



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 :	NARAYANPUR
NAME OF ROAD :	PMGSY ROAD RAIPUR CHOWK TO MANOHARPUR PMGSY ROAD TAK		
TOTAL LENGTH OF ROAD	:	1.000	KMS
TOTAL COST OF FDR. PART - A	:	0.805	LACS
ADD B.S.T. @ 12 %	:	0.097	LACS
ADD LABOUR CESS @ 1%	:	0.008	LACS
ADD SF @ 1.0%	:	0.050	LACS
	:	0.959	LACS

SUBMITTED BY
The Executive Engineer
Works Division, Naugachhiya

प्रतिवेदन

योजना का नाम :- PMGSY Road Raipur Chowk to Manoharpur PMGSY Road Tak .
प्रमंडल :- ग्रामीण कार्य विभाग, कार्य प्रमंडल, नवगछिया।
अंचल :- ग्रामीण कार्य विभाग, कार्य अंचल, भागलपुर।
पथ की लम्बाई :- 1.000 कि०मी०
प्राक्कलित राशि :- Rs. 0.959 लाख

प्रस्तुत प्राक्कलन वर्ष 2020 में आयी बाढ़/अतिवृष्टि से क्षतिग्रस्त पथों की तत्काल मरम्मत कर, यातायात पुनः बहाल करने हेतु तैयार किया गया है। दिनांक- 20/10/2020 को मुख्यालय स्तर पर V.C. के माध्यम से होने वाली समान्य बैठक में दिये गये दिशा निर्देश के अनुपालन एवं कार्यपालक अभियंता, ग्रामीण कार्य विभाग, कार्य प्रमंडल, नवगछिया का पत्रांक- 1385/नवगछिया, दिनांक- 20/10/2020 के आलोक में प्राक्कलन तैयार किया गया है। बाढ़ के कारण जगह-जगह पर रोडकस्ट में कटाव के साथ-साथ पथ का फलैंक भी क्षतिग्रस्त हुआ है। कटाव के कारण पथ से आवागमन बाधित हो गया है।

अतः आपातकालीन प्रकृति के कार्य को देखते हुए इस क्षतिग्रस्त पथांश में आवश्यकता एवं उपलब्धतानुसार ईट के टुकड़े (Brick Bats) इत्यादि के द्वारा पथ के पुनःस्थापन का प्रावधान किया गया है। प्राक्कलन में मर्दों का दर, वर्तमान अनुसूचित दर विश्लेषण पर आधारित हैं। प्राक्कलन में Contractor Profit एवं Over Head Charge नहीं जुड़ा हुआ है। जबकि GST, S.F एवं Labour Cess को जोड़ा गया है।

Utp.
21/10/2020
J. E.

21/10/2020
A. E.

18/10/20
E. E.

GENERAL ABSTRACT OF COST

Name of Road : PMGSY ROAD RAIPUR CHOWK TO
MANOHARPUR PMGSY ROAD TAK

District : BHAGALPUR

Length : 1.000 KM

Block : NARAYANPUR

SL No	Particulars		Details	Total Cost (in Rs.)
1	Cost of Road Restoration work	:	1.000 KM	80,476.00
2	Add G.S.T @ 12 %	:		9,657.00
3	Add L.C. @ 1 %	:		805.00
4	S. F. @ 10 %	:		4,978.00
	Total Cost of Restoration work	:		95,916.00
			Say,	95,916.00

95,916.00

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21/10/2020
J. E.

Qm
21/10/2020
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16/11/20
E. E.

*Technically Approved for Rs 95,916.00 (Rupees
ninety five thousand nine hundred) only.*

Handwritten
Superintending Engineer
Rural Works Department
Works Circle, Bhagalpur

8/12/21

ESTIMATE FOR ROAD RESTORATION WORK

Name of Road: PMGSY ROAD RAIPUR CHOWK TO MANOHARPUR PMGSY ROAD TAK

Block: NARAYANPUR

Length : 1.000 KM

District: BHAGALPUR

SL No.	SSR Item No.	Description	No	Length (M)	Width (M)	H/D (M)	Qty.	Unit	Rates (in Rs.)	Amount (in Rs.)
1	4.5	Providing brick bats including spreading laying hand pecking 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 cartage cost of bricks.								
		As per attached "Annexure - A"					46.83			
							46.83	cum	1718.47	80,476.00
							Total Cost of Flood Protective work =			80,476.00

Vijay
21/10/2020
J. E.

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ESTIMATE FOR ROAD RESTORATION WORK

Name of Road: PMGSY ROAD RAIPUR CHOWK TO MANOHARPUR PMGSY ROAD TAK

Block: NARAYANPUR

Length : 1.000 KM

District: BHAGALPUR

SL No.	SSR Item No.	Description	No	Length (M)	Width (M)	H/D (M)	Qty.	Unit	Rates (in Rs.)	Amount (in Rs.)
1	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 attached "Annexure - A"					46.83			
							46.83	cum	1718.47	80,476.00
							Total Cost of Flood Protective work =			80,476.00

Vijay
21/10/2020
J. E.

QandC
21/10/2020
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16/12/20
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ANNEXURE - " A "

Brick Bat Measurement

Name of Road : PMGSY ROAD RAIPUR CHOWK TO MANOHARPUR PMGSY ROAD TAK

Length of Road : 1.000 KM

Sr.No.	Chainage (m)	Nos.	Length (m)	Width (m)			Average Width (M)	Depth (m)			Average Depth (M)	Quantity (cum)
1	0 - 100	1	10.00	1.50	0.50		1.00	0.45			0.45	4.50
2		1	15.00	1.50	0.60		1.05	0.50			0.50	7.88
3	100 - 200	1	18.00	3.00			3.00	0.50			0.50	27.00
4	200 - 300	4	2.00	1.50			1.50	0.30			0.30	3.60
5	300 - 400	1	3.00	2.50			2.50	0.30			0.30	2.25
6		1	8.00	1.00	1.00		1.00	0.20			0.20	1.60
											Total =	46.83

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Rate Analysis for Carriage of Materials

Name of Road : PMGSY ROAD RAIPUR CHOWK TO MANOHARPUR PMGSY ROAD TAK

Sl No	Item	Unit	Source	Carriage Cost & Lead in Km												Loading & Unloading Cost	Carriage Cost by Rail Head	Total* (By Road)	
				Pukka / Surface						Katcha									
1	Stone Metal Gr-III / GSB	Cum	Mirjachauki	8.00 4.99	x	16.32	x	80.00 Km	=	Rs 2093.21	8.00 4.99	x	25.47	x	0.00 Km	=	Rs 0.00	172.07	Rs. 2265.28
2	Brick/ Brick Bats	Cum	Local	3.60 1.91	x	16.32	x	7.00 Km	=	Rs 215.33	3.60 1.91	x	25.47	x	1.00 Km	=	Rs 48.01	172.07	Rs. 435.40
3	Local Sand	Cum	Local	3.60 2.04	x	16.32	x	2.00 Km	=	Rs 57.60	3.60 2.04	x	25.47	x	1.00 Km	=	Rs 44.95	172.07	Rs. 274.62
4	Earth	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	Rs. 206.03
5	Hume Pipe (1000 mm)	M	Purnia	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	Rs. 843.12
6	Hume Pipe (600 mm)	M	Purnia	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	164.36	Rs. 435.93

Cost of Haulage Excluding Loading & Unloading as per SOR

Type of Road	Per Ton. Km by Tractor	Per Ton. Km by Tipper
For Surface Road	16.32	
Unsurface Gravel Road	0.00	
Kachha Road	25.47	

* Subjected to Verification of Lead

Verified
21/11/2020
J. E.

Quoted
21/10/2020
A. E.

RP
16/12/20
E. E.
S. E.

SDB Sl. No.	MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs.
4.4		Loading and unloading of stone Boulder /stone aggregates sand/ kankar/ moorum				
		Placing tractor at loading point loading with front end loader dumpoing ,turning for return trip excludng time for haulage and return trip				
		Unit = cum				
		Taking output = 2.25 cum				
		Time required for				
	i)	positioning of tractor at loading point	min	1		
	ii)	Loading by front end loader 1 cum bucket capacity @ 25 cum per	min	5		
		Total		6		
	a)	Labour				
		Mate	day	0.030	305.00	9.15
		Mazdoor (Unskilled)	day	0.720	287.00	206.64
	b)	Machinery				
		Tractor 3.60 Tonnes Capacity	hour	0.100	549.10	54.91
		Front end loader 1 cum bucket capacity @ 25 Cum/hour	hour	0.083	1,403.00	116.45
		Cost for 2.25 cum = a+b+c				387.15
		Rate per cum = (a+b+c+d)/2.25	cum			172.07
		Total per cum	cum			172.07
1.10		Haulage excluding Loading & Unloading				
		Haulage of materials by truck excluding cost of Loading, Unloading and stacking				
		Unit = 7km				
		Taking output 3.6t load and lead 10km = 36t/km				
		Case- I : Surfaced Road				
		Speed with load : 15km per hour				
		Speed while returning empty : 25km per hour				
	a)	Machinery				
		Tractor 3.6 tonnes Capacity				
		Haulage with load	hour	0.67	549.10	367.90
		Empty return trip	hour	0.40	549.10	219.64
		Cost for 36t/km = a+b+c				587.54
		Cost for 1 t km = a+b+c/36				16.32
		Total per t per km				16.32
		Case - II Kutchu 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				
		Tractor 3.6 tonnes Capacity				
		Haulage with load	hour	1.00	549.10	549.10
		Empty return trip	hour	0.67	549.10	367.90
		Cost for 36t/km = a+b+c				917.00
		Cost for 1 t km = a+b+c/36				25.47
		Total per t per km				25.47
1.1		Loading and Unloading Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by Manual Means				
	(i)	Loading of lime, Aggregates, Stone boulder, Brick aggregate, Kankar, Building Rubbish, Crushed Slag Stone for masonry work by manual means including a lend upto 30m				
		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				
		Tipper 5.5 Tonnes Capacity	hour	0.50	1,043.00	521.50
		Cost for 5.5 cum = a+b+c				671.10
		Rate per cum = (a+b+c+d)/5.5	cum			122.02

SDB Sl. No.	MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
		Total per cum	cum			122.02
1.1		Loading and Unloading Lime, Aggregate, Stone Boulder, Brick Aggregate, Kankar, Building Rubbish, Crushed Slag, Stone for Masonry Work by Manual Means				
	(i)	Loading of lime, Aggregates, Stone boulder, Brick aggregate, Kankar, Building Rubbish, Crushed Slag Stone for masonry work by manual means including a lead upto 30m				
		Unit = cum				
		Taking output = 5.5 cum				
		Time required for				
	(i)	Position of tipper at loading point		1Min		
	(ii)	loading by front end loader 1 cum bucket capacity @25		13Min		
	(iii)	maneuvering, reversing, dumping and turning for return		2Min		
	(iv)	Waiting time unforeseen contingencies etc.		4Min		
		Total		20Min		
	b)	Machinery				
		Tipper 5.5 Tonnes Capacity	hour	0.330	1,043.00	344.19
		Front end loader 1 cum bucket capacity @ 25 Cum/hour	hour	0.330	1,403.00	462.99
		Cost for 5.5 cum = a+b+c				807.18
		Rate per cum = (a+b+c+d)/5.5	cum			146.76
		Total per cum	cum			146.76
1.2		Loading and Unloading Stone Boulder, Manual Means				
	(i)	Loading of lime, Aggregates, Stone boulder, Brick aggregate, Kankar, Building Rubbish, Crushed Slag Stone for masonry work by manual means including a lead upto 30m				
		Unit = cum				
		Taking output = 5.5 cum				
	a)	Labour				
		Mate	day	0.11	305.00	33.55
		Mazdoor (Unskilled)	day	0.75	287.00	215.25
	b)	Machinery				
		Tipper 5.5 Tonnes Capacity	hour	0.750	1,043.00	782.25
		Cost for 5.5 cum = a+b+c				1031.05
		Rate per cum = (a+b+c+d)/5.5	cum			187.46
		Total per cum	cum			187.46
	(ii)	Loading of Earth, Sand, Moorum, Manure, Flyash by manual means including a lead up to 30m				
		Unit = cum				
		Taking output = 2.21 cum				
	a)	Labour				
		Mate	day	0.01	305.00	3.05
		Mazdoor (Unskilled)	day	0.221	287.00	63.43
	b)	Machinery				
		Tractor 2.21 Cum Capacity	hour	0.221	549.10	121.35
		Cost for 2.21 cum = a+b+c+d				187.83
		Rate per cum = (a+b+c+d)/2.21	cum			84.99
		Total per cum	cum			84.99
	(iii)	Unloading of lime, Aggregates, Stone boulder, Brick aggregate, Kankar, Building Rubbish, Crushed Slag Stone for masonry work by manual means including a lead upto 30m				
		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				
		Tractor 2.21 Cum Capacity	hour	0.25	549.10	137.28
		Cost for 5.5 cum = a+b+c+d				212.08
		Rate per cum = (a+b+c+d)/5.5	cum			38.56

SDB Sl. No.	MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
		Total per Cum	cum			38.56
	(iv)	Unloading of Earth, Sand, Moorum, Manure, Flyash by manual means including a lead up to 30m				
		Unit = cum				
		Taking output = 5.5 cum				
	a)	Labour				
		Mate	day	0.005	305.00	1.53
		Mazdoor (Unskilled)	day	0.221	287.00	63.43
	b)	Machinery				
		Tractor 2.21 Cum Capacity	hour	0.221	549.10	121.35
		Cost for 2.21cum = a+b+c+d				186.30
		Rate per cum = (a+b+c+d)/2.21	cum			84.30
		Total per cum	cum			84.30
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
		Cost for 2000 Nos. = a+b+c+d				383.12
		Rate for 1000 bricks = (a+b+c+d)/2	no.			191.56
		Total per no.s				191.56
	(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
		Cost for 2000 Nos. = a+b+c+d				383.12
		Rate for 1000 bricks = (a+b+c+d)/2	no.			191.56
		Total per no.s				191.56
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

SDB Sl. No.	MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
		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
L10		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- I : 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
		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				

SDB Sl. No.	MORD Ref No.	DESCRIPTION	Unit	QTY	Rate	Amount in Rs
		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				
		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	625.98
		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	Total material Qty. required	Total Material Amount	Add 10 % Seigniorage Fee
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							
b)	Materilas							
	Brick Bats	cum	2.830	1,063.00	3008.29			
	Total per cum	cum			1,063.00	46.83	49780.29	4978

Total Amount = 4,978

Wink
21/10/20
J.E.

21/10/20
A.E.

RP 16/12/20
E.E.