



ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

PLAN HEAD- FDR(2245) YEAR 2020-21

DISTRICT :- East Champaran

BLOCK :- Patahi

Estimate for Repair of Road breaches
(Damaged by Flood) for Motorability in
BOKANE KALAN TO AMBARIA.

ESTIMATED COST - 7.07 Lacs

6.866

SUBMITTED BY:
EXECUTIVE ENGINEER,
RWD WORKS DIVISION,
PAKRIDAYAL

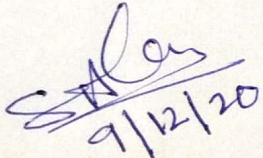
Technical Report

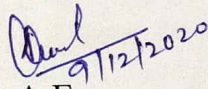
F.D.R.(2020-21)

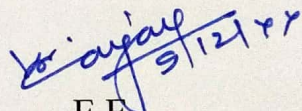
Name of Road:- Bokane Kalan To Ambaria.
Length of Road:- 3.500 K.M
Name of Block:- Patahi
Project Head:- P.M.G.S.Y
Package No:- BR-11R-554
Estimated Cost:- 7.07 Lacs

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 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.


9/12/20
J.E


9/12/2020
A.E


9/12/20
E.E.
R.W.D.(w) Div. Pakridayal.

Name of Work:- Estimate for Repair of Road breaches (Damaged by Flood) for Motorability in BOKANE KALAN TO AMBARIA.

Head - 2245 Length- 3.500 KM

SI 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			291.928	2216.20 2147=40	646970.834 626886=20
2		Providing & Supplying NP3 HP 1000 MM DIA Fixed In Proper Palace.	cum	2X3X2.5 = 15 Meter				15	3981.91	59728.65
TOTAL (in Re.)									706899.48	

Say Re 707000.00 6,86,614=85

S. A. S.
9/12/20

Junior Engineer,
Rural Works Department,
Works Section, Patahi

Amul
9/12/20

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

V. S. J.
9/12/20

Executive Engineer,
Rural Works Department,
Works Division, Pakridayal

Post Facto TA is accorded for Rs. 6,86,600 = 00
— crore Six lacs Eighty Six thousand
Six hundred () only.

Amul
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 BOKANE
KALAN TO AMBARIA.**

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	1.800 - 1.900	5.000	3.000	0.900	13.500
2.00	1.900 - 1.950	6.000	2.400	0.950	13.680
3.00	1.950 - 2.000	9.700	5.00+4.00/2	2.500	90.000
4.00	2.000 - 2.500	8.900	3.200	0.850	24.208
5.00	2.500 - 2.600	8.600	3.000	0.600	15.480
6.00	2.600 - 2.700	4.000	2.500	0.550	5.500
7.00	2.700 - 2.800	9.400	1.500	0.875	12.338
8.00	2.800 - 3.150	5.500	1.500	0.970	8.003
9.00	3.150 - 3.200	15.400	4.000	0.700	43.120
10.00	3.200 - 3.250	5.800	3.000	0.650	11.310
11.00	3.250 - 3.300	10.000	4.000	0.950	38.000
12.00	3.300 - 3.350	5.000	4.500	1.500	33.750
				Total	308.888
		Deduction For Hume Pipe 0.7854X1.44X15			16.960
			Net Quantity Of Bricks Bat		291.928

S. A. S.
9/12/20

Junior Engineer
Rural Works Department,
Works Section, Patahi

Q. A. S.
9/12/20

Assistant Engineer
Rural Works Department,
Works Sub Division, Patahi

K. S. S.
9/12/20

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	861.00
	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	366.25
	Time taken for empty return trip.	hour	0.400	549.10	219.64
	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	457.40
	Time taken for empty return trip hour 0.50	hour	0.500	549.10	274.55
	b) Overhead charges @ 0.06 on (a)				43.92
	Cost for 36 t .km = a+b+c 840.34				775.87
	Rate per t.Km = (a+b+c)/36 23.34				21.55
	Say Rs. -				21.55

1.1 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	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
	Rate per cum = (a+b+c+d)/ 2.25				182.39
Note:-	Unloading will be done manually.				
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

QUANTITY FOR NEW H.P. CULVERT

Proposed and New H.P. C
Internal Diameter
No. of Rows

0 nos
1000 mm
1 nos

Sl. No.	Description of Items	Qty for single row one	Rate	Amount
1	Earth work in excavation for foundation of structures upto 3.0 m depth as per drawing and technical specification clause 1104			
	H.W. 2 x 6.450 x 1.550 x 1.675 = 33.492			
	Below Pipe 1 x 5.000 x 1.530 x 0.540 = 4.131	37.62 cum	269.32	10,132.00
2	Sand Filling in Foundation Trenches as per drawing and technical specification Clause 1108 - rate as per item No. 11.2 (f) of Chapter 11			
	H.W. 2 x 6.450 x 1.550 x 0.100 = 2.000			
	Below Pipe 1 x 5.593 x 1.530 x 0.100 = 0.856	2.86 cum	400.59	1,146.00
3	Brick Flat Soling in foundation Trenches as per drawing and technical specification Clause 1108			
	H.W. 2 x 6.450 x 1.550 = 19.995			
	Below Pipe 1 x 5.653 x 1.530 = 8.650	28.64 sqm	289.47	8,290.00
4	Plain cement concrete M15 (PCC 1:2.5:5) in levelling course below open foundation of head walls as per drawing and technical specification clause 1109			
	H.W. 2 x 6.300 x 1.400 x 0.150 = 2.646			
	Below Pipe 1 x 5.766 x 1.530 x 0.550 = 4.852			
	Less for pipe 0.188 x 0.7857 x 1.230 ^a x 5.955 = -1.331	6.17 cum	5,350.00	33,010.00
5	Brick Masonary work in cement mortar (1:4) in head wall complete as per drawing and technical specification clause 1109 in cement mortar 1:4			
	H.W. 2 x 6.150 x 0.825 x 2.465 = 25.014			
	Parrapet 2 x 6.150 x 0.400 x 0.600 = 2.952			
	Less for pipe 2 x 0.7857 x 1.230 ^a x 0.612 = 1.455	26.51 cum	5,484.54	1,45,395.00
6	Providing and laying 1000 mm Dia RCC pipe NP-3 for culverts on first class bedding of PCC M10 (1:3:6) in single row including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling concrete and masonry works in head			
	3 x 2.50 = 7.50	7.50 m	3,981.91	29,864.00
7	Plastering with cement mortar (1:4) on brick work in sub-structure as per Technical Specifications			
	Outer Sides 2 x 6.150 x 1.830 = 22.509			
	Inner Sides 2 x 6.150 x 0.600 = 7.380			

Top	2	x	6.150	x	0.400	=	4.920
Ends	4	x	0.612	x	1.230	=	3.011
Ends (Parapet)	4	x	0.400	x	0.600	=	0.960
Less	2	x	0.7857	x	1.230 *	=	2.377
							36.40
							sqm 167.26
							6,110.00
8 Providing 1.5 mm cement punning including curing carriage of water with all leads and lifts as per building specification and direction of E/I							
Top	2	x	6.150	x	0.400	=	4.920
Ends (Parapet)	4	x	0.400	x	0.600	=	0.960
Inner Sides	2	x	6.150	x	0.600	=	7.380
							13.26
							sqm 55.91
							741.00
							2,34,523.00
COST OF ONE HP CULVERT Size (1000mm x Single Row) Rs.							

0.00

Cost of 0 H.P. CULVERT Size (1000 mm) Rs. =

Sd/-
9/12/20
J.E.

Sd/-
9/12/20
A.E.

E.E.