

# Question of the Quality of the Service of Cyclist Traffic

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**Abstract** – *In the work, existing methods of research and criteria for evaluation the effectiveness and quality of cyclist traffic service, which take into account a great amount of impact of environmental factors on its quality, are analyzed.*

Keywords – cyclist traffic, cycle path, quality of transport service, effectiveness.

## Introduction

Cyclist traffic quality is the measure of to what extent the trip meets expectations of the cyclist, in other words, according to the need in space for movement, integral system of cycling routes, possibility to keep its speed on maximum long sections of the route etc. By its nature it is integral concept that consists from a lot of objective and subjective factors which determine the perception of safety, comfort, aestheticism etc.

## The main part

Research on quality of cyclist traffic service is topical both for researchers and for public or private sector. Increasing of cycling service quality will lead first of all to the increase of demand, increasing of which will be followed by the contraction of private transport usage which, in its turn, will help to solve a broad circle of urgent questions about parking, air pollution, noise, energy consumption etc. [1].

There exists a set of research methods which mostly are based on subjective values of cyclists: questionnaire, experiment and video surveillance.

Exists also research on safety index where the model of interdependence of cyclists and road conditions, level of comfort of street for cyclist [2], condition of passage index [3] and cyclist traffic compatibility index [4]. In the research also takes into account the factor of parking rules offence for the optimization of model of cycling compatibility index.

Additionally, it should be admitted that in its terminology researchers quite frequently use interchangeable and identical definitions which correspond to the concept of transport service quality, such as “quality of service”, “level of service” or “performance measures”.

Research on cyclist safety on certain section of the road network as the function of different factors including traffic volumes and speeds, pavement condition, and the width of lane is mostly represented. So, for example, in the work [5] is proposed the model for evaluation the motion safety of cyclists during the passage of intersection as function of dependence of traffic volume, width of lane and distance between intersections.

Federal administration of highways of USA developed BCI – Bicycle Compatibility Index [4] where attention is aimed at sections between intersections. Given index proposes to give an evaluation according to norms, given in table 1.

Table 1

Evaluation of the level of Bicycle Compatibility Index

Level BCI	≤ 1,50	1,51-2,30	2,31-3,40	3,41-4,40	4,41-5,30	> 5,30
Level LOS	A	B	C	D	E	F
Evaluation of level	Very high	High	Moderately high	Moderately low	Low	Very low

Another approach to “Bicycle Level of Service” (BLOS) is based on account of the width of automobile and cyclist lanes, pavement condition, percentage value of heavy traffic, traffic volume etc. Value of BLOS proposes the evaluation of cyclist traffic quality, according to table 2.

*Table 2*

Level BLOS	≤ 1,50	1,51-2,50	2,51-3,50	3,51-4,50	4,51-5,50	> 5,50
Level LOS	A	B	C	D	E	F

Nowadays, there is exist a great amount of developed methods of evaluation of level BLOS which take into account stress, comfort, safety, cyclist volume, intersection etc. In table 3, are given some of them which quite frequently are given in research publications. Each method tries to provide the evaluation of accepted comfort and safety of linear section of cyclist traffic. All methods, basically, adhere to the same general format, that is usage of scoring.

### Conclusion

Existing methods take into account a great amount of environmental impact factors on cyclist traffic quality. To the main factors of impact relate existence of cycling infrastructure, volume and speed of movement, problems with parking etc. Given methods allow to plan and design cyclist traffic effectively that will lead to increase of demand for usage of bikes by citizens.

### References

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