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This paper presents the results of a study on the correspondence of the main spatial characteristics of real estate objects and cadastral division units taken into account in the local coordinate systems of the real estate cadastre to their actual values on the Earth's surface. The results of projection distortions for real estate objects are analyzed, taking into account the zonal principle of using a system of flat rectangular coordinates. It is proved that the used coordinate support of the modern real estate cadastre determines a significant number of registered objects with distorted spatial characteristics. Current trends in the transition to information modeling of real estate objects determine the prospects for further maintaining the cadastre in spatial coordinate systems, which will further solve the problem of existing zoning. These calculations and conclusions prove the relevance of improving the coordinate basis and projection adaptation of spatial data of the real estate cadastre, including for solving the problems of designing and reconstructing technological complexes and linear real estate objects with minimal metric distortions.

Key words: local coordinate systems, projection distortions, real estate cadastre, zonal coordinate systems, conditional cadastral units, projection adaptation, cartographic projections.

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Received 20.02.2020

© A. M. Portnov, G. I. Zagrebin, Zhenfeng Shao, 2020