

OFFICE OF THE CHIEF ENGINEER PW(R&B) DEPARTMENT, JAMMU

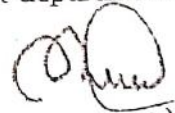
Subject: Construction of Parmaz link road Length = 4.00 Kms (Languishing Project).
And Accord of Administrative Approval thereof:

ORDER NO. : 67 OF 2019
DATED : - 25-01-2019

Administrative Approval is hereby accorded for the Construction of Parmaz link road Length = 4.00 Kms (Languishing Project) at an estimated cost of **Rs.600.00 lacs** (Rupees Six Hundred lacs only) as per the details and cost abstract respectively to this order as per Annexure- I.

The Administrative Approval is however, subject to the following conditions:-

1. The works has been taken up for execution only after specific authorization of funds by the competent Authority.
2. The works is being executed after observing all Codal formalities / procedures.
3. It must be ensured that there shall be no multi-source of funding or overlapping of schemes under different programmes.
4. The scheme is being executed only after encumbrance's free land is available.
5. That the works are executed strictly as per provisions and specifications of the sanctioned estimates.
6. Schemes / project shall be completed within stipulated time.
7. There is no time over-run or cost over-run involved in the project.
8. Accord of Administrative Approval shall not be treated as an authority to spend money not provided for in the budget.
9. Quality control is mentioned in accordance with standards set under MORTH/IRC code.
10. The detailed estimate of the work shall be technically sanctioned by the competent authority and proposals strictly devised and designed as per the relevant code of MORD /MORTH and IRC Manual / specifications as per the relevant code.
11. Any such item(s) not covered under relevant schedule of rates is paid in accordance with the set codal procedure.
12. The structural design of the cross drainage has been got authenticated by the competent authority well before the execution of work. The design shall also account for the latest HFL.
13. The NOC from the concerned regulatory Authorities such as forest department etc. has been obtained before the commencement of the work.


(Er. Sudheer Shah)
CHIEF ENGINEER,
PW (R&B) DEPARTMENT,
JAMMU

No.: **CEJ/DB/18538-41**
Dated: **28-01-2019**

Copy for information to the:-

1. Commissioner / Secretary to Govt. Public Works (R&B) Department Civil Sectt. Jammu.
2. Accountant General J&K, Jammu.
3. Superintending Engineer PWD (R&B) Circle Doda for information
4. Executive Engineer PWD (R&B) Spl. Sub Division Doda for information.

Government of Jammu & Kashmir
OFFICE OF THE SUPERINTENDING ENGINEER
PWD (R&B) CIRCLE DODA
(Ph./Fax No.01996233544, E.Mail:supengerroadsdoda@Gmail.Com)

The Chief Engineer,
PW(R&B) Department,
Jammu.

NO.SED/R&B/DB/ 8394-98

Dated: 23-10-2018

Sub: Submission of Application for Accord of Administrative Approval.

Ref: Executive Engineer PWD (R&B) Special Sub-Division Doda's communication No. 4651-54 Dated:- 16.10.2018.

Sir,

Kindly find enclosed herewith the Application for Accord of Administrative Approval for the below mentioned work alongwith General Abstract of Cost, Typical Estimates, Drawing and Technical reports explaining all physical / financial aspects and salient features of the Project in requisite number of copies for favour of further necessary action at your end please.

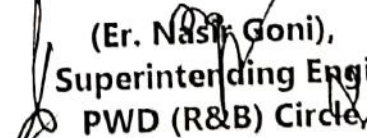
S. No.	Name of the scheme	AA cost (Rs.in lacs)
1.	Construction of Parmaz link road (Under State Sector) L= 4.00 Kms.	600.00

The AAA has been submitted by the Executive Engineer concerned as desired by the Hon'ble MLA Doda.

The history / necessity of the scheme stands fully discussed in the technical report forming part of the AAA. It is, therefore, requested that the AAA may kindly be got accorded at the earliest.

Yours faithfully,

Encl: _____ Lvs.


(Er. Nasir Goni),
Superintending Engineer,
PWD (R&B) Circle,
Doda.

Copy to the:-

1. District Development Commissioner Doda for favour of information.
2. Executive Engineer PWD (R&B) Special Sub-Division Doda for information.
3. Statistical Officer (Planning) Circle office Doda for information.
4. HD Circle Office Doda along with copy of AAA for record and reference.

**OFFICE OF THE EXECUTIVE ENGINEER PWD (R&B)
SPL SUB DIVISION DODA**

✓ The Distt. Superintending Engineer,
PWD (R&B) Circle,
Doda.

No. 4651-54
Dt. 16-10-2018

Sub: Submission of Application for accord of Administrative Approval.

Ref:- D.O Letter No. MLA Doda/Nil dated 02.09.2018.

Sir,

Kindly find enclosed herewith the application for accord of administrative approval for the below mentioned work along with General Abstract of cost, Typical Estimates, Drawing and Technical report explaining all physical/ financial aspects and salient features of the project in requisite number of copies for favour of further necessary action at your end please.

S.No	Name of the Scheme.	AA Cost (Rs in laces)
1.	Construction of Parmaz link road. Under (STATE SECTOR)	600.00 lacs

The Detailed Project Report has been framed as per authority of Hon'ble MLA Doda and the same is submitted for favour of further necessary action at your end please.

Encl. (4 Sets of DPR)

Yours faithfully,


Executive Engineer,
PWD (R&B) Spl Sub Division,
Doda

Copy to the:-

- 01/- Chief Engineer PW (R&B) Department Jammu for favour of information please.
- 02/- Asstt. Executive Engineer PWD (R&B) East Sub Division Doda for information.
- 03/- Head Draftsman Divisional office Doda for record and reference.


Asstt. Executive Engineer


Head Draftsman

Government of Jammu & Kashmir
OFFICE OF THE SUPERINTENDING ENGINEER
PWD (R&B) CIRCLE DODA
(Ph./Fax No.01996233544, E.Mail:supengerroadsdoda@Gmail.Com)

The Chief Engineer,
PW(R&B) Department,
Jammu.

NO.SED/R&B/DB/ 8394-98

Dated: 23-10-2018

Sub: Submission of Application for Accord of Administrative Approval.

Ref: Executive Engineer PWD (R&B) Special Sub-Division Doda's communication No. 4651-54 Dated:- 16.10.2018.

Sir,

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S. No.	Name of the scheme	AA cost (Rs.in lacs)
1.	Construction of Parmaz link road (Under State Sector) L= 4.00 Kms.	600.00

The AAA has been submitted by the Executive Engineer concerned as desired by the Hon'ble MLA Doda.

The history / necessity of the scheme stands fully discussed in the technical report forming part of the AAA. It is, therefore, requested that the AAA may kindly be got accorded at the earliest.

Yours faithfully,

Encl: _____ Lvs.

(Er. Nasir Goni),
Superintending Engineer,
PWD (R&B) Circle,
Doda.

Copy to the:-

1. District Development Commissioner Doda for favour of information.
2. Executive Engineer PWD (R&B) Special Sub-Division Doda for information.
3. Statistical Officer (Planning) Circle office Doda for information.
4. HD Circle Office Doda along with copy of AAA for record and reference.

Handwritten notes in red ink:
Jammu's order no. 1012/2018
Dt: 25.10.2018
By: G.O. - W/Asst
1201/2018
Dt: 28.10.2018
CFI DB/1850/18



GOVERNMENT OF JAMMU AND KASHMIR
OFFICE OF THE DISTRICT DEVELOPMENT COMMISSIONER DODA.

Ph./Fax No: 01996-233547

The Superintending Engineer,
R&B Circle Doda.

No: DDC/R&B/D/1819/ 6530-32 dated: 07-09-2018
Sub: Providing of road connectivity to Permaz.

Sir,

Please find enclosed herewith photo copy of D.O. Letter No: MLA/Doda/
dated: 02.09.2018 received from Shri Shakti Raj Parihar, Hon'ble MLA Doda
regarding the subject cited above.

In this connection, you are directed to get the remaining part measuring 1.60
Kms upto village Permaz constructed from the existing Permaz link road at the
earliest, so that the demand of general public is redressed.

Matter Most Urgent.

Encl: (1)


(Simrandeep Singh).IAS
District Dev. Commissioner,
Doda.

- Doda*
copy to the
Shri Shakti Raj Parihar, Hon'ble MLA Doda C/O Tehsilat Doda for information
please.
2. Executive Engineer, R&B Special Sub-Division Doda for information and
necessary action.

8/9/2018

(E)
Prepaid DPR
at Doda be
monitored with be
to Doda.

8/9/18
IE concerned
for n/a
if any
face.



cf/o
P. write to
SE, P&B

MEMBER
J&K Legislative Assembly
Srinagar/Jammu

Shri Raj Parihar

As. Simrandeep Singh ji

Min. O. No. MCA/1000A/2018

Dated 02/09/2018

It is to intimate your goodself
that construction of Pormaz Link
Road From Sainik board side
is already sanctioned in state
and Distt. Plan for a length of
4.6 kms.

You are requested to
direct the (R&B) Distt. Doda to
get remaining part of a length of
1.6 kms upto village Pormaz
to provide road connectivity with
existing road Pormaz Link Road at
an earliest please so that
public issue is resolved.

With warm regards

Sincerely yours

(SHARAT PARHAR)
MLA DODA

District Dev. Commissioner
Doda.

PROJECT REPORT

Name of Project: Construction of parmaz link road
Authority: D.O Letter No :MLA/Doda/ dated 02.09.2018

History and Necessity:-

The under reference road shall take off from km 5th of ghat via nagri road, which is about 500 mtr from the new bus stand doda town and is about 6.5 km from NHIB at pull Doda. The proposed length of the said road is lying in the lower contours of doda town on the eastern side, which shall cater number of newly mushroomed mohallas/hamlets such as asrarabad, nai basti, parmaz etc. which have come up due to migration of people from adjoining villages in a span of 10-15 years consequent due to turmoil in the recent past. Since a population of more than 8000 souls reside along the said road, but have no facility of road connectivity. The life of the people residing in the lower contours of this side of doda town has become misrabe, which gets enhanced at times of shifting of ailing persons to distt. Hospital at doda and carrying of ration and godowns by head load or by poneys. The school and college students have to scale up and down every day the steep gradient of hillock of doda town consuming their energy and wasting their precious time immensely. As such there is an acute need of construction of this road which may address the need of general public at large and the public of asrarabad to parmaz particularly, hence necessitate for construction of the said road.

ALIGNMENT:

The proposed Road shall take off from km 5th of ghat via nagri road. The alignment has been fixed so as to connect maximum no. of villages and the local people have been fully involved in the fixation of alignment. The alignment is passing through safe zones with minimum of no. of C.D works. The right of way equal to 10mtr is available. The road has been proposed upto B.T. status.

SPECIFICATIONS:-

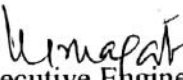
- (a) Earth work : The formation width of 6mtr shall be achieved by way of earth work and walling.
- (b) Pvement : (i) A total of 250mm thick WBM Grade- I, G-II & G-III in one layers shall be laid for full 8km length for carriageway of 3mtr.
(ii) 25mm thick open graded premix carpet with paver finished shall be laid for full 8km length for carriageway of 3 mtr.
- (c) X-drainage : (i) 12 No of 900mm dia H.P culverts, and 02 NO. 1.50 mtr. Span RCC Culverts are proposed to drain off the road water to downhill side.
- (d) Walling : To stabilize the road formation semipucca Retaining walls and Breast walls of length 200 mtr. for each have been proposed

All these works shall be executed as per IRC specifications.

Estimated Cost & Time of completion:-

The Total estimated cost of the Project is 600.00 lacs(as per detailed abstract of cost enclosed and the project is proposed to get completed with in 02 years , subject to the availability of funds.


Asstt. Executive Engineer,
PWD(R&B) East Sub- Div.
Doda


Executive Engineer,
PWD(R&B) Special Sub- Div.
Doda



GENERAL ABSTRACT OF COST

Name of Work: Construction of parmaz link road.

P = 1.60 km

2.70 RT

Length:- 4.0 kms

Formation width:- 6.0 mtr.

Carriage Way width:- 3.0 mtr

Pavement thickness:- 250mm

S.No	Description of Items	Unit	Quantity	Rate in lacs	Amount in lacs	Remarks
01	Earth Work a) All kinds of soils b) Ordinary Rock c) Hard Rock required blasting	As per detailed estimates enclosed			153.12	
02	Cross Drainage works a) 900mm dia H/PCulvert b) 1.50 mtr span RCC Culvert c) Protection Works a) Retaining Wall 6.0 Mts Ht. b) Retaining Wall 4.0 Mts Ht c) Breast Wall 2.0 Mtrs Ht	No. No. Rmt. Rmt. Rmt.	12 No. 02No. 200 500 500	3.90 11.54 43000 17000 6770	46.8 23.08 86.00 85.00 33.85	
03	Pavement a) WBM GII 75mm thick (2 layers) b) WBM GII 75 mm thick c) Bitumin-Premix Carpet 25mm thick	Sq.m Sq.m Sq.m	26400 13200 13200	129 141 400	34.05 18.61 52.80	
01	a) Constt. Of Pucca Drain in built up areas b) Constt. Of Pucca Parapets	Rmt Each	200 200	3537 1543	7.0 3.08	
05	Miscellaneous a) Land Compensation b) House Compensation c) Forest Compensation	--			40.00	

Total = Rs. 583.39 lacs
Add 3 % W.C and Contingencies = Rs. 17.39 lacs

Total = Rs. 600.89 lacs

Say Rs. 600.00 lacs

Asstt. Executive Engineer
PWD (R & B) East Sub Div.
Doda

Executive Engineer
PWD (R & B) Special Sub Division
DODA

Superintending Engineer
PWD (R&B) Circle Doda

DETAILED ESTIMATE FOR

Construction of parmaz link road .(up to B.T Status)

Item No.	Particulars	Unit	Qty.	Rate	Amount in Rupees
1.	Felling of trees of girth (measured at a ht. of 1.0 mtr above ground level incl. cutting of trenches and branches, removing of roots and stocking of serviceable material and disposal of unserviceable material.				
	i. Girth (30 cm to 60 cm)	No.	10	179.30	0.017
	ii. Girth (60 cm to 120 cm)	No.	15	794.15	0.11
	iii. Girth (120 cm to 240 cm)	No.	10	3673.70	0.36
	iv. Girth (above 240 cm)	No.	--	--	--
2.	Earth work in mechanical means (Hydraulic excavator) over areas (exceeding 30cm in depth, 1.50 mtr in width as well as 10 sq.m on plan) including disposal of excavated earth lead upto 50 mtr and lift upto 1.50 mtr disposed earth to be leveled and neatly dressed.				
	i. All kinds of soils.	Cum	30937.25	148.25	45.86
	ii. Ordinary Rock	Cum	18562.35	263.65	48.93
	iii. Hard Rock requiring blasting	Cum	12374.90	467.55	57.85
				Total	153.12

Say Rs.153.12 lacs

Asstt. Executive Engineer
PWD (R & B) East Sub Div.
Doda

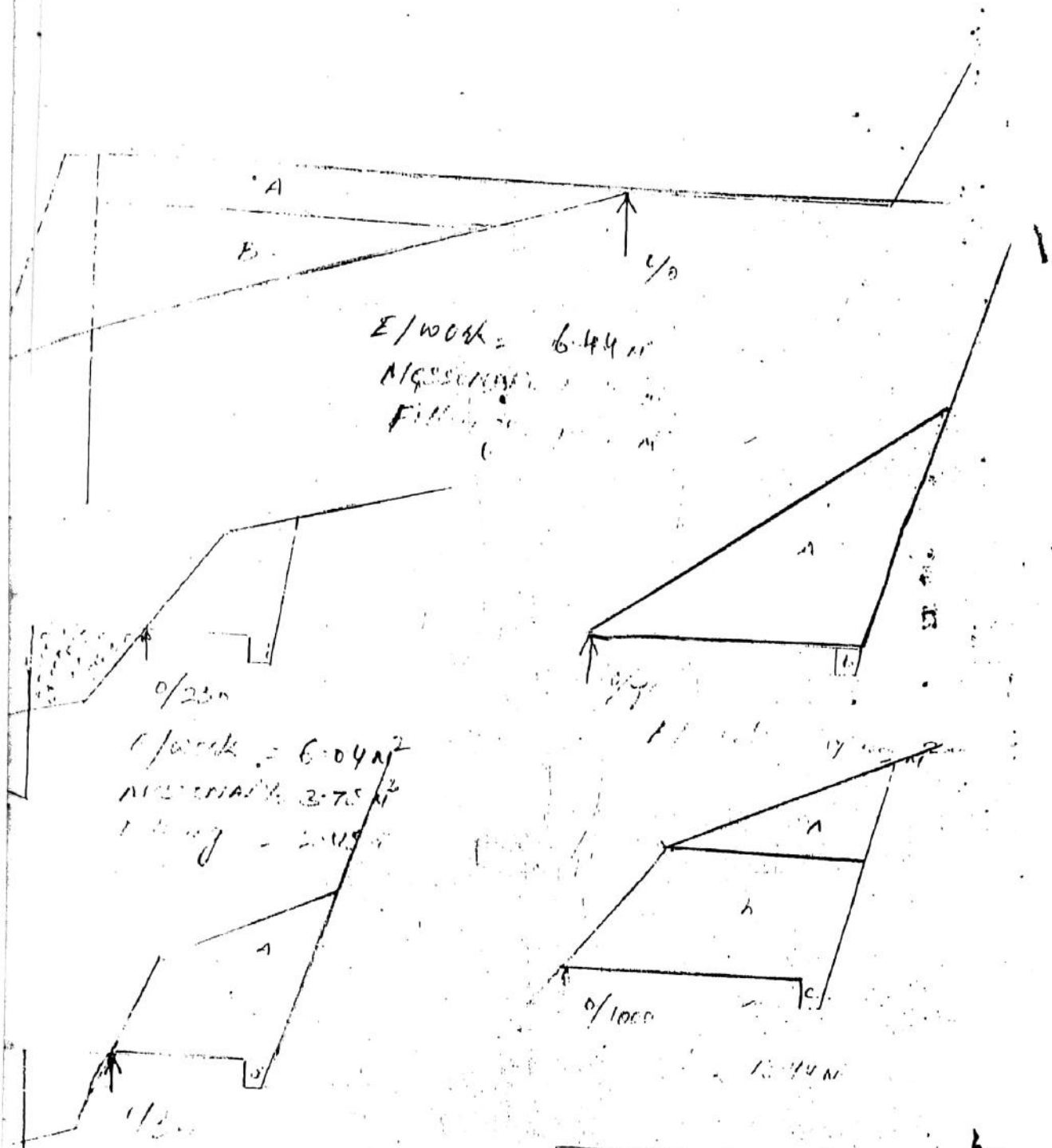
Executive Engineer
PWD (R & B) Special Sub Division
DODA

(Earth work)						Classification		
RD	Area	T.A	M.A	Length	Qty. Cum	All kinds of soil	Soft Rock	Hard Rock
0	10.62	24.90	12.45	-	3112.50	50%	30%	20%
250	15.24	29.46	14.73	250	3682.50			
500	23.11	38.35	19.17	250	4792.50			
750	11.10	34.21	17.10	250	4275.00			
1000	15.82	26.92	13.46	250	3365.00			
				Total	19227.50			

Add for passing zones = $3 \times 25 \times 15.80 = 1185.00$ cum
 G. Total = 20412.50 cum

K. S. S.
 Asstt. Executive Engineer,
 PWD(R&B) West Sub-Divn.
 Doda

U. M. S.
 Executive Engineer,
 PWD(R&B) Spl. Sub-Division,
 Doda



X-SECTION OF PARMAR
LINK ROAD KM 4th RD (10-1000)

[Signature]

Executive Engineer
PWD (R&B) Special Sub Division
DODA

Construction Of parmaz link road Km 3rd RD (0-1000)

(Earth work					Classification			
RD	Area	T.A	M.A	Length	Qty. Cum	All kinds of soil	Soft Rock	Hard Rock
1/0	10.62	24.90	12.45	-	3112.50	50%	30%	20%
1/250	4.72	15.34	7.67	250	1917.50			
1/500	13.42	18.14	9.07	250	2267.50			
1/750	8.72	22.14	11.07	250	2767.50			
1/1000	14.22	22.94	11.47	250	2868.50			
				Total	12932.50			

Add for passing zones = $3 \times 25 \times 15.80 = 1185.00$ cum
G. Total = 14117.50 cum

[Signature]
Asst. Executive Engineer,
PWD(R&B) West Sub-Divn.
Doda

[Signature]
Executive Engineer,
PWD(R&B) Spl. Sub-Division,
Doda

Earth work					Classification			
RD	Area	T.A	M.A	Length	Qty. Cum	All kinds of soil	Soft Rock	Hard Rock
2/0	13.94	23.26	11.63	-	2907.50	50%	30%	20%
2/250	12.74	26.68	13.34	250	3335.00			
2/500	12.07	24.81	12.40	250	3100.00			
2/750	14.28	26.35	13.17	250	3292.50			
2/1000	10.62	24.90	12.45	250	3112.50			
				Total	15747.50			

Add for passing zones = $3 \times 25 \times 15.80 = 1185.00$ cum
 G. Total = 16932.50 cum


 Asst. Executive Engineer,
 PWD(R&B) West Sub-Div'n.
 Doda


 Executive Engineer,
 PWD(R&B) Spl. Sub-Division,
 Doda

Construction Of parmaz link road Km Ist RD (0-1000)

(Earth work)

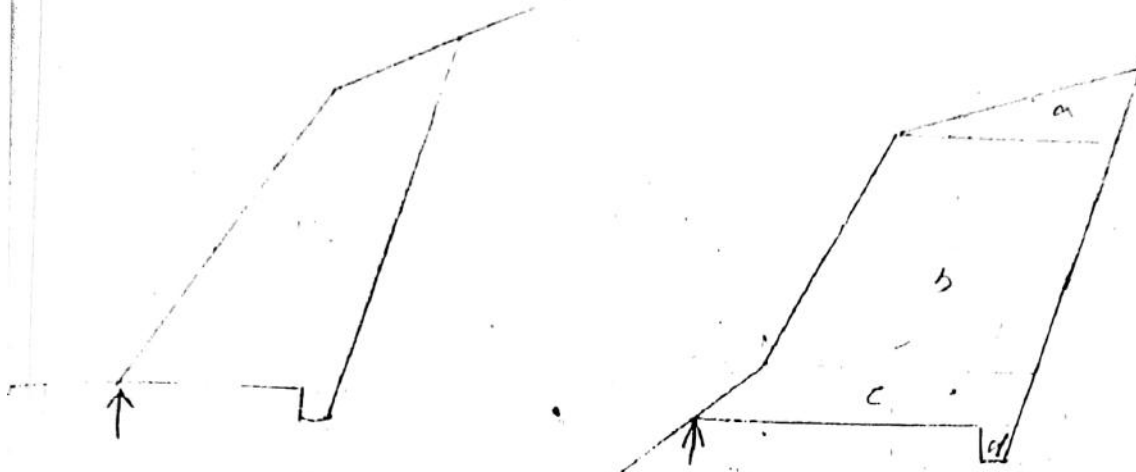
RD	Area	T.A	M.A	Length	Qty. Cum	Classification		
						All kinds of soil	Soft Rock	Hard Rock
3/0	6.44	-	-	-	-	50%	30%	20%
3/250	6.04	12.48	8.24	250	1560.00			
3/500	11.36	17.40	8.70	250	2175.00			
3/750	9.32	20.68	10.34	250	2585.00			
3/1000	13.94	23.26	11.63	250	2907.50			
				Total	9227.50			

Add for passing zones = $3 \times 25 \times 15.80 = 1185.00$ cum

G Total = 10412.50 cum

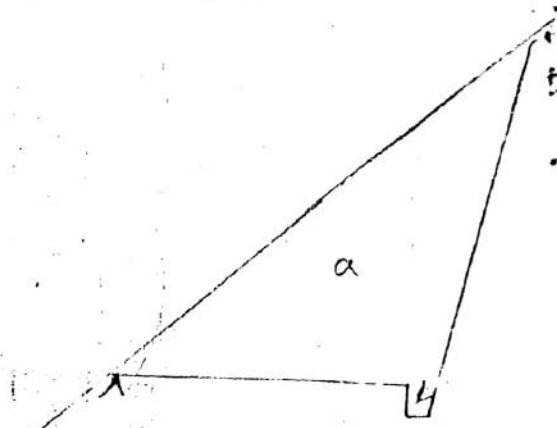
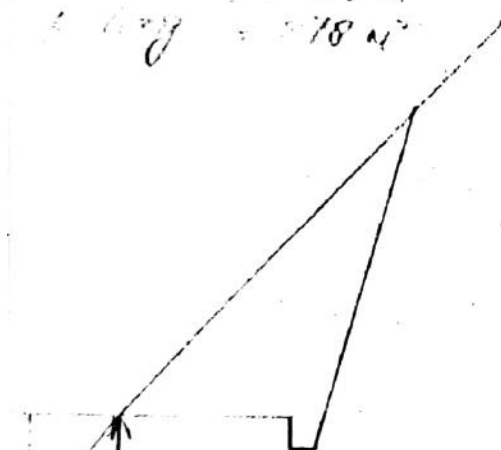
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Asstt. Executive Engineer,
PWD(R&B) West S. S. Div. n.
Doda

Handwritten Signature
Executive Engineer,
PWD(R&B) Spl. Sub-Div. n.
Doda



3/250

E/WORKED 15.24 m²
 RESERVATION 1.57 m²
 FILLING 1.78 m²



E/WORKED 11.10 m²
 RESERVATION 6.88 m²
 FILLING 1.40 m²

X-SECTION OF
 PARMAZ LINK ROAD
 KM 184 RD (CO-100P)

Asstt. Engr
 PWD (R&B) DODA

Executive Engineer
 PWD (R&B) Special Sub Division
 DODA

AREA AI RD (0)

E/W:-

$$a = \frac{1}{2} \times 2.8 \times 1.50 = 2.10 \text{ m}^2$$

$$b = \frac{2.8 + 5.20}{2} \times 6.50 = 26.10$$

$$\text{Drain} = 0.60 \times 0.60 = 0.36$$

$$T = \frac{26.10}{1.28} = 16$$

AI RD

E/W:-

$$a = \frac{1}{2} \times 3.40$$

$$b = \frac{3.40 + 5.20}{2}$$

$$c = 5.0$$

At RD (250)

E/W:-

$$a = \frac{1}{2} \times 1.8 \times 1.00 = 0.90$$

$$b = \frac{1.8 + 1.70}{2} \times 1.00 = 1.75 \text{ m}$$

$$c = \frac{1.70 + 2.50}{2} \times 2.00 = 4.20$$

$$d = \frac{4.50 + 5.20}{2} \times 3.00 = 14.55$$

$$\text{Drain} = 0.36$$

$$T = \frac{21.76}{1.28} = 16$$

At RD (1000)

E/W:-

$$a = \frac{1}{2} \times 4.7 \times 1$$

$$b = \frac{4.70 + 5.20}{2}$$

$$c = 5.0$$

AREA AI RD (500)

$$E/W:- a = \frac{1}{2} \times 3.8 \times 3.0 = 5.70 \text{ m}^2$$

$$b = \frac{3.8 + 4.20}{2} \times 1.00 = 4.00$$

$$c = \frac{4.20 + 4.40}{2} \times 4.00 = 17.20$$

$$R/W = \frac{0.5 + 0.9}{2} \times 1.20 = 0.84$$

$$\text{Drain} = 0.36$$

$$T = \frac{26.10}{1.28} = 16$$

Drains

$$0.60 + 2.00 \times 2.50 = 2.25$$

$$\text{Filling} = \frac{1}{2} \times 1.40 \times 1.9 = 1.33$$

$$1.10 \times 1.40 = 1.54$$

TYPICAL X-SEC OF
CONSTT. OF ROAD
BY WAY OF E/W &
WALLING ON PARMA
LINK ROAD.

Executive Engineer

PWD (R&B) Special Sub Division

DODA

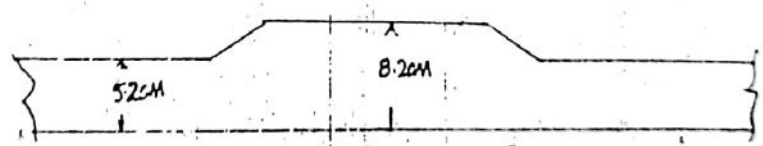
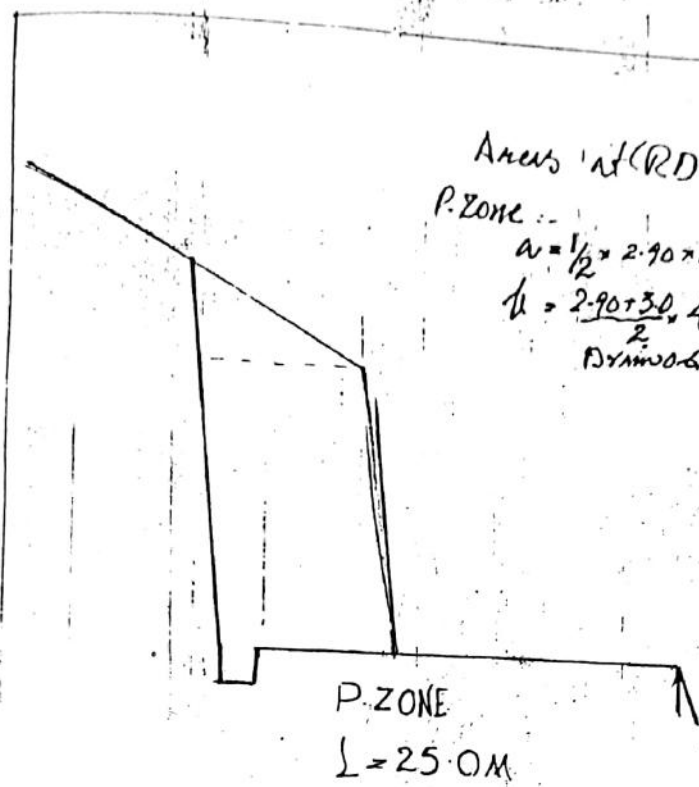
STONE FILL

500

2.50

1.20

ASST



SITE PLAN

TYPICAL CROSS-SECTION
FOR CONST. OF PASSING
ZONE ON

ROAD

SCALE 1:100

Handwritten signature

Handwritten signature

Handwritten signature
Executive Engineer
PWD (R&E) Special Sub Division
DODA

Handwritten signature
Executive Engineer,
PWD (R&E) Special Sub Division
DODA

Typical estimate for constt. of 900 mm dia Hume pipe culvert on various
Roads of PWD (R&B) Spl Sub Division Doda

S.No	Name of the particulars	Amount
01	Earth work in excavation in trenches for foundations disposal lead 25 m and lift upto 1.5 mtr. in 70% all kinds of soil and 30% ordinary rock. Back cutting $\frac{1}{2} \times 2.40 \times 2.40 \times 7.0 = 20.16 \text{ Cum}$ D/wall $\frac{1}{2} \times 4.70 \times 1.80 \times 2.0 = 08.46 \text{ Cum}$ $1 \times 4.80 \times 0.70 = 03.36 \text{ Cum}$ Catch pit $2.0 \times 2.30 \times 2.00 = 09.20 \text{ Cum}$ App. Walls $2 (0.60 + 1.30) \times 2.25 \times 4.20 = 17.95 \text{ Cum}$ 02 Total 59.00 Cum @ Rs. 345.28/Cum	620372.00
02	Providing and laying in position cement concrete 1:5:10 with stone aggregate 40mm nominal size) Nallah. D/wall $4.00 \times 2.0 \times 0.10 = 0.80 \text{ Cum}$ Catch pit $2.0 \times 2.30 \times 0.10 = 0.46 \text{ Cum}$ Total 1.26 Cum @ Rs. 2698.90/Cum	3405.00
03	Providing and laying in position cement concrete 1:3:6 with 20% plums (Crusher bajree) D/ Walls $2 (0.60 + 2.50) \times 5.70 \times 2.0 = 17.67 \text{ Cum}$ 02 Catch pit $2.0 \times 2.30 \times 0.50 \times 1.80 = 4.14 \text{ Cum}$ $2.0 \times 1.50 \times 0.50 \times 1.50 = 2.25 \text{ Cum}$ Ppts. $5 \{0.50 \times 0.30 + (0.50 + 0.30) \times 0.30\} \times 1.0 = 1.35 \text{ Cum}$ 02 App. Walls B.Band $2 \times 4.20 \times 2.20 (\text{avg}) \times 0.30 = 5.54 \text{ Cum}$ C.Band $2 \times 4.20 \times 1.40 (\text{avg}) \times 0.20 = 2.35 \text{ Cum}$ T.Band $2 \times 4.20 \times 0.60 \times 0.15 = 0.76 \text{ Cum}$ Vert. pillars $2 (1.40 + 0.65) \times 2.25 \times 0.20 = 0.92 \text{ Cum}$ 02 Total = 36.49 Cum D/d pipe area $785 \text{ M}^2 \times (1.50 + 1.20) = @ 1.06 \text{ Cum}$ 02 $785 \text{ M}^2 \times 0.50 = @ 1.39 \text{ Cum}$ Net = 35.00 Cum @ Rs. 3037.69/Cum	106319.00
04	Form work including centering shuttering propping & strutting etc. and removal of the same. D/ Walls Face $1 \times 2.0 \times 5.70 \text{ M} = 11.40 \text{ Sqm}$ Back $1 \times 2.0 \times 4.00 = 8.00 \text{ Sqm}$ Side $1 \times 2.0 (0.60 + 2.50) \times 5.70 = 17.67 \text{ Sqm}$ 02 Total = 37.07 Sqm Catch pit $2.0 (1.50 + 1.80) \times 1.50 = 9.90 \text{ Sqm}$ Approaches B.Band $2 \times 1 \times 4.20 \times 0.30 = 2.52 \text{ Sqm}$ C.Band $2 \times 2 \times 4.20 \times 0.20 = 3.36 \text{ Sqm}$ T.Band $2 \times 2 \times 4.20 \times 0.15 = 2.52 \text{ Sqm}$ Vert. pillars $2 \times 2 (2.25 + 2.10) \times 0.20 = 3.48 \text{ Sqm}$ Side $2 \times 2 \times (2.15 + 1.45) \times 2.10 = 15.12 \text{ Sqm}$	

	$\frac{2 \times 2.0 (1.40 + 0.60) \times 2.25}{02} = 4.50 \text{ Sqm}$ $\frac{\text{Ppts. } 5 \times 2 \times 1 \times 0.60}{02} = 6.00 \text{ Sqm}$ $\frac{\text{Sides } 5 \times 2 \times 0.50 \times 0.30}{02} = 1.50 \text{ Sqm}$ $\frac{2 \times 2.0 (0.50 + 0.30) \times 0.30}{02} = 1.20 \text{ Sqm}$ D/d pipe area $3 \times 0.785 \text{ M}^2$ $T = 87.17 \text{ Sqm}$ @ 2.35 Sqm Net = 84.80 Sqm @ Rs. 342.80/ Sqm	29069.00
05	Dry random rubble masonry using Nallah stone in foundation and plinth. $\frac{\text{App. Walls } 2 (2.15 + 1.45) \times 2.10 \times 4.0}{02} = 30.24 \text{ Cum}$ $\frac{2 (1.40 + 0.60) \times 2.25 \times 4.0}{02} = 18.00 \text{ Cum}$ $T = 48.20 \text{ Cum}$ @ 1304.45/ Cum	62874.00
	Hand packed stone filling in wire crate including carriage of stone $1 \times 6.0 \times 1.20 \times 1.20 = 8.64 \text{ Cum}$ @ Rs. 421.50/ Cum	3642.00
	Filling available excavated earth with 50% stone behind walling 50% earth. $\frac{\text{D/ Walls } \frac{1}{2} \times 1.40 \times 3.30}{02} = 2.31 \text{ Sqm}$ $\frac{(3.50 + 3.90) \times (0.50 + 0.80)}{02} = 2.40 \text{ Sqm}$ $T = 4.71 \text{ Sqm} \times 2.0 = 9.63 \text{ Cum}$ $\frac{\text{App. Walls } 2 (0.40 + 0.90) \times 3.50 \times 6.0}{02} = 27.30 \text{ Cum}$ $T = 36.73 \text{ Cum}$ @ Rs. 230.52/ Sqm	8467.00
08	Labour for laying of NP3 pipes (900 mm) dia with Collars jointed with stiff mixture of 1:2 complete. (i) Masson 1 for one day @ Rs. 500/day (ii) Labour Mazdoor 12 for one day @ Rs. 300/day	500.00 3600.00
	Providing and laying 50 mm thick cement concrete flooring with 1:2:4 mix C/pit. $1 \times 1.80 \times 1.50 = 2.70 \text{ Sqm}$ @ 275.45/ Sqm	744.00
10	Carriage of material:- (i) Stones for an avg. distance of 5.0 km by MT Qty. vide item No. 03 = 35.0 Cum @ 20% = 7.00 Cum Qty. vide item No. 05 = 48.00 Cum Qty. vide item No. 06 = 9.00 Cum Total = 64 Cum @ Rs. 137.81/ Cum (ii) Sand for an avg. distance of 30 km by MT Qty. vide item No. 02 = 1.26 Cum @ 47% = 0.56 Cum Qty. vide item No. 03 = 35.0 Cum @ 37% = 12.95 Cum Qty. vide item No. 09 = 2.70 Cum @ 0.022 Sqm = 0.06 Cum $T = 26.60 \text{ Cum}$ @ Rs. 302.18/ Cum (iii) Stone agg. crusher for an avg. dist. 50 km by MT Qty. vide item No. 03 = 35.0 Cum @ 75% = 26.25 Cum Qty. vide item No. 09 = 2.70 Cum @ 0.044 Cum = 0.12 Cum $T = 26.37 \text{ Cum}$ @ 418.78 / Cum	8820.00 8038.00 11043.00

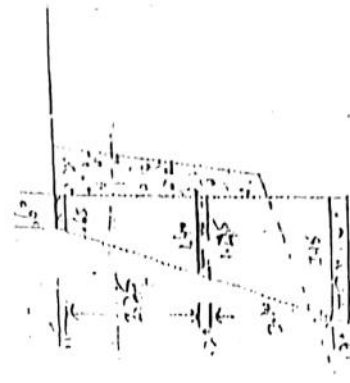
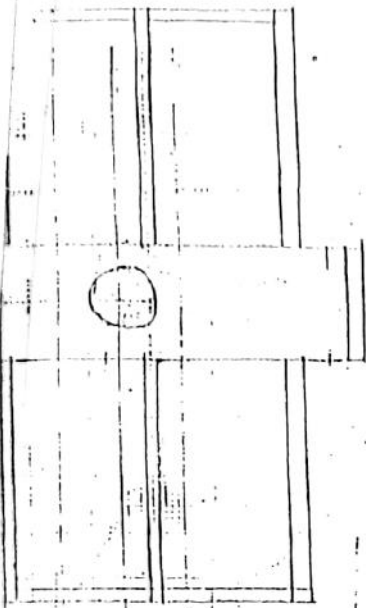
(iv) Hume pipes from Divi. Store for an avg. distance of 19km by MT 3x2.50M=7.50RMT@12933.27/100RMT	970.00
TOTAL	267863.00
Add 30% above SSR.2012	80359.00
Add Cost of pipes 3@Rs 12000/Each	36000.00
Add Cost of wire crates @Rs 5000/Each	5000.00
G.TOTAL	389222.00

Say 3.90 LACS

H. Zayas

H. Zayas
Executive Engineer,
PWD(R&B) Spl. Sub-Divn,
Doda

21



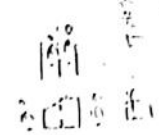
3.25

SEC. 100

TYPICAL DRAWING

CONST. OF 900mm

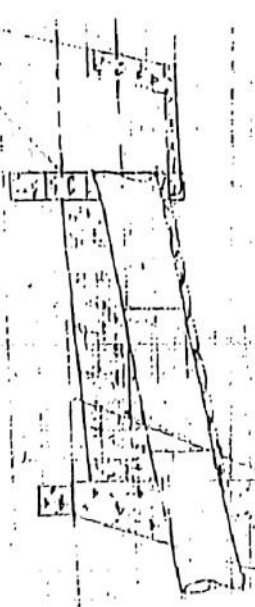
HUME PIPE CULVERT



Executive Engineer

PWD (R&S) Special Sub Division

200DA



SEC. 100

Typical

3.25



200DA

Typical estimate for construction of 1.50 M span RCC culvert.

S.No	PARTICULARS	Amount (in lacs)
	Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables, etc over areas (not exceeding 1.5 mtr. in width and exceeding 10 sqm on plan depth upto 1.50 M including disposal of excavated earth lead up to 50 M disposed earth to be leveled and neatly dressed in in 50% AKS, 30% OR, 20% HR). Qty = $1 \times 7.00 \times \frac{(7.90+10)}{2} \times 1.35 = 84.57 \text{ Cum}$ Approach wall = $\frac{1}{2} \times 2.30 \times 1 = 1.15 \text{ Sqm}$ = $(2.30+3.10)/2 \times 0.30 = 0.81 \text{ Sqm}$ = $(3.10+2.80)/2 \times 0.30 = 0.85 \text{ Sqm}$ = $2.81 \times 4 \times 2 = 22.48 \text{ Cum}$ T = 107.05 @ 415.74/ Cum	44505.00
	Providing and laying in position cement concrete of specified grade 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size) Hallah excluding the cost of centering and shuttering all work upto plinth level Abutment = $1.00 \times 6.00 \times 10.00 \times 0.15 = 9.00 \text{ Cum}$ Approach wall = $2 \times 2.60 \times 4 \times 0.15 = 3.12 \text{ Cum}$ Total = 12.12 Cum @ 2698.90/Cum	32710.00
	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm) nominal size crushed. Qty. = $1 \times 10 \times 0.15 = 1.50 \text{ Cum}$ Total = 1.50 Cum @ 4428.90/Cum	6643.00
	Providing and laying cement concrete 1:3:6 (1 cement : 3 Coarse Sand : 6 graded stone aggregate 20 mm nominal size) excluding the cost of centering and shuttering (crushed stone) Abutment = $2 \times 10.00 \times \frac{0.60+2.00}{2} \times 1.85 = 48.10 \text{ Cum}$ Side $2 \times 2 \left(\frac{1+2}{2} \right) \times 1.85 \times 0.60 = 6.66$ = 54.76 Cum @ 3707.40/Cum	203017.00
	Random Rubble masonry with hard stone from Nallah in foundation and plinth including leveling up with cement concrete 1 : 6 : 12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) at plinth level in cement mortar 1:6 (1 cement : 6 coarse sand) Qty. = $6.70 \times 6.00 \times 0.20 = 8.04 \text{ Cum}$ = $6.70 \times 5.80 \times 0.20 = 7.77 \text{ Cum}$ = $6.70 \times 5.40 \times 0.80 = 28.95 \text{ Cum}$ R/wall = $(0.60+2.28)/2 \times 4 \times (1+0.50)/2 = 4.32 \text{ Cum}$ Approach wall BB = $(2.30+2.60)/2 \times 0.60 \times 4 \times 2 = 12.21 \text{ Cum}$ TB = $(0.60+0.90)/2 \times 0.60 \times 4 \times 2 = 3.60 \text{ Cum}$ Vp = $(0.90+2.30)/2 \times 0.60 \times 2.80 \times 2 = 5.37 \text{ Cum}$ Total = 76.26 @ 2583.50/Cum	181517.00
6	Dry Random rubble masonry with hard stone in foundation and plinth using Hallah stone without bond stone. Qty. = $(0.90+2.30)/2 \times 2.80 \times 2.80 \times 2 = 25.08 \text{ Cum @ 1304.45/Cum}$	32716.00

Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement. All work upto plinth level 1:1.5:3 (1 Cement: 1.5 Coarse Sand : 3 graded stone aggregate 20 mm nominal size)

$$\text{R.C.C cap} = 2 \times 0.50 \times 0.50 \times 10 = 5.00 \text{ Cum}$$

$$\text{Slab} = 1 \times 2.50 \times 10 \times 0.22 = 5.50 \text{ Cum}$$

$$\text{Wheel guard} = 2 \times (0.30 + 0.50) / 2 \times 0.72 \times 6.00 = 0.37 \text{ Cum}$$

$$\text{D/wall} = 2 \times (0.30 + 0.50) / 2 \times 0.72 \times 6.00 = 3.46$$

$$\text{Total} = 14.33 \text{ Cum @ } 6280.95/\text{Cum}$$

90006.00

Reinforced for R.C.C work including, straightening, cutting, bending, placing in position and binding all complete thermo-Mechanically treated-bars.

$$\text{Qty as per item no. 7} = 14.33 \text{ Cum @ } 125 \text{ kg/Cum}$$

$$= 1791 \text{ kg @ } 71.00/\text{kg}$$

127161.00

Centering and shuttering including, strutting, propping etc and removal of form work. Retaining walls return walls, wall (any thickness) including attached pilasters, buttresses plinth and string courses fillets etc.

$$\text{Suspended floor} = 1 \times 1.50 \times 10.00 = 15.00 \text{ Sqm @ } 372.40/\text{Sqm}$$

$$\text{Edges of slab} = 2 \times 10.00 \times 0.22 = 4.40 \text{ Sqm}$$

$$= 2 \times 2.50 \times 0.22 = 1.10 \text{ Sqm}$$

$$\text{D/wall} = 22.80 \text{ Sqm}$$

$$\text{Sides} = 2 \times 2 \times 0.40 \times 0.95 = 1.52 \text{ Sqm}$$

$$\text{Wheel guard} = 2 \times 2 \times 2.50 \times 0.30 = 3.00 \text{ Sqm}$$

$$\text{R.C.C cap} = 2 \times 6.00 \times 0.50 = 6.00 \text{ Sqm}$$

$$\text{Sides} = 2 \times 2 \times 0.50 \times 0.50 = 1.00 \text{ Sqm}$$

$$\text{Total} = 39.82 \text{ Sqm @ } 342.80 \text{ Sqm}$$

$$\text{Base of columns} = 2 \times 2 \times 10.00 \times 1.85 = 74.00 \text{ Sqm}$$

$$\text{Sides} = 2 \times 2 \times 2 \times 0.60 = 4.80 \text{ Sqm}$$

$$= 2 \times 2 \times 1.85 = 7.40 \text{ Sqm}$$

$$\text{Total} = 86.20 \text{ Sqm @ } 179.25/\text{Sqm}$$

5586.00

13650.00

15451.00

Dumping stone including cost of stones in horizontal on level.

$$\text{Qty.} = (1 + 0.10) / 2 \times 2.95 \times (8.80 + 4.00) / 2 = 10.36 \text{ Cum}$$

$$= \frac{1}{2} \times 1.50 \times 2 \times 4 \times 2 = 12.00 \text{ Cum}$$

$$= 22.36 \text{ Cum @ } 358.85/\text{Cum}$$

8024.00

Carriage of crusher bajree avg. leads 40 km by MT including loading, unloading and staking complete.

$$\text{Qty. Vide Item No. 3} = 1.50 \times 0.89 = 1.33 \text{ Cum}$$

$$\text{Qty. Vide Item No. 4} = 54.76 \times 0.94 = 51.47 \text{ Cum}$$

$$\text{Qty. Vide Item No. 7} = 14.13 \times 0.85 = 12.11 \text{ Cum}$$

$$\text{Total} = 64.98 \text{ Cum @ } 360.48/\text{Cum}$$

23424.00

Carriage of sand avg. leads 30 km by MT including loading unloading and staking complete.

$$\text{Qty. Vide Item No. 2} = 12.12 \times 47\% = 5.69 \text{ Cum}$$

$$\text{Qty. Vide Item No. 3} = 1.50 \times 45\% = 0.67 \text{ Cum}$$

$$\text{Qty. Vide Item No. 4} = 54.76 \times 47\% = 25.73 \text{ Cum}$$

$$\text{Qty. Vide Item No. 5} = 70.26 \times 38\% = 26.69 \text{ Cum}$$

$$\text{Qty. Vide Item No. 7} = 14.33 \times 43\% = 6.16 \text{ Cum}$$

$$\text{Total} = 64.94 \text{ Cum @ } 302.18/\text{Cum}$$

19624.00

Carriage of stone avg. leads 6 km by MT including loading unloading and staking complete.

$$\text{Qty. Vide Item No. 5} = 70.26 \text{ Cum}$$

$$\text{Qty. Vide Item No. 6} = 25.08 \text{ Cum}$$

$$\text{Qty. Vide Item No. 10} = 22.36 \text{ Cum}$$

18867.00

Total = 117.70 Cum @ 160.03/Cum

Carriage of stone aggregate 40mm an avg. distance 6 km by MT including loading unloading and staking complete.

Qty Vide Item No. 2 = 12.12 Cum x 0.89 Cum/Sqm = 10.78 Cum

Total = 10.78 Cum @ 147.85/Cum

Total 824495.00

Add 40% above 129798.00

G. Total 1154293.00

Rs. 11.54 lacs

H. Sanyal

U. N. Patel
Executive Engineer,
PWD(P&B) Spl. Sub-Divn,
Doda

2000

1.5M SPAN & CULVERT

PWD (R&B) Special Sub Group

DOBA

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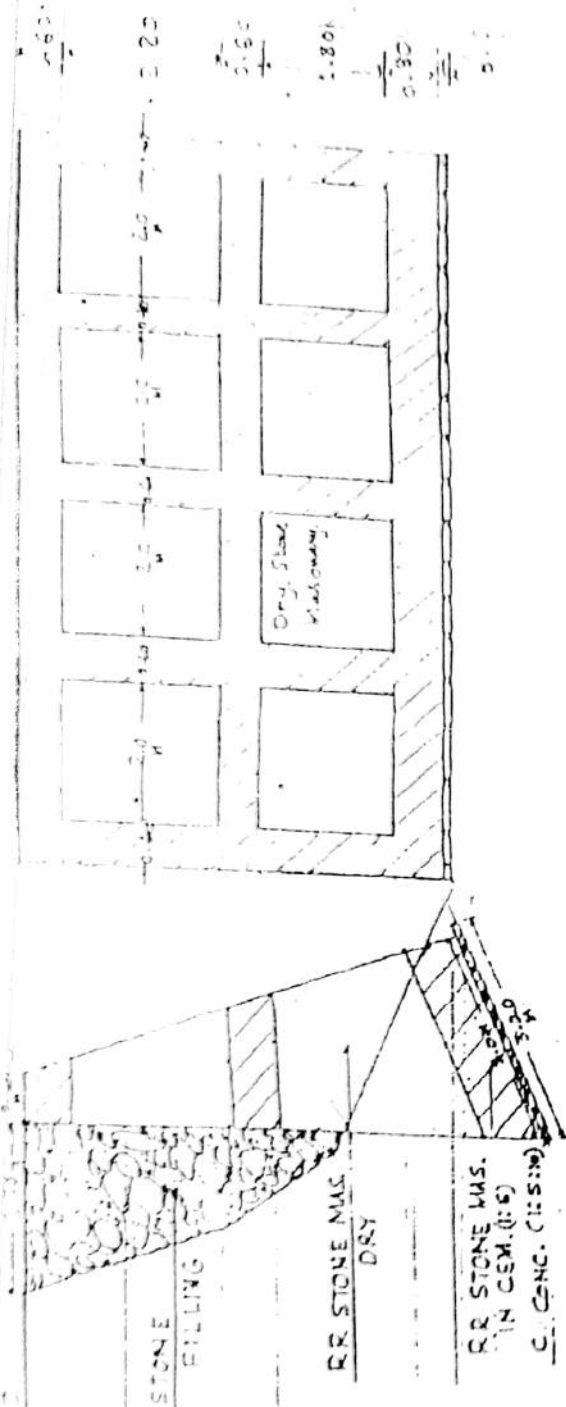
Typical estimate for constt. of semi pucca retaining wall 6.00 M height in Doda Area.

Name of the particulars	Amount
Earth work in excavation in foundation trenches or drains (not exceeding 1.5 m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottoms lead up to 01 m and lift upto 1.5m including getting out the excavated soil and disposal of surplus excavated soil as 80% OR 20%.	
Qty = $\frac{1}{2} \times 1.00 \times 2.00 = 3.00 \text{ Sqm}$ $3.00 \times 11.00 = 33.00 \text{ Cum @ } 292.55/\text{Cum}$	9654.00
Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size) Nallah.	
Bed = $11.00 \times 3.20 \times 0.15 = 5.28 \text{ Cum}$ Total = $5.28 \text{ Cum @ } 2698.90/\text{Cum}$	14250.00
Random rubble masonry with hard stone from Nallah in foundation and plinth including leveling up with cement concrete 1:6:12 (1 cement: 6 coarse sand: 12 graded stone aggregate 20mm nominal size) at plinth level with cement mortar 1:6 (1 cement : 6 fine sand).	
BB = $(3.00+2.70)/2 \times 0.80 \times 11.00 = 25.08 \text{ Cum}$ CB = $(2.00+1.80)/2 \times 0.60 \times 11.00 = 12.54 \text{ Cum}$ IB = $(0.60+0.80)/2 \times 0.60 \times 11.00 = 4.62 \text{ Cum}$ Vp a = $(2.00+2.70)/2 \times 0.60 \times 1.80 \times 5 = 12.69 \text{ Cum}$ Vp a = $(1.80+0.80)/2 \times 2.20 \times 0.60 \times 5 = 8.58 \text{ Cum}$ Total = $63.51 \text{ Cum @ } 2583.50/\text{Cum}$	164078.00
Dry Random rubble masonry with hard stone in foundation and plinth using Nallah stone without bond stone.	
Qty. a = $4 \times 2.00 \times (2.00 + 2.70)/2 \times 1.80 = 62.64 \text{ Cum}$ b = $4 \times 2.00 \times (1.80 + 0.80)/2 \times 2.20 = 22.88 \text{ Cum}$ 85.52 Cum @ 1304.45/Cum	111557.00
Providing and laying damp-proof course 50mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) crushed.	
Qty. = $1 \times 11.00 \times 0.60 = 6.60 \text{ Sqm @ } 275.45/\text{Cum}$	1818.00
Centering and shuttering including strutting, propping etc. and removal of form work for Retaining walls return walls, walls (any thickness) including attached pilasters buttresses plinth and string courses fillets etc.	
Bed = $1 \times 11.00 \times 0.20 = 2.20 \text{ Sqm}$ Total = $2.20 \text{ Sqm @ } 342.80/\text{Sq.}^2$	754.00
Pumping stone including cost of stones in horizontal on level.	
Qty. a = $\frac{1}{2} \times 1.50 \times 1.50 = 1.125 \text{ Sqm}$ b = $(1.50 + 2.50)/2 \times 2.50 = 5.00 \text{ Sqm}$ = $6.125 \times 11.00 = 67.375 \text{ Cum}$ = $67.375 \text{ Cum @ } 358.85/\text{Cum}$	24177.00
Freight of crusher bajree an avg. distance of 50 km by MT including loading, unloading and stacking complete.	
Qty. vide item No. 5 = $6.60 \text{ Sqm} \times 0.045 \text{ Cum} / \text{Sqm} = 0.29 \text{ Cum}$ = $0.29 \text{ Cum @ } 418.78/\text{Cum}$	121.00
Freight of sand an avg. distance of 30 km by MT including loading, unloading and stacking complete.	
Qty. vide item No. 2 = $5.28 \text{ Cum @ } 0.47/\text{Cum} / \text{Cum} = 2.48 \text{ Cum}$ Qty. vide item No. 3 = $63.51 \text{ Cum @ } 0.38/\text{Cum} / \text{Cum} = 24.13 \text{ Cum}$	

Qty. vide item No. 7 = 6.60 Sqm @ 0.23/Cum/Sqm = 0.15 Cum = 26.76 Cum @ 302.18/Cum	8086.00
Carriage of stone an avg. distance of 03 km by MT including loading, unloading and stacking complete. Qty. vide item No. 3 = 63.51 Cum Qty. vide item No. 4 = 85.52 Cum Qty. vide item No. 7 = 67.37 Cum = 216.40 Cum @ 125.64/Cum	27188.00
Carriage of stone aggregate 40 mm an avg. distance of 06 km by MT including loading, unloading and stacking complete. Qty. vide item No. 2 = 5.28 Cum x 0.89 Cum/ Sqm = 4.70 Cum = 4.70 Cum @ 116.08/Cum	545.00
Total	362228.00
Add 30% above	108668.00
G. Total	470896.00
Cost per Rmt.	42808.00
Say 43000.00/ Rmt.	

Handwritten signature

Handwritten signature
 Executive Engineer
 PWD (R&B) Special Sub Division,
 Doda - DODA



FRONT ELEVATION OF R/WALL

TYPICAL SEC. OF R/WALL

TYPICAL SECTIONS OF
RETAINING WALL 6.00 M
IN DODA AREA

[Signature]

[Signature]
Executive Engineer
P.W.D./R.R. Special Sub Division
DODA

ical estimate for constt. of semi pucca retaining wall 4.00 M height in
Doda Area.

L = 11.00 M

Name of the particulars	Amount
Earth work in excavation in foundation trenches or drains (not exceeding 1.5 m in width as well as 10 sqm on plan) including dressing of sides and ramming of bottoms lead up to 01 m and lift upto 1.5m including getting out the excavated soil and disposal of surplus excavated soil as directed in all kinds of soil. 80% OR 20% Qty. = $\frac{1}{2} \times 1.75 \times 1.00 = 0.875 \text{ Sqm}$ = $(1.75 + 1.95)/2 \times 0.75 = 1.387$ = $2.26 \times 11.00 = 24.86 \text{ Cum @ } 292.55/\text{Cum}$	7273.00
Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size) Nallah. Bed = $11.00 \times 1.95 \times 0.15 = 3.21 \text{ Cum}$ Total = $3.21 \text{ Cum @ } 2698.90/\text{Cum}$	8663.00
Random rubble masonry with hard stone from Nallah in foundation and plinth including leveling up with cement concrete 1:6:12 (1 cement: 6 coarse sand: 12 graded stone aggregate 20mm nominal size) at plinth level with cement mortar 1:6 (1 cement : 6 fine sand). BB = $(1.75+1.95)/2 \times 0.60 \times 11.00 = 12.21 \text{ Cum}$ IB = $(0.60+0.80)/2 \times 0.60 \times 11.00 = 4.62 \text{ Cum}$ Vp = $(0.80+1.75)/2 \times 0.60 \times 2.65 \times 5 = 10.13 \text{ Cum}$ Total = $26.96 \text{ Cum @ } 2583.50/\text{Cum}$	69651.00
Dry Random rubble masonry with hard stone in foundation and plinth using Nallah stone without bond stone. Qty. = $(0.80 + 1.75)/2 \times 2 \times 2.65 \times 4 = 27.03 \text{ Cum @ } 1304.45/\text{Cum}$	35259.00
Providing and laying damp-proof course 50mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) crushed. Qty. = $1 \times 11.00 \times 0.60 = 6.60 \text{ Sqm @ } 275.45 / \text{Cum}$	1818.00
Centering and shuttering including strutting, propping etc. and removal of form work for Retaining walls return walls, walls (any thickness) including attached pilasters buttresses plinth and string courses fillets etc. Bed = $1 \times 11.00 \times 0.15 = 1.65 \text{ Sqm}$ Total = $1.65 \text{ Sqm @ } 179.25 / \text{m}^2$	296.00
Dumping stone including cost of stones in horizontal on level. Qty. = $\frac{1}{2} \times 1.50 \times 2.50 \times 11.00 = 20.62 \text{ Cum}$ = $20.62 \text{ Cum @ } 358.85/\text{Cum}$	7399.00
Carriage of crusher bajree an avg. distance of 50 km by MT including loading, unloading and stacking complete. Qty. vide item No. 5 = $6.60 \text{ Sqm} \times 0.045 \text{ Cum / Sqm} = 0.29 \text{ Cum}$ = $0.29 \text{ Cum @ } 418.78/\text{Cum}$	121.00
Carriage of sand an avg. distance of 30 km by MT including loading, unloading and stacking complete. Qty. vide item No. 2 = $3.21 \text{ Cum @ } 0.47/\text{Cum/Cum} = 1.50 \text{ Cum}$ Qty. vide item No.3 = $26.96 \text{ Cum @ } 0.38/\text{Cum/Cum} = 10.24 \text{ Cum}$ Qty. vide item No.7 = $6.60 \text{ Sqm @ } 0.23/\text{Cum/Sqm} = 0.15 \text{ Cum}$ = $11.89 \text{ Cum @ } 302.18/\text{Cum}$	3593.00

Carriage of stone an avg. distance of 03 km by MT including loading, unloading and stacking complete.

Qty. vide item No. 3 = 26.96 Cum

Qty. vide item No. 4 = 27.03 Cum

Qty. vide item No. 6 = 20.62 Cum

= 74.61 Cum @ 125.64/Cum

9374.00

Carriage of stone aggregate 40 mm an avg. distance of 03 km by MT including loading, unloading and stacking complete.

Qty. vide item No. 5 = 3.21 Cum x 0.89 Cum/Sqm = 2.85 Cum

= 2.85 Cum @ 116.08/Cum

331.00

Total

143778.00

Add 30% above

43133.00

G. Total

186911.00

Cost per Rmt.

16992.00

Say 17000.00/ Rmt.

H. B. B. B.

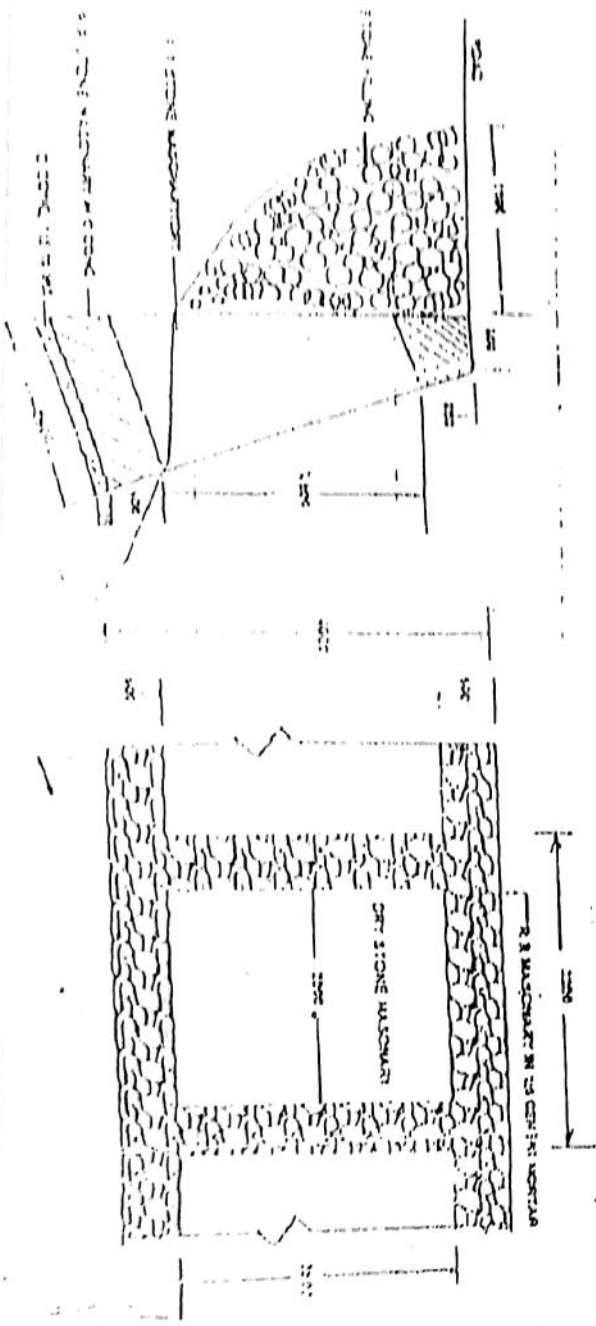
W.D.

DODA

H. B. B. B.
Executive Engineer
RWD (R&D) Special Sub Division
DODA

C. B. B. B.

Imagay
 Executive Engineer
 PWD (R&B) Special Sub Division
 DODA



NOTES

1. THE STONE MASONRY SHALL BE COURSED.
2. THE FACE JOINTS SHALL BE NOT MORE THAN 20MM THICK.
3. THE HEIGHT OF COURSES SHALL DEPEND ON AVAILABLE SIZE OF STONE. IN NO CASE, THE HEIGHT OF COURSE SHOULD BE LESS THAN 150MM.
4. THE THICKNESS OF MASONRY SHALL BE OF THE WALL SHALL BE NOT LESS THAN 150MM.

THE USE OF ORG. SALT BE RESTRICTED TO THE PLANT OF THE STONES. THE ADJACENT STONES SHALL BE LAPPED AND THE JOINTS SHALL NOT BE IN A LINE. THE COURSE OF COURSES SHALL BE ALTERNATE. THE COURSE OF COURSES SHALL BE ALTERNATE. THE COURSE OF COURSES SHALL BE ALTERNATE.

SECTION OF THE WALL

Executive Engineer
 PWD (R&B) Special Sub Division
 DODA

Estimate for constt. of semi pucca B/wall 2.00 M height in Doda Area.

Particulars	Amount
Work in excavation in foundation trenches or drains (not exceeding 1m in width as well as 10 sqm on plan), including dressing of sides, ramming of bottoms lead up to 01 m and lift upto 1.5m including pumping out the excavated soil and disposal of surplus excavated soil as directed in all kinds of soil. $1 \times 0.30 \times 0.75 = 0.11 \text{ Sqm}$ $(0.30 + 1.20)/2 \times 0.75 = 0.56 \text{ Sqm}$ $(1.20 + 1.10)/2 \times 0.65 = 0.74 \text{ Sqm}$ $= 1.41 \times 11.00 = 15.59 \text{ Cum @ } 286.35/\text{Cum}$	4464.00
Providing and laying in position cement concrete of specified grade including the cost of centering and shuttering. — All work upto plinth level 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40mm nominal size) Nallah. $11.00 \times 1.10 \times 0.15 = 1.81 \text{ Cum}$ Total = 1.81 Cum @ 2698.90/Cum	4885.00
Random rubble masonry with hard stone from Nallah in foundation and plinth including leveling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) at plinth level with cement mortar 1:6 (1 cement : 6 fine sand). $(1.00 + 1.10)/2 \times 0.60 \times 11.00 = 6.93 \text{ Cum}$ $(0.60 + 0.70)/2 \times 0.60 \times 11.00 = 4.29 \text{ Cum}$ $(0.70 + 1.00)/2 \times 0.60 \times 0.80 \times 5 = 2.04 \text{ Cum}$ Total = 13.26 Cum @ 2583.50/Cum	34257.00
Random rubble masonry with hard stone in foundation and plinth using Nallah stone without bond stone. $(0.70 + 1.00)/2 \times 0.80 \times 4.00 = 5.44 \text{ Cum @ } 1304.45/\text{Cum}$	7096.00
Providing and laying damp-proof course 50mm thick cement concrete 1:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) crushed. $1 \times 11.00 \times 0.60 = 6.60 \text{ Sqm @ } 275.45/\text{Cum}$	1818.00
Centering and shuttering including strutting, propping etc. and removal of form work for Retaining walls return walls, walls (any thickness) including attached pilasters buttresses plinth and string courses fillets etc. $1 \times 11.00 \times 0.15 = 1.65 \text{ Sqm}$ Total = 1.65 Sqm @ 179.25 /sqm	296.00
Cartage of crusher bajree an avg. distance of 50 km by MT including loading, unloading and stacking complete. vide item No. 5 = $6.60 \text{ Sqm} \times 0.045 \text{ Cum / Sqm} = 0.29 \text{ Cum}$ $= 0.29 \text{ Cum @ } 418.78/\text{Cum}$	121.00
Cartage of sand an avg. distance of 30 km by MT including loading, unloading and stacking complete. vide item No. 2 = $1.81 \text{ Cum @ } 0.47/\text{Cum} = 0.85 \text{ Cum}$ vide item No. 3 = $13.26 \text{ Cum @ } 0.38/\text{Cum} = 5.03 \text{ Cum}$ vide item No. 7 = $6.60 \text{ Sqm @ } 0.23/\text{Cum/Sqm} = 0.15 \text{ Cum}$ 6.03 Cum @ 302.18/Cum	1822.00
Cartage of stone an avg. distance of 03 km by MT including loading, unloading and stacking complete. vide item No. 3 = 13.26 Cum vide item No. 4 = 5.44 Cum = 18.70 Cum @ 125.64/Cum	2349.00

Cartage of stone aggregate 40 mm an avg. distance of 03 km by
MJ including loading, unloading and stacking complete.
vide item No. 5 = 1.81 Cum x 0.89 Cum/Sqm = 1.61 Cum
= 1.61 Cum @ 116.08/Cum.

Total	187.00
Add 30% above	57295.00
G. Total	17188.00
Cost per Rmt.	74483.00
	6771.00
Say 6770.00/ Rmt.	

H. Sagar

Umapath
Executive Engineer,
PWD (R&B) Spl Sub Division,
Doda

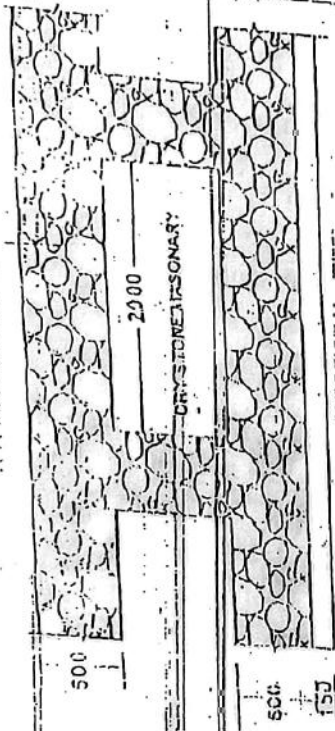
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- 1 THE STONE MASONRY SHALL BE MORTAR 1:3 MIX.
- 2 THE FACE JOINTS SHALL BE NOT MORE THAN 20MM THICK.
- 3 THE HEIGHT OF COURSES SHALL DEPEND ON AVAILABLE SIZE OF STONE IN NO CASE THE HEIGHT OF COURSE SHOULD BE LESS THAN 150MM.
- 4 THE HEARTING OR INTERIOR FILLING OF THE WALL SHALL CONSIST OF FLAT BEDDED STONE CAREFULLY LAID ON TOP OF PROPER BEDS IN MORTAR.
- 5 THE USE OF CHIPS SHALL BE RESTRICTED TO THE FILLING OF INTERSTICES BETWEEN THE ADJACENT STONE IN HEARTING AND THESE SHALL NOT EXCEED 15 PERCENT OF THE QUANTITY OF MASONARY.
- 6 THE HEIGHT OF COURSES GENERALLY ADOPTED ARE 160 MM, 180 MM, 200MM.

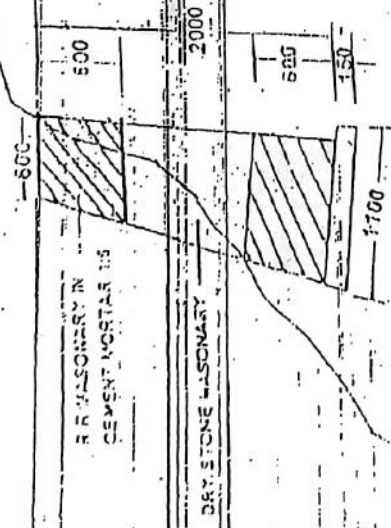
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TYPICAL SECTIONS OF BENT WALL

R.R. MASONRY IN 1:3 CEMENT MORTAR



FRONT ELEVATION OF B.WALL



TYPICAL SECTION OF B.WALL

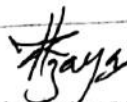
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Executive Engineer
PWD (R&B) Special Sub Division
DODA

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Typical estimate for providing and laying WBM G-1 (100) mm thick in Doda Area.

PARTICULARS	Amount (in lacs)
Providing and laying water bound macadam with specified stone aggregate stone and blinding material incl. screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne Power Road Roller sub base with stone aggregate 90mm to 45mm including stone screening of 13.20mm nominal size. 1x 1000 x 3.00 = 3000 Sqm Add 10% for curves = 300.00 sqm Total = 3300.00 Sqm x 0.10m = 330.00 Cum @ 766.70/Cum.	253011.00
Supply and stacking of stone screening chippings at excluding carriage (13.20mm Nominal Size). Qty = 3300.00 Sqm @ 0.25 Cum/ 10 sqm = 82.50 cum @492.50/Cum	40631.00
Supply and stacking of crusher dust at site but excluding cost of carriage. Qty. = 3300.00 sqm @ 0.08 Cum/ Cum = 26.40 Cum @ 377.50/Cum	9966.00
Carriage of stone agg. 90-45 mm size avg lead 06 km by MT Qty. vide item No. 1 = 1330.00 Cum @ 160.03/Cum	52810.00
Carriage of stone screening 13.2mm size for an avg lead 50 km by MT Qty. vide item No.2 = 82.50 Cum @ 418.78/Cum	34549.00
Carriage of crusher dust from an avg lead 50 km by MT Qty. vide item No. 2 = 26.40 Cum @ 418.78/ Cum	11056.00
Total	402023.00
Add 50% above	201012.00
G. Total	603035.00
COST PER RMT.	182.73

Say Rs. 183.00/Sqm

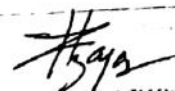

Asst. Executive Engineer,
PWD(R&B) West Sub-Divn.
Doda

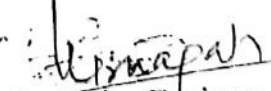

Executive Engineer,
PWD(R&B) Spl Sub-Divn,
Doda

Typical estimate for providing and laying WBM G-II 75 mm thick in Doda Area.

No	PARTICULARS	Amount (in lacs)
	Providing and laying water bound macadam with specified stone aggregate stone and blinding material incl. screening, sorting, spreading to template and consolidation with power road roller of 8 to 10 tonne Power Road Roller sub base with stone aggregate 90mm to 45mm including stone screening of 13.20mm nominal size. 1x 1000 x 3.00 = 3000 Sqm Add 10% for curves = 300.00 sqm Total = 3300.00 Sqm x 0.075m = 247.50 Cum @ 796.50/Cum.	197134.00
	Supply and stacking of stone screening chippings at excluding carriage (13.20mm Nominal Size). Qty = 247.50 Sqm @ 0.156 Cum/ Cum = 38.61 cum @ 492.50/Cum	19015.00
	Supply and stacking of crusher dust at site but excluding cost of carriage. Qty. = 247.50 sqm @ 0.08 Cum/ Cum = 19.80 Cum @ 377.50/Cum	7474.00
	Carriage of stone agg. 63-45 mm size avg lead 06 km by MT Qty. vide item No. 2 = 37.86 Cum @ 418.78/Cum	36593.00
	Carriage of stone screening 13.2mm size from an avg lead 50 km by MT Qty. vide item No.2 = 37.86 Cum @ 418.78/Cum	15855.00
	Carriage of stone dust from an avg lead 50 km by MT Qty. vide item No. 3 = 19.80 Cum @ 418.78/ Cum	8292.00
	Total	284363.00
	Add 50% above	142182.00
	G. Total	426545.00
	COST PER RMT.	129.25

Say Rs. 129.00/Sqm


Asstt. Executive Engineer,
PWD(R&B) West Sub-Divn.
Doda


Executive Engineer,
PWD(R&B) Spt. Sub-Divn.
Doda

Typical estimate for providing and laying WBM G-III (75) mm thick in
Doda Area.

PARTICULARS	Amount (in laes)
Providing and laying water bound macadam with specified stone aggregate stone and blinding material incl. screening, sorting, spreading to template and consolidation with power road roller of 8.to 10 tonne Power Road Roller sub base with stone aggregate 90mm to 45mm including stone screening of 13.20mm nominal size. 1x 1000 x 3.00 = 3000 Sqm Add 10% for curves = 300.00 sqm Total = 3300.00 Sqm x 0. 075 m = 247.50 Cum @ 833.70/Cum.	206341.00
Supply and stacking of stone screening chippings at excluding carriage (13.20mm Nominal Size). Qty= 247.50 Sqm @ 0.228 Cum/ Cum = 56.43 Cum @492.50/Cum	27792.00
Supply and stacking of crusher dust at site but excluding cost of carriage. Qty. = 247.00 sqm @ 0.08 Cum/ Cum= 19.80 Cum @ 377.50/Cum	7474.00
Carriage of stone agg. 53-22.40 mm size avg lead 06 km by MT Qty. vide item No. 247.50 Cum @ 147.85/Cum	36593.00
Carriage of stone screening 11.20 mm size for an avg lead 50 km by MT Qty. vide item No.2 =56.43 Cum @ 418.78/Cum	23632.00
Carriage of crusher dust from an avg lead 50 km by MT Qty. vide item No. 3 19.80 Cum @ 418.78/ Cum	8292.00
Total	310124.00
Add 50% above	155062.00
G. Total	465186.00
COST PER RMT.	140.96

Say Rs. 141.00/Sqm

[Signature]
Asstt. Executive Engineer,
PWD(R&B) West Sub-Divn.
Doda

[Signature]
Executive Engineer
PWD(R&B) Special Sub Division
DODA

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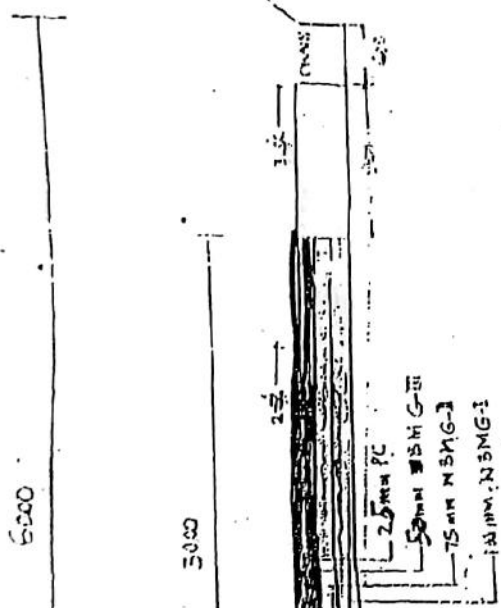
Typical Estimate for Providing and laying 25mm thick open Graded
premix carpet in Doda Area.

Description of Items	Amount
Providing and laying 25mm thick open graded premixed carpet surfacing with 2.25 cum and 1.12 cum of stone chipping of 13.20 mm and 11.20 mm size incl. applying tack coat using hot straight run bitumen of grade 80/100 incl. heating and spraying the bitumen with mechanically operated spray premix carpet laid with paver finisher incl. seal coat complete (excl. cost of bitumen). $1 \times 1000 \times 3 = 3000$ Add. 10% for curves = 300.00 Sqm Total = 3300 Sqm @ Rs. 400/M ²	Rs. 1320000.00
Total	Rs. 1320000.00
Cost Per Sqm = $1320000/3300$	400/M ²

Say = Rs. 400/M²

[Signature]

[Signature]
 Executive Engineer
 PWD (R&B) Special Sub Division
 DODA



TYPICAL CROSS SECTION OF ROAD

(Signature)
Executive Engineer
PWD (R&P) Special Sub Division
DODA

(Signature)

Typical estimate for construction of pucca parapets in Doda Area

PARTICULARS	Amount (In lacs)
Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering -- All work upto plinth level 1:3:6 (Cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) with 20% boulders. $(0.20 + 0.50)/2 \times 0.30 = 0.105 \text{ Sqm}$ $(0.50 + 0.50)/2 \times 0.20 = 0.10 \text{ Sqm}$ Total = 0.205 Sqm x 1.00 M = 0.205 Cum @ 3037.69/Cum	628.00
Centering and shuttering including strutting, propping etc. and removal of form work for Retaining walls return walls, walls (any thickness) including attached pilasters buttresses plinth and string $2 \times (0.50 \times 0.20 + \frac{0.50 + 0.20}{2} \times 0.30) = 0.41 \text{ Sqm}$ $(1.00 \times 0.50 \times 1.00) = 0.50 \text{ Sqm}$ $1 \times 0.20 \times 1.00 = 0.20 \text{ Sqm}$ Total 1.11 Sqm @ 342.80/Cum	381.00
Carriage of Crusher bajree an avg. distance of 50 km by MT including loading, unloading and stacking complete. Qty. vide item No. 1 = 0.205 x 0.752 Cum/ Cum = 0.15 Cum = 0.15 Cum @ 418.75/Cum	63.00
Carriage of sand an avg. distance of 30 km by MT including loading, unloading and stacking complete. Qty. vide item No. = 1 = 0.205 x 0.376 Cum/ Cum = 0.077 Cum = 0.077 Cum @ 302.18/Cum	21.00
Carriage of stone an avg. distance of 08 km by MT including loading, unloading and stacking complete. = 0.04 Cum @ 170.55/Cum	7.00
Total	1102.00
Add 40% above	441.00
G. Total	1542.80

Cost per running mtr. = 1542.80/ Rmt.

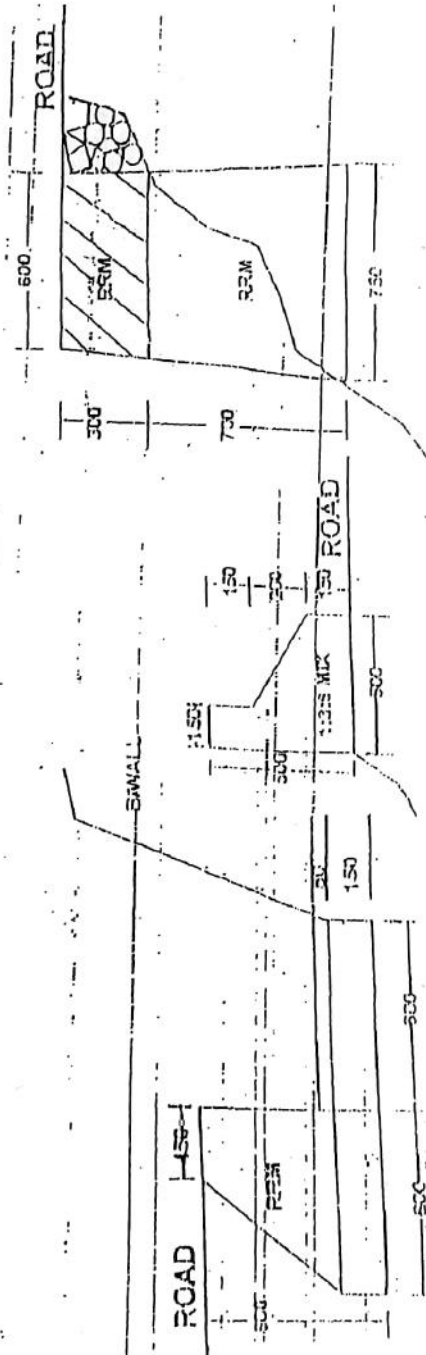
Say Rs. 1543.00/ Rmt

[Signature]

[Signature]
 Executive Engineer
 PWD (R&B) Special Sub Division
 DODA

NOTES

- 1 THE STONE MASONRY SHALL BE IN CEMENT MORTAR 1:3 MIX.
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- 5 THE USE OF CHIPS SHALL BE RESTRICTED TO THE FILLING OF INTERSTICES BETWEEN THE ADJACENT STONE IN HEARTING AND THESE SHALL NOT EXCEED 15 PERCENT OF THE QUANTITY OF MASONRY.
- 6 THE HEIGHT OF COURSES GENERALLY ADOPTED ARE 150 MM, 180 MM, 200MM.



EDGE WALL

PARAPET

PACCA DRAIN

TYPICAL SECTIONS OF EDGE WALL
PARAPET & PACCA DRAIN

TYPICAL SECTIONS OF EDGE WALL
PARAPET & PACCA DRAIN

Executive Engineer
HYD (R&B) Special Sub Division
DODA

Signature

Signature

Typical estimate for construction of pucca drain in Doda Area

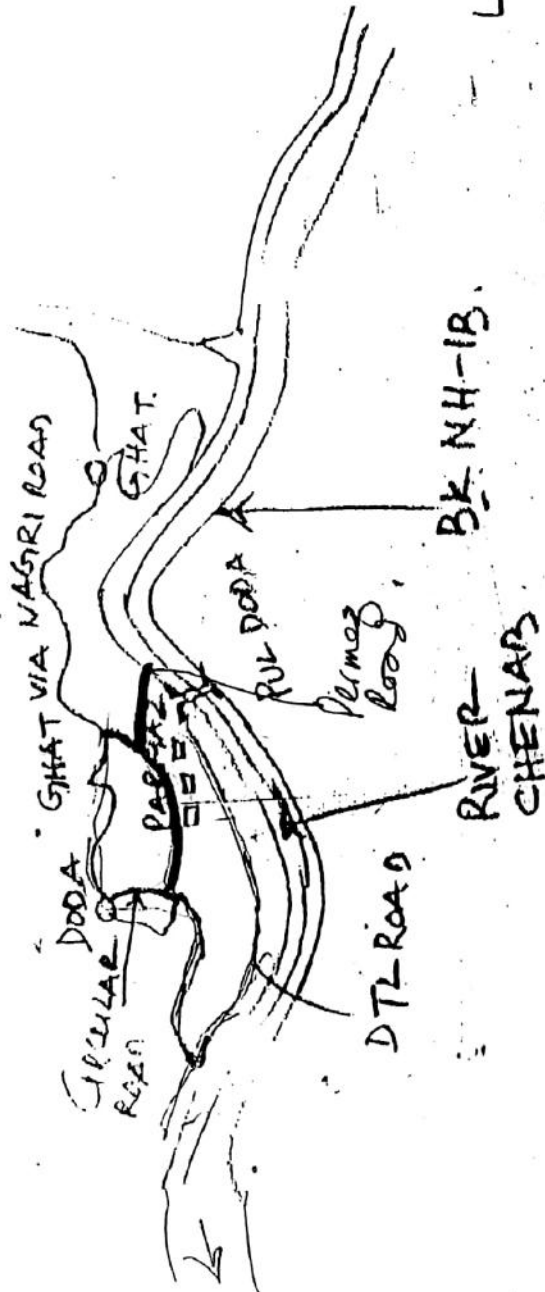
S.No	PARTICULARS	Amount (in lacs)
1	Earth work in excavation by manual means in trenches for foundations, drains, pipes, cables, etc over areas (not exceeding 1.5 mtr in width and exceeding 10 sqm on plan depth upto 1.50 M including disposal of excavated earth lead up to 50 M disposed earth to be leveled and neatly dressed in in (80% AKS, 20% OR.). Qty. = $500.00 \times (1.10 + 1.00)/2 \times 0.60 = 315.00 \text{ cum}$ = 315.00 Cum @ 426.12/Cum	134227.00
2	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level. 1:3:6 (1 cement: 3 coarse sand: 6 graded stone aggregate 20mm nominal size) Nallah. Qty. hill side = $500.00 \times (0.15 + 0.30)/2 \times 1.00 = 112.50 \text{ Cum}$ $500.00 \times 0.20 \times 0.45 = 45.00 \text{ Cum}$ $500.00 \times 1.00 \times 0.10 = 50.00 \text{ Cum}$ Total 207.50 Cum @ 3707.40/Cum	769285.00
3	Centering and shuttering including strutting, propping etc. and removal of form work for Retaining walls return walls, walls (any thickness) including attached pilasters buttresses plinth and string courses fillets etc. Qty. hill side = $1 \times 500.00 \times 1.00 = 500.00 \text{ Cum}$ $1 \times 500.00 \times 0.45 = 225.00 \text{ Cum}$ Total 725.00 Sqm @ 342.80/Cum	248530.00
4	Carriage of Crusher bajree an avg. distance of 50 km by MT including loading, unloading and stacking complete. Qty. vide item No. 2 = $207.50 \times 0.94 \text{ Cum/ Cum} = 97.52 \text{ Cum}$ = 97.52 Cum @ 418.75/Cum	81677.00
5	Carriage of sand an avg. distance of 30 km by MT including loading, unloading and stacking complete. Qty. vide item No. = $207.50 \times 0.47 \text{ Cum/ Cum} = 97.52 \text{ Cum}$ = 97.52 Cum @ 302.18/Cum	29468.00
	Total	1263187.00
	Add 40% above	505274.00
	G. Total	1768461.00

Cost per running mtr. = 3537/ Rmt.

Say Rs. 3537.00/ Rmt

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Executive Engineer
PWD (R&D) Special Sub Division
DODA



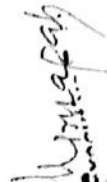
LEGEND

PROP. ROAD :- 
 UNDER CONSTY. 

INDEX MAP OF PARMAZ
 LINK ROAD.



Executive Engineer
 PWD (R&B) Special
 DODA


 PWD (R&B)
 DODA