



ग्रामीण कार्य विभाग

Rural Works Department, Govt of Bihar

DETAILED PROJECT REPORT FOR REPAIRING OF ROAD F.D.R. PART - A (2020 - 21)

DETAILED ESTIMATE FOR F.D.R. RESTORATION WORK

DISTRICT :	BHAGALPUR	BLOCK :	RANGRA CHHOWK
NAME OF ROAD :	PWD ROAD SADHUA MUSLIM TOLI VIA RAILWAY EAST CABIN		
PACKAGE NO. :			
TOTAL LENGTH OF ROAD	:	2.225	KMS
TOTAL COST OF FDR, PART - A	:	1.326	LACS
ADD G.S.T. @ 12 %	:	0.159	LACS
ADD LABOUR CESS @ 1 %	:	0.0132 0.0132	LACS
ADD SF @ 10 %	:	0.820	LACS
	:	1.58 2.348	LACS
SUBMITTED BY <i>The Executive Engineer</i> Works Division, Naugachhiya			

General Abstract Of Cost

Name of Road: PWD ROAD SADHUA MUSLIM TOLA VIA RAILWAY EAST CABIN

District: BHAGALPUR

Length: 2.225 Km.

Block: RANGRA CHOWK

Particulars		Details	Total Cost (In Rs.)
Cost Of Road Restoration Work	:	2.225 Km	132614 ✓
Add G.S.T. @ 12 %	:		15914 ✓
Add L.C. @ 1%	:		1326 ✓
S. F. @ 10 %	:		82032 ✓ 82032
Total Cost Of Restoration Work	:		2,31,886 ✓ 158,057.0
		Say,	2,31,886.00

Rs. 1,58,100.20

Q/A
24/10/2020
I.E.

Q/A
24/10/2020
A.E.

R.P.
16/12/20
Execd E.E. Engineer
R. W. D. W. D., Naugachia

Technically Approved for Rs. 1,58,100.20 (Rupees One lac fifty eight thousand one hundred and 20 only).

Q/A
24/10/2020
Superintending Engineer
Rural Works Department
Works Circle, Bhagalpur
Q/A
24/10

ESTIMATE FOR ROAD RESTORATION WORK

Name of Road: PWD ROAD SADHUA MUSLIM TOLI VIA RAILWAY EAST CABIN
District: BHAGALPUR

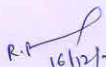
Estimate No.:

Block: RANGRA CHOWK

SSR Item No.	Description	No	Length (M)	Width (M)	H/D (M)	Qty.	Unit	Rates (In Rs.)	Amount (In Rs.)
4.5	Providing brick bats including spreading laying hand packing and compacting with C. I. Hammer in layers not exceeding 75 mm thick including cost of light, barriers, danger signals, chowkidar, taxes, royalty etc. all complete job as per specification and direction of E/I excluding carriage cost of bricks.								
	As per attach "Annexure- A"					77.17 m ³			
						77.17 m ³	cu m	1718.47	132614
								Total Rs=	132614


24/10/2020
J.E.


24/10/2020
A.E.


16/12/20
Executive Engineer
R. W. D. W. D., Naugachia

Brick Bat Measurement

(m)	No s.	Length (m)	Width (m)		Average Width (M)	Depth (m)		Average Depth (M)	Quantity (cum)
100 - 110	2	2 m	1.50 m		1.50 m	0.30 m		0.30 m	1.81 m ³
	3	1 m	1.40 m		1.40 m	0.30 m		0.30 m	1.26 m ³
200 - 215	3	2 m	1.20 m		1.20 m	0.30 m		0.30 m	2.16 m ³
	2	1 m	1.40 m		1.40 m	0.30 m		0.30 m	0.84 m ³
	5	1 m	1.30 m		1.30 m	0.30 m		0.30 m	1.95 m ³
	2	1 m	1.50 m		1.50 m	0.30 m		0.30 m	0.90 m ³
300 - 318	9	1 m	1.20 m		1.20 m	0.30 m		0.30 m	3.24 m ³
	9	1 m	1.10 m		1.10 m	0.30 m		0.30 m	2.97 m ³
400 - 415	10	1 m	1.20 m		1.20 m	0.30 m		0.30 m	3.6 m ³
	5	1 m	1.30 m		1.30 m	0.30 m		0.30 m	1.95 m ³
550 - 560	10	1 m	1.50 m		1.50 m	0.30 m		0.30 m	4.5 m ³
600 - 610	10	1.80 m	1.20 m		1.20 m	0.30 m		0.30 m	6.48 m ³
840 - 890	2	15 m	1.30 m		1.30 m	0.30 m		0.30 m	11.7 m ³
	5	1 m	1.4 m		1.4 m	0.30 m		0.30 m	2.1 m ³
1000 - 1500	7	1 m	1.20 m		1.20 m	0.30 m		0.30 m	2.52 m ³
	8	1 m	1.10 m		1.10 m	0.30 m		0.30 m	2.64 m ³
2000 - 2015	10	1 m	1.20 m		1.20 m	0.30 m		0.30 m	3.6 m ³
	5	1 m	1.30 m		1.30 m	0.30 m		0.30 m	1.95 m ³
2200 - 2225	2	10 m	3.50 m		3.50 m	0.30 m		0.30 m	21 m ³
									Total Qty. = 77.17 m ³

2/11/2020

22/10/2020
AEC

R. W. D. W. D. Naugachia
R. W. D. W. D. Naugachia

ESTIMATE FOR ROAD RESTORATION WORK

Name of Road: PWD ROAD SADHUA MUSIM TOLI VIA RAILWAY EAST CABIN

Block: RANGRA CHOWK

Package No. BR-05R-048

Length: 2.225 K.M.

District: BHAGALPUR

Sl. No.	SGR Item No.	Description	No	Length (M)	Width (M)	H/D (M)	Qty.	Unit	Rates (in Rs.)	Amount (in Rs.)
1	5.7.53	Providing sand bag with sand and labour including carriage laying, filling etc. all complete job as per specification and direction of E/I								
		As per attached "Annexure - B"							31.72	
2	4.6	Providing brick bats including spreading laying, ramm, playing and compacting with C.I. Hammer in layers not exceeding 75 mm thick including cost of 1/2" barms, danger signals, drawbars, taxes, novelty etc. all complete job as per specification and direction of E/I excluding carriage cost of bricks.								
		As per attached "Annexure - A"					77.17	cum	1718.47	132614
							Total Cost of Flood Protective work =			132614

N/19
21/10/2020

J. E.

B
21/10/2020

A. E.

R.P.
16/12/20

E. E.

Executive Engineer
R. W. D. W. D., Naugachia

Rate Analysis for Carriage of Materials

Name of Road : PWD ROAD SADHUA MUSLIM TOLL VIA RAILWAY EAST CABIN

Sl. No.	Item	Unit	Source	Carriage Cost & Lead to Kon										Total Cost (By Road)		
				Pukka / Surface			Katcha			Loading & Unloading Cost						
1	Stone Metal Gr-III / C50	Cum	Marichanali	8.00 4.99	x 16.32	x 80.00 Km	=	Rs 2095.21	0.00 4.99	x 25.47	x 0.00 Km	=	Rs 0.00	172.07	0	Rs 2765.28
2	Brick / Bricks class	Cum	Local	3.60 1.91	x 16.32	x 700 Km	=	Rs 215.33	3.60 1.91	x 25.47	x 1.00 Km	=	Rs 48.01	172.07	0	Rs 415.40
3	Local Sand	Cum	Local	3.60 2.04	x 16.32	x 200 Km	=	Rs 57.60	3.60 2.04	x 25.47	x 1.00 Km	=	Rs 44.95	172.07	0	Rs 274.62
4	Barth	Cum	Local	8.00 6.00	x 16.32	x 0.00 Km	=	Rs 0.00	8.00 6.00	x 25.47	x 1.00 Km	=	Rs 33.96	172.07	0	Rs 206.03
5	Hyne Pipe (1000 mm)	M	Goodla	8.00 10.00	x 16.32	x 52.00 Km	=	Rs 678.93	8.00 10.00	x 25.47	x 0.00 Km	=	Rs 0.00	164.19	0	Rs 843.12
6	Hyne Pipe (500 mm)	M	Goodla	8.00 25.00	x 16.32	x 52.00 Km	=	Rs 271.57	8.00 25.00	x 25.47	x 0.00 Km	=	Rs 0.00	164.56	0	Rs 435.93

* Subjected to Verification of Lead

Cost of Haulage Excluding Loading & Unloading as per SDR

Type of Road	Per Ton. Km by Tractor	Per Ton. Km by Tipper
Dry Surface Road	16.32	
Unsatisfactory Gravel Road	0.00	
Badly Road	25.47	

I. E.

A. E.

Executive Engineer
R. W. D. M. D. Naugachip

S. E.

SDB Sl. No.	MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
1.9		Loading and Unloading of Hume Pipes				
	(i)	Loading 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	0.33	934.30	308.32
		Crane	hour	0.33	1289.30	425.47
		Cost for 9 pipes = a+b+c+d				883.39
		Rate per pipe = (a+b+c+d)/9	per p			98.15
		Total per p				98.15
	C.	600/450 mm dia Hume pipe				
		Unit = per pipe				
		Taking output = 21 pipe				
	a)	Labour				
		Mate	day	0.02	305.00	6.10
		Mazdoor (Unskilled)	day	0.50	287.00	143.50
	b)	Machinery				
		Truck	hour	0.33	934.30	308.32
		Crane	hour	0.33	1289.30	425.47
		Cost for 21 pipes = a+b+c+d				883.39
		Rate per pipe = (a+b+c+d)/21	per p			98.15
		Total per p				98.15
	(ii)	Unloading of RCC Hume pipe by Mechanical means including a lead upto 30 m				
	A.	1000/1200 mm dia RCC Hume pipes				
		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	1289.30	257.86
		Cost for 9 pipes = a+b+c+d				594.32
		Rate per pipe = (a+b+c+d)/9	per p			66.04
		Total per p				66.04
	C.	600/450 mm dia Hume pipe				
		Unit = per pipe				
		Taking output = 21 pipes				
	a)	Labour				
		Mate	day	0.03	305.00	7.63
		Mazdoor (Unskilled)	day	0.50	287.00	143.50
	b)	Machinery				
		Truck	hour	0.20	934.30	186.86
		Crane	hour	0.20	1289.30	257.86
		Cost for 21 pipes = a+b+c+d				595.85
		Rate per pipe = (a+b)/21	per p			66.21
		Total per p				66.21
1.10		Haulage excluding Loading & Unloading				
		Haulage of materials by truck excluding cost of Loading, Unloading and stacking				
		Unit = 1km				
		Taking output 10t load and lead 10km = 100t.km				
		Case- 1 : Surfaced Road				
		Speed with load : 25km per hour				
		Speed while returning empty : 35km per hour				
	a)	Machinery				
		Tipper				
		Haulage with load	hour	0.40	1043.00	417.20
		Empty return trip	hour	0.29	1043.00	302.47

SDB Sl. No.	MORD Ref.No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
		Cost for 100t km = a+b+c				719.67
		Cost for 1 t km = a+b+c/100				7.20
		Total per t per km				7.20
		Case - II : Unsurfaced Road				
		Speed with load : 20km per hour				
		Speed while returning empty : 30km per hour				
	a)	Machinery				
		Tipper				
		Haulage with load	hour	0.50	1043.00	521.50
		Empty return trip	hour	0.33	1043.00	344.19
		Cost for 100t km = a+b+c				865.69
		Cost for 1 t km = a+b+c/100				8.66
		Total per t per km				8.66
		Case - III Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed				
		Speed with load : 10km per hour				
		Speed while returning empty : 15km per hour				
	a)	Machinery				
		Tipper				
		Haulage with load	hour	1.00	1043.00	1043.00
		Empty return trip	hour	0.67	1043.00	698.81
		Cost for 100t km = a+b+c				1741.81
		Cost for 1 t km = a+b+c/100				17.42
		Total per t per km				17.42
1.10		Haulage excluding Loading & Unloading				17.42
		Haulage of materials by truck excluding cost of Loading, Unloading and stacking				
		Unit = 1km				
		Taking output 10t load and lead 10km = 100t km				
		Case - I : Surfaced Road				
		Speed with load : 25km per hour				
		Speed while returning empty : 35km per hour				
	a)	Machinery				
		truck				
		Haulage with load	hour	0.40	934.30	373.72
		Empty return trip	hour	0.29	934.30	270.95
		Cost for 100t km = a+b+c				644.67
		Cost for 1 t km = a+b+c/100				6.45
		Total per t per km				6.45
		Case - II : Unsurfaced Road				
		Speed with load : 20km per hour				
		Speed while returning empty : 30km per hour				
	a)	Machinery				
		truck				
		Haulage with load	hour	0.50	934.30	467.15
		Empty return trip	hour	0.33	934.30	308.32
		Cost for 100t km = a+b+c				775.47
		Cost for 1 t km = a+b+c/100				7.75
		Total per t per km				7.75
		Case - III Kutcha Track and Track in River Bed / Nallah Bed and Choe Bed				
		Speed with load : 10km per hour				
		Speed while returning empty : 15km per hour				
	a)	Machinery				
		truck				
		Haulage with load	hour	1.00	934.30	934.30
		Empty return trip	hour	0.67	934.30	625.88
		Cost for 100t km = a+b+c				1560.28
		Cost for 1 t km = a+b+c/100				15.60
		Total per t per km				15.60

SDB Sl. No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
4.5	Providing and Laying of Brick Bats				
	Placing tractor at loading point loading with front end loader dumping, turning for return trip excluding time for haulage and return trip				
	Unit = cum				
	Taking output = 2.832 cum				
a)	Labour				
	Mazdoor (Unskilled)	day	2.170	287.00	622.79
b)	Material				
	Brick, Bat	cum	2.830	1,063.00	3008.29
c)	Carriage				
		cum	2.830	435.40	1232.19
	Cost for 3.3 cum = a+b+c				4863.27
	Rate per cum = (a+b+c+d)/2.83	cum			1718.47
	Total per cum	cum			1718.47
10.7.40	Labour for filling Cement Bag, swing and laying materials				
WRD	Unit = Per Bag				
A	Supply Empty cement Bag with Sand	kg	1	7.460	7.46
					7.46
B	Unskilled Mazdoor for filling sand into bag and swing	No	2	287.00	574.00
	Unskilled Mazdoor for filling sand Bag to work site	No	3	287.00	861.00
	Rate per 100 Nos.				1442.46
	Total per bag				14.42
C	Supply Local sand Cost of Fine Sand				
	Supply Empty Cement Bag				
	Unit = No				
	Taking output = 1 No				
	Labour				14.42
	Cost of cement bag with Sand				7.46
	Cost of Local Sand				
	1.2 Cft = 0.034 m ³	cum	0.034	274.62	9.34
	Carriage				
	Total per bag	Bag			31.22
	Total cost of (A + B + C) =				31.22
5.7.52	Supply of New bag and N.C with labour for filling item E.C. bag with local sand, stitching on two lines by approval (1mx1mx1m)				
	Unit = Per N.C.				
	Taking output = 100 Nos filled new bags in 4 nos N.C.				
A	Supply Empty cement Bag with Sand	No	100	14.30	1430.00
	Nylon cruce (N.C.)	No	4	39.85	159.40
	Total =				1589.40
	Rate of Material for each N. C. (Total x 25/100)				397.35
B	Labour for filling stitching and stacking in dry position	No	1.67	287	479.29
	Labour for carrying and placing at work site	No	3	287	861.00
	skilled Mazdoor for stitching	No	0.33	364	120.12
	Stitching roll (Nylene)	No	2	30	60.00
	Hire charge of stitching Machine	day	0.33	50	16.50
	Hire charge of Generator 3 KVA	hrs	2.67	74	197.58
	Total =				1734.49
	Rate of Material for each N. C. (Total x 25/100)				433.62
	Rate for each N. C. in dry portion (A + B) =				830.97
C	Carriage:				
	Local sand				
	25 bags = 0.85 m ³	cum	0.85	274.62	233.43
	Carriage for each N. C.	No			233.43
	Total cost of (A + B + C) =	No			1064.40

SDB Sl. No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs	Total material Qty. required	Total Material Amount	Add 10% Sclpmentage fee
4.5	Providing and Laying of Brick Basis							
	Placing tractor at landing point loading with front end loader dumping, starting for return trip excluding time for handling and return trip							
	Unit = cum							
	Taking output = 2.832 cum							
b)	Materials							
	Brick Basis	cum	2.832		5098.29			
	Total per cum	cum		1,063.00	1063.00	77.17	82032	82072
10.7.40	Labour for filling Cement Bag, swing and laying materials							
WRD	Unit = Per Bag							
A	Supply Empty cement Bag with Sand							
	Cost of 1 sack Sand							
	1.2 CB = 0.034 m ³	cum	0.034	141.85	4.82			
	Total per bag	Bag						
	Total cost of (A + B + C) =	Bag						

Total Amount = 82032

82032 = cum

W.D. Naugachia
21/10/2020
J. E.

W.D. Naugachia
A. E.

W.D. Naugachia
E.E.
Executive Engineer
R. W. D. W.D. Naugachia