iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 8 **Issue:** V **Month of publication:** May 2020

DOI: http://doi.org/10.22214/ijraset.2020.5448

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 8 Issue V May 2020- Available at www.ijraset.com

The Parking System: A Review

Sandeep[1], Asst. Prof. Pardeep [2]
[1] *M Tech Student,* [2]*Assistant Professor, Dept. of Civil Engg, Sat Priya Group of Institution, Rohtak, Haryana (India)*

Abstract: India is confronting increasingly significant issue; here streets are restricted while populace thickness is higher. It is valid for huge urban communities of India like Mumbai and Kolkata, faces an a lot graver issue. Boulevards here are limited, while the populace thickness is high. The main aim of the review is study of parking built-in under a flyover. This parking has traffic volume of two wheelers and auto-rickshaws.

I. INTRODUCTION

Parking is characterized as the demonstration of uncoupling and halting autos and leaving those jobless. Stopping is done either on both or one side of a street is regularly permitted and in some cases isn't permitted. For Proper great transportation framework legitimate plan of the stopping is significant. In the event that there is deficiency of parking spot it will be a problematic circumstance for everybody. A number for of parameters are required for an appropriate plan of parking spot and discover them with any method with a basic information. Finally, municipal efforts to build multi-storey parking have proven ineffective because on-street parking remains unmanaged and under-priced. Surface parking areas and multi-celebrated parking structures developed in business regions further empower the utilization of engine vehicles, which clashes with the nation's portability, value, and ecological objectives.

II. LITERATURE REVIEW

Juliane Stark (2008) There was a telephone survey of why motorists turned to buying cars. This will reduce time consumption, traffic congestion and provide the mall to users.

Chakrabarty et. al. (2010) The article shows various behavioral characteristics related to parking demand, location, and urban areas.

Eduardo Barata (2010) made parking problems in the UC campus this study emphasizes the importance of adopting integrated policies for parking management in order to ensure efficient use of parking spaces available.

Jun Chen et al. (2011) Coordination and planning of urban planning parking on the street and off-road. The authors show how to optimize the planning design of urban parks.

Dr. L.B. Zala(2012) A case study of Amul Anand Dairy Road; the author has worked in the volume of parking and parking policies, had taken the study area was the commercial center of the city of Anand.

Dr. SupritiDubey(2013)One of Bhopal study with reference to the users satisfaction with the parking space and the accessibility of the market.

Indrajit(2016) Pointed out that more dependency on personalized vehicles enhance the number of vehicles and it needs more parking spaces.

III. KINDS OF PARKING

There are the two kinds of parking:-

1) *On Road Parking:* On road leaving is the kind of leaving wherein vehicles are left on street side and government organizations normally controlled this sort of leaving. On-road stopping types are referenced beneath. Measurements of a vehicle according to IRC standard are taken as 5m long and 2.5m in width and for a truck is 3.75m width 7.5m length.



Fig.1:- On Road Parking.

©IJRASET: All Rights are Reserved

ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.429
Volume 8 Issue V May 2020- Available at www.ijraset.com

a) *Parallel Parking:* In parallel leaving the vehicles are left along the length of the road/street. While leaving or un-leaving the vehicle there is no back advancement included. Consequently, from the incident viewpoint it is the most secure halting. In any case, equivalent leaving eats up the best control length and in this way only a base number of vehicles can be left for a given kerb length. This strategy conveys least hindrance to the on-going traffic out on the town and least road width is used.

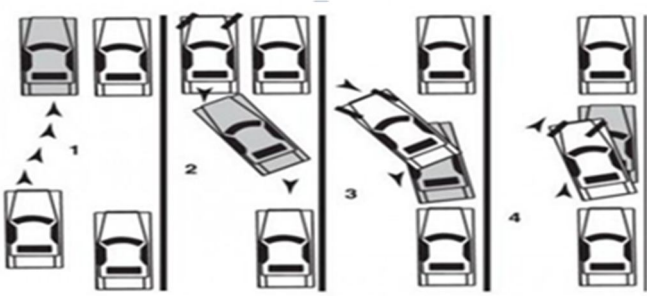


Fig. 2:- Parallel Parking.

b) *30 Degree Parking:* The vehicles are parked at 30 degree with respect to the road. In this parking, more vehicles can be parked as compared to parallel parking with better manoeuvrability. In 30 degree type of parking minimum delay is caused to the track.

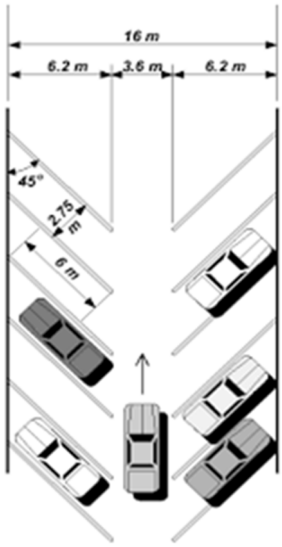


Fig.3:- 30 Degree Parking.

c) *45 Degree Parking:* The 45 degree leaving is the most productive leaving, if the point of leaving builds, increasingly number of vehicles can be left. Henceforth increasingly number of vehicles can be left right now leaving when contrasted with 30 degree leaving and equal leaving.

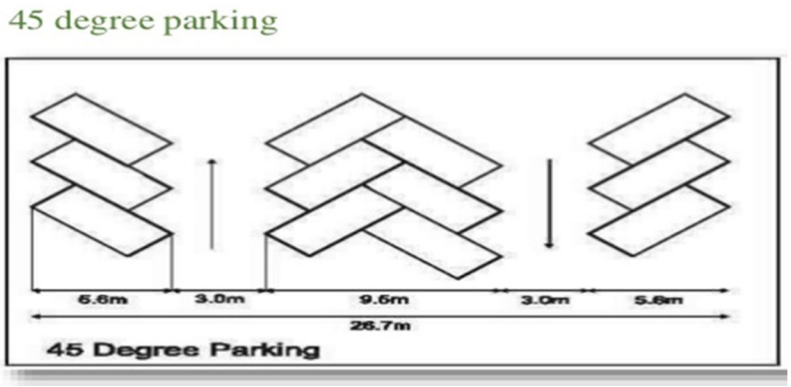


Fig.4:- 45 Degree Parking.

©IJRASET: All Rights are Reserved

d) 60 Degree Parking: At present time leaving vehicles are left at 60 degree to the road. Continuously number of vehicles can be left present time, yet this produces obstacle to the on-going traffic all over the place and progressively vital road width is used.

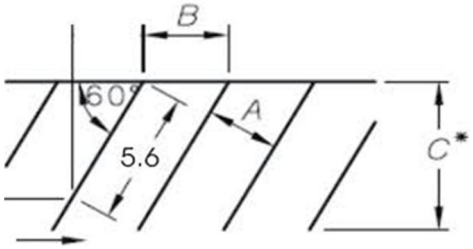


Fig.5:- 60 Degree Parking.

2) Off Street Parking: Off road stopping is characterized when stopping office is given at a different spot away from a street. While the constraint of this sort leaving is that the proprietors need to travel more separation after the vehicle left. Off road stopping is preposterous, especially at different interims in the business habitats of the city.



Fig.7:- Off Street Parking.

IV. PARKING ISSUES

A. Low stopping turnover rate. This can happen when autos are stopped in a similar space for at any rate 4 hours (by and large).
B. Impact of extra parking spots on territory traffic and nearby inhabitants.
C. Out-of-town stopping. Most of vehicles left in a local location are from outside of the area.
D. Loading and emptying zones. Rare leaving for business vehicles to load or empty will make them square travel paths.
E. Parking spaces that are a burden to close by occupants and organizations. In holding clients organizations may confront trouble and living arrangements may encounter issue in discovering stopping close to their homes.

V. EFFECTS OF PARKING

A. The leaving On-road brings down the street limit in view of this speed of vehicle diminished and trip time will expand, it additionally increment the vehicle operational expense and prompting practical misfortune to the general public.
B. While halting and beginning of vehicles from the leaving region makes clamor and creates the exhaust which cause natural contamination.
C. Left vehicles may hinder the advancement of extinguishing fires vehicles and some time salvage vehicle.

VI. PARKING STATISTICS

A. Parking collection It is described as the amount of vehicles left at a given snapshot of time Normally this is communicated by amassing bend. Collection bend is the diagram acquired by plotting the quantity of bayous busy as for time.
B. Parking volume parking volume is characterized as the all out number of vehicles left at a given term of time. This doesn't represent reiteration of vehicles.
C. Parking turnover is characterized as the proportion of number of vehicles left in term to the quantity of leaving sounds. This can be communicated as number of vehicles per inlet per time term.

©IJRASET: All Rights are Reserved

VII. HEAD OF PARKING DATA COLLECTED

Following main head under which the parking data collected are:-

1) *Sr. No.:* Sr. no. shows the ascending order of the data.
2) *Types of Parking:* It shows the parking type for which data is collected like:-auto stand or two-wheeler.
3) *Time:* Whole survey time is divided into 30 minutes interval in order to determine the length of time for which the vehicles stay at each parking area.
4) *Day:* It shows the name of the day for which data is collected.
5) *Parking Bays:* It shows the number of bay in the parking area in which vehicle parked.

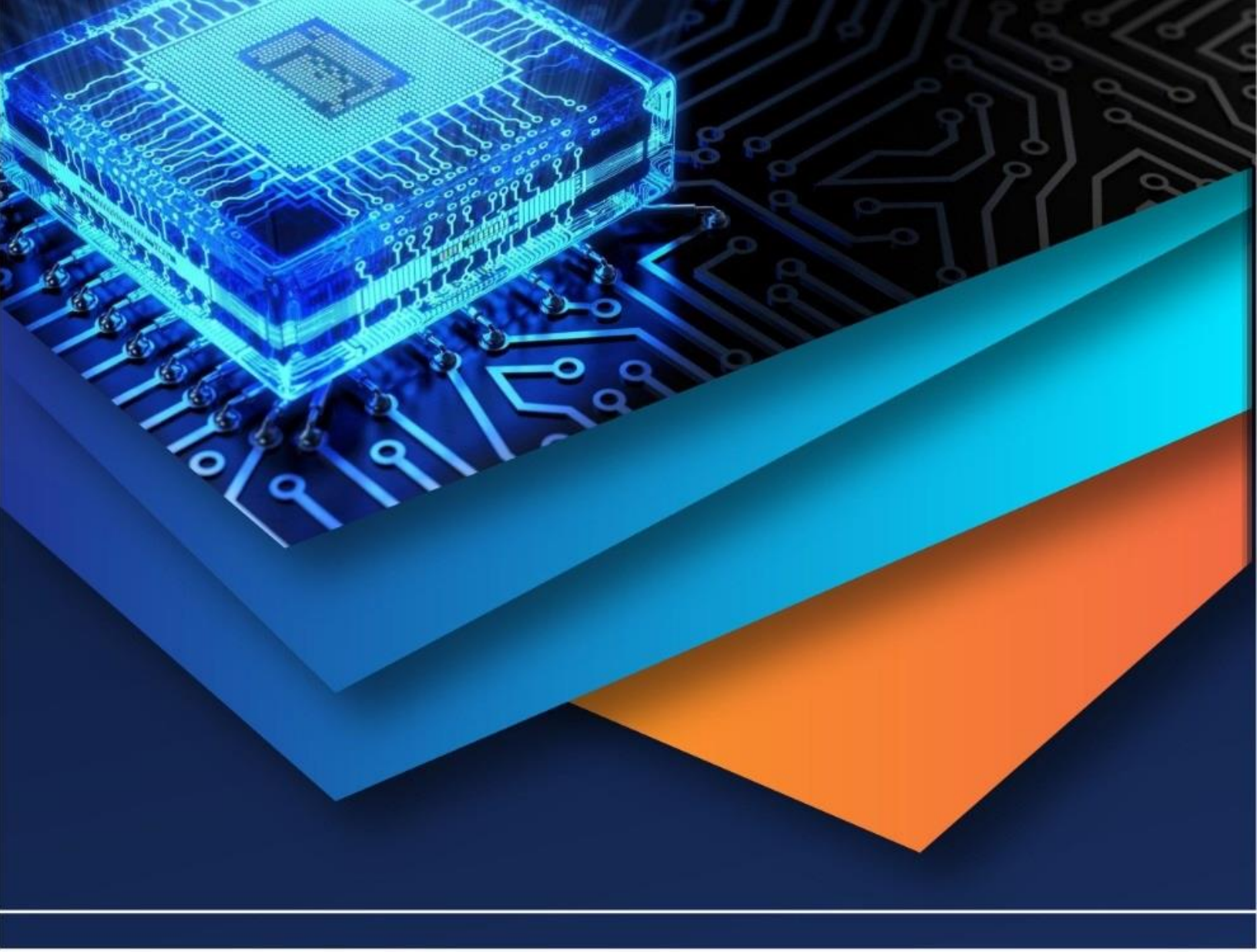
VIII. CONCLUSION

The information gathered by tag strategy is examined to assess stopping volume, normal stopping length, normal stopping span, normal inheritance, stopping collection, stopping limit, stopping burden and effectiveness of each of the three stopping were determined. Through analysis it can be concluded that the parking efficiency above 70% can be considered as satisfactory parking efficiency.

REFERENCES

[1] Banister, D., & Bowling A. (2004). Quality of Life for the Elderly: The Transport Dimension. Transport Policy 11, 105-115.
[2] Ben-Akiva, M. & Lerman S. R. (1985). Discrete Choice Analysis: Theory and Application to Travel Demand. Cambridge, MA: MITPress.
[3] Ben-Akiva, M., Bowman J., & Gopinath D. (1996). Travel Demand Model System for the Information Era. Transportation 23,241-266.
[4] Bhat, C.R. & Koppelman F. S. (1999). A Retrospective and Prospective Survey of Time- Use Research. Transportation 26(2), 119-139.
[5] Boarnet, M.G., & Sarmineto S. (1998). Can Land-Use Policy Really Affect Travel Behavior? Urban Studies 35(7), 1155–1169.
[6] Bowman, J.L., & Ben-Akiva M. (2000). Activity-Based Disaggregate Travel Demand System with Activity Schedules. Transportation Research Part A 35, 1-28.
[7] Buehler, R. & Nobis C. (2010). Travel Behavior in Aging Societies: Comparison of Germany And The United States. Transportation Research Record: Journal of The Transportation Research Board 2182, 62-70.
[8] Burkhardt, J. E. (1999). Mobility Changes: Their Nature, Effects, and Meaning for Elders Who Reduce or Cease Driving. Transportation Research Record 1671, 11-19.
[9] Cervero, R., & Kockelman K. (1997). Travel Demand and The 3Ds: Density, Diversity, and Design. Transportation Ressearch Part D 2(3), 199–219.
[10] Crane, R., & Crepeau R. (1998). Does Neighborhood Design Influence Travel? A Behavioral Analysis of Travel Diary and GIS Data. Transportation Research Part D: Transportation Environment 3, 225–238.

©IJRASET: All Rights are Reserved



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)