

# **D.G.P.S. SURVEY REPORT**

AREA DEMARCATION AND BOUNDARY FIXATION OF LAND (ORENCE AREA)  
FOR COMPENSATORY AFFORESTATION AGAINST THE FOREST LAND REQUIRED  
FOR WIDENING OF CHOWKI-CHILHATI-KORCHATOLA- UP TO MH BORDER ROAD

FOREST DIVISION – RAJNANDGAON, RANGE – BAGNADI

FOREST BLOCK – MATEKHEDA

DISTRICT – RAJNANDGAON (C.G.)



## **APPLICANT**

MANAGING DIRECTOR  
CHHATTISGARH ROAD DEVELOPMENT CORPORATION Ltd.  
RAIPUR.(C.G.)

*S.C. ARYA*  
**S.C. ARYA**  
Project Manager  
CGRD

For, Sumine Consulting Pvt. Ltd.  
*[Signature]*  
**Authorised Signatory**

## CERTIFICATE

This is to certify that the work of D.G.P.S. Survey of the area proposed for Compensatory Afforestation against the Forest land required for widening of Chowki-Chilhathi-Korchatola-MH Border Road construction in Rajnandgaon under Rajnandgaon forest division in District - Rajnandgaon. Ordered by The Office of the Managing Director, CGRDC, Raipur (C.G.).

Forest Land Covered - 5.577 Hectare (Compartment No. PF - 716, PF - 720, PF - 731)

CA Land Covered - 11.154 Hectare

The D.G.P.S. Survey work done by Surmine Consulting Pvt. Ltd. Raipur (C.G.)

The work done is as followed:-

As per the work order the Co-ordinates of Boundary pillars & Surveyed area are corrected and we have successfully completed the work, which is correct in our knowledge.

Date :- 30/11/2017

Place :- Rajnandgaon (C.G.)

  
**S.C. ARYA**  
Project Manager  
CGRDC

For, Surmine Consulting Pvt. Ltd.

  
Authorised Signatory



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## **INTRODUCTION**

Office of the Managing Director, CGRDC Raipur (C.G.) is the nodal agency for construction of **Chowki-Chilhathi-Korchatola-MH Border (Pkg-4)** in **Dist- Rajnandgaon** over an area of **5.577 Hectare**, in **forest compartment no. PF-716,PF-720,PF-731** of **Rajnandgaon forest division** in , **District- Rajnandgaon**. **D.G.P.S. survey work has been done for Compensatory Afforestation in 11.154 Hectare land in Oreng Area No. U-1087 under Bagnadi Range, Forest Block – Mtekheda , Village - Dharmutola by Surmine Consulting Pvt. Ltd. Raipur (C.G.) .** The **D.G.P.S. survey** was done successfully and accurately from **24/11/2017** to **26/11/2017** in the presence of **CGRDC and Forest Dept. officials.**

  
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Project Manager –  
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## LOCATION OF THE AREA

The surveyed area is situated in approximate 50 Km. NW direction from Rajnandgaon district (C.G.). It falls in Survey of India Toposheet No F44U9. The surveyed area is bounded by SOI Co-ordinates 80°35'00" East, 20°57'30" North to 80°37'30" East, 20°55'00" North of Toposheet.

The survey area comes under Orange Area No. U- 1087 of Rajnandgaon forest division, Range – Bagnadi, Forest Block – Matekheda, Village – Dhamutola District- Rajnandgaon in Chhattisgarh. The total surveyed area 11.154 Hectare

  
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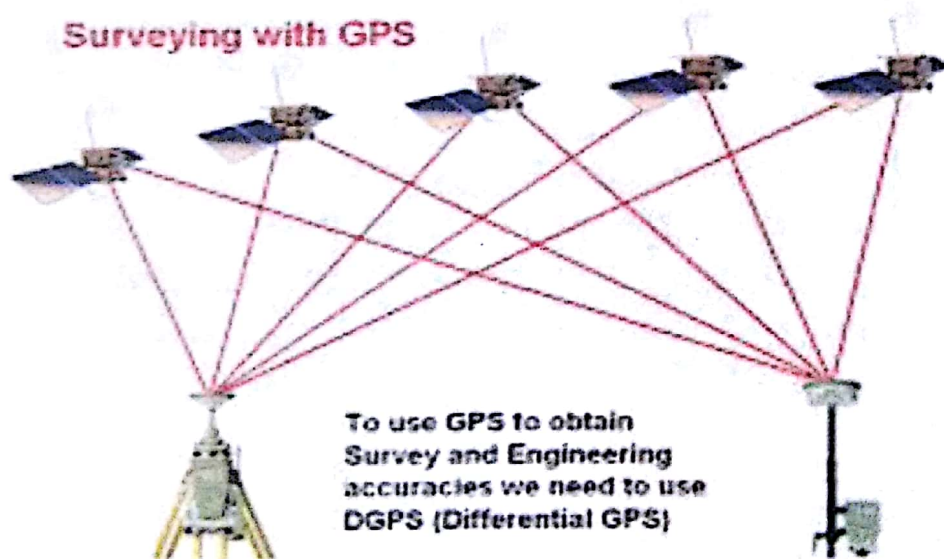
  
Authorised Signatory



## FEATURES & METHODOLOGY OF DGPS SURVEY

Differential Global Positioning System (DGPS) is an enhancement to Global Positioning System that uses a network of fixed, ground-based reference station to broadcast the difference between the position indicated by the satellite system and the known fixed positions. These positions broadcast the difference between the measured satellite pseudo ranges and actual (internally computed) pseudo ranges and receiver station may correct their pseudo ranges by the same amount.

### Differential Positioning



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The survey work has done by **Surmine Consulting Pvt. Ltd. Raipur (C.G.)** Starting DGPS Survey by making one permanent reference point (Base Station) by setting up, initialization of all the parameters of BASE Unit for minimum 2 Hrs reading.

That Initialization of the ROVER Unit in the same manner and each boundary pillars was established and fixer after 15 minutes of reading and that's how 7 boundary pillars and points has been fixed. After the successful completion of the survey ,all the RAW data collected from the field ,post process in the GNSS software , than Validation of the collected data by several methods & Geo referenced Vectorized forest maps, SOI Toposheets and Satellite Imageries.

### **WHAT IS DGPS AND WHY USE IT?**

Differential Global Positioning System (DGPS) is an enhancement to Global Positioning System that provides improved location accuracy, from the 15-meter nominal GPS accuracy to about 10 cm in case of the best implementations.


DGPS refers to using a combination of receivers and satellites to reduce /eliminate common receiver based and satellite based errors reduce orbit errors reduce ionospheric and tropospheric errors reduce effects of SA eliminate satellite and receiver clock errors. Improve accuracy significantly 100's of meters to meters to centimeters to Millimeters.

1. DGPS uses one or several (network) fixed ground based reference stations (in known locations).
2. The base station compares its own known location, to that computed from a GPS receiver.
3. Any difference is then broadcast as a correction to the user.

Correction signals can be broadcast either from ground stations, or via additional satellites. These services are privately owned and usually require a user subscription.

### **Examples:-**

- Satellite Based Augmentation System (SBAS),
- Wide Area Augmentation System (WAAS),
- Local Area Augmentation System (LAAS),
- European Geostationary Navigation Overlay Service (EGNOS),
- Omni STAR
- Coast guard beacon service.

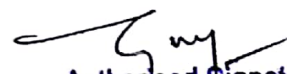
  
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Project Manager  
CGPD

## LIST OF MAPS

S.No.	PARTICULARS	MAP NO.
1	GEO- REFERENCED SOI TOPOSHEET WITH FIXED BOUNDARY POINTS	1
2	GEO- REFERENCED MAP OF GOOGLE EARTH	2
3	SURVEYED AREA SUPER IMPOSED ON FOREST COMPARTMENT MAP	3

  
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## **SUMMERY**

**PROJECT NAME— DGPS Survey for Compensatory Afforestation  
(Against 5.577 Hec. Forest Land, required for widening of Chowki-Chilhati-  
Korchatola-up to MH Border)**

**DGPS SURVEYED AREA – 11.154 HECTARE**

**DISTRICT—RAJNANDGAON**

**FOREST BLOCK - MATEKHEDA**

**FOREST DIVISION—RAJNANDGAON**

**RANGE— BAGNADI**

**LAND TYPE – ORENGE AREA**

**VILLAGE NAME – MATEKHEDA , DHARMUTOLA**

  
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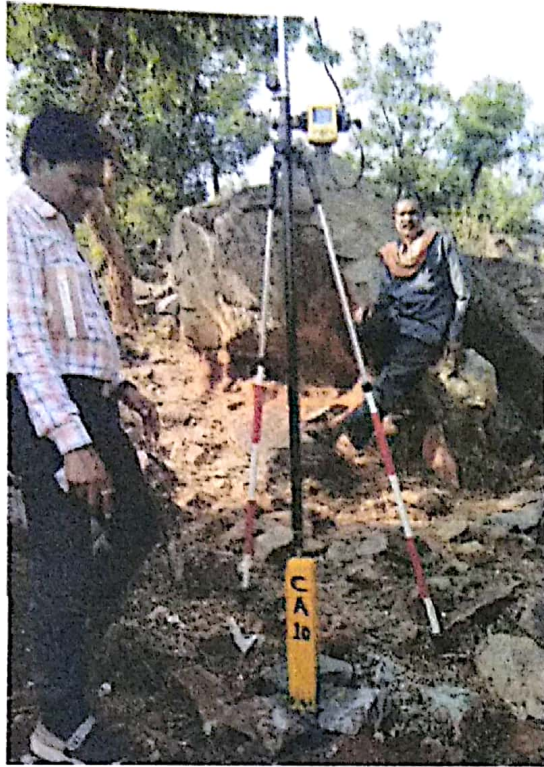
## DATA SHEET

SL No.	CODE	EASTING	NORTHING	ZONE	LONGITUDE	LATITUDE
1	CA 0	459240.3204	2314831.063	44	20,56,0.38	80,36,28.755
2	CA 1	459189.3459	2314859.391	44	20,56,1.298	80,36,26.987
3	CA 2	459101.9477	2314872.372	44	20,56,1.713	80,36,23.96
4	CA 3	459004.2167	2314850.908	44	20,56,1.007	80,36,20.578
5	CA 4	458866.0695	2314778.688	44	20,55,58.647	80,36,15.801
6	CA 5	458668.8999	2314677.096	44	20,55,55.326	80,36,8.984
7	CA 6	<del>458755.3352</del>	2314564.345	44	20,55,51.659	80,36,9.183
8	CA 7	458914.2352	2314468.983	44	20,55,48.577	80,36,17.495

  
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