ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

PLAN HEAD- FDR(2245)

YEAR 2020-21

DISTRICT :- East Champaran

BLOCK :- Pakridayal

Estimate for Repair of Road breaches (Damaged by Flood) for Motoribility in RCC Bridge over Kachhua Moti River at Parsauni village.

ESTIMATED COST - 8.608 Lacs

SUBMITTED BY:
EXECUTIVE ENGINEER,
RWD WORKS DIVISION,
PAKRIDAYAL

Technical Report

F.D.R.(2020-21)

Name of Road:- RCC Bridge over Kachhua Moti River at Parsauni village.

Length of Road:- 45.370 M

Name of Block:- Pakridayal.

Project Head:- STATE SCHEME (NABARD)Package No:-

Estimated Cost:- 8.61 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.

14/12/20
J.E

14/12/20
A.E

14/12/20
E.E
R.W.D.(w) Div. Pakridayal.

Name of Work:- Estimate for Repair of Road breaches (Damaged by Flood) for Motoribility in RCC Bridge over Kachhua Moti River at Parsauni village.

Head - 2245 Length- 45.370 METER

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				373.04	~~2147.41~~ 2147=40	~~801069.826~~ 801066=10
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.)	~~860798.48~~
									Say Re	~~861000.00~~ 860794 860800=00

14/12/20

Junior Engineer,
Rural Works Department,
Works Section, Pakridayal

14/12/20

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

14/12/20

Executive Engineer,
Rural Works Department,
Works Division, Pakridayal

Post Facto T.A./TS is accorded for Rs. 86,0,800=00

(— crore Eight lacs Sixty thousand Eight hundred —) only.

29.12.20

S.E. (R.W.D.)
works Circle
Motihari

29/12/20

Name of Work:- **Estimate for Repair of Road breaches (Damaged by Flood) for Motoribility in RCC Bridge over Kachhua Moti River at Parsauni village.**

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	Just Side Of Under Construction H.L BRIDGE.	60.000	5.000	1.300	390.000
	0.000-0.700			**Total**	**390.000**
	Deduction For Hume Pipe 0.7854X1.44X15				**16.960**
			Net Quantity Of Bricks Bat		**373.040**

14/12/xx

Junior Engineer
Rural Works Department,
Works Section, Pakridayal

14/12/20

Asistant Engineer
Rural Works Department,
Works Sub Division, Pakridayal

14/12/xx

Executive Engineer,
Rural Works Department,
Works Division, Pakridayal

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.) -				**322.27**
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 h	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/ Stoneaggregates/Sand /Kanker/Moorum**				
	Placing Tractor at loading point, loading with frontloader, dumping, turning for return trip, excludingfor 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.	**Suplying 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)				322.27
	Total (A+B+C) -				1810.36
	Add 1% Labour Cess (A+B+C)				18.10
	Add 12% GST (A+B+C)				217.24
	Add 10% cost of Material for Seigniorage Fee		1	101.70	101.70
	Total Cost per Cum			**Rs.-**	**2147.41**

QUANTITY FOR NEW H.P. CULVERT

Proposed and New H.P. C	**0 nos**
Internal Diameter	**1000 mm**
No. of Rows	**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	**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 (I) 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	**2.86**	**cum**	**400.59**	**1,146.00**
3	**Brick Flat Soling in foundation:--** 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	**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 drawingand 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 ^{2}	x	5.955		-1.331			
										6.17	**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 ^{2}	x	0.612	=	1.455			
										26.51	**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 masonary works in head												
		3	x	2.50					=	7.50			
										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	0.450	=	4.695			
Ends	4	x	0.613	x	1.230	=	3.011			
Ends (Parrapet)	4	x	0.450	x	0.600	=	5.985			
Less	2	x	0.7857	x	1.230 *	=	3.377			
							38.48	38.48	sqm	197.00	6,118.00
8	Providing 1.5 mm cement pointing including cutting carriage of water with all leads and lifts as per building specification and direction of E/I										
Top	2	x	6.150	x	0.450	=	4.695			
Ends (Parrapet)	4	x	0.450	x	0.600	=	5.985			
Inner Sides	2	x	6.150	x	0.600	=	7.395			
							13.08	13.08	sqm	55.91	745.00
COST OF ONE RP CULVERT Size (1000mm x Single Row) Rs.											1,24,695.00

Cost of 0 R.P. CULVERT Size (1000 mm) Rs. = 0.00

14/12/79

J.E. A.E. S.E.