

Annexure- "B"

**Model Plan related to Engineering measures for Stabilization
of Muck Dumping Sites (5 nos.) in Forest Area.**

(FOR ONE DUMPING POINT)

Typical Estimate for construction of Crated wall to protect dumping sites of
Surplus Muck/Excavated Material in forest area as per Engineering measures.

Taking Length of Crated Wall = 40.00 Mtrs.

Trench Excavation in Dense

Soil for Structures = 1 x 40 mtr x 1.40 mtr x 0.60 mtr
= 33.60 Cum @ Rs 332/cum
= Rs. 11155.0/-

For Six layered Crated Wall,

Quantity = 6 x 40 mtr x 1.20 mtr x 1.20 mtr = 345.60 cum


Amount = 345.60 Cum @ Rs 1200 / Cum (including cost of crates and labour for
handling of available stones)


= Rs. 414720/-

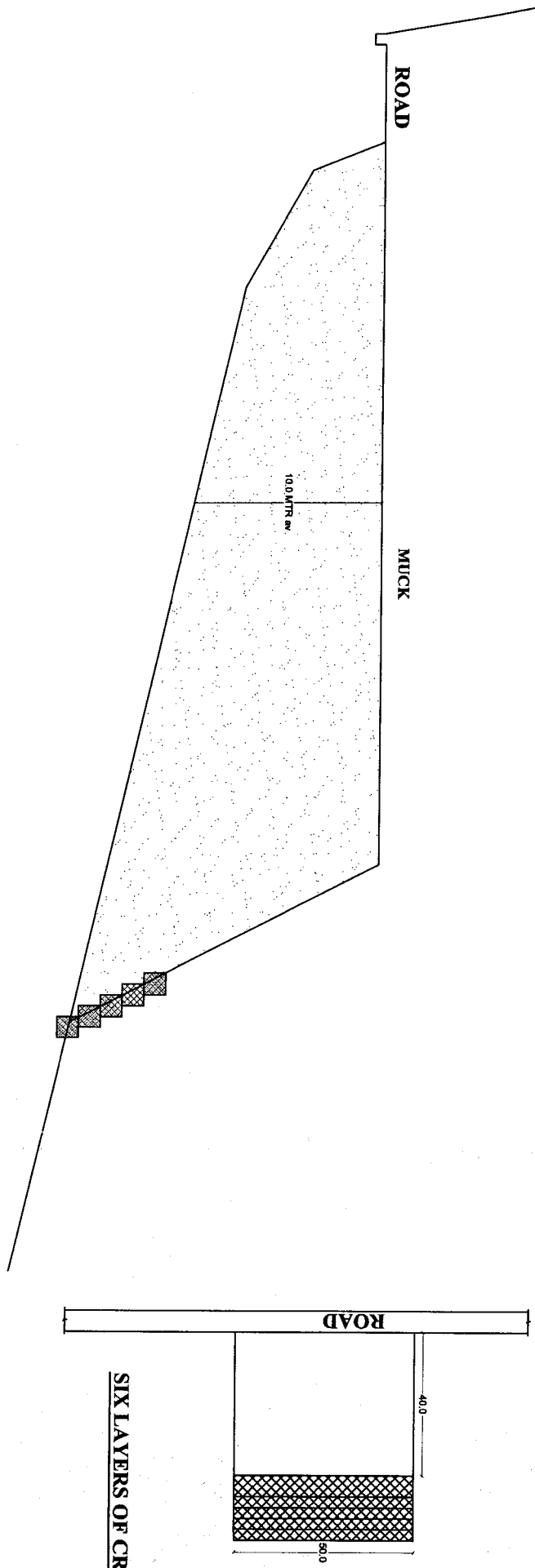
Total amount for 40.00 mtrs Six layered Crated Wall =

Rs. (11155+414720)=425875/-

Rate per Mtr = Rs. 10646.88/- Say 10647/mtr


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TYPICAL CROSS SECTION AND SITE PLAN OF MUCK DISPOSAL POINT FOR STABILIZATION OF MUCK EXCAVATED FROM FOREST AREA
COMING IN THE ALIGNMENT OF CONSTRUCTION OF ROAD FROM RAMNAGAR TO BASANTGARH (PHASE-II) I=11.0 KM .

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PERFORMA-II (REFER ITEM-8)

**STATEMENT SHOWING DUMPING QUANTITY OF MUCK/ DEBRIS TO BE DUMPED WITH OTHER DETAIL FOR CONSTRUCTION OF ROAD FROM
RAMNAGAR TO BASANTGARH (PHASE-II) L=11.0 KM IN DISTRICT UDHAMPUR UT JAMMU AND KASHMIR.**

S.No.	Name of component from Muck/ Debris is to be produced	Total qty. of Muck/ Debris to be produced (in cum)	Qty. of muck / Debris to be utilized locally (in cum)	Qty. of muck / Debris to be Dumped on compact basis (in cum)	Factor of increase in Vol. for dumping (in cum)	Qty. of muck / Debris to be Dumped on basis of increase (in cum)	Name of Dumping Places	Slope of dumping Places	Location of Dumping Places, Police station and nearby road	Distance of Dumping Place from river (in Kms)	Area of Dumping place with Length and Breadth (in hect.)	Area of forest land out of land in Column 10 (in hect.)	Height of muck / Debris dump expected (Vol. Area) in mtrs	Remarks
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	Formation Cutting work	113757.52	81000	32757.52	1.4	45860.53	Keya	1:4	20/50 to 20/75, 22/325 to 22/350, 23/400 to 23/425, 24/250 to 24/275, 26/900 to 26/925.	-	0.40	1.582	10.0	

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Title of The Project:- CONSTRUCTION OF ROAD FROM RAMNAGAR TO BASANTGARH (PHASE-II) L=11.0 KM IN DISTRICT UDHAMPUR UT JAMMU AND KASHMIR

FILE NO:- FP/JK/ROAD/143554/2021

DATE OF PROPOSAL:- 15-06-2021

STATEMENT SHOWING THE ROAD LINE TO BE CONSTRUCTED FOR CONSTRUCTION OF ROAD FROM RAMNAGAR TO BASANTGARH (PHASE-II) L=11.0 KM IN DISTRICT UDHAMPUR UT JAMMU AND KASHMIR

S.No.	RD		Distance in mtrs.			Width of right of way	Area of road		Total area in Sqm	Name of Village/ Muhl and forest Area nearly	Muck/Debries to produce Total cum	Muck/ Debries to be consumed at work	Muck/ Debries to be dumped	Remarks
	From	To	Forest land (in mtrs)	Non Forest land (in mtrs)	Total (in mtrs)		Forest land	Non Forest land						
	20/0	20/975	976	0	976	6.00	976 x 2.50= 2440 sqm or 0.244 Ha	0	2440 sq.m or 0.244 Ha					
	21/750	22/700	951	0	951	6.00	951 x 2.50= 2377.50 sqm or 0.23775 Ha	0	2377.50 sq.m or 0.23775 Ha	Keya	113757.52	81000	45860.53	
	23/225	24/250	1025	0	1025	6.00	1025 x 2.50= 2562.50 sqm or 0.25625 Ha	0	2562.50 sq.m or 0.25625 Ha					
	25/50	28/425	3376	0	3376	6.00	3376 x 2.50= 8440.0 sqm or 0.844 Ha	0	8440 sq.m or 0.844 Ha					

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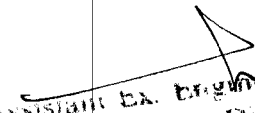
STATEMENT SHOWING DETAIL OF PLACES FOR DISPOSAL OF MUCK/ DEBRIS OF CONSTRUCTION OF ROAD FROM RAMNAGAR TO BASANTGARH (PHASE-II) L=11.0 KM IN DISTRICT UDHAMPUR UT JAMMU AND KASHMIR.


S.No.	Name of dumping places	Location of Dumping places i.e. village Khasra No.	Slope of dumping place	Length and width (in mtrs) and area of Dumping places (in sqm)	Quantity of muck/ Debris to be dumped (in 1000 cum)	Height of dumping expected Remarks (Area in bigha)	Remarks (Area in ha)
1	Keya	20/50 to 20/75	1:4	40 m x 20 m = 800 sq.m	4.58	10.00	0.08 ha
2		22/325 to 22/350	1:4	40 m x 20 m = 800 sq.m	4.58	10.00	0.08 ha
3		23/400 to 23/425	1:4	40 m x 20 m = 800 sq.m	4.58	10.00	0.08 ha
4		24/250 to 24/275	1:4	40 m x 20 m = 800 sq.m	4.58	10.00	0.08 ha
5		26/900 to 26/925	1:4	40 m x 20 m = 800 sq.m	4.58	10.00	0.08 ha
		Total		4000 sq.m	22.90		0.40 ha
							Say 0.40 Ha

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Full Title of The Project:- CONSTRUCTION OF ROAD FROM RAMNAGAR TO BASANTGARH (PHASE-II) L=11.0 KM		
FILE NO:- FP/JK/ROAD/143554/2021		
DATE OF PROPOSAL:- 15-06-2021		
DETAIL OF MUCK/DEBRIES TO BE PRODUCED		
Name of Work:- CONSTRUCTION OF ROAD FROM RAMNAGAR TO BASANTGARH (PHASE-II) L=11.0 KM IN DISTRICT UDHAMPUR UT JAMMU AND KASHMIR.		
Detail of quantity to be produced and used during the construction of road.		
S.No.	Description of items	Quantity (in cum)
1	Total quantity to be produced during construction	113757.52
2	Consumable Muck quantity at work	81000.00
3	Net quantity to be dumped (1-2)	32757.52
4	Soil factor 40%	13103.01
	G. Total (3+4)	45860.53


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BIOLOGICAL MEASURES FOR STABILIZATION OF MUCK DUMPING SITES TO BE UNDERTAKEN IN THE UP-GRADATION WORK OF ROAD FROM RAMNAGAR TO BASANTGARH KM 21ST TO 31ST IN RESPECT OF RAMNAGAR FOREST DIVISION.

1. Introduction:

The Ramnagar Forest Division was constituted in 1984 vide Govt. order No. FST of 1984 dated 23.05.1984. It has three Ranges viz: Ramnagar North, Ramnagar South and Basantgarh. This Forest Division is situated between 75° 9' E to 75° 42' E Longitude (meridian) and 32° 40' N to 32° 58' Latitude (Parallel). The Ramnagar Forest Division is bounded on its North by Jug Dhar which extends towards South East to the highest peak (Kapas) (4341 m) from the mean sea level. On the eastern side, ridge of the Ujh catchment separates Basantgarh and Billawar Ranges. On the Western side River Tawi, Champal Khad (partly), Barmeen Khad (partly) and Nardan Nallah forms the boundary.

2. Configuration of the ground:

The tract is extremely hilly and rugged in nature having varied range of aspects and is cut up by numerous Nallahs and Khads which makes it difficult to traverse. The hilly slopes range from precipitous to gentle. The altitude varies from 500 m to 4341 m. There are two main rivers i.e. river Tawi and river Ujh.

3. Geology, Rock and Soil:

- a. **Recent:** Consist of alluvial gravel and glacial moraines.
- b. **Upper Siwaliks:** It consists of coarse boulder-conglomerate, coarse grits, sand grits and clays.

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- c. **Middle Siwaliks:** It consists of brown sandstone, gravel beds or clays & haes hard gray sandstone with inter bedded clays.
- d. **Lower Siwaliks:** Consists of dark grey, buff brown shales and sand stone, hard red sand stone, purple shales and pseudo-conglomerate.
- e. **Murrees:** Purple, Grey hard and compact bedded, massive undulated sand stones inter bedded with purple and red clays.

4. **Climate and Rainfall:**

The climate of the tract varies with altitude, aspect and topography, a Sub-tropical climate prevails over most parts of the division as its tract consists of low lying hills. Most part of Ramnagar North and Basantgarh Ranges experience a moist climate. Snow fall is a regular feature at higher reaches of the division during winters. It melts early in the Ramnagar North Range but lasts for a pretty long time in higher elevations of Basantgarh Range.

5. **Diversion of Forest Land for Non-Forestry Works:**

In order to improve the living standard of downtrodden people in terms of access to better education, enhancement of living standard, and access to economy, the road connectivity is the main key. In the implementation of schemes, various types of land is to be involved, and the Central Government under the provision of Indian Forest (Conservation) Act, 1980 has made access to use of forest land for non-forestry activity. To mitigate the loss of environment which is the key component for the sustainable of all living creatures on this planet, several parameters have been kept in view by the Government while considering the use of forest land for non-forestry purposes.

6. **Stabilization of Muck Dumping Sites.**

While taking into hand the construction activities of road, a large scale much is generated and thrown in the forest land, thus disturbing the

natural feature of the site. In order to stabilize these sites, a plan with respect to biological measures has been drawn as under:

Sites identified for dumping of muck/mulba:

Forest Comptt. No.	Location of mulba dumping sites	Length (mtrs)	Width (mtrs)	Areas in sq.mtrs
70/Bgh	RD 20/075	40	20	800
68b/Bgh	RD 22/350	40	20	800
	RD 23/400	40	20	800
	RD 24/250	40	20	800
68c/Bgh	RD 26/900 & area in zig-zag	40	20	842
Total				4042 S.qm or 0.402 ha

Area under mulba dumping sites = 0.402 ha.

S. No.	Item of works	unit	Quantity	Rate (in Rs)	Amount (Rs. in lakh)
1	Fencing: Using Square Fence post conforming to product code PCFP-4 at spacing of 10' & 5 strands of Galvanized Barbed wire with 2 criss cross conforming to the product code GA-BW all fence post be fixed in the cement concrete 1:3:6 (1 Cement:3coarse sand: 6stone aggregate 40 mm nominal size) block of size 1'6" x 1'x1'	Rft	2000	100/rft	2.00 ✓
2	Afforestation (1 st Year)				
i	Plantation: Poly bagged planting of fast-growing soil binding local species (Tree/Shrubs) in pits of size 45 x 45 x 45 cm in staggered fashion along the contour.	Nos.	1500	29.34	0.44 ✓
ii	Plant Production: Raising of plants in Polythene bags of size (9" x 6") conforming to product code No. PB-60/90 with artificial source of irrigation in the nursery	Nos.	1800	8.03	0.145 ✓
iii	Maintenance of Plants raised in departmental Nursery	Nos.	1800	2.66	0.05 ✓
iv	Agave: Agave bulbs planted between interspaces of plants, open spaces & along the fence line of size	Nos.	4000	15.45	0.62 ✓
v	Grass slips (Soil binding grasses viz: Vetivers, Napier, Saccharum munja & Arundo donax)	Nos.	4000	6.35	0.254 ✓

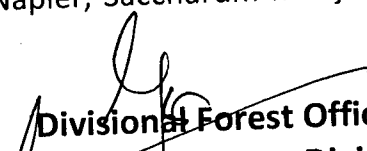
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vi	Cutting: Ipomea/Vitex/Popular/Salix/Mulberry (area specific)	Nos.	1000	6.00	0.06 ✓
vii	Seed ball: Broad casting/dibbling of seed balls	Nos.	1000	2.35	0.023 ✓
Total					1.592
3	Maintenance for 9 Years: 2 nd year @ 25% + 3 rd year @ 10% + 4 th Year to 10 th Year 7@ 5% = 70% of afforestation				1.114
Total (1+2+3)					4.706
4	Overhead 10% of total cost				0.4706
Grand Total					5.1766

7. Modus Operandi

- Fast growing species of plants shall be planted to stabilize the area in the very near future.
- Soil binding species viz: Vetivers, Napier, Saccharum munja & Arundo donax shall be planted.


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