



## PARKING STUDY: A CASE STUDY BETWEEN GURUDWARA CIRCLE AND GANDHI STATUE

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**Abstract** — As we all know we are now living in the time where there is rapid growth of the vehicle density. This has put high strain and congestion because of high vehicle ownership. And against that we have very few places for parking the vehicles and bad transportation systems like roads in cities. Parking space availability in cities are very difficult so the people have to park their vehicles on street or roads. The increase in heavy population in last few decades in India is very fast so the parking problems are arising very fast in mega cities and metro cities and cities where the population is comparing high. This study deals with the parking problems of around railway station road Anand. This study is contended to carry out the survey about parking problems between the gurudwara circle to Gandhi statue circle, Anand.

**Keywords**- vehicle parking, parking survey, parking problems, parking demand.

### I. INTRODUCTION

Each medium of transportation involves three necessary elements without which it cannot operate effectively: the vehicle, the right of way and the terminal. Increased urbanization gives rise to problems of congestion. As city growing, it will be important to plan and build new facilities for both public and private transportation. There is strong relationship between parking facilities and traffic flow characteristics in the city. Unplanned urbanization and transportation facilities cause parking problems. Inadequate parking facilities results in decrease of road capacity. Thus, all parking facilities as well as others should be designed and planned properly in order to provide a better life for the people and for the prosperity of the city. Due to rapid growth in population, increase in mobility of the traffic flow rate has begun. So we have to increase the capacity of the parking space or we can build new place for parking spaces.

### II. OBJECTIVES OF THE STUDY

This study has been planned with the following objectives.

1. To study parking situation the current situation between gurudwara circle to Gandhi circle, Anand.
2. To identify the problems around the area and need to meet the demand of parking space.
3. To provide adequate facility for parking of vehicles.
4. To meet the demand of the parking space required by the parked vehicles.

### III. STUDYAREA JUSTIFICATION:

- Our study area is between gurudwara circle to Gandhi circle, Anand.
- It is very congested area.
- The vehicles are parked haphazardly on roadsides.
- Due to haphazardly parking only one lane is used of two lane road.

#### IV. METHODOLOGY AND ANALYSIS OF PARKING STUDY:

Parking is one of the serious problems that confront the urban planner and the traffic engineer. Before any measures for the betterment of the conditions can be formulated basic data pertaining to the availability of parking space, extent of its usage and parking demand are essential. If it is proposed to implement a system of parking charges it will be necessary to know how much to charge and what will be the effect of the pricing policy on parking. Parking survey are intended to supply all this kind of information.

#### V. METHOD OF SURVEY

- Parking usage survey by patrol.
- Questionnaire type parking usage survey.
- Parking space inventory.
- Cordon count.

##### 5.1. Method used: (Parking usage survey by patrol.)

We use parking usage survey by patrol method to do the parking survey. The purpose of parking usage survey is to obtain data on the extent of usage of parking spaces. The survey will include counts of parked vehicles at regular intervals through a period, covering both the morning and evening peak period, and the parking accumulation and turn over.

The survey we conducted is for on street parking. The method consists of making periodic observation of parked vehicles on each patrol. For our method we observe entire area by patrolling.

#### VI. DATA COLLECTION & ANALYSIS

- We collected the data at peak hours 3 hours in the morning and 3 hours in evening time.
- We note down all the parked vehicles number for collecting the data.
- We calculated the all the nos of parked vehicles between the time.

#### VII. COLLECTED DATA

DAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
TIME	Nos of vehicles					
09:00 to 10:00	94	111	104	108	118	116
10:00 to 11:00	136	138	123	120	106	127
11:00 to 12:00	118	121	116	124	111	109
03:00 to 04:00	87	76	89	88	98	101
04:00 to 05:00	127	113	135	119	120	126
05:00 to 06:00	98	86	76	89	97	95

- From the above table and collected data, we have prepared bar chart for no. of vehicles parked on particular day and time. The bar chart represents the data in form of no. of parked vehicles versus time.

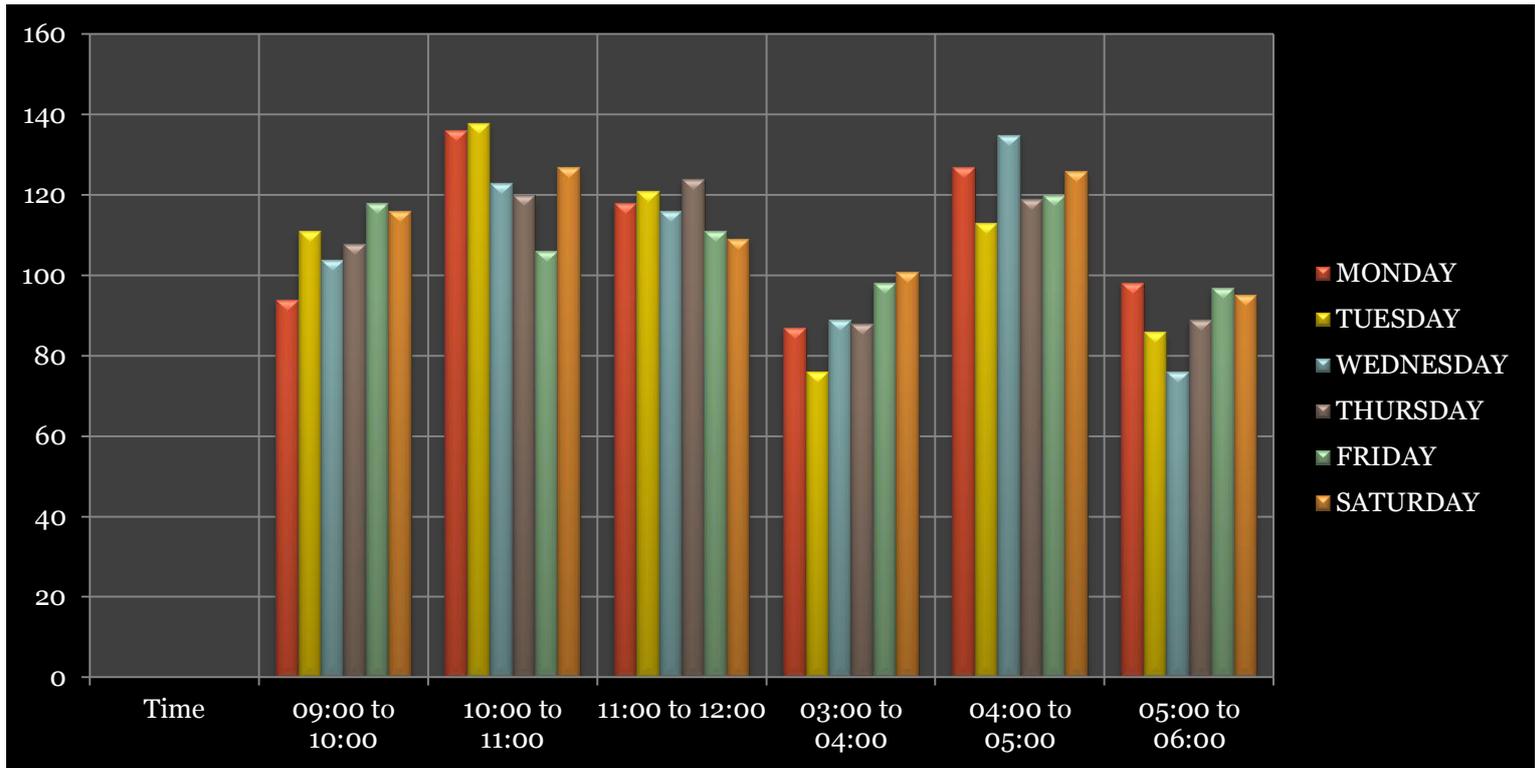


Fig 1. Represents time versus no. of parked vehicle bar chart.

### VIII. CONCLUSION

- As the conclusion of the survey we can provide parking facility on footpath which is not used by peoples for walking by expanding the given road.
- The secondly we can use the quarters available opposite to the police office Anand for pay and park purpose.
- As the third option we can provide a multistory parking which can be used for pay and park purpose but the construction of it will be very costly.

### IX. REFERENCES

- “Methodology of parking analysis”, by Catherine Morency, PhD, Asst. Professor, Canada.
- “Scenario of on street parking demand”, a case studies of Kolkata city, India, by Indrajit Roy Chowdhry, 2016.
- Analysis of Different parking space and its comparison, by Kumari Pratibha, 2012.
- Dr.Kadiyali L.R, “Traffic Engineering and Transportation Planning” Khanna Publishers,Ninth Print, 2011