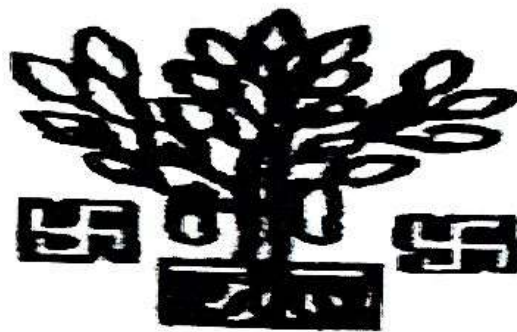


RURAL WORKS DEPARTMENT GOVT OF BIHAR



NAME OF WORKS :- Rampur Salaudin Ke Ghar to Idgah Tak

BLOCK :- ARARIA

FDR
Phase-I
17,95,752

YEAR(2024-25)

R.W.D., WORKS CIRCLE, KISHANGANJ

R.W.D., WORKS DIVISION, ARARIA

प्रतिवेदन

पथ का नाम :-

Rampur Salaudin Ke Ghar to Idgah Tak

कार्य का नाम :-

Rampur Salaudin Ke Ghar to Idgah Tak

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 Seventy lakh Ninety five thousand Seven hundred & fifty है। उक्त पथ का निर्माण योनान्तर्गत हुआ है एवं योजना अनुरक्षण अवधि में।

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।

 11/11/24

कनीय अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रशाखा, Araria

 11/11/24

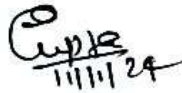
सहायक अभियंता,
ग्रामीण कार्य विभाग,
कार्य अवर प्रमण्डल, Araria

 11/11/24

कार्यपालक अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रमण्डल, Araria

SUMMARY OF COST ESTIMATE FOR THE PROJECT		
NAME OF ROAD :-	Rampur Salaudin Ke Ghar to Idgah Tak	
DISTRICT :-	ARARIA	
BLOCK :-	ARARIA	
Length of Road:-	0.000KM	
Length of Cutting in mtr :-	97.000	
Sl. No.	DESCRIPTION	AMOUNT (LAKHS)
1	Supplying of EC bag, of local sand	1765752.12
2	Drone videography six times	30000.00
	SUB TOTAL COST =	1795752.12
	TOTAL (RS.) =	17,95,752


J.E


A.E


E.E

S.E

Technically ^{Approved} ~~Sanctioned~~ for ₹ 17,95,752=00
(Rupees Seventeen Lakh Ninety-five thousand
Seven hundred fifty-two) only


Superintending Engineer
RWD Work Circle
Kishanganj

Bill of Quantlty

NAME OF ROAD :-

Rampur Salaudln Ke Ghar to Idgah Tak

DISTRICT :-

ARARIA

BLOCK :-

ARARIA

Sl. No.	DESCRIPTION OF ITEMS	QUANTITY	UNIT	RATE (Rs.)	AMOUNT (Rs.)
1	Supplying of EC bag, filling of local sand stitching and placing in position as the direction of Engineer-in-charge.	31599.00	Each	55.88	1766752.12
A) SUB TOTAL =					1766752.12
TOTAL COST =					1765752

J.E

A.E

E.E

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

Phase-I

NAME OF ROAD :-		Rampur Salaudin Ke Ghar to Idgah Tak							
DISTRICT :-		ARARIA							
BLOCK :-		ARARIA							
Length of Cutting:-		97.00 mtr							
Sl. No.	DESCRIPTION OF ITEMS	Unit	Nos.	L(m)	B(m)	D(m)	QUANTITY	RATE (Rs.)	AMOUNT (Rs.)
1	Supplying of EC bag, filling of local sand stitching and placing in position as the direction of Engineer-in-charge.								
	At ch:-0 m	cum	2	15.00	$(1.25+2.25)/2$	$(1.85+3.5+2.5)/3$	792.00		
	At ch:-200 m	cum	1	20.00	$(1.25+1.5)/2$	$(1.85+3.25+2.5)/3$	69.67		
	At ch:-250 m	cum	1	6.00	$(1.25+2.25)/2$	$(1.85+3.5+2.5)/3$	27.48		
	At ch:-270m	cum	1	19.00	$(1.25+1.75)/2$	$(2.85+2.45+1.75)/3$	66.98		
	At ch:-550m	cum	1	16.00	$(1.25+2.25)/2$	$(2.85+2.5+1.75)/3$	66.27		
	At ch:-600m	cum	1	21.00	$(1.25+1.5)/2$	$(2.25+1.65+1.5)/3$	61.98		
	Total No of E C Bags(0.034cum=100Baq)			1074.36	/	0.034	31599.00		
	Each			Say No of Bage :-			31599.00	55.88	1765752.120
							A) SUB TOTAL =		1765752.12
							TOTAL COST =		1765752.12

Junior Engineer

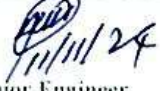
Asstt. Engineer

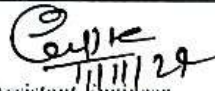
Executive Engineer

S.E
KISHANGANJ

FINAL RATE UNDER WORKS CIRCLE KISHANGANJ

S.No	Description of Item	Unit	Final Rate (Excluding GST, Solignorage & L.Cess)	Final Rate (Including GST, Solignorage & L.Cess)	S.F. Per Cum / Per Bag BAG
1	EARTH WORK	CUM	459.003	649.740	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 (Cement Bag)	Each	46.550	55.880	0.490
5	BAMBOO PILE	Per Mtr.	58.140	69.186	
6	BAMBOO CHACHRI	Per Mtr.	302.258	359.690	
7	BAMBOO RUNNER	Per 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	Per 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


Junior Engineer


Assistant Engineer


Executive Engineer

Superintending Engineer
Rural Works Department
Works Circle Kishanganj

BASIC RATES

(A) Labour

No.	Description of Labour	Unit	Rate (Rs.)
L-01	Bhisti	day	373
L-02	Bitumen 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 Guard	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	Empty 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	Empty 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
009	P&M-012	Cement mixer 80 l	Loading of materials			per hour	5,573.00
010	P&M-015	Dozer D 80 - 412 Dozer D 30 - 415	Dozing cutting	cum h	260.00	per hour	2,997.00
011				cum h	120.00		4,326.00
014	P&M-017	Front end-loader 1 cum bucket capacity or 45 cum hour	Loading Aggregates	cum h	45.00	per hour	1,419.00
017	P&M-026	Hydraulic Excavator of 1 cum bucket	Excavation	cum h	100.00	per hour	2,272.00
031	P&M-044	Three wheel 80-100 kN Static Roller	Compaction Rolling			per hour	1,593.00
032			Earth - Embankment or sub-grade	cum h	80.70		1,593.00
033			Sub-base G-I	cum h	10.00		1,593.00
034			Sub-base G-II G-III	cum h	8.00		1,593.00
035			WMM	cum h	16.00		1,593.00
036			BUSG	cum h	10.00		1,593.00
037			BM 50 75 mm	cum h	12.00		1,593.00
038			Premium 20 mm	sqm h	250.00		1,593.00
039			Seal Coat	sqm h	500.00		1,593.00
040			Surface Dressing 1st Coat	sqm h	400.00		1,593.00
041			Surface Dressing 2nd Coat	sqm h	500.00		1,593.00
042	P&M-048	Tipper 5.5 cum 10 t	Carriage	cum trip	5.50	per hour	1,426.00
043	P&M-053	Tractor with Disc Harrows	Pulverisation of soil	cum h	80.00	per hour	693.00
044	P&M-053	Tractor with ripper or 60 cum per hour	Ripping Pavements, uprooting trees	cum h	60.00	per hour	697.00
045	P&M-053	Tractor with trolley with Grading equipment	Transportation of materials	t trip	3 to 5	per hour	676.00
046	P&M-054	Tractor with Rotavator	Scarifier	cum h	25.00	per hour	693.00
047	P&M-057	Truck 10 t capacity	Carriage	cum trip	5.50	per hour	1,034.00
048	P&M-059	Vibratory roller 80-100 kN	Compaction of soil WMM	cum h	100.00	per hour	2,053.00
049			Compaction of BM	cum h	60.00		2,053.00
050	P&M-060	Water tanker 6 kl capacity (Truck Mounted)	Carriage of water	litre h	12000.00	per hour	752.00
063	P&M-060	generator 3KVA	stiching	per hour		per hour	74.00
064	P&M-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 various sources															
Sl No	Item	Unit	Source	Pucka / Surface						Katcha				Carriage by Road	Total
1	By Tractor														
A	Earth Work Via Road	Cum	Local	3.60											
				2.04	x 20.04	x	0 Km								
B	Brick Bat Via Road	Cum	Local	3.60											
				2.04	x 20.04	x	7 Km								
B	Bamboo Via Road	per mtr.	Local	3.60											
				126.00	x 20.04	x	2 Km								
D	Local Sand Via Road	Cum	Local	3.60											
				2.04	x 20.04	x	2 Km								
2	By Tipper														
A	GSB Via Road	Cum	Siliguri	8.00	x 9.83	x	177 Km								
				4.99											
3	By Truck														
A	Hume Pipe (1000 mm) Via Road	Mtr.	purnea	8.00											
				10.00	x 7.27	x	53 Km								
A1	Rate Per Mtr. Pipe	Mtr.	purnea												
B	Hume Pipe (600 mm) Via Road	Mtr.	purnea	8.00											
				25.00	x 7.27	x	53 Km								
B1	Rate Per Mtr. Pipe	Mtr.	purnea												

Submitted for SO, Subjected to Verification of Lead

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

SDB SL No.	MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
Carriage Of Material (By Tractor)						
4.4		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 excluding 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				
		Male	day	0.010	397.00	11.91
		Mazdoor (Unskilled)	day	0.720	373.00	268.56
	b)	Machinery				
		Tractor 3.60 Tonnes Capacity	hour	0.100	676.00	67.60
		Front end loader 1 cum bucket 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				
		Haulage with load	hour	0.667	676.00	450.89
		Empty return trip	hour	0.400	676.00	270.40
		Cost for 36t/km = a+b+c				721.29
		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				
		Haulage with load	hour	1.00	676.00	676.00
		Empty return trip	hour	0.667	676.00	450.89
		Cost for 36t/km = a+b+c				1126.89
		Cost for 1 t, km = a+b/36				31.300
		Total per t per km				31.300
Carriage Of Material (By Tipper)						
1.1		Loading and Unloading Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by Manual Means				
	(1)	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 contingencies etc.		4Min		
		Total		20Min		
	b)	Machinery				
		Tipper 5.5 Tonnes Capacity	hour	0.330	1,426.00	470.58
		Front end loader 1 cum bucket 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 = $(a+b+c)/3.5$				
		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				
		Lead = 1 km				
		Taking output 10t load and lead 10km = 100t km				
		Case - I : Surfaced Road				
		Speed with load = 25km per hour				
		Speed while returning empty = 15km per hour				
a)	Machinery					
	Truck					
	Haulage with load					
	Empty return trip	hour	0.40	1426.00		570.40
	Cost for 100t km = a + b	hour	0.29	1426.00		413.54
	Cost for 1 t km = a+b/100					983.94
	Total per t per km					9.830
		Case - III Kutchha Track and Track in River Bed / Nallah Bed and Choe Bed				9.830
		Speed with load = 10km per hour				
		Speed while returning empty = 15km per hour				
a)	Machinery					
	Truck					
	Haulage with load					
	Empty return trip	hour	1.00	1426.00		1426.00
	Cost for 100t km = a + b	hour	0.67	1426.00		955.42
	Cost for 1 t km = a+b-c/100					2381.42
	Total per t per km					23.81
						23.810
		Carriage Of Material (By Truck)				
1.10		Haulage excluding Loading & Unloading				
		Haulage of materials by truck excluding cost of Loading, Unloading and stacking				
		Lead = 1 km				
		Taking output 10t load and lead 10km = 100t km				
		Case - I : Surfaced Road				
		Speed with load = 25km per hour				
		Speed while returning empty = 15km 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 Kutchha 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	1054.00		1054.00
	Empty return trip	hour	0.67	1054.00		706.18
	Cost for 100t km = a + b					1760.18
	Cost for 1 t km = a+b-c/100					17.60
	Total per t per km					17.600
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				
		Truck	hour	0.33	1054.00	347.82
		Crane	hour	0.33	5573.00	1839.09
		Cost for 9 pipes = a+b+c+d				2381.35

		Rate per pipe = (a+b+c)/9	per p			264.594
		Total per pipe				264.594
	c.	600/450 mm dia Hume pipe				
		Unit = per pipe				
		Taking output = 21 pipe				
	a)	Labour				
		Mate	day	0.02	397.00	7.94
		Mazdoor (Unskilled)	day	0.50	373.00	186.50
	b)	Machinery				
		Tractor 1 ton Tonnes Capacity	hour	0.33	1054.00	347.82
		Crane	hour	0.33	5573.00	1839.09
		Cost for 21 pipes = a+b+c+d				2301.35
		Rate per pipe = (a+b+c)/21	per p			113.398
		Total per pipe				113.398
	(iii)	Unloading of RCC Hume pipe by Mechanical means including a lead upto 30 m				
	A.	1000/1200 mm dia RCC Hume pipes				
		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				
		Truck	hour	0.20	1054.00	210.80
		Crane	hour	0.20	5573.00	1114.60
		Cost for 9 pipes = a+b+c+d				1519.84
		Rate per pipe = (a+b+c)/9	per p			168.871
		Total per pipe				168.871
	c.	600/450 mm dia Hume pipe				
		Unit = per pipe				
		Taking output = 21 pipes				
	a)	Labour				
		Mate	day	0.020	397.00	7.94
		Mazdoor (Unskilled)	day	0.50	373.00	186.50
	b)	Machinery				
		Truck	hour	0.20	1054.00	210.80
		Crane	hour	0.20	5573.00	1114.60
		Cost for 21 pipes = a+b+c+d				1519.84
		Rate per pipe = (a+b+c)/21	per p			72.373
		Total per pipe				72.373
1.9		Loading and Unloading of Bamboo				
	(i)	Loading & unloading Bamboo				
		Unit = per metre				
		Taking output = per mtr.				
	a)	Material				
		Bamboo = 2016/300	per pipe			6.72
		Bamboo Per Mt.	per mt			0.96
		Total per m				0.960
3.3	301.5	Construction of Embankment with material obtained from roadway cutting				
		Construction of Embankment with approved material deposit at site from roadway cutting and excavation from drain and foundation of other structure graded and compacted to meet requirement of Table 300.1 and 300.2 as per Technical Specification Clause 301.5.				
		Unit = cum				
		Taking output = 100 cum				
	a)	Labour				
		Mate	day	0.02	397.00	7.94
		Mazdoor (Unskilled)	day	0.50	373.00	186.50
	b)	Machinery				
		Dozer D-50 for spreading @200 cum per hour	hour	0.50	0.00	0.00
		Motor Grader for grading @200 Cum per hour	hour	2.00	697.00	1,394.00
		Water tanker 6 kl capacity	hour	2.00	752.00	1,504.00
		Three Wheel 80-100 kN Static Roller	hour	1.25	1593.00	1,991.25
	c)	Material				
		Water	kl	12.00	60.30	723.60
		Cost for 100 cum = a+b+c+d+e				5807.29

		Rate per cum = (a+b+c+d)/100	cum			58.073
		Total per cum	cum			58.073
3.5	301.5	Excavation in soil with Dozer with lead upto 100 m				
(ii)	(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.				
		Unit = cum				
		Taking output = 100 cum				
	a)	Labour				
		Mate	day	0.08	397.00	31.60
		Mazdoor (Unskilled)	day	2.00	373.00	822.00
	b)	Machinery				
		Dozer D-50 for spreading @200 cum per hour	hour	3.60	4326.00	15,573.60
		Cost for 100 cum = a+b+c+d+e				16427.20
		Rate per cum = (a+b+c+d)/180	cum			91.262
		Total per cum	cum			91.260
3.3	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				
		Unit = cum				
		Rate item no. 3.3 Clause 301.5				58.073
		Rate item no. 3.5(ii) Clause 301.5				91.260
		Royalty Compensation for earth taken from private land				35.250
		Carriage of Earth by Tractor Lead 1 K.M.				274.420
		Total Cost of 1 cum =				459.003
		Labour Cess @ 1%				4.590
		G.S.T. @ 18%				82.621
		Add Seigniorage Fee @ 10 % of Materials	cum	1.00	35.25	3.53
		Total Cost of 1 cum 1% Cess & 18 % GST =				549.743
7	4.5	Providing and Laying of Brick Bats				
		Placing tractor at loading point loading with front end loader dumping, turning for return trip excluding time for haulage and return trip				
		Unit = cum				
		Taking output = 2.83 cum				
	a)	Labour				
		Mazdoor (Unskilled)	day	2.170	373.00	809.41
	b)	Materials				
		Brick Bats	cum	3.396	1,081.00	3671.08
		Total (a+b) =				4480.49
		Total (a+b+c) =				4480.49
	d)	Carriage				
		Brick Bats	cum	3.396	521.97	1772.61
		TOTAL				6253.10
		Rate per cum = (a+b+c+d)/2.83	cum			2209.576
		Total per cum	cum			2209.576
		Labour Cess @ 1%				22.096
		G.S.T. @ 18%				397.724
		Add Seigniorage Fee @ 10 % of Materials	cum	1.20	1,081.00	129.72
		Total Cost of 1 cum 1% Cess & 18 % GST =				2,759.115
8	4.1	401 PAVEMENT CRUST LAYERS				
		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	day	0.48	397.00	190.56
		Mazdoor (Skilled)	day	2.00	472.00	944.00
		Mazdoor (Unskilled)	day	10.00	373.00	3730.00

		b)	Machinery					
			Tractor mounted grader arrangement	hour	12.00	676.00		4864.56
			Three wheel 30-100 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					
			Well graded granular sub-base material as per Table 400.1					67978.00
			GSB					
			Cost of 300 cum without Carriage = (a+b+c+d+e)	cum	1.28	167.03		213.80
			A) Basic Cost per cum = (a+b+c+d+e)/100					73956.36
			CARRIAGE	cum				243.521
			GSB					
			Carriage cost of 300 cum	cum	414.00	2960.13		1225493.82
			B) Carriage cost per cum					1225493.82
			Rate per cum = (A+B)					4084.98
			Total per cum	CUM				4328.501
			Labour Cess @ 1%	CUM				4328.501
			G.S.T. @ 18%					43.285
			Add Surtax Fee @ 10 % of Materials					779.120
			Total Cost of 1 cum 1% Cess & 18 % GST =	cum	1.28	167.03		21.38
								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)					44311.71
			A) Basic Cost per m = (a+b)/7.5	m				5908.23
			Rate per m of Pipe					5908.23
		(d)	CARRIAGE COST					
			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 ofutti etc. all complete as per approved design, specification and direction E/I.					

		Unit = Per sq. Met.			
		(b) for cutting & stretching & stretching			
		Labour			
		Material			
		Cost	No.	2.00	8.00
			sq.	0.50	20.00
		(8) Labour: Rate for carrying & placing filled 3.5 bags			
		Labour			
		Material			
		Cost	No.	3.00	12.00
			sq.	0.50	20.00
					2370.00
		Rate per bag (A+B) = 100			2370.00
		(c) Cost of empty cement bag & cost of sand			23.70
		each			11.11
		Divisor with 1000			
		(6) Total = (A+B+C+D) =	mm	0.034	345.14
		Labour Cost @ 1%			46.55
		G.S.T. @ 18%			8.465
		Rate for carrying & placing @ 10% of Materials			23.70
		Total Cost of 1 mtr. 1% Cess & 18% GST =	mm	0.034	146.75
					55.882
		Labour for cutting & stretching & stretching 62 mm to 75 mm dia bamboo poles in size and making complete job as per specification and direction			
		Unit = Per mt.			
		Taking Out Put = 30.50 m			
		(a) Materials			
		Bamboo			
		Nails	m	30.50	20.21
		Labour	sq.	0.50	103.00
		Material			
		Labour	No.	0.125	531.00
		Material	No.	0.25	373.00
		Rate for 30.5 m			
		TOTAL =			830.04
		Rate per mt			830.04
		(b) Carriage cost			27.21
		Labour			
		Total Cost with Carriage	mt	1	3.00
		Labour Cost @ 1%			30.21
		G.S.T. @ 18%			0.302
		Total Cost of 1 mtr. 1% Cess & 18% GST =			5.439
					35.955
		Labour for cutting 62 mm to 75 mm dia bamboo poles in size and making shoes and driving etc. complete bob as per specification and direction 1.1			
		Unit = Per mt.			
		Taking Out Put = 30.50 m			
		Assuming			
		20 m per sunk 1.525 m deep			
		Total depth sunk 30.50 m			
		(i) Materials			
		Bamboo	m	30.50	20.21
		(ii) Labour			
		Carpenter Gr-II	No.	0.25	531.00
		Unskilled Labour for piling	No.	2.50	373.00
		Rate for 30.5 m			1681.66
		Total			1681.66
		Rate for 1 m			55.14
		Carriage Cost of Bamboo	per mtr.		3.00
		Total Cost with Carriage			58.14
		Labour Cost @ 1%			0.581
		G.S.T. @ 18%			10.465
		Total Cost of 1 mtr. 1% Cess & 18% GST =			69.182

5.7.8 WRD	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			
	Mazdoor (Unskilled)			
	Carpenter 1st Class			
	No.	4.00	531.00	2124.00
	b Materials			
	No.	4.00	373.00	1492.00
	No.	4.00	503.00	2012.00
	Steel Drum sheet			
	kg	5.00	170.13	850.65
	Nos.	88.5	170.13	15056.51
	Rate Per m = $(a+b+c)/100$			
	Labour Cess @ 1%			
	G.S.T. @ 18%			
	Total Cost of 1 mtr. 1% Cess & 18 % GST =			
	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.			
5.7.8 WRD	(Assuming strip of $3.05 \times 3.05 = 9.30$ sqm			
	Unit = per sqm			
	Taking Out = 9.30 sqm			
	a Labour			
	Carpenter Gr-II			
	Mazdoor (Unskilled) for pilling			
	No.	1.00	531.00	531.00
	b Materials			
	No.	1.00	373.00	373.00
	Bamboo			
	Nails			
	Mtr.	10.00	188.00	1880.00
	kg	0.25	108.00	27.00
	Rate Per m = $(a+b+c)/9.30$			
	Labour Cess @ 1%			
	G.S.T. @ 18%			
	Total Cost of 1 mtr. 1% Cess & 18 % GST =			
	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.			
5.7.50	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
	Unskilled 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			
	Rate per bag (total/40) (A)			
(ii)	charge for placing & dumping			
	nos	16	373.00	6320.00
	unskilled labour for loading unloading & dumping			
	nos	1	397.00	419.00
	Mate			
	each	4	676.00	2704.00
	Tractor with trolley			
	Total			
	Rate per bag (Total/256) (B)			
	Matroiols			
	each	1	124.00	124.00
	cost of Geo Bag			
	Total cost (a+b+c)			

		Rate per bag				278.764
		Labour Cess @ 1%				2.788
		G.S.T. @ 18%				50.178
		Add Seigniorage Fee @ 10 % of Materials				1.01
		Total Cost of 1 Geo Bag 1% Cess & 18 % GST =	cum	0.070	144.75	332.739
		Labour for filling empty cement bags with local sand, striking the bags and piling in Nylon crate of size (1m x 1m x 1m) with a lead of 1.50 m including supply of silt 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				
		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)	(ii) Labour Cost for filling bags in one Nylon crate in dry portion	No.	1	472.00	411.00
		(III) Placing of 120 N.C with 30 m lead in water portion				
		Labour				
		Mate	No.	0.37	397.00	146.89
		Labour (Skilled)	No.	1.00	472.00	472.00
		Labour (Unskilled)	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
	(a)	Hence, labour rate for placing one filed N.C.		356.49		356.49
		Hence rate per mu;pm crate on water portion (I-II)			Say.	967.49
		Labour Cess @ 1%				9.675
		G.S.T. @ 18%				174.148
		Add Seigniorage Fee @ 10 % of Materials				0.49
		Total Cost of 1 E.C. 1% Cess & 18 % GST =	cum	0.034	144.75	1,151.803
(1)	800	local sand Filling in foundation trenches as per drawing and technical specification				
		local sand Filling in foundation trenches as per drawing and technical specification Clause 305.3.9				
	I.	Sand filling				
		Unit = cum				
	a)	Labour				
		Mate	day	0.01	397.00	3.97
		Mazdoor (Unskilled)	day	0.30	373.00	111.90
	b)	Material				
		Sand (assuming 20 per cent voids)	cum	1.20	144.75	173.70
		Overheads @ 6 % on (a)				17.37
						306.94
		<u>CARRIAGE COST</u>				
		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