



# 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  
MADHUBAN MELABAZAR TO LOHARGAMA.

ESTIMATED COST - ~~4.55~~ Lacs

4.40

SUBMITTED BY:  
EXECUTIVE ENGINEER,  
RWD WORKS DIVISION,  
PAKRIDAYAL

# Technical Report

F.D.R.(2020-21)

Name of Road:- Madhuban Mela Bazar To Lohargama.  
Length of Road:- 5.129 K.M  
Name of Block:- Madhuban.  
Project Head:- P.M.G.S.Y.  
Package No:- BR-11R-257  
Estimated Cost:- 4.55 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.

*W*  
10.12.2020

J.E

*h*  
10.12.20

A.E

*For signature*  
10/12/20

E.E.

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

of Work:- Estimate for Repair of Road breaches (Damaged by Flood) for Motorability in MADHUBAN MELABAZAR TO LOHARGAMA.

2245 Length- 5.129 K.M

SIN	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			205.1605	2216.20	454676.7
<b>TOTAL (in Re.)</b>										<b>454676.70</b>

Say Re 455000.00

2147.40  
440561.20  
440600

4  
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

Post facto T.A.T.S is accorded for Rs. 4,40,600.00  
 four lac, forty thousand  
 six hundred only.

29/12/20  
S.E. (R.W.D.)  
works Circle  
Motihari

of Work:-

Estimate for Repair of Road breaches (Damaged by Flood) for Motorability in  
MADHUBAN MELABAZAR TO LOHARGAMA.

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	0-100-0.210	3.000	5.300	0.450	7.155
2.00		3.200	5.400	0.450	7.776
3.00	0.210-4.920	7.700	4.30+3.80/2	0.900	28.070
4.00		12.500	4.00+3.00/2	0.600	26.250
5.00		5.500	4.500	0.900	22.275
6.00	4.920-4.950	6.000	0.500	0.300	0.900
7.00		2.400	1.000	0.600	1.440
8.00		2.000	1.200	0.450	1.080
9.00		3.900	3.700	0.600	8.658
10.00	4.950-5.010	9.800	3.800	0.600	22.344
11.00		1.000	0.800	0.850	0.680
12.00		15.000	4.000	0.750	45.000
13.00		15.500	3.500	0.450	24.413
14.00		3.800	4.000	0.600	9.120
				<b>Total</b>	<b>205.161</b>

4  
10.12.2020

Junior Engineer  
Rural Works Department,  
Works Section, Madhuban

10.12.20

Asistant Engineer  
Rural Works Department,  
Works Sub Division, Madhuban

10.12.20

Executive Engineer,  
Rural Works Department,  
Works Division, Pakridayal

BRICK BATS PITCHING MANUAL MEANS

1.1 WRD Bihar	<b>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.</b>				
	Unit :- Per Cum				
	Taking Output = 2.832 Cum				
	Unskilled Mazdoor	Nos.	3	287.00	861.00
	Add 6% Overhead Charges				51.66
	Rate for 2.832 Cum				912.66
	<b>Rate per Cum (Rs.) -</b>				<b>383.15</b>
<b>1.4 RCD</b>	<b>Cost of Haulage Excluding Loading and Unloading</b>				
	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				
	<b>(i) Surfaced Road</b>				
	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	366.25
	Time taken for empty return trip.	hour	0.400	549.10	219.64
	b) Overhead charges @ 0.06 on (a)				
	cost for 36 t km = a+b+c				
	Rate per t.km = (a+b+c)/36				
	<b>Say Rs. -</b>				
	<b>(ii) Unsurfaced Graveled Road</b>				
	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	457.40
	Time taken for empty return trip	hour 0.50	0.500	549.10	274.55
	b) Overhead charges @ 0.06 on (a)				
	Cost for 36 t .km = a+b+c 840.34				
	Rate per t.Km = (a+b+c)/36 23.34				
	<b>Say Rs. -</b>				

<b>Loading and Unloading of Stone Boulder/ Stone aggregates/Sand /Kanker/Moorum</b>				
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	9.15
Mazdoor for loading and unloading	day	0.72	287.00	206.64
b) Machinery				
Tractor 3.60 tonnes capacity	hour	0.1	549.10	54.91
Front end-loader 1 cum bucket capacity @ 25 cum/hour	hour	0.083	1403.00	116.45
c) Overhead charges @ 0.06 on (a+b)				23.23
Cost for 2.25 cum = a+b+c+d				410.38
<b>Rate per cum = (a+b+c+d)/ 2.25</b>				<b>182.39</b>
Note:-	Unloading will be done manually.			
1.	<b>Suplying for Brick Bats (with OH )</b>			
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
	<b>Total Cost per Cum</b>		<b>Rs.-</b>	<b>2216.20</b>