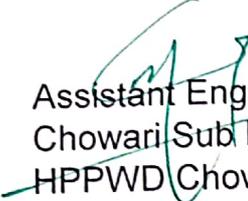
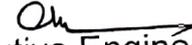


COMPONENT WISE DETAIL OF MUCK TO BE GENERATED IN RESPECT OF  
CONSTRUCTION OF LINK ROAD TO VILLAGE DANGARI BY HPPWD

S.No.	Quantity to be generated (Cum)	To be used Locally (Cum)	To be dumped (Cum)	To be dumped after swell (40%)
1	20861.00 Cum	5846.71 Cum	15014.29 Cum	21020.00 Cum

  
Assistant Engineer  
Chowari Sub Division  
HPPWD Chowari

  
Executive Engineer  
Dalhousie Division  
HPPWD Dalhousie

DETAIL OF MEASUREMENT

Name of Work: C/O Link road to village dangari Km 0/00 to 5/675

(Sub Head: Dumping place of muck/debris to be dumped in between RD 0/770 to 0/813, 0/930 to 0/987, 2/950 to 3/000 & 3/720 to 3/775)

S.No.	RD/KM	Name of dumping places	X- Sectional area (Sqm)	Length (m)	Quantity (Cum)
1	0/770 to 0/813	DS I	35.5	43.00	1526.50
2	0/930 to 0/987	DS II	82.85	57.00	4722.45
3	2/950 to 3/000	DS III	57.75	50.00	2887.50
4	3/720 to 3/775	DS IV	216.06	55.00	11883.55
TOTAL					21020.00

Assistant Engineer  
Chowari Sub Division  
HPPWD Chowari

Executive engineer  
Dalhousie Division  
HPPWD Dalhousie

**COST ESTIMATION OF RECLAMATION OF DUMPING SITES OF CONSTRUCTION OF LINK ROAD TO VILLAGE DANGARI KM 0/00 to 5/675**

S.No.	DESCRIPTION	UNIT	QUANTITY	RATE(RS)	AMOUNT (RS)
<b>A</b>	<b>Engineering Measures</b>				
1	Wire Crates and retaining walls	Cum	432.81	2158.66	<b>934288.00</b>
<b>B</b>	<b>Biological Measures</b>				
1	Cost of fence post	No	35	150	5250.00
2	Carriage of fence Post to work site manually	No	35	8	280.00
3	Fixing of fence post	No	35	4.77	167.00
4	Cost of Barbed wire	Qtl	0.35	5500	1925.00
5	Carriage of barbrd wire by vehicle	Qtl	0.35	LS	3000.00
6	Carriage of barbed wire to work site manually	Qtl	0.35	LS	1500.00
7	Streching and fixing of barbed wire	Rmt	315	3.16	995.00
8	Interlacing of thorny bushes in Barbed wire	Rmt	315	2.74	863.00
9	Layout of pits	Ha	0.54	68.15	37.00
10	Digging of pits(60cm x 60 cm x 60 cm)	No	2410	6.98	16822.00
11	Filling of pits	No	2410	0.142	342.00
12	Cost of Plants	No	2410	7	16870.00
13	Carriage of plants by vehicle	No	2410	1.5	3615.00
14	Carriage of plants to work site manually	No	2410	2	4820.00
15	Planting of entire plants raised in polybags	No	2410	8.73	21039.00
16	Planting of shrubs grasses in inerspaces	LS			5000.00
17	Watering of plants during dry season	LS			1500.00
18	Providing imported	No	2410	5	12050.00
19	Watch and ward	Mandays	150	200	30000.00
<b>TOTAL</b>					<b>126075.00</b>
<b>C</b>	<b>Contingencies</b>	LS			<b>10000.00</b>
<b>D</b>	<b>Maintenance 1st to 7th year</b>				<b>61700.00</b>
<b>GRAND TOTAL (A+B+C+D)</b>					<b>1132063.00</b>
Say					<b>1132100.00</b>

Assistant Engineer  
Chowari Sub Division  
HPPWD Chowari

Executive Engineer  
Dalhousie Division  
HPPWD dalhousie

Maintenance of plantation

FIRST YEAR MAINTENANCE WITH 25% MORTALITY

SR. NO.	DESCRIPTION	UNITS	QUANTILY	RATE	AMOUNT (RS)
1.	Re-digging of pits 60x60x60cm	Nos	603	4.2	2533
2.	Filling of pits 60x60x60cm	Nos	603	1.42	856
3.	Cost of plants	Nos	603	7	4221
4.	Carriage of plants by vehicle	-----	603	1.5	905
5.	Carriage of plants on p. pages over a distance of --- km	Nos	603	2	1206
6.	Planning of entire plants	Nos	603	7.36	4438
7.	Repair of fence	Rmt	315	0.65	205
8.	Repair of fence plants	Nos	35	2.35	82
	<b>Total</b>				<b>14446</b>
	<b>Or say</b>				<b>14500</b>

SECOND YEAR MAINTENANCE WITH 20% MORTALITY

SR. NO.	DESCRIPTION	UNITS	QUANTILY	RATE	AMOUNT (RS)
1.	Re-digging of pits 60x60x60cm	Nos	482	4.2	2024
2.	Filling of pits 60x60x60cm	Nos	482	1.42	684
3.	Cost of plants	Nos	482	7	3374
4.	Carriage of plants by vehicle	-----	482	1.5	723
5.	Carriage of plants on p. pages over a distance of --- km	Nos	482	2	964
6.	Planning of entire plants	Nos	482	7.36	3548
7.	Repair of fence	Rmt	315	0.65	205
8.	Repair of fence plants	Nos	35	2.35	82
	<b>Total</b>				<b>11604</b>
	<b>Or say</b>				<b>11600</b>

**THIRD & FORTH YEAR MAINTENANCE WITH 15% MORTALITY**

SR. NO.	DESCRIPTION	UNITS	QUANTILY	RATE	AMOUNT (RS)
1.	Re-digging of pits 60x60x60cm	Nos	362	4.2	1520
2.	Filling of pits 60x60x60cm	Nos	362	1.42	514
3.	Cost of plants	Nos	362	7	2534
4.	Carriage of plants by vehicle	-----	362	1.5	543
5.	Carriage of plants on p. pages over a distance of --- km	Nos	362	2	724
6.	Planning of entire plants	Nos	362	7.36	2664
7.	Repair of fence	Rmt	315	0.65	205
8.	Repair of fence plants	Nos	35	2.35	82
	<b>Total</b>				<b>8786</b>
	<b>Or say</b>				<b>8800</b>

**FIFTH, SIXTH & SEVENTH YEAR MAINTENANCE WITH 10% MORTALITY**

SR. NO.	DESCRIPTION	UNITS	QUANTILY	RATE	AMOUNT (RS)
1.	Re-digging of pits 60x60x60cm	Nos	241	4.2	1012
2.	Filling of pits 60x60x60cm	Nos	241	1.42	342
3.	Cost of plants	Nos	241	7	1687
4.	Carriage of plants by vehicle	-----	241	1.5	362
5.	Carriage of plants on p. pages over a distance of --- km	Nos	241	2	482
6.	Planning of entire plants	Nos	241	7.36	1774
7.	Repair of fence	Rmt	315	0.65	205
8.	Repair of fence plants	Nos	35	2.35	82
	<b>Total</b>				<b>5946</b>
	<b>Or say</b>				<b>6000</b>

YEAR WISE PHASING OF WORKS		
YEARS	ACTIVITY	AMOUNT
0 Year	Engineering work	934288
1 <sup>st</sup> year	Planting (initial formation) &	136076
2 <sup>nd</sup> year	Maintenance	14500
3 <sup>rd</sup> year	Maintenance	11600
4 <sup>th</sup> year	Maintenance	8800
5 <sup>th</sup> year	Maintenance	8800
6 <sup>th</sup> year	Maintenance	6000
7 <sup>th</sup> year	Maintenance	6000
8 <sup>th</sup> year	Maintenance	6000
	<b>GRAND TOTAL</b>	1132064
	<b>Or Say</b>	1132100

ANNEXURE-R4			
ABSTICULAR OF COST			
SR.NO.	PARTICULAR	AMOUNT (RS)	
A	Engineering measures	934288	
B	Biological Measures	16822	
	Initial formation Cost	109254	
	First year maintenance	14500	
	Second year maintenance	11600	
	Third year maintenance	8800	
	Forth year maintenance	8800	
	Fifth year maintenance	6000	
	Sixth year maintenance	6000	
	Seventh year maintenance	6000	
C	Contingencies	10000	
	<b>GRAND TOTAL (A+B+C)</b>	1132064	
	<b>OR SAY</b>	1132100	

  
**Executive Engineer**  
**Dalhousie Division**  
 U.P.W.D. Dalhousie

STATEMENT SHOWING DETAIL OF THE ROAD TO BE CONSTRUCTED ( LINK ROAD TO VILLAGE DANGARI) Refer Item No 9(I) to (IV)

S.No	RD		Distance in meters			Width or right of way in meters	Area of forest Land	Area of road in			Name of the village and forest nearby	Muck/ Debris to be produced (Cum)	Muck/ Debris to be used locally (Cum)	Muck/ debris to be dumped (Cum)	Remarks
	From	To	In forest land/ Govt Land	In non Forest Land	Total			In forest land/ govt land (Sq.m)	In non forest land (Sq.m)	Total					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	0/000	5/675	5/242	0/433	5/675	5.00 mtrs on straight portion and up to 7.000 mtrs on curves	30978.04 Sqm (3.0978 Hectare) for road construction	30978.04	3115.00	34093.04	Dangardi, Bandera DPF III	20861.00	5846.71	15014.29 Cum (With swell @ 40% = 21020.00 Cum)	Muck will be disposed in four dumping sites identified along the proposed road

Assistant Engineer  
Chowari Sub Division  
HPPWD Chowari

Place Dalhousie  
Date

Executive Engineer  
Dalhousie Division  
HPPWD Dalhousie

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STATEMENT SHOWING THE DUMPING PLACE QUANTITY OF MUCK DEBRIS TO BE DUMPED WITH OTHER DETAIL FOR PROJECT IN  
CHAMBA DISTT HIMACHAL PRADESH

1	2	3	4	5	6	7	8	9	10	11	12	13	14	
S.No.	Name the Component from where Muck/ Debris is to be produced	Total quantity of muck/ debris to be produced (Cum)	Total Quantity of muck/ debris to be dumped on compact bases (Cum)	Factor for increase in volume for dumping	Quantity of muck / debris to be dumped on basis of increase (Cum)	Name of Dumping Place	Slope of Dumping place	Location of Dumping Place	Distance of Dumping place from nearby river with name of river (Kms)	Area of dumping place with length and Breadth	Area of Ft Land out of Land Col	Height of Muck/ Debris dumped Expressed Vol 11 area in Mtrs	Remarks	
1	Road Formation Cutting of hill side	20861.00	15014.29	40%	21020.00	DS-I	25%	DS-I (RD 0/770 to 0/813)	2.00 Kms from Chakki Khhad	DS-I = 811.02 Sqm (L=43 m, Width=18.861 m)	Nil	DS-I=1.88 m		
						DS-II		DS-II (RD 0/930 to 0/987)		DS-II = 1698.90 Sqm (L=57 m, Width=29.805 m)			DS-II=2.78m	
						DS-III		DS-III( RD 2/950 to 3/000)		DS-III = 1375.30 Sqm (L=50 m, Width=27.506 m)			DS-III=2.10m	
						DS-IV		DS- IV ( RD 3/720 to 3/775)		DS-IV = 1537.10 Sqm (L=55 m, Width=27.947 m)			DS-IV=7.73m	

Assistant Engineer  
Chowari Sub Division  
HPPWD Chowari

Place Dalhousie  
Date

Executive Engineer  
Dalhousie Division  
HPPWD Dalhousie

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PERFORMA V

STATEMENT SHOWING THE DETAILS OF PLACES FOR DISPOSAL OF ROAD TO BE CONSTRUCTED IN CHAMBA DISTRICT  
OF HP STATE

S.No	Name of Dumping Place	Location of Dumping Place i.e. Village and Khasra No etc	Slope of Dumping Place	Length, Breadth & area of dumping place (Sqm)	Quantity of muck/ debris to be dumped (Cum)	Height of dumping expected in mtrs	Remarks
1	2	3	4	5	6	7	8
1	DS-I	Dangardi, 252/2	25%	L= 43m, B=18.861m (Area = 811.02 Sqm)	1526.50	1.88	Along Proposed Road
2	DS-II	Dangardi, 273/262/1	25%	L= 57m, B=29.805m (Area = 1698.90 Sqm)	4722.45	2.78	Along Proposed Road
3	DS-III	Dangardi, 215/4	25%	L= 50m, B=27.506m (Area = 1375.30 Sqm)	2887.50	2.1	Along Proposed Road
4	DS-IV	Dangardi, 280/84/4	25%	L= 55m, B=27.947m (Area = 1537.10 Sqm)	11883.55	7.36	Along Proposed Road

Total muck generated from road formation cutting will be 20861.00 Cum. As the road is a new construction muck will be used in filling in depressions, filling in Retaining Walls, wing Walls etc to make road fit for smooth plying of vehicular traffic. So out of 20861.00 Cum 5846.71 Cum of muck will be used in above mentoned construction activities. Rest of muck will be dumped in proposed dumping sites.

Assistant Engineer  
Chowari Sub Division  
HPPWD Chowari

Executive Engineer  
Dalhousie Division  
HPPWD Dalhousie

Place Dalhousie  
Date

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### ABSTRACT OF COST

Name of work :- C/O Link Road to dangardi km. 0/00 to 5/675					
( SH :- Crate For Dumping site at Rd 0/770 to 0/813 , 0/930 to 0/987 , 2/950 to 3/00 & 3/720 to 3/755)					
S. No.	Description of item	Quantity	Rate	Unit	Amount
1	Providing and laying of boulder apron laid in wire crates with 4 mm ( four millimetre ) dia GI wire conforming to IS:280 and IS:4826 in 100 mm x 100 mm ( one hundred millimetre into one hundred millimeter ) mesh (woven diagonally) including 10% extra for laps and joints laid with stone boulders weighing not less than 40 kg ( Fort kilogramme) each as per drawing and technical specifications Clause 1301 and as per directions of including the octroi , royalty, Malkana, toll tax, sales tax, GST or any taxes imposed by the Government.	432.81	2158.66	Per Each	934288
<b>Total:-</b>					<b>934288</b>

  
Assistant Engineer  
Chowari Sub Division  
HPPWD Chowari

  
Executive Engineer  
Dalhousie Division  
HPPWD Dalhousie

## DETAIL OF MEASUREMENT

Name of work :- C/O Link Road to dangardi km. 0/00 to 5/675

( SH :- Crate For Dumping site at Rd 0/770 to 0/813 , 0/930 to 0/987 , 2/950 to 3/00 & 3/720 to 3/755)

S.No.	RD of Crate			Length	Height	Wire crate ( Boulders)			Total
						Row	L	B	
1	0	770	813.00	43.00	1.25	1	2.50	1.25	67.19
2	0	930	987.00	57.00	1.25	2	2.50	1.25	178.13
3	2	950	1000.00	50.00	1.25	1	2.50	1.25	78.13
4	3	720	755.00	35.00	1.25	2	2.50	1.25	109.38
									432.81

  
  
Surinder

N.O. No. 10 Link Road To Damsardol, Km. 0/60 To 5/675

CSH: CRATE WORK FOR DUMPING SITE RD. 0/770 - 0/817

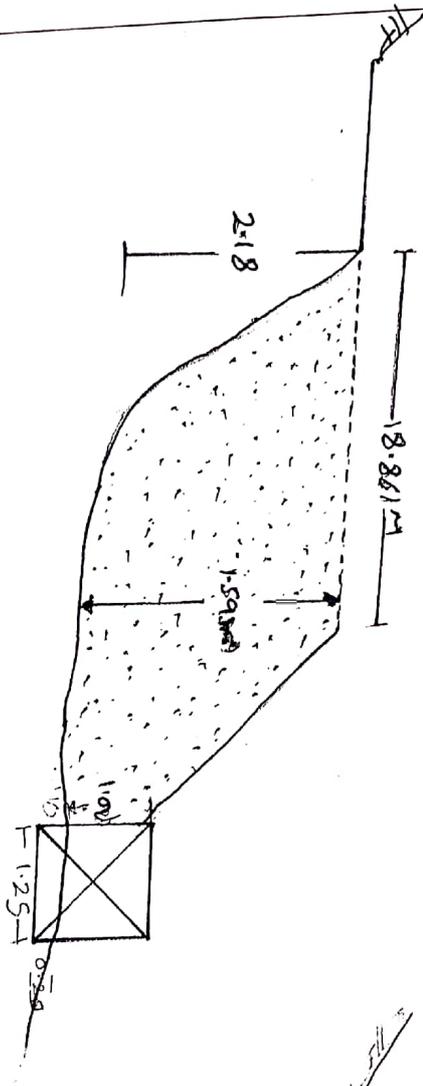
N.T.S.

$$18.861 \times 1.59 = 29.99 \text{ m}^2$$

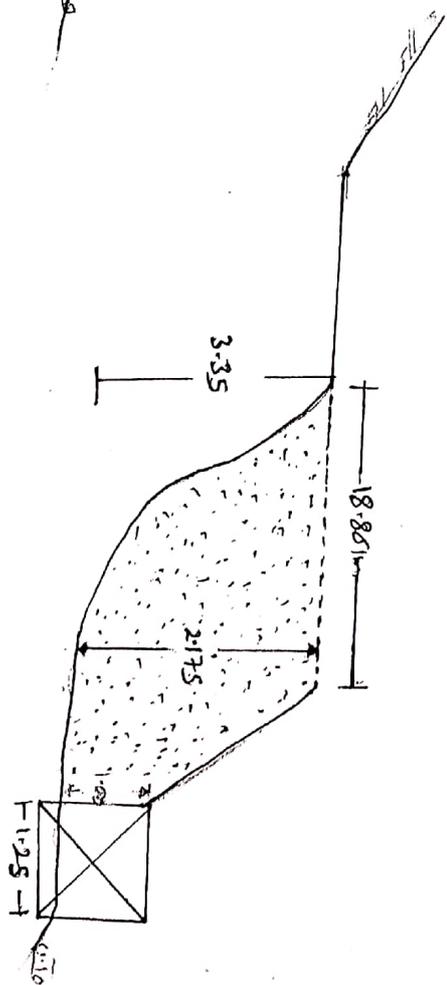
Area:  $\frac{29.99 + 41.02}{2} \times 43.02 = 1526.500 \text{ m}^3$

X Sectional area = 3550 m<sup>2</sup>

$$18.861 \times 2.175 = 41.02$$



X-SEC. AT RD. 0/770



X-SEC. AT RD. 0/817

*Swamy*

*Chowari*

Assistant Engineer  
Chowari Sub-Division  
HPPWD, Chowari

Executive Engineer  
Dalhousie Division  
HPPWD Dalhousie

W: C/O LINK ROAD TO DALHOUSIE VILLAGE RD TO 0/975

C/S: C/O CRATE WORK FOR DUMPING SITE AT RD 0/930 TO 0/987

N.T.S

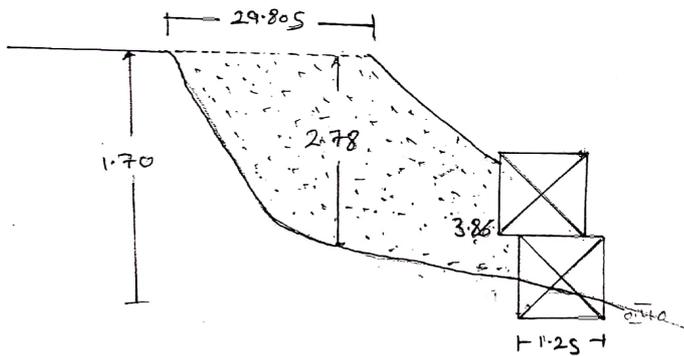
① Area =  $\frac{82.857 + 82.857}{2} = 82.857 \text{ m}^2$

② Qty =  $82.857 \times 57 = 4722.450 \text{ m}^3$

$70.5 \times 2.78 = 82.85 \text{ m}^2$

X-Sectional area =  $82.85 \text{ m}^2$

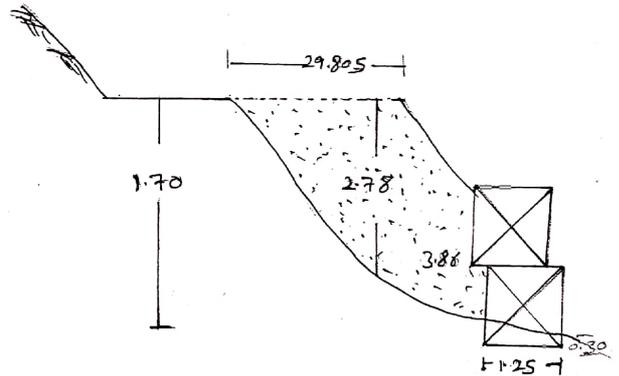
$29.805 \times 2.78 = 82.85 \text{ m}^2$



X-sec. AT RD 0/930

*[Handwritten signature]*  
Sunder

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X-sec. AT RD 0/987

Assistant Engineer,  
Chowari Sub-Division  
HPPWD Chowari

Executive Engineer  
Dalhousie Division  
HPPWD Dalhousie

Row: C10 LINK ROAD TO DANGGARDI KH. 0100 TO 5/1875

C/S: C10 WIRE CRATE FOR DUMPING SITE AT RD. 2/1950 TO 3/1000

N.T.S

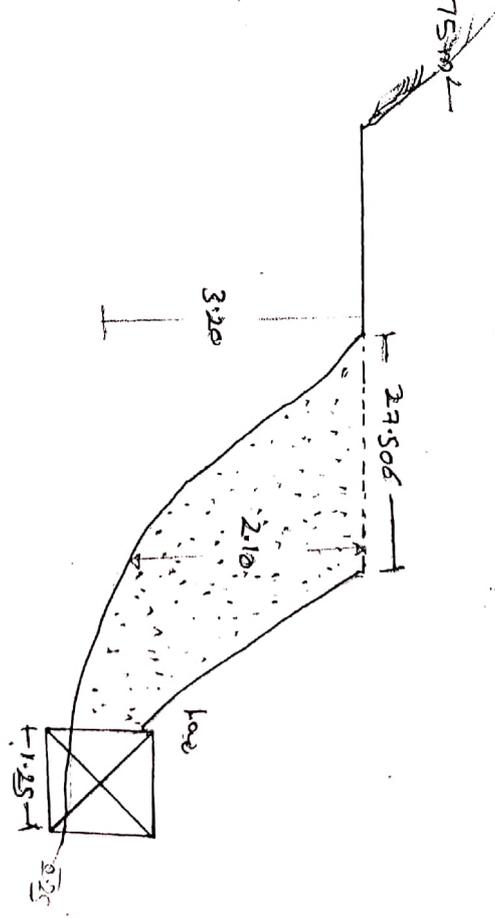
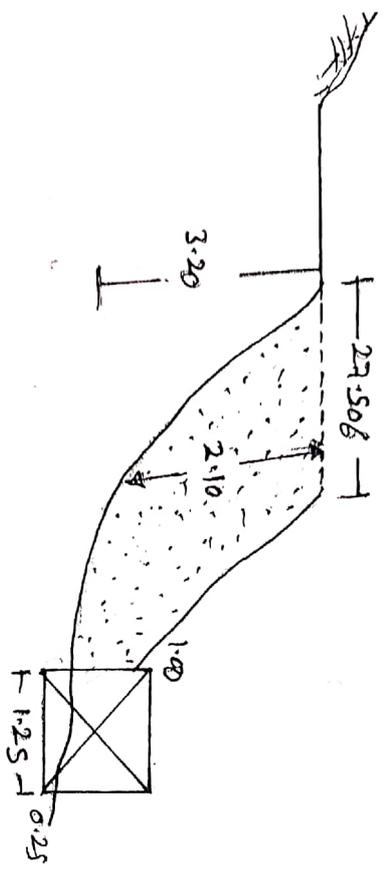
Area  $57.756 + 57.756 = 57.756 \text{ m}^2$

Area  $57.756 \times 50 = 2887.800 \text{ m}^2$

$27.506 \times 2.10 = 57.756 \text{ m}^2$

$27.506 \times 2.10 = 57.756 \text{ m}^2$

X-Sectional area:  $57.756 \text{ m}^2$



X-SEC. AT RD 2/1950

X-SEC. AT RD-3/1000

Surveys

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Assistant Engineer,  
Chowal Sub-Division,  
HPPWD, Chowal

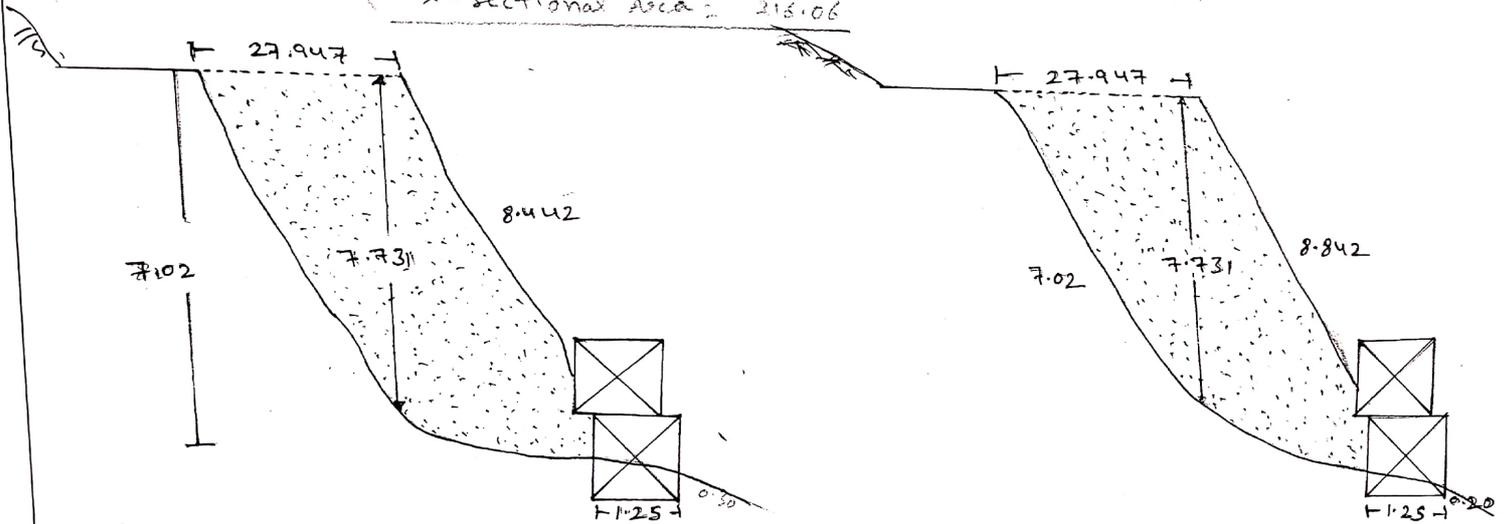
Executive Engineer,  
Dalhousie Division,  
HPPWD Dalhousie

C/O LINK ROAD TO DANGARDI KM. 0/100 TO 5/675.  
 CSH = C/O CRATE WORK FOR DUMPING SITE AT RD. 3/720 TO 3/750

N.T.S.

$$Qty = 216.06 \times 55 = 11883.55 \text{ m}^3$$

x-sectional Area = 216.06



X-SEC. AT RD. - 3/720

*[Signature]*  
 survey

*[Signature]*  
 02

Assistant Engineer,  
 Chowari Sub-Division,  
 HPPWD, Chowari

*[Signature]*  
 Executive Engineer  
 Dalhousie Division  
 HPPWD Dalhousie

X-SEC. AT RD. 3/775

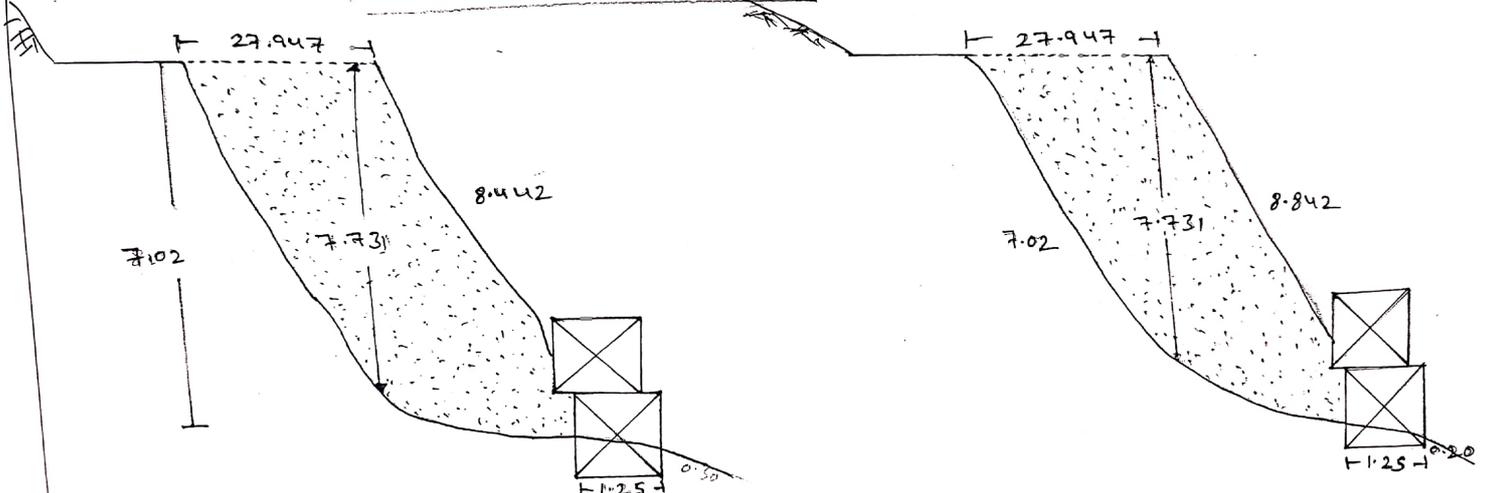
Now: C/O LINK ROAD TO DANGARDI KM. 0100 TO 5/675.

C.S.H. = C/O CRATE WORK FOR DUMPING SITE AT RD. 3/720 TO 3/755

N.T.S.

$$Qty = 216.06 \times 55 = 11883.55 \text{ m}^3$$

x-sectional Area = 216.06



x-sec. At RD. - 3/720

x-sec. At RD. 3/775

*[Signature]*

Assistant Engineer,  
Chowahi Sub-Division,  
HPPWD, Chowahi

*[Signature]*  
Executive Engineer  
Dalhousie Division  
HPPWD Dalhousie