Actual Issues of Control and Supervision of Construction

A Storozheva¹, a, E Dadayan¹ and E Letyagina¹

¹Krasnoyarsk State Agricultural University, Krasnoyarsk, 117 Lenin Street, Russia

E-mail: storanya@yandex.ru

Abstract. The purpose of our study is to identify the problematic topics that arise during the implementation of measures by supervisory bodies in the construction of real estate facilities. The study examines the directions and ways out of these situations. On the example of a constituent entity of the Russian Federation, the Krasnoyarsk Territory, we analyze performance indicators of construction supervision and residential control services, determine effectiveness and need for state regulation of reconstruction, overhaul, redevelopment and construction of real estate objects through control measures.

1. Introduction

Today, the issues related to regulation of public relations in the construction industry are becoming more urgent in the current conditions of active development of metropolises. In addition, it is important to carry out timely supervision and control in this area of activity, as the implementation of activities related to this depends on the safety of the use of produced real estate.

Indeed, in the construction of various real estate objects, it is important to comply with the requirements of the construction legislation.

Thus, the main purpose of our work is to analyze the problematic topics related to the implementation of state supervision and control in the construction industry, as well as to determine efficiency and the need for state regulation on the basis of an analysis of the performance indicators of regional construction supervision in the Krasnoyarsk Territory in the area of construction, reconstruction, redevelopment and overhaul of real estate objects (REO).

Considering this issue, we should note that in the legal science, problems of state regulation in the field of construction relations have rarely been the subject of independent separate studies. However, the work of legal scholars on general issues of organization and functioning of the public administration system, as well as its institutions and their components, can act as the theoretical basis for researching building construction industry as a special area of public administration.

For example, works of L.P. Alekhin, G.V. Atamanchuk [1], D.N. Bakhrahh, I.A. Vasilenko, Y.M. Kozlov, A.M. Kononov, V.M. Manokhin, L.L. Popova, and Y.A. Tikhomirov are dedicated to the problems of state regulation and organization of its executive branch.

In addition, we need to mention the works of S.A. Bogolyubov, O.I. Krassov, and L.N. Korolev, which are devoted to the study and analysis of urban planning legislation.

Studies by S.A. Kuznetsova [2], B.V. Muromtsev, L.M. Abramovich, G.D. Denisova, and A.V. Verkhov require a special mention.
For example, in her research, S.A. Kuznetsova has carried out a systematic analysis of the sphere of construction as a facility of state control and supervision, as well as considered the main provisions of the administrative legal status of actors involved in the construction sphere.

Also, in the scientific research of B.V. Muromtsev [3], dedicated to the problems of architectural and construction supervision, the issues of the state performing management functions in the field of construction relations are rather extensively presented.

At the same time, we need to note that the current construction legislation is developing as dynamically as the construction industry itself, and therefore, the existing scientific work on construction supervision and control no longer reflects the current legal realities, which necessitates new research in this area.

2. Materials and methods

Given that the main requirement for constructed real estate is its safety, the presence of state construction supervision at these sites is highly important. In the implementation of the state construction supervision, it is necessary to carry out supervisory measures already at the first stage of construction of the facility, and developers, as well as contractors, have the opportunity to eliminate all violations identified during the inspection activities of the supervisory body, even during the construction and installation work before their completion.

Thus, before the inspection of the completed property, the developer and the supervisory body should already have a clear understanding of whether the facility meets the requirements of the design documentation and all technical regulations [4].

However, in modern reality, quite often situations arise where construction begins in the absence of the necessary documentation in full. In such circumstances, the state supervisory authorities are not always able to adequately perform their functions of verifying the fulfillment of construction requirements at all stages of the construction of real estate.

Failure to perform the proper scope of the functions of state construction supervision during the construction, redevelopment, reconstruction of real estate on the one hand allows entities performing construction to make independent decisions and carry out work quickly, as there is no need to delay in view of the implementation of regulations that can be issued by officials of the state construction supervision. On the other hand, at the time of commissioning of the object in view of the inability to bypass the interaction with representatives of the state construction supervision service, difficulties and problems that could be eliminated at the stage of construction of the property often arise. Indeed, in the process of carrying out inspections at construction sites, additional examinations and tests can be assigned, and when a discrepancy with the requirements established by law is exposed, or if the object does not comply to its design documentation, the need for reconstruction, modification, reconstruction of the constructed structures, and dismantling is not ruled out. All this at the stage of commissioning will undoubtedly only complicate the commissioning of the REO.

In addition, when commissioning construction facilities related to chemical, petrochemical and oil refining industry, the most common problems are those associated with equipment start-up.

Today, the procedure for commissioning of oil refining facilities, individual testing activities and system testing of equipment complexes, unfortunately, is not governed by regulatory legal acts or technical documents and is carried out, as a rule, in accordance with project documents for construction, redevelopment or reconstruction, if it is established by requirements of the manufacturer. It is also not established which document confirming the completion of work is drawn up as a consequence of the outcome of their implementation.

In addition, researching the problems associated with the implementation of state supervision and control, which determine the delays in the construction of real estate facilities and their commissioning, we can note the following:

1. Non-conformity of technical and other documentation developed by domestic and foreign design organizations leads to the need to change it, and, as a result, to an increase in the construction time and cost of these projects.
2. There are significant differences in the way domestic and foreign design and construction organizations work during obtaining and compiling the starting parameters for construction design. For example, Russian design agencies and organizations for the collection of raw data primarily rely on projects already developed and implemented earlier, which have already been tested. In their turn, foreign developers carry these out based on actual measurements performed at the stage of creating the REO model with the layout and integration of the spatial model of the object. This circumstance also entails significant differences in the design documents of domestic and foreign origin.

3. The process of coordination and comparing Russian and foreign construction and safety standards, both in the development of the necessary documents and in terms of the manufacture and placement of equipment on the industrial facilities under construction, also significantly affects the timing and cost of construction.

The problems we have pointed out are directly related to the functioning of the state authorities in the control and supervision of the construction industry, as it is precisely during the process of verifying the relevant results of the construction of a particular REO that these bodies authorize the commission of the REO into operation. Accordingly, even the actual completion of construction work on the object does not mean that the property is introduced into civil law from a legal point of view.

We should note that the state construction supervision is carried out by the authorized executive bodies of the constituent entities of the Russian Federation. At the same time, a special procedure of supervision in the construction, overhaul, reconstruction of the REO, related to the construction of communication lines, hazardous industries (oil and gas industry, etc.), nuclear power, as well as REO that are technically complex and unique properties and in a number of other cases.

We believe that this variant of state administration and safety control in the construction sector is the most effective given the federal structure of our state. Indeed, Russia has a significant number of constituent entities, with each one having its own unique characteristics, defining, among other things, the specifics of the development of the construction sector.

As part of our study, we analyzed the performance of the supervisory activities of the Construction Supervision and Control Service of the Krasnoyarsk Territory in the implementation of regional state construction supervision during 2017–2019.

![Figure 1. The number of inspections conducted in relation to developers or construction managers, contractors, units.](image-url)
As we can see from the data presented, in 2018, the number of inspections carried out is slightly lower than in 2017, but in 2019 we observe a significant increase in the number of inspections by more than 54% compared to 2018. This indicates the high pace of construction, and, as a consequence, the need for more verification activities in the construction sector of the Krasnoyarsk Territory.

![Figure 2. The number of violations detected during inspections, units.](image)

Meanwhile, the data on the number of violations of technical regulations and other regulatory and legal documents revealed during inspections testify to the high growth rates of violations committed by subjects of construction relations. Moreover, even with a decrease in the number of inspections in 2018, the number of detected violations increased by 76% compared to 2017. The indicators of 2019 show an increase in the number of violations by more than 2 times in comparison with 2018.

![Figure 3. The number of rulings instituting administrative penalties, units.](image)

Analyzing the data on the number of administrative penalties, we should note that the dynamics of growth is observed throughout the study period, but the “jump” of indicators (by more than 5 times) is
also associated with 2019, which corresponds to the general regional trend in the field of construction supervision and control in the Krasnoyarsk Territory.

In addition, we should note that at the regional level, not only inspections on compliance with construction legislation are carried out, but also measures aimed at preventing violations of mandatory requirements, including warnings about the inadmissibility of violation of mandatory requirements.

![Figure 4. The number of preventive measures, units.](image)

### 3. Results

Summing up our study, we should mention that state supervision and control in construction is a necessary regulator of public relations in the construction sector as it:

1. Ensures compliance with regulatory requirements in the construction of REO (SNIP, GOST, SanPiN and others) by all participants in the construction sector (especially developers).
2. Establishes the conformity of the reconstructed, redeveloped, built or renovated real estate facility to its design documentation.
3. Tracks compliance with construction deadlines.
4. Checks the level of quality of the materials used in the construction, the availability of appropriate supporting documentation (quality certificates), the possibility of using these materials in a particular construction in certain conditions.
5. Controls the correct execution of various stages of construction works, timely and high-quality execution of schemes, drawings, acts of hidden work, etc.
6. Determines the performance of construction workers, compliance with the requirements of state and departmental supervisory bodies, environmental, fire, sanitary and epidemiological surveillance and control.
7. Performs step-by-step commission of construction works.

All of these features, in the end, undoubtedly, allow to ensure the safety of the built, reconstructed or overhauled real estate facility for its use and free civil turnover.

In addition, the statistics we have provided suggest that the role of regional supervision and control in construction has increased, as violations have been identified in plenty, are mandatory for elimination, and, accordingly, the developer has to carry out work to improve the safety of the object when they are removed.

At the same time, we can state that the legislation in the field of construction supervision and control requires constant change and modernization, taking into account the dynamically developing construction branch of the economy.
4. References

[1] Atamanchuk G V 2003 Essence of Public Service: History, Theory, Law, Practice, RAGS (Moscow) 268 p

[2] Kuzhetsova S A 2003 Administrative and Legal Regulation in the Construction Sector: A dissertation for the degree of candidate of legal sciences: 12.00.14 (Moscow) 188 p

[3] Muramoto B V 2006 Architectural and Construction Supervision in the Russian Federation: A dissertation for the degree of candidate of legal sciences: 12.00.14 (Moscow) 228 p

[4] Bobylev A I, Belyaev V P 2005 Control and Supervision in the Russian State: A monograph, ed. by A V Malko (Moscow) 272 p

[5] Martynov A V 2010 Administrative Supervision in Russia: Theoretical Foundations of Construction, ed. by Y N Starilov Unity-Dana: Law and Rights (Moscow) 183 p

[6] Petrov I A 2016 State building supervision: Foundations and procedures for its implementation Science, Technology and Education 10 44-46

[7] Izbienova T A, Shirshov A S 2018 Actual problems of state control and supervision in the field of housing and public utilities Herald of the Russian University of Cooperation 3(33) 118-121

[8] Lushkin A M 2011 The concept and meaning of the state building supervision Current Problems of Economics and Law 1 205-208

[9] Yurchenko E A 2013 Mechanisms of state architectural and construction supervision: International experience Herald of Moscow University 3 106-119