

SH-71 ਦੇ ਆਦਿ ਸ਼ਾਇਦੀ ਲੇਖਾ
ਪੰਚਕਾਲੀ ਸਰ-ਲੇਖਾ ਲੇਖਾ

Schedule XLV-Form No. 134

M.B.No. 994 ਲੇਖਾ DIVISION

ਲੇਖਾ SUB-DIVISION

Measurement Book

ਲੇਖਾ - D.K. Varma

INDEX

PAGE

प्रमाणित किया जाता है कि इस भाषी-
पुस्त में कुल 100 (सौ) प्रष्ट अंकित हैं।
यह भाषीपुस्त ग्रामीण कार्य विभाग,
कार्य अवर प्रमंडल, कनरीसराय के
सहायक अभियंता जी अंकित आमुष
को निर्गत किया जाता है।

12/12/2023

Executive Engineer
Rural Works Department
Works Division, Rajgir

12/12/2023

1st on Alc bill

1

Name of Work—

Situation of Work—

Agency by which work is executed—

Date of Measurement—

No. and date of agreement

(These four lines should be repeated at the commencement of the measurement relating to each work)

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
N/W:-	Construction of road & e/d works of road from SH-71 to Yadav tola and Mahadast tola, under MMSY (NDB) BRICS at block Katoisohai				
N/Agency:-	Dileep Kumar Verma				

Ass. NO-	14/580/2023-24
Date of start	-05.12.2023
Date of Completion	-04.12.2024
Date of measurement	-03.04.2024

Hours of work

- ① PIV 2 lining of working
Benchmark pillars = 04 Nos
iii) Reference pillars = 12 Nos

- ② clearing & grubbing of road land —
- | | | | |
|----|-----|------------------|--------------------------|
| 2x | 20x | 30.10 m x 3.50 m | = 4200.10 m ² |
| 2x | 20x | 30.10 m x 2.50 m | = 4200.10 m ² |

Continuation

$$Qty\ C/O = 84001.00m^2$$

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D.	
				Qty $\frac{1}{10} =$	8400.00 m ²
2x	20 x 30	0.00 m	x 3.50 m	=	4200.00 m ²
2x	20 x 30	0.00 m	x 3.50 m	=	4200.00 m ²
2x	20 x 30	0.00 m	x 3.50 m	=	4200.00 m ²
				Total =	21000.00 m ²
					= 2.10 Hect.

(3) Cutting of trees, including cutting of trunks, branches etc. all completed 2/2 Nos

(4) Construction of embankment with material obtained from borrow pits with a lead up to 1000 m & 100 m.

Earth work calculation

Sl. No	chainage (m)	c/s Area (m ²)	mean c/s Area (m ²)	Dist. (m)	Volume (m ³)
1	0	5.513	2.756	0.00	0.00
2	50	5.142	5.328	50	266.375
3	100	4.901	5.022	50	251.075
4	150	4.976	4.939	50	246.925
5	200	4.668	4.822	50	241.100
6	250	6.000	5.374	50	266.700
7	300	5.652	5.826	50	291.300
8	350	6.472	6.062	50	303.100

Continuation

Qty $\frac{1}{10} = 1866.575$ m³

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
S.No	chainage	C/S Area	mean C/S Area	Dist	volume
	(m)	(m ²)	(m ²)	(m)	(m ³)
			avg A/F =		1866.575
9	400	5.481	5.977	50	298.825
10	450	5.812	5.642	50	282.325
11	500	4.808	5.310	50	265.500
12	550	5.362	5.085	50	254.250
13	600	4.952	5.157	50	252.850
14	650	5.884	5.418	50	270.900
15	700	6.262	6.023	50	303.650
16	750	6.021	6.142	50	307.075
17	800	5.821	5.921	50	296.050
18	850	5.850	5.836	50	291.775
19	900	6.457	6.154	50	307.675
20	950	6.171	6.314	50	315.700
21	1000	7.686	6.929	50	346.425
22	1050	6.186	6.936	50	346.800
23	1100	6.471	6.329	50	316.425
24	1150	7.153	6.812	50	340.600
25	1200	6.138	6.646	50	332.275
26	1250	6.294	6.216	50	310.800
27	1300	6.130	6.212	50	310.600
28	1350	6.120	6.125	50	306.250
29	1400	4.865	5.493	50	274.625
30	1450	5.155	5.010	50	250.500

Continuation

Avg = 1028453.4
m²

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Sl. No. chainage		C/S Area	mean c/s Area	Dist.	Volume
	(m)	(m ²)	(m ²)	(m)	(m ³)
			Qty B/F =		8453.450 m ³
31	1500	6.835	5.995	50	299.750
32	1550	8.064	7.450	50	372.425
33	1600	5.080	6.572	50	328.600
34	1650	4.880	4.980	50	249.000
35	1700	5.518	5.199	50	259.950
36	1750	5.823	5.691	50	283.525
37	1800	5.236	5.530	50	276.475
38	1850	5.687	5.462	50	273.075
39	1900	5.296	5.492	50	274.575
40	1950	5.431	5.364	50	268.175
41	2000	4.912	5.172	50	258.575
42	2050	5.088	5.000	50	250.000
43	2100	4.940	5.014	50	250.700
44	2150	6.081	5.511	50	275.525
45	2200	5.062	5.572	50	278.575
46	2250	5.744	5.403	50	270.150
47	2300	4.926	5.375	50	266.750
48	2350	5.484	5.205	50	260.250
49	2400	3.484	4.484	50	224.200
50	2450	5.484	4.484	50	224.200
51	2500	4.836	5.160	50	258.000

Continuation

Qty 40 = 14155.97 m³

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Sl. No	chainage	C/S Area	mean C/S	Dist	Volume
	(m)	(m ²)	(m ²)	(m)	(m ³)
			Qty	B/F =	14155.975 m ³
52	2550	3.412	4.124	50	206.200
53	2600	4.996	4.704	50	240.200
54	2650	4.922	4.959	50	247.950
55	2700	6.889	5.906	50	295.275
56	2750	4.603	5.746	50	287.300
57	2800	7.410	6.007	50	300.325
58	2850	7.622	7.576	50	375.800
59	2900	4.463	6.043	50	302.125
60	2950	4.771	4.617	50	230.850
61	3000	2.771	3.771	50	188.550
62	3020	3.771	3.271	20	65.420
			Total =		16,865.97 m ³
			Less Qty of subgrade =		2613.60 m ³
			(vide Table - 6)		
			Net Qty of embankment =		14252.37 m ³
(i)	For 1000 m lead =		5% of 14252.37 m ³		
			=		712.62 m ³
(ii)	For 100 m lead =		(14252.37 m ³ - 712.62 m ³)		
			=		13539.75 m ³

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
⑤ Construction of Subgrade					
for B.T. Portion —					
from Ch. 0.00 Km to 1.20 Km,					
1 x 10 x 30.00m x				$(6.820m + 7.220m)$	$\times 0.30m$
				2	
					$= 654.30$
1 x 10 x 30.00m x				$(6.820m + 7.220m)$	$\times 0.30m$
				2	
					$= 654.30m^2$
1 x 10 x 30.00m x				$(6.820m + 7.220m)$	$\times 0.30m$
				2	
					$= 652.50m^2$
1 x 10 x 30.00m x				$(6.820m + 7.220m)$	$\times 0.30m$
				2	
					$= 652.50m^2$
Total =					$2613.60m^2$

⑥ Construction of Granular Sub-base, by partially well graded material.

$$1 \times 10 \times 30.00m \times 4.050m \times 0.200m = 243.00m^2$$

$$1 \times 10 \times 30.00m \times 4.050m \times 0.200m = 243.00m^2$$

$$1 \times 10 \times 30.00m \times 4.050m \times 0.200m = 243.00m^2$$

$$1 \times 10 \times 30.00m \times 4.050m \times 0.200m = 243.00m^2$$

Extra widening at the curve

$$2 \times 15.00m \times 0.750m \times 0.200m = 4.50m^2$$

$$2 \times 14.00m \times 0.900m \times 0.200m = 5.04m^2$$

$$\text{Total} = 981.54m^2$$

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(7) Dismantling of existing structure cent concrete					
(For 1x600mm HPC - 02 NOS)					
P.C.C -	2x	3.50m	1.54m	0.15m	1.617m ³
For 2x900mm (Double row)					
For 900mm dia HPC -	01				NO
P.C.C -	1x	3.50m	3.38m	0.15m	1.774m ³
					Total = 3.39m ³
					Qty int = 3.39m ³
(8) Dismantling of brick masonry for existing structure					
Like HPC etc all completed					
For 1x600mm HPC - 2 NOS					1.617m ³
2x2x620mm x 0.825m x 3.00m =					61.38m ³
For 2x900mm HPC - 01 NOS					
2x 3.00m x 0.825m x 3.00m =					39.60m ³
					Total = 100.98m ³
(9) Removing all types of Hume pipe					
Above given to 900mm dia					
For 1x600mm dia HPC - 02 NOS					
2x 5 NOS =	10				NOS
For 2x900mm dia HPC - 01 NOS					
2x 5 NOS =	10				NOS
					Total = 20 NOS RM
Continuation					

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(10) Earthwork in excavation for foundation of structure all completed.					
For 12000 mm dia HRC - 03 NOS					
For Head wall -					
	3x	2x 6.450m	x 1.40m	x 1.50m	28.187m ³
Below pipe					
	3x	1 x 4.880m	x 1.530m	x 0.365m	8.12m ³
Total =					89.99m ³
(11) P.V MIS P.C.C. (1:2:5) at levelling course in open					
Foundation all completed.					
For Head wall -					
	3x	2x 6.450m	x 1.40m	x 0.15m	8.12m ³
Below pipe -					
	3x	1 x 4.931m	x 1.530m	x 0.250m	5.65m ³
Total =					13.77m ³
(12) p.v p.c.c. in sub-structure all completed					
For H. wall -					
	3x	2x 6.150m	x 1.250m	x 0.40m	3.18m ³
					= 115.68m ³
For Parapet -					
	3x	2 x 6.150m	x 0.40m	x 0.60m	8.85m ³
Less for pipe -					
	3x	2 x 0.7857m	x 1.230m	x 0.62m	4.43m ³
Continuation					Total = 120.10m ³

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(13) P/V & Laying RCC pipe NPB for Culvert - 1000 mm dia all completed - $3 \times 3 \times 2.50 \text{ M} = 22.50 \text{ RM.}$					
(14) Earthwork in excavation for structure (3m x 2m slab culvert) - of 140. For Abutment, $2 \times 9.10 \text{ m} \times 2.30 \text{ m} \times 1.60 \text{ m} = 66.97 \text{ m}^3$ Return wall - $4 \times 1.60 \text{ m} \times 2.117 \text{ m} \times 1.60 \text{ m} = 21.67 \text{ m}^3$ For Floor under deck slab $1 \times 7.70 \text{ m} \times 1.40 \text{ m} \times 0.250 \text{ m} = 2.69 \text{ m}^3$ Total = 91.33 m ³					
(15) Sand filling in foundation trenches all completed For floor under deck slab $1 \times 7.70 \text{ m} \times 2.629 \text{ m} \times 0.10 \text{ m} = 2.02 \text{ m}^3$ Total = 2.02 m ³					
(16) P/V P.C.C M15 (1:2:5:5) for plain concrete in foundation - For Abutment - $2 \times 9.10 \text{ m} \times 2.30 \text{ m} \times 0.200 \text{ m} = 8.37 \text{ m}^3$ For R/wall - $4 \times 1.60 \text{ m} \times 2.117 \text{ m} \times 0.200 \text{ m} = 2.70 \text{ m}^3$ Total = 11.07 m ³					

Continuation

Qty of 0 = 11.07 m³Rin
5/11/24

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
			Qty B/F =		11.07 m ²
Floor under deck Slab.					
1 x 7.70 m x 2.736 m x 0.150 m					= 3.16 m ³
Cut off wall —					
2 x 0.400 m x 1.00 m x 0.200 m					= 0.16 m ³
			Total =		14.39 m ³

(17)	plv RCC M15 (1:2.5:5)				
Concrete for plain concrete					
in open foundation					
as per drawing.					

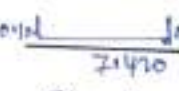
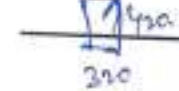
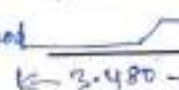
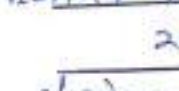
For Abutment —					
2 x 8.30 m x $\frac{2.10 \text{ m} + 1.50 \text{ m}}{2}$ x 1.40 m					= 41.83 m ³
Return wall —					
4 x 1.60 m x $\frac{1.917 \text{ m} + 1.377 \text{ m}}{2}$ x 1.40 m					= 14.48 m ³
Cut off wall —					
2 x 1.70 m x $\frac{0.800 \text{ m} + 0.375 \text{ m}}{2}$ x 1.40 m					= 2.79 m ³
			Total =		59.10 m ³

(18)	plain concrete concrete (M15)				
in Sub structure completed					
as per drawing —					

Above G.L.					
Abutment 2 x 7.50 m x $\frac{1.30 \text{ m} + 0.70 \text{ m}}{2}$ x 1.80 m					= 27.00 m ³
Per Return wall.					
4 x 1.90 m x $\frac{1.117 \text{ m} + 0.40 \text{ m}}{2}$ x 2.150 m					= 12.39 m ³
			Total =		39.39 m ³

27
05/11/24

Particulars	Details of actual measurement				Contents of area
	No.	L	B	D	
(19) Plv & laying R.C.C. m/s in deck slab (superstructure)					
1x 7.50m x 3.560m x 0.300m					8.01 m^3
					Total = 8.01 m^3
(20) Plv weepholes in plain cast concrete with 100mm dia. A/c pipe					
For Abutment -	2x12				24 NOS
For R/Wall -	4x4				16 NOS
					Total = 40 NOS
(21) Plv & laying Drainage spouts all completed job					
	1x2				02 NOS
(22) Plv & laying Plain cast concrete R.C.C. M-20 in substructure all completed job -					
For Abutment cap -					
2x 7.50m x 0.700m x 0.200m					2.10 m^3
For Ret wall -					
2x 7.50m x 0.400m x 0.300m					1.80 m^3
Return wall coping -					
4x 2.20m x 0.400m x 0.150m					0.52 m^3
Parapet wall -					
2x 9.00m x 0.400m x 0.600m					4.32 m^3
Continuation					Total = 8.74 m^3

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
23 Supplying, fitting and placing of HYSD reinforcement in sub-structure (deck slab) For Abutment Cap & dist wall —					
Main bar — 12 mm dia —					
 7.470×2.1420	10 Nos	7.620 m	0.89 kg		135.63 kg
Riser — 8 mm @ 200 c/c					
 6.20×1.10	2 x 38 Nos	1.580 m	0.275 kg		47.43 kg
 4.20×3.20	2 x 38 Nos	1.580 m	0.275 kg		47.43 kg
For Deck slab —					
Bottom main bar — 16 mm dia @ 125 c/c — (61 Nos)					
 3.480×1.200	61 x 3.880 m	1.58 kg			373.95 kg
Top main — 10 mm @ 175 c/c					
 4.4×2.808	44 x 2.808 m	0.617 kg			76.23 kg
Distribution Bottom + Top — 10 mm @ 175 c/c					
 2.2×7.820	2 x 21 Nos	7.820 m	0.617 kg		202.64 kg
Chairs — 12 mm dia — 30 Nos					
 3.0×1.90	30 x 1.90 m	0.39 kg			50.73 kg
					Total = 934.04 kg
					Qty. used = 914.00 kg
					= 0.914 MT

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(24) Earth work in excavation of foundation for structure (For 2 x 5.00 m x 3.00 m slab culvert) - 01 NO					
For Abutment -					
2 x 9.650 m x 3.450 m x 2.275 m = 151.48 m ³					
Return wall -					
4 x 1.267 m x 3.204 m x 2.275 m = 36.94 m ³					
Pier -					
1 x 9.850 m x 2.350 m x 2.275 m = 52.66 m ³					
Floor under deck slab -					
2 x 7.50 m x 2.883 m x 0.475 m = 20.44 m ³					
Total = 261.62 m ³					

(25) Plaster and filling in foundation trenches as per drawing

For Abutment -					
2 x 9.650 m x 3.450 m x 0.10 m = 6.65 m ³					
Pier -					
1 x 9.850 m x 2.350 m x 0.10 m = 2.31 m ³					
Return wall -					
4 x 1.267 m x 3.204 m x 0.10 m = 1.62 m ³					
Floor under deck slab -					
2 x 7.50 m x 4.293 m x 0.10 m = 6.43 m ³					

Continuation Total = 12.01 m³

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(26) Brick flat ceiling in foundation as per drawing					
For Abutment -					
	2	9.650m	3.450m		66.58 m ²
Pier -					
	1	9.850m	2.350m		23.14 m ²
Return wall -					
	4	1.267m	3.204m		16.23 m ²
Pier under draft slab -					
	2	7.500m	4.293m		64.39 m ²
				Total =	170.34 m ²
(27) Plaster (PCC 1:2:5) as leveling course in open foundation all completed job -					
For Abutment -					
	2	9.520m	3.300m	0.300m	18.18 m ³
For Return wall -					
	4	1.192m	3.054m	0.300m	4.36 m ³
For Pier -					
	1	9.200m	2.200m	0.300m	6.40 m ³
				Total =	29.57 m ³
(28) Plaster (PCC 1:2:5) plain cement concrete in open foundation -					

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
Below G.C. —					
For Abutment —					
$\frac{1}{2} \times 2 \times 2.500m \times \frac{3.10m + 2.30m}{2} \times 1.80m = 82.62m^2$					
For Return wall —					
$4 \times 1.192m \times \frac{3.05m + 1.85m}{2} \times 1.80m = 21.06m^2$					
For Pier — $2.500m$					
$1 \times (\frac{2.507m + 1.889m}{2}) \times (\frac{1.507m + 1.882m}{2}) \times 1.80m$					
					$= 19.53m^2$
For Semi Circular Portion —					
$1 \times 1.753 \times 1.800m = 2.15m^2$					
					Total = 126.36m ²

(29) p/v & bring of typical masonry
 information taken from water
 log = 02 No. 3.

M. M. M.
 03/04/24
 (J.E.)

Arjun Arjun
 03/04/24
 AE

Continuation

Abstract of Cost

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Sch. XLV-Form No. 134

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
<u>(1)</u> 1. PIV & 2 nd of working Bent made pillars 04 NOS, vide TMBP-1					
	(a) Rs	4976 = 22/40- Rs			19,907.00
<u>1 (ii)</u> 1 Reference pillars 12 NOS, vide TMBP-1					
	(a) Rs	2273 = 36/40- Rs			27,280.00
<u>2</u> 2 clearing & grubbing of road land - 2.10 Hauls vide TMBP-2					
	(a) Rs	22647 = 86/40- Rs			1,52,665.00
<u>3</u> 3 cutting of trees all completed 12 NOS, vide TMBP-2					
	(a) Rs	345 = 76/40- Rs			4,149.00
<u>4 (i)</u> 5 Continuation of embankment - incl - with approved material obtained for borrow pits with a load up to 2000. 13,539.75 m ³ , vide TMBP-5					
	(a) Rs	175.01/m ³ - Rs			23,69,500.00
					Chg. Rs 2573,500.00

Continuation

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
				BIF, B	55,86,973 ⁰⁰
$\frac{8}{24}$					primarily of brick masonry for existing structure
					100.98 m ³ wide TMBP-7
					(1) B 314204/m ³ - Rs 31,712 ⁰⁰
$\frac{9}{25}$					Remainig all types of House hold
					20 Km - wide TMBP-7
					(2) B 336235/Km - Rs 6727 ⁰⁰
$\frac{10}{26}$					earthwork in excav. for foundation of structure (H.D. culvert)
					89.99 m ³ wide TMBP-8
					(2) B 410266/m ³ - Rs 36955 ⁰⁰
$\frac{11}{27}$					plv m/s p.c.c (1:2:5) as leveling course in open foundation
					8.12 m ³ wide TMBP-8
					(1) B 6107248/m ³ - Rs 49,609 ⁰⁰
$\frac{12}{28}$					plv p.c.c in sub stru all complete
					120.10 m ³ wide TMBP-8
					(1) B 7089209/m ³ - Rs 8,51,400 ⁰⁰

Continuation

cl. B 65,63,376⁰⁰

= 00

Continuation

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
				R/A	69,64,264 = 60
<u>12</u> 24				plv mis pcc (1:2:5.5)	
				as levelling course	
				in foundation	
				14.39 m ² wide T.M.B.R. 10	
				29.57 m ² wide T.M.B.R. 14	
				43.96 m ²	
				① R 6109 = 48 m ² - R	2,68,593 = 60
<u>18</u> 35				plv pcc mis (1:2:5.5)	
				Concrete for plain	
				Concrete in foundation	
				59.10 m ² wide T.M.B.R. 10	
				126.26 m ² wide T.M.B.R. 15	
				185.46 m ²	
				② R 6109 = 48 m ² - R	11,33,064 = 60
<u>19</u> 36				plv plain/reinforced	
				cast concrete	
				in sub structure	
				couplets as per dry	
				39.39 m ² wide T.M.B.R. 10	
				③ R 6563 = 19 m ² - R	2,58,524 = 60
<u>20</u> 32				plain/reinforced cast	
				concrete (m-20) in	
				sub structure	
				8.74 m ² wide T.M.B.R. 11	
Continuation					
				④ R 7089 = 09 m ² - R	61,959 = 60
				40, R 86,86,384 = 60	

Particulars	Details of actual measurement				Contents of area
	No.	L	B.	D.	
			RIF	B	86,86,384 = 60
<u>21</u> 38	plv & large R.C.C				
	M25 in deck slab				
	(Super structure) 22				
	per deck slab span				
	8.01 m ² , vide TMBR-11				
	(Q) R 8359060/MT-B				66,912 = 60
<u>22</u> 40	plv weep holes in				
	plain cast concrete				
	40 NOS, vide TMBR-11				
	(Q) R 145233/No-B				5813 = 60
<u>23</u> 41	plv & fixing of				
	drainage spouts				
	02 NOS, vide TMBR-11				
	(Q) R 549291/No-B				11002 = 60
<u>24</u> 39	supplying, lifting				
	and placing HYSD				
	bar reinforcement				
	0.914 MT, vide TMBR-12				
	(Q) R 8360590/MT-B				76,416 = 60
<u>25</u> 16	plv & fixing of typical				
	mmcsy in R.C.C				
	slab bars with lgr				
	02 NOS, vide TMBR-15				
	(Q) R 11,09193/No-B				22,184 = 60

Continuation

40, R 88,58,809 = 60

(Rupin) one crore four
lakh, forty nine thousand,
four hundred & thirty nine)

only.

Prins

03/04/24.

(J.F.)

03/04/24
AF

03/04/24