

M/S R.S. Construction

406/20-21

MMSY & Chhatisgarh

Schedule XLV Form No.-134
BIHAR P.W.D.

1105

372<164

DIVISION

372<164

SUB-DIVISION

MEASUREMENT BOOK

21-01-2021
Bilal & Chhatisgarh

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
<u>Ind on A/C Bill</u>					
<u>Name of work</u> - MM4SX road to					
Channarayana Talabandh.					
Head - MM4SX (ND B)					
Agency - M/S RS Builder					
Agg No - 46884D/200-2021					
Date of start - 17/7/2020					
Date of completion - 16/9/2021					
Estimated cost -					

Date of entry -

Measurement

(1) R/W in road embank

cut etc do do do

$$1 \times 5 \quad 30.10 \quad \frac{0.9 + 1.35}{2} \times 0.75 = 123.75 \text{ m}^3$$

$$1 \times 4 \quad 30.10 \quad \frac{1.0 + 1.5}{2} \times 0.70 = 105.10$$

$$\text{Total} = 228.75 \text{ m}^3$$

(i) R/W @ 2% for level = 100m

$$\frac{70}{100} \times 228.75 \text{ m}^3 = 160.12 \text{ m}^3$$

$$\text{Total} = 160.12 \text{ m}^3$$

(ii) R/W @ 2% for level = 1500m

$$\frac{30}{100} \times 228.75 \text{ m}^3 = 68.62 \text{ m}^3$$

$$\text{Total} = 68.62 \text{ m}^3$$

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
② Construction of subgrade with approved soil of all do do all sub	20	30.0	6.5	0.30	$= 1080.0 m^3$
	5	30.0	6.0	0.30	$= 270.0 m^3$
					$\text{Qty} = 1350.0 m^3$
① S/P/F 300mm thick pipe for drainage etc at 7.50m					
② Construction of granular subbase etc do at					
		17.50	3.80 + 4.00	0.20	$= 13.9 m^3$
					$\text{Qty} = 13.9 m^3$
③ Procuring & laying spreading and compacting WBM or stone metal Consolidation etc do at					
		28.0	3.75	0.075	$= 7.875 m^3$
					$\text{Qty} = 7.875 m^3$
④ Construction of curbs for C.C. pavement with M.S etc do at					
	1	2.10	3.75	0.160	$= 1.20 m^3$
					$\text{Qty} = 1.20 m^3$
⑤ Procuring & laying primer coat with bitumen					

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
emulsion etc do - job					
	20	30.0	3.75	-	= 2250.0 m ²
	1	30.0	3.75	-	= 112.50 m ²
	1	26.50	3.75	-	= 99.375 m ²
					<u>Q/S = 2461.875 m²</u>
⑥ Procuring and applying					
tack coat with bitumen					
emulsion (A.4) etc do - job					
					<u>Q/S as Item No (5) = 2461.875 m²</u>
					<u>Q/S = 2461.875 m²</u>

⑦ Laying and rolling					
Mac seal surfacing with					
white plastic etc do - job					
	20	30.0	3.75	-	= 2250.0 m ²
	1	30.0	3.75	-	= 112.50 m ²
	1	26.50	3.75	-	= 99.375 m ²
					<u>Q/S = 2461.875 m²</u>

⑧ P/V & F/F ordinary Km					
Post etc do - do - all - job					
					<u>Q/S = 0.2 Nos</u>

⑨ P/V & F/R 200m ordinary					
Post etc do - do - all - job					
					<u>Q/S = 0.4 Nos</u>

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
⑩ P/W P/F boundary filler etc do - do - all complete job Qty = 220 Nos					
⑪ P/W applying 2 coats on new concrete surface etc do - do 2 x 4 x 30.0 0.10 - = 24.0 m ² 2 x 11 x 30.0 0.10 - = 66.0 m ² 90.0 m ²					
⑫ Providing & laying of hot applied thermoplastic paint etc do - do - all complete job 2 x 21 x 30.0 0.10 - = 126.0 m ² 2 x 1 x 30.0 0.10 - = 4.0 m ² 2 x 15 x 30.0 0.10 - = 90.0 m ² Qty = 220.0 m ²					
⑬ P/W P/F retro reflective cautioning, mandating sign board etc do - do - all complete job (i) 600 mm square sign Qty = 8 Nos (ii) 600 mm circular sign etc do - do - all complete job Qty = 6 Nos					

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(iii) 3/4 IF 600mm x 450mm rectangular stones etc					Qty = 0.2 Nos
(iv) 900mm side octagon sign board etc etc etc					Qty = 2 No
(14) P/R F/F maintenance sign board etc etc etc					Qty = 0.2 No

(15) Construction of road
embankment & subgrade
R/W Qty as per L/CC/CS
calculation sheet given
below :-

Sl. No.	Chainage (M)	C/S Area (M ²)	Mean Area (M ²)	Length (m)	Volume (M ³)
1	0+0	3.794	-	0.10	-
2	50+0	5.043	4.4185	50.10	220.925
3	100+0	4.93	4.9865	50.10	249.325
4	150+0	6.698	5.814	50.10	290.70
5	200+0	5.739	6.0185	50.10	300.925
6	250+0	4.785	5.062	50.10	253.10
7	300+0	1.759	3.272	50.10	163.60
8	350+0	0.162	0.9605	50.10	48.025

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
SV	Change (m)	e/s Area (m ²)	mean e/s Area (m ²)	Length (m)	Volume (m ³)
9.	400.0	0.013	0.0875	50	4.375
10.	450	0.021	0.017	50	0.85
11.	500	0.04	0.0305	50	1.525
12.	550	0.394	0.217	50	10.85
13.	600	0.795	0.5945	50	29.725
14.	650	1.789	1.292	50	64.60
15.	700	6.99	4.3895	50	219.475
16.	750	6.999	6.9445	50	347.225
17.	800	5.416	6.1575	50	307.875
18.	850	6.026	5.721	50	286.05
19.	900	8.081	7.0535	50	352.675
20.	950	9.146	8.6135	50	430.675

21.	1000	6.474	7.181	50	390.50
22.	1050	9.026	7.75	50	387.50
23.	1100	9.564	9.295	50	464.75

(A) ————— Total = 4825.25 m³

(B) Deduction for crust

(1) For C.B. (-) 613.48 m³

(2) For bottomer (-) 255.36 m³

(3) For C.C. Pavement (-) 271.20 m³

(4) 100A B/E/s (-) 28.12 m³

(5) For Muxseal (-) 49.23 m³

Total (B) → (-) 1217.39 m³

Net R/W Q/tg = (A - B) = 3607.86 m³

(1) R/W Q/tg for subgrade

Shoulder = $\frac{58}{100} \times 3607.86 = 2092.55 \text{ m}^3$

Continuation Q/tg = 2092.55 m³

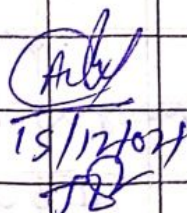
Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(11) R/w qty for embankment					
					$= \frac{42}{100} \times 3607.86 m^3$
					$= 1515.30 m^3$
(22) (a) R/w qty for lead					
					$= 1000 m$
					$= \frac{70}{100} \times 1515.30 m^3 = 1060.71 m^3$
					<u>Qty = 1060.71 m^3</u>
(22) (b) R/w in road embankment					
For lead = 1000 m					
					$= \frac{30}{100} \times 1515.30 m^3 = 454.59 m^3$
					<u>Qty = 454.59 m^3</u>

(16) Laying knap sailing					
on prepared subgrade					
					$2 \times 15 \times 30 \times 0.25 = 225 m^2$
					<u>Qty = 225 m^2</u>

(17/91) Planting of trees and their maintenance for one year etc					
do do all emp't job					
					<u>Qty = 63 Nos</u>


 09/12/22
 02

20/12/24
 02


 15/12/24
 02

Item on A/C Bill

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
<u>ABSTRACT OF COST</u>					
Name of work :- MMUSX Road to					
Champanam Tatbandh.					
Road :- MMUSX (NDB)					
Agency :- M/S RS Builders					
Ag. No :- 46 SBD/2020-2021					
Date of start :- 17/9/2020					
Date of completion :- 16/9/2021					
Estimated cost :- Rs. 78.14 Lacs					
Date of entry :-					

<u>ABSTRACT OF COST</u>					
(1) Construction of Working					
6" bench mark Piller etc					
At 5 wide TMBP - 5					
1.10 km @ Rs. 10228 = 03/km Rs. 11030 = 00					
(2/13) Construction of Reference					
Piller etc do - do all - 16					
At 5 wide TMBP - 5					
1.10 km @ Rs. 9736 = 01/km Rs. 10706 = 00					
(3/64) Clearing & grading					
road lens etc do - 16					
At 5 wide TMBP - 05					
0.30 km @ Rs. 49496 = 10/km Rs. 16037 = 00					

Continuation

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
($\frac{4}{65}$) Construction of road emb improvement with lead 100m etc do do do job Qty wide TMBP - 16, 17 454.59 m ³ @ R 174 = 79475 = 00					
($\frac{5}{66}$) Construction of R/W in subgrade sections shoulder etc do do do all jobs Qty wide TMBP - 16 2092.50 m ³ @ R 176 = 369,272 = 00					
($\frac{6}{67}$) Construction of road emb improvement etc do do job lead 100m etc. Qty wide TMBP - 17 10607 m ³ @ R 139 = 1,48,086 = 00					
($\frac{7}{68}$) Excavation for road in by in soil using manual means etc do do do all comp etc job Qty wide TMBP - 6 38106 m ³ @ R 74 = 2820 = 00					

Continuation

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
($\frac{8}{70}$) Construction of granular subbase with well graded material etc do - do all job					
Qty wide TMBP - 6, 12					
(599.57 + 412.91) m ³					
613.48 m ³ @ R 3106 = 21/m ³ R 1905966 = 00					
($\frac{9}{71}$) P/W laying spreading					
W.B.M. 11 stone metal concrete etc do - do all job					
Qty wide TMBP - 6, 12					
(247.49 + 17.875) m ³					
265.365 m ³ @ R 3260 = 66/m ³ R 985896 = 00					
($\frac{10}{72}$) P/W applying Portland with bitumen emulsion etc					
Qty wide TMBP - 13					
2461.875 m ² @ R 41 = 52/m ² R 102217 = 00					
($\frac{11}{73}$) P/W applying tack coat with bitumen emulsion etc					
Qty wide TMBP - 13					
2461.875 m ² @ R 14 = 07/m ² R 34638 = 00					
($\frac{12}{74}$) Misc. seal surfacing type					
10' etc do - do all job					
Qty wide TMBP - 13					
2461.875 m ² @ R 21 = 90/m ² R 521671 = 00					

Continuation

B/F R₄ 41,87,814 = 00

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(13/15) Construction of water tank and cement concrete frame work etc do - do - all job @ 1/2 wide T.M.B.P - 6/2 (270.0 + 1.20) m ³ 271.20 m ³ @ R ₄ 7438 = 2017270 = 00					
(14/17) P/W F/F ordinary m work etc do - do - all job @ 1/2 wide T.M.B.P - 13 02 Nos @ R ₄ 500 = 67/No R ₄ 5017 = 00					
(15/18) P/W F/F 200m stone work etc do - do - all job @ 1/2 wide T.M.B.P - 13 04 Nos @ R ₄ 653 = 29/No R ₄ 2613 = 00					
(16/19) Boundary Pile etc do - do - all job @ 1/2 wide T.M.B.P - 14 02 Nos @ R ₄ 517 = 57/No R ₄ 1039 = 00					
(17/20) Painting two coats in including primer coat etc @ 1/2 wide T.M.B.P - 14 90.0 m ² @ R ₄ 90 = 30/m ² R ₄ 8127 = 00					

Continuation

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(18) (82) Painting and laying of hot applied thermoplastic paint etc do do all job Qty wide TMBP - 14 22010 M ² @ R. 73540/m ² R. 161784=01					
(19) (84) P/V & F/F typical major informatory sign board etc do do all job Qty wide TMBP - 7 02 Nos @ R. 1145123/No R. 22903=00					
(20) (85) P/V & F/F Maintenance sign board etc do job Qty wide TMBP - 15 02 Nos @ R. 1145123/No R. 22902=00					
(21) (86) P/V & F/F 600 mm triangular sign board etc Qty wide TMBP - 14 8 Nos @ R. 2709=88/No R. 29678=01					
(22) (87) P/V & F/F 600 mm Corridor sign board etc do do job Qty wide TMBP - 14 06 Nos @ R. 5023=88/No R. 30143=00					

Continuation

B1FR 64,99,685=00

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(23) (89) P/V & P/F 900mm gble octagon etc do do do Atg wide TMB P-15 02 Nos @ R 8288=55/No R, 16577=00					
(24) (89) P/V & P/F 650mm/450mm rectangular signls 2 ft Atg wide TMB P-15 02 Nos @ R, 4331=70/No R, 2663=00					
(25) (69) Laying bricks Selling layer on floor etc do do do do Atg wide TMB P-17 225.0m ² @ R 471=27/m ² R, 106036=00 (26) (99) P/V & P/F 300mm/100mm wide TMB P-12 7.50m @ R 756=8/m R, 5673=00 (26) (91) Planting of tree and their maintenance one year 0 ft do do do all j.f. Atg wide TMB P-17 63 Nos @ R 800=30/Nos R, 50419=00 R, 687,380=00 12% Add for GST (+) R, 801765=00 1% Add for CESS (+) R, 66814=00 R, 75,49,959=00 0.03% Less for Below Rate (-) R, 2265=00 R, 75,47,694=00 Less for Previous Payment (-) R, 5740262=00 Atg wide TMB P- Continuation R, 1807432=00 R, (57402620) 1813842=00 1807432=00					

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