GOVERNMENT OF JAMMU AND KASHMIR

PMGSY DIVISION Thathri

ABSTRACT OF PROJECT

PROFORMA B & C

NAME OF SCHEME	:	Kharangal to Chounri
LENGTH	:	8.518 KMS.
ESTIMATE COST	:	~~702.99~~ 774.30 Lacs
COST PER KM	:	~~91.92~~ LACS 83.06 lacs
PACKAGE NO.	:	JK-04-281
BLOCK	:	Bhallessa
CODE NO	:	~~L022~~ L043
NO. OF VILLAGES LINKED	:	7 No
NAME OF THE VILLAGES	:	Angnool , Bhargi, Bheja, Dalian ,Draie ,Ludoo , Rajpura, Sinoodalari& Chounri
POPULATION Target Habitation Chounri	:	681 SOULS

Executive Engineer,
Pmgsy Division ,
Thathri

Superintending Engineer,
Pmgsy Circle, Ratote

Executive Engineer
PMGSY Division
Thathri

Technical Report

Name of the Road: - Kharangal To Chounri
Length of the Road:- 8.518 Kms
Block:- Bhallessa
Package No Stage I JK04- 281
Terrian :- Hilly & Snow Bound.

Introduction: - There is a difference between "Urban Indian & Rural Bharat" villages have not been able to keep pace in the path of progress & development. A critical link on this path is national network of all weather roads in the rural areas.

There is great close link between rural connectivity and growth be it in the area of trade, employment, education or healthcare. States having poor connectivity are also, the states that reflect poor Socio-Economic indices.

While over the past five decades the length of rural roads has been increasing but there are still more than 50% habitations which remain unconnected.

For the first time in India a programme had been launched in December 2001, that is dedicated only to the construction of rural roads known as Pradhan Mantri Gram Sadak Yojana (PMGSY). This programme consider connectivity to every unconnected habitation with a population more than 250 through all weather roads in hilly states, desert & tribal areas.

PMGSY is a programme with vision clarity of purpose professionalism, transparency and accountability. A programme to transform lines of rural people through roads would bring growth, employment and a great change. A programme that would enable millions to cross the poverty line. A programme that is bridging the gap between Urban & Rural Bharat.

Our state has launched massive road network under PMGSY.

Stage I of the road from Kharangal To Chounri has been completed under Package No:- JK04-281 and connects the village Chounri

The flexible pavement of the road which is a part of present scope of work has been designed for stage II on the basis of CBR of the Sub base and traffic growth rate of 6% per year for the design life of 10 years. As per recommendations contained in SP:72

Provisions of retaining walls, Breast Walls, Pucca Drain and all other item of work which were not covered or beyond the scope of Stage-I have been kept in the DPR of Stage –II

Proposals and specifications: - Following are the proposal and their specifications.

GSB (Granular Sub Base) :- It is proposed to lay and compact well graded material on prepared sub grade in accordance with the requirements, with the help of vibratory road roller of minimum 80-100 Kms static weight. The material shall be laid in one or more layers as sub base or lower sub base (termed as sub base here-in-after) as necessary according to lines, grade, as per drawings. Also

Executive Engineer
PMGSY Division
Thatri

the material shall be laid on the prepared sub grade on the design based on IRC-SP-72-2007 and the material comprises of natural sand, moorum, Gravel, crushed stones, crushed slag, brick metal, Kankar, or combination thereafter depending upon the grading requirement. The material shall pass 100% through 75mm IS sieve and 55-75% through 26.5mm IS sieve. The material when tested according to IS 2720 (Part-5) shall have liquid limit and plasticity index not more than 25 & 6% respectively. The wet aggregate impact value shall not exceed 50.

The rolling shall commence at the lower edge and proceed towards the upper edge longitudinally for portion having unidirectional cross fall and super elevation and shall commence at edge and progress towards the centre for the portion having cross fall on both sides

Water Bound Macadam (WBM) Grade III:- (a). It is proposed to lay one layers of WBM III 75mm thick of crushed or broken stone aggregates with grading 63 to 45 mm and compacted with the help of 3 wheeled power roller 80-100 Kn capacity or vibratory roller of 80-100 KN static weight at the speed of 5 Km per hour.

Impact value and flakiness index of the material shall be less than 40 and 25 respectively. Also water absorption of the aggregate shall not exceed 2%.

b. Screening: - Screening to fill voids in the coarse aggregates shall generally consists of same material as the coarse aggregates. Liquid limit and plasticity index of such material shall be less than 20 and 6% respectively and fraction passing 75 micron IS sieve does not exceed 10%.
The quantity of screening of size 13.2mm for WBM grade-III 63mm to 45mm size (75mm thickness) shall be 0.21 cum to 0.15 cum/10 sqm.

B. **Binding Material:-** Binding material to be used for Water Bound Macadam shall comprise of a suitable material having a plasticity index value less than 6 for Sub base/base course and 4 to 10 for surfacing course as determined in accordance with is; 2720 (part 5). Quality of material for 75mm compacted thickness of WBM will be 0.6 = $0.09m^3/10m^2$ and for 100mm compacted thickness 0.08-$0.10m^3/10m^2$.

3. Bituminous Macadam :-

a. Prime Coat:- Prime coat with bitumen emulsion (SS-I) sprayed @ 0.70-1.80Kg/m2 on prepared surface of granular base using Mechanical means
as per Technical specifications clause 502.

b. Tack coat:- tack coat with bitumen emulsion (RS-I) using emulsion distributor at the rate of 0.20-0.25kg/sqm. On the prepared bituminous surface as per clause 503.

Executive Engineer
PMGSY Division
Thathri

c. **20 mm premix carpet using bitumen Emulsion:-** The work shall consist of laying of 20mm thick open graded premix with hot mix plant & rolling with ordinary roller (8.0 -10.0t) using bitumen as binder @14.6kg/10m^2 and aggregate (13.2mm and 11.20mm size) @ 0.27m^3/10m^2 (0.18m^3 + 1.09m^3)

d. **seal coat:- Type B:-** The work shall consist of laying of a seal coat for sealing the voids in bituminous surface laid to specific levels, grade and cross falls (camber) using bitumen @6.8kg/10m^2 and aggregate shall be sand or grit @0.06m^3/10m^2 the aggregate shall pass 2.36mm sieve and be retained on 180micron sieve.

4. **Protection work:-** Semi pucca retaining wall and breast wall, parapet edge wall and drain wherever necessary and which are not covered in stage I shall be constructed to retain the edge of the road and stabilize the uphill slope.

Cost and Time Period:- Cost of the Project is **Rs.509.87Lacs** and shall be completed in 09 months.

Asstt Ex.Engineer
PMGSY SUB DIV . BHALLESSA

Ex. Engineer
PMGSY DIV.THATHRI

Executive Engineer
PMGSY Division
Thathri

LOCATION CHART OF C.D WORK OF KHARANGAL TO CHOUNRI UNDER BHARAT NIRMAN (PMGSY)

Km	HPCulverts	1 Mtr.	2 Mtrs.	3 Mtr	6 Mtr	10 Mtr.
1st Km						
0-75	01	-	-	-	-	-
350-375	01	-	-	-	-	-
575-600	01	-	-	-	-	-
800-825	01	-	-	-	-	-
950-975	01	-	-	-	-	-
2nd Km						
350-375	-	-	-	01	-	-
675-700	01	-	-	-	-	-
950-975	01	-	-	-	-	-
3rd Km						
75-100	01	-	-	-	-	-
275-300	-	-	-	-	01	-
550-575	01	-	-	-	-	-
725-750	01	-	-	-	-	-
925-950	01	-	-	-	-	-
4th Km						
200-225	01	-	-	-	-	-
525-550	01	-	-	-	-	-
700-725	01	-	-	-	-	-
900-925	01	-	-	-	-	-
5th KM						
25-50	-	-	-	-	01	-
200-225	01	-	-	-	-	-
475-500	-	-	-	01	-	-
550-575	01	-	-	-	-	-
750-775	-	-	-	01	-	-
6th KM						
125-150	01	-	-	-	-	-
300-325	01	-	-	-	-	-
500-525	01	-	-	-	-	-
700-725	01	-	-	-	-	-
900-925	01	-	-	-	-	-
925-50	-	-	-	-	-	-
7th KM						
125-150	01	-	-	-	-	-
300-325	01	-	-	-	-	-
500-525	01	-	-	-	-	-
700-725	01	-	-	-	-	-
900-925	-	-	-	01	-	-
8th KM						
175-200	01	-	-	-	-	-
250-275	01	-	-	-	-	-
450-475	01	-	-	-	-	-
575-600	01	-	-	-	-	-
875-900	01	-	-	-	-	-
9th KM						
225-250	01	-	-	-	-	-
400-425	01	-	-	-	-	-
	34	0	0	04	02	-

H.P Culverts :- 34 Nos 2 Mtrs Span Culverts:- 0Nos 3 Mtr Span Culvert :-04
6 Mtr. Span Culverts = 02 Nos .

Assit Ex. Engineer
PMGSY SUB DIV .Bhalleswa

Executive Engineer
PMGSY Division
Thathri

Ex. Engineer
PMGSY DIV.THATHRI

BHARAT NIRMAN (PMGSY)
PACKAGE SUMMERY

S No	Name of Block	Name of Road		Type of Proposal	Proposed Length in Km	Cost of Pavement Rs	No. of CD Works	Cost of CD & Protection Works Rs	Total Estimate cost Rs	Average cost Per/ Km Rs
		From	To							
1	2	3	4	5	6	7	8	9	10	11
1	Bhallessa	Kharangal	Chounri	New	8.518 Km	218.33	40	~~562.36~~ 426.66	~~780.69~~ 644.99	91.65

N-New connectivity U- Up gradation

Add for Survey preparation of DRP
PMGSY logo & sign board = 2.30 Lacs
& selling out

Grand Total = ~~782.99~~ 647.29 lacs @ 75.97 lac/km

Prepared by: Signature :
Name :
Designation :
J.E

Akhtar Hussain Shah
Assistant Executive Engineer
PMGSY Sub. Division Gandoh

Scrutinized by : Signature
Name : Raman Puri
Designation : Superintending Engineer,
Circle Batote.

Signature
Name :
Designation :

Ishwar Lal Khapar
Executive Engineer,
PMGSY Division, Thathri

Technical Scrutiny done by :
Name : Dr. S.K. Gupta
Signature :
Coordinator STA
(Civil) & Ex. Chief STA (PMGSY)
Govt. College of Engg. & Tech.
Jammu.

EXECUTIVE ENGINEER
PMGSY Division
Thathri

Proforma C

111

PRADHAN MANTRI GRAM SADAK YOJANA (PMGSY)

CHECK LIST FOR P.I.U. & S.T.A.

(For Individual Road Works)

To be filled by PIU

Location : State: J&K District Doda

2. Package No.. JK04-281
3. Name of the Road: From Kharangal To Chounri
4. Total Length (Km): 8.518 In built yup area 4.00 In Open Area 4.518
5. Estimated Cost (in lacs) : 647.29

Average Cost:

Item	Total Cost (in lacs)	Cost per Km Lacs
Flexible Pavement	218.63	
Pavement (~~Rigid Pavement~~) (cc ...)	426.66	
Other	2.30	
Total	~~[illegible]~~ 647.29	95.92

6. Type of proposal: New connectivity/Up gradation (647.29) lacs 4.75% ... lacs

- **If the proposed road is a New Connectivity**
- Is the road a part of core network Yes
- If yes Through Route/ Link Route No.

T-		

L-	0	4	3

- Name of the unconnected Target Habitation (s) (to be) Angrool, Bhargi, Rheja, Darie, Luddu, Rajpora, Sinoodalari & Chounri crosschecked with CN-6)
- Population sub served by the proposed road ~~10391~~ 4591 ✓
- Does the proposed road lead upto the Habitation for which it is supposed to provide connectivity (In other words are you sure that the road is not being made partially?) YES/NO
- Does the Proposed Road connect the unconnected Habitation to
  a) Another habitation having All-weather road
  b) Directly to an All weather road
  If (b) indicate the nature of road to which the proposed road leads N.A

RR	MDR	SH	NH

YES/NO

- **If the proposal is for up gradation**
- is the road a part of the core network YES/NO
- is it associated Through Route or Not YES/NO
- PCI Value
- Age of the road
- Is it certified that there are no other unconnected Eligible Habitation in the district YES/NO

YES/NO

7. a) Whether the proposed Road has desired carriage way width, Roadway width and Road Land Width (RLW)
   b) **Indicate the actual widths of the** following for the proposed road
      a) Carriageway
      b) Roadway
      c) Road Land Width

	In the Built Up Area (m)	In the Open Area (m)
a) Carriageway	3.00	3.00
b) Roadway	~~5.50~~ 6.0 m	~~4.50~~ 6.0 m
c) Road Land Width	Varies	12.00

Index Map (not to scale) : Sheet attached

Executive Engineer
PMGSY Division
Thathri

/ad: Kharangal to Chounri

tion Details:

Cross Section of the Existing Road Showing different component layers.

b) Cross Section of the proposed Road Showing different component layers

(Should be as per Actual Provisions of DPR)

8. Base year traffic Volume **Anticipated** **N.A** (The present proposal is upto fair weather status only)

Month & Year Traffic Volume

Motorized Traffic													Non Motorised Traffic			
Days	Cars, Jeep, Van, Three Wheeler	Motorized two wheelers	Light commercial vehicles	Trucks			Agriculture Tractor Trailers			Buses			Cycles	Cycle Rikshaw	Animal Drawn Vehicle	
				L	U	OL	L	U	OL	L	U	OL			SWC	Num Type
Day 1																
Day 2																
Day 3																
Average																

ADT in the year of Traffic Count =

Growth rate adopted (%) = 6.00

Base year Traffic AADT (T) =

Design Life = 10 years

Number of Harvesting Seasons = 2

No. of Days in each Harvesting Season (t) = 120 days

Value of (n) assumed = 1

Cumulative ESAL =

Traffic Category =

9. Sub Grade CBR (For Different Sections) =

Chainage					
CBR %					

10. Cost Details

A. General Costs	Cost Lacs	Cost/Km Lacs
Cost of preparation of DPR i) Survey and preparation of DPR's Providing tracer cut and setting out.		

Executive Engineer
PMGSY Division
Thathri

Pavement Components

Description of layer	Thickness in mm	Quantity	Cost (in lacs)	Cost/km (in lacs)
Earth Work – in Excavation/ Cutting		150274.70	218.33	
Earth Work – in Filling (Embankment)				
Subgrade (if provided separately)				
Shoulders (if not considered in the Earthwork)				
Granular Sub base				
Soil + Aggregate Mix				
WBM Gr-II				
WBM Gr-II				
C. Bituminous Layers				
Prime Coat				
Track Coat				
OGPC				
Seal Coat				
MPM/ BBM				
Surface Dressing				
D. Cement Concrete Road Pavement Quality Concrete (M30)				

E: C D Works

No. of Existing CD Works — No

Do they require any improvement – specify the nature of improvement proposed

If yes, there Number and Cost of improvement

	Location-Chainage (Similar Type of CD's may be groped together)	Type pf CD & their Nos.		Total Length of Bridge/ Culvert	Cost in lacs
		Type	No.		
1.		1.0 m dia Hume pipe culvert	34	×2.44	~~87.04~~ 82.96
2.		3mtrs span culvert	04	× 8.79	~~35.48~~ 35.16
3.		6 mtrs span culvert	02	× 20.89	~~42.56~~ 41.78
	Total Cost of Proposed CD Works		40 No.		~~165.08~~ 159.90 lacs

	Cost in (lacs)	Cost/ Km (lacs)
F. Protection Works (R/w 3mtr = ~~950~~ 675 mtr, 4 mtr = ~~1050~~ 675, E/w = ~~1300~~ 1000 mtr, B/w = ~~1500~~ 1335 mtr)	~~383.48~~ 252.96	45.02
G. Pucca Side Drain (if Provided): Length Crates = 80 No.s	13.80	1.62
H. Road Logo, other Road Furniture		
I. Any other Provision (Please Specify) (Logo + Inf.) Boards + survey + setting out	2.30	
Total Cost of the Project (Lacs)	~~782.99~~ Rs. 647.29 lacs @ 75.97 lacs/km	

Executive Engineer
PMGSY Division
Thathri

the Road

year Routine Maintenance

Year	Cost in lacs	% Cost	Cost/Km
I			
II			
III			
IV			
V			
Total Maintenance Cost			

11. Whether the road has Geometrics as per Rural Manual RRM/ Latest Circulars of NRRDA — Yes

12. Whether C.D. Works/ Protection Works are provided as per RRM/ Latest Circulars of NRRDA/ Respective Codes — Yes

13. Whether the Cost estimates ~~are~~ are as standard data analysis and SSR — Yes

14. Source and the lead distances of Materials are as under:

Material	Source	Lead Distance	Material	Source	Lead Distance
Earth from cutting	Local	1 Kms	Cement	Jammu	260 Kms
Murrum	-	-	Emulsion	-	-
Aggregate	Thathri	49 Kms	Bitumen	-	-
Sand	Thathri	49 Kms	Steel	Jammu	260 Kms

Certified that information provided is true

Prepared by

Asstt. Ex. Engineer
PMGSY Sub Division
~~Thathri~~
GANDOH

Checked By

Executive Engineer
PMGSY Division
Thathri

Scrutinized by

Superintending Engineer
PMGSY Circle
Batote

Counter Signature of
Co-ordinator STA:

Executive Engineer
PMGSY Division
Thathri

1/1

To be filled by State Technical Agency

Name of the STA: Govt. College of Engg. & Tech. Jammu

Name of Road: Kharangal to Chounri

15.	**Is the Proposed Road entered on the OMMS:** (Data entries to be verified by STA before clicking the proposal)	~~Yes~~/No
16.	If the Proposal is for new connectivity	Yes/No
	Have you satisfied yourself that the proposed road is a part of the Core Network	Yes/No
	Is the unconnected habitation (s) part of list of unconnected habitations as per CN-6	Yes
	Does the Proposal ensure full connectivity to Target Habitation	~~Yes~~/No
	a) If No, the name of Unconnected Habitations upto which is connected.	~~Yes~~/No
	b) If such unconnected Habitation eligible Under PMGSY	Yes/No
17.	**Are you satisfied with the following**	~~Yes~~/No
	Engineering Surveys (L section, X Section must be verified)	Yes/No
	Soil/ Material Investigation (CBR, Density, LL, PI, Gradation to be verified)	Yes/No
	Traffic Surveys/ Estimation	~~Yes~~/No
	Hydraulic Studies (Catchment for structures with more than 2 Vents to be verified from topo sheet.	
	Location and requirement of all CD Structures to be verified from L section.	~~Yes~~/No
18.	In case, Traffic is project beyond T 4 Category are you satisfied with reason given by PIU.	N/A ~~Yes/No~~
19.	In case, sub grade CBR is less than 3, has Soil Stabilization etc. been proposed (If not, specific Reasons given by PIU)	~~Yes~~/ No
20.	Is the design of the following elements as per Rural Road Manul/ Circulars of NRRDA:	~~Yes~~/ No
	Alignment & Geometrics	Yes/ No
	Location and type of CD works and	~~Yes~~/ No
	Side drains	~~Yes/ No~~
	Integration for Cross and Longitudinal Drainage Protection work.	
21.	Is the design of flexible pavement as per IRC SP: 72-2007 and design of Rigid Pavement as per IRC SP:62-2004	~~Yes/ No~~
22.	**Does the Estimation Conform to Standard Rate Analyse and SSR generated for the current phase.**	Yes
23.	Does the proposal have provisions for	
	PMGSY Logo Sign Boards and Information Board	Yes/ No
	Km/Hm Stones	Yes/ No
	Guard Stones (where necessary)	Yes/ No
	Traffic Sign Boards (as necessary)	
24.	Secific Remarks, if any by STA	

Certified that the Design and Estimation for the proposed Road work are based on the data and SSR provided by PIU Engineers. The proposal after final correction is entered on the OMMS. The proposal may be considered for Clearance.

Technical Scrutiny at STA done by:

Signature

Name

Date

Co-ordinator STA

Signature

Dr. S. K. Gupta 7/13

Name (Civil) Co. Ord STA (PMGSY)

Govt. College of Engg. & Tech., Jammu.

Executive Engineer
PMGSY Division
Thathri

DETAILED ESTIMATE FOR THE CONSTRUCTION OF BREAST WALL (2.55 MT. HEIGHT IN

Road Kharangal to Chounri

56

S.No	Particulars of Items	Amount
1.	Earthwork in excavation for structures as per drawing and technical specifications clause 305.1 including setting out construction of shoring & bracing, removal of stumps and other deleterious material and disposal up to a lead of 50Mtr. Dressing of sides and bottoms and back filling in trenches with excavated suitable material. Ordinary Soil 70% Ordinary Rock 20%, Hard Rock 10% = 1 x 10.0 $\frac{(0.75+0.98)}{2}$ x 1 = 8.65 Cum = 1 X 10.0 X $\frac{(0.25+0.85)}{2}$ x0.82 = 4.51 Cum T = 13.26 Cum 363 @ ~~243.60~~	4813.38 ~~3230.13~~
2.	Providing / Laying for Plain /reinforced concrete in open foundation complete as per drawing and technical specifications clause 802,803, 1202 & 1203 PCC grade M-10 grade (1:3:6 nominal mix). 1 x 10.x 0.87 x 0.10 = 0.87 Cum Drain = 10 X 0.10 X 0.825 = 0.825 Cum T = 1.69 4020 @ ~~3645.00~~/Cum.	6793.80 6160.05
3.	Stone Masonry in cement mortar for sub-structure complete as per drawing and technical specifications clause 702,704, 1202, 1204 in cement mortar 1:5 B.Band 1 x 10 $\frac{(0.66+0.77)}{2}$ x 0.60 = 4.29 Cum T Band 1 x 10 x $\frac{(0.45+0.53)}{2}$ X 0.45 = 2.20 Cum V Band 4 x 0.45 x $\frac{(0.66+0.53)}{2}$ x 1.50 = 1.60 Cum Total = 8.09 Cum 3523.78 @ ~~3040.00~~/Cum	27274.05 ~~24593.60~~
4.	R.R Masonry laid dry for sub-structure complete as per drawing and technical specifications clause 702,704, 1202 & 1204 1 x 10 x $\frac{(0.45+0.87)}{2}$ x 2.55 = 16.83 / Cum Deduct Pacca Masonry vide item (3) = (-) 8.09 Cum Net = 8.74 Cum 2365.51 @ ~~1409.00~~/Cum	12135.06 ~~12314.66~~
5.	Providing / Laying Plain / reinforced cement concrete in Sub Structure complete as per drawing and technical specifications clause 802,804, 805, 806, 807,1202 & 1204 PCC grade M-20 [1:2:4] Nominal mix 1 x 10 x 0.45 x 0.05 = 0.225 Cum Drain = 10 X 0.60 X 0.05 = 0.30 Cum T = 0.52 Cum 4961.00 @ ~~4550.00~~/Cum	2579.72 ~~2370.16~~
6	Providing concrete for plain / reinforced concrete in open foundations complete as per drawings & Technical specifications Clause 802, 803, 1202 & 1203 (P.C.C Grade M-15 Nominal mix 1:2.5:5) Drain Edge : 10.0 X 0.225 X 0.60 = 1.35 4120 @ ~~3711.00~~ / Cum	5562 ~~5057.10~~
7.	Carriage of material by M.T from source to site of work incl. loading unloading complete a) Carriage of sand 49 Km from Thathri Qty. Vide item No. (2) 1.69 Cum @ 0.462 / Cum = 0.78 Cum (3) 8.09 Cum @ 0.35/ Cum = 2.83 Cum (5) 0.525 Cum @ 0.45 /Cum = 0.23 Cum (6) 1.35 Cum @ 0.48 / Cum = 0.64 Cum Total = 4.48 Cum 557.23 @ ~~581.60~~/ Cum	3741.20 ~~2650.37~~

Executive Engineer
PMGSY Division
Thodupuzha

1/1

	b) Carriage of stone agg. for an av. Distance of 49 Km from Thathri Qty. Vide item No. (2) 1.69 Cum @ 0.924 / Cum = 1.56 Cum (5) 0.525 Cum @ 0.96/ Cum = 0.50 Cum (6) 1.35 Cum @ 0.90 / cum = 1.21 Cum Total = 3.27 cum	556.24 @ 729.00/Cum	1018.90 ~~2383.83~~
	c) Carriage of RR Masonry / Stone 9 Km Qty. vide item No. (3) = 8.09 Cum (4) = 8.74 Cum T = 16.83 Cum × 50 %	694.04 @ ~~201.00~~/ Cum	1491 ~~3382.83~~ 11694.15
	d) Carriage of cement av. distance of 260 KM. from Jammu Qty vide item No. (2) 1.69 cum @ 0.250 MT / Cum = 0.422 MT (3) 8.09 Cum @ 0.092 MT / Cum = 0.744 MT (5) 0.525 Cum @ 0.33 MT/ Cum = 0.173 MT (6) 1.35 Cum @ 0.275 MT/Cum = 0.371 MT T = 1.71 MT	1450.20 @ ~~1538.00~~ /MT	2480.30 ~~2614.60~~
	Total Cost of 10.0 RM Length =		~~54799.26~~ 66597.20
	Cost per RM =		~~5480.00~~ 6659.72

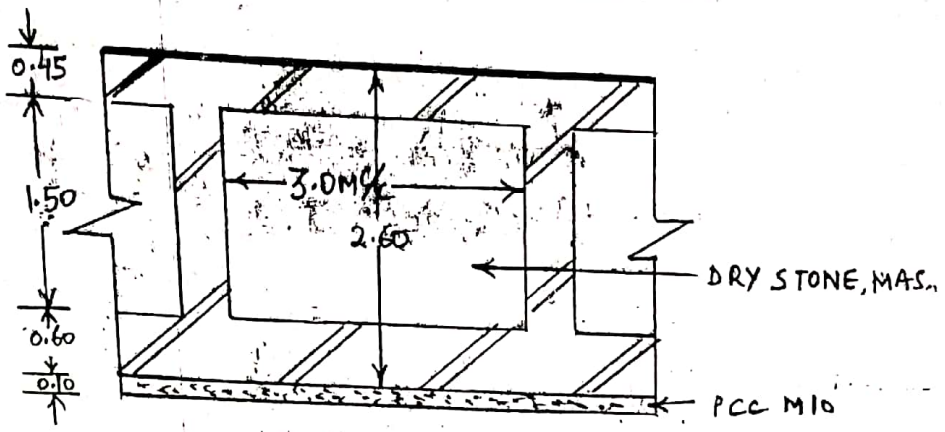
Asstt. Executive Engineer
PMGSY Sub-Division
Gandoh

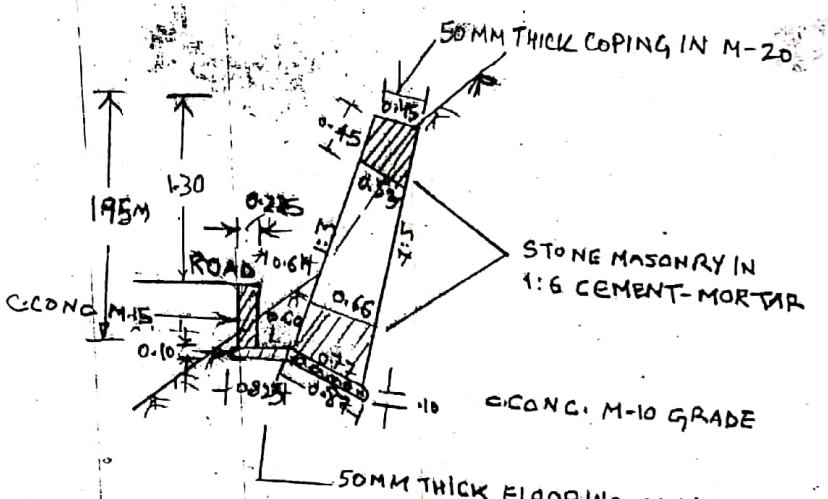
Executive Engineer
PMGSY Division
Thathri

Executive Engineer
PMGSY Division
Thathri

ICAL DRAWING FOR CONST. OF BIWALL. OF AV.

HEIGHT = 2.55M.





Executive Engineer
PMGSY Division
Thathri

Jr. ENGINEER.

ASSTT. EX. ENGINEER

EX. ENGINEER.
PMGSY DIVISION
THATHRI

Detailed Estimate for the Construction of Semi Pucca R/wall 3.0m Road Kharangal to Chounri

Sr. No.	Description	Amount
1.	Earthwork in excavation for structures as per drawing and technical specifications clause 305.1 including setting out construction of shoring & bracing, removal of stumps and other deleterious materials and disposal up to a lead of 50 Mtr. Dressing of sides and bottoms and back filling in trenches with excavated suitable material. Ordinary Soil 70%, Ordinary Rock 20%, Hard Rock 10% 1 x 10.0 x 1.467 M² (As per Drawing) = 14.67 M³ 363 @ ~~243.60~~ / M³	5325.21 ~~3573.61~~
2.	Providing / Laying concrete for Plain / reinforced concrete in open foundations complete as per drawing and technical specifications clause 802, 803, 1202 & 1203 PCC grade M-10 (1:3:6 nominal mix). 1 x 10.00 x 1.45 x 0.10 = 1.45 M³ 4020 @ ~~3645.00~~ / M³	5829.00 ~~5285.25~~
3.	Polygonal / Random, Rubble masonry uncoursed / brought to course in 1 cement : 6 fine sand mortar with nallah stone in substructure, incl. leveling up at specified levels with M-5 nominal mix (mix size of stone agg. 20mm nominal) conc. incl. cost of through / Bond stones. Bottom Band 1 x 10 x (1.20 + 1.35)/2 x 0.60 = 7.65 M³ Top Band 1 x 10 x (0.75 + 0.60)/2 x 0.60 = 4.05 M³ V.B 4 x 0.60 x (0.75 + 1.20)/2 x 1.80 = 4.21 M³ 15.91 M³ --(A) Parapets :- 5 x 1.50 x (0.60 + 0.45)/2 x 0.60 = 2.36 M³ 3707 T = 18.27 M³ 3523.78 .. @ Rs.~~3040.00~~ / M³	64379.46 ~~55540.80~~
4.	Polygonal / Random Rubble masonry uncoursed / brought to course, laid dry, with nallah stone, in substructure, incl. cost of through / Bond stones. 1 x 10.0 x (1.35 + 0.60)/2 x 3.0 = 29.25 M³ Deduct Pacca Masonary Qty. vide item No.(3)(A) = 15.91 M³ 1809 Net = 13.34 M³ 2365.51 @ ~~1409.00~~ / M³	31555.90 ~~18796.00~~
5.	Providing / Laying for Plain / reinforced cement conc. in substructure complete as per drawings and technical specifications clause 802, 804, 805, 806, 807, 1202 & 1204 in P.C.C grade M-20 (1:2:4) nominal mix 1 x 10.0 x 0.60 = 6 x 0.05 = 0.30 M³ @ Rs.~~4556.00~~ / M³ 4961	1468.30 ~~1367.00~~
6.	Backfilling behind with stones abutment, wing walls and return walls complete as per drawings and technical specifications clause 1204.3.8 1 x 10.0 x (0.60 + 0.15)/2 x 3.00 = 11.25 M³ 677 @ ~~527.00~~ / M³	7616.25 ~~5929.00~~

Executive Engineer
PMGSY Division
Theni

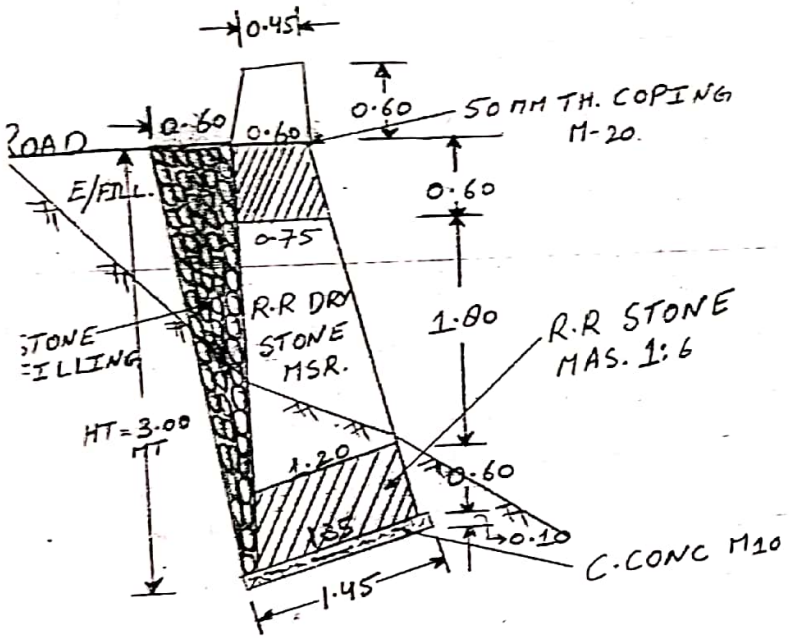
Sr. No.	Description	Amount
	Carriage of materials by M.T from source to site of work incl. loading/ unloading complete.	
	a) Carriages of Sand 49Km from Thathri	
	T = 7.771 M³	4322.54
	@ 591.60/ M³ 556.24	4597.32
	b) Carriage of Stone agg.49 Kms from Thathri	
	T = 16.278 M³	11310.60
	@ 729.00/ M³ 694.04	11868.12
	c) Carriage of Stone Av. 9 Kms.	
	T = 31.61 M³	9687.03
	@ 201.00/ M³ 306.48	6353.61
	d) Carriage of cement av. 260 KM from Jammu	
	Qty. vide item No.(2) = 1.45 M³ @ 0.25 / MT / M³ = 0.362 MT	
	(3) = 18.27 M³ @ 0.092 / MT / M³ = 1.68 MT	
	(5) = 0.30 M³ @ 0.33 MT / M³ = 0.09 MT	
	T = 2.132 MT	
	@ 1538.00/ MT 1450.52	3092.50 3275.94
	Cost of 10.0 M Length:	~~116297.22~~ 125083.2
	Cost per one RM Length =	~~11629.00~~ 12508.32

Asstt. Executive Engineer
PMGSY Sub-Division
Gandoh

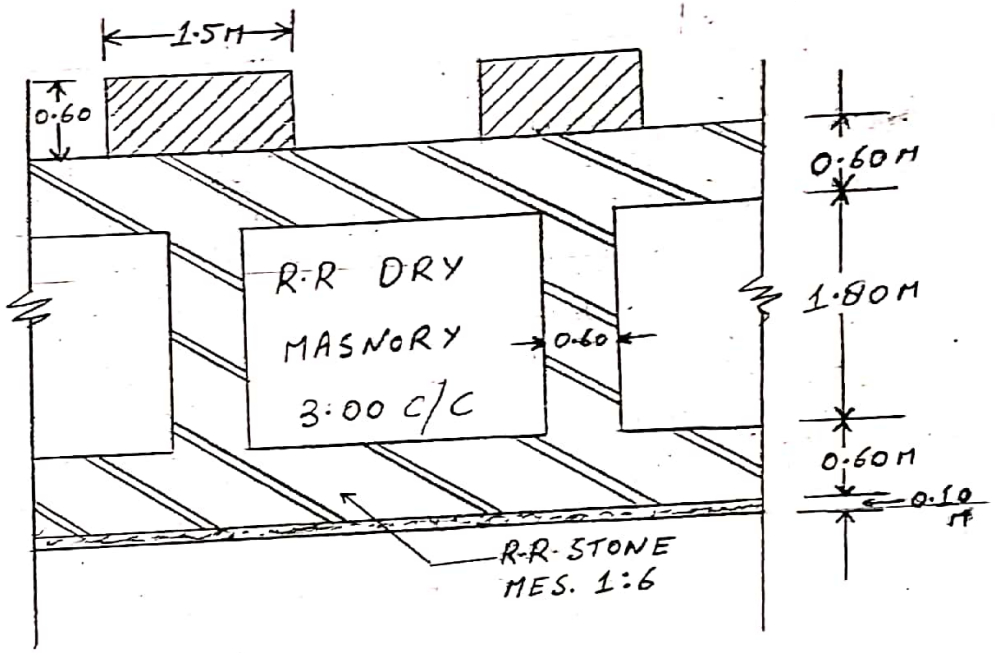
Executive Engineer
PMGSY Division
Thathri

Executive Engineer
PMGSY Division
Thathri

DETAILED DRAWING FOR CONST OF R-WALL 3-M



CROSS-SECTION



ELEVATION

Executive Engineer
PMGSY Division
Thathri

JR. ENGINEER

ASSTT. EX. ENGINEER

EX. ENGINEER
PMGSY DIVISION
THATHRI