



TRAFFIC SIGNAL DESIGN FOR SHALTANG CHOWK SRINAGAR

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1. ABSTRACT

In the recent years the intense growth of vehicles in Srinagar has caused heavier traffic congestion on roads and intersections which are even worse during peak time. The shalteng chowk is most prominent place in Srinagar as it enables various vehicles coming from educational institutions, main bazar, bus stand and railway line to pass through it which results in creating chaos and occurrence of accidents is very common. The traffic jam and collision on roads are because of improper and insufficient data to evaluate and design the signal which is mostly needed in this chowk. Traffic signals are very effective in controlling vehicles especially at intersections. The main objective of my work is to evaluate and analysis of current traffic condition at shalteng chowk Srinagar and to design a traffic signal which would result into reducing traffic delays and thus resulting into orderly movement of traffic.

2. INTRODUCTION

As we know from beginning of history society is developing day by day or it progresses because of human mobility. History of civilization is the result of this mobility or transport. As we know for every country the basic step for development is simply develop an efficient mode of transport and infrastructure without it country cannot develop. As history has revealed any country or any nation which has developed efficient and proper road transport has resulted in the development of that nation. Transportation plays an important role in the country as it carries goods and passengers from one place to another ,it is considered as arteries and veins of country and movement of goods and passengers is related to the movement of blood in the body ie circulation.

3. OBJECTIVES OF STUDY

The principle goals of the investigation are as per the following:

1. To evaluate the traffic issues on this part and distinguish the essential activities to improve those traffic issues.
2. To direct fundamental traffic concentrates on the chosen stretches of the road to realize existing traffic conditions.
3. To see the value in development that can be accomplished by applying Transportation System Management activities.
4. To propose some viable measures to forestall traffic issues on Road in future.
5. To be utilized for the investigation of traffic examples and patterns.
6. Turning development study is utilized in the plan of crossing point.
7. Pedestrian volume study is utilized for planning on pedestrian signal.

4. SCOPE OF STUDY

The extent of the investigation envelops enthusiasm for distinguishing the street segments for directing fundamental traffic contemplates and to evaluate issues with view to propose improvement measures. The traffic examines incorporate

Traffic Volume Count Study.

Spot Speed Study

These traffic studies would empower evaluation of traffic flows, distinguishing proof of foundations for postponement and failure besides traffic accidents.

Keeping in view, the location of the city with the current traffic issues and as a part of continuing with program of inspecting and upgrading Intersections, the primary object of this examination is to basically contemplate road crossing points concerning their traffic light estimates traffic execution and other significant highlights and from there on overhaul them as indicated by the necessity of the present and future traffic and Suggest enhancements in their current design. The ends and suggestions from these investigations will be useful in better comprehension of the issues and finding of the viable measures to beat each one of those issues.

5. DESIGNED SIGNAL TIMINGS

Based on the study and analysis work being carried out signal timings has been made in the table given below:

Signal timings for Shalteng Chowk Intersection

Road Side	Phase	Signal Aspect	Designed Signal Time (seconds)
RAILWAY SIDE	I	Green	30
		Amber	3
		Red	95
SARAFI BAZAAR ROAD SIDE	II	Green	22
		Amber	3
		Red	103
GOVT. COLLEGESIDE	III	Green	31
		Amber	3
		Red	94
BUS STAND SIDE	IV	Green	29
		Amber	3
		Red	96

6. CONCLUSIONS

1. Both the present and future traffic/person on foot volume just as the current mathematical format ought to be given due thought, while a thought is being made between various traffic light measures, in any case the improvement is probably going to bring about an over or under planned intersection with its subsequent traffic challenges.
2. In metropolitan region, signals are discovered to be more proficient and reasonable than the traffic circles because of space limitation. However, in rustic regions, traffic circles might be utilized with extraordinary productivity.
3. The mathematical plan of the chose crossing point isn't as per the IRC particular. Traffic is lopsided on the four legs of crossing point yet at the same time the street having more traffic have less width.
4. The level headed strategy to plan the sign planning plan is just Webster's technique. It gives least postponement and ideal process duration; subsequently, Webster's strategy ought to be utilized for planning signal plan.

5. The fundamental commitment factor to the lock up at crossing point is the weighty traffic volume during morning and evening top hours, which was not considered at the hour of plan of the convergence.
6. Due to weighty traffic, during top hour and higher level of right turning traffic, lockup happens at convergence. The current pinnacle volume at the convergence inspected in the report is 4344 PCU/hr with % turning traffic.
7. Due to development of traffic volume, the convergence can't deal with traffic volume proficiency in not so distant future.
8. The common street client's conduct and field study calls. For guaranteed improvement of convergence by giving zebra crossing, roadway checking, railing, intersection, lighting.
9. Due to cycle, sluggish vehicle volume causing lockup and mishaps at the convergence because of their lethargic speed.
10. Optimum cycle length for a separated fixed time signal, of this crossing point for the current traffic volume is determined just 128seconds.
11. Signal cycle length ought to be streamlined for greatest limit and least deferral. Despite the fact that both are clashing in nature, yet a trade off must be finished.
12. Before and after examinations ought to be attempted to assess the effect of every improvement as far as traffic activity.

7. RECOMMENDATIONS

- 1) For the current traffic volume, crossing point isn't up to IRC proposals because of lopsided traffic on four legs. So introduce traffic lights at the crossing point since traffic lights will give efficient development of traffic at this convergence.
- 2) For the pinnacle traffic volume in March 2016 the convergence with the recommended signal planning is given in proposed signal format (Table, figure).
- 3) The one of a kind issue of every crossing point as to traffic volumes, organization and turning developments and contiguous land use and so forth should be valued and the sign plan planned deductively ought to be based on applicable information and an update proposition to be agreeable to a phase development to meet the future necessities.
- 4) Since the current crossing point is loaded with insufficiencies, it ought to be forced by utilizing reasonable traffic signals (managing gadget) as indicated by its specific necessities.
- 5) It is likewise suggested that different stage for walker ought to be imported.

- 6) The person on foot crosswalk, walkways and appropriate railing should be given around the convergence to channelize the passerby development in the ideal safe way.
- 7) The convergence configuration can't be considered as last because of shifting traffic prerequisites. Albeit four stages for the chose crossing point have been proposed at present to dispense with specific struggles. However as the traffic is developing step by step, the number and timing of the stages ought to be audited time to time. In future it is suggested that slip street for left turning traffic might be presented at the crossing point to diminish the ideal cycle length and improve the productivity of the sign which needs to deal with substantial traffic.

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