

MMGSY
BKR P-129
M.B. NO-3203

Schedule XLY-Form No. 134

प्राप्त ३/११/३२११क-३२११-२०१९-२०
अ. नं. ५२५३३/२०१९-२०
प्राप्त ३/११/३२११क-३२११-२०
प्राप्त ३/११/३२११क-३२११-२०

MMGSY (NDB)
SUB-DIVISION

प्राप्त ३/११/३२११

MEASUREMENT BOOK

M.B. NO- 3203

Sch. XLV—Form No. 134

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
2.00					
N/W:— construction of road & C/D works from Ranchay Bhaman Ashoknagar to Bar Kagoni Katarhat taluk under MMBSY (N) at block Jalalpur.					
N/Agency— Shivcon Estate Pvt. Ltd.					
Agg. No.— 52/SBD/2019-20					
Date of start— 26.12.2019					
Date of completion— 25.12.2020					
Date of measurement— 12.05.2022					

Item of work

① Earth work in excavation for structure

(For slab culvert— 3.00m x 2.00m)

Abutment—

$$2 \times 7.60m \times 2.30m \times 1.60m = 55.931$$

Retaining wall,

$$2 \times 2 \times 3.00m \times 2.087m \times 1.60m = 40.071$$

$$\text{Total} = 96.00m^3$$

② PCC concrete for plain cement concrete in open foundation— (MIS grade)

Abutment.

$$2 \times 7.60m \times 2.30m \times 0.20m = 6.99m^3$$

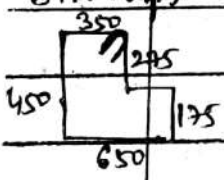
Retaining wall,

$$2 \times 2 \times 3.00m \times 2.087m \times 0.20m = 5.00m^3$$

$$\text{Total} = 11.99m^3$$

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
③ p/v P.C.C. m:20 in open foundation as per drawing & technical specification					
Abutment —					
2 x 6.800m					
		2 x 6.800m	x 2.100m + 1.50m	x 1.40m	= 34.276
Return wall —					
2 x 2 x 3.00m			1.887m + 1.287m	x 1.40m	
					= 26.66
					Total = 60.93m
④ p/v P.C.C. m:20 in Substructure as per drawing & technical specification					
Abutment,					
2 x 6.00m		1.30m + 0.70m		x 1.80m	
					= 21.60m
Return wall,					
2 x 2 x 3.00m		1.080m + 0.60m		x 2.160m	
					= 19.86
					Total = 40.78m
⑤ p/v Weep holes in the Abutment & Return wall.					
For Abutment —	2 x 6 NOS				= 12 NOS
For Return wall —	2 x 2 x 3 = 12 NOS				
					Total = 24 NOS

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
⑥ HY R.C.C M-20 grade in sub structure as per drawing & technical specification					
Abutment Cap —					
2 x 6.10 m x 0.70 m x 0.20 m					21.68 m ³
Return wall coping —					
2 x 2 x 3.10 m x 0.40 m x 0.15 m					20.72 m ³
Drift wall —					
2 x 6.10 m x 0.40 m x 0.30 m					1.44 m ³
					Total = 3.84 m ³
⑦ Supplying, Raising & placing of HYSD bar reinforcement (Fe 415) in sub structure as per drawings.					
Stirrups —					
					Total length = 2.280 m.
					Total No. of Stirrups = 2 x 24 Nos = 48 Nos
Main longitudinal bar @ 3 m c/c					
					= 2 x 0.5 x 6.10 m
					= 2 x 30.50 m = 60 m
Total weight = 60 x 0.395 kg = 23.70 kg					
L. bar					
Stirrups = 48 x 2.280 m x 0.395 kg = 43.22 kg					
					Total = 66.92 kg
					= 0.669 MT
					= 0.067 MT

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(8) Plv & Back filling behind Abutment & return wall with local sand — $2 \times 3.10 \text{ m} \times 6.00 \text{ m} \times 0.10 \text{ m} = 3.72 \text{ m}^3$					
(9) Plv & Lumpy filter media with granules crushed aggregate behind Abutment & return wall, Abutment — $2 \times 6.00 \text{ m} \times 0.60 \text{ m} \times 2.00 \text{ m} = 14.40 \text{ m}^3$ Return wall — $2 \times 2 \times 3.00 \text{ m} \times 0.60 \text{ m} \times 2.00 \text{ m} = 14.40 \text{ m}^3$ Total = 28.80 m^3					
(10) Plv P.C.C M-20 architectural finish coping on the top of return wall. $2 \times 2 \times 2.50 \text{ m} = 10.00 \text{ m}^3$					
(11) Plv & Lumpy R.C.C M-25 in Super Structure as per drawing & technical specs. $1 \times 6.00 \text{ m} \times 9.60 \text{ m} \times 0.30 \text{ m} = 6.48 \text{ m}^3$					
(12) Supplying, lifting & placing HYSD bar reinforcement in Super Structure as per drawing & technical specifications.					

Continuation

P.T.O.

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Main bar in Deck slabs					
16 mm dia -					
Top,	48	3.60 M			172.80 M
Bottom,	48	3.60 M			172.80 M
Total = 345.60 M.					
(12) 1.58 kg/M = 546.04 kg					
Distribution bar,					
10 mm dia -					
Top,	21	6.10 M			128.10 M
Bottom,	21	6.10 M			128.10 M
Total = 256.20 M					
(13) 0.62 kg/M = 158.84 kg					
Total wt = 704.88 kg					
					= 0.704 MT
Qty limit					= 0.700 MT
(13) Plv & Filling joint sealing compound					
2 x 6.00 M = 12.00 RM.					
(14) Plv & Ringing of reference pillars = 02 Nos.					
(15) clearing & grubbing of road land					
9 x 30.00 m x 3.50 m =					945.00 m ²
1 x 15.00 m x 3.50 m =					52.50 m ²
8 x 30.00 m x 3.50 m =					840.00 m ²
1 x 5.00 m x 3.50 m =					17.50 m ²
Continuation Total = 1855.00 m ²					
					= 0.185 Hect

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(16) Box cutting —					
For B.T. portion —					
	2	10.10m	0.525m	0.10m	31.50m ²
	2	4.30m	0.525m	0.10m	12.60m ²
	2	1.10m	0.525m	0.10m	1.04m ²
				Total =	45.14m ²

(17) Construction of granule sub-base by providing coarse graded material

For P.C.C. portion —					
	3	30.00m	3.40m	0.10m	30.60m ²
	2	30.00m	3.75m	0.10m	22.50m ²
	1	20.00m	3.75m	0.10m	7.50m ²

	4	30.00m	3.75m	0.10m	45.00m ²
	1	20.00m	3.75m	0.10m	7.50m ²

For B.T. portion —

	3	30.00m	4.05m	0.20m	72.90m ²
	1	10.00m	4.05m	0.20m	8.10m ²
	3	30.00m	4.05m	0.20m	72.90m ²
	1	7.00m	4.05m	0.20m	5.67m ²
	10	30.00m	4.05m	0.10m	121.50m ²
	4	30.00m	4.05m	0.10m	48.60m ²
	1	10.00m	4.05m	0.10m	4.05m ²
	3	30.00m	3.75m	0.20m	67.50m ²
	2	30.00m	4.05m	0.20m	48.60m ²
	2	30.00m	3.75m	0.20m	45.00m ²
	2	30.00m	4.05m	0.20m	48.60m ²

Continuation

Qty 40 = 656.52m²

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
				Qty of F	656.52 m ²
3x 30.10 m x 3.90 m x 0.200 m					= 117.60 m ²
1x 10.10 m x 3.90 m x 0.200 m					= 7.80 m ²
In box cutting (widening)					
2x 10 x 30.10 m x 0.525 m x 0.10 m					= 31.50 m ²
2x 4 x 30.10 m x 0.525 m x 0.10 m					= 12.60 m ²
2x 1 x 10.10 m x 0.525 m x 0.10 m					= 1.04 m ²
				Total	= 826.46 m ²

(18) Plr. Laying, spreading &

Compacting of WBM 3

For P.C.C. Pavement

$$3 \times 30.10 \text{ m} \times 3.40 \text{ m} \times 0.075 \text{ m} = 22.95 \text{ m}^3$$

$$2 \times 30.10 \text{ m} \times 3.75 \text{ m} \times 0.075 \text{ m} = 16.87 \text{ m}^3$$

$$1 \times 16.10 \text{ m} \times 3.75 \text{ m} \times 0.075 \text{ m} = 4.50 \text{ m}^3$$

For B.T. Pavement

$$3 \times 30.10 \text{ m} \times 3.75 \text{ m} \times 0.075 \text{ m} = 25.31 \text{ m}^3$$

$$1 \times 14.10 \text{ m} \times 3.75 \text{ m} \times 0.075 \text{ m} = 3.93 \text{ m}^3$$

$$10 \times 30.10 \text{ m} \times 3.75 \text{ m} \times 0.075 \text{ m} = 84.37 \text{ m}^3$$

$$4 \times 30.10 \text{ m} \times 3.75 \text{ m} \times 0.075 \text{ m} = 33.75 \text{ m}^3$$

$$1 \times 10.10 \text{ m} \times 3.75 \text{ m} \times 0.075 \text{ m} = 2.81 \text{ m}^3$$

$$4 \times 30.10 \text{ m} \times 2.75 \text{ m} \times 0.075 \text{ m} = 33.75 \text{ m}^3$$

$$2 \times 30.10 \text{ m} \times 3.0 \text{ m} \times 0.075 \text{ m} = 20.25 \text{ m}^3$$

$$1 \times 15.10 \text{ m} \times 3.0 \text{ m} \times 0.075 \text{ m} = 3.37 \text{ m}^3$$

$$1 \times 30.10 \text{ m} \times 3.30 \text{ m} \times 0.075 \text{ m} = 7.42 \text{ m}^3$$

$$1 \times 20.10 \text{ m} \times 3.30 \text{ m} \times 0.075 \text{ m} = 4.95 \text{ m}^3$$

$$10 \times 30.10 \text{ m} \times 3.75 \text{ m} \times 0.075 \text{ m} = 84.37 \text{ m}^3$$

$$9 \times 30.10 \text{ m} \times 3.75 \text{ m} \times 0.075 \text{ m} = 75.93 \text{ m}^3$$

$$1 \times 5.10 \text{ m} \times 3.75 \text{ m} \times 0.075 \text{ m} = 1.40 \text{ m}^3$$

$$\text{Qty of } \phi = 425.93 \text{ m}^3$$

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
			Qty	B/F	425.93 m ³
3 x 30.00 m			3.60 m	0.075 m	24.30 m ³
3 x 30.00 m			3.00 m	0.075 m	20.25 m ³
1 x 10.00 m			3.00 m	0.075 m	2.25 m ³
10 x 30.00 m			3.30 m	0.075 m	74.25 m ³
3 x 30.00 m			3.30 m	0.075 m	22.27 m ³
4 x 30.00 m			3.75 m	0.075 m	33.75 m ³
Extra width of the wall					
4 x 6.00 m			0.50 m	0.075 m	0.90 m ³
2 x 5.80 m			0.60 m	0.075 m	0.52 m ³
2 x 2.50 m			3.00 m	0.075 m	1.12 m ³
2 x 5.50 m			0.50 m	0.075 m	0.41 m ³
2 x 3.00 m			2.00 m	0.075 m	0.45 m ³

Total = 606.85 m³

19 P/V & applying Primer
coat with bitumen emulsion
SS-1 on prepared surface.

4 x 30.00 m			3.75 m		450.00 m ²
3 x 30.00 m			3.00 m		270.00 m ²
1 x 15.00 m			3.00 m		45.00 m ²
1 x 30.00 m			3.30 m		99.00 m ²
1 x 20.00 m			3.30 m		66.00 m ²
10 x 30.00 m			3.75 m		1125.00 m ²
9 x 30.00 m			3.75 m		1012.50 m ²
1 x 5.00 m			3.75 m		18.75 m ²
6 x 30.00 m			3.75 m		675.00 m ²
1 x 20.00 m			3.75 m		75.00 m ²

Continuation

Qty 40 = 3836 m²

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
				Qty B/F	3836.25 m ²
		3 x 30.10 m	x 3.60 m	=	324.00 m ²
		3 x 30.10 m	x 3.00 m	=	270.00 m ²
		1 x 10.10 m	x 3.00 m	=	30.00 m ²
		10 x 30.10 m	x 3.30 m	=	990.00 m ²
		3 x 30.10 m	x 3.30 m	=	297.00 m ²
		4 x 30.10 m	x 3.75 m	=	450.00 m ²
		10 x 30.10 m	x 3.75 m	=	1125.00 m ²
		5 x 30.10 m	x 3.75 m	=	562.50 m ²
		10 x 30.10 m	x 3.75 m	=	1125.00 m ²
		4 x 30.10 m	x 3.75 m	=	450.00 m ²
		1 x 10.10 m	x 3.75 m	=	37.50 m ²
Extra width at corners					
		4 x 6.10 m	x 0.50 m	=	12.00 m ²
		2 x 5.80 m	x 0.60 m	=	6.96 m ²
		2 x 2.50 m	x 3.00 m	=	15.00 m ²
		2 x 5.50 m	x 0.50 m	=	5.50 m ²
		2 x 3.10 m	x 2.00 m	=	12.00 m ²
				Total	9548.71 m ²

(20) Plv & applying tack coat with bitumen emulsion B-1
 Net Qty = Qty As per Prime Coat
 = 9548.71 m²

(21) Plv, laying & rolling of close graded porous surfacing material
 Net Qty = Qty As per tack coat
 = 9548.71 m²

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(22) Construction of sub-grade & earthen shoulders with approved material. within a local upto 1000m. For B.T. Portion -					
Sides of G.S.B					
2 x 10 x 30.00m x 1.075m x 0.200m					129.00
2 x 5 x 30.00m x 1.075m x 0.200m					64.50
2 x 10 x 30.00m x 1.075m x 0.200m					129.00
2 x 4 x 30.00m x 1.075m x 0.200m					51.60
2 x 1 x 30.00m x 1.075m x 0.200m					4.30
2 x 4 x 30.00m x 1.075m x 0.200m					51.60
2 x 10 x 30.00m x 1.075m x 0.200m					129.00
2 x 9 x 30.00m x 1.075m x 0.200m					116.10
2 x 1 x 30.00m x 1.075m x 0.200m					2.15
2 x 4 x 30.00m x 1.075m x 0.200m					51.60
Sides of W.B.M-3					
2 x 10 x 30.00m x 0.950m x 0.075m					42.75
2 x 5 x 30.00m x 0.950m x 0.075m					21.37
2 x 10 x 30.00m x 0.950m x 0.075m					42.75
2 x 4 x 30.00m x 0.950m x 0.075m					17.10
2 x 1 x 30.00m x 0.950m x 0.075m					1.42
2 x 4 x 30.00m x 0.950m x 0.075m					17.10
2 x 10 x 30.00m x 0.950m x 0.075m					42.75
2 x 9 x 30.00m x 0.950m x 0.075m					38.47
2 x 1 x 30.00m x 0.950m x 0.075m					0.71
2 x 4 x 30.00m x 0.950m x 0.075m					17.10

Continuation

Total = 970.37m³

M. M. S.
12/05/22
(J.E.)

12/05/22
A.E.

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
<u>Abstract of Cost.</u>					
<u>1. Construction of Working Benchmark Pillar.</u>					
04 Nos, vide TMBP-27					
① Rs 2983=52 / No. B 15,53420					
<u>2. Construction of reference pillar.</u>					
15 Nos, vide TMBP-28					
02 Nos, vide TMBP-37					
17 Nos,					
① Rs 1792260/Hs-B 30,47420					
<u>3. clearing & grubbing of road land.</u>					
1.190 Hect, vide TMBP-28					
0.185 Hect, vide TMBP-37					
1.375 Hect,					
① Rs 49739=47/Hect B 68,3920					
<u>4. Box cutting & excavation for roadway in soil, using hydraulic excavator.</u>					
109.75 m ³ , vide TMBP-28					
45.14 m ³ , vide TMBP-38					
154.89 m ³					
① Rs 82001/m ³ B 12703=60					
Ch B 1,27,10300					

Continuation

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
			B/B	B	1,27,1032.00
5(a) 5.	Construction of embankment with a lead up to 1000 m.				
	1170.38 m ³	vide TMBP-28			
	(a) B	187=23/m ³	B		2,19,1302.00
5(b) 6.	Construction of embankment with a lead up to 100 m.				
	1932.90 m ³	vide TMBP-29			
	(a) B	142=39/m ³	B		2,75,226.21
6 8.	Construction of granular sub-base on borrow pit.				
	Crane & loaded material.				
	1380.41 m ³	vide TMBP-29			
	826.46 m ³	vide TMBP-39			
	2206.87 m ³				
	(a) B	2777=74/m ³	B		61,30,111.00
7 9.	Plr, Loading, spreading & compaction of WBM-2				
	426.33 m ³	vide TMBP-29			
	606.85 m ³	vide TMBP-40			
	1033.18 m ³				
	(a) B	3769=81/m ³	B		38,94,892.00
			C/P	B	1,06,46,462.00

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
				BIFB	1,06,46,462 _{2 cc}
$\frac{8}{18}$		Plr & sig'y of typical mmsy (MDS) 12' long sign board with logo			
	02 Nos. vide TMBP-25				
		(W) PS 10193 = 47/100-B			20,399 = 00
$\frac{9}{13}$		Construction of un-reinforced plain cement concrete pavement as per technical specification			
		509.22 m ³ , vide TMBP-30			38,93,094
		(W) PS 7637 = 21/m ³ B			38,93,094 ₂
					mpa
$\frac{10}{25}$		Earthwork in excavation for structural (Hume pipe Culvert) (1x600mm x 4403)			
		74.50 m ³ , vide TMBP-30			
		(W) PS 261 = 90 m ³ B			19,51225
$\frac{11}{26}$		Plr, 8 layer first class bedding on well compacted sand,			
		8.52 m ³ , vide TMBP-30			
		(W) PS 459 = 68/m ³ R			3916 = 00
				etc PS	1,45,83,383 ₅₀

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
			RIF BS		1,45,83,382 ⁰⁰
<u>12</u> 22.	Plr & Lorry R.C.C.				
	ms for open foundation				
	6.46 m ³ , vide TMBP-30				
	① BS 5862-05/m ³		B		37,869 ⁰⁰
<u>13</u> 28.	Brick masonry work in c.m (1:4)				
	for H wall,				
	55.95 m ³ , vide TMBP-30				
	① BS 5619-02/m ³		B		3,14,387 ⁰⁰
<u>14</u> 29.	Plr & Lorry R.C.C.				
	NPB pipe of dia 600 mm.				
	30.00 m, vide TMBP-31				
	① BS 3190-42/m		B		95,713 ⁰⁰
<u>15</u> 30	Plastering with c.m (1:4) on brick work				
	53.12 m ² , vide TMBP-31				
	① BS 158-33/m ²		B		8410 ⁰⁰
<u>16</u> 32.	Earth work in excavation for structure (slab culvert - 01 H0)				
	96.00 m ³ , vide TMBP-33				
	① BS 261-90/m ³		B		25,142 ⁰⁰
			C/A		1,50,64,904 ⁰⁰

Continuation

Continuation

Continuation

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
				RIF, B	1,59,024.37
					240
$\frac{26}{42}$				plv & lumpy Rec	
				mmr in superstructure	
				as per drawing & standard	
				specimens.	
				6.48 m ² , vide TMDP-36	
				① B 7982-28/m ² -B	51,725.26
$\frac{27}{43}$				supplying, fitting	
				& placing HYSD	
				bar reinforcement	
				in Super structure	
				0.700 mt, vide TMDP-37	
				① B 7025-30/m ² -B	49,529.4
$\frac{28}{44}$				plv & filling joint	
				sealing compound	
				12.00 km, vide TMDP-37	
				① B 37-04/m ² -B	4442.00
$\frac{29}{10}$				plv & applying Primer	
				coat with bitumen	
				emulsion SS-1	
				9548.71 m ² , vide TMDP-41	
				① B 54-57/m ² -B	5,21,073.00
$\frac{30}{11}$				plv & applying thick	
				coat with bitumen	
				emulsion PB-1	
				9548.71 m ² , vide TMDP-41	
				① B 18-54/m ² -B	1,77,033.00

Continuation 40 B 1,67,02,241.00

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Continuation