling sand into bags and sewing	No.	2.00	472.00	944.00
		retail	kg	0.50	20.59	10.30
		(B) Labour Rate For Carrying & Placing filed E.C. Bags.				
		Labour				
		Skilled Labour for Carrying filed bags and placing to work site	No.	3.00	472.00	1416.00
		TOTAL =				2370.30
		Per % Nos. (B) =			Say.	2370.30
		Rate per bag (A-B) = /100				23.70
		(C) Cost of empty cement bag & cost of sand	each			11.11
		(D) Carriage cost				
		Tractor with trolley	cum	0.034	345.14	11.73
		(G) Total = (A+B+C+D) =				46.55
		Labour Cess @ 1%				0.465
		G.S.T. @ 18%				8.379
		Add Seigniorage Fee @ 10 % of Materials				0.49
		Total Cost of 1 E.C. Bag 1% Cess & 18% GST =	cum	0.034	144.75	55.882
4	5.7.9	Supply Labour for fitting and fixing 62 mm to 75 mm dia bamboo runners in position at every verticle pile with 150 mm long nails or 38 swg G. I. wire including cost of G.I. or nails complete job as per specification and direction				
		Unit = Per mt.				
		Taking Out Put = 30.50 m				
	(i)	Materials				
		Bamboo				
		Nails	m	30.50	20.21	616.41
	(ii)	Labour	kg	0.50	108.00	54.00
		Carpenter Gr-II				
		Unskilled Labour	No.	0.125	531.00	66.38
		Rate for 30.5 m	No.	0.25	373.00	93.25
		TOTAL =				830.04
		Rate per mt				830.04
	(iii)	Carriage cost				27.21
		bamboo				
		Total Cost with Carriage	mt	1	3.00	3
		Labour Cess @ 1%				30.21
		G.S.T. @ 18%				0.302
		Total Cost of 1 mtr. 1% Cess & 18% GST =				5.439
5	5.7.7	Labour for cutting 62 mm to 75 mm dia bamboo piles in size and making shoes and driving etc. complete bob as per specification and direction E/I.				35.955
		Unit = Per mt.				
		Taking Out Put = 30.50 m				
		Assurning				
		20 no pile sunk 1.525 m deeps				
		Total depth sunk 30.50 m				
	(i)	Materials				
		Bamboo				
	(i)	Labour	m	30.50	20.21	616.41
		Carpenter Gr-II				
		Unskilled Labour for piling	No.	0.25	531.00	132.75
		Rate for 30.5 m	No.	2.50	373.00	932.5
		Total				1681.66
		Rate for 1 m				1681.66
		Carriage Cost of Bamboo				55.14
		Total Cost with Carriage	per mtr.			3.00
		Labour Cess @ 1%				58.14
		G.S.T. @ 18%				0.581
		Total Cost of 1 mtr. 1% Cess & 18% GST =				10.465
						69.182

		Labour for fitting and and fixing Steel Drum 300 mm dia 1.2 m high as per specification and direction				
		(Assuming Per Mtr. = $3.14 \times 0.30 = 0.942$ mtr.)				
		Area of Assuming in one Drum = $0.942 \times 1.20 = 1.130$ Sqm				
		One Sqm sheet Cost = $127.80 / 1.130 = 113.12$ Cost				
		Unit = per sqm				
		Taking Out = 100 sqm				
	a	Labour				
		Hammer man	No.	4.00	531.00	2124.00
		Mazdoor (Unskilled)	No.	4.00	373.00	1492.00
		Carpenter 1st Class	No.	4.00	503.00	2012.00
	b	Materials				
		Nails	kg	5.00	170.13	850.65
		Steel Drum sheet	Nos.	88.5	170.13	15056.51
						21535.160
		Rate Per m = $(a+b+c)/100$				
		Labour Cess @ 1%				
		G.S.T. @ 18%				
		Total Cost of 1 mtr. 1% Cess & 18 % GST =				
5.7.8	WRD	Labour for fitting and and fixing split bamboo woven chachari in position with 20 swg G.I. wire of 75 mm to 100 mm long nails alternatively including cost of G.I. wire or nails complete job as per specification and direction of E/I.				
		(Assuming strip of $3.05 \times 3.05 = 9.30$ sqm				
		Unit = per sqm				
		Taking Out = 9.30 sqm				
	a	Labour				
		Carpenter Gr -II	No.	1.00	531.00	531.00
		Mazdoor (Unskilled) for pilling	No.	1.00	373.00	373.00
	b	Materials				
		Bamboo	Mtr.	10.00	188.00	1880.00
		Nails	kg	0.25	108.00	27.00
						2811.000
		Rate Per m = $(a+b+c)/9.30$				
		Labour Cess @ 1%				
		G.S.T. @ 18%				
		Total Cost of 1 mtr. 1% Cess & 18 % GST =				
5.7.50		Providing laying & filling Geo bags of size 1m X 0.700m (Type A) 300 GSM nonwoven) weight 420 gm volume of filled bag 0.070 cum Weight of filled Geo bag 126 kg with local sand including stitching in four lines by approved Ntlon thread with Staching machine and generator, stacking and placing after loading, Unloading and carriage with the help of Trolley within 150 mtr. lead and all complete as per specification and direction of E/I.				
		Unit = Each Bag				
		Taking Out = 40 Nso.				
		Labour				
		Unskilled Loading For filling stacking	nos	2	373.00	746.00
		Skilled labour for stacking	nos	0.33	472.00	155.76
		Unskild labour for carring and placing	nos	4.00	373.00	1492.00
		Mate	nos	0.25	397.00	99.25
		Stiching Machine	day	0.33	50.00	16.50
		Tractor with trolley	day	1.00	676.00	676.00
		Generator 3KVA	hrs	20.67	74.00	1529.58
		Total				4715.09
		Rate per bag (total/40) (A)				
	(ii)	charge for placing & dumplng				
		unskilled labour for loading unloading & dumplng	nos	16	373.00	6320.00
		Mate	nos	1	397.00	419.00
		Tractor with trolley	each	4	676.00	2704.00
		Total				9,443.000
		Rate per bag (Total/256) (B)				
		Matroials				
		cost of Geo Bag	each	1	124.00	124.00
		Total cost (a+b+c)				
						278.764

		Rate per bag				
		Labour Cess @ 1%				278.764
		G.S.T. @ 18%				2.788
		Add Seigniorage Fee @ 10 % of Materials				50.178
		Total Cost of 1 Geo Bag 1% Cess & 18 % GST =	cum	0.070	144.75	1.01
		Labour for filling empty cement bags with local sand, stitching the bags and pitching in Nylon crate of size (1m x 1m x 1m) with a lead of 150 m including supply of suti etc. and placing the filed crates in water portion within a lead 30 m all complete as per approved design, specification and direction of E/I.				332.739
		Unit = Each N.C.				
	(i)	(i) Labour Cost for filling bags in one Nylon crate in dry portion	No.	1	472.00	411.00
	(ii)	(i) Labour Cost for filling bags in one Nylon crate in dry portion	No.	1	472.00	611.00
		(II) Placing of filed N/C with 30 m lead in water portion				
		Labour				
		Mate				
		Labour(Skilled)	No.	0.37	397.00	146.89
		Labour(Unskilled)	No.	1.00	472.00	472.00
			No.	1.00	373.00	373.00
		Hence, Total Labour for 100 Cft.				2013.89
		Taking one E.C. Bags to contain 1.20 Cft. Of sand				2013.89
	(ii)	Hence, labour rate for placing one filed N.C.				
		Hence rate per mu;pm crate om water portion (I+II)		356.49		356.49
		Labour Cess @ 1%			Say.	967.49
		G.S.T. @ 18%				9.675
		Add Seigniorage Fee @ 10 % of Materials				174.148
		Total Cost of 1 E.C.1% Cess & 18 % GST =	cum	0.034	144.75	0.49
(1)	800	local sand Filling in foundation trenches as per drawing and technical specification				1,151.803
		local sand Filling in foundation trenches as per drawing and technical specification Clause 305.3.9				
	I.	Sand filling				
		Unit = cum				
	a)	Labour				
		Mate				
		Mazdoor (Unskilled)	day	0.01	397.00	3.97
	b)	Material	day	0.30	373.00	111.90
		Sand (assuming 20 per cent voids)				
		Overheads @ 6 % on (a)	cum	1.20	144.75	173.70
						17.37
		CARRIAGE COST				306.94
		sand	Cum	1.2	345.14	414.17
		Rate per cum = a+b+c				721.11
		Total Cost Including 1 % LABOUR CESS				7.21
		G.S.T. @ 18%				129.80
		Add Seigniorage Fee @ 10 % of Materials				0.49
		Total Cost of 1 E.C.1% Cess & 18 % GST =				1272.78