JIS COLLEGE OF ENGINEERING

(NAAC-A Accredited Autonomous Institution under MAKAUT)

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

A project report about Smart vehicle detection system

*Semester:- **7**th semester*

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Group member's name

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<u>Acknowledgement</u>

*We would like to express our special thanks of gratitude to my respected teacher **Anirban Ghoshal**, who gave us the golden opportunity to do this wonderful project of automatic accident detection system in hill area, who also helped us in completing our project. We came to know about so many new things, we are really thankful to them. Secondly I would also like thankful to my respected principal **Prof.(Dr.) Partha Sarkar** who also helped us lot in finalizing this project within the limited time frame.*

DATE:
20/11/2019

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Introduction

Vehicles play an important role in our day to day life such as commuting from one place to another, transportation materials, foods etc. helping the humans by decreasing the time in travelling. As per the previous experiences and reports, we find that there are many accidents happening on hilly roads due to non visibility of other vehicle that is coming from other side.

CUT

0.45 to 0.6 m

7.5 m

FACE BATTER 1 IN 4
FOR DRY RUBBLE

FILL

h = 4 m

0.5 h = 2 m
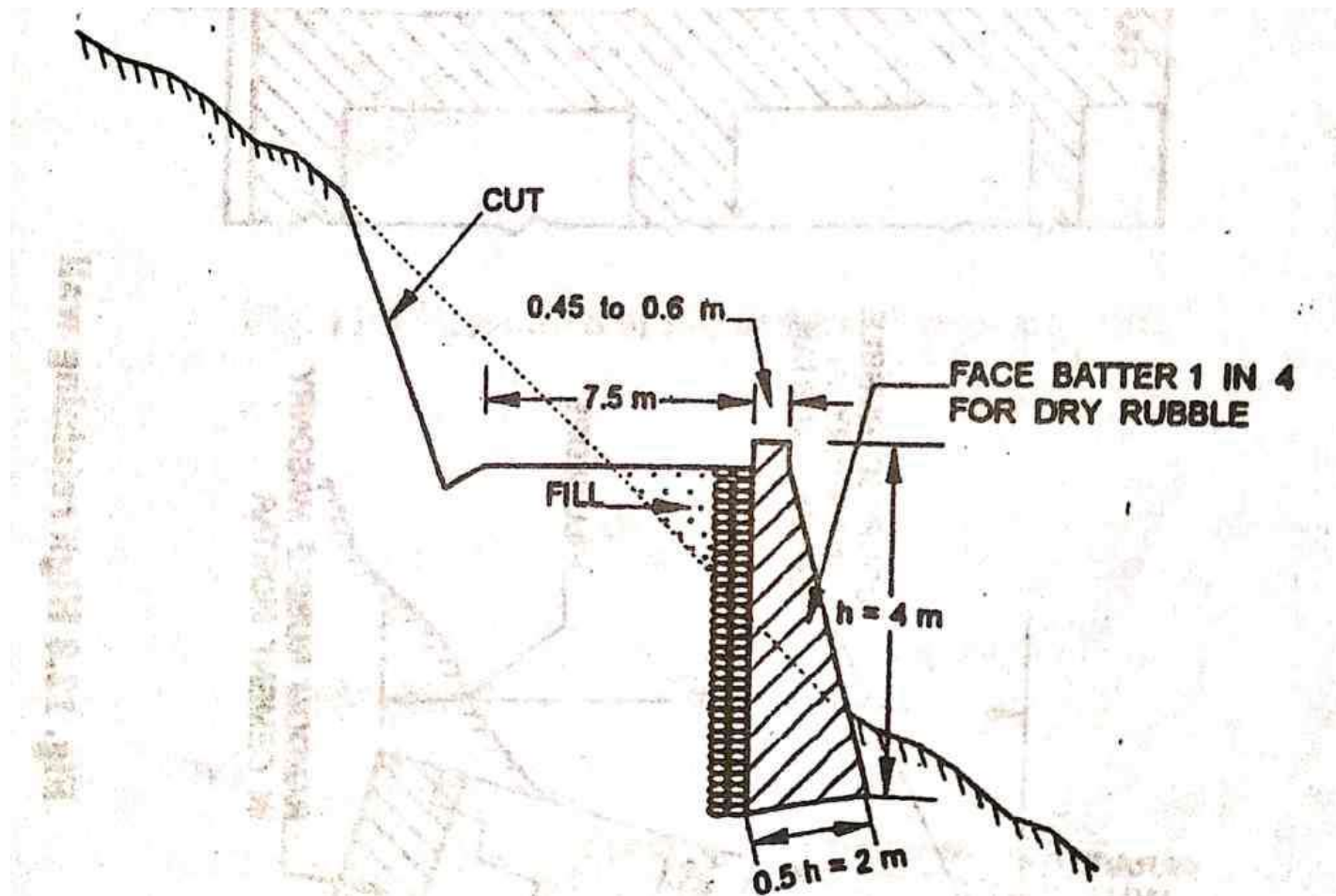
Hilly Road Construction Process Blueprint

A brief concept about hilly road area

Special Requirements For Hill Roads:-

1.   Stability against geological disturbances.

2.   Prevention of soil erosion.

Others :-

•   Hairpin Bends

•   Retaining Walls

Causes of different Accidents in hilly areas

There are some technical, physical and natural issues for accidents of hilly areas.

- Road Users
- Defects of Vehicles
- Road Condition and Designing
- Earth Quake
- Land slide

GOVT. Records of accidents in hilly area

Table 1

The incidence of RTA and persons killed and injured

Parameters	2010		2011	
	Uttarakhand	National	Uttarakhand	National
Number of RTA	1 493	4 99 628	1 508	4 97 686
Persons killed	931	1 34 513	937	1 42 485
Persons injured	1 656	5 27 512	1 712	5 11 394

Table 2

The number of deaths and disabilities in Uttarakhand and hilly districts

Parameters	2010		2011	
	Uttara-khand	Hilly districts of Uttarakhand	Uttara-khand	Hilly districts of Uttarakhand
Deaths in RTA	512	931	527	937
Disabilities in RTA	862	1 656	847	1 712

Table 3

Prevalence of RTA in different age groups

Age range (yr)	Percentage of patients
0–14	7.4
15–24	30.3
24–65	51.9
>65	10.4

Why we choose hill area?

- RTA Records
- Emergency Condition
- Helpless Condition
- Low Light
- Bad Weather
- Natural Disaster

How can we detect an accident?
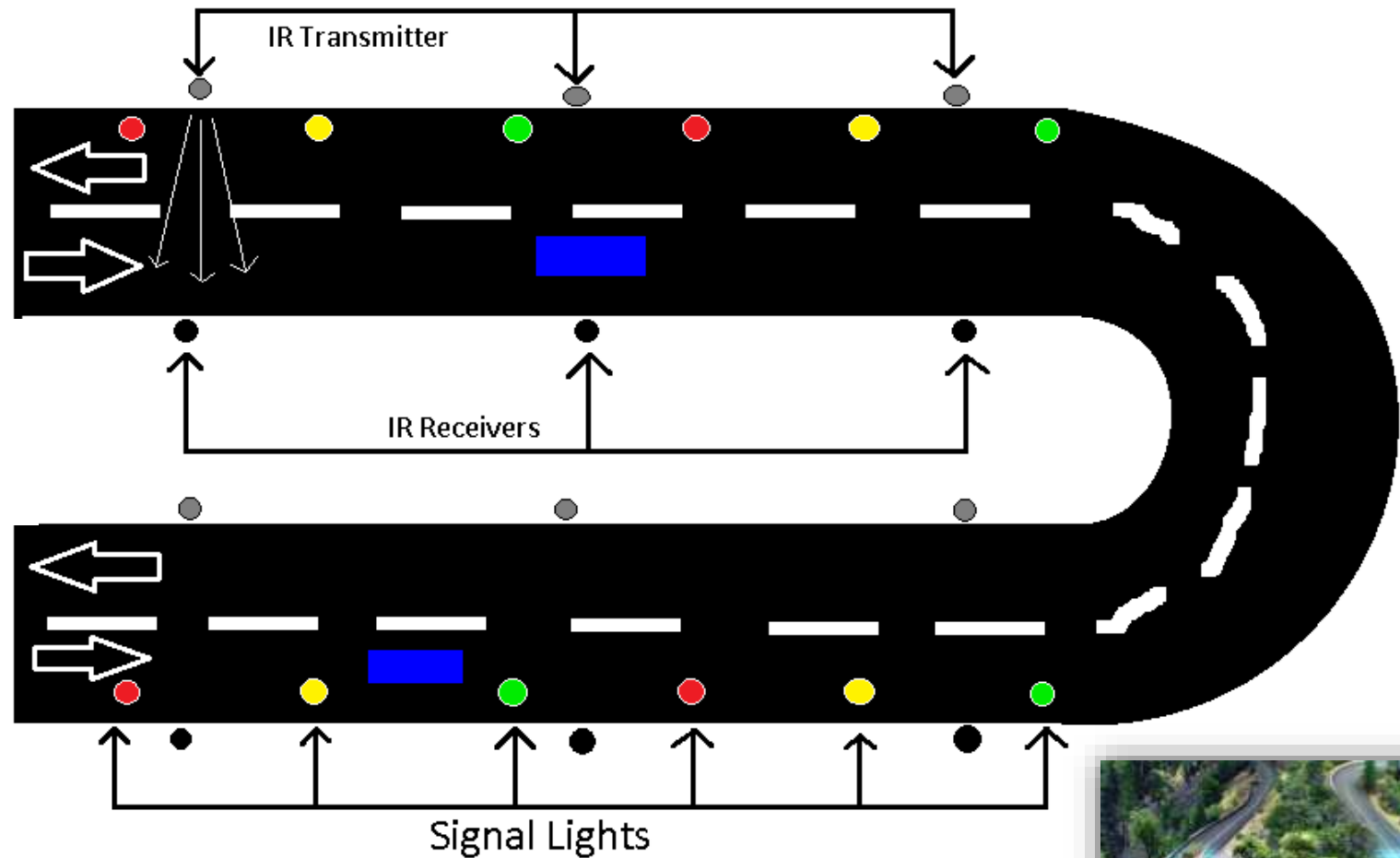
**<u>Picture of The Prototype
Project</u>**

Components using in this project

- IR Sensors
- IR Receivers
- Arduino
- Signal Lights (LEDs)
- 16x2 LCD Display

Advantages of this project

- Reduce RTA
- Low Cost High efficiency

Conclusion

We concluded from the project is that theory and practical life is something different. We need to apply that theory in our practical life for better and effective results. If we able to balanced between them, then also our job will be successful. We also learn that how many accidents are taking places in one day. Some accidents cause by people, some are caused of negligence and poor planning. Although we learned about how hilly roads are being made and what is structural components of it.

CERTIFICATE

Certified that this project report   **"automatic accident detection system in hill area"**   is the work of
"**Titas Saha, Soujit Das, Sweety mandal, Maitri Mandal, Sayantani Mandal**"
who carried out the
Innovative project (3rd year 5th semester) work under my supervision.

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INTERNAL EXAMINER   **Prof.(Dr.) Partha Sarkar**
                                                                          PRINCIPAL OF JISCE