

Name of Work - ~~control River from Pimay to~~
 Situation of Work - ~~front~~
 Agency by which work is executed -
 Date of Measurement -
 No. and date of agreement 1233 BD / May / 2022

(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.	
Agency : Orissa Provincial Survey Deptt. East Chamberlain.					

Date of start: 19.7.2021

Date of contd: - 18.7.2022

Date of ending: 12.12.21

(1) construction of Reference survey

Brash mark pillar - do -

$$49 \times 30 = 1470 \text{ m}$$

$$1 \times 5 = 5 \text{ m}$$

$$1475 \text{ m or } 1.475 \text{ km}$$

(2) construction of Reference Pillar

1 Burden - do -

$$1.475 \text{ km}$$

Accepted
A. S.
10.01.22

(3) clearing agency road land m.

Cutting surveying - do -

$$2 \times 49 \times 30 \times 1.5 = 4410 \text{ m}$$

$$2 \times 1 \times 5 \times 1.0 = 10 \text{ m}$$

$$4420 \text{ m}^2$$

$$\text{or, } 0.442 \text{ Ha}$$

(4) Boundary survey mmsy

Information sign Board - do -

1 NO.

Particulars	Details of actual measurement				Contents of area	
	No.	L.	B.	D.		
<u>(5) construction of embankment with</u>						
<u>cut off from borrow pit level 1000 m</u>						
grainage	c.s.o	area	length	depth (m)		
0	-	0.62	-	-	0.11 m ³	
50	-	2.80	1.2 × 50 =		85.50	
100	-	3.52	3.16 × 50 =		158.00	
150	-	3.26	3.31 × 50 =		169.50	
200	-	2.60	2.93 × 50 =		146.50	
250	-	2.10	2.35 × 50 =		117.50	
300	-	1.40	1.75 × 50 =		87.50	
1000	-	2.68	1.35 × 0 =		0.00	
1030	-	4.02	3.35 × 30 =		100.50	
1050	-	1.56	2.79 × 29 =		55.40	
1100	-	2.16	1.86 × 50 =		93.00	
1150	-	0.80	1.48 × 50 =		74.00	
1200	-	2.92	1.86 × 50 =		93.00	
1250	-	2.56	2.24 × 50 =		137	
1300	-	3.11	3.1 × 50 =		155.50	
1330	-	2.60	3.13 × 30 =		93.90	
					1567.20 m ³	

<u>(6) construction of embankment with cut</u>
<u>cut from borrow pit level 1000 m</u>
depth :- 1567.2 × 0.3
= 470.16 m ³

<u>(7) construction of embankment with cut</u>
<u>cut from borrow pit level 100 m</u>

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
<u>sqf :-</u>	<u>15.2.2 + 0.7 = 10.97.04 m²</u>				
(8) <u>EW in excavation or structure</u>					
<u>Ordn</u>	<u>dm</u>				
<u>R/W :-</u>	<u>1+6 x 2.5 x 0.83 = 12.45 m³</u>				
<u>R/W :-</u>	<u>4 x 1.75 x 0.25 x 0.83 = 1.45</u>				
<u>cut & fill :-</u>	<u>2 x 6.0 x 0.25 x 1.45 = 4.35</u>				
<u>Walls :-</u>	<u>1+6.0 x 2.5 + 0.1 = 9.1</u>				
					<u>27.25 m³</u>
(9) <u>Pounding sand filling in trench</u>					
<u>trench</u>	<u>m</u>				
<u>R/W :-</u>	<u>1+6.1 x 2.5 + 0.1 = 1.5 m³</u>				
<u>R/W :-</u>	<u>4 x 1.75 x 0.25 x 0.1 = 0.175</u>				
<u>cut & fill :-</u>	<u>2 x 6.0 x 0.25 + 0.1 = 0.3</u>				
					<u>1.975 m³</u>
(10) <u>Brick P.C.C mix</u>					
<u>in foundation</u>	<u>m³</u>				
<u>R/W :-</u>	<u>1+6.0 x 2.5 + 0.1 = 1.5 m³</u>				
<u>R/W :-</u>	<u>4 x 1.75 x 0.25 x 0.1 = 0.175 m³</u>				
12-11-21	1.675 m³				
(11) <u>Date of sqf :-</u>	<u>18-11-21</u>				
<u>Reinforcement required of B.R + C.R.V.R</u>					
	<u>572</u>	<u>2m + 2m</u>			

Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
<u>Foundation (Ratt)</u>					
Bottom :-	1 × 40	× 2.4 × 0.9	=	36.48	
Bottom Gutter :-	1 × 14	× 6.0 × 0.6	=	50.4 "	
Main Top :-	1 × 40	× 2.4 × 0.6	=	57.6	
Bottom Plaster :-	1 × 30	× 6.0 × 0.6	=	50.40	
Horizontal :-	1 × 20	× 1.1 × 0.6	=	26.4	
					271.24 (i)

out of wall

Tilt :-	2 × 19 × 1.24 × 0.4	= 188.481g
S. butt. :-	2 + 2 + 6 × 6.0 × 0.4	= 57.6 1g
		246.081g (ii)

partition

Vertical Part :-	2 × 36 × 3.1 × 0.3	= 207.881g
	2 + 36 × 2.6 × 0.6	= 112.321g
Horizontal Part :-	4 × 15 × 6.0 × 0.6	= 216.01g
		529.21g (iii)

R/W :-

Vertical :-	1 × 4 × 10m × 2.55 × 0.6	= 61.2 1g
	1 × 4 × 10m × 3.0 × 0.6	= 72.0 1g
Horizontal :-	1 × 4 m × 7 m × 1.75 × 0.6	= 29.4 g
	1 × 4 m × 10 m × 1.75 × 0.6	= 42.0 g
		914.61g (iv)

Surveyor
18.11.21TOE
AC

Date of survey :- 26.11.2021

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(12) REINFORCEMENT DETAILED OF DECK SLAB SIZE E 2M X 2M					
<u>Bottom main:-</u> $1 \times 80 \times 2.4 \times 0.9 = 172.8 \text{ kg}$					
<u>Bottom girder</u> $1 \times 14 \times 6.0 \times 0.6 = 50.4 \text{ kg}$					
<u>M-TIP</u> $1 \times 14 \times 2.0 \times 0.6 = 57.6 \text{ kg}$					
<u>B-TIP</u> $1 \times 14 \times 6.0 \times 0.6 = 50.4 \text{ kg}$					
<u>331.2 kg (V)</u>					

Penal area

<u>B+T area</u> $2 \times 2 \times 2.5 \times 0.4 = 6 \text{ kg}$
<u>TIP</u> $2 \times 2 \times 2.5 \times 0.4 = 4 \text{ kg}$
<u>TIP 2</u> $2 \times 14 \times 1.5 \times 0.4 = 16.8 \text{ kg}$
<u> </u>
<u>20.2 kg (VI)</u>

(13) Doubly Tilted implying by 50°

bottom reinforcement - do

by Additional weight factor

W-4 to 5 =

$$(I) + (II) + (III) + (IV) + (V) + (VI)$$

$$= 271.2 + 246.8 + 523.2 + 214.6 + 331.2 + 20.4$$

$$= 1611.68 \text{ kg say } 1611 \text{ kg}$$

or, 1.611 Ton.

J P
31-12-2021

F B
26/11/21
AE

Date of orig:- 18-12-2021

Particulars	Details of actual measurement			Contents of area
	No.	L	B.	

(14) Excavation for Sand Dug in m³
by spread meter

$$2 \times 12 \times 30 \times 0.525 \times 0.1 = 37.5 \text{ m}^3$$

$$2 \times 1 \times 15 \times 0.525 \times 0.1 = 1.57 \text{ m}^3$$

$$2 \times 3.5 \times 30 \times 0.375 \times 0.1 = 78.75 \text{ m}^3$$

$$\text{TOTAL } 118.12 \text{ m}^3$$

(15) Backfilling Behind Abutments

in m³ per m

$$2 \times 5.5 \times 2.0 + 0.5 = 14.30 \text{ m}^3$$

(16) construction of R.C.B. godowns
materials -

~~$$8 \times \text{culpt} \quad 2 \times 12 \times 30 \times 0.525 \times 0.1 = 37.5 \text{ m}^3$$~~

~~$$2 \times 1 \times 15 \times 0.525 \times 0.1 = 1.57 \text{ m}^3$$~~

~~$$2 \times 3.5 \times 30 \times 0.375 \times 0.1 = 78.75 \text{ m}^3$$~~

Brickwork:

$$2 \times 17 \times 0.9 \times 0.1 = 3.46 \text{ m}^3$$

$$3 \times 1.5 \times 1.0 \times 0.1 = 5.1 \text{ m}^3$$

$$6.7 \times 0.3 \times 0.45 \times 0.1 = 0.22 \text{ m}^3$$

$$2 \times 20 \times 1.15 \times 0.1 = 4.6 \text{ m}^3$$

$$4 \times 15.0 \times 1.1 \times 0.1 = 6.6 \text{ m}^3$$

$$3.7 \times 1.6 \times 1.2 \times 0.1 = 7.1 \text{ m}^3$$

$$1.9 \times 2.1 \times 1.1 \times 0.1 = 4.38 \text{ m}^3$$

$$1.7 \times 1.9 \times 1.3 \times 0.1 = 4.2 \text{ m}^3$$

~~$$\text{Overall: } 12 \times 30 \times 4.15 \times 0.1 = 145.8 \text{ m}^3$$~~

~~$$1 \times 15 \times 4.05 \times 0.1 = 6.07 \text{ m}^3$$~~

Continuation

THE 30/5/25

J. R. 14.12.21

18/12/21
AG

Dok. Reg. - 31.12.2021

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ABSTRACT OF CASE

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Particulars	Details of natural measurement				Contents of area
	No.	L.	B.	D.	
(1) contour of watercourse, shape					
Benchmarks P. 1, P. 2, P. 3					
approximate length - 1					
$b = T_m \cdot B = 1.475 \text{ km}$					
$\therefore N = 1059.429 / \text{km} \rightarrow N = 15232 \text{ m}$					
(2) contour of watercourse P. 1, P. 2, P. 3					
as per					
approximate length - 2					
$b = T_m \cdot B = 1.475 \text{ km}$					
$\therefore N = 1059.429 / \text{km} \rightarrow N = 15226 \text{ m}$					
(3) contour of watercourse					
length roughly - 3					
approximate length - 3					
$b = T_m \cdot B = 0.442 \text{ km}$					
$\therefore N = 5133.78 / \text{km} \rightarrow N = 22681 \text{ m}$					
(4) bridge across typical marsh					
intensity sign board - do					
approximate length - 4 by					
$b = T_m \cdot B = 1 \text{ NO}$					
$\therefore N = 14454.47 \text{ km} \rightarrow N = 14454 \text{ m}$					
(5) contour embankment with soil					
obt from brown bit line 800 m					
approximate length - 6 P - 2					
$b = T_m \cdot B = 470.1 \text{ m} \times 174.341 \text{ m} \rightarrow N = 82249.10$					

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
(8) cant. of embankment with soil					
upt from bottom to land 100 M					
at width 10 m - 70 - 3					
$b = 3 \text{ R.T.m.B} = 1497.04 \text{ m}^3$					
@ 10 $133.56 \text{ m}^3 \rightarrow 153410.00$					
(7) area of excavation for foundation					
trapez. — $\text{a} \text{m}$					
at width 10 m - 8					
$b = 3 \text{ R.T.m.B} = 2725 \text{ m}^3$					
@ 10 $269.32 \text{ m}^3 \rightarrow 7338.00$					
(6) partly sand fill in foundation					
trapez. — $\text{a} \text{m}$					
at width 10 m - 9					
$b = 3 \text{ R.T.m.B} = 1575 \text{ m}^3$					
@ 10 $468.50 \text{ m}^3 \rightarrow 731.00$					
(9) partly s.c.m. sand in open foundation					
open foundation — $\text{a} \text{m}$					
at width 10 m - 10					
$b = 3 \text{ R.T.m.B} = 1625 \text{ m}^3$					
@ 10 $5021.01 \text{ m}^3 \rightarrow 9916.00$					
(10) levelling, lifting and placing					
bottom to top — $\text{a} \text{m}$					
at width 10 m - 10					

Continuation

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Particulars	Details of actual measurement				Contents of area
	No.	L.	B.	D.	
b-6 cl TMB = 1.61 m ²					
(@ M 45925.90 / m ²) → D 73340.00					
(11) excavation for road way 1m x 1m					
by manual means — cl					
of width 1m - 14					
b-6 cl TMB = 18.12 m ²					
(@ M 74416 / m ²) → D 87600.00					
(12) Bare hilly Backland Abutment					
having wall — cl					
of width 1m - 15					
b-6 cl TMB = 14.38 m ²					
(@ M 2769.16 / m ²) → D 39598.00					
(13) Completion of road going I					
materials — cl					
of width 1m - 16					
b-6 cl TMB = 385.20 m ²					
(@ M 2935.05 / m ²) → D 89604.00					
(14) Brick laying stone and					
concrete m.b m ² — cl					
of width 1m - 17					
b-7 cl TMB = 2023.40 m ²					
(@ M 3607.29 / m ²) → D 1115693.00					

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