**REPORT ON [SUBJECT OF REPORT]**

(The facts presented in this report is subject to changes and primarily for

illustration only as to the smart traffic light system. Please

change accordingly. Remove this note upon the use

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**SUBMITTED TO**

[CLIENT NAME]

**SUBMITTED BY**

[NAME OF AUTHOR]

[DATE OF SUBMISSION]

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**ACKNOWLEDGMENT**

This report was prepared by [NAME OF AUTHOR] of [INSTITUTION THE AUTHOR IS ACQUAINTED]. During the preparation and completion of this report, the Author received comments as well as valuable materials that greatly contributed to this report from [NAMES OF PERSONS INVOLVED]. The analysis and testing of theory conducted and incorporated into this report were produced in collaboration with [NAMES OF PERSONS INVOLVED]. The report was financially supported by [NAME OF PERSON OR INSTITUTION].

**ABSTRACT**

This report is based on the smart-traffic light system model that the proponent designed to provide better system management in cities and other locations that are known to have heavy traffic congestion. This facility will not only improve the traffic system in the area, but can potentially help citizens increase their productivity, and help businesses become more efficient in providing their services.

The proposed smart-traffic light system was pilot-tested in Los Angeles, California. In this report, we started by giving an overview of the traffic congestion and its effects on the economic productivity of the nation; then went on discussing the proposed smart-traffic light technology and its traffic optimization technique. Further the system was differentiated from the ordinary traffic light system before discussing its advantages and disadvantages.

**INTRODUCTION**

A country’s economic growth is influenced by a number of things such as social and political factors, natural resources, human resources, capital formation, and technological advances. One of the most recent developments is the creation of ways of solving the traffic systems in different cities, which shall be the focus of this report.

Traffic congestion affects every commuter and businesses: It delays people’s time and services, compromising their effectiveness in the workforce. In a recent study, an effective transportation system is important in sustaining economic growth as it provides mobility in everyday activities.

Despite the operational and technical improvements developed in creating an efficient traffic light system, the problem of delays due to congestion still persists, thus the need to develop a more sophisticated traffic light control system with effective signal timing.

Suitably designed and well-maintained traffic signals can effectively manage the traffic among highways and improve mobility through the use of appropriate layouts and controls of traffic light system operations. Furthermore, it can also provide a smooth flow of traffic, reducing congestion.

**Problem Statement**

Different versions of traffic light systems offer ease and efficiency in mobility, however, it is important to spot the advantages and disadvantages of using a smart traffic light system and record its efficiency compared to the ordinary traffic light system.

**Location Study**

The efficiency of the proposed smart traffic light system shall be tested in California. Prototypes of the traffic light system model shall be placed at different intersections, specifically in Los Angeles, in consideration of the study made in [INSERT YEAR] accounting the location as one of the busiest cities in the country.

**MATERIALS AND METHODS**

To aid in the constant problem of traffic management, the proponent introduces [NAME OF TRAFFIC LIGHT SYSTEM MODEL].

The [NAME OF TRAFFIC LIGHT SYSTEM MODEL] is a smart traffic light control system that optimizes the flow of traffic and is deemed to become the leading smart traffic light system in the country, with its sophisticated traffic control detectors taking into consideration the vehicle presence and count at intersections.

Technical details of the model are presented below:

[INSERT DIAGRAM OF SYSTEM MODEL]

The smart traffic light system mode shall be installed in the target location and shall be monitored at different time intervals. The following task plan shall be followed to test the effectivity as well as the efficiency of the model:

|  |
| --- |
| **TASK PLAN** |
| 1. Record data indicating the potential sources of traffic. 2. Set a time schedule for the implementation of the system model. 3. Integrate data from various sources into the system 4. Monitor the operation efficiency of the system and compare it with an ordinary traffic light system 5. Track and record inconsistencies to improve the system 6. Develop a failsafe mode in case the system detects inconsistent and questionable input. |

[INSERT DIAGRAM OF MAP IN LOS ANGELES WHERE THE PROTOTYPE SYSTEM SHALL BE INSTALLED]

**CONCLUSIONS**

The system model has a pilot testing timeframe of [INSERT TIME FRAME], conducted on [DATE]. It has been tested to observe its effectively and efficiency in alleviating the growing traffic problem in the area. The tables below summarize the results and lapses in the conducted pilot testing:

|  |  |  |
| --- | --- | --- |
| **SYSTEM TESTING** | **RESULTS** | **COMMENTS** |
| Week 1 |  |  |
| Week 2 |  |  |
| Week 3 |  |  |

Upon examination of the generated results from the pilot testing of the smart traffic light system, a performance comparison between the ordinary traffic light system and the smart traffic light system showed noticeable differences:

|  |  |  |
| --- | --- | --- |
|  | **ORDINARY TRAFFIC LIGHT SYSTEM** | **SMART TRAFFIC LIGHT SYSTEM** |
| Time Delays | MM:SS | MM:SS |
| Vehicles queued during the red light | 0 | 0 |
| Default speed | [N] mph | [N] mph |
| Queue length | [N] yards | [N] yards |
| Waiting time intervals | MM:SS | MM:SS |

It can, therefore, be concluded that upon the utilization of the smart-traffic light system within the given time frame, [PROVIDE THE GENERATED RESULTS OF STUDY].

**REFERENCES**:

[INSERT THE DIFFERENT REFERENCES INCORPORATED INTO THE REPORT]