



ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

PLAN HEAD- FDR(2245) YEAR 2020-21

DISTRICT :- East Champaran
BLOCK :- Madhuban

Estimate for Repair of Road breaches
(Damaged by Flood) for Motorability in LAHI
N.H 104 TO KAURIYA.

ESTIMATED COST - 6.62 Lacs

6.416

SUBMITTED BY:
EXECUTIVE ENGINEER,
RWD WORKS DIVISION,
PAKRIDAYAL

Technical Report

F.D.R.(2020-21)

Name of Road:- Lahi N.H 104 To Kauriya.
Length of Road:- 2.75 K.M
Name of Block:- Madhuban.
Project Head:- New Maintenance Policy-2018.
Package No:- M.R. -N/2019-20 Pakridayal/10
Estimated Cost:- 6.62 Lacs

This estimate has been prepared for temporary restoration of the above road damaged due to heavy rain/ Flood - 2020 under instruction of Rural Works Department vide letter no- 2789 dated. 21.08.2020. Brick Bats/ Local Sand Bag / Humepipe / Bamboo Pile / Soil has been provided as per need of the above damaged road. This road is under Construction/maintenance / out of maintenance.

All items of this estimate has been taken from approved current schedule rate of works circle Motihari. This estimate is submitted for technical approval /Sanction.

64
10.12.2020

J.E

10.12.20

A.E

10/12/20

E.E

R.W.D.(w) Div. Pakridayal.

Name of Work:- Estimate for Repair of Road breaches (Damaged by Flood) for Motorability in LAHI N.H 104 TO KAURIYA.

Head - 2245 Length- 2.75 K.M

Sl No.	Item No.	Name of Item	unit	No	Length	Width	Height	Qty.	Rate	Amount
1		Labour for laying dry graded Jhama Khoa or stone filter under Brick Pitching or Boulder Pitching in slope or apron including light ramming etc. all complete as per approved design, specification and direction of E/I.	cum		As Per Appendix I			298.792	2216.20	662182.83
TOTAL (in Re.)									662000.00	662182.83

Say Re 662000.00

10/12/2020

Junior Engineer,
Rural Works Department,
Works Section, Madhuban

10/12/20

Assistant Engineer,
Rural Works Department,
Works Sub Division, Madhuban

10/12/20

Executive Engineer,
Rural Works Department,
Works Division, Pakridayal

T.A./TS is accorded for Rs. 6,41,600.00
(Six crore Six lacs four thousand six hundred only.)

25/12/20
S.E. (R.W.D.)
works Circle
Motihari

Name of Work:-

Estimate for Repair of Road breaches (Damaged by Flood) for Motorability in LAHI N.H
104 TO KAURIYA.

Appendix - I

Measurement for surfacing the Breach with Brick Bats

Sl. No.	Chainage	Length (M)	Avg. Width In Meter	Avg. Depth In Meter	Quantity (Cum)
1.00	0.00 - 0.330	4.700	3.300	0.300	4.653
2.00		8.000	1.50+0.50/2	0.300	2.400
3.00	0.330 - 0.580	5.700	2.00+1.20/2	0.300	2.736
4.00	0.580 - 0.800	5.200	2.600	0.300	4.056
5.00	0.800 - 0.900	6.500	2.200	0.300	4.290
6.00	0.900 - 0.930	7.000	2.500	0.450	7.875
7.00		2.500	2.500	0.500	3.125
8.00	0.930 - 1.000	14.000	2.70+2.30/2	0.450	15.750
9.00	1.000 - 1.020	3.400	3.500	0.450	5.355
10.00	1.020 - 1.600	18.500	3.500	0.300	19.425
11.00	1.600 - 1.700	14.000	2.50+1.80/2	0.450	13.545
12.00	1.700 - 1.750	6.000	3.80+3.50/2	0.450	9.855
13.00	1.750 - 1.800	22.500	3.500	0.350	27.563
14.00	1.800 - 1.830	7.200	2.20+1.80/2	0.400	5.760
15.00	1.830 - 2.020	8.800	3.000	0.450	11.880
16.00	2.020 - 2.100	15.500	3.000	0.300	13.950
17.00	2.100 - 2.200	11.700	1.900	0.450	10.004
18.00	2.200 - 2.250	7.000	3.500	0.300	7.350
19.00	2.250 - 2.300	4.200	4.300	0.600	10.836
20.00	2.300 - 2.350	11.800	2.500	0.300	8.850
21.00	2.350 - 2.370	5.500	2.600	0.450	6.435
22.00	2.370 - 2.400	6.800	2.50+1.80/2	0.350	5.120
23.00	2.400 - 2.430	7.000	3.800	0.500	13.300
24.00	2.430 - 2.450	4.000	2.000	0.600	4.800
25.00		3.500	1.800	0.500	3.150
26.00	2.450 - 2.500	3.500	4.000	0.600	8.400
27.00		6.600	2.800	0.450	8.316
28.00		3.800	2.500	0.500	4.750
29.00		5.900	3.700	0.450	9.824
30.00	2.500 - 2.570	2.400	1.700	0.500	2.040
31.00		2.000	1.700	0.450	1.530
32.00		2.200	2.000	0.500	2.200

	2.570 -	15.500	1.000	0.300	4.650
	2.650	2.900	2.200	0.450	2.871
36.00		2.500	2.100	0.500	2.625
37.00		7.500	2.500	0.450	8.438
38.00		7.700	1.800	0.450	6.237
		15.000	3.300	0.300	14.850
				Total	298.792

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10/12/2020

Junior Engineer
Rural Works Department,
Works Section, Madhuban

H N
10.12.20

Asistant Engineer
Rural Works Department,
Works Sub Division, Madhuban

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10/12/20

Executive Engineer,
Rural Works Department,
Works Division, Pakridayal

BRICK BATS PITCHING MANUAL MEANS

6.6.1 WRD Bihar	Labour for laying dry graded Jhama Khoa or stone filter under Brick Pitching or Boulder Pitching in slope or apron including light ramming etc. all complete as per approved design, specification and direction of E/I.			
	Unit :- Per Cum			
	Taking Output = 2.832 Cum			
	Unskilled Mazdoor	Nos.	3	287.00
	Add 6% Overhead Charges			51.66
	Rate for 2.832 Cum			912.66
	Rate per Cum (Rs.) -			383.15
1.4 RCD	Cost of Haulage Excluding Loading and Unloading			
	Haulage of materials by Tractor excluding cost of loading, unloading and stacking.			
	Unit = t.km			
	Taking output 3.60 tonnes load and lead 10 km = 36.0 t.km			
	(i) Surfaced Road			
	Speed with load : 15 km / hour.			
	Speed while Returning empty :25 km / hour.			
	a) Machinery.			
	Tractor 3.6 tonne capacity			
	Time taken for onward haulage with load	hour	0.667	549.10
	Time taken for empty return trip.	hour	0.400	549.10
	b) Overhead charges @ 0.06 on (a)			35.15
	cost for 36 t km = a+b+c			621.04
	Rate per t.km = (a+b+c)/36			17.25
	Say Rs. -			17.25
	(ii) Unsurfaced Graveled Road			
	Speed with load: 12 km / hour			
	Speed for empty return trip :20 km / hour			
	a) Machinery			
	Tractor 3.6 tonnes capacity			
	Time taken for onward haulage with load	hour	0.833	549.10
	Time taken for empty return trip hour 0.50	hour	0.500	549.10
	b) Overhead charges @ 0.06 on (a)			43.92
	Cost for 36 t .km = a+b+c			775.87
	Rate per t.Km = (a+b+c)/36			21.55
	Say Rs. -			21.55

1 RCD	Loading and Unloading of Stone Boulder/ Stone aggregates/Sand /Kanker/Moorum			
	Placing Tractor at loading point, loading with frontloader, dumping, turning for return trip, excluding for haulage and return trip			
	Unit = cum			
	Taking output = 2.25 cum			
	Time required for			
	i) Positioning of Tractor at loading point	1 Min		
	ii) Loading by front end loader 1 cum bucket capacity @ 25 cum per hour	5 Min		
	iii) Maneuvering, reversing, dumping and turning for return	0 Min		
	iv) Waiting time, unforeseen contingencies etc	0 Min		
	Total	6 Min		
	a) Labour			
	Mate	day	0.03	305.00
	Mazdoor for loading and unloading	day	0.72	287.00
	b) Machinery			
	Tractor 3.60 tonnes capacity	hour	0.1	549.10
	Front end-loader 1 cum bucket capacity @ 25 cum/hour	hour	0.083	1403.00
	c) Overhead charges @ 0.06 on (a+b)			116.45
	Cost for 2.25 cum = a+b+c+d			23.23
	Rate per cum = (a+b+c+d)/ 2.25			410.38
Note:-	Unloading will be done manually.			182.39
1.	Supplying for Brick Bats (with OH)			
A.	Basic Rate of Brick Bats	Per Cum	1017.00	1017.00
	Add overhed Charges	6%		61.02
	Total -			1078.02
	Surface Lead	KM	7	
	Unsurface Lead	KM	1	
	Factor (3.6/2.25)	Cum	1.60	
B.	Carriage (with OH)			
	(1.6 x 7 x 17.25) + (1.6 x 1 x 21.55) + 182.39			410.07
C.	Cost of Labour for Pitching and Light Ramming as per WRD SOR 6.6.1 (with OH)			383.15
	Total (A+B+C) -			1871.24
	Add 1% Labour Cess (A+B+C)			18.71
	Add 12% GST (A+B+C)			224.55
	Add 10% cost of Material for Seigniorage Fee	1	101.70	101.70
	Total Cost per Cum		Rs.-	2216.20