7

RURAL WORKS DEPARTMENT

GOVERNMENT OF BIHAR

CIRCLE – R.W.D. works Circle, Chapra

DIVISION – R.W.D. works Division , Marhaura

Name of Work - Motrable of Road from Chand chak to koriya

Block - Amnaur

Estimated cost - Rs 930589.00

Year : 2020-21

Inspection Report for flood damage work

Date:

1.Name of PIUs- B.E. R.W.D.(W) Marhoura.

2.Name of Block/Road- Amnaur — Motorable of Road from Chandichak to Koriya.

A.For Road

1.Damage Location/Chainage : 1.50 + 1.60 + 1.70 + 2.10 + 2.25 k.m.

2. Damage Lengh : 84 M.

3.Nature of Damage : Cutting the Road due to flood.

4.Details of Restoration :

i Material being used in Restoration : Brick Bat & Sand etc

ii Equipment/Tools being used in Restoration works: Tractor, J.C.B, Roller Trolly etc

iii Procedure taken up in Restoration works : Brick Bat & Sand filling, dumping, Laying, rolling.

iv Restored Length : 84 m.

B. For Bridge

1.Damage Location/Chainage :

2. Damage Lengh :

3.Nature of Damage :

4.Details of Restoration :

i Material being used in Restoration :

ii Equipment/Tools being used in Restoration works:

iii Procedure taken up in Restoration works :

iv Restored Length :

02/11/20. 3/11/20

Signature of JE/AE/EE

14/11/2020

Signature

AKHILESH KUMAR

(Name of Inspector)

E.E R.W.D

(W) DIVISION - SONEPUR

प्रतिवेदन

कार्य का नाम :– Motorable of Road from [illegible] to Koriya.

शीर्ष :– FDR

प्राक्कलित राशिः– 930587/–

प्रखण्ड का नामः– अमनौर

जिला–सारण।

प्रस्तुत प्राक्कलन शीर्ष PMGSY/MMGSY/GTSNY/NABARD/MR-3054 अंर्तगत निर्मित/निर्माणाधीन पथ के गत महीने में इस जिला में आये बाढ़/अतिवृष्टि के कारण क्षतिग्रस्त हुए पथों को चलने लायक (Motarable) बनाने हेतु विभागीय दिशा–निर्देशानुसार कार्यपालक अभियंता, ग्रा0का0वि0, कार्य प्रमंडल मढ़ौरा के दिशा–निर्देशन में कुल रु0 930587/– के लिए तैयार किया गया है।

आवश्यकतानुसार तत्काल प्रभाव से पथों को चलने लायक बनाने हेतु प्राक्कलन में Bricks Bats, Sand Bag, Hume-Pipe इत्यादी का प्रावधान आवश्यक लम्बाई, चौड़ाई एवं मोटाई में प्राक्कलन के अनुसार प्रावधान किया गया है।

योजना एवं कार्य की महत्ता के साथ–साथ जनहित के लिए अतिउपयोगी प्राक्कलन को कार्यहित में स्वीकृति हेतु प्रस्तुत किया जा रहा है।

02/12/20

कार्यपालक अभियंता,
ग्रामीण कार्य विभाग,
कार्य प्रमंडल, मढ़ौरा।

2/12/20

ABSTRACT OF COST

Name of Work - Motrable of Road from Chand chak to koriya

Block - Amnaur

S.L No.	Particulars	Amount (In Rs.)
A	Cost of Restoration work	Rs 823530.00
B	Add 12 % GST on (A)	Rs 98824.00
C	Add 1 % L. Cess on (A)	Rs 8235.00
	Total Cost	**Rs 930589.00**

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T/A for Rs 930589:- (nine lakh thirty thousand five hundred eighty nine only)

23.12.20
अधीक्षण अभियंता
ग्रामीण कार्य विभाग
कार्य प्रमंडल, छपरा

Name of work :-

Detailed Estimate

Motrable of Road from Chand chak to koriya

Sl No	Item	No	Length	Width	Avg.H/D	Qnty	Unit	Rate	Amount
1	Providing laying and spreading brick bats in Road ditches all complete as per approved design, specifications and direction of E/I	1	25.00	5.00	0.91	113.75			
		2	28.00	4.10	0.76	174.50			
		1	8.00	4.40	0.76	26.75			
		1	21.00	5.00	0.87	91.35			
		1	3.00	4.25	0.95	12.11			
					Total	418.46	cum	1909.87	799202.00
2	Fillling and spreading local sand over brick bats as per drawing and technical specification Clause 305.3.9	1	25.00	5.00	0.10	12.50			
		2	28.00	4.10	0.10	22.96			
		1	8.00	4.40	0.10	3.52			
		1	21.00	5.00	0.10	10.50			
		1	3.00	4.25	0.10	1.28			
					Total	50.76	cum	479.27	24328.00
								TOTAL	823530.00

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ANALYSIS FOR CARRIAGE OF MATERIAL

(A) Name of the Work :- Restoration/Motrable of Road from Chand chak to koriya

(B) Haulage Charge By 8 T Capacity Truck

(i) For Surface Road :-	Rs. 7.52	Per t per K.M
(ii) For Unsurface Toad :-	Rs. 9.04	Per t per K.M
(iii) For Kutcha Road :-	Rs. 18.19	Per t per K.M

1 CARRIAGE COST OF BAMBOO 62 MM TO 75 MM OF 6 To 8 M LONG

Lead as per Quary Chart :- 5 P + 5 K

Haulage Cost = $\frac{8}{3.00} \times [(7.52 \times 5.00) + (18.19 \times 5.00)]$ = 206.09

Loading & Unloading = 2224.00

Total per % Nos = 2430.09

Total per m = 3.47

2 CARRIAGE COST OF STONE BOULDER

Lead as per Quary Chart :- 180 P + 0 K

Haulage Cost = $\frac{8}{4.80} \times [(7.52 \times 180.00) + (18.19 \times 0.00)]$ = 2256.00

Loading & Unloading = 196.13

Total per M^3 = 2452.13

3 CARRIAGE COST OF GSB Material

Lead as per Quary Chart :- 180 P + 0 K

Haulage Cost = $\frac{8}{4.99} \times [(7.52 \times 180.00) + (18.19 \times 0.00)]$ = 2170.10

Loading & Unloading = 196.13

Total per M^3 = 2366.23

4 CARRIAGE COST OF HUME PIPE (1000 MM DIA)

Lead as per Quary Chart :- 55 P + 0 K

Haulage Cost = $\frac{8}{22.5} \times [(7.52 \times 55.00) + (18.19 \times 0.00)]$ = 330.88

Loading & Unloading = 76.58

Total per M = 407.46

5 CARRIAGE COST OF HUME PIPE (600 MM DIA)

Lead as per Quary Chart :- 55 P + 0 K

Haulage Cost = $\frac{8}{52.50} \times [(7.52 \times 55.00) + (18.19 \times 0.00)]$ = 63.02

Loading & Unloading = 32.82

Total per M = 95.84

(C) Haulage Charge By 3.60 t Tractor capacity

(i) For Surface Road :- Rs. 18.70 Per t per K.M
(ii) For Unsurface Toad :- Rs. 23.30 Per t per K.M
(iii) For Kutcha Road :- Rs. 29.20 Per t per K.M

1 CARRIAGE COST OF BRICK BAT

Lead as per Quary Chart :- 7 P + 1 K

Haulage Cost = $\frac{3.60}{2.25} \times [(18.70 \times 7.00) + (29.20 \times 1.00)] = 256.16$

Unloading = = 65.38

Total per 1000 Nos. = 321.54

2 CARRIAGE COST OF LOCAL SAND

Lead as per Quary Chart :- 2 P + 1 K

Haulage Cost = $\frac{3.60}{2.25} \times [(18.70 \times 2.00) + (29.20 \times 1.00)] = 106.56$

Unloading = = 40.81

Total per M^3 = 147.37

3 CARRIAGE COST OF STEEL

Lead as per Quary Chart :- 5 P + 0 K

Haulage Cost = $\frac{3.60}{3.60} \times [(18.70 \times 5.00) + (29.20 \times 0.00)] = 93.50$

Loading & Unloading = = 325.46

Total per Mt = 418.96

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SUMMARY OF CARRIAGE COST OF MATERIAL

Name of work :- Restoration/Motrable of Road from Chand chak to koriya

S.I No.	Name of material	Unit	Source	Mode of Transport	Carriage Charge by Road	Total Carriage up to site
1	2	3	4	5	7	8
1	Bricks Bats	per m^3	Local Kiln	By Road	321.54	321.54
2	Fine sand	per m^3	Local source	By Road	147.37	147.37
3	Steel	per mt	Local	By Road	418.96	418.96
4	Boulder	per m^3	Sheikhpura	By Road	2452.13	2452.13
5	Stone metal <50 mm	per m^3	Sheikhpura	By Road	2366.23	2366.23
6	Hume pipe (1000 mm dia)	Per metre	Hajipur	By Road	407.46	407.46
7	Hume pipe (600 mm dia)	Per metre	Hajipur	By Road	95.84	95.84
8	Bamboo of 62 to 75 mm dia	Per metre	Local	By Road	3.47	3.47

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FDR Analysis

Sr. No.	Description		Unit	Quantity	Rate (Rs.)	Amount (Rs.)
1.1	**Loading and Unloading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by Manual Means**					
	(i) Loading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by manual means including a lead upto 30 m					
	Unit = cum					
	Taking output = 5.5 cum					
	a) Labour					
	Mate		day	0.02	305.00	6.10
	Mazdoor (Unskilled)		day	0.50	287.00	143.50
	b) Machinery					
	Truck		hour	0.50	934.30	467.15
	c) Overheads on (a+b)	=@	6%			37.01
	d) Contractor's profit on (a+b+c)	=@	10%			65.38
	Cost for 5.5 cum = a+b+c+d					719.13
	Rate per cum = (a+b+c+d)/5.5					**130.75**
	(ii) Loading of Earth, Sand, Moorum, Manure, Flyash by manual means including a lead upto 30 m					
	Unit = cum					
	Taking output = 5.5 cum					
	a) Labour					
	Mate		day	0.01	305.00	3.05
	Mazdoor (Unskilled)		day	0.25	287.00	71.75
	b) Machinery					
	Truck		hour	0.25	934.30	233.58
	c) Overheads on (a+b)	=@	6%			18.50
	d) Contractor's profit on (a+b+c)	=@	10%			32.69
	Cost for 5.5 cum = a+b+c+d					359.57
	Rate per cum = (a+b+c+d)/5.5					**65.38**
	(iii) Unloading of Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by manual means including a lead upto 30 m					
	Unit = cum					
	Taking output = 5.5 cum					
	a) Labour					
	Mate		day	0.01	305.00	3.05
	Mazdoor (Unskilled)		day	0.25	287.00	71.75
	b) Machinery					
	Truck		hour	0.25	934.30	233.58
	c) Overheads on (a+b)	=@	6%			18.50
	d) Contractor's profit on (a+b+c)	=@	10%			32.69
	Cost for 5.5 cum = a+b+c+d					359.57
	Rate per cum = (a+b+c+d)/5.5					**65.38**

(iv) Unloading of Earth, Sand, Moorum, Manure, Flyash by manual means including a lead upto 30 m

Unit = cum

Taking output = 5.5 cum

a) **Labour**					
Mate		day	0.005	305.00	1.53
Mazdoor (Unskilled)		day	0.125	287.00	35.88
b) **Machinery**					
Truck		hour	0.166	934.30	155.09
c) **Overheads on (a+b)**	=@	6%			11.55
d) **Contractor's profit on (a+b+c)**	=@	10%			20.40
Cost for 5.5 cum = a+b+c+d					224.45
Rate per cum = (a+b+c+d)/5.5					**40.81**

1.3 Loading, Unloading and Stacking of Bricks by Manual Means

(i) Loading of Bricks by manual means including a lead upto 30 m

Unit = 1000 Nos.

Taking output = 2000 Nos.

a) **Labour**					
Mate		day	0.01	305.00	3.05
Mazdoor (Unskilled)		day	0.25	287.00	71.75
b) **Machinery**					
Truck		hour	0.33	934.30	308.32
c) **Overheads on (a+b)**	=@	6%			22.99
d) **Contractor's profit on (a+b+c)**	=@	10%			40.61
Cost for 2000 Nos. = a+b+c+d					446.72
Rate for 1000 bricks = (a+b+c+d)/2					**223.36**

(ii) Unloading and Stacking of Bricks by manual means including a lead upto 30 m

Unit = 1000 Nos.

Taking output = 2000 Nos.

a) **Labour**					
Mate		day	0.01	305.00	3.05
Mazdoor (Unskilled)		day	0.25	287.00	71.75
b) **Machinery**					
Truck		hour	0.33	934.30	308.32
c) **Overheads on (a+b)**	=@	6%			22.99
d) **Contractor's profit on (a+b+c)**	=@	10%			40.61
Cost for 2000 Nos. = a+b+c+d					446.72
Rate for 1000 bricks = (a+b+c+d)/2					**223.36**

1.5 Loading and Unloading of Structural Steel and Steel Bars by manual means

(i) Loading of Structural Steel, Steel Bars by manual means including a lead upto 30 m

Unit = t

Taking output = 10 t

a) **Labour**					
Mate		day	0.07	305.00	21.35
Mazdoor (Unskilled)		day	1.80	287.00	516.60
b) **Machinery**					
Truck		hour	1.00	934.30	934.30
c) **Overheads on (a+b)**	=@	6%			88.34
d) **Contractor's profit on (a+b+c)**	=@	10%			156.06

Cost for 10 t = a+b+c+d	1716.64
Rate per tonnes = (a+b+c+d)/10	**171.66**

(iii) Unloading 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	305.00	6.10
Mazdoor (Unskilled)		day	0.50	287.00	143.50
b) Machinery					
Truck		hour	0.20	934.30	186.86
Crane		hour	0.20	1,289.30	257.86
c) Overheads on (a+b)	=@	6%			35.66
d) Contractor's profit on (a+b+c)	=@	10%			63.00
Cost for 9 pipes = a+b+c+d					692.98
Rate per M = (a+b+c+d)/9					277.19
Rate per pipe = (a+b+c+d)/9					77.00
Rate per M = (a+b+c+d)/9					**30.80**

C. 600/450 mm dia Hume pipe

Unit = per pipe

Taking output = 21 pipes

a) Labour					
Mate		day	0.02	305.00	6.10
Mazdoor (Unskilled)		day	0.50	287.00	143.50
b) Machinery					
Truck		hour	0.20	934.30	186.86
Crane		hour	0.20	1,289.30	257.86
c) Overheads on (a+b)	=@	6%			35.66
d) Contractor's profit on (a+b+c)	=@	10%			63.00
Cost for 21 pipes = a+b+c+d					692.98
Rate per pipe = (a+b+c+d)/21					33.00
Rate per M = (a+b+c+d)/9					**13.20**

BY Truck

1.10 Haulage excluding Loading & Unloading

Haulage of materials by tipper excluding cost of loading, unloading and stacking.

Unit = t.km

Taking output 10 t load and lead 10 km = 100 t.km

Case-I : Surfaced Road

Speed with load: 25 km per hour

Speed while returning empty: 35 km per hour

a) Machinery					
Tipper 10 t capacity					
Haulage with load		hour	0.40	934.30	373.72
Empty return trip		hour	0.29	934.30	270.95
b) Overheads on (a)	=@	6%			38.68
c) Contractor's profit on (a+b)	=@	10%			68.33
Cost for 100 t.km = a+b+c					751.68
Rate per t.km = (a+b+c)/100					**7.52**

Case-II: Unsurfaced Gravel Road

Speed with load: 20 km/hour

Speed for empty return trip: 30 km/hour

a)	**Machinery**					
	Tipper 10 t capacity					
	Haulage with load		hour	0.50	934.30	467.15
	Empty return trip		hour	0.33	934.30	308.32
b)	**Overheads on (a)**	=@	6%			46.53
c)	**Contractor's profit on (a+b)**	=@	10%			82.20
Cost for 100 t.km = a+b+c						904.20
Rate per t.km = (a+b+c)/100						**9.04**

Case-II Katcha Track and Track in River Bed/Nallah Bed and Choe Bed

Speed with load: 10 km per hour

Speed while returning empty: 15 km per hour

a)	**Machinery**					
i)	**Tipper 10 t capacity**					
	Haulage with load		hour	1.00	934.30	934.30
	Empty return trip		hour	0.67	934.30	625.98
b)	**Overheads on (a)**	=@	6%			93.62
c)	**Contractor's profit on (a+b)**	=@	10%			165.39
Cost for 100 t.km = a+b+c						1819.29
Rate per t.km = (a+b+c)/100						**18.19**

BY Tractor

1.10 Haulage excluding Loading & Unloading

Haulage of materials by tractor excluding cost of loading, unloading and stacking.

Unit = t.km

Taking output 3.60 t load and lead 10 km = 36 t.km

Case-I : Surfaced Road

Speed with load: 15 km per hour

Speed while returning empty: 25 km per hour

a)	**Machinery**					
	Tractor 3.60 t capacity					
	Haulage with load		hour	0.667	542.00	361.51
	Empty return trip		hour	0.40	542.00	216.80
b)	**Overheads on (a)**	=@	6%			34.70
c)	**Contractor's profit on (a+b)**	=@	10%			61.30
Cost for 36 t.km = a+b+c						674.31
Rate per t.km = (a+b+c)/36						**18.73**

Case-II: Unsurfaced Gravel Road

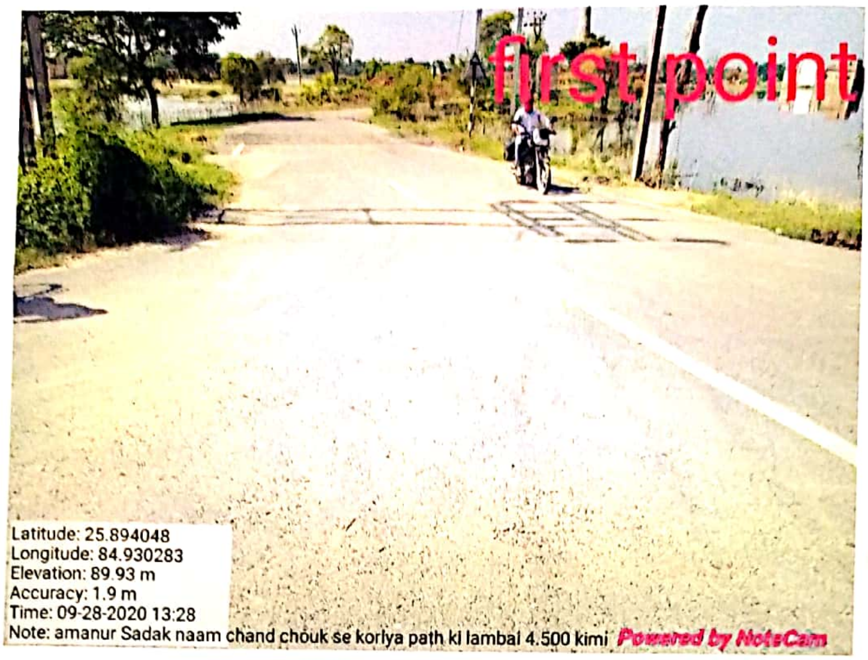
Speed with load: 12 km/hour

Speed for empty return trip: 20 km/hour

a)	**Machinery**					
	Tractor 3.60 t capacity					
	Haulage with load		hour	0.833	542.00	451.49
	Empty return trip		hour	0.50	542.00	271.00
b)	**Overheads on (a)**	=@	6%			43.35
c)	**Contractor's profit on (a+b)**	=@	10%			76.58
Cost for 100 t.km = a+b+c						842.42

Rate per t.km = (a+b+c)/36	23.40

Name of Road – F.D.R Chand chak to Koriya
Block – Amnour



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27/12/20
J.E. A.