

M/S
Removal of m/s

mmmsy (uen)

Measurement Book

Schedule XLV-Form No. 134

Sahora to Bali Harijan

DIVISION

tola

SUB-DIVISION

सहायक अभियंता, मुंबई

7478

Particulars	Details of actual measurement			
	No.	L.	B.	D.
				Contents of area
1st or 2nd Bill				
Work done :- Construction & Fire work				
main frame & foundation				
labour to sub project				
To 1/2 under 1000 (1/2)				
Agency - M/s Vinod Kumar & Sons,				
Varitheka Hite area Dist-				
Bhadrachalam, Pin-509251				
Agreement dated 17/08/2021 - P-2				
Rate Approved - 12.54 % below.				
Agreement Value Rs 13175809.000				
Date of commencement - 19/11/2024				
Date of completion - 18/11/2022				
Date of measurement - 10/11/2022,				
Work done				
Item D Construction & the work				
of reference to bill no 2 -				
do - do - do - etc.				
24 - 142 km				

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Item (2) clearing & grubbing roadside etc.					
	10	30.00	7.00		2100.00 m ²
	10	30.00	7.00		2100.00 "
	10	30.00	7.00		2100.00 "
	10	30.00	7.00		2100.00 "
	8	30.00	7.00		1680.00 "
	1	2.00	7.00		14.00 "
					10094.00 m ²
Net = 10094.00 m ² / 10.00 = 1.0094 Net.					

Item (3) Prov. & fixing of typical RMC sign information sign board with logo etc.					
					Logo - 1.00 nos.
					City sign information - 1.00 nos
					Maintenance information - 1.00 nos
					Total = 3.00 nos
Item (4) construction of embankment with approved material retained from borrow bits - do - do - etc.					

Continuation

P.T.O.

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Length work calculation					
is given below as per					
chart: —					
S/No.	CH	Area	mean Area	width	volume
	(m)	(m ²)	(m ²)	(m)	(m ³)
1	0	0.323	-	-	-
2	50	0.371	0.347	50	17.350 m ³
3	100	0.430	0.401	47	18.824 "
4	150	0.422	0.426	50	21.380 "
5	200	0.402	0.412	50	20.600 "
6	250	0.483	0.443	50	22.195 "
7	300	0.453	0.468	50	23.400 "
8	350	0.505	0.477	50	23.950 "
9	400	0.520	0.513	50	25.625 "
10	450	0.498	0.509	50	25.450 "
11	500	0.498	0.498	50	24.900 "
12	550	0.558	0.528	50	26.400 "
13	600	0.438	0.498	50	24.900 "
14	650	0.528	0.493	50	24.150 "
15	700	0.438	0.983	50	24.150 "
16	750	3.412	3.425	50	171.950 "
17	800	3.467	3.440	50	171.975 "
18	850	3.485	3.476	50	173.800 "
19	900	3.634	3.560	48	170.856 "
20	950	3.709	3.672	50	183.555 "
21	1000	3.234	3.472	50	173.575 "
22	1050	3.424	3.334	50	166.700 "

Continuation

PTD

Sch. XLV-Form No. 134

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Item (4) Control (C/W) calculation chart					
Sl. No.	CH	Area	mean Area	Dist. - m	Volume
	(M)	(M ²)	(M ²)	(M)	(M ³)
23	1100	3.453	3.444	50	172.1750 ³
24	1150	3.577	3.515	50	175.750 ⁴
25	1200	3.769	3.673	50	183.650 ⁴
26	1250	3.328	3.547	50	177.405 ⁴
27	1300	3.557	3.444	50	172.175 ⁴
28	1350	3.536	3.548	50	177.375 ⁴
29	1400	3.691	3.614	50	180.675 ⁴
30	1442	3.796	3.744	42	157.227 ⁴
			Total C/W qty =		3006.307 ³
			C/W qty (est) =		3006.31 m ³

(i) Lead up to 100.00 m @ 7% = 2104.417 m³

(ii) Lead up to 1000.00 m @ 30% = 901.893 m³

Item (5) Construction of subgrade

2200 m length

do - do - do - etc.

$$10 \times 30.00 \times 7.00 \times 0.300 = 630.00 \text{ m}^3$$

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$$10 \times 30.00 \times 7.00 \times 0.300 = 630.00 \text{ m}^3$$

$$6 \times 30.00 \times 7.00 \times 0.300 = 378.00 \text{ m}^3$$

$$1 \times 2.00 \times 7.00 \times 0.300 = 4.20 \text{ m}^3$$

$$\text{Total } 2 \times 10 \times 30 \text{ m} \times 100 \times 0.075 = 54.00 \text{ m}^3$$

$$4822.50 \text{ m}^3$$

Continuation

PTD

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
					$AF = 382.2 m^3$
Item ⑤ Cont. (Subgrade):					
	2	10	30.00	1.20	$+ 0.075 = 54.00''$
	2	10	30.00	1.20	$+ 0.075 = 54.00''$
	2	4	30.00	1.20	$+ 0.075 = 21.60''$
	2	1	22.00	1.20	$+ 0.075 = 3.96''$
side of	2	10	30.00	1.35	$+ 0.000 = 162.00''$
base	2	10	30.00	1.35	$+ 0.000 = 162.00''$
	2	10	30.00	1.35	$+ 0.000 = 162.00''$
	2	4	30.00	1.35	$+ 0.000 = 64.80''$
	2	1	22.00	1.35	$+ 0.000 = 11.88''$
for 2nd	2	10	30.00	1.65	$+ 0.000 = 99.00''$
int. c. for 1st					
	2	3	30.00	1.65	$+ 0.000 = 99.70''$
	2	1	10.00	1.65	$+ 0.000 = 3.30''$
					$3810.44 m^3$
Item ⑥ Construction of G.S.B. gr. 2					
by hand well pre-bed mat.					
- axial - de - de - etc.					
	10	30.00	4.05	0.900	$= 243.00 m^3$
	10	30.00	4.05	0.900	$= 243.00''$
	10	30.00	4.05	0.900	$= 243.00''$
	10	30.00	4.05	0.900	$= 243.00''$
	8	30.00	4.05	0.900	$= 194.40''$
	1	2.00	4.05	0.900	$= 1.62''$

Continuation

Total = 1168.02 m³

PTD

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Item (1) Rev. Rec. masonry					
Rev. Rec. masonry					
Rev. Rec. masonry					
Rev. Rec. masonry					
10 x 30.00 x 3.75 x 0.75 =					84.375 m ³
10 x 30.00 x 3.75 x 0.75 =					84.375 "
10 x 30.00 x 3.75 x 0.75 =					84.375 "
10 x 30.00 x 3.75 x 0.75 =					84.375 "
8 x 30.00 x 3.75 x 0.75 =					67.50 "
1 x 2.00 x 3.75 x 0.75 =					0.56 "
					435.56 m ³

2/1/10 masonry 2 m					
Item (2) C/W preparation of					
foundation of structure					
do do do do					
F.W - 2 x 6.30 x 1.40 x 1.50 =					26.46 m ³
P.P - 1 x 5.90 x 1.50 x 0.75 =					2.66 "
					29.12 m ³
for 2 m = 2 x 29.12 m ³ =					58.24 m ³
Item (3) Rev. Rec. masonry					
foundation - do do do					
2 x 6.30 x 1.40 x 0.15 =					2.65 m ³
for 2 m = 2 x 2.65 m ³ =					5.30 m ³

Continuation

PTD

Particulars	Details of actual measurement			Quantity of Area
	No.	L.	B.	
Item (10) Prov. P.C.C. masonry for foundation do - do - etc.				
F.W. = 2 x 16.00 x 1.00 x 1.25 = 40.00 m ³				
B.P. = 1 x 15.00 x 1.50 x 0.95 = 20.92 m ³				
				12.82 m ³
For 2.00 = 2 x 12.82 m ³ = 25.64 m ³				
Item (11) Prov. P.C.C. masonry Sub structure do - do - etc.				
F.W. = 2 x 16.00 x 0.50 x 1.25 = 20.00 m ³				
2 x 16.00 x 0.40 x 1.00 = 12.80 m ³				
Subst. P.C.C. masonry = 1.25 x 0.50 x 11.37 m ³				
				= 14.21 m ³
				13.03 m ³
For 2.00 = 2 x 13.03 m ³ = 26.06 m ³				
Item (12) Prov. 1st class C.C. 11/P 1000 mm dia for latrine do - do - etc.				
3 x 2.50 = 7.50 m				
For 2.00 = 2 x 7.50 m = 15.00 m				

Continuation

PTD

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
2. C.C. Slab for Path 1x2m 4/20-1/20					
Item (13) C/c in excavation for foundation & substructure					
do do do etc.					
2x 7.60 x 2.30 x 1.60 =					55.94 m ³
4x 1.60 x 2.097 x 1.60 =					21.47 "
					77.41 m ³
Item (14) Prov. P.C.C. m-15 in					
open foundation & etc.					
2x 7.60 x 2.30 x 0.20 =					6.99 m ³
4x 1.60 x 2.097 x 0.20 =					2.66 m ³
					9.65 m ³
Item (15) Prov. P.C.C. m-20 in					
open foundation & etc.					
2x 6.90 x 1.80 x 1.40 =					34.27 m ³
4x 1.60 x 1.597 x 1.40 =					14.31 m ³
					48.58 m ³
Item (16) Prov. P.C.C. m-20 in					
Substructure & etc.					
2x 6.00 x 1.00 x 1.80 =					21.60 m ³
4x 2.00 x 0.749 x 2.090 =					12.52 "
					34.12 m ³

Continuation

PTD

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Item (17) S/F Spleading m/s					
bar reinforcement etc					
For slab					
12 mm dia (Bottom main bar)					
	71	2.536 m	0.89		160.25 kg
12 mm dia	11	6.00	0.62		40.92 "
10 mm dia - Top longitudinal bar					
	21	1.782	0.62		23.28 "
10 mm dia - Top transverse					
	11	6.00	0.62		40.92 "
curb wall & Pilt wall					
12 mm dia	24	6.00	0.89		128.16 "
8 mm dia	62	1.60	0.395		39.184 "
12 mm dia	8	6.00	0.89		42.72 "
8 mm dia	62	1.90	0.395		46.531 "
curb & pillar					
12 mm dia	8	2.60	0.89		19.512 "
8 mm dia	42	1.90	0.395		31.531 "
Add 5% cutting & binding					31.515 "
					603.513 kg
					or 0.604 mt
Item (18) Prov. R.C.C. m/s					
Sub structure - etc					
40 dia	4	2.30	0.40	0.15	0.55 m ³
					0.55 m ³

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
				bf =	0.55 m ³
Item (18) Contd (Rec. 17-20)					
Abut' cap	2	6.00	0.70	0.90	1.68 m ³
Dist wall	2	6.00	0.40	0.74	1.15 m ³
kerb	2	2.62	0.40	0.30	0.70 m ³
exp. Mass	4	0.40	0.40	0.40	0.38 m ³
					4.46 m ³
Item (19) Prov. Laying Rec					
0.85 in Super Structure					
--- do --- do --- etc					
Sub - 1	2	6.00	0.70	0.90	3.74 m ³
Item (20) Back filling behind					
abutment - do - etc					
2 x 2.00 x 4.50 x 1.80					16.92 m ³
Trench filling					19.16 m ³
					35.38 m ³
Item (21) Prop. with sides - do etc					
Abutment					24 m ³
Ret. wall					12 m ³
					36 m ³

Continuation

PTD

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Item (22) 2' x 6' x 1.5' x 1.5' per 1 m ²					
Structure - do - do - do					
Abutment - 2 x 7.6 x 2.47 x 1.60 = 69.07 m ³					
Return - 4 x 1.43 x 2.22 x 1.60 = 32.93 "					
					9.10 m ³
Item (23) Prov. P.C.C. m. 15 in					
open foundation - do - do					
2 x 7.6 x 2.47 x 0.25 = 7.51 m ³					
4 x 1.43 x 2.22 x 0.25 = 3.12 "					
					10.13 m ³
Item (24) Prov. P.C.C. m. 20 in					
open foundation - do - do					
2 x 6.8 x 1.97 x 1.400 = 37.51 m ³					
4 x 1.43 x 1.787 x 1.400 = 14.31 "					
					51.82 m ³
Item (25) Prov. P.C.C. m. 20 in					
Structure - do - do - do					
2 x 6.8 x 1.035 x 2.310 = 30.02 m ³					
4 x 1.915 x 0.84 x 2.660 = 17.20 "					
					47.22 m ³

Continuation

PTD

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
2/100 (26) 4/F P.P. 1/2" x 1/2" x 1/2"					
bars reinforcement etc.					
Slab - 16 mm bars					
Bottom main bars: 49 x 3.53 x 11.50 =					273.603 kg
10 mm top bars: 21 x 6.00 x 0.62 =					73.12 "
10 mm top 1 bar: 21 x 2.80 x 0.62 =					36.56 "
10 mm top 1 bar: 13 x 8.00 x 0.62 =					48.36 "
Cap Wall & DIRT Wall					
2 mm bars 24 x 6.00 x 0.87 =					128.16 "
3 mm bars 62 x 11.60 x 0.375 =					39.184 "
12 mm bars 8 x 6.00 x 0.87 =					42.72 "
8 mm bars 62 x 11.90 x 0.375 =					16.591 "
bars 2 pillars					
12 mm bars 8 x 3.60 x 0.87 =					35.632 "
8 mm bars 58 x 1.78 x 0.375 =					40.78 "
Add 5% cutting & bending =					40.878 "
					200.547 kg
					at 0.80 / MT
2/100 (27) Prov. h.c.c. m. 20 in					
sub structure. etc.					
Bottom 6/F 4 x 2.80 x 0.40 x 0.150 =					0.56 m ³
at 1.00					
at 1.00 2 x 6.00 x 0.70 x 0.200 =					1.68 "
at 1.00 2 x 6.00 x 0.40 x 0.300 =					1.44 "
at 1.00 2 x 3.60 x 0.40 x 0.300 =					2.88 "
End pillar 4 x 0.400 x 0.400 x 0.600 =					2.38 "
					5.82 m ³

Continuation

CTO

Continuation

Continuation

PTD

Continuation

P.T.O.

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
			13503		69026=00
Item (3) Contd. (Contd.)					
1000.00 Lead					
901.873 m ³ side Tm B.P. (4)					
at 176=86/m ³ —					159509=00
(4) Lead 100.00 m					
2104.417 m ³ side Tm B.P. (4)					
at 139=79/m ³ —					294176=00
(5) Construction of sub					
grade & weathering					
1000.00 Lead					
3910.44 m ³ side Tm B.P. (5)					
at 161=56/m ³ —					631771=00
(6) Construction of GSB					
grit by Prov. Well graded					
material - do - etc.					
1168.02 m ³ side Tm B.P. (5)					
at 2515=17/m ³ —					2937769=00
(7) Braking, spreading & compacting					
stone aggregate of					
specific resistance					
grit - do - do - etc.					
405.56 m ³ side Tm B.P. (6)					
at 3212=75/m ³ —					1302963=00
					405539524=00

Continuation

PTO

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
					0.42 5375 214200
(8)	Prov. fixing of typical provision for foundation sign board with "logo" etc.				
	3.00 m ² wide T m ² P - (2)				
	0.9176 = 91/1000 - 13				27531 = 0.
(9)	E/W in excavation of foundation & sky-				
	Type - do - do - etc.				
	58.24 m ² wide T m ² P - (6)				
	77.41 m ² wide T m ² P - (2)				
	81.00 m ² wide T m ² P - (2)				
	246.65 m ² 0.294 = 73/1000 - 13				63853 = 0.
(10)	Prov. P.C.C. m ² 15 in open foundation etc.				
	5.78 m ² wide T m ² P - (6)				
	9.67 m ² wide T m ² P - (9)				
	10.13 m ² wide T m ² P - (11)				
	25.10 m ² 0.54918 = 36/1000 - 13				127466 = 0.
(11)	Prov. P.C.C. m ² 20 in open foundation etc.				
	37.64 m ² wide T m ² P - (7)				
	40.58 m ² wide T m ² P - (8)				
	51.82 m ² wide T m ² P - (11)				
	130.04 m ² 0.5739 = 29/1000 - 13				737036 = 0.
					2406347100 = 0.

Continuation

PTO

Continuation

PTD

Continuation