#### <u>HIMACHAL PRADESH</u> PUBLIC WORKS DEPARTMENT

No.:- PW-SRDD-WA/Patyar Ghatru (forest case)/2024-25- 164/19-20 Dated:- 07-01-2015

The Divisional Forest Officer, Forest Division, Shimla Rural (Khalini).

Subject:-

Diversion of 1.4489 hac.of forest land in favour of HPPWD for the construction of road from Patyar Ghatru via Sitri Jayan Berti Nallah 0/00 to 3/600, within the jurisdiction of Shimla Forest Division, Distt. Shimla, H.P. (online No. FP/HP/ROAD/155756/2022).

Reference:-

Nodal officer (FCA) office letter No. HPFD-F05/40/2024-FCA-HP Forest department dated 25.09.2024.

The point wise reply to shortcoming to case in reference as follows:-

1. The Administrative Approval and Expenditure Sanction has been uploaded on the parivesh portal.

2. The layout plan is already provided and uploaded on parivesh portal duly countersigned by the Divisional Forest Officer.

3. The needful correction has been made.

4. The dumping site detail report has been given by the concerned Range Officer and same has been uploaded on parivesh portal.

5. The muck management plan already uploaded on parivesh portal duly countersigned by the concerned Divisional Forest Officer.

6. The Certificate has been enclosed and the same has been uploaded on parivesh portal.(copy

7. The reclamation plan already submitted duly counter signed by the concerned Divisional Forest officer and same has been uploaded on parivesh portal.

8. All the NOCs have been uploaded on parivesh portal.

9. It pertains to your office.

10. It pertains to your office.

11. It pertains to your office.. 12. It pertains to your office.

13. It pertains to your office.

14. It pertains to your office.

15. It pertains to your office.

16. The geologist report has been uploaded on parivesh portal.

It is therefore, submitted for information and necessary action please. Encl:- as above.

supplied as a

Executive Engineer, Shimla Rural Division, HP.PWD. Dhami.

Similar part of Side Codes Secretary

Copy to the Assistant Engineer, HPPWD Sub Division, Dhami for kind information.

> Executive Engineer, Shimla Rural Division, HP.PWD. Dhami.

#### Himachal Pradesh Public Works Department Phone No: 0177-2653455 Telefax: 0177-2805097 e-mail:hp-shi3@nic.in

No: SE-IV-R-II (Dhami)-Misc .Est. /2024- 13466-6

The Executive Engineer, Shimla Rural Division Dhami, HP PWD., Dhami.

Subject:-

C/O Link road Patyar Ghatru Via Sitiri Jayan Berti Nallah Km 0/00 to 3/600 (SH: Formation Cutting, C/O R/wall and B/wall, Cross Drainage work, Providing and laying Soling Grade I, in Km 1/015 to 3/600).

Reference:-

Preliminary PW-SRDD/DB/Detailed No. letter office Your estimate/Dhami/2024-25-13997-98 dated 28-11-2024.

The subject cited preliminary estimate as received vide your letter under reference is sent herewith duly approved for Rs. 80.18 Lacs (Rupees Eighty lacs and eighteen thousand) only for taking further necessary action subject to the condition that approval only for processing forest case clearance. Final A/A & E/S needs to be obtained with detailed estimate after obtaining the forest clearance and mutation of private land to HPPWD.

Encl: As above.

Superintending IF

4th Circle, HRPWI

What Circle HRPWI

Superintending IF

And Circle HRPWI

Superintending IF

And Circle HRPWI

And Circle HRPWI

Superintending IF

And Circle HRPWI

And Circle HRPWI

Superintending IF

And Circle HRPWI

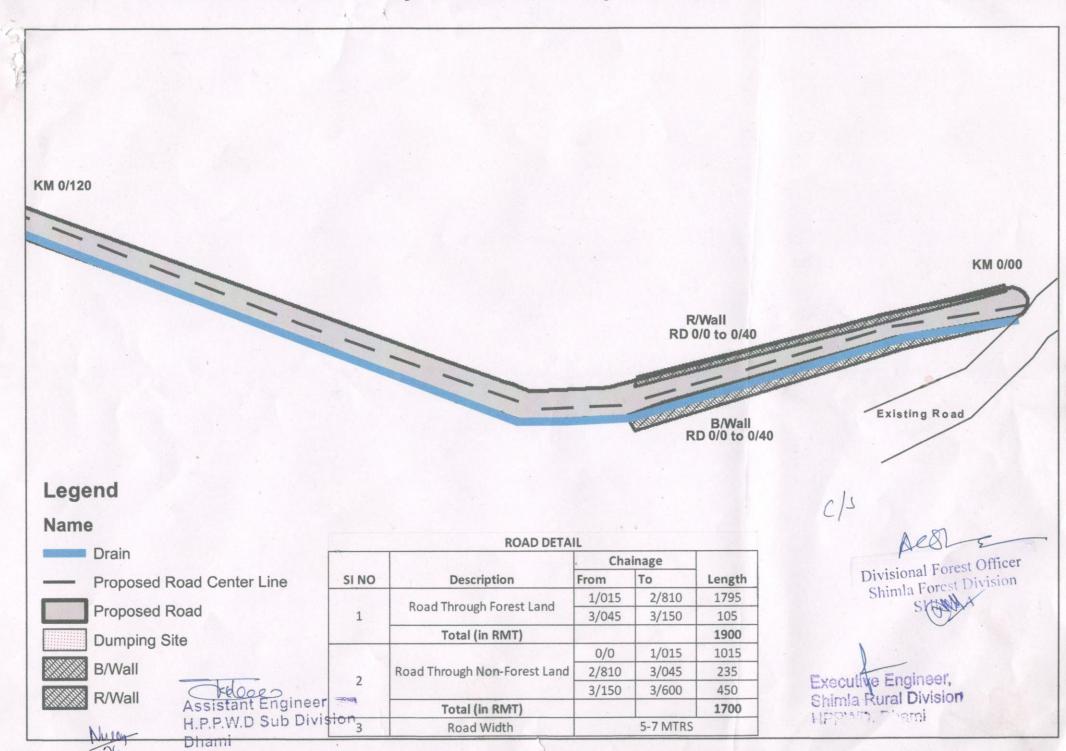
Superintending IF

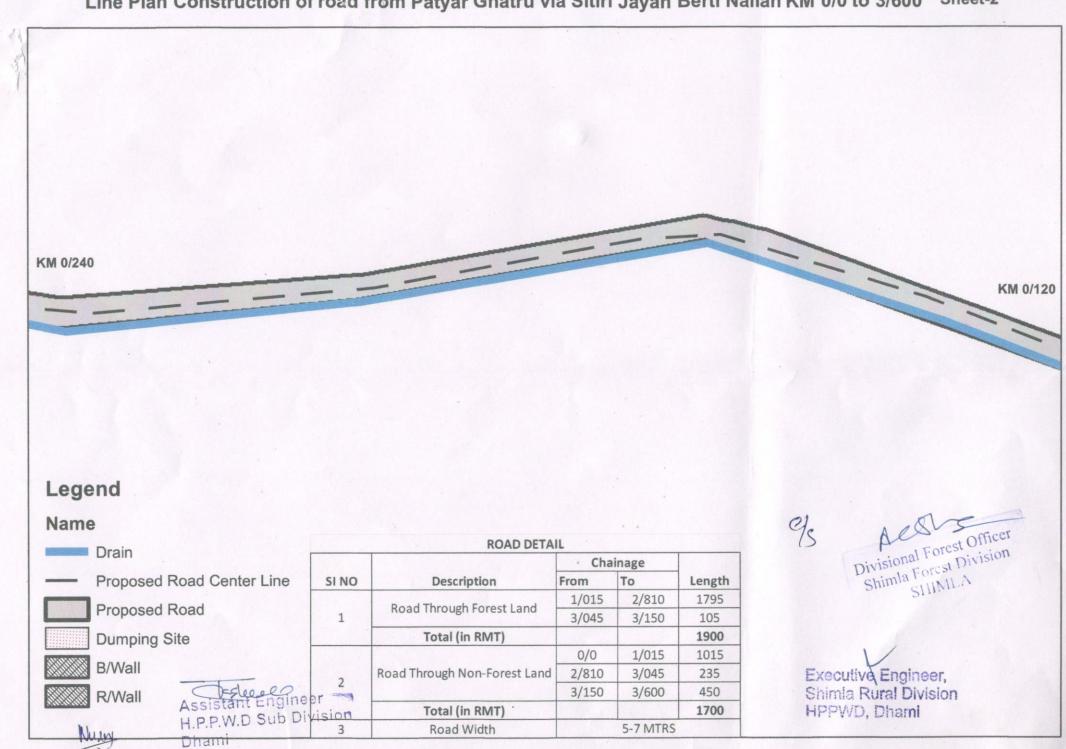
And Circle HRPWI

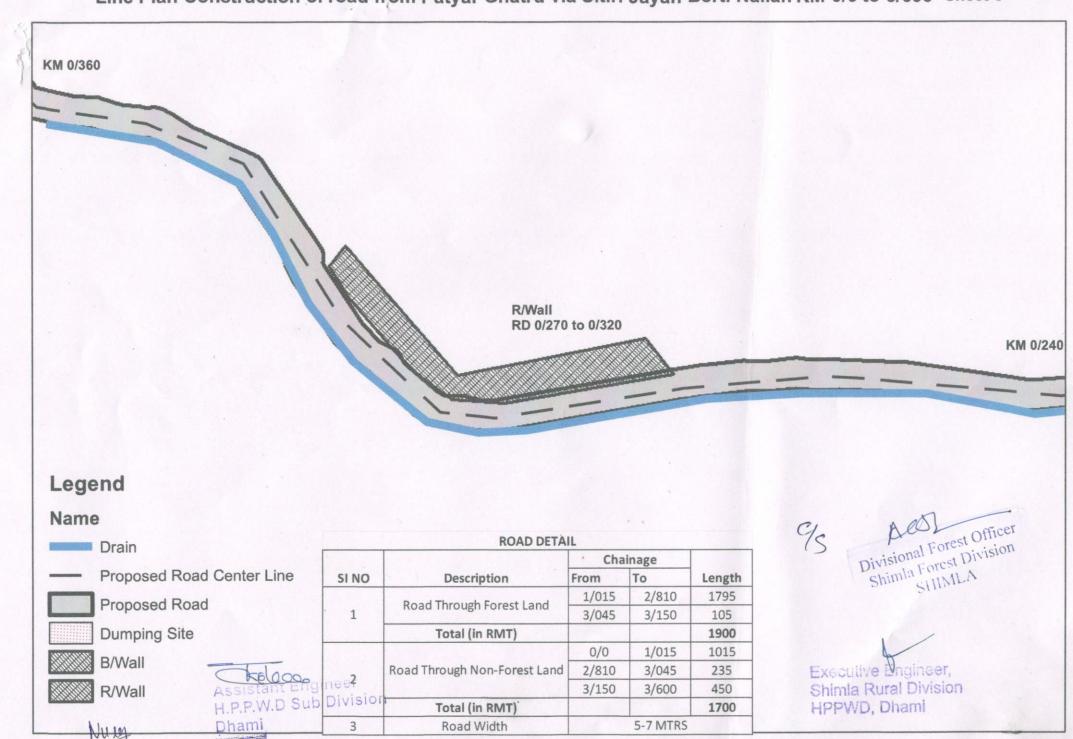
Superintending Engineer, 4<sup>th</sup> Circle, HPPWD, Shimla

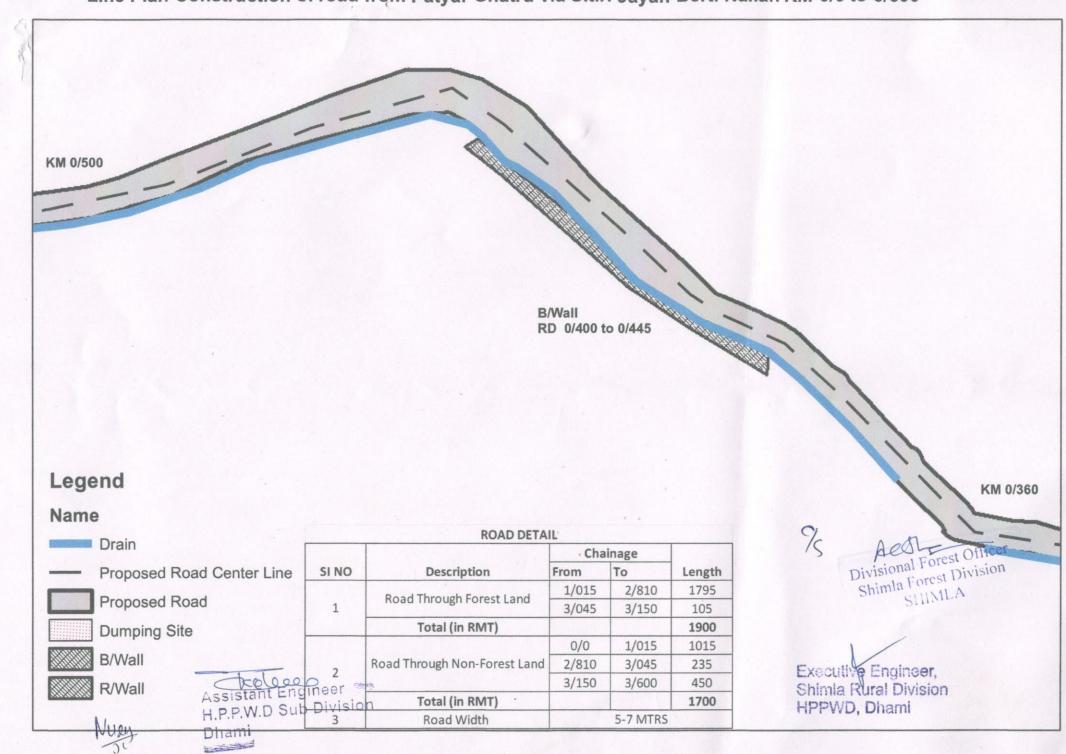
Executive Engineer,
Shimla Rural Division,
HPPWD, Dhami

643 R-II(Dhami)Misc.est.









## Line Plan Construction of road from Patyar Ghatru via Sitiri Jayan Berti Nallah KM 0/0 to 3/600 Sheet-5

KM 0/600

|      | ROAD DETA                    | IL    |          |        |
|------|------------------------------|-------|----------|--------|
|      | Description                  | Cha   |          |        |
| SINO |                              | From  | То       | Length |
|      | Road Through Forest Land     | 1/015 | 2/810    | 1795   |
| 1    |                              | 3/045 | 3/150    | 105    |
|      | Total (in RMT)               |       |          | 1900   |
|      | Road Through Non-Forest Land | 0/0   | 1/015    | 1015   |
| 2    |                              | 2/810 | 3/045    | 235    |
| 2    |                              | 3/150 | 3/600    | 450    |
|      | Total (in RMT)               |       |          | 1700   |
| 3    | Road Width                   |       | 5-7 MTRS |        |

## Legend

#### Name



Proposed Road Center Line

Proposed Road

**Dumping Site** 

B/Wall

R/Wall

Assistant Engineer
H.P.P.W.D Sub Division

Executive Engineer, Shimla Rural Division HPPWD, Dhami

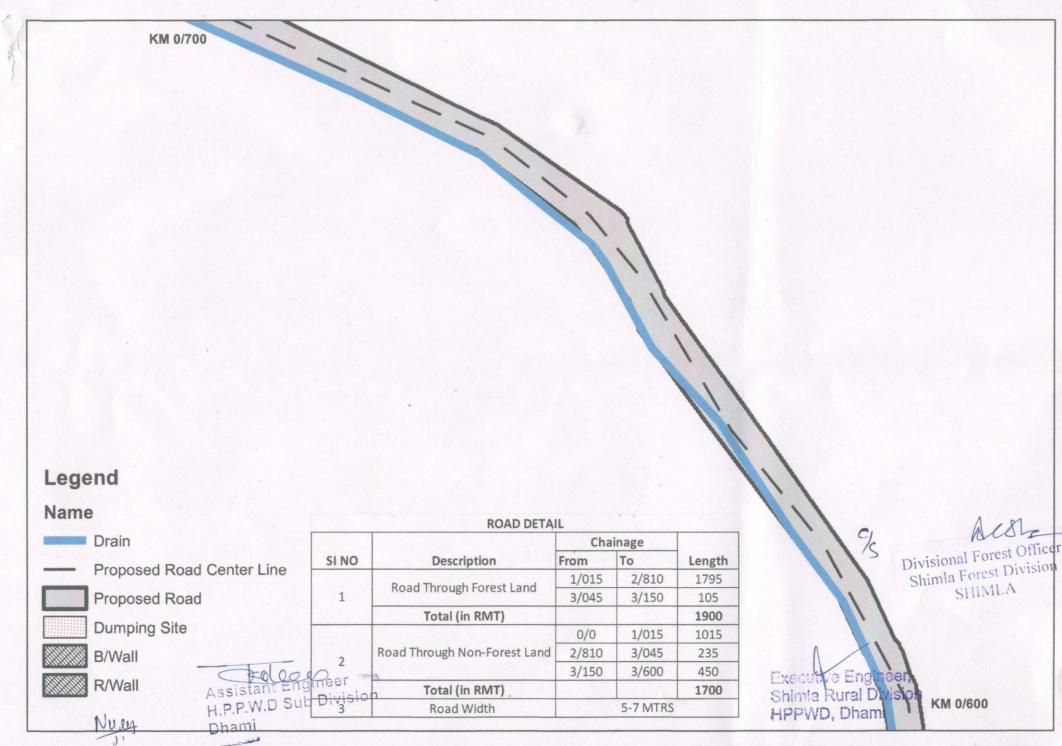
Divisional Forest Officer Shimla Forest Division

SHIMLA

KM 0/500



No. of Contract



## Line Plan Construction of road from Patyar Ghatru via Sitiri Jayan Berti Nallah KM 0/0 to 3/600 Sheet-7

|      | ROAD DETA                    | IL    |          |        |
|------|------------------------------|-------|----------|--------|
|      | Description                  | Cha   |          |        |
| SINO |                              | From  | То       | Length |
| 130  | Road Through Forest Land     | 1/015 | 2/810    | 1795   |
| 1    |                              | 3/045 | 3/150    | 105    |
|      | Total (in RMT)               |       |          | 1900   |
|      | Road Through Non-Forest Land | 0/0   | 1/015    | 1015   |
| 2    |                              | 2/810 | 3/045    | 235    |
| 2    |                              | 3/150 | 3/600    | 450    |
|      | Total (in RMT)               |       |          | 1700   |
| 3    | - Road Width                 |       | 5-7 MTRS |        |

## Legend

#### Name



Proposed Road Center Line

Proposed Road

**Dumping Site** 

B/Wall

R/Wall

Assistant Engineer
H.P.P.W.D Sub Division

Shimla Rural Division HPPWD, Dhami

Shimla Forest Division SHIMLA

KM 0/850



|      | ROAD DETA                    | IL       |          |        |
|------|------------------------------|----------|----------|--------|
|      |                              | Chainage |          |        |
| SINO | Description                  | From     | То       | Length |
| 1    | Dood Through Forest Land     | 1/015    | 2/810    | 1795   |
|      | Road Through Forest Land     | 3/045    | 3/150    | 105    |
|      | Total (in RMT)               |          |          | 1900   |
|      | Road Through Non-Forest Land | 0/0      | 1/015    | 1015   |
| 2    |                              | 2/810    | 3/045    | 235    |
| 2    |                              | 3/150    | 3/600    | 450    |
|      | Total (in RMT)               |          |          | 1700   |
| 3    | Road Width                   |          | 5-7 MTRS |        |

#### Name



Proposed Road Center Line

Proposed Road

Dumping Site

B/Wall

R/Wall

Assistant Engineer
H.P.P.W.D Sub Division
Dhami

Executive Engineer,
Shimla Rural Division
HPPWD, Dhami
KM 0/850

KM 0/930

Dumpi

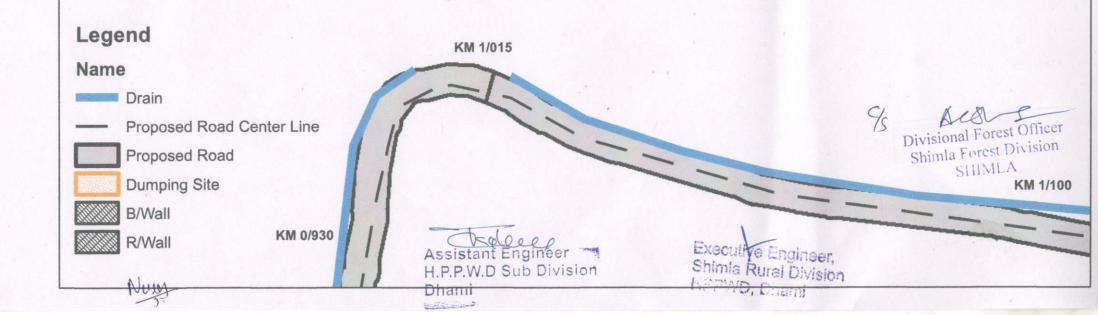
R/Wall

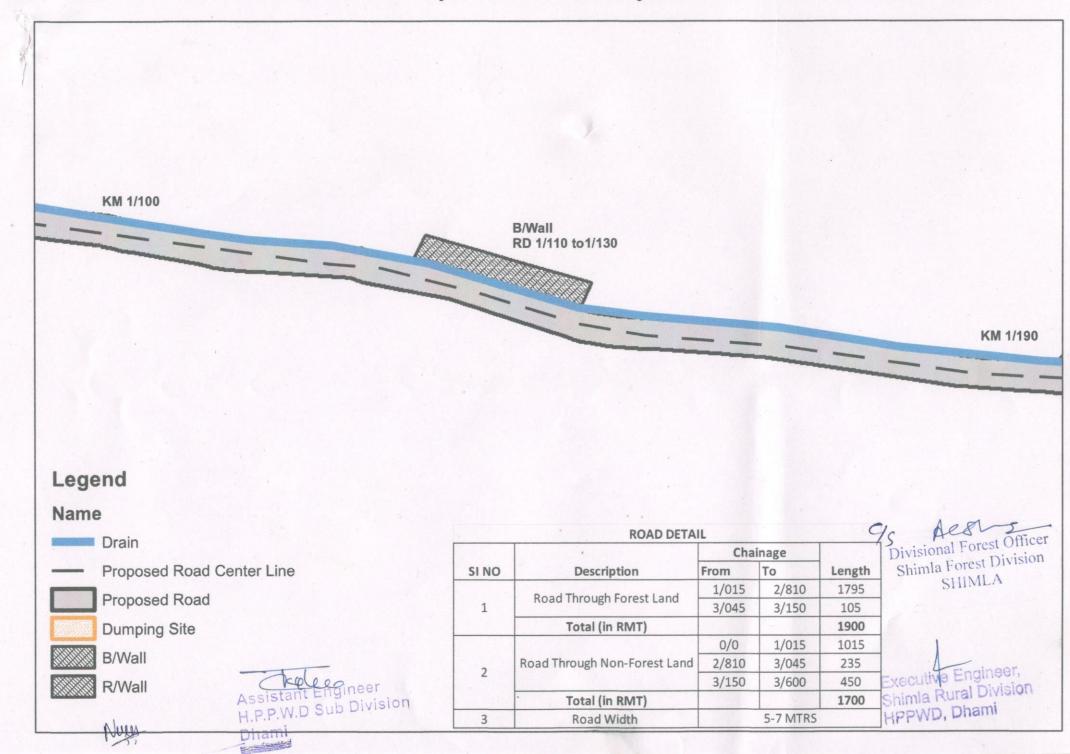
RD 0/890 to 0/910

Divisional Forest Officer
Shimla Forest Division
SHIMLA

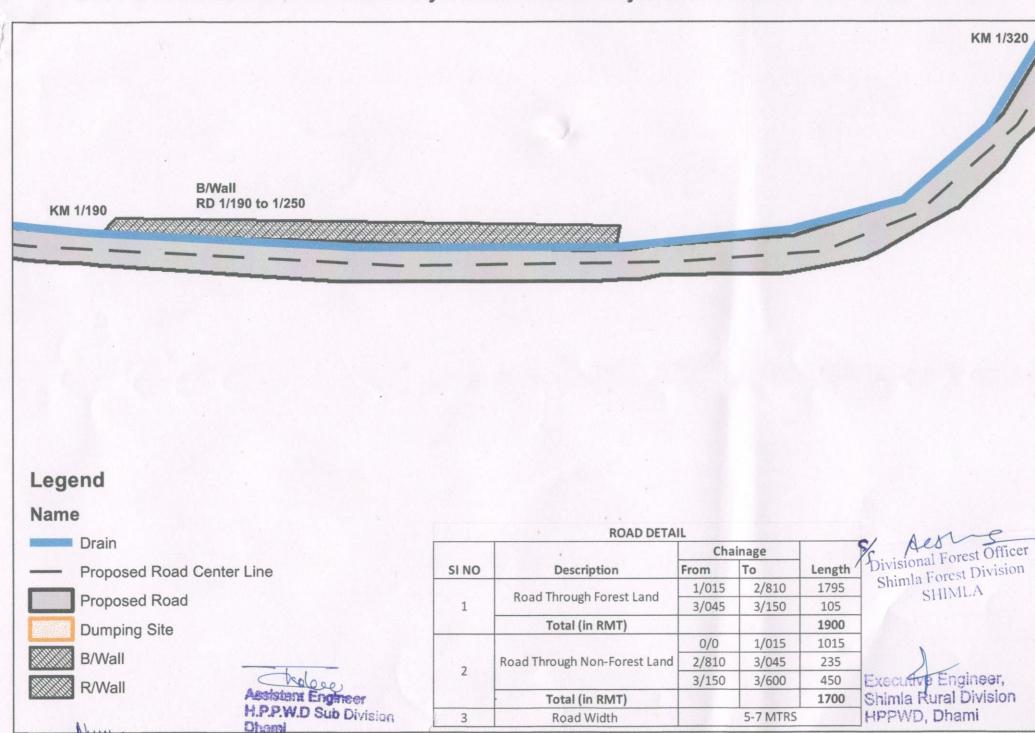


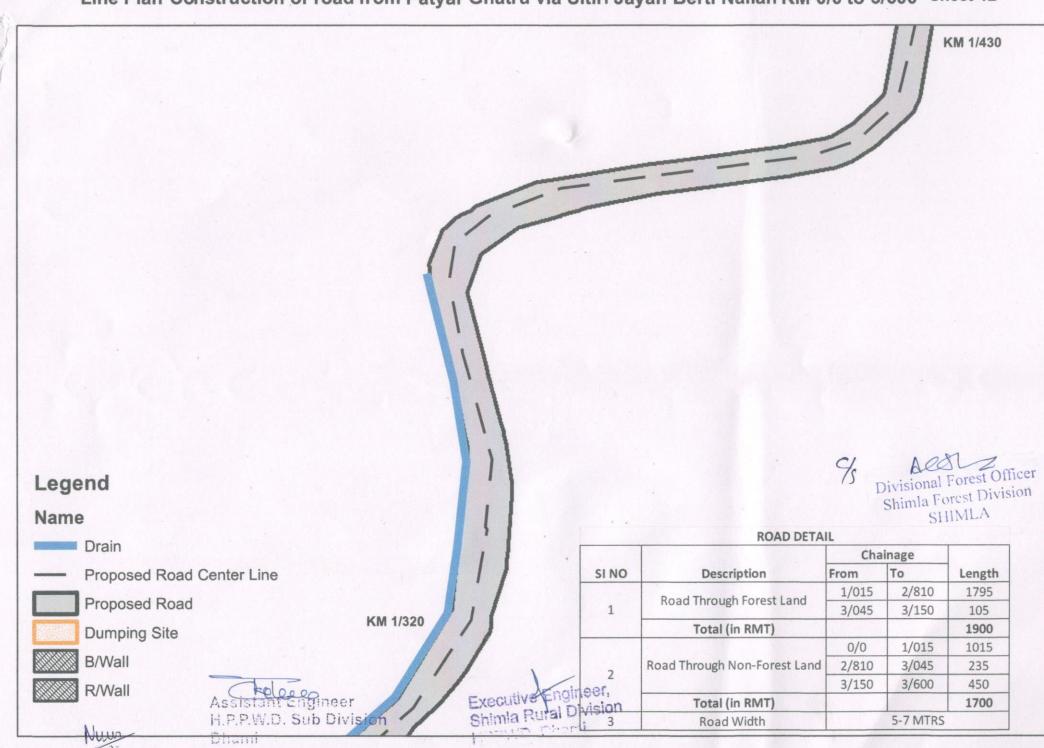
|      | ROAD DETA                    | IL       |          |        |
|------|------------------------------|----------|----------|--------|
|      |                              | Chainage |          |        |
| SINO | Description                  | From     | То       | Length |
|      | Dood Through Forest Land     | 1/015    | 2/810    | 1795   |
| 1    | Road Through Forest Land     | 3/045    | 3/150    | 105    |
|      | Total (in RMT)               |          |          | 1900   |
|      | Road Through Non-Forest Land | 0/0      | 1/015    | 1015   |
| 2    |                              | 2/810    | 3/045    | 235    |
| 2    |                              | 3/150    | 3/600    | 450    |
|      | Total (in RMT)               |          |          | 1700   |
| 3    | Road Width                   |          | 5-7 MTRS |        |





## Line Plan Construction of road from Patyar Ghatru via Sitiri Jayan Berti Nallah KM 0/0 to 3/600 Sheet-11





KM 1/430

KM 1/520

|      | ROAD DETA                    | IL       |          |        |
|------|------------------------------|----------|----------|--------|
|      |                              | Chainage |          |        |
| SINO | Description                  | From     | То       | Length |
|      | Road Through Forest Land     | 1/015    | 2/810    | 1795   |
| 1    |                              | 3/045    | 3/150    | 105    |
|      | Total (in RMT)               |          |          | 1900   |
|      | Road Through Non-Forest Land | 0/0      | 1/015    | 1015   |
| 2    |                              | 2/810    | 3/045    | 235    |
| 2    |                              | 3/150    | 3/600    | 450    |
|      | Total (in RMT)               |          |          | 1700   |
| 3    | Road Width                   |          | 5-7 MTRS |        |

## Legend

#### Name

Drain

Proposed Road Center Line

Proposed Road

**Dumping Site** 

B/Wall

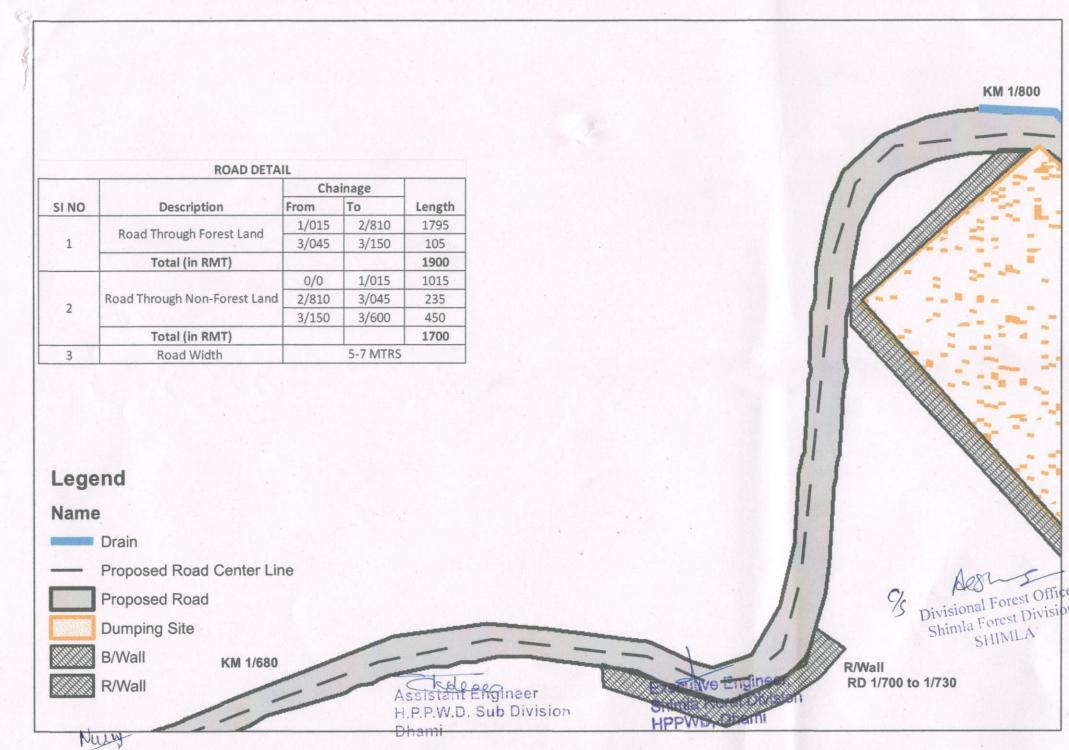
R/Wall

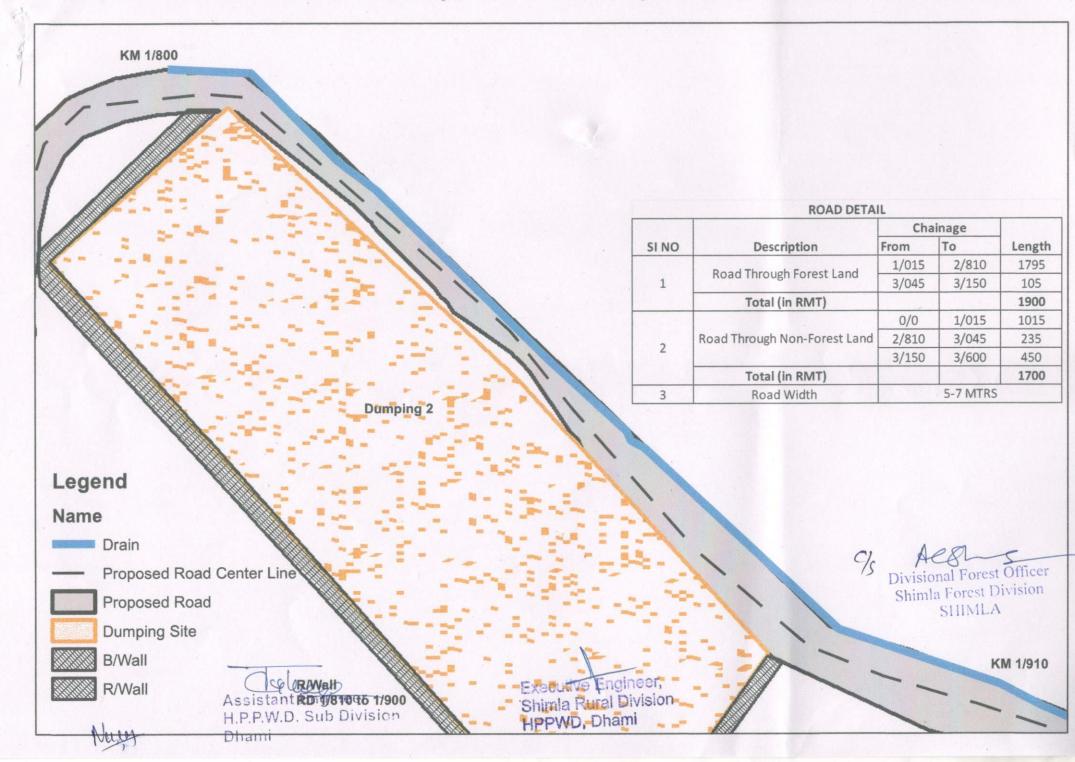
Assistant Engineer
H.P.P.W.D. Sub Division

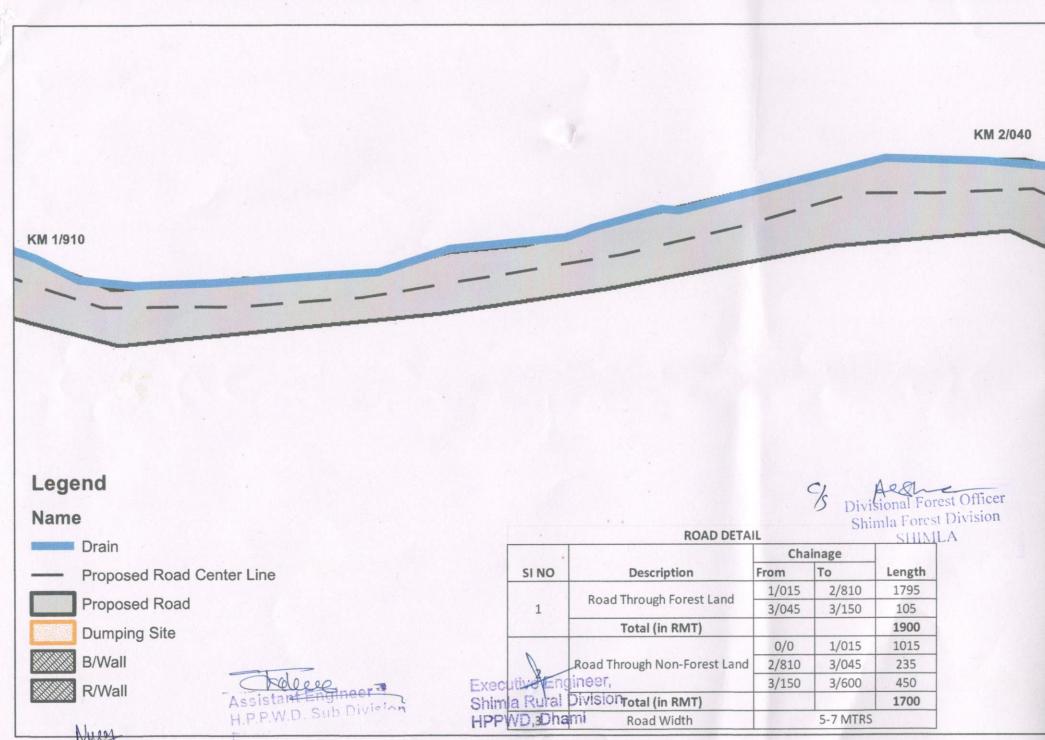
Dhami

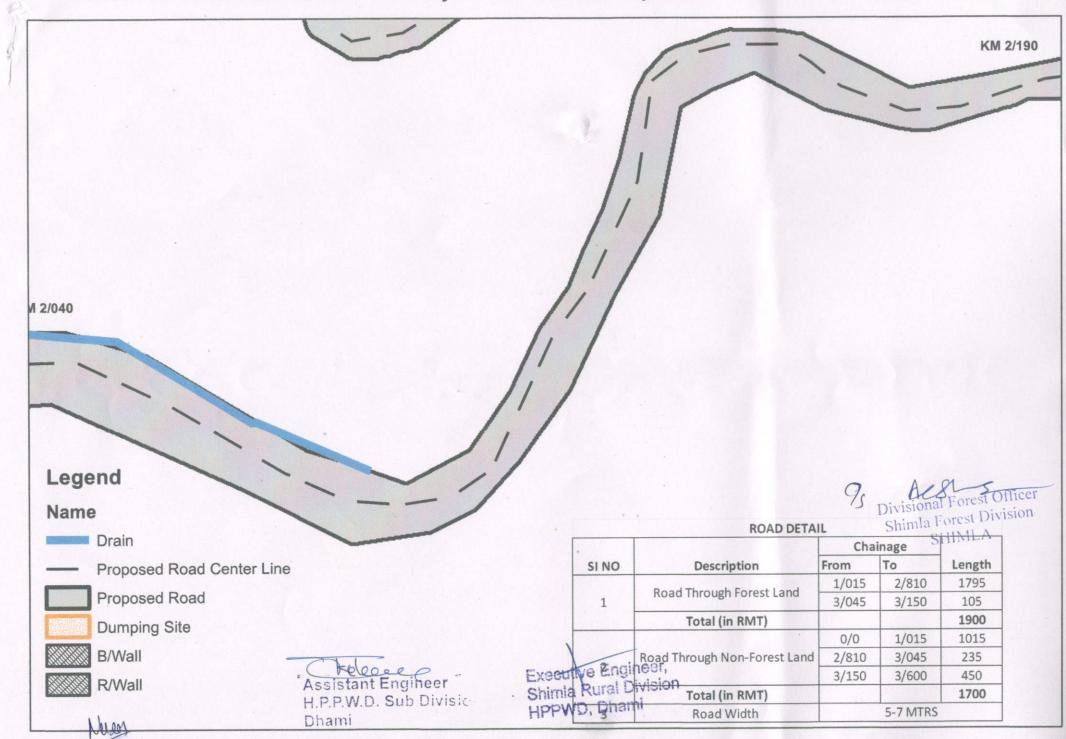
Shimla Forest Division SHIMLA Executive Engineer, Shimla Rural Division HPPWO, Dhami

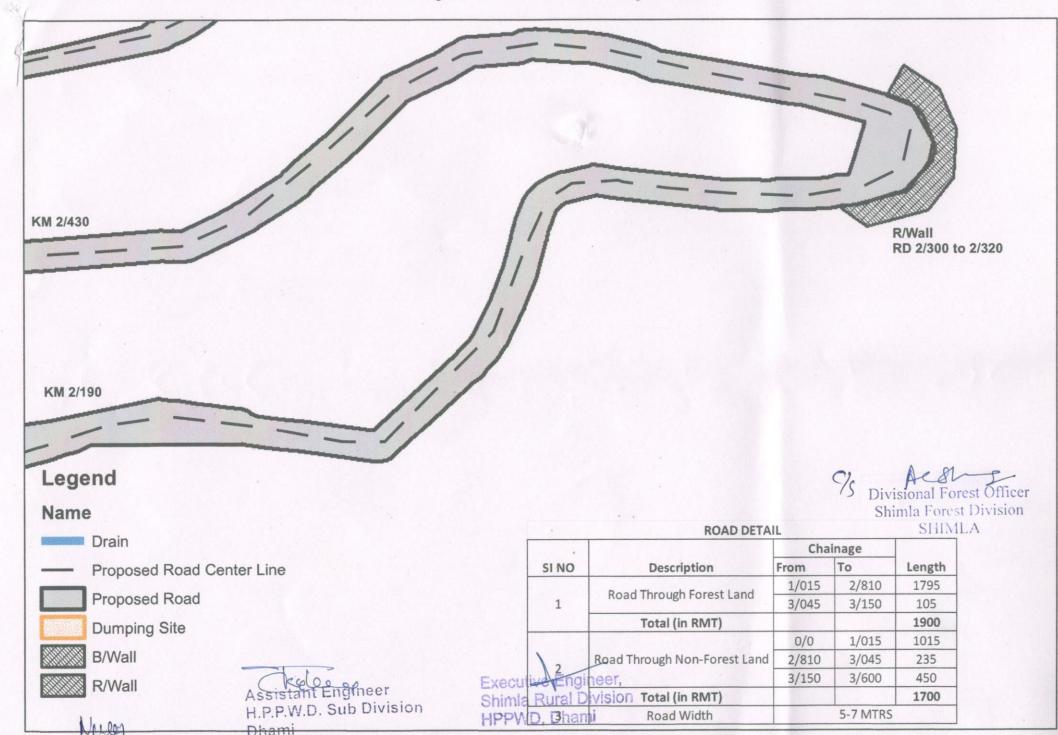
|              |  |                      |                |             |  | KM 1/6  |
|--------------|--|----------------------|----------------|-------------|--|---------|
|              | ROAD DETA  | IL                   |                |             |  |         |
|              |  | -                    | ainage         |             |  | /       |
| SINO         | Description  | From                 | To             | Length      |  | -       |
| 1            | Road Through Forest Land   | 1/015<br>3/045       | 2/810<br>3/150 | 1795<br>105 |  |         |
| 1            | Total (in RMT)   | 3/045                | 3/130          | 1900        |  |         |
|              | 10001 (11.1111)  | 0/0                  | 1/015          | 1015        |  |         |
| 2            | Road Through Non-Forest Land                                       |                      | 3/045          | 235         |  |         |
| 2            |  | 3/150                | 3/600          | 450         |  |         |
|              | Total (in RMT)   | -                    | 5-7 MTRS       | 1700        |  |         |
| 2            | Road Width   | A STATE OF THE PARTY | 5-7 MIRS       |             |  |         |
| 3            | , note triper  |                      | 3-7 WINS       |             |  |         |
| Lege<br>Name | nd   |                      |                | ==          |  |         |
| Lege<br>Name | nd   |                      |                |             |  |         |
| Lege<br>Name | nd   | e                    |                |             | 2 ALST                                   | orest O |
| Lege<br>Name | nd<br>Drain  | e                    |                |             | 95 All Divisional Fores                  | SIL     |
| Lege<br>Name | end  Drain  Proposed Road Center Line                              | e                    |                |             | % ALSI Divisional Fore Shimla Fores SHIM | SIL     |
| Lege<br>Name | ond  Drain  Proposed Road Center Line  Proposed Road  Dumping Site | е                    |                |             | Shimla Fores                             | SIL     |
| Lege<br>Name | ond  Drain  Proposed Road Center Line  Proposed Road  Dumping Site | e                    |                |             | · · · · lo Fores                         | SIL     |











|      | ROAD DETA                    | IL    |          |        |
|------|------------------------------|-------|----------|--------|
|      | Description                  | Cha   |          |        |
| SINO |                              | From  | То       | Length |
| 1    | Road Through Forest Land     | 1/015 | 2/810    | 1795   |
|      |                              | 3/045 | 3/150    | 105    |
|      | Total (in RMT)               |       |          | 1900   |
|      | Road Through Non-Forest Land | 0/0   | 1/015    | 1015   |
| 2    |                              | 2/810 | 3/045    | 235    |
| 2    |                              | 3/150 | 3/600    | 450    |
|      | Total (in RMT)               |       |          | 1700   |
| 3    | Road Width                   |       | 5-7 MTRS | **     |

Legend
Name

Drain

Proposed Road Center Line

Proposed Road

Dumping Site

B/Wall

R/Wall

R/Wall

Assistant Engineer

H.P.P.W.D. Sub Division

HPPWD, Dhami

KM 2/870

|      | ROAD DETA                    | IL    |          |        |
|------|------------------------------|-------|----------|--------|
|      | Description                  | Cha   |          |        |
| SINO |                              | From  | То       | Length |
|      | Road Through Forest Land     | 1/015 | 2/810    | 1795   |
| 1    |                              | 3/045 | 3/150    | 105    |
|      | Total (in RMT)               | 18.72 |          | 1900   |
|      | Road Through Non-Forest Land | 0/0   | 1/015    | 1015   |
| 2    |                              | 2/810 | 3/045    | 235    |
| 2    |                              | 3/150 | 3/600    | 450    |
|      | Total (in RMT)               |       |          | 1700   |
| 3    | Road Width                   |       | 5-7 MTRS |        |

#### Name

Drain

— Proposed Road Center Line

Proposed Road

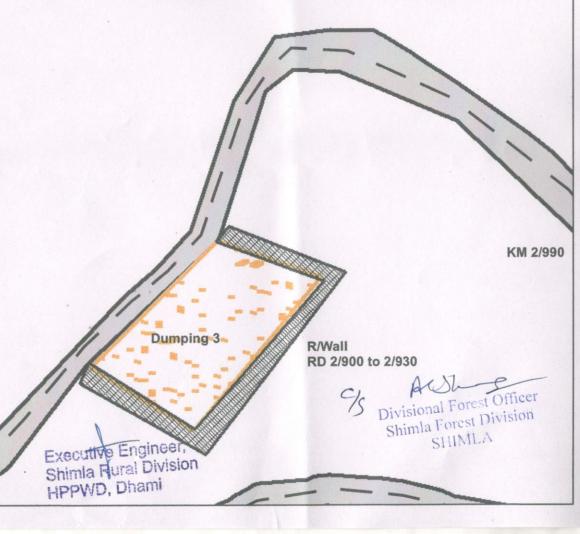
Dumping Site

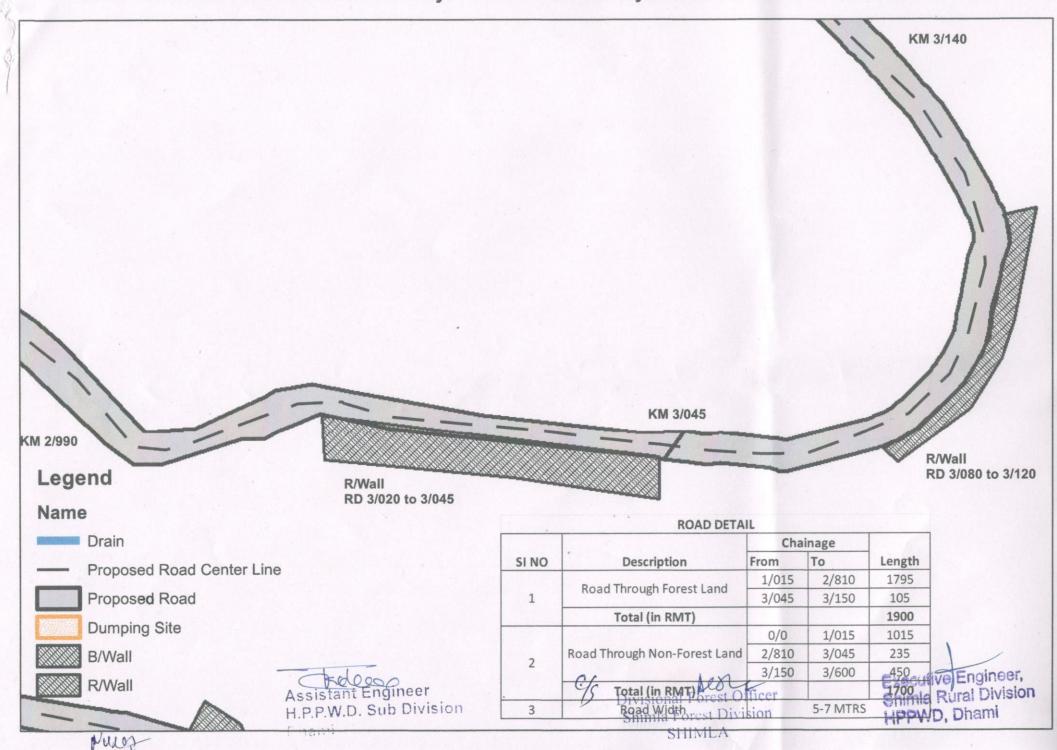
B/Wall

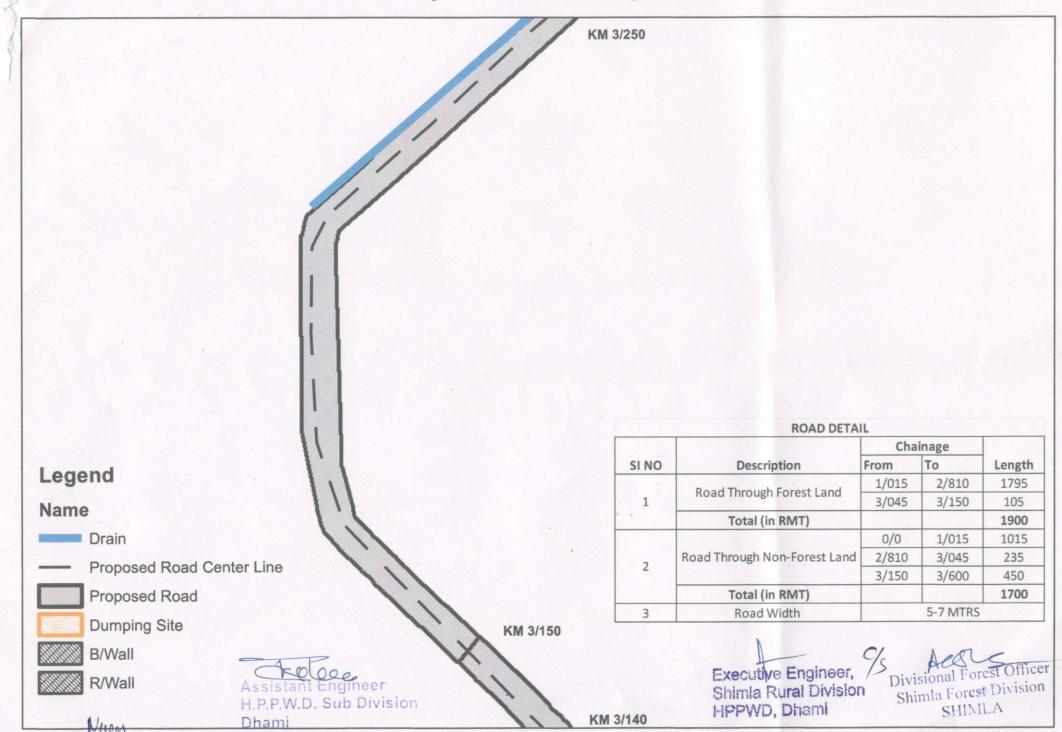
R/Wall Assistant i

Assistant Engir**KM 2/870** H.P.P.W.D. Sub Division

Dhami







|      | ROAD DETA                    | IL       |       |        |  |  |
|------|------------------------------|----------|-------|--------|--|--|
|      | Description                  | Cha      |       |        |  |  |
| SINO |                              | From     | То    | Length |  |  |
|      | Dood Through Forest Land     | 1/015    | 2/810 | 1795   |  |  |
| 1    | Road Through Forest Land     | 3/045    | 3/150 | 105    |  |  |
|      | Total (in RMT)               |          |       | 1900   |  |  |
|      | Road Through Non-Forest Land | 0/0      | 1/015 | 1015   |  |  |
| -    |                              | 2/810    | 3/045 | 235    |  |  |
| 2    |                              | 3/150    | 3/600 | 450    |  |  |
|      | Total (in RMT)               |          |       | 1700   |  |  |
| 3    | Road Width                   | 5-7 MTRS |       |        |  |  |

Name

Drain

Proposed Road Center Line

Proposed Road

**Dumping Site** 

B/Wall

R/Wall

KM 3/250

Executive Engineer, Shimla Rural Division HPPWD, Dhami

Shimla Forest Division SHIMLA

KM 3/360

|      | ROAD DETA                    | IL    |          |        |
|------|------------------------------|-------|----------|--------|
|      | Description                  | Cha   |          |        |
| SINO |                              | From  | То       | Length |
|      | Road Through Forest Land     | 1/015 | 2/810    | 1795   |
| 1    |                              | 3/045 | 3/150    | 105    |
|      | Total (in RMT)               |       |          | 1900   |
|      | Road Through Non-Forest Land | 0/0   | 1/015    | 1015   |
| 2    |                              | 2/810 | 3/045    | 235    |
| 2    |                              | 3/150 | 3/600    | 450    |
|      | Total (in RMT)               |       |          | 1700   |
| 3    | Road Width                   |       | 5-7 MTRS |        |

#### Name

Drain

Proposed Road Center Line

Proposed Road

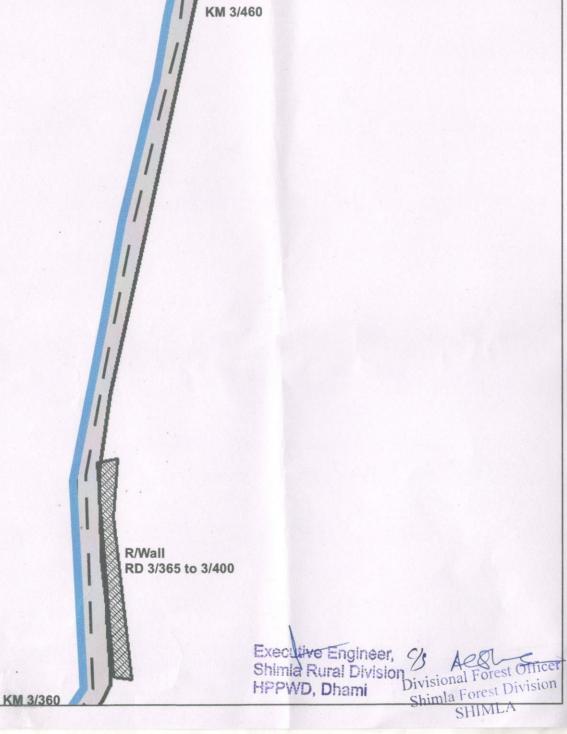
**Dumping Site** 

B/Wall

R/Wall

Assistant Engineer H.P.P.W.D. Sub Division

Phami



Shimla Forest Division

SHIMLA

KM 3/530

Sheet-26

|      | ROAD DETA                    | IL    |          |        |
|------|------------------------------|-------|----------|--------|
|      | Description                  | Cha   |          |        |
| SINO |                              | From  | То       | Length |
|      | Road Through Forest Land     | 1/015 | 2/810    | 1795   |
| 1    |                              | 3/045 | 3/150    | 105    |
|      | Total (in RMT)               |       |          | 1900   |
|      | Road Through Non-Forest Land | 0/0   | 1/015    | 1015   |
| 2    |                              | 2/810 | 3/045    | 235    |
| 2    |                              | 3/150 | 3/600    | 450    |
|      | Total (in RMT)               |       |          | 1700   |
| 3    | Road Width                   |       | 5-7 MTRS |        |

## Legend

#### Name

Drain

— Proposed Road Center Line

Proposed Road

Dumping Site

B/Wall

R/Wall

Assistant Engineer
H.P.P.W.D. Sub Division

Dhami

Divisional Forest Officer
Shimla Forest Division KM 3/460
SHIMLA

Executive Engineer, Shimla Rural Division HPPWD, Dhami

Num

|      | ROAD DETA                    | IL    |          |        |
|------|------------------------------|-------|----------|--------|
|      |                              | Cha   |          |        |
| SINO | Description                  | From  | То       | Length |
|      | Road Through Forest Land     | 1/015 | 2/810    | 1795   |
| 1    |                              | 3/045 | 3/150    | 105    |
|      | Total (in RMT)               |       |          | 1900   |
|      | Road Through Non-Forest Land | 0/0   | 1/015    | 1015   |
| 2    |                              | 2/810 | 3/045    | 235    |
| 2    |                              | 3/150 | 3/600    | 450    |
|      | Total (in RMT)               |       |          | 1700   |
| 3    | Road Width                   |       | 5-7 MTRS |        |

#### Name

Drain

Proposed Road Center Line

Proposed Road

**Dumping Site** 

B/Wall

R/Wall

Assistant Engineer H.P.P.W.D. Sub Division Dhami

R/Wall RD 3/570 to 3/600

Executive Engineer, Shimla Rural Division HPPWD, Dhami KM 3/530 Divisional Forest Officer Shimla Forest Division SHIMLA

Sheet-27

## MUCK MANAGEMENT PLAN

|   | 1 Total Q  | ty. of Muck being Produce   |  |   |   | 54000.00 |  |  |
|---|--|---|--|---|---|----------|--|--|
|   | Deducti  | on for useful stone as requi<br>cutive Engineer of Project  | red under the cla                      | ause of agreement to be executed  | by the contractor   | 18000.00 |  |  |
|   |  | Net Balance quantity of Debris/Muck(1-2) A  |  |   |   |          |  |  |
|   | 4 Quantity   | Quantity available on site with swell factor 2 40% 1.40xA   |  |   |   |          |  |  |
| 5 | Material/Muck to be used in project:   |   |  |   |   |          |  |  |
|   | Deduction for material/required for the construction of dumping place in dry masonry wall/ edge walls @ 5% of(B)                       |   |  |   |   |          |  |  |
|   | 2. Less to of (B)  | 2. Less for material/muck required for the levelling of the proposed road for the construction @ 15% of (B) |  |   |   |          |  |  |
|   | 3. Less for material/muckrequired for the Construction of the proposed road on the analogy of half cutting & half filling @ 40% of (B) |   |  |   |   |          |  |  |
|   | Total:- 5(1)+5(2)+5(3)   |   |  |   |   |          |  |  |
|   | Net material/muck to be dumping in dumping site (B-C)  |   |  |   |   |          |  |  |
|   | Proposed   | d Dunping sites   |  |   |   | 20160.00 |  |  |
|   | Proposed<br>Material<br>and Envi   | d Dunping sites /Muck left at site which rec  | uired carriages                        | B-C)  for the proper dumping at the rec dgment of the apex court Govt. o  | ognized site as per ins                                       |          |  |  |
| 7 | Proposed<br>Material<br>and Envi   | d Dunping sites /Muck left at site which recironment Ministry reinforce g Capacity Plan                     | uired carriages                        | for the proper dumping at the rec<br>dgment of the apex court Govt. o   | ognized site as per ins                                       |          |  |  |
|   | Proposed<br>Material<br>and Envi<br>Dumping<br>Sr. No.   | d Dunping sites /Muck left at site which rec ironment Ministry reinforce                                    | quired carriages<br>and by various jud | for the proper dumping at the rec   | ognized site as per ins                                       |          |  |  |
|   | Proposed<br>Material<br>and Envi<br>Dumping<br>Sr. No.   | d Dunping sites /Muck left at site which recironment Ministry reinforce g Capacity Plan Dumpling site no.   | quired carriages<br>and by various jud | for the proper dumping at the rec<br>dgment of the apex court Govt. o<br>Design annexed Yes/No.   | Capacity 00-65-02 00-07-74                                    |          |  |  |
|   | Proposed<br>Material<br>and Envi<br>Dumping<br>Sr. No.   | d Dunping sites /Muck left at site which recironment Ministry reinforce g Capacity Plan  Dumpling site no.  | quired carriages<br>and by various jud | for the proper dumping at the recoder of the apex court Govt. of the apex court Govt. of the apex court Govt. On the property of the apex court Govt. On the apex court Govt. | cognized site as per institution of india.  Capacity 00-65-02 |          |  |  |

H.P.P.W.D. Suo Blyment Uhami Executive Engineer, Shimla Rural Division HPPWD, Dhami

Divisional Forest Officer Shimla Forest Division

! IMIII?

HAME OF WORK :- MUCK DUMPING PLAN (SN: - Yo LINK BOOK From Pat tou ghoton via sitor Jatan Beri Mallar rem. 0/00 to 3/600 100 (Km. No 105/2/585/11217/974/2) RD Wire Mesh (loxlo) Divisional Forest Officer Shimla Forest Division SHIMI L= Som W=30m 10500m) H+=7m Mo. of dumpy = 3 Executive Engineer, H.P.P. W.O. Sun Edvictor Total = 3x10800 = 31500 Cum Shimla Rural Division, Chamber 17 HPPWD, Dhami.

#### **CHECK LIST NO. 28**

Detail Reclamation Plan, whenever required. It should be realistic exhaustive and complete in all respects along with relevant maps in distinct colours. It should also include the details of back fillings, afforestation and execution of such works, whenever required.

Diversion of 1.4489 hectare of forest land has been proposed for the construction of motorable Link road from Patyar ghatru Via sitri jaya Berti Nallah Km. 0/0 to 3/600 in sub Tehsil Dhami, District Shimla. The construction of this road will generate muck to the extent of 54000 Cubic Metre. By taking a swell factor of 40% the total muck become 50400 cubic metre (Detail attached at Page\_\_\_) Out of this 30240.00 cubic metre of muck will be used locally in filling, construction of masonary walls in dumping place and in leveling of road. The remaining 20160.00 Cubic metre of muck will require safe disposal. The user agency has identified 3 No. dumping site for the disposal of this muck. The dumping site has been identified along the proposed site and the capacity of these dumping sites has been worked out to be 31500.00 cubic metre (Detail attached at Page\_\_\_) which is sufficient to hold the muck to be generated.

Thus all the muck generated will be dumped in the designated dumping sites. 3 number dumping site designated as DS-I & III had been identified for dumping of muck / debris to be produced during the construction phase of the project. It is proposed that the dumping sites are treated in such a manner that these do not pose any problem to the environmental management consideration arising out of the necessity to stabilize the dumping sites at the earliest. Therefore, this reclamation plan has been formulated with the following objectives:-

- 1. To arrest the dumped muck in-situ so that it does not find its way to the nearby drainage channels, thus altering the drainage pattern of the area.
- To rehabilitate the dumped area over a period of time so that it merges with the Adjoining natural landscape and does not stand out as a sore point.
- To improve the aesthetics of the dumping grounds/ dumping site by planting suitable Plants and trees species thereby increasing the forest cover in the area.
- To stabilize the dumping site by vegetative and engineering structures.

#### Implementation:

The proposal will be implemented by the user agency itself at its own cost as detailed in this plan. The implementation of the plan will be supervised by the forest department from time to time and the progress will be periodically monitored. In case of default the sanction of diverted land may be revoked with suitable penalty as decided by the Govt. of India.

#### Strategy:

The pronged approach will be followed for reclamation of dumping sites. In the first instance crate wall will be erected around the dumping site so that required capacity for dumping of muck is created at the sites. The detailed drawings of the crate work to be undertaken are enclosed. The primary objective of the crate works will be to arrest the dumped muck at the dumping sites itself and not allow its spillage to adjoining areas and eventually to nearby drainage lines. The capacity of the dumping sites has been calculated as detailed in the table and will be enough to hold the muck required to be dumped in each of the sites.

In the second phase, once the dumping is complete it will be ensured that the dumping site is planted with grasses, bushes, shrubs and tree so that it gives an aesthetic look. This vegetal cover will also help in binding the soil and will prevent its erosion. For vegetating the dumping sites, suitable local species will be preferred. However, it may be noted that bulk of the muck to be dumped will be excavated material which will be lacking in essential nutrients and organic matter. Hence it will be desirable to increase the nutrient status of the top soil to make it conducive to tree/ vegetal growth. For this purpose maturing of top soil shall be done. If required, imported soil shall be brought to replenish the top soil. Instantly grasses and bushes will be planted in the area to improve the soil condition. Once these grasses and bushes take hold of the site, tree species will be planted in next phase. The tress species to be planted will be namely Robinia, Lucinea, albizia, Drek Amla Bamboo, Khair, Chail and Devdar.

Grasses like Steria and Napier will also be propagated. Trees will be Planted as the closer spacing so that canopy is closed at the earliest. Hence the spacing will be kept at 1.5 mtr. x 1.5 mtr. The total area involved in dumping is 7336 Square metre. Also due to inert nature of soil, plants will need extra care for their establishment. For this purpose, imported soil/ organic manure will be added in each pit for easy establishment of plants. Watering of the plant in dry season will be provided to prevent mortality. The plantation will be further maintained at project cost for next five year beating up of failure will be done.

#### Post reclamation arrangement :

Since the area in question is required by the user agency only for the temporary use of dumping, hence the area will be reverted back to forest department after implementing the reclamation plan, if so stipulated by Govt. of India. However if at the time of so reverting back the areas to forest department if any activities as per this reclamation plan is found wanting then the forest department may realize the cost that activity from the user agency at the prevailing wages rates applicable in forest department and may get the same done departmentally at the project cost.

Place: Dhami

Dated :-

Assistem Engineer
H.P.P.W.D. Sub Blutelen

Uham

Executive Engineer, Shimla Rural Division HPPWD, Dhami

Divisional Forest Officer Shimla Forest Division Full title of the Project: Diversion of 1.4489 hac.of forest land in favour of HPPWD for the construction of road from Patyar Ghatru via Sitri Jayan Berti Nallah 0/00 to 3/600, within the jurisdiction of Shimla Forest Division, Distt. Shimla, H.P. (online No. FP/HP/ROAD/155756/2022).

### **CERTIFICATE**

affect of land sliding and soil erosion will be mitigate by providing necessary protection work i.e. R/wall, B/wall, wire crate works and cutting work will be done in scientific manner. The plantation of various species of grass, beds and bushes also be done in the soil erosion portion in specific manner which helps to counter the land sliding/soil erosion efforts in the affected area with the help and direction of expert team of forest department.

Assistant Engineer
H.P.P.W.D Sub Division
Dhami

Exce<del>uti lo Engineer,</del> Shimia Winal Division HPPWD, Dhami



#### HIMACHAL PRADESH STATE ELECTRICITY BOARD LIMITED

(A State Government undertaking)

CIN

: U40109HP2009SGC031255 : HPSEBL02AACCH4894EHZB

GST No Office

: ESD Sunni

Phone No : 0177-2786638

Email :aeesdsuni@gmail.com

No: - HPSEBL/ESS/E-8/2024-25-782-83

Dated:- 25/10/2024

To

The Assistant Engineer HPPWD Sub Division, Dhami (HP).

Sub: - Issuance of NOC for diversion of 1.4489 Hectare of Forest land in favor of HPPWD Deptt. for construction of road from Patyar Ghatdu via Sit ki jiyan Berti naalah with in the juderisction of Shimla Forest division, distt. Shimla HP.

Sir,

"JAI HIND"

With reference to yours office letter No PW-DSD-Sitri Jayan road/2024-25-438-441 Dated 07/10/2024 regarding issuance of No Objection Certificate.

In this connection it is informed that as per report submitted by Junior Engineer Electrical Section Mandhorghat, there is single phase LT line passing near the purposed road. No Objection Certificate issued to subject shift the LT line in proper right of way, so that electric supply could not be affected to respective consumers. No Objection Certificate is issued for further necessary action.

Assistant Engineer Electrical Sub – Division HPSEBL Sunni

Copy forwarded to the following for information and necessary action:-

1. The Sr. Executive Engineer Shimla Rural Electrical Division HPSEBL Sunni.

Assistant Engineer, Electrical Sub – Division, HPSEBL Sunni.

## HIMACHAL PRADESH JAL SHAKTI VIBHAG

No.EE-JSV-CB-WA-NOC -2024- 4178-79

Dated 26-10-24

The Assistnat Engineer, HP,PWD Sub Division Dhammi.

Sub:-

Issuance of NOc for Diversion of 1.4489 hectare of Forest land in facour of Himachal Pradesh Public work Department for construction of road from Patyar Ghatru via Sitiri Jayan Berti Nalah Within the jurisdiction of Shimla Forest division, distt. Shimla Himachal Pradesh.

Ref:-

Your office letter No. PW-DSD-Sitri Jayan road /2024-25-438-41 dated 07.10.2024.

As recommended for NOC by the Assistant Engineer, Jal Shakti Sub Division Sunni, his office letter No. JS-SD-Sunni.Misc/2024-1667 dated 21.10.202,this office has no objection (NOC) for proposed C/O road from Patyar Ghatru via Sitiri Jayan Berti Nallah. If any pipe line etc. comes in the road alignment the same will changed by executing agency at theri own cost.

Executive Engineer,
Jal Shakti Shimla Rural
Division at Sunni.

Copy to the Assistant Engineer Jal Shakti Sub Division Sunni w.r.t his office letter reflered above for information.

Executive Engineer, Jal Shakti Shimla Rural Division at Sunni. Office of Divisional engineer

m District,

Tel xae chhota shimla.9416439896



भारत संचार निगम लिमिटेड

#### BHARAT SANCHAR NIGAM LIMITED

(A Govt. of India Enterprise)

To

Assistant Engineer(HPPWD),

Sub Division, Dhami.

No: Det/ Sml/Gen-corr /2024-25/046

Dated: 22.10.2024.

Sub: Reg no dues certificate in respect of your office letter no PW-DSW-sitrijayan-road-24-25 438-41 dated 07-10-2024 reg. no dues in respect of Diversion of Forest land for consruction of road from Patyar Ghatru via sitiri Jayan berti Nallah in this connection it is intimated that there is no any BSNL assests/lines etc within this location and BSNL has no objection for construction of Road on this location.

DET(ShinDiajsional Engineer (Telegraph)

BSNL, Chotta Shimla-171002

BSNL, CHHOTA SHIMLA.



# H.P. POWER TRANSMISSION CORPORATION LTD.

(A State Govt. Undertaking)

Regd. Office: Himfed Bhawan, New ISBT Road, Panjari, Shimla-171005

Ph.: - 0177-2831283, 2831284 FAX: -0177-2831284

(CIN): U40101HP2008SGC030950

(GSTIN):02AACCH1548M1ZP

To

Dated: 08 11 2024

Assistant Engineer HPPWD Sub Division Dhami.

Sub: Regarding Issuance of NOC for Diversion of 1.4489 Ha. of Forest land.

Ref: No. PW-DSD-Sitri Jayan Road/2024-25-438-41 Dated 07.10.2024.

The No Objection Certificate for the Diversion of 1.4489 Ha. (Proposal No.: FP/HP/ROAD/155756/2022) of Forest land in favour of Himachal Pradesh Public work Department for construction of road from Patyar Ghatru via Sitiri Jayan Berti Nallah within the jurisdiction of Shimla Forest Division, Distt. Shimla Himachal Pradesh, is hereby issued in order to process the FCA case.

Dy. General Manager (Projects) HPPTCL, HQ, Shimla



### HIMACHAL PRADESH FOREST DERARTMENT

#### OFFICE OF THE BHAJJI FOREST RANGE SHIMLA FOREST DIVISION (R)

Bhajjirange635@gmail.com

| No | 4 |  | 6 | / BH |
|----|---|--|---|------|
|----|---|--|---|------|

From:-

Range Forest Officer,

Bhajji.

To:-

Assistant Engineer

**HPPWD Sub- Division** 

Dhami

Subject:-

Diversion of 1.4489 hac. of forest land in favour of Himachal Pradesh

PWD for construction of of road from Patgair to Ghatru via Sitri Jain

Proposal no FP/HP/Road /155756/2022 received on 8.7.2024

Sir,

Kindly refer top your office letter no-436 dated- 07.10.2024 on the subject cited above

In this regard it is submitted that the reply of observations raised vide above referred subject cited above is placed as below:-

Pont no -4 Spot was inspected along with staff of PWD Sub-Division Dhami on 23.10.2024. As per spot inspection there are proposed 3 dumping sites on this proposed road alignment out of which 1 dumping site is proposed in Forest Land in U-577 Jaini –Nali, comprising khasra nol213/12/2 and 2 nos dumping sites are proposed in pvt land of people. No any trees are standing upon the proposed dumping sites.

Point no -14. The proposed C.A site which is 2 hac , proposed in U-577 Jaini – Nali falls in Chaneog Beat of Suni Forest Block. As per spot inspection there area is not so thick and there are bushes of Lantana and other B/leaves in proposed C.A site. The copy of C.H file is enclosed please. Therefore the report is submitted for f/o information and further n/action please.

Range Forest Officer

GEOLOGICAL INVESTIGATION FOR THE DIVERSION OF 14489 HECTARE OF FOREST LAND IN FAVOUR OF HPPWD FOR C/O ROAD FROM PATYAR GHATRU VIA SITIRI JAYAN BERTI NALLAH KM 0/00 TO KM 3/600 WITHIN THE JURISDICTION OF SHIMLA, H.P.

SUBMITTED TO :-THE ASSISTANT ENGINEER, H.P.PWD SUB DIVISION, DHAMI

## BY:-

## **GEOTECH ENGINEERS AND CONSULTANTS**

(AH.P. Govt. Appproved & An ISO 9001-2015 Certified Material Testing Laboratory)
MARIA NIWAS, BELOW BCS, NEAR SANJAY GANDHI PUBLIC SCHOOL NEW
SHIMLA-171009 (H.P)
Mob No-8894700939

## Table of Contents

| 1. INTRODUCTION                                | 1 |
|--|---|
| SCOPE OF WORK:-                                | 1 |
| 3. IDENTIFICATION AND CLASSIFICATION OF SOIL : | 2 |
| 4. FOUNDATION ANALYSIS:                        | 3 |
| 5. RECOMMENDATIONS :                           |   |
| 6. ANNEXURE:                                   | 6 |
| 6. ANIAL                                       |   |

# Geotech Engineers and Consultants

(AH.P. Government Approved & an ISO 9001-2015 ISO 14001-2015 and OHSAS 18001-2007 Certified Material Testing Laboratory) Maria Niwas, Below BCS Near Sanjay Gandhi Public School, New Shimla-171009 (H.P.)

Mobile No.: 098161-53281, 088947-00939 E-mail ID : geotechconsultants09@gmail.com Web: www.geotechconsultants.co.in

Services Available: vices Available Solid Investigation for Buildings, Bridges, Towers, Irrigation Structures, etc. by S.P.T., D.C.P.T. and Plate Load.

Soil Investigation Structures, etc. by S.P.T., D.6 of Soil/ Rock upto the depth of 50 Mtr for Bridges, Building, Towers, Tunnels etc. Boring of Solid Road Crust/Overlays Thickness by Lah CRP and Design Mix of Road Crust/Overlays Thickness by Lah CRP and Design Mix of Concrete for any Grade, Job mix of G.S.B., W.M.M., B.M., S.D.B.C. etc.

Design MIX OF Control of Road Crust/Overlays Thickness by Lab CBR and Benkelman Beam Deflection Techniques.

Assessment of Road Crust/Overlays Thickness by Lab CBR and Benkelman Beam Deflection Techniques.

Assessment of North Assessment of North Assessment Concrete Cubes, Bitumen required for Buildings, Towers, Storage tanks and also tests Physical Tests of Aggregate, National Highways, World Bank Roads etc. in the Latence Cubes, Bitumen required for Buildings, Towers, Storage tanks and also tests Physical Tests of Agents and Agen

required for Five Concrete Hammer test, Core cutting of flexible pavement and R.C.C. structure, Soil Resistivity test for Towers, Sub-station etc.

Ref. No.GEC-....

GEOLOGICAL INVESTIGATION FOR THE DIVERSION OF 14489 HECTARE OF FOREST LAND IN FAVOUR OF HPPWD FOR C/O ROAD FROM PATYAR GHATRU VIA SITIRI JAYAN BERTI NALLAH KM 0/00  $_{
m TO}$  KM 3/600 WITHIN THE JURISDICTION OF SHIMLA , H.P.

## 1. INTRODUCTION:-

1.1 Foundation engineering is the art of selecting designing and constructing the element that transfer the weight of a structure to the under lying soil/rock. To know the nature and consistency of the sub-soil, geotechnical typical engineering properties of soil of various groups is valuable for the computation of bearing capacity.

1.2 The laboratory tests of soil was conducted by Geotech Engineers and Shimla on behalf of The Assistant Maria Niwas, New Consultants, Engineer, H.P.PWD Sub Division Dhami to evaluate the Safe bearing capacity of Soil.

## 2. SCOPE OF WORK:-

2.1 Two number soil samples were supplied by the client, excavated at a depth of 1.5 mtr to the laboratory for further analysis in the laboratory to know the preliminary geo-technical information in respect of soil strata encountered in the test pits at the proposed site.

## 2.2 GRADATION ANALYSIS OF SOIL:-

The gradation analysis of soil were performed as per IS: 2720-Part III-1970 to work out the percentage composition of gravels, sand and fines (silt/clay).

The gradation analysis of soil revealed that the percentage composition of gravels, sand and fines (silt/clay) were found to vary from 57.4 % to 61.3 %, 20.4 % to 22.8 % and 18.3 % to 19.8 % respectively.

## 2.3 INDEX PROPERTIES OF SOIL:-

The index properties of soil has been done as per Code IS: 2720-Part V-1970 for calculating the plasticitty index of soil.

The index properties of soil revealed that the liquid limits varies from 18 % to 19% with non-plastic in character.

### 2.4 COMPACTION PROPERTIES OF SOIL:-

The compaction properties of soil has been done as per IS: 2720-Part VII-1965 to know the compaction characteristic of the soil in the excavated test pits.

The field compaction revealed that the field moisture content and bulk density of soil were observed to be 4.0 % to 4.6 % and 1.95 gm/cc to 1.98 gm/cc respectively. However, at Proctor compaction the value of OMC and MDD were found to vary from 8.0 % to 8.5 % and 1.99 gm/cc to 2.01 gm/cc respectively.

## 3. IDENTIFICATION AND CLASSIFICATION OF SOIL:-

The identification and classification of soil has been done as per code IS: 1498-1970.

The gradation analysis and index properties of soil held that the soil- strata was identified as that of the coarse grained soil of group symbol GM. The group symbol GM represented silty gravels, poorly graded gravels-sand-silt mixtures.

## 4. FOUNDATION ANALYSIS:-

Bearing capacity has been evaluated keeping in view of the foundation will be safe against shear failure. The value of angle of shearing resistance Ø in Test Pit No.I and II were found to be 32.5 ° & 33.0° respectively and C-value is 0.0 kg/cm² in both cases by conducting the Direct shear test on the sample supplied to the laboratory and is further used for calculating the bearing capacity of soil as per IS: 6403:1981 The following equation has been used for calculating the safe bearing capacity of soil i.e. 32.5°

$$q_u = q(N'_q-1) Sq dq iq + 0.5 \times B \times \gamma \times N'\gamma \times S\gamma \times d\gamma \times i\gamma \times w'$$

Where:

q<sub>u</sub> =Net ultimate bearing capacity

 $\emptyset$  = angle of shear resistance

q = Effective surcharge

B = Width of footing

 $\gamma$  = density

 $N'_{q}$ ,  $N'\gamma$  = Bearing capacity factors, local shear factor

 $S_c, S_q, S_{\gamma} = Shape factor$ 

 $d_c, d_q, d\gamma = Depth factor$ 

 $i_c, i_q, i_{\gamma} = inclination factors$ 

W' = Water table factor

## For Strip footing:

$$\phi = 32.5^{\circ}, N'q = 9.06$$

$$N'\gamma = 8.82$$

$$iq = iy = 1.0$$
 (Vertical load),

$$Sq = 1.0$$
,

$$S\gamma = 1.0$$

$$\gamma$$
= 1.95 gm/cc

Assumed, Depth of footing, Df = 1.5 mtr

Width of footing, B = 1.8 mtr.

$$dq = d\gamma = 1 + 0.1 \text{ Df/B tan } (45 + \emptyset/2) = 1.15$$

$$q(\text{ult}) = 2.93 \text{ x} (9.06 - 1) \text{ x } 1.0 \text{ x } 1.15 \text{ x } 1.0 + 0.5 \text{ x } 1.8 \text{ x } 1.95 \text{ x } 8.82 \text{ x } 1.0 \text{ x } 1.15 \text{ x } 1.0 \text{ x } 1.0$$

$$= 27.16 + 17.80 = 44.96 \text{ t/m}^2$$
With F.O.S. = 2.5

 $q(safe) = 17.98 t/m^2$ 

## 5. RECOMMENDATIONS:-

- **5.1** A factor of safety 2.5 is recommended by Bureau of Indian Standards. So a factor of safety 2.5 is recommended to be adopted for the safe and economic foundation design of the Const. of road from Patyar Ghatru via Sitiri Jayan Berti Nallah Km 0/00 to Km 3/600 within the jurisdiction of Shimla Forest Diversion, Distt Shimla as its periphery falls in Seismic Zone No. IV.
- 5.2 The safe bearing capacity of soil 'qs' were found to be 17.98 t/mt<sup>2</sup> and 19.04 t/mt<sup>2</sup> for Test Pit No.I and II respectively.
- So, keeping in view the structure consideration, the minimum value of safe bearing capacity 17.98 t/mt<sup>2</sup> may be adopted for the construction of said structure.
- **5.3** Proper designed retaining wall/ breast walls of suitable height may be provided along the periphery of the said structure.
- **5.4** No where the foundation may be allowed to rest on overburden/loose filing while constructing the structure.
- 5.5 These values do not take into the effect of under earthquake loading which may be considered by the Design Engineer at their own level while designing the said structure
- 5.6 The above said values of safe bearing capacity may hold good only for the soil samples supplied by the client from the site to laboratory. However, if any significant

change is noticed during actual excavation of foundations the soil consultants may be consulted for further opinion.

5.7 The surface soil water would require suitable drainage work along the periphery of the structure to prevent the tendency of water in filtration due to the seepage of water due to rain etc in the foundation.

for Geotech Engineers and Consultants